CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 05/29/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/01/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0	5		10	2			7		10				1			1		
4.1- 5.0			1	1			1		1						1			1
5.1- 6.0	1		1	2		2	3		3									
6.1- 7.0	1						1											
MEAN/DEPTH	4.2		3.9	4.6		5.8	4.4		4.2				4.0		4.5	4.0		4.5
STD ERR	.47		.17	.39		.10	.31		.24									
MEAN/DATE		4.0			4.9			4.3						4.3			4.3	
STD ERR		.20			.36			.19						.25			.25	
RANGE(MIN)	3.3		3.2	3.6		5.7	3.3		3.2				4.0		4.5	4.0		4.5
(MAX)	6.2		5.2	5.5		5.9	6.2		5.9				4.0		4.5	4.0		4.5
NO.LENG'D	7	0	12	5	0	2	12	0	14	0	0	0	1	0	1	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/05/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0	1						1											
4.1- 5.0	2			1			3			4		3				4		3
5.1- 6.0	1		2	1		3	2		5	10		9				10		9
6.1- 7.0						1			1	1		2				1		2
MEAN/DEPTH	4.9		5.9	5.1		5.8	5.0		5.8	5.3		5.5				5.3		5.5
STD ERR	.48		.05	.10		.20	.31		.14	.12		.17				.12		.17
MEAN/DATE		5.2			5.5			5.4			5.4						5.4	
STD ERR		.38			.19			.21			.10						.10	
RANGE(MIN)	3.6		5.9	5.0		5.2	3.6		5.2	4.6		4.3				4.6		4.3
(MAX)	5.9		6.0	5.2		6.1	5.9		6.1	6.3		6.8				6.3		6.8
NO.LENG'D	4	0	2	2	0	4	6	0	6	15	0	14	0	0	0	15	0	14

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/12/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0	9		7	2		1	11		8									
4.1- 5.0	27		37	1		1	28		38	1		1			1	1		2
5.1- 6.0	28		38	2			30		38			2						2
MEAN/DEPTH	4.8		5.0	4.5		4.0	4.8		4.9	4.9		5.1			4.7	4.9		5.0
STD ERR	.08		.06				.08		.06									
				.33		.40						.09						.12
MEAN/DATE		4.9			4.4			4.9			5.1			4.7			5.0	
STD ERR		.05			.26			.05			.09						.10	
RANGE(MIN)	3.1		3.2	3.7		3.6	3.1		3.2	4.9		5.0			4.7	4.9		4.7
(MAX)	6.0		5.8	5.4		4.4	6.0		5.8	4.9		5.3			4.7	4.9		5.3
NO.LENG'D	64	0	82	5	0	2	69	0	84	1	0	3	0	0	1	1	0	4

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/19/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
5.1- 6.0				6			6			7						7		
6.1- 7.0				2			2			2						2		
7.1- 8.0																		
8.1- 9.0																		
9.1- 10.0																		
10.1- 11.0																		
11.1- 12.0																		
12.1- 13.0																		
13.1- 14.0													1			1		
MEAN/DEPTH				5.8			5.8			5.7			13.7			6.5		
STD ERR				.23			.23			.16						.81		
MEAN/DATE				5.8			5.8			5.7			13.7			6.5		
STD ERR				.23			.23			.16						.81		
RANGE(MIN)				5.1			5.1			5.1			13.7			5.1		
(MAX)				7.0			7.0			6.5			13.7			13.7		
NO.LENG'D	0	0	0	8	0	0	8	0	0	9	0	0	1	0	0	10	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/26/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/03/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0	2		2				2		2									
4.1- 5.0																		
5.1- 6.0	2		4				2		4									
6.1- 7.0	4		1				4		1									
7.1- 8.0																		
8.1- 9.0																		
9.1- 10.0																		
10.1- 11.0																		
11.1- 12.0																		
12.1- 13.0																		
13.1- 14.0																		
14.1- 15.0																		
15.1- 16.0						1			1									
16.1- 17.0																		
17.1- 18.0																		
18.1- 19.0																		
19.1- 20.0																		
20.1- 21.0																		
21.1- 22.0																		
22.1- 23.0																		
23.1- 24.0																		
24.1- 25.0																		
25.1- 26.0																		
26.1- 27.0																		
27.1- 28.0																		
28.1- 29.0						1			1									
MEAN/DEPTH	5.6		5.1			21.8	5.6		8.8									
STD ERR	.48		.39			6.45	.48		2.70									
MEAN/DATE		5.4			21.8			7.3										
STD ERR		.31			6.45			1.46										
RANGE(MIN)	3.2		3.6			15.4	3.2		3.6									
(MAX)	6.7		6.4			28.3	6.7		28.3									
NO.LENG'D	8	0	7	0	0	2	8	0	9	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 07/10/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/17/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
11.1- 12.0				1			1											
12.1- 13.0																		
13.1- 14.0																		
14.1- 15.0																		
15.1- 16.0																		
16.1- 17.0			1						1									
17.1- 18.0																		
18.1- 19.0																		
19.1- 20.0																		
20.1- 21.0																		
21.1- 22.0																		
22.1- 23.0				1			1											
MEAN/DEPTH			16.6	16.9			16.9		16.6									
STD ERR				5.65			5.65											
MEAN/DATE		16.6			16.9			16.8										
STD ERR					5.65			3.26										
RANGE(MIN)			16.6	11.2			11.2		16.6									
(MAX)			16.6	22.5			22.5		16.6									
NO.LENG'D	0	0	1	2	0	0	2	0	1	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 07/24/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/31/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
13.1- 14.0	1						1											
14.1- 15.0																		
15.1- 16.0																		
16.1- 17.0																		
17.1- 18.0																		
18.1- 19.0																		
19.1- 20.0						1			1									
20.1- 21.0																		
21.1- 22.0																		
22.1- 23.0						1			1									
23.1- 24.0																		
24.1- 25.0						1			1									
MEAN/DEPTH	13.6					22.0	13.6		22.0									
STD ERR						1.58			1.58									
MEAN/DATE		13.6			22.0			19.9										
STD ERR					1.58			2.38										
RANGE(MIN)	13.6					19.1	13.6		19.1									
(MAX)	13.6					24.5	13.6		24.5									
NO.LENG'D	1	0	0	0	0	3	1	0	3	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 05/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0											1	1					1	1
5.1- 6.0												4			1			5
MEAN/DEPTH											5.0	5.2			6.0		5.0	5.4
STD ERR												.29						.27
MEAN/DATE											5.2			6.0			5.3	
STD ERR											.24						.23	
RANGE(MIN)											5.0	4.1			6.0		5.0	4.1
(MAX)											5.0	5.7			6.0		5.0	6.0
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	1	5	0	0	1	0	1	6

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 05/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0	1		1				1		1	1		1				1		1
4.1- 5.0										1		1			1	1		2
MEAN/DEPTH	3.8		3.7				3.8		3.7	3.9		4.1			4.1	3.9		4.1
STD ERR										.20		.40				.20		.23
MEAN/DATE		3.8						3.8			4.0			4.1			4.0	
STD ERR		.05						.05			.19						.15	
RANGE(MIN)	3.8		3.7				3.8		3.7	3.7		3.7			4.1	3.7		3.7
(MAX)	3.8		3.7				3.8		3.7	4.1		4.5			4.1	4.1		4.5
NO.LENG'D	1	0	1	0	0	0	1	0	1	2	0	2	0	0	1	2	0	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 05/29/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/01/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
2.1- 3.0															1			1
3.1- 4.0				1			1			1						1		
MEAN/DEPTH				3.6			3.6			3.6					2.7	3.6		2.7
STD ERR																		
MEAN/DATE				3.6			3.6			3.6			2.7			3.2		
STD ERR																.45		
RANGE(MIN)				3.6			3.6			3.6					2.7	3.6		2.7
(MAX)				3.6			3.6			3.6					2.7	3.6		2.7
NO.LENG'D	0	0	0	1	0	0	1	0	0	1	0	0	0	0	1	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/05/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0	1						1						1			1		
MEAN/DEPTH	3.9						3.9						3.4			3.4		
STD ERR																		
MEAN/DATE	3.9						3.9						3.4			3.4		
STD ERR																		
RANGE(MIN)	3.9						3.9						3.4			3.4		
(MAX)	3.9						3.9						3.4			3.4		
NO.LENG'D	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/12/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
2.1- 3.0	3		1				3		1									
3.1- 4.0	2		4				2		4									
MEAN/DEPTH	3.2		3.3				3.2		3.3									
STD ERR	.12		.12				.12		.12									
MEAN/DATE		3.2						3.2										
STD ERR		.08						.08										
RANGE(MIN)	3.0		2.9				3.0		2.9									
(MAX)	3.5		3.5				3.5		3.5									
NO.LENG'D	5	0	5	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/19/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0			1						1									
MEAN/DEPTH STD ERR			3.4						3.4									
MEAN/DATE STD ERR		3.4						3.4										
RANGE(MIN)			3.4						3.4									
(MAX)			3.4						3.4									
NO.LENG'D	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/26/79 DAY S	M	B	NIGHT S	M	B	DAY + NIGHT S	M	B	DATE 07/03/79 DAY S	M	B	NIGHT S	M	B	DAY + NIGHT S	M	B
3.1- 4.0			1						1									
MEAN/DEPTH			3.1						3.1									
STD ERR																		
MEAN/DATE		3.1						3.1										
STD ERR																		
RANGE(MIN)			3.1						3.1									
(MAX)			3.1						3.1									
NO.LENG'D	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 05/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/25/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0				1		1	1		1				1			1		
5.1- 6.0										3		3	1			4		3
MEAN/DEPTH				4.8		4.5	4.8		4.5	5.7		5.7	4.9			5.3		5.7
STD ERR										.07		.15	.65			.29		.15
MEAN/DATE					4.7			4.7			5.7			4.9			5.5	
STD ERR					.15			.15			.07			.65			.19	
RANGE(MIN)				4.8		4.5	4.8		4.5	5.6		5.5	4.2			4.2		5.5
(MAX)				4.8		4.5	4.8		4.5	5.8		6.0	5.5			5.8		6.0
NO.LENG'D	0	0	0	1	0	1	1	0	1	3	0	3	2	0	0	5	0	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 05/29/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/01/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0				1		1	1		1			1						1
4.1- 5.0	1			1		1	2		1	3		3				3		3
5.1- 6.0	1		1	5			6		1	1		4				1		4
6.1- 7.0	1		1	9		8	10		9	1		1				1		1
7.1- 8.0				12		13	12		13	1			3		5	4		5
8.1- 9.0				9		5	9		5	1		2			2	1		4
9.1- 10.0				3		1	3		1						1			1
MEAN/DEPTH	5.7		6.3	7.3		7.3	7.2		7.2	5.9		5.8	7.6		8.0	6.4		6.7
STD ERR	.54		.46	.21		.21	.20		.21	.63		.44	.23		.22	.51		.37
MEAN/DATE	5.9			7.3			7.2			5.8			7.9			6.6		
STD ERR	.35			.15			.15			.35			.18			.30		
RANGE(MIN)	4.7		5.8	3.6		3.8	3.6		3.8	4.2		3.7	7.2		7.2	4.2		3.7
(MAX)	6.5		6.7	9.4		9.3	9.4		9.3	8.7		8.6	8.0		9.1	8.7		9.1
NO.LENGTHD	3	0	2	40	0	29	43	0	31	7	0	11	3	0	8	10	0	19

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/05/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0				4			4			1					2	1		2
4.1- 5.0										2		2	1		2	3		4
5.1- 6.0						2			2									
6.1- 7.0	1			1		1	2		1	1		1				1		1
7.1- 8.0	1		1	1		1	2		2			1						1
8.1- 9.0	2		3	3		2	5		5	1		1				1		1
9.1- 10.0	2			2			4					1						1
10.1- 11.0												1						1
MEAN/DEPTH	8.2		8.1	6.7		7.1	7.2		7.5	5.5		7.5	4.8		4.2	5.4		6.3
STD ERR	.51		.13	.76		.58	.54		.38	.89		.90			.28	.73		.75
MEAN/DATE		8.2			6.9			7.3			6.6			4.3			6.0	
STD ERR		.30			.52			.36			.69			.25			.55	
RANGE(MIN)	6.2		7.8	3.5		5.4	3.5		5.4	3.7		4.4	4.8		3.7	3.7		3.7
(MAX)	9.3		8.4	9.6		8.7	9.6		8.7	8.4		10.3	4.8		4.9	8.4		10.3
NO.LEN'D	6	0	4	11	0	6	17	0	10	5	0	7	1	0	4	6	0	11

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/12/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
2.1- 3.0						1			1									
3.1- 4.0	2			1		1	3		1	5		3	4		4	9		7
4.1- 5.0				1		1	1		1	6		1	4		5	10		6
5.1- 6.0	5		8	1		1	6		9	5			4		5	9		5
6.1- 7.0	4		8	1			5		8	3			7		3	10		3
7.1- 8.0	3						3						7		2	7		2
8.1- 9.0			2						2									
9.1- 10.0	6		9				6		9						3			3
10.1- 11.0	6		4			1	6		5				2		2	2		2
11.1- 12.0	1		2				1		2						1			1
MEAN/DEPTH	8.0		8.1	5.0		5.5	7.6		7.7	4.8		4.0	6.2		6.4	5.6		6.1
STD ERR	.43		.36				.42		.38				.37		.48			
				.58		1.34				.24		.10				.26		.45
MEAN/DATE		8.0			5.3			7.7			4.7			6.3			5.8	
STD ERR		.27			.75			.28			.21			.30			.23	
RANGE(MIN)	3.5		5.1	3.5		3.0	3.5		3.0	3.2		3.8	3.2		3.4	3.2		3.4
(MAX)	11.7		11.4	6.3		10.5	11.7		11.4	6.6		4.2	10.9		11.3	10.9		11.3
NO.LENGTHD	27	0	33	4	0	5	31	0	38	19	0	4	28	0	25	47	0	29

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/19/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0				1			1											
4.1- 5.0				3			3											
5.1- 6.0			1	6		1	6		2	3						3		
6.1- 7.0				2		9	2		9	3		1				3		1
7.1- 8.0				4		10	4		10	4		3				4		3
8.1- 9.0	1			5		3	6		3	2		1				2		1
9.1- 10.0			1	1			1		1									
10.1- 11.0	1		2				1		2			1			1			2
11.1- 12.0			1			2			3			1			1			2
12.1- 13.0			1			3			4			1			2			3
13.1- 14.0						6			6	1					1	1		1
14.1- 15.0						2			2									
15.1- 16.0															1			1
MEAN/DEPTH	9.5		10.1	8.6		9.3	8.8		9.4	7.4		8.9			12.5	7.4		10.4
STD ERR	.85		.91	.34		.50	.36		.45	.59		.70			.72	.59		.69
MEAN/DATE		9.9			8.3			8.5			8.0			12.5			9.0	
STD ERR		.69			.38			.35			.47			.72			.54	
RANGE(MIN)	8.6		6.0	3.8		5.4	3.8		5.4	5.7		6.5			10.3	5.7		6.5
(MAX)	10.3		12.2	9.1		14.2	10.3		14.2	13.8		12.2			15.5	13.8		15.5
NO.LENGTH	2	0	6	22	0	36	24	0	42	13	0	8	0	0	6	13	0	14

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM)	DATE 06/26/79									DATE 07/03/79								
	DAY			NIGHT			DAY + NIGHT			DAY			NIGHT			DAY + NIGHT		
INTERVAL	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B
5.1- 6.0			1						1									
6.1- 7.0	1		4				1		4									
7.1- 8.0	1		5	2			3		5									
8.1- 9.0	1		1				1		1						2			2
9.1- 10.0	1		2	1			2		2				1			1		
10.1- 11.0			2	4		1	4		3				3		2	3		2
11.1- 12.0				3		3	3		3									
12.1- 13.0	1			1		1	2		1						1			1
13.1- 14.0															1			1
14.1- 15.0				1		2	1		2									
15.1- 16.0																		
16.1- 17.0						2			2									
17.1- 18.0						1			1									
MEAN/DEPTH	8.9		7.9	10.6		13.8	10.1		10.2				10.0		10.6	10.0		10.6
STD ERR	.92		.38				.50		.71				.30		.79			
				.55		.82										.30		.79
MEAN/DATE	9.1			12.0			10.2						10.3			10.3		
STD ERR	.37			.58			.46						.47			.47		
RANGE(MIN)	7.0		5.8	7.3		10.3	7.0		5.8				9.2		8.6	9.2		8.6
(MAX)	12.2		10.5	14.5		17.6	14.5		17.6				10.6		13.5	10.6		13.5
NO.LENGTHD	5	0	15	12	0	10	17	0	25	0	0	0	4	0	6	4	0	6

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 07/10/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/17/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
5.1- 6.0				1			1											
6.1- 7.0																		
7.1- 8.0				1			1											
8.1- 9.0						1			1									
9.1- 10.0																		
10.1- 11.0	4			1			5											
11.1- 12.0			1	1		5	1		6									
12.1- 13.0	2		2	1		3	3		5									
13.1- 14.0	2		2	2		2	4		4									
14.1- 15.0				2			2											
15.1- 16.0						1			1									
MEAN/DEPTH	11.8		12.8	11.6		12.2	11.7		12.4									
STD ERR	.49		.33				.60		.38									
				1.08		.52												
MEAN/DATE		12.2			11.9			12.0										
STD ERR		.34			.54			.35										
RANGE(MIN)	10.3		11.5	5.3		8.5	5.3		8.5									
(MAX)	14.0		13.5	14.8		16.0	14.8		16.0									
NO.LENGTHD	8	0	5	9	0	12	17	0	17	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION 01

LENGTH(MM) INTERVAL	DATE 07/24/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/31/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
9.1- 10.0			1						1									
10.1- 11.0			1						1									
11.1- 12.0			1						1									
12.1- 13.0						1			1									
13.1- 14.0																		
14.1- 15.0			1						1									
15.1- 16.0			2	1			1		2									
MEAN/DEPTH			12.9	15.7		12.2	15.7		12.8									
STD ERR			1.03						.87									
MEAN/DATE		12.9			14.0			13.2										
STD ERR		1.03			1.75			.84										
RANGE(MIN)			9.6	15.7		12.2	15.7		9.6									
(MAX)			15.5	15.7		12.2	15.7		15.5									
NO.LENG'D	0	0	6	1	0	1	1	0	7	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/26/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/03/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
15.1- 16.0						1			1									
16.1- 17.0						4			4									
17.1- 18.0						1			1									
18.1- 19.0						2			2									
19.1- 20.0						1			1									
MEAN/DEPTH						17.5			17.5									
STD ERR						.46			.46									
MEAN/DATE					17.5			17.5										
STD ERR					.46			.46										
RANGE(MIN)						15.7			15.7									
(MAX)						19.6			19.6									
NO.LENGTHD	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

	DATE 07/16/79									DATE 07/17/79								
LENGTH(MM)	DAY			NIGHT			DAY + NIGHT			DAY			NIGHT			DAY + NIGHT		
INTERVAL	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B
16.1- 17.0						2			2									
17.1- 18.0				1			1											
18.1- 19.0																		
19.1- 20.0																		
20.1- 21.0																		
21.1- 22.0				1			1											
22.1- 23.0																		
23.1- 24.0				1			1											
24.1- 25.0				2		2	2		2									
25.1- 26.0				1			1											
26.1- 27.0				1			1											
27.1- 28.0						1			1									
28.1- 29.0				2			2											
MEAN/DEPTH				24.7		22.2	24.7		22.2									
STD ERR				1.23		2.33	1.23		2.33									
MEAN/DATE				23.8			23.8											
STD ERR				1.14			1.14											
RANGE(MIN)				17.1		16.5	17.1		16.5									
(MAX)				29.0		28.0	29.0		28.0									
NO.LEVGD	0	0	0	9	0	5	9	0	5	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 07/24/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/31/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
16.1- 17.0						2			2									
17.1- 18.0						7			7									
18.1- 19.0						5			5									
19.1- 20.0						9			9									
20.1- 21.0						8			8									
21.1- 22.0						1			1									
22.1- 23.0						3			3									
23.1- 24.0						2			2									
24.1- 25.0						2			2									
25.1- 26.0						2			2									
26.1- 27.0																		
27.1- 28.0						1			1									
28.1- 29.0						1			1									
29.1- 30.0						1			1									
30.1- 31.0																		
31.1- 32.0																		
32.1- 33.0						2			2									
33.1- 34.0																		
34.1- 35.0																		
35.1- 36.0																		
36.1- 37.0						1			1									
37.1- 38.0																		
38.1- 39.0						1			1									
MEAN/DEPTH						22.0			22.0									
STD ERR						.73			.73									
MEAN/DATE				22.0			22.0											
STD ERR				.73			.73											
RANGE(MIN)						16.8			16.8									
(MAX)						38.5			38.5									
NO.LENGTH	0	0	0	0	0	48	0	0	48	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 08/07/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 08/14/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
18.1- 19.0						1			1									
19.1- 20.0																		
20.1- 21.0																		
21.1- 22.0																		
22.1- 23.0																		
23.1- 24.0																		
24.1- 25.0						1			1									
25.1- 26.0																		
26.1- 27.0																		
27.1- 28.0																		
28.1- 29.0																		
29.1- 30.0																		
30.1- 31.0																		
31.1- 32.0																		
32.1- 33.0																		
33.1- 34.0																		
34.1- 35.0																		
35.1- 36.0																		
36.1- 37.0																		
37.1- 38.0																		
38.1- 39.0						1			1									
39.1- 40.0						1			1									
MEAN/DEPTH						30.8			30.8									
STD ERR						5.20			5.20									
MEAN/DATE					30.8			30.8										
STD ERR					5.20			5.20										
RANGE(MIN)						19.0			19.0									
(MAX)						40.0			40.0									
NO.LENG'D	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 05/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0	1		1				1		1	1		1				1		1
4.1- 5.0										1		1			1	1		2
MEAN/DEPTH	3.8		3.7				3.8		3.7	3.9		4.1			4.1	3.9		4.1
STD ERR										.20		.40				.20		.23
MEAN/DATE		3.8						3.8			4.0			4.1			4.0	
STD ERR		.05						.05			.19						.15	
RANGE(MIN)	3.8		3.7				3.8		3.7	3.7		3.7			4.1	3.7		3.7
(MAX)	3.8		3.7				3.8		3.7	4.1		4.5			4.1	4.1		4.5
NO.LENG'D	1	0	1	0	0	0	1	0	1	2	0	2	0	0	1	2	0	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION 01

LENGTH(MM) INTERVAL	DATE 05/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/25/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0				1		1	1		1				1			1		
5.1- 6.0										3		3	1			4		3
MEAN/DEPTH				4.8		4.5	4.8		4.5	5.7		5.7	4.9			5.3		5.7
STD ERR										.07		.15	.65			.29		.15
MEAN/DATE				4.7			4.7			5.7			4.9			5.5		
STD ERR				.15			.15			.07			.65			.19		
RANGE(MIN)				4.8		4.5	4.8		4.5	5.6		5.5	4.2			4.2		5.5
(MAX)				4.8		4.5	4.8		4.5	5.8		6.0	5.5			5.8		6.0
NO.LENG'D	0	0	0	1	0	1	1	0	1	3	0	3	2	0	0	5	0	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 05/29/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/01/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
2.1- 3.0															1			1
3.1- 4.0				2		1	2		1	1		1				1		1
4.1- 5.0	1			1		1	2		1	3		3				3		3
5.1- 6.0	1		1	5			6		1	1		4				1		4
6.1- 7.0	1		1	9		8	10		9	1		1				1		1
7.1- 8.0				12		13	12		13	1			3		5	4		5
8.1- 9.0				9		5	9		5	1		2			2	1		4
9.1- 10.0				3		1	3		1						1			1
MEAN/DEPTH	5.7		6.3	7.2		7.3	7.1		7.2	5.6		5.8	7.6		7.4	6.2		6.5
STD ERR	.54		.45	.22		.21	.22		.21	.62		.44	.23		.62	.53		.41
MEAN/DATE		5.9			7.2			7.1			5.7			7.5			6.4	
STD ERR		.35			.16			.15			.35			.46			.32	
RANGE(MIN)	4.7		5.8	3.6		3.8	3.6		3.8	3.6		3.7	7.2		2.7	3.6		2.7
(MAX)	6.5		6.7	9.4		9.3	9.4		9.3	8.7		8.6	8.0		9.1	8.7		9.1
NO.LENG'D	3	0	2	41	0	29	44	0	31	8	0	11	3	0	9	11	0	20

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/05/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0	1			4			5			1			1		2	2		2
4.1- 5.0										2		2	1		2	3		4
5.1- 6.0						2			2									
6.1- 7.0	1			1		1	2		1	1		1				1		1
7.1- 8.0	1		1	1		1	2		2			1						1
8.1- 9.0	2		3	3		2	5		5	1		1				1		1
9.1- 10.0	2			2			4					1						1
10.1- 11.0												1						1
MEAN/DEPTH	7.6		8.1	6.7		7.1	7.0		7.5	5.5		7.5	4.1		4.2	5.1		6.3
STD ERR	.75		.13	.76		.58	.54		.38	.89		.90	.70		.28	.68		.75
MEAN/DATE	7.8			6.9			7.2			6.6			4.2			5.8		
STD ERR	.47			.52			.37			.68			.25			.54		
RANGE(MIN)	3.9		7.8	3.5		5.4	3.5		5.4	3.7		4.4	3.4		3.7	3.4		3.7
(MAX)	9.3		8.4	9.6		8.7	9.6		8.7	8.4		10.3	4.8		4.9	8.4		10.3
NO.LENGTH'D	7	0	4	11	0	6	18	0	10	5	0	7	2	0	4	7	0	11

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION 01

LENGTH(MM) INTERVAL	DATE 06/12/79 DAY S	M	B	NIGHT S	M	B	DAY + NIGHT S	M	B	DATE 06/15/79 DAY S	M	B	NIGHT S	M	B	DAY + NIGHT S	M	B
2.1- 3.0	3		1			1	3		2									
3.1- 4.0	4		4	1		1	5		5	5		3	4		4	9		7
4.1- 5.0				1		1	1		1	6		1	4		5	10		6
5.1- 6.0	5		8	1		1	6		9	5			4		5	9		5
6.1- 7.0	4		8	1			5		8	3			7		3	10		3
7.1- 8.0	3						3						7		2	7		2
8.1- 9.0			2						2									
9.1- 10.0	6		9				6		9						3			3
10.1- 11.0	6		4			1	6		5				2		2	2		2
11.1- 12.0	1		2				1		2						1			1
MEAN/DEPTH	7.2		7.4	5.0		5.5	7.0		7.2	4.8		4.0	6.2		6.4	5.6		6.1
STD ERR	.48		.41				.44		.40				.37		.48			
				.58		1.34				.24		.10				.26		.45
MEAN/DATE		7.3			5.3			7.1			4.7			6.3			5.8	
STD ERR		.31			.75			.29			.21			.30			.23	
RANGE(MIN)	3.0		2.9	3.5		3.0	3.0		2.9	3.2		3.8	3.2		3.4	3.2		3.4
(MAX)	11.7		11.4	6.3		10.5	11.7		11.4	6.6		4.2	10.9		11.3	10.9		11.3
NO.LENG'D	32	0	38	4	0	5	36	0	43	19	0	4	28	0	25	47	0	29

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/19/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0			1	1			1		1									
4.1- 5.0				3			3											
5.1- 6.0			1	6		1	6		2	3						3		
6.1- 7.0				2		9	2		9	3		1				3		1
7.1- 8.0				4		10	4		10	4		3				4		3
8.1- 9.0	1			5		3	6		3	2		1				2		1
9.1- 10.0			1	1			1		1									
10.1- 11.0	1		2				1		2			1			1			2
11.1- 12.0			1			2			3			1			1			2
12.1- 13.0			1			3			4			1			2			3
13.1- 14.0						6			6	1					1	1		1
14.1- 15.0						2			2									
15.1- 16.0															1			1
MEAN/DEPTH	9.5		9.1	6.6		9.3	6.8		9.3	7.4		8.9			12.5	7.4		10.4
STD ERR	.85		1.22	.34		.50	.36		.46	.59		.70			.72	.59		.69
MEAN/DATE		9.2			8.3			8.4			8.0			12.5			9.0	
STD ERR		.95			.38			.35			.47			.72			.54	
RANGE(MIN)	8.6		3.4	3.8		5.4	3.8		3.4	5.7		6.5			10.3	5.7		6.5
(MAX)	10.3		12.2	9.1		14.2	10.3		14.2	13.8		12.2			15.5	13.8		15.5
NO.LENG'D	2	0	7	22	0	36	24	0	43	13	0	8	0	0	6	13	0	14

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/26/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/03/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0			1						1									
4.1- 5.0																		
5.1- 6.0			1						1									
6.1- 7.0	1		4				1		4									
7.1- 8.0	1		5	2			3		5									
8.1- 9.0	1		1				1		1						2			2
9.1- 10.0	1		2	1			2		2				1			1		
10.1- 11.0			2	4		1	4		3				3		2	3		2
11.1- 12.0				3		3	3		3									
12.1- 13.0	1			1		1	2		1						1			1
13.1- 14.0															1			1
14.1- 15.0				1		2	1		2									
15.1- 16.0						1			1									
16.1- 17.0						6			6									
17.1- 18.0						2			2									
18.1- 19.0						2			2									
19.1- 20.0						1			1									
MEAN/DEPTH	8.9		7.6	10.6		15.5	10.1		11.9				10.0		10.6	10.0		10.6
STD ERR	.92		.47	.55		.64	.50		.79				.30		.79	.30		.79
MEAN/DATE		7.9			13.6			11.3						10.3			10.3	
STD ERR		.43			.63			.57						.47			.47	
RANGE(MIN)	7.0		3.1	7.3		10.3	7.0		3.1				9.2		8.6	9.2		8.6
(MAX)	12.2		10.5	14.5		19.6	14.5		19.6				10.6		13.5	10.6		13.5
NO.LENG'D	5	0	16	12	0	19	17	0	35	0	0	0	4	0	6	4	0	6

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 07/10/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/17/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
5.1- 6.0				1			1											
6.1- 7.0																		
7.1- 8.0				1			1											
8.1- 9.0						1			1									
9.1- 10.0																		
10.1- 11.0	4			1			5											
11.1- 12.0			1	1		5	1		6									
12.1- 13.0	2		2	1		3	3		5									
13.1- 14.0	2		2	2		2	4		4									
14.1- 15.0				2			2											
15.1- 16.0						1			1									
16.1- 17.0						2			2									
17.1- 18.0				1			1											
18.1- 19.0																		
19.1- 20.0																		
20.1- 21.0																		
21.1- 22.0				1			1											
22.1- 23.0																		
23.1- 24.0				1			1											
24.1- 25.0				2		2	2		2									
25.1- 26.0				1			1											
26.1- 27.0				1			1											
27.1- 28.0						1			1									
28.1- 29.0				2			2											
MEAN/DEPTH	11.8		12.8	18.1		15.1	16.2		14.6									
STD ERR	.49		.33				1.36		1.06									
				1.77		1.35												
MEAN/DATE		12.2			16.7			15.5										
STD ERR		.34			1.14			.88										
RANGE(MIN)	10.3		11.6	5.3		8.5	5.3		8.5									
(MAX)	14.0		13.5	29.0		28.0	29.0		28.0									
NO.LENG'D	8	0	5	18	0	17	26	0	22	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION 01

LENGTH(MM) INTERVAL	DATE 07/24/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/31/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
9.1- 10.0			1						1									
10.1- 11.0			1						1									
11.1- 12.0			1						1									
12.1- 13.0						1			1									
13.1- 14.0																		
14.1- 15.0			1						1									
15.1- 16.0			2	1			1		2									
16.1- 17.0						2			2									
17.1- 18.0						7			7									
18.1- 19.0						5			5									
19.1- 20.0						9			9									
20.1- 21.0						8			8									
21.1- 22.0						1			1									
22.1- 23.0						3			3									
23.1- 24.0						2			2									
24.1- 25.0						2			2									
25.1- 26.0						2			2									
26.1- 27.0																		
27.1- 28.0						1			1									
28.1- 29.0						1			1									
29.1- 30.0						1			1									
30.1- 31.0																		
31.1- 32.0																		
32.1- 33.0						2			2									
33.1- 34.0																		
34.1- 35.0																		
35.1- 36.0																		
36.1- 37.0						1			1									
37.1- 38.0																		
38.1- 39.0						1			1									
MEAN/DEPTH			12.9	15.7		21.8	15.7		20.8									
STD ERR			1.03						.77									
						.75												
MEAN/DATE		12.9			21.7			20.7										
STD ERR		1.03			.74			.76										
RA (MIN)			9.6	15.7		12.2	15.7		9.6									
(MAX)			15.5	15.7		38.5	15.7		38.5									
NO LENGTH																		

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 08/07/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 08/14/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
18.1- 19.0						1			1									
19.1- 20.0																		
20.1- 21.0																		
21.1- 22.0																		
22.1- 23.0																		
23.1- 24.0																		
24.1- 25.0						1			1									
25.1- 26.0																		
26.1- 27.0																		
27.1- 28.0																		
28.1- 29.0																		
29.1- 30.0																		
30.1- 31.0																		
31.1- 32.0																		
32.1- 33.0																		
33.1- 34.0																		
34.1- 35.0																		
35.1- 36.0																		
36.1- 37.0																		
37.1- 38.0																		
38.1- 39.0						1			1									
39.1- 40.0						1			1									
MEAN/DEPTH						30.8			30.8									
STD ERR						5.20			5.20									
MEAN/DATE				30.8			30.8											
STD ERR				5.20			5.20											
RANGE(MIN)						19.0			19.0									
(MAX)						40.0			40.0									
NO.LENGTHD	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0

APPENDIX-5 Nekton: Abundance, Biomass and Percent Composition

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

ALL SITES- SURFACE TRAWLS

SPECIES	JAN		FEB		MAR		APR		MAY		JUN	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	3	25.0	2	4.3
ALOSA SP	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	20	42.6
AMERICAN EEL	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	1	8.3	0	.0
AMERICAN SHAD	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	13	27.7
ATLANTIC TOMCOD	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	1	2.1
BANDED KILLIFISH	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	0	.0
BAY ANCHOVY	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	0	.0
BLUEBACK HERRING	NOT SAMPLED		NOT SAMPLED		0	.0	1	14.3	6	50.0	0	.0
GOLDEN SHINER	NOT SAMPLED		NOT SAMPLED		0	.0	1	14.3	0	.0	1	2.1
GOLDFISH	NOT SAMPLED		NOT SAMPLED		0	.0	1	14.3	0	.0	0	.0
HOGCHOKER	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	0	.0
RAINBOW SMELT	NOT SAMPLED		NOT SAMPLED		2	50.0	1	14.3	0	.0	1	2.1
SPOTTAIL SHINER	NOT SAMPLED		NOT SAMPLED		1	25.0	1	14.3	0	.0	0	.0
STRIPED BASS	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	1	2.1
WHITE CATFISH	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	1	8.3	1	2.1
WHITE PERCH	NOT SAMPLED		NOT SAMPLED		1	25.0	2	28.6	1	8.3	7	14.9
TOTAL					4		7		12		47	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

ALL SITES- SURFACE TRAWLS

	JUL		AUG		SEP		OCT		NOV		DEC		TOTAL	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	5	2.5	18	2.2	2	11.1	20	.3	11	24.4	0	.0	61	.70
ALOSA SP	18	8.9	0	.0	0	.0	0	.0	0	.0	0	.0	38	.44
AMERICAN EEL	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.01
AMERICAN SHAD	21	10.3	20	2.5	3	16.7	51	.7	9	20.0	1	12.5	118	1.36
ATLANTIC TOMCOD	0	.0	0	.0	0	.0	0	.0	2	4.4	1	12.5	4	.05
BANDED KILLIFISH	0	.0	0	.0	1	5.6	0	.0	0	.0	0	.0	1	.01
BAY ANCHOVY	7	3.4	766	94.2	5	27.8	0	.0	0	.0	0	.0	778	8.98
BLUEBACK HERRING	149	73.4	4	.5	4	22.2	7425	99.0	19	42.2	1	12.5	7609	87.87
GOLDEN SHINER	0	.0	0	.0	0	.0	0	.0	0	.0	1	12.5	3	.03
GOLDFISH	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.01
HOGCHOKER	0	.0	0	.0	1	5.6	2	.0	0	.0	0	.0	3	.03
RAINBOW SMELT	0	.0	1	.1	0	.0	0	.0	0	.0	1	12.5	6	.07
SPOTTAIL SHINER	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0	2	.02
STRIPED BASS	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.01
WHITE CATFISH	0	.0	1	.1	0	.0	0	.0	0	.0	0	.0	3	.03
WHITE PERCH	3	1.5	3	.4	2	11.1	4	.1	4	8.9	3	37.5	30	.35
TOTAL	203		813		18		7502		45		8		8659	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

ALL SITES- BOTTOM TRAWLS

	JAN		FEB		MAR		APR		MAY		JUN	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	NOT SAMPLED		NOT SAMPLED		0	.0	4	.3	19	1.3	2	.1
ALOSA SP	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	9	.6
AMERICAN EEL	NOT SAMPLED		NOT SAMPLED		3	1.5	12	1.0	33	2.3	27	1.8
AMERICAN SHAD	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	1	.1
ATLANTIC STURGEON	NOT SAMPLED		NOT SAMPLED		1	.5	0	.0	3	.2	1	.1
ATLANTIC TOMCOD	NOT SAMPLED		NOT SAMPLED		0	.0	2	.2	108	7.4	227	15.2
BANDED KILLIFISH	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	0	.0
BAY ANCHOVY	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	1	.1
BLUEBACK HERRING	NOT SAMPLED		NOT SAMPLED		0	.0	3	.2	23	1.6	12	.8
BROWN BULLHEAD	NOT SAMPLED		NOT SAMPLED		0	.0	3	.2	23	1.6	20	1.3
CARP	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	0	.0
GOLDEN SHINER	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	0	.0
GOLDFISH	NOT SAMPLED		NOT SAMPLED		0	.0	1	.1	1	.1	1	.1
HOGCHOKER	NOT SAMPLED		NOT SAMPLED		2	1.0	13	1.0	333	22.7	33	2.2
PUMPKINSEED	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	0	.0
RAINBOW SMELT	NOT SAMPLED		NOT SAMPLED		1	.5	6	.5	14	1.0	1	.1
SPOTTAIL SHINER	NOT SAMPLED		NOT SAMPLED		18	9.3	13	1.0	41	2.8	51	3.4
STRIPED BASS	NOT SAMPLED		NOT SAMPLED		0	.0	2	.2	2	.1	1	.1
TESSELLATED DARTER	NOT SAMPLED		NOT SAMPLED		62	32.0	31	2.5	12	.8	13	.9
THREESPINE STICKLEBACK	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	1	.1	0	.0
WHITE CATFISH	NOT SAMPLED		NOT SAMPLED		10	5.2	9	.7	49	3.3	37	2.5
WHITE PERCH	NOT SAMPLED		NOT SAMPLED		92	47.4	1144	92.0	799	54.6	1055	70.6
WHITE SUCKER	NOT SAMPLED		NOT SAMPLED		5	2.6	1	.1	3	.2	3	.2
YELLOW PERCH	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	0	.0
TOTAL					194		1244		1464		1495	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

ALL SITES- BOTTOM TRAWLS

	JUL		AUG		SEP		OCT		NOV		DEC		TOTAL	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	77	3.7	210	2.3	172	2.8	47	1.2	15	.5	0	.0	546	1.86
ALOSA SP	94	4.5	0	.0	0	.0	0	.0	0	.0	0	.0	103	.35
AMERICAN EEL	18	.9	20	.2	10	.2	7	.2	16	.6	3	.3	149	.51
AMERICAN SHAD	198	9.4	342	3.8	159	2.6	149	3.9	29	1.1	0	.0	878	2.98
ATLANTIC STURGEON	7	.3	14	.2	8	.1	0	.0	3	.1	3	.3	40	.14
ATLANTIC TOMCOD	398	18.9	52	.6	84	1.4	141	3.7	412	15.0	314	26.8	1738	5.91
BANDED KILLIFISH	0	.0	0	.0	5	.1	1	.0	1	.0	0	.0	7	.02
BAY ANCHOVY	11	.5	133	1.5	35	.6	0	.0	0	.0	0	.0	180	.61
BLUEBACK HERRING	618	29.4	1860	20.6	2950	47.7	1941	51.3	160	5.8	0	.0	7567	25.72
BROWN BULLHEAD	11	.5	23	.3	5	.1	1	.0	1	.0	0	.0	87	.30
CARP	0	.0	1	.0	0	.0	1	.0	0	.0	1	.1	3	.01
GOLDEN SHINER	0	.0	0	.0	0	.0	0	.0	1	.0	14	1.2	15	.05
GOLDFISH	1	.0	0	.0	1	.0	0	.0	2	.1	39	3.3	46	.16
HOGCHOKER	44	2.1	99	1.1	139	2.2	258	6.8	146	5.3	30	2.6	1097	3.73
PUMPKINSEED	0	.0	0	.0	0	.0	0	.0	0	.0	4	.3	4	.01
RAINBOW SMELT	21	1.0	9	.1	3	.0	3	.1	5	.2	0	.0	63	.21
SPOTTAIL SHINER	33	1.6	111	1.2	47	.8	59	1.6	127	4.6	429	36.6	929	3.16
STRIPED BASS	6	.3	41	.5	6	.1	2	.1	11	.4	11	.9	82	.28
TESSELLATED DARTER	1	.0	16	.2	11	.2	10	.3	20	.7	44	3.8	220	.75
THREESPINE STICKLEBACK	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.00
WHITE CATFISH	42	2.0	61	.7	29	.5	32	.8	28	1.0	8	.7	305	1.04
WHITE PERCH	525	24.9	6039	66.8	2522	40.8	1126	29.8	1763	64.3	267	22.8	15332	52.11
WHITE SUCKER	0	.0	7	.1	1	.0	2	.1	1	.0	4	.3	27	.09
YELLOW PERCH	0	.0	0	.0	0	.0	0	.0	0	.0	2	.2	2	.01
TOTAL	2105		9038		6187		3780		2741		1173		29421	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

ALL SITES- SEINES

SPECIES	JAN NO.	JAN PCNT	FEB NO.	FEB PCNT	MAR NO.	MAR PCNT	APR NO.	APR PCNT	MAY NO.	MAY PCNT	JUN NO.	JUN PCNT
ALEWIFE	0	.0	NOT SAMPLED		0	.0	113	17.8	136	7.3	3	.1
ALOSA SP	0	.0	NOT SAMPLED		0	.0	0	.0	0	.0	7	.3
AMERICAN EEL	0	.0	NOT SAMPLED		0	.0	2	.3	29	1.6	16	.8
AMERICAN SHAD	0	.0	NOT SAMPLED		0	.0	0	.0	0	.0	8	.4
ATLANTIC NEEDLEFISH	0	.0	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0
BANDED KILLIFISH	0	.0	NOT SAMPLED		16	16.5	32	5.0	80	4.3	262	12.3
BAY ANCHOVY	0	.0	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0
BLACK CRAPPIE	0	.0	NOT SAMPLED		1	1.0	2	.3	1	.1	4	.2
BLUEBACK HERRING	0	.0	NOT SAMPLED		0	.0	0	.0	16	.9	3	.1
BLUEGILL	0	.0	NOT SAMPLED		1	1.0	0	.0	7	.4	25	1.2
BROWN BULLHEAD	0	.0	NOT SAMPLED		0	.0	0	.0	3	.2	20	.9
CARP	0	.0	NOT SAMPLED		5	5.2	7	1.1	15	.8	14	.7
CHANNEL CATFISH	0	.0	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0
COMMON SHINER	0	.0	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0
EMERALD SHINER	0	.0	NOT SAMPLED		0	.0	0	.0	0	.0	5	.2
FATHEAD MINNOW	0	.0	NOT SAMPLED		0	.0	0	.0	0	.0	1	.0
FOURSPINE STICKLEBACK	1	50.0	NOT SAMPLED		0	.0	1	.2	8	.4	2	.1
GIZZARD SHAD	0	.0	NOT SAMPLED		0	.0	1	.2	0	.0	0	.0
GOLDEN SHINER	0	.0	NOT SAMPLED		2	2.1	28	4.4	84	4.5	121	5.7
GOLDFISH	1	50.0	NOT SAMPLED		16	16.5	18	2.8	5	.3	13	.6
HOGCHOKER	0	.0	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0
LARGEMOUTH BASS	0	.0	NOT SAMPLED		1	1.0	1	.2	0	.0	7	.3
LEPOMIS SP	0	.0	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0
MUMMICHOG	0	.0	NOT SAMPLED		0	.0	0	.0	1	.1	0	.0
PUMPKINSEED	0	.0	NOT SAMPLED		0	.0	11	1.7	60	3.2	69	3.2
RAINBOW SMELT	0	.0	NOT SAMPLED		0	.0	0	.0	1	.1	0	.0
REDBREAST SUNFISH	0	.0	NOT SAMPLED		0	.0	0	.0	9	.5	27	1.3
ROCK BASS	0	.0	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0
SILVERY MINNOW	0	.0	NOT SAMPLED		0	.0	0	.0	1	.1	0	.0
SPOTTAIL SHINER	0	.0	NOT SAMPLED		47	48.5	234	36.8	726	39.0	328	15.4
STRIPED BASS	0	.0	NOT SAMPLED		0	.0	0	.0	5	.3	43	2.0
TESSELLATED DARTER	0	.0	NOT SAMPLED		6	6.2	140	22.0	92	4.9	45	2.1
WHITE CATFISH	0	.0	NOT SAMPLED		1	1.0	10	1.6	6	.3	30	1.4
WHITE MULLET	0	.0	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0
WHITE PERCH	0	.0	NOT SAMPLED		1	1.0	35	5.5	569	30.6	1055	49.7
WHITE SUCKER	0	.0	NOT SAMPLED		0	.0	1	.2	6	.3	12	.6
YELLOW PERCH	0	.0	NOT SAMPLED		0	.0	0	.0	2	.1	4	.2
TOTAL	2				97		636		1862		2124	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

ALL SITES- SEINES

	JUL		AUG		SEP		OCT		NOV		DEC		TOTAL	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	41	1.7	166	2.7	107	4.0	86	3.1	64	8.3	0	.0	716	3.68
ALOSA SP	6	.2	0	.0	0	.0	0	.0	0	.0	0	.0	13	.07
AMERICAN EEL	7	.3	17	.3	8	.3	10	.4	6	.8	0	.0	95	.49
AMERICAN SHAD	1382	57.1	474	7.9	90	3.4	109	3.9	6	.8	0	.0	2069	10.62
ATLANTIC NEEDLEFISH	0	.0	1	.0	13	.5	2	.1	0	.0	0	.0	16	.08
BANDED KILLIFISH	94	3.9	168	2.8	239	9.0	154	5.6	59	7.7	10	9.1	1114	5.72
BAY ANCHOVY	0	.0	0	.0	1	.0	0	.0	0	.0	0	.0	1	.01
BLACK CRAPPIE	0	.0	1	.0	0	.0	1	.0	1	.1	0	.0	11	.06
BLUEBACK HERRING	105	4.3	3595	59.5	461	17.4	786	28.3	6	.8	0	.0	4972	25.52
BLUEGILL	3	.1	37	.6	33	1.2	6	.2	2	.3	1	.9	115	.59
BROWN BULLHEAD	6	.2	8	.1	8	.3	11	.4	1	.1	0	.0	57	.29
CARP	2	.1	9	.1	5	.2	10	.4	5	.7	2	1.8	74	.38
CHANNEL CATFISH	0	.0	0	.0	0	.0	1	.0	0	.0	0	.0	1	.01
COMMON SHINER	0	.0	1	.0	0	.0	0	.0	0	.0	0	.0	1	.01
EMERALD SHINER	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0	5	.03
FATHEAD MINNOW	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.01
FOURSPINE STICKLEBACK	1	.0	2	.0	6	.2	16	.6	13	1.7	4	3.6	54	.28
GIZZARD SHAD	0	.0	0	.0	0	.0	1	.0	0	.0	6	5.5	8	.04
GOLDEN SHINER	49	2.0	19	.3	11	.4	17	.6	15	2.0	6	5.5	352	1.81
GOLDFISH	35	1.4	77	1.3	19	.7	6	.2	1	.1	2	1.8	193	.99
HOGCHOKER	0	.0	1	.0	4	.2	0	.0	0	.0	0	.0	5	.03
LARGEMOUTH BASS	4	.2	3	.0	2	.1	2	.1	0	.0	0	.0	20	.10
LEPOMIS SP	0	.0	4	.1	0	.0	0	.0	0	.0	0	.0	4	.02
MUMMICHOG	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.01
PUMPKINSEED	39	1.6	237	3.9	284	10.7	173	6.2	46	6.0	6	5.5	925	4.75
RAINBOW SMELT	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.01
REDBREAST SUNFISH	7	.3	13	.2	19	.7	12	.4	1	.1	1	.9	89	.46
ROCK BASS	0	.0	0	.0	1	.0	1	.0	0	.0	0	.0	2	.01
SILVERY MINNOW	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.01
SPOTTAIL SHINER	70	2.9	286	4.7	300	11.3	421	15.2	141	18.4	30	27.3	2583	13.26
STRIPED BASS	13	.5	69	1.1	66	2.5	29	1.0	11	1.4	0	.0	236	1.21
TESSELLATED DARTER	22	.9	37	.6	55	2.1	42	1.5	40	5.2	3	2.7	482	2.47
WHITE CATFISH	4	.2	1	.0	5	.2	3	.1	0	.0	0	.0	60	.31
WHITE MULLET	0	.0	0	.0	0	.0	1	.0	1	.1	0	.0	2	.01
WHITE PERCH	529	21.9	804	13.3	905	34.1	866	31.2	339	44.2	37	33.6	5140	26.39
WHITE SUCKER	0	.0	1	.0	2	.1	0	.0	4	.5	2	1.8	28	.14
YELLOW PERCH	1	.0	6	.1	7	.3	8	.3	5	.7	0	.0	33	.17
TOTAL	2420		6037		2651		2774		767		110		19480	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

ALL SITES- SURFACE TRAWLS

SPECIES	JAN GM.	JAN PCNT	FEB GM.	FEB PCNT	MAR GM.	MAR PCNT	APR GM.	APR PCNT	MAY GM.	MAY PCNT	JUN GM.	JUN PCNT
ALEWIFE	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	60.60	18.5	34.00	5.0
ALOSA SP	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	.97	.1
AMERICAN EEL	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	166.00	50.7	.00	.0
AMERICAN SHAD	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	28.30	4.2
ATLANTIC TOMCOD	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	5.30	.8
BANDED KILLIFISH	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0
BAY ANCHOVY	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0
BLUEBACK HERRING	NOT SAMPLED		NOT SAMPLED		.00	.0	3.20	1.3	45.80	14.0	.00	.0
GOLDEN SHINER	NOT SAMPLED		NOT SAMPLED		.00	.0	108.40	45.1	.00	.0	.00	.0
GOLDFISH	NOT SAMPLED		NOT SAMPLED		.00	.0	52.30	21.8	.00	.0	.00	.0
HOGCHOKER	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0
RAINBOW SMELT	NOT SAMPLED		NOT SAMPLED		33.50	44.1	4.90	2.0	.00	.0	7.60	1.1
SPOTTAIL SHINER	NOT SAMPLED		NOT SAMPLED		4.10	5.4	4.20	1.7	.00	.0	.00	.0
STRIPED BASS	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	39.70	5.8
WHITE CATFISH	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	9.30	2.8	69.10	10.2
WHITE PERCH	NOT SAMPLED		NOT SAMPLED		38.30	50.5	67.10	27.9	45.80	14.0	493.90	72.8
TOTAL					75.90		240.10		327.50		678.87	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

ALL SITES- SURFACE TRAWLS

SPECIES	JUL		AUG		SEP		OCT		NOV		DEC		TOTAL	
	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
ALEWIFE	57.40	21.0	182.00	43.7	56.50	31.6	150.60	1.1	181.00	41.1	.00	.0	722.10	4.36
ALOSA SP	.85	.3	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	1.82	.01
AMERICAN EEL	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	166.00	1.00
AMERICAN SHAD	35.60	13.0	48.40	11.6	10.80	6.0	262.00	1.9	52.20	11.8	6.50	2.6	443.80	2.68
ATLANTIC TOMCOD	.00	.0	.00	.0	.00	.0	.00	.0	82.20	18.7	45.20	17.8	132.70	.80
BANDED KILLIFISH	.00	.0	.00	.0	.80	.4	.00	.0	.00	.0	.00	.0	.80	.00
BAY ANCHOVY	13.70	5.0	78.84	18.9	4.05	2.3	.00	.0	.00	.0	.00	.0	96.59	.58
BLUEBACK HERRING	59.55	21.8	5.40	1.3	9.50	5.3	13103.51	95.9	43.90	10.0	1.40	.5	13272.26	80.21
GOLDEN SHINER	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	63.30	24.9	171.70	1.04
GOLDFISH	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	52.30	.32
HOGCHOKER	.00	.0	.00	.0	.70	.4	1.50	.0	.00	.0	.00	.0	2.20	.01
RAINBOW SMELT	.00	.0	.60	.1	.00	.0	.00	.0	.00	.0	2.10	.8	48.70	.29
SPOTTAIL SHINER	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	8.30	.05
STRIPED BASS	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	39.70	.24
WHITE CATFISH	.00	.0	41.90	10.1	.00	.0	.00	.0	.00	.0	.00	.0	120.30	.73
WHITE PERCH	106.30	38.9	59.00	14.2	96.60	54.0	143.60	1.1	81.30	18.5	136.10	53.5	1268.00	7.66
TOTAL	273.40		416.14		178.95		13661.21		440.60		254.60		16547.27	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

ALL SITES- BOTTOM TRAWLS

SPECIES	JAN GM.	JAN PCNT	FEB GM.	FEB PCNT	MAR GM.	MAR PCNT	APR GM.	APR PCNT	MAY GM.	MAY PCNT	JUN GM.	JUN PCNT
ALEWIFE	NOT SAMPLED		NOT SAMPLED		.00	.0	1378.90	2.0	402.92	.7	50.50	.1
ALOSA SP	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	1.20	.0
AMERICAN EEL	NOT SAMPLED		NOT SAMPLED		112.70	1.0	1280.90	1.8	2067.30	3.6	3619.80	6.0
AMERICAN SHAD	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	.50	.0
ATLANTIC STURGEON	NOT SAMPLED		NOT SAMPLED		169.80	1.6	.00	.0	1136.40	2.0	3174.50	5.2
ATLANTIC TOMCOD	NOT SAMPLED		NOT SAMPLED		.00	.0	76.60	.1	785.60	1.4	1172.00	1.9
BANDED KILLIFISH	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0
BAY ANCHOVY	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	2.90	.0
BLUEBACK HERRING	NOT SAMPLED		NOT SAMPLED		.00	.0	604.40	.9	2027.25	3.5	1014.80	1.7
BROWN BULLHEAD	NOT SAMPLED		NOT SAMPLED		.00	.0	636.90	.9	5241.90	9.1	2546.40	4.2
CARP	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0
GOLDEN SHINER	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0
GOLDFISH	NOT SAMPLED		NOT SAMPLED		.00	.0	20.70	.0	478.30	.8	770.20	1.3
HOGCHOKER	NOT SAMPLED		NOT SAMPLED		42.20	.4	148.00	.2	3092.45	5.3	218.40	.4
PUMPKINSEED	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0
RAINBOW SMELT	NOT SAMPLED		NOT SAMPLED		18.60	.2	41.70	.1	76.40	.1	5.60	.0
SPOTTAIL SHINER	NOT SAMPLED		NOT SAMPLED		188.20	1.7	139.20	.2	464.20	.8	417.57	.7
STRIPED BASS	NOT SAMPLED		NOT SAMPLED		.00	.0	1263.80	1.8	24.20	.0	9.10	.0
TESSELLATED DARTER	NOT SAMPLED		NOT SAMPLED		180.63	1.7	94.54	.1	31.70	.1	30.30	.0
THREESPINE STICKLEBACK	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	1.50	.0	.00	.0
WHITE CATFISH	NOT SAMPLED		NOT SAMPLED		3564.00	33.0	2462.50	3.5	2291.60	4.0	6226.40	10.2
WHITE PERCH	NOT SAMPLED		NOT SAMPLED		5451.70	50.5	61383.23	88.3	38749.20	67.3	40705.56	66.9
WHITE SUCKER	NOT SAMPLED		NOT SAMPLED		1060.20	9.8	5.00	.0	951.80	1.6	857.80	1.4
YELLOW PERCH	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0
TOTAL					10788.03		69536.37		57822.72		60823.53	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

ALL SITES- BOTTOM TRAWLS

SPECIES	JUL		AUG		SEP		OCT		NOV		DEC		TOTAL	
	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
ALEWIFE	304.00	.7	1708.77	1.9	2870.11	5.0	252.70	.6	116.40	.3	.00	.0	7084.30	1.40
ALOSA SP	17.14	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	18.34	.00
AMERICAN EEL	928.50	2.0	3103.10	3.4	631.70	1.1	1014.50	2.6	1439.70	3.3	49.80	.2	14248.00	2.81
AMERICAN SHAD	364.24	.8	1462.15	1.6	843.46	1.5	925.20	2.4	186.00	.4	.00	.0	3781.55	.75
ATLANTIC STURGEON	4421.70	9.5	14605.90	16.1	4364.40	7.6	.00	.0	56.70	.1	238.30	.8	28167.70	5.56
ATLANTIC TOMCOD	2694.90	5.8	303.06	.3	768.90	1.3	2302.80	5.9	11686.80	27.0	17078.90	56.5	36869.56	7.28
BANDED KILLIFISH	.00	.0	.00	.0	3.30	.0	.60	.0	1.60	.0	.00	.0	5.50	.00
BAY ANCHOVY	32.54	.1	321.09	.4	48.53	.1	.00	.0	.00	.0	.00	.0	405.06	.08
BLUEBACK HERRING	588.92	1.3	3284.74	3.6	6903.22	12.0	4521.91	11.5	397.62	.9	.00	.0	19342.86	3.82
BROWN BULLHEAD	1702.10	3.7	3397.60	3.7	816.00	1.4	251.50	.6	406.30	.9	.00	.0	14998.70	2.96
CARP	.00	.0	5156.00	5.7	.00	.0	3966.00	10.1	.00	.0	54.80	.2	9176.80	1.81
GOLDEN SHINER	.00	.0	.00	.0	.00	.0	.00	.0	118.40	.3	624.00	2.1	742.40	.15
GOLDFISH	505.90	1.1	.00	.0	393.40	.7	.00	.0	1009.90	2.3	1348.00	4.5	4526.40	.89
HOGCHOKER	375.00	.8	933.40	1.0	1601.54	2.8	3556.30	9.0	2728.32	6.3	459.20	1.5	13154.81	2.60
PUMPKINSEED	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	297.40	1.0	297.40	.06
RAINBOW SMELT	10.73	.0	9.20	.0	1.00	.0	2.40	.0	27.40	.1	.00	.0	193.03	.04
SPOTTAIL SHINER	286.30	.6	937.48	1.0	491.40	.9	479.52	1.2	1077.80	2.5	2371.80	7.9	6853.47	1.35
STRIPED BASS	1272.60	2.7	604.50	.7	1260.70	2.2	73.30	.2	618.10	1.4	956.40	3.2	6082.70	1.20
TESSELLATED DARTER	.30	.0	33.26	.0	24.70	.0	30.90	.1	44.90	.1	112.10	.4	583.33	.12
THREESPINE STICKLEBACK	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	1.50	.00
WHITE CATFISH	5085.20	11.0	5810.70	6.4	3066.40	5.3	4491.60	11.4	3329.50	7.7	487.60	1.6	36815.50	7.27
WHITE PERCH	27750.81	59.9	48794.61	53.7	33485.68	58.0	16851.29	42.8	19870.05	46.0	4921.31	16.3	297963.44	58.81
WHITE SUCKER	.00	.0	384.40	.4	119.50	.2	612.60	1.6	124.60	.3	1084.40	3.6	5200.30	1.03
YELLOW PERCH	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	119.60	.4	119.60	.02
TOTAL	46340.88		90849.96		57693.94		39333.12		43240.09		30203.61		506632.25	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

ALL SITES- SEINES

SPECIES	JAN GM.	JAN PCNT	FEB GM.	FEB PCNT	MAR GM.	MAR PCNT	APR GM.	APR PCNT	MAY GM.	MAY PCNT	JUN GM.	JUN PCNT
ALEWIFE	.00	.0	NOT SAMPLED		.00	.0	34248.90	44.0	29041.90	22.6	62.60	.1
ALOSA SP	.00	.0	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.80	.0
AMERICAN EEL	.00	.0	NOT SAMPLED		.00	.0	37.40	.0	2132.80	1.7	621.70	.7
AMERICAN SHAD	.00	.0	NOT SAMPLED		.00	.0	.00	.0	.00	.0	1.10	.0
ATLANTIC NEEDLEFISH	.00	.0	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0
BANDED KILLIFISH	.00	.0	NOT SAMPLED		37.80	.1	125.70	.2	393.15	.3	1088.80	1.3
BAY ANCHOVY	.00	.0	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0
BLACK CRAPPIE	.00	.0	NOT SAMPLED		166.00	.6	299.70	.4	145.30	.1	337.20	.4
BLUEBACK HERRING	.00	.0	NOT SAMPLED		.00	.0	.00	.0	156.82	.1	192.50	.2
BLUEGILL	.00	.0	NOT SAMPLED		2.10	.0	.00	.0	270.70	.2	1569.70	1.8
BROWN BULLHEAD	.00	.0	NOT SAMPLED		.00	.0	.00	.0	610.70	.5	3712.30	4.3
CARP	.00	.0	NOT SAMPLED		20218.00	72.6	23508.90	30.2	52796.20	41.0	34543.60	40.1
CHANNEL CATFISH	.00	.0	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0
COMMON SHINER	.00	.0	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0
EMERALD SHINER	.00	.0	NOT SAMPLED		.00	.0	.00	.0	.00	.0	11.40	.0
FATHEAD MINNOW	.00	.0	NOT SAMPLED		.00	.0	.00	.0	.00	.0	1.00	.0
FOURSPINE STICKLEBACK	.60	.1	NOT SAMPLED		.00	.0	.70	.0	6.50	.0	2.00	.0
GIZZARD SHAD	.00	.0	NOT SAMPLED		.00	.0	67.10	.1	.00	.0	.00	.0
GOLDEN SHINER	.00	.0	NOT SAMPLED		79.80	.3	1153.30	1.5	5919.80	4.6	2446.70	2.8
GOLDFISH	411.60	99.9	NOT SAMPLED		6093.80	21.9	6505.20	8.3	2349.90	1.8	5101.80	5.9
HOGCHOKER	.00	.0	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0
LARGEMOUTH BASS	.00	.0	NOT SAMPLED		437.10	1.6	668.40	.9	.00	.0	2189.00	2.5
LEPOMIS SP	.00	.0	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0
MUMMICHOG	.00	.0	NOT SAMPLED		.00	.0	.00	.0	3.00	.0	.00	.0
PUMPKINSEED	.00	.0	NOT SAMPLED		.00	.0	108.50	.1	3650.80	2.8	2965.10	3.4
RAINBOW SMELT	.00	.0	NOT SAMPLED		.00	.0	.00	.0	6.50	.0	.00	.0
REDBREAST SUNFISH	.00	.0	NOT SAMPLED		.00	.0	.00	.0	658.90	.5	1937.90	2.2
ROCK BASS	.00	.0	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0
SILVERY MINNOW	.00	.0	NOT SAMPLED		.00	.0	.00	.0	.70	.0	.00	.0
SPOTTAIL SHINER	.00	.0	NOT SAMPLED		291.50	1.0	2128.10	2.7	6061.90	4.7	2231.02	2.6
STRIPED BASS	.00	.0	NOT SAMPLED		.00	.0	.00	.0	431.90	.3	1128.50	1.3
TESSELLATED DARTER	.00	.0	NOT SAMPLED		23.00	.1	408.77	.5	266.00	.2	138.36	.2
WHITE CATFISH	.00	.0	NOT SAMPLED		341.80	1.2	4895.70	6.3	5139.30	4.0	7495.40	8.7
WHITE MULLET	.00	.0	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0
WHITE PERCH	.00	.0	NOT SAMPLED		142.90	.5	3481.90	4.5	17599.20	13.7	16937.20	19.7
WHITE SUCKER	.00	.0	NOT SAMPLED		.00	.0	279.20	.4	741.90	.6	994.10	1.2
YELLOW PERCH	.00	.0	NOT SAMPLED		.00	.0	.00	.0	237.40	.2	440.80	.5
TOTAL	412.20				27833.80		77917.47		128621.27		86150.58	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

ALL SITES- SEINES

SPECIES	JUL		AUG		SEP		OCT		NOV		DEC		TOTAL	
	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
ALEWIFE	119.10	.4	2286.30	9.3	1191.10	5.0	799.50	2.1	1241.80	10.5	.00	.0	68991.20	15.20
ALOSA SP	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.80	.00
AMERICAN EEL	161.80	.5	875.40	3.5	278.60	1.2	463.90	1.2	105.10	.9	.00	.0	4676.70	1.03
AMERICAN SHAD	2047.61	6.7	1176.55	4.8	298.80	1.3	462.70	1.2	29.50	.2	.00	.0	4016.26	.88
ATLANTIC NEEDLEFISH	.00	.0	21.10	.1	893.10	3.8	148.40	.4	.00	.0	.00	.0	1062.60	.23
BANDED KILLIFISH	355.90	1.2	439.30	1.8	757.72	3.2	584.70	1.5	254.80	2.2	38.80	1.1	4076.67	.90
BAY ANCHOVY	.00	.0	.00	.0	.80	.0	.00	.0	.00	.0	.00	.0	.80	.00
BLACK CRAPPIE	.00	.0	167.00	.7	.00	.0	220.20	.6	212.80	1.8	.00	.0	1548.20	.34
BLUEBACK HERRING	58.25	.2	4166.47	16.9	678.56	2.9	1460.81	3.8	13.50	.1	.00	.0	6726.91	1.48
BLUEGILL	160.60	.5	418.30	1.7	1525.50	6.5	38.80	.1	11.20	.1	1.40	.0	3998.30	.88
BROWN BULLHEAD	724.10	2.4	611.50	2.5	528.10	2.2	970.00	2.5	14.60	.1	.00	.0	7171.30	1.58
CARP	11048.00	36.1	907.80	3.7	983.80	4.2	12105.10	31.2	568.10	4.8	203.20	5.8	156882.70	34.56
CHANNEL CATFISH	.00	.0	.00	.0	.00	.0	12.70	.0	.00	.0	.00	.0	12.70	.00
COMMON SHINER	.00	.0	2.40	.0	.00	.0	.00	.0	.00	.0	.00	.0	2.40	.00
EMERALD SHINER	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	11.40	.00
FATHEAD MINNOW	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	1.00	.00
FOURSPINE STICKLEBACK	1.30	.0	.80	.0	2.00	.0	7.40	.0	7.00	.1	2.40	.1	30.70	.01
GIZZARD SHAD	.00	.0	.00	.0	.00	.0	45.30	.1	.60	.0	162.80	4.7	275.20	.06
GOLDEN SHINER	1036.80	3.4	801.82	3.2	750.30	3.2	1047.10	2.7	592.50	5.0	38.50	1.1	13866.62	3.05
GOLDFISH	1396.40	4.6	188.90	.8	1421.80	6.0	2430.20	6.3	484.50	4.1	694.10	19.9	27078.20	5.96
HOGCHOKER	.00	.0	.30	.0	3.00	.0	.00	.0	.00	.0	.00	.0	3.30	.00
LARGEMOUTH BASS	346.80	1.1	311.50	1.3	37.20	.2	61.70	.2	.00	.0	.00	.0	4051.70	.89
LEPOMIS SP	.00	.0	.60	.0	.00	.0	.00	.0	.00	.0	.00	.0	.60	.00
MUMMICHOG	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	3.00	.00
PUMPKINSEED	2027.60	6.6	3047.30	12.3	3203.52	13.6	2722.30	7.0	585.40	4.9	33.10	.9	18343.62	4.04
RAINBOW SMELT	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	6.50	.00
REDBREAST SUNFISH	359.20	1.2	360.60	1.5	504.50	2.1	918.20	2.4	51.50	.4	5.80	.2	4796.60	1.06
ROCK BASS	.00	.0	.00	.0	58.20	.2	4.60	.0	.00	.0	.00	.0	62.80	.01
SILVERY MINNOW	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.70	.00
SPOTTAIL SHINER	504.60	1.7	913.18	3.7	1311.85	5.6	2711.40	7.0	920.80	7.8	196.20	5.6	17270.55	3.80
STRIPED BASS	215.40	.7	486.50	2.0	589.60	2.5	1084.70	2.8	252.50	2.1	.00	.0	4189.10	.92
TESSELLATED DARTER	33.20	.1	60.20	.2	122.00	.5	83.20	.2	102.00	.9	5.10	.1	1241.83	.27
WHITE CATFISH	856.50	2.8	5.20	.0	2443.60	10.4	1598.30	4.1	.00	.0	.00	.0	22775.80	5.02
WHITE MULLET	.00	.0	.00	.0	.00	.0	39.30	.1	56.80	.5	.00	.0	96.10	.02
WHITE PERCH	9045.20	29.6	7045.50	28.5	5674.60	24.0	8452.20	21.8	4531.80	38.3	1629.90	46.7	74540.40	16.42
WHITE SUCKER	.00	.0	92.70	.4	203.50	.9	.00	.0	1410.60	11.9	475.60	13.6	4197.60	.92
YELLOW PERCH	80.60	.3	306.70	1.2	136.00	.6	379.00	1.0	385.30	3.3	.00	.0	1965.80	.43
TOTAL	30578.96		24693.92		23597.75		38851.71		11832.10		3486.90		453976.66	

APPENDIX-6 Nekton: Monthly Mean Catch-Per-Effort and Monthly Mean Biomass-Per-Effort

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* SURFACE TRAWL COLLECTIONS
ALL SITES

SPECIES	MONTH JAN	FEB	MAR	APR	MAY	JUN
ALEWIFE	NS	NS	.00	.00	.08	.04
ALOSA SP	NS	NS	.00	.00	.00	.44
AMERICAN EEL	NS	NS	.00	.00	.02	.00
AMERICAN SHAD	NS	NS	.00	.00	.00	.27
ATLANTIC TOMCOD	NS	NS	.00	.00	.00	.02
BANDED KILLIFISH	NS	NS	.00	.00	.00	.00
BAY ANCHOVY	NS	NS	.00	.00	.00	.00
BLUEBACK HERRING	NS	NS	.00	.02	.12	.00
GOLDEN SHINER	NS	NS	.00	.02	.00	.02
GOLDFISH	NS	NS	.00	.02	.00	.00
HOGCHOKER	NS	NS	.00	.00	.00	.00
RAINBOW SMELT	NS	NS	.07	.03	.00	.02
SPOTTAIL SHINER	NS	NS	.03	.02	.00	.00
STRIPED BASS	NS	NS	.00	.00	.00	.02
WHITE CATFISH	NS	NS	.00	.00	.02	.02
WHITE PERCH	NS	NS	.03	.08	.03	.17
TOTAL SPECIES MONTHLY MEAN	NS	NS	.13	.19	.26	1.02
UNITS OF EFFORT* PERFORMED	.00	.00	27.10	35.80	44.60	38.70

ANNUAL VALUES ARE BASED ON 10 SAMPLED MONTHS (NS - NOT SAMPLED)
* A UNIT EFFORT IS DEFINED AS 10 MINUTES OF TRAWLING

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* SURFACE TRAWL COLLECTIONS

ALL SITES

SPECIES	MONTH JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL MEAN
ALEWIFE	.11	.38	.04	.35	.25	.00	.12
ALOSA SP	1.19	.00	.00	.00	.00	.00	.16
AMERICAN EEL	.00	.00	.00	.00	.00	.00	.00
AMERICAN SHAD	.62	.49	.09	.88	.15	.02	.25
ATLANTIC TOMCOD	.00	.00	.00	.00	.05	.04	.01
BANDED KILLIFISH	.00	.00	.02	.00	.00	.00	.00
BAY ANCHOVY	.12	11.93	.10	.00	.00	.00	1.21
BLUEBACK HERRING	4.84	.08	.12	90.11	.39	.03	9.57
GOLDEN SHINER	.00	.00	.00	.00	.00	.02	.01
GOLDFISH	.00	.00	.00	.00	.00	.00	.00
HOGCHOKER	.00	.00	.03	.07	.00	.00	.01
RAINBOW SMELT	.00	.02	.00	.00	.00	.02	.02
SPOTTAIL SHINER	.00	.00	.00	.00	.00	.00	.00
STRIPED BASS	.00	.00	.00	.00	.00	.00	.00
WHITE CATFISH	.00	.01	.00	.00	.00	.00	.01
WHITE PERCH	.07	.06	.05	.07	.17	.17	.09
TOTAL SPECIES MONTHLY MEAN	6.94	12.98	.44	91.48	1.01	.30	11.47
UNITS OF EFFORT* PERFORMED	34.50	46.50	38.80	50.50	44.90	33.70	395.10

ANNUAL VALUES ARE BASED ON 10 SAMPLED MONTHS (NS - NOT SAMPLED)
* A UNIT EFFORT IS DEFINED AS 10 MINUTES OF TRAWLING

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* BOTTOM TRAWL COLLECTIONS

ALL SITES

SPECIES	MONTH JAN	FEB	MAR	APR	MAY	JUN
ALEWIFE	NS	NS	.00	.08	.32	.05
ALOSA SP	NS	NS	.00	.00	.00	.30
AMERICAN EEL	NS	NS	.09	.29	.58	.72
AMERICAN SHAD	NS	NS	.00	.00	.00	.03
ATLANTIC STURGEON	NS	NS	.09	.00	.05	.03
ATLANTIC TOMCOD	NS	NS	.00	.04	1.69	5.86
BANDED KILLIFISH	NS	NS	.00	.00	.00	.00
BAY ANCHOVY	NS	NS	.00	.00	.00	.02
BLUEBACK HERRING	NS	NS	.00	.04	.44	.24
BROWN BULLHEAD	NS	NS	.00	.08	.51	.64
CARP	NS	NS	.00	.00	.00	.00
GOLDEN SHINER	NS	NS	.00	.00	.00	.00
GOLDFISH	NS	NS	.00	.04	.03	.05
HOGCHOKER	NS	NS	.05	.37	5.84	1.09
PUMPKINSEED	NS	NS	.00	.00	.00	.00
RAINBOW SMELT	NS	NS	.09	.18	.24	.02
SPOTTAIL SHINER	NS	NS	1.57	.32	.72	1.74
STRIPED BASS	NS	NS	.00	.07	.07	.05
TESSELLATED DARTER	NS	NS	3.95	1.11	.30	.52
THREESPINE STICKLEBACK	NS	NS	.00	.00	.03	.00
WHITE CATFISH	NS	NS	.62	.23	.92	1.04
WHITE PERCH	NS	NS	3.69	31.20	16.82	40.05
WHITE SUCKER	NS	NS	.47	.03	.07	.10
YELLOW PERCH	NS	NS	.00	.00	.00	.00
TOTAL SPECIES MONTHLY MEAN	NS	NS	10.62	34.07	28.63	52.53
UNITS OF EFFORT* PERFORMED	.00	.00	26.00	44.70	54.20	37.40

ANNUAL VALUES ARE BASED ON 10 SAMPLED MONTHS (NS - NOT SAMPLED)
* A UNIT EFFORT IS DEFINED AS 10 MINUTES OF TRAWLING

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* BOTTOM TRAWL COLLECTIONS
ALL SITES

SPECIES	MONTH JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL MEAN
ALEWIFE	1.82	5.93	3.94	.94	.41	.00	1.35
ALOSA SP	2.14	.00	.00	.00	.00	.00	.24
AMERICAN EEL	.42	.47	.20	.17	.44	.06	.34
AMERICAN SHAD	4.49	8.55	3.89	3.32	.80	.00	2.11
ATLANTIC STURGEON	.15	.25	.15	.00	.07	.06	.09
ATLANTIC TOMCOD	7.62	.87	1.47	2.91	9.77	10.91	4.12
BANDED KILLIFISH	.00	.00	.19	.04	.03	.00	.03
BAY ANCHOVY	.27	2.03	.68	.00	.00	.00	.30
BLUEBACK HERRING	13.48	30.89	53.68	39.60	4.43	.00	14.28
BROWN BULLHEAD	.62	.66	.17	.04	.04	.00	.28
CARP	.00	.05	.00	.04	.00	.04	.01
GOLDEN SHINER	.00	.00	.00	.00	.05	.54	.06
GOLDFISH	.05	.00	.05	.00	.07	1.50	.18
HOGCHOKER	1.01	1.97	3.52	6.63	3.49	.73	2.47
PUMPKINSEED	.00	.00	.00	.00	.00	.15	.02
RAINBOW SMELT	.42	.14	.05	.05	.14	.00	.13
SPOTTAIL SHINER	1.10	3.77	1.96	2.01	4.48	16.56	3.42
STRIPED BASS	.23	1.23	.11	.09	.38	.51	.27
TESSELLATED DARTER	.06	.65	.40	.40	.60	1.62	.96
THREESPINE STICKLEBACK	.00	.00	.00	.00	.00	.00	.00
WHITE CATFISH	1.27	1.78	.70	.97	.81	.22	.86
WHITE PERCH	14.97	197.99	91.33	35.82	57.19	9.33	49.84
WHITE SUCKER	.00	.22	.05	.07	.03	.17	.12
YELLOW PERCH	.00	.00	.00	.00	.00	.08	.01
TOTAL SPECIES MONTHLY MEAN	50.12	257.44	162.52	93.10	83.23	42.48	81.47
UNITS OF EFFORT* PERFORMED	38.70	51.40	43.80	43.40	40.00	35.10	414.70

ANNUAL VALUES ARE BASED ON 10 SAMPLED MONTHS (NS - NOT SAMPLED)
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CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* SEINE COLLECTIONS
ALL SITES

SPECIES	MONTH JAN	FEB	MAR	APR	MAY	JUN
ALEWIFE	.00	NS	.00	3.53	3.40	.09
ALOSA SP	.00	NS	.00	.00	.00	.22
AMERICAN EEL	.00	NS	.00	.06	.73	.50
AMERICAN SHAD	.00	NS	.00	.00	.00	.25
ATLANTIC NEEDLEFISH	.00	NS	.00	.00	.00	.00
BANDED KILLIFISH	.00	NS	.80	1.00	2.00	8.19
BAY ANCHOVY	.00	NS	.00	.00	.00	.00
BLACK CRAPPIE	.00	NS	.05	.06	.03	.13
BLUEBACK HERRING	.00	NS	.00	.00	.40	.09
BLUEGILL	.00	NS	.05	.00	.18	.78
BROWN BULLHEAD	.00	NS	.00	.00	.08	.63
CARP	.00	NS	.25	.22	.38	.44
CHANNEL CATFISH	.00	NS	.00	.00	.00	.00
COMMON SHINER	.00	NS	.00	.00	.00	.00
EMERALD SHINER	.00	NS	.00	.00	.00	.16
FATHEAD MINNOW	.00	NS	.00	.00	.00	.03
FOURSPINE STICKLEBACK	.25	NS	.00	.03	.20	.06
GIZZARD SHAD	.00	NS	.00	.03	.00	.00
GOLDEN SHINER	.00	NS	.10	.88	2.10	3.78
GOLDFISH	.25	NS	.80	.56	.13	.41
HOGCHOKER	.00	NS	.00	.00	.00	.00
LARGEMOUTH BASS	.00	NS	.05	.03	.00	.22
LEPOMIS SP	.00	NS	.00	.00	.00	.00
MUMMICHOG	.00	NS	.00	.00	.03	.00
PUMPKINSEED	.00	NS	.00	.34	1.50	2.16
RAINBOW SMELT	.00	NS	.00	.00	.03	.00
REDBREAST SUNFISH	.00	NS	.00	.00	.23	.84
ROCK BASS	.00	NS	.00	.00	.00	.00
SILVERY MINNOW	.00	NS	.00	.00	.03	.00
SPOTTAIL SHINER	.00	NS	2.35	7.31	18.15	10.25
STRIPED BASS	.00	NS	.00	.00	.13	1.34
TESSELLATED DARTER	.00	NS	.30	4.38	2.30	1.41
WHITE CATFISH	.00	NS	.05	.31	.15	.94
WHITE MULLET	.00	NS	.00	.00	.00	.00
WHITE PERCH	.00	NS	.05	1.09	14.23	32.97
WHITE SUCKER	.00	NS	.00	.03	.15	.38
YELLOW PERCH	.00	NS	.00	.00	.05	.13
TOTAL SPECIES MONTHLY MEAN	.50	NS	4.85	19.88	46.55	66.38
UNITS OF EFFORT* PERFORMED	4.00	.00	20.00	32.00	40.00	32.00

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CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* SEINE COLLECTIONS
ALL SITES

SPECIES	MONTH JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL MEAN
ALEWIFE	1.71	4.31	3.34	2.20	2.00	.00	1.87
ALOSA SP	.25	.00	.00	.00	.00	.00	.04
AMERICAN EEL	.29	.44	.25	.26	.19	.00	.25
AMERICAN SHAD	57.58	12.03	2.81	2.78	.19	.00	6.88
ATLANTIC NEEDLEFISH	.00	.03	.41	.05	.00	.00	.04
BANDED KILLIFISH	3.92	4.67	7.47	3.97	1.84	.67	3.14
BAY ANCHOVY	.00	.00	.03	.00	.00	.00	.00
BLACK CRAPPIE	.00	.03	.00	.03	.03	.00	.03
BLUEBACK HERRING	4.38	90.07	14.41	20.41	.19	.00	11.81
BLUEGILL	.13	.96	1.03	.15	.06	.06	.31
BROWN BULLHEAD	.25	.21	.25	.28	.03	.00	.16
CARP	.08	.24	.16	.25	.16	.17	.21
CHANNEL CATFISH	.00	.00	.00	.03	.00	.00	.00
COMMON SHINER	.03	.03	.00	.00	.00	.00	.00
EMERALD SHINER	.00	.00	.00	.00	.00	.00	.01
FATHEAD MINNOW	.00	.00	.00	.00	.00	.00	.00
FOURSPINE STICKLEBACK	.04	.07	.19	.40	.41	.25	.17
GIZZARD SHAD	.00	.00	.00	.03	.00	.50	.05
GOLDEN SHINER	2.04	.49	.34	.43	.47	.50	1.01
GOLDFISH	1.46	2.13	.59	.16	.03	.17	.61
HOGCHOKER	.00	.04	.13	.00	.00	.00	.01
LARGEMOUTH BASS	.17	.08	.06	.06	.00	.00	.06
LEPOMIS SP	.00	.12	.00	.00	.00	.00	.01
MUMMICHOG	.00	.00	.00	.00	.00	.00	.00
PUMPKINSEED	1.63	6.99	8.88	4.37	1.44	.40	2.52
RAINBOW SMELT	.00	.00	.00	.00	.00	.00	.00
REDBREAST SUNFISH	.29	.40	.59	.30	.03	.08	.25
ROCK BASS	.00	.00	.03	.03	.00	.00	.01
SILVERY MINNOW	.00	.00	.00	.00	.00	.00	.00
SPOTTAIL SHINER	2.92	7.30	9.38	10.89	4.41	1.96	6.81
STRIPED BASS	.54	1.79	2.06	.74	.34	.00	.63
TESSELLATED DARTER	.92	1.01	1.72	1.10	1.25	.23	1.33
WHITE CATFISH	.17	.03	.16	.08	.00	.00	.17
WHITE MULLET	.00	.00	.00	.03	.03	.00	.01
WHITE PERCH	22.04	20.46	28.28	21.97	10.59	3.06	14.07
WHITE SUCKER	.00	.04	.06	.00	.13	.17	.09
YELLOW PERCH	.04	.16	.22	.20	.16	.00	.09
TOTAL SPECIES MONTHLY MEAN	100.84	154.09	82.85	71.15	23.97	8.21	52.66
UNITS OF EFFORT* PERFORMED	24.00	37.00	32.00	39.00	32.00	14.00	306.00

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CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN BIOMASS PER EFFORT* SURFACE TRAWL COLLECTIONS

ALL SITES

SPECIES	MONTH JAN	FEB	MAR	APR	MAY	JUN
ALEWIFE	NS	NS	.00	.00	1.53	.67
ALOSA SP	NS	NS	.00	.00	.00	.02
AMERICAN EEL	NS	NS	.00	.00	2.96	.00
AMERICAN SHAD	NS	NS	.00	.00	.00	.48
ATLANTIC TOMCOD	NS	NS	.00	.00	.00	.10
BANDED KILLIFISH	NS	NS	.00	.00	.00	.00
BAY ANCHOVY	NS	NS	.00	.00	.00	.00
BLUEBACK HERRING	NS	NS	.00	.06	.96	.00
GOLDEN SHINER	NS	NS	.00	2.42	.00	.00
HOGCHOKER	NS	NS	.00	.00	.00	.00
RAINBOW SMELT	NS	NS	1.22	.14	.00	.14
SPOTTAIL SHINER	NS	NS	.10	.10	.00	.00
STRIPED BASS	NS	NS	.00	.00	.00	.73
WHITE CATFISH	NS	NS	.00	.00	.18	1.66
WHITE PERCH	NS	NS	1.20	2.62	1.15	11.24
TOTAL SPECIES MONTHLY MEAN (GM.)	NS	NS	2.52	5.34	6.77	15.05
UNITS OF EFFORT* PERFORMED	.00	.00	27.10	35.80	44.60	38.70

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CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN BIOMASS PER EFFORT* SURFACE TRAWL COLLECTIONS

ALL SITES

SPECIES	MONTH						ANNUAL
	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
ALEWIFE	1.06	3.99	1.05	2.96	3.36	.00	1.46
ALOSA SP	.06	.00	.00	.00	.00	.00	.01
AMERICAN EEL	.00	.00	.00	.00	.00	.00	.30
AMERICAN SHAD	1.03	1.16	.31	4.49	.85	.14	.85
ATLANTIC TOMCOD	.00	.00	.00	.00	2.15	1.57	.38
BANDED KILLIFISH	.00	.00	.01	.00	.00	.00	.00
BAY ANCHOVY	.23	1.36	.08	.00	.00	.00	.17
BLUEBACK HERRING	1.72	.11	.27	159.34	.93	.04	16.34
GOLDEN SHINER	.00	.00	.00	.00	.00	1.52	.39
HOGCHOKER	.00	.00	.02	.06	.00	.00	.01
RAINBOW SMELT	.00	.01	.00	.00	.00	.04	.15
SPOTTAIL SHINER	.00	.00	.00	.00	.00	.30	.02
STRIPED BASS	.00	.00	.00	.00	.00	.00	.07
WHITE CATFISH	.00	.55	.00	.00	.00	.00	.24
WHITE PERCH	2.99	1.00	2.52	2.31	3.36	7.33	3.57
TOTAL SPECIES MONTHLY MEAN (GM.)	7.08	8.18	4.26	169.15	10.64	10.64	23.96
UNITS OF EFFORT* PERFORMED	34.50	46.50	38.80	50.50	44.90	33.70	395.10

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CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN BIOMASS PER EFFORT* BOTTOM TRAWL COLLECTIONS

ALL SITES

SPECIES	MONTH JAN	FEB	MAR	APR	MAY	JUN
ALEWIFE	NS	NS	.00	28.05	7.02	1.26
ALOSA SP	NS	NS	.00	.00	.00	.04
AMERICAN EEL	NS	NS	3.23	30.98	36.69	111.68
AMERICAN SHAD	NS	NS	.00	.00	.00	.01
ATLANTIC TOMCOD	NS	NS	.00	1.60	12.69	28.43
BANDED KILLIFISH	NS	NS	.00	.00	.00	.00
BAY ANCHOVY	NS	NS	.00	.00	.00	.06
BLUEBACK HERRING	NS	NS	.00	7.05	39.15	19.18
BROWN BULLHEAD	NS	NS	.00	17.41	116.65	80.06
CARP	NS	NS	.00	.00	.00	.00
GOLDEN SHINER	NS	NS	.00	.00	.00	.00
GOLDFISH	NS	NS	.00	.80	15.94	35.01
HOGCHOKER	NS	NS	1.06	3.89	55.74	6.10
PUMPKINSEED	NS	NS	.00	.00	.00	.00
RAINBOW SMELT	NS	NS	1.69	1.29	1.28	.12
SPOTTAIL SHINER	NS	NS	16.86	3.61	8.02	13.66
STRIPED BASS	NS	NS	.00	48.40	.81	.41
TESSELLATED DARTER	NS	NS	11.11	3.22	.84	1.23
THREESPINE STICKLEBACK	NS	NS	.00	.00	.04	.00
WHITE CATFISH	NS	NS	269.74	83.10	44.13	187.06
WHITE PERCH	NS	NS	224.00	1708.75	800.66	1453.87
WHITE SUCKER	NS	NS	102.44	.17	21.15	29.15
YELLOW PERCH	NS	NS	.00	.00	.00	.00
TOTAL SPECIES MONTHLY MEAN (GM.)	NS	NS	630.11	1938.30	1160.81	1967.32
UNITS OF EFFORT* PERFORMED	.00	.00	26.00	44.70	54.20	37.40

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CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN BIOMASS PER EFFORT* BOTTOM TRAWL COLLECTIONS

ALL SITES

SPECIES	MONTH JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL MEAN
ALEWIFE	5.09	49.65	81.70	4.99	3.40	.00	18.12
ALOSA SP	.39	.00	.00	.00	.00	.00	.04
AMERICAN EEL	25.37	96.24	13.58	27.74	40.15	.99	38.67
AMERICAN SHAD	5.48	35.15	21.65	20.29	5.01	.00	8.76
ATLANTIC TOMCOD	32.40	4.98	13.49	47.08	280.75	599.09	102.05
BANDED KILLIFISH	.00	.00	.13	.02	.05	.00	.02
BAY ANCHOVY	.77	5.16	1.08	.00	.00	.00	.71
BLUEBACK HERRING	8.78	54.56	122.11	87.67	11.25	.00	34.97
BROWN BULLHEAD	88.46	107.56	32.04	8.98	15.05	.00	46.62
CARP	.00	234.36	.00	141.64	.00	2.11	37.81
GOLDEN SHINER	.00	.00	.00	.00	5.64	24.00	2.96
GOLDFISH	23.00	.00	17.88	.00	33.44	51.85	17.79
HOGCHOKER	7.94	18.86	34.62	87.39	65.48	10.04	29.11
PUMPKINSEED	.00	.00	.00	.00	.00	11.44	1.14
RAINBOW SMELT	.09	.16	.02	.04	.87	.00	.55
SPOTTAIL SHINER	6.42	31.98	20.42	16.58	38.04	91.92	24.75
STRIPED BASS	60.50	20.15	22.97	3.29	19.88	26.07	20.25
TESSELLATED DARTER	.02	1.41	.78	1.20	1.38	4.31	2.55
THREESPINE STICKLEBACK	.00	.00	.00	.00	.00	.00	.00
WHITE CATFISH	168.55	162.98	85.32	129.45	95.63	13.15	123.91
WHITE PERCH	703.85	1355.85	902.78	480.96	584.31	164.48	837.95
WHITE SUCKER	.00	11.97	5.43	21.88	3.78	47.77	24.37
YELLOW PERCH	.00	.00	.00	.00	.00	4.60	.46
TOTAL SPECIES MONTHLY MEAN (GM.)	1137.12	2191.00	1376.01	1079.21	1204.08	1051.79	1373.57
UNITS OF EFFORT* PERFORMED	38.70	51.40	43.80	43.40	40.00	35.10	414.70

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CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN BIOMASS PER EFFORT* SEINE COLLECTIONS

ALL SITES

SPECIES	MONTH JAN	FEB	MAR	APR	MAY	JUN
ALEWIFE	.00	NS	.00	1070.28	726.05	1.96
ALOSA SP	.00	NS	.00	.00	.00	.03
AMERICAN EEL	.00	NS	.00	1.17	53.32	19.43
AMERICAN SHAD	.00	NS	.00	.00	.00	.03
ATLANTIC NEEDLEFISH	.00	NS	.00	.00	.00	.00
BANDED KILLIFISH	.00	NS	1.89	3.93	9.83	34.03
BAY ANCHOVY	.00	NS	.00	.00	.00	.00
BLACK CRAPPIE	.00	NS	8.30	9.37	3.63	10.54
BLUEBACK HERRING	.00	NS	.00	.00	3.92	6.02
BLUEGILL	.00	NS	.11	.00	6.77	49.05
BROWN BULLHEAD	.00	NS	.00	.00	15.27	116.01
CARP	.00	NS	1010.90	734.65	1319.91	1079.49
CHANNEL CATFISH	.00	NS	.00	.00	.00	.00
COMMON SHINER	.00	NS	.00	.00	.00	.00
EMERALD SHINER	.00	NS	.00	.00	.00	.36
FATHEAD MINNOW	.00	NS	.00	.00	.00	.03
FOURSPINE STICKLEBACK	.15	NS	.00	.02	.16	.06
GIZZARD SHAD	.00	NS	.00	2.10	.00	.00
GOLDEN SHINER	.00	NS	3.99	36.04	148.00	76.46
GOLDFISH	102.90	NS	304.69	203.29	58.75	159.43
HOGCHOKER	.00	NS	.00	.00	.00	.00
LARGEMOUTH BASS	.00	NS	21.86	20.89	.00	68.41
LEPOMIS SP	.00	NS	.00	.00	.00	.00
MUMMICHOG	.00	NS	.00	.00	.08	.00
PUMPKINSEED	.00	NS	.00	3.39	91.27	92.66
RAINBOW SMELT	.00	NS	.00	.00	.16	.00
REDBREAST SUNFISH	.00	NS	.00	.00	16.47	60.56
ROCK BASS	.00	NS	.00	.00	.00	.00
SILVERY MINNOW	.00	NS	.00	.00	.02	.00
SPOTTAIL SHINER	.00	NS	14.58	66.50	151.55	69.72
STRIPED BASS	.00	NS	.00	.00	10.80	35.27
TESSELLATED DARTER	.00	NS	1.15	12.77	6.65	4.32
WHITE CATFISH	.00	NS	17.09	152.99	128.48	234.23
WHITE MULLET	.00	NS	.00	.00	.00	.00
WHITE PERCH	.00	NS	7.15	108.81	439.98	529.36
WHITE SUCKER	.00	NS	.00	8.73	18.55	31.07
YELLOW PERCH	.00	NS	.00	.00	5.94	13.78
TOTAL SPECIES MONTHLY MEAN (GM.)	103.05	NS	1391.69	2434.92	3215.54	2692.28
UNITS OF EFFORT* PERFORMED	4.00	.00	20.00	32.00	40.00	32.00

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CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN BIOMASS PER EFFORT* SEINE COLLECTIONS

ALL SITES

SPECIES	MONTH JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL MEAN
ALEWIFE	4.96	58.22	37.22	20.39	38.81	.00	177.99
ALOSA SP	.00	.00	.00	.00	.00	.00	.00
AMERICAN EEL	6.74	22.07	8.71	11.96	3.28	.00	11.52
AMERICAN SHAD	85.32	29.82	9.34	11.80	.92	.00	12.48
ATLANTIC NEEDLEFISH	.00	.53	27.91	3.71	.00	.00	2.92
BANDED KILLIFISH	14.83	13.02	23.68	15.04	7.96	2.61	11.53
BAY ANCHOVY	.00	.00	.03	.00	.00	.00	.00
BLACK CRAPPIE	.00	4.18	.00	5.51	6.65	.00	4.38
BLUEBACK HERRING	2.43	104.36	21.21	37.97	.42	.00	16.03
BLUEGILL	6.69	10.47	47.67	.97	.35	.09	11.11
BROWN BULLHEAD	30.17	16.93	16.50	24.25	.46	.00	19.96
CARP	460.33	22.87	30.74	302.63	17.75	16.93	454.20
CHANNEL CATFISH	.00	.00	.00	.32	.00	.00	.03
COMMON SHINER	.00	.06	.00	.00	.00	.00	.01
EMERALD SHINER	.00	.00	.00	.00	.00	.00	.03
FATHEAD MINNOW	.00	.00	.00	.00	.00	.00	.00
FOURSPINE STICKLEBACK	.05	.03	.06	.19	.22	.15	.10
GIZZARD SHAD	.00	.00	.00	1.13	.00	13.57	1.53
GOLDEN SHINER	43.20	20.83	23.45	26.63	18.52	3.21	36.39
GOLDFISH	58.18	5.43	44.43	63.40	15.14	57.84	97.59
HOGCHOKER	.00	.01	.09	.00	.00	.00	.01
LARGEMOUTH BASS	14.45	7.79	1.16	1.71	.00	.00	12.39
LEPOMIS SP	.00	.02	.00	.00	.00	.00	.00
MUMMICHOG	.00	.00	.00	.00	.00	.00	.01
PUMPKINSEED	84.48	83.97	100.11	70.28	18.29	2.13	49.69
RAINBOW SMELT	.00	.00	.00	.00	.03	.00	.01
REDBREAST SUNFISH	14.97	10.25	15.77	23.26	1.61	.48	13.03
ROCK BASS	.00	.00	1.82	.12	.00	.00	.18
SILVERY MINNOW	.00	.00	.00	.00	.00	.00	.00
SPOTTAIL SHINER	21.03	23.07	41.01	69.73	28.78	12.64	45.33
STRIPED BASS	8.98	12.60	18.43	27.21	7.89	.00	11.01
TESSELLATED DARTER	1.38	1.57	3.81	2.17	3.19	.38	3.40
WHITE CATFISH	35.69	.13	76.36	39.96	.00	.00	62.27
WHITE MULLET	.00	.00	.00	.98	1.78	.00	.25
WHITE PERCH	376.88	180.94	177.33	214.18	141.62	135.66	210.17
WHITE SUCKER	.00	3.31	6.36	.00	44.08	39.63	13.79
YELLOW PERCH	3.36	7.73	4.25	9.48	12.04	.00	5.14
TOTAL SPECIES MONTHLY MEAN (GM.)	1274.13	640.19	737.44	984.94	369.75	285.32	1284.48
UNITS OF EFFORT* PERFORMED	24.00	37.00	32.00	39.00	32.00	14.00	306.00

ANNUAL VALUES ARE BASED ON 11 SAMPLED MONTHS (NS - NOT SAMPLED)
* A UNIT EFFORT IS DEFINED AS ONE SEINE HAUL

APPENDIX-7 Statistical Analysis for Select Species Collected at the Roseton and Danskammer Point Electric Generating Stations

TABLE A-1

STATISTICAL[a] ANALYSIS FOR WHITE PERCH
EGG ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Roseton and Danskammer Point Generating Stations - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	MS	SS	F
Date[b]	(D)	12	10.8677	0.9056	5.23*
Plant	(G)	1	3.5677	3.5677	20.60*
Photoperiod	(P)	1	0.2046	0.2046	1.18
D x G		12	6.2112	0.5176	2.99*
D x P		12	4.0184	0.3349	1.93
G x P		1	0.5264	2.5264	3.04
Error		12	2.0782	0.1732	
Total		51	27.4742		

Plant: Danskammer > Roseton

[a]Number of eggs per 1000 m^3; mean of depths and stations.
[b]Dates used were from 1 May through 22 June.
*Significant at the 95% level.

TABLE A-2

STATISTICAL ANALYSIS FOR WHITE PERCH
EGG ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Roseton Generating Station - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	SS	MS	F
Date[b]	(D)	8	20.6196	2.5775	2.76*
Photoperiod	(P)	1	0.1706	0.1706	0.18
Depth	(R)	2	5.3865	2.6933	2.89
D x P		8	3.4585	0.4323	0.46
D x R		16	8.6519	0.5408	0.58
P x R		2	3.9996	1.9998	2.14
D x P x R		16	10.2547	0.6409	0.69
Error		54	50.3564	0.9325	
Total		107	102.8978		

[a] Number of eggs per 1000 m^3.
[b] Dates used were from 8 May through 12 June.
*Significant at the 95% level.

TABLE A-3

STATISTICAL ANALYSIS FOR WHITE PERCH
EGG ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	SS	MS	F
Date[b]	(D)	12	36.2536	3.0211	7.92*
Photoperiod	(P)	1	4.7944	4.7944	12.58*
Depth	(R)	1	0.8281	0.8281	2.17
D x P		12	19.5535	1.6295	4.27*
D x R		12	4.2616	0.3551	0.93
P x R		1	1.6371	1.6371	4.29*
D x P x R		12	4.7731	0.3978	1.04
Error		52	19.8241	0.3812	
Total		103	91.9255		

TUKEY COMPARISONS ($\alpha = .05$)

PHOTOPERIOD: Day > Night

PHOTOPERIOD x DEPTH

DAY: Largest: Surface Bottom :Smallest
Night: Largest: Surface Bottom :Smallest

[a]Number of eggs per 1000 m^3.
[b]Dates used were from 1 May through 22 June.
*Significant at the 95% level.

TABLE A-4

STATISTICAL ANALYSIS FOR WHITE PERCH
LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Roseton and Danskammer Point Generating Stations - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	SS	MS	F
Date[b]	(D)	16	21.0106	1.3132	4.85*
Plant	(G)	1	0.3881	0.3881	1.43
Photoperiod	(P)	1	2.4769	2.4769	9.14*
D x G		16	5.0209	0.3138	1.16
D x P		16	3.7943	0.2372	0.88
G x P		1	0.9080	0.9080	3.35
Error		16	4.3361	0.2710	
Total		67	37.9349		

PHOTOPERIOD: Day > Night

[a]Number of larvae per 1000 m^3; mean of depths and stations.
[b]Dates used were from 8 May through 24 July.
*Significant at the 95% level.

TABLE A-5

STATISTICAL ANALYSIS FOR WHITE PERCH
LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Roseton Generating Station - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	MS	SS	F
Date[b]	(D)	15	49.5495	3.3033	7.46*
Photoperiod	(P)	1	18.4152	18.4152	41.58*
Depth	(R)	2	3.6425	1.8212	4.11*
D x P		15	24.7732	1.6516	3.73*
D x R		30	19.8633	0.6621	1.49
P x R		2	2.7263	1.3631	3.08
D x P x R		30	14.0029	0.4668	1.05
Error		96	42.5185	0.4429	
Total		191	175.4914		

TUKEY COMPARISONS (α = .05)

PHOTOPERIOD: Night > Day

DEPTH: Largest: Mid Bottom Surface :Smallest

[a]Number of larvae per 1000 m^3.
[b]Dates used were from 15 May through 24 July.
*Significant at the 95% level.

TABLE A-6

STATISTICAL ANALYSIS FOR WHITE PERCH
LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	SS	MS	F
Date[b]	(D)	16	59.5631	3.7227	8.69*
Photoperiod	(P)	1	2.0430	2.0430	4.77*
Depth	(R)	1	0.4413	0.4413	1.03
D x P		16	21.3633	1.3352	3.12*
D x R		16	10.5751	0.6610	1.54
P x R		1	0.6133	0.6133	1.43
D x P x R		16	4.3793	0.2737	0.64
Error		68	29.1230	0.4283	
Total		135	128.1014		

PHOTOPERIOD: Night > Day

[a]Number of larvae per 1000 m^3.
[b]Dates used were from 8 May through 24 July.
*Significant at the 95% level.

TABLE A-7

STATISTICAL ANALYSIS FOR STRIPED BASS
EGG ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Roseton and Danskammer Point Generating Stations - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	SS	MS	F
Date[b]	(D)	7	8.1793	1.1685	12.56*
Plant	(G)	1	1.8061	1.8061	19.41*
Photoperiod	(P)	1	0.0080	0.0080	0.09*
D x G		7	5.5058	0.7865	8.45*
D x P		7	1.6988	0.2427	2.61
G x P		1	0.3118	0.3118	3.35
Error		7	0.6514	0.0931	
Total		31	18.1612		

PLANT: Danskammer > Roseton

[a]Number of eggs per 1000 m^3; mean of depths and stations.
[b]Dates used were from 15 May through 12 June.
*Significant at the 95% level.

TABLE A-8

STATISTICAL ANALYSIS FOR STRIPED BASS
EGG ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Roseton Generating Station - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	SS	MS	F
Date[b]	(D)	5	7.8224	1.5645	4.11*
Photoperiod	(P)	1	0.0914	0.0914	0.24
Depth	(R)	2	5.0339	2.5170	6.61*
D x P		5	6.4383	1.2877	3.38*
D x R		10	5.1483	0.5148	1.35
P x R		2	2.3172	1.1586	3.04
D x P x R		10	4.6911	0.4691	1.23
Error		36	13.6983	0.3805	
Total		71	45.2409		

TUKEY COMPARISONS ($\alpha = .05$)

DEPTH: Largest: Bottom Mid Surface :Smallest

[a]Number of eggs per 1000 m^3.
[b]Dates used were from 15 May through 5 June.
*Significant at the 95% level.

TABLE A-9

STATISTICAL ANALYSIS FOR STRIPED BASS
EGG ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1979

THREE-WAY ANALYSIS OF VARIANCE (Log Transformed)					
SOURCE		DF	SS	MS	F
Date[b]	(D)	7	23.1619	3.3089	5.15*
Photoperiod	(P)	1	0.0052	0.0052	0.01
Depth	(R)	1	0.4045	0.4045	0.63
D x P		7	3.2158	0.4594	0.71
D x R		7	8.0978	1.1568	1.80
P x R		1	0.3782	0.3782	0.59
D x P x R		7	6.1205	0.8744	1.36
Error		32	20.5706	0.6428	
Total		63	61.9545		

[a]Number of eggs per 1000 m^3.
[b]Dates used were from 15 May through 12 June.
*Significant at the 95% level.

TABLE A-10

STATISTICAL ANALYSIS FOR STRIPED BASS
LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Roseton and Danskammer Point Generating Stations - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	SS	MS	F
Date[b]	(D)	16	28.6053	1.7878	2.71*
Plant	(G)	1	1.0669	1.0669	1.62
Photoperiod	(P)	1	0.1018	0.1018	0.15
D x G		16	4.4502	0.2781	0.42
D x P		16	6.3027	0.3939	0.60
G x P		1	1.2099	1.2099	1.83
Error		16	10.5688	0.6606	
Total		67	52.3056		

[a]Number of larvae per 1000 m^3; mean of depths and stations.
[b]Dates used were from 8 May through 24 July.
*Significant at the 95% level.

TABLE A-11

STATISTICAL ANALYSIS FOR STRIPED BASS
LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Roseton Generating Station - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	SS	MS	F
Date[b]	(D)	14	37.2034	2.6574	6.96*
Photoperiod	(P)	1	2.2333	2.2333	5.85*
Depth	(R)	2	0.4294	0.2147	0.56
D x P		14	41.1314	2.9380	7.69*
D x R		28	12.4992	0.4464	1.17
P x R		2	4.0432	2.0216	5.29*
D x P x R		28	9.5334	0.3405	0.89
Error		90	34.3811	0.3820	
Total		179	141.4544		

TUKEY COMPARISONS ($\alpha = .05$)

PHOTOPERIOD: Night > Day

PHOTOPERIOD x DEPTH

DAY: Largest: Mid Bottom Surface :Smallest

Night: Largest: Surface Mid Bottom :Smallest

[a]Number of larvae per 1000 m^3.
[b]Dates used were from 15 May through 17 July.
*Significant at the 95% level.

TABLE A-12

STATISTICAL ANALYSIS FOR STRIPED BASS
LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	SS	MS	F
Date[b]	(D)	15	58.1251	3.8750	10.10*
Photoperiod	(P)	1	3.7224	3.7224	9.70*
Depth	(R)	1	0.5064	0.5064	1.32
D x P		15	25.8015	1.7201	4.48*
D x R		15	12.6620	0.8441	2.20*
P x R		1	0.0620	0.0620	0.16
D x P x R		15	8.4282	0.5619	1.46
Error		64	24.5498	0.3836	
Total		127	133.8574		

PHOTOPERIOD: Day > Night

[a]Number of larvae per 1000 m^3.
[b]Dates used were from 15 May through 24 July.
*Significant at the 95% level.

TABLE A-13

STATISTICAL ANALYSIS FOR ALOSA SPP.
LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Roseton and Danskammer Point Generating Stations - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	SS	MS	F
Date[b]	(D)	10	25.3965	2.5397	3.91*
Plant	(G)	1	10.6845	10.6845	16.45*
Photoperiod	(P)	1	0.4529	0.4529	0.70
D x G		10	8.3465	0.8347	1.28
D x P		10	4.7099	0.4710	0.73
G x P		1	0.4841	0.4841	0.75
Error		10	6.4955	0.6495	
Total		43	56.5699		

PLANT: Danskammer > Roseton

[a]Number of eggs per 1000 m^3; mean of depths and stations.
[b]Dates used were from 1 May through 15 June.
*Significant at the 95% level.

TABLE A-14

STATISTICAL[a] ANALYSIS FOR ALOSA SPP.
EGGS ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	SS	MS	F
Date[b]	(D)	7	64.8671	9.2667	21.69*
Photoperiod	(P)	1	4.8647	4.8647	11.39*
Depth	(R)	1	1.0109	1.0109	2.37
D x P		7	29.7455	4.2494	9.95*
D x R		7	1.2850	0.1836	0.43
P x R		1	0.0922	0.0922	0.22
D x P x R		7	2.9455	0.4208	0.99
Error		32	13.6701	0.4272	
Total		63	118.4810		

PHOTOPERIOD: Day > Night

[a]Number of eggs per 1000 m^3.
[b]Dates used were from 1 May through 5 June.
*Significant at the 95% level.

TABLE A-15

STATISTICAL ANALYSIS FOR ALOSA SPP.
LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Roseton and Danskammer Point Generating Stations - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	SS	MS	F
Date[b]	(D)	18	58.7820	3.2657	14.23*
Plant	(G)	1	2.3264	2.3264	10.14*
Photoperiod	(P)	1	1.3866	1.3866	6.04*
D x G		18	3.1851	0.1770	0.77
D x P		18	4.3007	0.2389	1.04
G x P		1	0.3470	0.3470	1.51
Error		18	4.1315	0.2295	
Total		75	74.4593		

PLANT: DANSKAMMER > ROSETON
PHOTOPERIOD: Night > Day

[a]Number of larvae per 1000 m^3; mean of depths and stations.
[b]Dates used were from 1 May through 31 July.
*Significant at the 95% level.

TABLE A-16

STATISTICAL ANALYSIS FOR ALOSA SPP.
LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Roseton Generating Station - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	SS	MS	F
Date[b]	(D)	16	131.9086	8.2443	20.06*
Photoperiod	(P)	1	17.8979	17.8979	43.55*
Depth	(R)	2	5.6747	2.8374	6.90*
D x P		16	31.4642	1.9665	4.79*
D x R		32	12.3767	0.3868	0.94
P x R		2	2.2319	1.1159	2.72
D x P x R		32	16.1757	0.5055	1.23
Error		102	41.9186	0.4110	
Total		203	259.6483		

TUKEY COMPARISONS ($\alpha = .05$)

PHOTOPERIOD: Night > Day

DEPTH: Largest: Mid Surface Bottom :Smallest

[a]Number of larvae per 1000 m^3.
[b]Dates used were from 1 May through 17 July.
*Significant at the 95% level.

TABLE A-17

STATISTICAL ANALYSIS FOR ALOSA SPP.
LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	SS	MS	F
Date[b]	(D)	18	139.0121	7.7229	23.17*
Photoperiod	(P)	1	3.0753	3.0753	9.23*
Depth	(R)	1	0.0335	0.0335	0.10
D x P		18	22.3854	1.2436	3.73*
D x R		18	3.9846	0.2214	0.66
P x R		1	0.9293	0.9293	2.79
D x P x R		18	8.8571	0.4921	1.49
Error		76	25.3315	0.3333	
Total		151	203.6088		

PHOTOPERIOD: Night > Day

[a]Number of larvae per 1000 m^3.
[b]Dates used were from 1 May through 31 July.
*Significant at the 95% level.

TABLE A-18

STATISTICAL ANALYSIS FOR ALOSA SPP.
LARVAL ABUNDANCE[a] IN REPLICATE SAMPLES OF ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1979

FOUR-WAY ANALYSIS OF VARIANCE (Log Transformed)					
SOURCE		DF	SS	MS	F
Date[b]		20	204.954	10.248	25.21*
Photoperiod	(P)	1	0.150	0.150	0.37
Replicate	(R)	1	0.000	0.000	0.00
Depth	(D)	1	0.308	0.308	0.76
P x R		1	0.604	0.604	1.49
P x D		1	0.637	0.637	1.57
R x D		1	0.112	0.112	0.28
P x R x D		1	0.047	0.047	0.12
Error		140	56.911	0.407	
Total		167	263.723		

[a]Number of larvae per 1000 m^3.
[b]Dates used were from 17 Apr through 31 Jul.
*Significant at the 95% level.

TABLE A-19

STATISTICAL ANALYSIS FOR AMERICAN SHAD
LARVAL ABUNDANCE[a] IN REPLICATE SAMPLES OF ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1979

FOUR-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	SS	MS	F
Date[b]		10	27.949	2.795	6.74*
Photoperiod	(P)	1	0.004	0.004	0.01
Replicate	(R)	1	0.363	0.363	0.88
Depth	(D)	1	0.029	0.029	0.07
P x R		1	0.089	0.089	0.21
P x D		1	7.332	7.332	17.68*
R x D		1	0.097	0.097	0.23
P x R x D		1	0.576	0.576	1.39
Error		70	29.023	0.415	
Total		87	65.462		

[a]Number of larvae per 1000 m^3.
[b]Dates used were from 22 May through 26 Jun.
*Significant at the 95% level.

TABLE A-20

STATISTICAL ANALYSIS FOR ATLANTIC TOMCOD
LARVAL ABUNDANCE[a] IN REPLICATE SAMPLES OF ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1979

FOUR-WAY ANALYSIS OF VARIANCE (Log Transformed)					
SOURCE		DF	SS	MS	F
Date[b]		5	25.424	5.084	12.81*
Photoperiod	(P)	1	0.225	0.225	0.57
Replicate	(R)	1	0.461	0.461	1.16
Depth	(D)	1	0.344	0.344	0.87
P x R		1	0.121	0.121	0.30
P x D		1	0.208	0.208	0.52
R x D		1	0.122	0.122	0.31
P x R x D		1	0.074	0.074	0.19
Error		35	13.889	0.397	
Total		47	40.868		

[a]Number of larvae per 1000 m^3.
[b]Dates used were from 20 Feb through 27 Mar.
*Significant at the 95% level.

TABLE A-21

STATISTICAL ANALYSIS FOR STRIPED BASS
LARVAL ABUNDANCE[a] IN REPLICATE SAMPLES OF ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1979

FOUR-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	SS	MS	F
Date[b]		16	94.116	5.882	11.45*
Photoperiod	(P)	1	3.633	3.633	7.07*
Replicate	(R)	1	0.056	0.056	0.11
Depth	(D)	1	0.010	0.010	0.02
P x R		1	0.437	0.437	0.85
P x D		1	0.280	0.280	0.55
R x D		1	0.001	0.001	0.00
P x R x D		1	0.277	0.277	0.54
Error		112	57.523	0.514	
Total		135	156.333		

[a]Number of larvae per 1000 m^3.
[b]Dates used were from 8 May through 24 Jul.
*Significant at the 95% level.

TABLE A-22

STATISTICAL ANALYSIS FOR WHITE PERCH
LARVAL ABUNDANCE[a] IN REPLICATE SAMPLES OF ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1979

FOUR-WAY ANALYSIS OF VARIANCE (Log Transformed)					
SOURCE		DF	SS	MS	F
Date[b]		17	61.800	3.635	9.45*
Photoperiod	(P)	1	0.023	0.023	0.06
Replicate	(R)	1	0.067	0.067	0.17
Depth	(D)	1	0.952	0.952	2.47
P x R		1	0.381	0.381	0.99
P x D		1	0.063	0.063	0.16
R x D		1	0.420	0.420	1.09
P x R x D		1	1.427	1.427	3.71
Error		119	45.792	0.385	
Total		143	110.925		

[a]Number of larvae per 1000 m^3.
[b]Dates used were from 1 May through 24 Jul.
*Significant at the 95% level.

TABLE A-23

STATISTICAL ANALYSIS FOR ALOSA SPP.
LARVAL ABUNDANCE[a] IN REPLICATE SAMPLES OF ENTRAINMENT COLLECTIONS

Roseton Generating Station - 1979

FOUR-WAY ANALYSIS OF VARIANCE (Log Transformed)					
SOURCE		DF	SS	MS	F
Date[b]		6	74.497	12.416	28.53*
Photoperiod	(P)	1	0.002	0.002	0.01
RI vs RIN	(R)	1	0.057	0.057	0.13
Depth	(D)	2	0.368	0.184	0.42
P x R		1	0.694	0.694	1.59
P x D		2	1.287	0.643	1.48
R x D		2	1.410	0.705	1.62
P x R x D		2	1.843	1.922	2.12
Error		66	28.721	0.435	
Total		83	108.879		

[a]Number of larvae per 1000 m^3.
[b]Dates used were 1 May, 8 May, 15 May, 29 May, 10 Jul, 24 Jul, and 31 Jul.
*Significant at the 95% level.

TABLE A-24

STATISTICAL ANALYSIS FOR STRIPED BASS
LARVAL ABUNDANCE[a] IN REPLICATE SAMPLES OF ENTRAINMENT COLLECTIONS

Roseton Generating Station - 1979

FOUR-WAY ANALYSIS OF VARIANCE (Log Transformed)				
SOURCE	DF	SS	MS	F
Date[b]	4	28.434	7.108	23.38*
Photoperiod (P)	1	0.135	0.135	0.44
RI vs RIN (R)	1	0.004	0.004	0.01
Depth (D)	2	1.269	0.634	2.09
P x R	1	0.017	0.017	0.05
P x D	2	2.612	1.305	4.29*
R x D	2	0.336	0.168	0.55
P x R x D	2	0.477	0.238	0.78
Error	44	13.379	0.304	
Total	59	46.663		

[a]Number of larvae per 1000 m^3.
[b]Dates used were 8 May, 15 May, 29 May, 10 Jul, and 24 Jul.
*Significant at the 95% level.

TABLE A-25

STATISTICAL ANALYSIS FOR WHITE PERCH
LARVAL ABUNDANCE[a] IN REPLICATE SAMPLES OF ENTRAINMENT COLLECTIONS

Roseton Generating Station - 1979

FOUR-WAY ANALYSIS OF VARIANCE (Log Transformed)					
SOURCE		DF	SS	MS	F
Date[b]		5	43.679	8.736	22.99*
Photoperiod	(P)	1	0.598	0.598	1.58
RI vs RIN	(R)	1	0.214	0.214	0.56
Depth	(D)	2	2.073	1.036	2.73
P x R		1	0.110	0.110	0.29
P x D		2	0.769	0.385	1.01
R x D		2	0.757	0.379	1.00
P x R x D		2	0.853	0.427	1.12
Error		55	20.894	0.380	
Total		71	69.947		

[a]Number of larvae per 1000 m^3.
[b]Dates used were 1 May, 8 May, 15 May, 29 May, 10 Jul, and 24 Jul.
*Significant at the 95% level.

TABLE A-26

STATISTICAL ANALYSIS FOR ALOSA SPP.
LARVAL ABUNDANCE[a] IN REPLICATE SAMPLES OF ENTRAINMENT COLLECTIONS

Roseton Intake North Generating Station - 1979

FOUR-WAY ANALYSIS OF VARIANCE (Log Transformed)					
SOURCE		DF	SS	MS	F
Date[b]		7	11.996	1.714	3.99*
Photoperiod	(P)	1	37.678	37.678	87.65*
Replicate	(R)	1	0.285	0.285	0.66
Depth	(D)	2	4.194	2.097	4.88*
P x R		1	0.029	0.029	0.07
P x D		2	5.321	2.661	6.19*
R x D		2	1.682	0.841	1.96
P x R x D		2	2.646	1.323	3.08
Error		77	33.100	0.430	
Total		95	96.931		

[a]Number of larvae per 1000 m^3.
[b]Dates used were from 5 Jun through 3 Jul.
*Significant at the 95% level.

TABLE A-27

STATISTICAL ANALYSIS FOR AMERICAN SHAD
LARVAL ABUNDANCE[a] IN REPLICATE SAMPLES OF ENTRAINMENT COLLECTIONS

Roseton Intake North Generating Station - 1979

FOUR-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	SS	MS	F
Date[b]		6	11.561	1.927	5.74*
Photoperiod	(P)	1	2.772	2.772	8.26*
Replicate	(R)	1	0.001	0.001	0.00
Depth	(D)	2	1.926	0.963	2.87*
P x R		1	0.071	0.071	0.21
P x D		2	5.072	2.536	7.56*
R x D		2	0.079	0.039	0.12
P x R x D		2	0.839	0.419	1.25
Error		66	22.138	0.335	
Total		83	44.459		

[a]Number of larvae per 1000 m^3.
[b]Dates used were from 5 Jun through 26 Jun.
*Significant at the 95% level.

TABLE A-28

STATISTICAL ANALYSIS FOR ATLANTIC TOMCOD
LARVAL ABUNDANCE[a] IN REPLICATE SAMPLES OF ENTRAINMENT COLLECTIONS

Roseton Intake North Generating Station - 1979

FOUR-WAY ANALYSIS OF VARIANCE (Log Transformed)					
SOURCE		DF	SS	MS	F
Date[b]		5	22.556	4.511	7.71*
Photoperiod	(P)	1	1.731	1.731	2.96
Replicate	(R)	1	0.289	0.289	0.49
Depth	(D)	2	2.434	1.217	2.08
P x R		1	0.013	0.013	0.02
P x D		2	1.165	0.583	1.00
R x D		2	1.205	0.602	1.03
P x R x D		2	1.192	0.596	1.02
Error		55	32.181	0.585	
Total		71	62.766		

[a]Number of larvae per 1000 m^3.
[b]Dates used were from 20 Feb through 27 Mar.
*Significant at the 95% level.

TABLE A-29

STATISTICAL ANALYSIS FOR STRIPED BASS
LARVAL ABUNDANCE[a] IN REPLICATE SAMPLES OF ENTRAINMENT COLLECTIONS

Roseton Intake North Generating Station - 1979

FOUR-WAY ANALYSIS OF VARIANCE (Log Transformed)					
SOURCE		DF	SS	MS	F
Date[b]		7	20.446	2.921	4.45*
Photoperiod	(P)	1	0.411	0.411	0.63
Replicate	(R)	1	0.081	0.081	0.12
Depth	(D)	2	1.285	0.642	0.98
P x R		1	0.232	0.232	0.35
P x D		2	0.471	0.236	0.36
R x D		2	0.123	0.062	0.09
P x R x D		2	0.730	0.365	0.56
Error		77	50.484	0.656	
Total		95	74.263		

[a]Number of larvae per 1000 m^3.
[b]Dates used were from 5 Jun through 3 Jul.
*Significant at the 95% level.

TABLE A-30

STATISTICAL ANALYSIS FOR WHITE PERCH
LARVAL ABUNDANCE[a] IN REPLICATE SAMPLES OF ENTRAINMENT COLLECTIONS

Roseton Intake North Generating Station - 1979

FOUR-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	SS	MS	F
Date[b]		7	21.002	3.000	4.27*
Photoperiod	(P)	1	16.920	16.920	24.09*
Replicate	(R)	1	0.168	0.168	0.24
Depth	(D)	2	2.129	1.064	1.52
P x R		1	0.077	0.077	0.11
P x D		2	4.629	2.315	3.30*
R x D		2	0.391	0.196	0.28
P x R x D		2	0.247	0.123	0.18
Error		77	54.089	0.702	
Total		95	99.652		

[a]Number of larvae per 1000 m^3.
[b]Dates used were from 5 Jun through 3 Jul.
*Significant at the 95% level.

APPENDIX-8 Impingement Biomass and Percent Composition of the Roseton and Danskammer Point Electric Generating Stations

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
ROSETON GENERATING STATION - 1979

	JAN		FEB		MAR		APR	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
ALEWIFE	0	0.0	0	0.0	0	0.0	673	2.0
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0
AMERICAN EEL	537	1.4	64	0.6	362	1.1	777	2.3
AMERICAN SHAD	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC MENHADEN	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC TOMCOD	5611	14.8	753	7.6	151	0.5	0	0.0
BANDED KILLIFISH	117	0.3	78	0.8	86	0.3	2	*
BAY ANCHOVY	0	0.0	0	0.0	0	0.0	0	0.0
BLACK BULLHEAD	0	0.0	0	0.0	0	0.0	0	0.0
BLACK CRAPPIE	230	0.6	0	0.0	0	0.0	0	0.0
BLUEBACK HERRING	0	0.0	0	0.0	262	0.8	451	1.3
BLUEFISH	0	0.0	0	0.0	0	0.0	0	0.0
BLUEGILL	104	0.3	217	2.2	178	0.6	3	*
BROWN BULLHEAD	1906	5.0	0	0.0	751	2.3	690	2.0
BROWN TROUT	0	0.0	0	0.0	0	0.0	0	0.0
CARP	60	0.2	0	0.0	0	0.0	0	0.0
FATHEAD MINNOW	0	0.0	0	0.0	0	0.0	4	*
FOURSPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	4	*
GIZZARD SHAD	526	1.4	0	0.0	0	0.0	0	0.0
GOLDEN SHINER	464	1.2	156	1.6	238	0.7	127	0.4
GOLDFISH	5692	15.0	3076	31.1	13264	41.2	15113	44.2
HICKORY SHAD	0	0.0	0	0.0	0	0.0	0	0.0
HOGCHOKER	0	0.0	0	0.0	0	0.0	120	0.4
LARGEMOUTH BASS	0	0.0	0	0.0	725	2.3	0	0.0
PUMPKINSEED	7179	18.9	2453	24.8	1762	5.5	209	0.6
RAINBOW SMELT	8	*	76	0.8	1218	3.8	432	1.3
REDBREAST SUNFISH	2	*	0	0.0	3	*	236	0.7
ROCK BASS	2	*	0	0.0	10	*	0	0.0
SPOTTAIL SHINER	1718	4.5	1085	11.0	2273	7.1	651	1.9
STRIPED BASS	358	0.9	8	0.1	86	0.3	6	*
SUNFISHES	0	0.0	0	0.0	0	0.0	0	0.0
TESSELLATED DARTER	9	*	12	0.1	297	0.9	926	2.7
THREESPINE STICKLEBACK	0	0.0	0	0.0	20	0.1	2	*
WHITE CATFISH	2202	5.8	501	5.1	846	2.6	78	0.2
WHITE PERCH	10315	27.1	896	9.1	8935	27.8	13471	39.4
WHITE SUCKER	0	0.0	0	0.0	0	0.0	0	0.0
YELLOW BULLHEAD	6	*	0	0.0	0	0.0	0	0.0
YELLOW PERCH	991	2.6	508	5.1	722	2.2	238	0.7

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
ROSETON GENERATING STATION - 1979

	JAN		FEB		MAR		APR	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
TOTAL (KG.)	38.0	100.0	9.9	100.0	32.2	100.1	34.2	100.1
MONTHLY FLOW SAMPLED (MG)	2385		2406		2960		3392	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS, ALL UNITS COMBINED
(GM) GRAMS
(KG) KILLOGRAMS

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
ROSETON GENERATING STATION - 1979

	MAY		JUN		JUL		AUG	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
ALEWIFE	3119	8.3	0	0.0	154	1.8	6544	11.4
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0
AMERICAN EEL	2	*	170	1.7	656	7.8	1181	2.1
AMERICAN SHAD	0	0.0	0	0.0	165	2.0	1891	3.3
ATLANTIC MENHADEN	0	0.0	0	0.0	0	0.0	125	0.2
ATLANTIC TOMCOD	64	0.2	20	0.2	15	0.2	197	0.3
BANDED KILLIFISH	52	0.1	0	0.0	23	0.3	22	*
BAY ANCHOVY	13	*	0	0.0	680	8.1	16138	28.1
BLACK BULLHEAD	0	0.0	0	0.0	0	0.0	0	0.0
BLACK CRAPPIE	0	0.0	0	0.0	0	0.0	0	0.0
BLUEBACK HERRING	2628	7.0	879	8.6	847	10.0	4381	7.6
BLUEFISH	0	0.0	0	0.0	0	0.0	25	*
BLUEGILL	214	0.6	0	0.0	0	0.0	48	0.1
BROWN BULLHEAD	201	0.5	350	3.4	588	7.0	516	0.9
BROWN TROUT	0	0.0	0	0.0	0	0.0	0	0.0
CARP	0	0.0	0	0.0	0	0.0	0	0.0
FATHEAD MINNOW	0	0.0	0	0.0	0	0.0	0	0.0
FOURSPINE STICKLEBACK	1	*	0	0.0	0	0.0	0	*
GIZZARD SHAD	0	0.0	0	0.0	0	0.0	0	0.0
GOLDEN SHINER	15	*	0	0.0	197	2.3	223	0.4
GOLDFISH	18226	48.5	1558	15.2	921	10.9	323	0.6
HICKORY SHAD	0	0.0	0	0.0	0	0.0	77	0.1
HOGCHOKER	1234	3.3	7	0.1	16	0.2	206	0.4
LARGEMOUTH BASS	0	0.0	0	0.0	0	0.0	0	0.0
PUMPKINSEED	1284	3.4	316	3.1	413	4.9	1534	2.7
RAINBOW SMELT	250	0.7	1	*	3	*	34	0.1
REDBREAST SUNFISH	0	0.0	0	0.0	0	0.0	0	0.0
ROCK BASS	4	*	0	0.0	0	0.0	0	0.0
SPOTTAIL SHINER	266	0.7	51	0.5	1	*	179	0.3
STRIPED BASS	42	0.1	0	0.0	1640	19.5	575	1.0
SUNFISHES	0	0.0	0	0.0	0	0.0	0	0.0
TESSELLATED DARTER	347	0.9	14	0.1	10	0.1	20	*
THREESPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0
WHITE CATFISH	742	2.0	257	2.5	1112	13.2	2367	4.1
WHITE PERCH	8606	22.9	6593	64.5	986	11.7	20840	36.3
WHITE SUCKER	0	0.0	0	0.0	0	0.0	0	0.0
YELLOW BULLHEAD	269	0.7	0	0.0	0	0.0	0	0.0
YELLOW PERCH	0	0.0	0	0.0	0	0.0	0	0.0

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
ROSETON GENERATING STATION - 1979

	MAY		JUN		JUL		AUG	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
TOTAL (KG.)	37.6	99.9	10.2	99.9	8.4	100.0	57.4	100.0
MONTHLY FLOW SAMPLED (MG)	4458		2163		3505		6309	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS, ALL UNITS COMBINED
(GM) GRAMS
(KG) KILLOGRAMS

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
ROSETON GENERATING STATION - 1979

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	KG.	PCNT
ALEWIFE	1116	8.6	2593	9.0	2333	4.4	22	0.1	16.55	4.8
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0	.00	0.0
AMERICAN EEL	1357	10.4	715	2.5	893	1.7	210	0.9	6.92	2.0
AMERICAN SHAD	433	3.3	812	2.8	653	1.2	18	0.1	3.97	1.2
ATLANTIC MENHADEN	0	0.0	0	0.0	0	0.0	0	0.0	.12	*
ATLANTIC TOMCOD	0	0.0	226	0.8	228	0.4	6215	27.5	13.48	3.9
BANDED KILLIFISH	17	0.1	75	0.3	141	0.3	5	*	.62	0.2
BAY ANCHOVY	347	2.7	0	0.0	0	0.0	0	0.0	17.18	5.0
BLACK BULLHEAD	0	0.0	0	0.0	204	0.4	0	0.0	.20	0.1
BLACK CRAPPIE	0	0.0	0	0.0	0	0.0	0	0.0	.23	0.1
BLUEBACK HERRING	3344	25.7	7902	27.4	3376	6.4	16	0.1	24.09	7.0
BLUEFISH	0	0.0	0	0.0	0	0.0	0	0.0	.03	*
BLUEGILL	195	1.5	214	0.7	849	1.6	842	3.7	2.86	0.8
BROWN BULLHEAD	0	0.0	15	0.1	17	*	0	0.0	5.04	1.5
BROWN TROUT	0	0.0	0	0.0	0	0.0	0	0.0	.00	0.0
CARP	0	0.0	0	0.0	186	0.4	359	1.6	.60	0.2
FATHEAD MINNOW	0	0.0	0	0.0	0	0.0	0	0.0	.00	*
FOURSPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	1	*	.01	*
GIZZARD SHAD	0	0.0	2	*	547	1.0	361	1.6	1.43	0.4
GOLDEN SHINER	364	2.8	59	0.2	190	0.4	299	1.3	2.33	0.7
GOLDFISH	0	0.0	1435	5.0	28	0.1	815	3.6	60.45	17.5
HICKORY SHAD	118	0.9	0	0.0	0	0.0	0	0.0	.19	0.1
HOGCHOKER	27	0.2	146	0.5	98	0.2	0	0.0	1.85	0.5
LARGEMOUTH BASS	0	0.0	0	0.0	240	0.5	35	0.2	1.00	0.3
PUMPKINSEED	314	2.4	828	2.9	831	1.6	227	1.0	17.35	5.0
RAINBOW SMELT	0	0.0	181	0.6	550	1.0	121	0.5	2.87	0.8
REDBREAST SUNFISH	0	0.0	7	*	2	*	0	0.0	.25	0.1
ROCK BASS	0	0.0	0	0.0	0	0.0	0	0.0	.02	*
SPOTTAIL SHINER	15	0.1	524	1.8	1484	2.8	1063	4.7	9.31	2.7
STRIPED BASS	252	1.9	38	0.1	227	0.4	571	2.5	3.80	1.1
SUNFISHES	0	0.0	0	0.0	0	0.0	0	0.0	.00	0.0
TESSELLATED DARTER	3	*	13	*	44	0.1	27	0.1	1.72	0.5
THREESPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0	.02	*
WHITE CATFISH	395	3.0	122	0.4	823	1.6	31	0.1	9.47	2.7
WHITE PERCH	4728	36.3	12891	44.7	38353	72.9	9579	42.3	136.19	39.5
WHITE SUCKER	0	0.0	0	0.0	0	0.0	0	0.0	.00	0.0
YELLOW BULLHEAD	0	0.0	12	*	0	0.0	0	0.0	.29	0.1
YELLOW PERCH	0	0.0	25	0.1	298	0.6	1822	8.0	4.60	1.3

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
ROSETON GENERATING STATION - 1979

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	KG.	PCNT
TOTAL (KG.)	13.0	99.9	28.8	99.9	52.6	100.0	22.6	99.	345.06	100.1
MONTHLY FLOW SAMPLED (MG)	4557		4800		7552		2553		47040	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS, ALL UNITS COMBINED
(GM) GRAMS
(KG) KILLOGRAMS

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
DANSKAMMER POINT GENERATING STATION - 1979

	JAN		FEB		MAR		APR	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
WHITE PERCH	19668	7.1	814	0.9	61868	28.4	67942	71.3
WHITE SUCKER	0	0.0	0	0.0	721	0.3	0	0.0
YELLOW PERCH	1581	0.6	508	0.5	4132	1.9	2100	2.2
TOTAL (KG.)	277.6	99.9	92.4	99.8	217.8	100.2	95.3	100.0
MONTHLY FLOW SAMPLED (MG)	1529		987		1371		1128	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS, ALL UNITS COMBINED
(GM) GRAMS
(KG) KILLOGRAMS

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
DANSKAMMER POINT GENERATING STATION - 1979

	JAN		FEB		MAR		APR	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
ALEWIFE	27	*	0	0.0	1750	0.8	3739	3.9
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0
AMERICAN EEL	195	0.1	231	0.2	671	0.3	1526	1.6
AMERICAN SHAD	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC STURGEON	0	0.0	0	0.0	0	0.0	88	0.1
ATLANTIC TOMCOD	107377	38.7	10944	11.8	12960	6.0	51	0.1
BANDED KILLIFISH	289	0.1	83	0.1	133	0.1	14	*
BAY ANCHOVY	0	0.0	0	0.0	0	0.0	0	0.0
BLACK BULLHEAD	252	0.1	0	0.0	0	0.0	0	0.0
BLACK CRAPPIE	344	0.1	286	0.3	485	0.2	361	0.4
BLUEBACK HERRING	0	0.0	0	0.0	0	0.0	500	0.5
BLUEGILL	395	0.1	0	0.0	137	0.1	345	0.4
BRINDLED MADTOM	0	0.0	0	0.0	1	*	0	0.0
BROWN BULLHEAD	2036	0.7	1187	1.3	1857	0.9	696	0.7
BROWN TROUT	0	0.0	0	0.0	0	0.0	0	0.0
CARP	1214	0.4	17584	19.0	333	0.2	13	*
CHAIN PICKEREL	0	0.0	0	0.0	0	0.0	67	0.1
CHANNEL CATFISH	25	*	0	0.0	0	0.0	0	0.0
COMMON SHINER	7	*	0	0.0	0	0.0	0	0.0
FOURSPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	2	*
GIZZARD SHAD	1603	0.6	0	0.0	0	0.0	0	0.0
GOLDEN SHINER	15202	5.5	5640	6.1	14145	6.5	1916	2.0
GOLDFISH	75256	27.1	45969	49.7	84750	38.9	8558	9.0
HOGCHOKER	0	0.0	0	0.0	0	0.0	7	*
LARGEMOUTH BASS	303	0.1	0	0.0	1719	0.8	0	0.0
LEPOMIS SP	0	0.0	0	0.0	0	0.0	0	0.0
NORTHERN PIKE	0	0.0	0	0.0	0	0.0	0	0.0
PUMPKINSEED	20773	7.5	3511	3.8	3687	1.7	1569	1.6
RAINBOW SMELT	8	*	27	*	12834	5.9	1014	1.1
REDBREAST SUNFISH	0	0.0	0	0.0	0	0.0	0	0.0
ROCK BASS	0	0.0	0	0.0	7	*	2	*
SEA LAMPREY	0	0.0	0	0.0	0	0.0	100	0.1
SPOTTAIL SHINER	4473	1.6	1948	2.1	9701	4.5	3708	3.9
STRIPED BASS	9851	3.5	450	0.5	1444	0.7	10	*
TESSELLATED DARTER	51	*	0	0.0	81	*	103	0.1
THREESPINE STICKLEBACK	0	0.0	0	0.0	1	*	4	*
WHITE CATFISH	16629	6.0	3246	3.5	4282	2.0	868	0.9
WHITE CRAPPIE	15	*	8	*	105	*	0	0.0

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
DANSKAMMER POINT GENERATING STATION - 1979

	MAY		JUN		JUL		AUG	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
ALEWIFE	58015	59.1	1044	1.2	766	4.8	3094	15.6
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0
AMERICAN EEL	724	0.7	1990	2.3	286	1.8	428	2.2
AMERICAN SHAD	0	0.0	1	*	96	0.6	383	1.9
ATLANTIC STURGEON	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC TOMCOD	70	0.1	178	0.2	77	0.5	25	0.1
BANDED KILLIFISH	13	*	9	*	8	0.1	7	*
BAY ANCHOVY	0	0.0	0	0.0	288	1.8	284	1.4
BLACK BULLHEAD	0	0.0	0	0.0	0	0.0	0	0.0
BLACK CRAPPIE	0	0.0	91	0.1	0	0.0	0	0.0
BLUEBACK HERRING	2534	2.6	9926	11.3	830	5.2	527	2.7
BLUEGILL	442	0.4	703	0.8	226	1.4	775	3.9
BRINDLED MADTOM	0	0.0	0	0.0	0	0.0	0	0.0
BROWN BULLHEAD	309	0.3	2237	2.5	615	3.8	24	0.1
BROWN TROUT	0	0.0	0	0.0	152	0.9	0	0.0
CARP	0	0.0	0	0.0	0	0.0	0	0.0
CHAIN PICKEREL	0	0.0	0	0.0	0	0.0	0	0.0
CHANNEL CATFISH	0	0.0	0	0.0	0	0.0	0	0.0
COMMON SHINER	0	0.0	0	0.0	0	0.0	0	0.0
FOURSPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	2	*
GIZZARD SHAD	0	0.0	0	0.0	0	0.0	0	0.0
GOLDEN SHINER	777	0.8	0	0.0	131	0.8	23	0.1
GOLDFISH	9199	9.4	3190	3.6	649	4.0	0	0.0
HOGCHOKER	355	0.4	16	*	38	0.2	52	0.3
LARGEMOUTH BASS	0	0.0	0	0.0	0	0.0	47	0.2
LEPOMIS SP	0	0.0	0	0.0	0	0.0	0	0.0
NORTHERN PIKE	0	0.0	0	0.0	0	0.0	0	0.0
PUMPKINSEED	5333	5.4	1872	2.1	2077	12.9	2069	10.4
RAINBOW SMELT	21	*	0	0.0	7	*	2	*
REDBREAST SUNFISH	562	0.6	328	0.4	249	1.5	291	1.5
ROCK BASS	0	0.0	0	0.0	0	0.0	0	0.0
SEA LAMPREY	0	0.0	0	0.0	0	0.0	0	0.0
SPOTTAIL SHINER	791	0.8	256	0.3	71	0.4	31	0.2
STRIPED BASS	78	0.1	205	0.2	710	4.4	630	3.2
TESSELLATED DARTER	180	0.2	12	*	0	*	5	*
THREESPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0
WHITE CATFISH	1301	1.3	716	0.8	709	4.4	1221	6.2
WHITE CRAPPIE	0	0.0	0	0.0	0	0.0	0	0.0

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
DANSKAMMER POINT GENERATING STATION - 1979

	MAY		JUN		JUL		AUG	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
WHITE PERCH	14753	15.0	64132	73.1	8067	50.3	9922	50.0
WHITE SUCKER	1939	2.0	694	0.8	0	0.0	0	0.0
YELLOW PERCH	830	0.8	143	0.2	0	0.0	0	0.0
TOTAL (KG.)	98.2	100.0	87.7	99.9	16.1	99.8	19.8	100.0
MONTHLY FLOW SAMPLED (MG)	1130		1427		1401		1488	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS, ALL UNITS COMBINED
(GM) GRAMS
(KG) KILLOGRAMS

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
DANSKAMMER POINT GENERATING STATION - 1979

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	KG.	PCNT
ALEWIFE	1757	13.8	9900	14.0	6365	11.5	322	0.6	86.78	7.9
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0	.00	0.0
AMERICAN EEL	468	3.7	1883	2.7	851	1.5	901	1.6	10.15	0.9
AMERICAN SHAD	212	1.7	3554	5.0	660	1.2	42	0.1	4.95	0.4
ATLANTIC STURGEON	0	0.0	0	0.0	0	0.0	0	0.0	.09	*
ATLANTIC TOMCOD	4	*	35	0.1	1838	3.3	24895	43.3	158.45	14.4
BANDED KILLIFISH	11	0.1	28	*	48	0.1	225	0.4	.87	0.1
BAY ANCHOVY	26	0.2	0	0.0	0	0.0	0	0.0	.60	0.1
BLACK BULLHEAD	0	0.0	0	0.0	513	0.9	99	0.2	.86	0.1
BLACK CRAPPIE	0	0.0	0	0.0	500	0.9	67	0.1	2.13	0.2
BLUEBACK HERRING	890	7.0	9058	12.8	2084	3.8	5	*	26.35	2.4
BLUEGILL	95	0.7	1680	2.4	2709	4.9	1280	2.2	8.79	0.8
BRINDLED MADTOM	0	0.0	0	0.0	0	0.0	0	0.0	.00	*
BROWN BULLHEAD	0	0.0	21	*	56	0.1	520	0.9	9.56	0.9
BROWN TROUT	0	0.0	0	0.0	0	0.0	0	0.0	.15	*
CARP	0	0.0	0	0.0	76	0.1	500	0.9	19.72	1.8
CHAIN PICKEREL	0	0.0	0	0.0	0	0.0	0	0.0	.07	*
CHANNEL CATFISH	0	0.0	0	0.0	0	0.0	0	0.0	.02	*
COMMON SHINER	0	0.0	0	0.0	0	0.0	0	0.0	.01	*
FOURSPINE STICKLEBACK	0	*	0	0.0	0	0.0	0	0.0	.00	*
GIZZARD SHAD	0	0.0	83	0.1	1313	2.4	647	1.1	3.65	0.3
GOLDEN SHINER	145	1.1	70	0.1	1030	1.9	460	0.8	39.54	3.6
GOLDFISH	0	0.0	728	1.0	352	0.6	2656	4.6	231.31	21.0
HOGCHOKER	5	*	28	*	94	0.2	0	0.0	.59	0.1
LARGEMOUTH BASS	38	0.3	985	1.4	598	1.1	866	1.5	4.56	0.4
LEPOMIS SP	0	0.0	0	0.0	4	*	0	0.0	.00	*
NORTHERN PIKE	0	0.0	0	0.0	0	0.0	0	0.0	.00	0.0
PUMPKINSEED	1391	10.9	3044	4.3	2930	5.3	949	1.7	49.20	4.5
RAINBOW SMELT	0	0.0	41	0.1	158	0.3	48	0.1	14.16	1.3
REDBREAST SUNFISH	188	1.5	347	0.5	105	0.2	0	0.0	2.07	0.2
ROCK BASS	0	0.0	0	0.0	0	0.0	0	0.0	.01	*
SEA LAMPREY	0	0.0	0	0.0	0	0.0	0	0.0	.10	*
SPOTTAIL SHINER	16	0.1	719	1.0	2212	4.0	2686	4.7	26.61	2.4
STRIPED BASS	313	2.5	1118	1.6	1742	3.1	6877	12.0	23.43	2.1
TESSELLATED DARTER	1	*	0	0.0	0	0.0	0	0.0	.43	*
THREESPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0	.01	*
WHITE CATFISH	493	3.9	2046	2.9	778	1.4	10	*	32.30	2.9
WHITE CRAPPIE	0	0.0	0	0.0	0	0.0	0	0.0	.13	*

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
DANSKAMMER POINT GENERATING STATION - 1979

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	KG.	PCNT
WHITE PERCH	6702	52.5	35294	49.9	28010	50.6	11745	20.4	328.91	29.9
WHITE SUCKER	0	0.0	0	0.0	0	0.0	0	0.0	3.35	0.3
YELLOW PERCH	0	0.0	15	*	336	0.6	1644	2.9	11.29	1.0
TOTAL (KG.)	12.8	100.0	70.7	99.9	55.4	100.0	57.4	100.	1101.20	100.0
MONTHLY FLOW SAMPLED (MG)	1046		2092		1768		748		16115	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS, ALL UNITS COMBINED
(GM) GRAMS
(KG) KILLOGRAMS

APPENDIX-9 Weekly Estimated Impingement Rate for Select Species Collected at the Roseton and Danskammer Point Electric Generating Stations

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	418	599.8300	.6969	4213.4400	2936	
	2	517	601.9200	.8589	4213.4400	3619	
	3	115	593.5600	.1938	4213.4400	817	
	4	135	589.3800	.2291	6019.2000	1379	
			MONTH EST.RATE	.4947	18659.5200		9231
FEB	1	189	601.9200	.3140	4213.4400	1323	
	2	130	601.9200	.2160	4213.4400	910	
	3	50	599.8300	.0834	4213.7300	351	
	4	44	601.9200	.0731	4213.4400	308	
			MONTH EST.RATE	.1716	16854.0500		2892
MARCH	1	74	599.8300	.1234	4682.1900	578	
	2	123	601.9200	.2044	4213.4400	861	
	3	279	602.2116	.4633	4215.4500	1953	
	4	370	1156.4785	.3199	6050.2400	1935	
			MONTH EST.RATE	.2778	19161.3200		5323
APRIL	1	80	601.9200	.1329	4338.4200	577	
	2	179	601.9200	.2974	4465.6900	1328	
	3	207	601.9200	.3439	4213.4400	1449	
	4	1450	1586.6496	.9139	6704.1400	6127	
			MONTH EST.RATE	.4220	19721.6900		8323
MAY	1	475	805.1983	.5899	5347.6300	3155	
	2	304	901.2816	.3373	6182.3200	2085	
	3	313	923.0400	.3391	6461.2800	2191	
	4	455	1828.7282	.2488	9230.4000	2297	
			MONTH EST.RATE	.3788	27221.6300		10312
JUNE	1	95	541.4400	.1755	4519.8400	793	
	2	61	537.6800	.1135	3790.2600	430	
	3	53	542.0016	.0978	3813.0200	373	
	4	17	542.0016	.0314	4873.5200	153	
			MONTH EST.RATE	.1046	16996.6400		1778
JULY	1	31	795.9384	.0390	4727.5100	184	
	2	42	923.0400	.0455	6365.1200	290	
	3	315	910.2202	.3461	6022.6400	2084	
	4	135	875.7392	.1542	8104.8800	1250	
			MONTH EST.RATE	.1462	25220.1500		3687

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	512	908.1612	.5638	6390.8000	3603	
		2	6207	1708.2806	3.6335	6461.2800	23477	
		3	7585	1846.0800	4.1087	6461.2800	26547	
		4	863	1846.0800	.4675	9230.4000	4315	
				MONTH EST.RATE	2.1934	28543.7600		62608
	SEPT	1	275	154.0800	1.7848	6461.2800	11532	
		2	416	1751.8392	.2375	6329.2000	1503	
		3	1204	923.0400	1.3044	6291.7600	8207	
		4	936	1728.4604	.5415	7427.6600	4022	
				MONTH EST.RATE	.9671	26509.9000		25638
	OCT	1	38	676.8000	.0562	3831.9100	215	
		2	389	674.9200	.5764	3803.4200	2192	
		3	2254	473.0080	4.7653	3813.1300	18171	
		4	4903	2974.9099	1.6498	5436.9600	8970	
				MONTH EST.RATE	1.7619	16885.4200		29750
	NOV	1	5173	2710.2291	1.9087	4742.9000	9053	
		2	3298	2417.9100	1.3640	5659.3600	7719	
		3	1787	1615.6800	1.1060	5546.1700	6245	
		4	401	807.8400	.4964	7231.9400	3590	
				MONTH EST.RATE	1.2188	23280.3700		28374
	DEC	1	690	807.8400	.8541	5138.2600	4389	
		2	551	589.3800	.9349	3647.7800	3410	
		3	586	601.9200	.9736	4213.4400	4102	
		4	492	553.8500	.8883	6069.5800	5392	
				MONTH EST.RATE	.9127	19069.0600		17404
				ANNUAL EST.RATE	.7541			205320

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	599.8300	.0000	4213.4400	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	593.5600	.0000	4213.4400	0	
	4	0	589.3800	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18659.5200		0
FEB	1	0	601.9200	.0000	4213.4400	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	599.8300	.0000	4213.7300	0	
	4	0	601.9200	.0000	4213.4400	0	
			MONTH EST.RATE	.0000	16854.0500		0
MARCH	1	0	599.8300	.0000	4682.1900	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	602.2116	.0000	4215.4500	0	
	4	0	1156.4785	.0000	6050.2400	0	
			MONTH EST.RATE	.0000	19161.3200		0
APRIL	1	0	601.9200	.0000	4338.4200	0	
	2	0	601.9200	.0000	4465.6900	0	
	3	1	601.9200	.0017	4213.4400	7	
	4	1	1586.6496	.0006	6704.1400	4	
			MONTH EST.RATE	.0006	19721.6900		12
MAY	1	1	805.1983	.0012	5347.6300	6	
	2	4	901.2816	.0044	6182.3200	27	
	3	10	923.0400	.0108	6461.2800	70	
	4	6	1828.7282	.0033	9230.4000	30	
			MONTH EST.RATE	.0049	27221.6300		133
JUNE	1	0	541.4400	.0000	4519.8400	0	
	2	0	537.6800	.0000	3790.2600	0	
	3	0	542.0016	.0000	3813.0200	0	
	4	0	542.0016	.0000	4873.5200	0	
			MONTH EST.RATE	.0000	16996.6400		0
JULY	1	0	795.9384	.0000	4727.5100	0	
	2	6	923.0400	.0065	6365.1200	41	
	3	58	910.2202	.0637	6022.6400	384	
	4	8	875.7392	.0091	8104.8800	74	
			MONTH EST.RATE	.0198	25220.1500		499

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	25	908.1612	.0275	6390.8000	176	
		2	584	1708.2806	.3419	6461.2800	2209	
		3	528	1846.0800	.2860	6461.2800	1848	
		4	79	1846.0800	.0428	9230.4000	395	
				MONTH EST.RATE	.1746	28543.7600		4984
	SEPT	1	35	154.0800	.2272	6461.2800	1468	
		2	36	1751.8392	.0206	6329.2000	130	
		3	31	923.0400	.0336	6291.7600	211	
		4	22	1728.4604	.0127	7427.6600	94	
				MONTH EST.RATE	.0735	26509.9000		1948
	OCT	1	10	676.8000	.0148	3831.9100	57	
		2	2	674.9200	.0030	3803.4200	11	
		3	52	473.0080	.1099	3813.1300	419	
		4	359	2974.9099	.1207	5436.9600	656	
				MONTH EST.RATE	.0621	16885.4200		1049
	NOV	1	104	2710.2291	.0384	4742.9000	182	
		2	169	2417.9100	.0699	5659.3600	396	
		3	63	1615.6800	.0390	5646.1700	220	
		4	11	807.8400	.0136	7231.9400	98	
				MONTH EST.RATE	.0402	23280.3700		936
	DEC	1	3	807.8400	.0037	5138.2600	19	
		2	0	589.3800	.0000	3647.7800	0	
		3	0	601.9200	.0000	4213.4400	0	
		4	0	553.8500	.0000	6069.5800	0	
				MONTH EST.RATE	.0009	19069.0600		17
				ANNUAL EST.RATE	.0314			9578

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	599.8300	.0000	4213.4400	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	593.5600	.0000	4213.4400	0	
	4	0	589.3800	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18659.5200		0
FEB	1	0	601.9200	.0000	4213.4400	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	599.8300	.0000	4213.7300	0	
	4	0	601.9200	.0000	4213.4400	0	
			MONTH EST.RATE	.0000	16854.0500		0
MARCH	1	0	599.8300	.0000	4682.1900	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	602.2116	.0000	4215.4500	0	
	4	0	1156.4785	.0000	6050.2400	0	
			MONTH EST.RATE	.0000	19161.3200		0
APRIL	1	0	601.9200	.0000	4338.4200	0	
	2	0	601.9200	.0000	4465.6900	0	
	3	0	601.9200	.0000	4213.4400	0	
	4	0	1586.6496	.0000	6794.1400	0	
			MONTH EST.RATE	.0000	19721.6900		0
MAY	1	0	805.1983	.0000	5347.6300	0	
	2	0	901.2816	.0000	6182.3200	0	
	3	0	923.0400	.0000	6461.2800	0	
	4	0	1828.7282	.0000	9230.4000	0	
			MONTH EST.RATE	.0000	27221.6300		0
JUNE	1	0	541.4400	.0000	4519.8400	0	
	2	0	537.6800	.0000	3790.2600	0	
	3	0	542.0016	.0000	3813.0200	0	
	4	0	542.0016	.0000	4873.5200	0	
			MONTH EST.RATE	.0000	16996.6400		0
JULY	1	9	795.9384	.0113	4727.5100	53	
	2	15	923.0400	.0163	6365.1200	104	
	3	65	910.2202	.0714	6022.6400	430	
	4	13	875.7392	.0148	8104.8800	120	
			MONTH EST.RATE	.0285	25220.1500		719

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	27	908.1612	.0297	6390.8000	190	
		2	304	1708.2806	.1780	6461.2800	1150	
		3	269	1846.0800	.1457	6461.2800	941	
		4	35	1846.0800	.0190	9230.4000	175	
				MONTH EST.RATE	.0931	28543.7600		2657
	SEPT	1	16	154.0800	.1038	6461.2800	671	
		2	28	1751.8392	.0160	6329.2000	101	
		3	21	923.0400	.0228	6291.7600	143	
		4	24	1728.4604	.0139	7427.6600	103	
				MONTH EST.RATE	.0391	26509.9000		1037
	OCT	1	0	676.8000	.0000	3831.9100	0	
		2	3	674.9200	.0044	3803.4200	17	
		3	50	473.0080	.1057	3813.1300	403	
		4	97	2974.9099	.0326	5436.9600	177	
				MONTH EST.RATE	.0357	16885.4200		603
	NOV	1	34	2710.2291	.0126	4742.9000	60	
		2	60	2417.9100	.0248	5659.3600	140	
		3	9	1615.6800	.0056	5646.1700	32	
		4	16	807.8400	.0198	7231.9400	143	
				MONTH EST.RATE	.0157	23280.3700		366
	DEC	1	1	807.8400	.0012	5138.2600	6	
		2	0	589.3800	.0000	3647.7800	0	
		3	0	601.9200	.0000	4213.4400	0	
		4	1	553.8500	.0018	6069.5800	11	
				MONTH EST.RATE	.0008	19069.0600		15
				ANNUAL EST.RATE	.0177			5397

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC STURGEON
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	599.8300	.0000	4213.4400	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	593.5600	.0000	4213.4400	0	
	4	0	589.3800	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18659.5200		0
FEB	1	0	601.9200	.0000	4213.4400	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	599.8300	.0000	4213.7300	0	
	4	0	601.9200	.0000	4213.4400	0	
			MONTH EST.RATE	.0000	16854.0500		0
MARCH	1	0	599.8300	.0000	4682.1900	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	602.2116	.0000	4215.4500	0	
	4	0	1156.4785	.0000	6050.2400	0	
			MONTH EST.RATE	.0000	19161.3200		0
APRIL	1	0	601.9200	.0000	4338.4200	0	
	2	0	601.9200	.0000	4465.6900	0	
	3	0	601.9200	.0000	4213.4400	0	
	4	0	1586.6495	.0000	6704.1400	0	
			MONTH EST.RATE	.0000	19721.6900		0
MAY	1	0	805.1983	.0000	5347.6300	0	
	2	0	901.2816	.0000	6182.3200	0	
	3	0	923.0400	.0000	6461.2800	0	
	4	0	1828.7282	.0000	9230.4000	0	
			MONTH EST.RATE	.0000	27221.6300		0
JUNE	1	0	541.4400	.0000	4519.8400	0	
	2	0	537.6800	.0000	3790.2600	0	
	3	0	542.0016	.0000	3813.0200	0	
	4	0	542.0016	.0000	4873.5200	0	
			MONTH EST.RATE	.0000	16996.6400		0
JULY	1	0	795.9384	.0000	4727.5100	0	
	2	0	923.0400	.0000	6365.1200	0	
	3	0	910.2202	.0000	6022.6400	0	
	4	0	875.7392	.0000	8104.8800	0	
			MONTH EST.RATE	.0000	25220.1500		0

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC STURGEON
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	0	908.1612	.0000	6390.8000	0	
		2	0	1708.2806	.0000	6461.2800	0	
		3	0	1846.0800	.0000	6461.2800	0	
		4	0	1846.0800	.0000	9230.4000	0	
				MONTH EST.RATE	.0000	28543.7600		0
	SEPT	1	0	154.0800	.0000	6461.2800	0	
		2	0	1751.8392	.0000	6329.2000	0	
		3	0	923.0400	.0000	6291.7600	0	
		4	0	1728.4604.	.0000	7427.6600	0	
				MONTH EST.RATE	.0000	26509.9000		0
	OCT	1	0	676.8000	.0000	3831.9100	0	
		2	0	674.9200	.0000	3803.4200	0	
		3	0	473.0080	.0000	3813.1300	0	
		4	0	2974.9099	.0000	5436.9600	0	
				MONTH EST.RATE	.0000	16885.4200		0
	NOV	1	0	2710.2291	.0000	4742.9000	0	
		2	0	2417.9100	.0000	5659.3600	0	
		3	0	1615.6800	.0000	5646.1700	0	
		4	0	807.8400	.0000	7231.9400	0	
				MONTH EST.RATE	.0000	23280.3700		0
	DEC	1	0	807.8400	.0000	5138.2600	0	
		2	0	589.3800	.0000	3647.7800	0	
		3	0	601.9200	.0000	4213.4400	0	
		4	0	553.8500	.0000	6069.5800	0	
				MONTH EST.RATE	.0000	19069.0600		0
				ANNUAL EST.RATE	.0000			0

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC TOMCOD
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	35	599.8300	.0584	4213.4400	246	
	2	94	601.9200	.1562	4213.4400	658	
	3	45	593.5600	.0758	4213.4400	319	
	4	25	589.3800	.0424	6019.2000	255	
			MONTH EST.RATE	.0832	18659.5200		1552
FEB	1	20	601.9200	.0332	4213.4400	140	
	2	8	601.9200	.0133	4213.4400	56	
	3	3	599.8300	.0050	4213.7300	21	
	4	2	601.9200	.0033	4213.4400	14	
			MONTH EST.RATE	.0137	16854.0500		231
MARCH	1	1	599.8300	.0017	4682.1900	8	
	2	3	601.9200	.0050	4213.4400	21	
	3	2	602.2115	.0033	4215.4500	14	
	4	1	1156.4785	.0009	6050.2400	5	
			MONTH EST.RATE	.0027	19161.3200		52
APRIL	1	0	601.9200	.0000	4338.4200	0	
	2	0	601.9200	.0000	4465.6900	0	
	3	0	601.9200	.0000	4213.4400	0	
	4	0	1586.6496	.0000	6704.1400	0	
			MONTH EST.RATE	.0000	19721.6900		0
MAY	1	0	805.1983	.0000	5347.6300	0	
	2	0	901.2815	.0000	6182.3200	0	
	3	11	923.0400	.0119	6461.2800	77	
	4	23	1828.7282	.0126	9230.4000	116	
			MONTH EST.RATE	.0061	27221.6300		166
JUNE	1	4	541.4400	.0074	4519.8400	33	
	2	1	537.6800	.0019	3790.2600	7	
	3	1	542.0016	.0019	3813.0200	7	
	4	0	542.0016	.0000	4873.5200	0	
			MONTH EST.RATE	.0028	16996.6400		48
JULY	1	2	795.9384	.0025	4727.5100	12	
	2	0	923.0400	.0000	6365.1200	0	
	3	1	910.2202	.0011	6022.6400	7	
	4	0	875.7392	.0000	8104.8800	0	
			MONTH EST.RATE	.0009	25220.1500		23

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC TOMCOD
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	12	908.1612	.0132	6390.8000	84	
		2	16	1708.2806	.0094	6461.2800	61	
		3	5	1846.0800	.0027	6461.2800	17	
		4	2	1846.0800	.0011	9230.4000	10	
				MONTH EST.RATE	.0066	28543.7600		188
	SEPT	1	0	154.0800	.0000	6461.2800	0	
		2	0	1751.8392	.0000	6329.2000	0	
		3	0	923.0400	.0000	6291.7600	0	
		4	0	1728.4604	.0000	7427.6600	0	
				MONTH EST.RATE	.0000	26509.9000		0
	OCT	1	0	676.8000	.0000	3831.9100	0	
		2	0	674.9200	.0000	3803.4200	0	
		3	0	473.0080	.0000	3813.1300	0	
		4	12	2974.9099	.0040	5436.9600	22	
				MONTH EST.RATE	.0010	16885.4200		17
	NOV	1	4	2710.2291	.0015	4742.9000	7	
		2	6	2417.9100	.0025	5659.3600	14	
		3	1	1615.6800	.0006	5646.1700	3	
		4	0	807.8400	.0000	7231.9400	0	
				MONTH EST.RATE	.0012	23280.3700		28
	DEC	1	73	807.8400	.0304	5138.2600	464	
		2	36	589.3800	.0611	3647.7800	223	
		3	86	601.9200	.1429	4213.4400	602	
		4	7	553.8500	.0126	6069.5800	76	
				MONTH EST.RATE	.0768	19069.0600		1465
				ANNUAL EST.RATE	.0163			3770

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BAY ANCHOVY
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	599.8300	.0000	4213.4400	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	593.5600	.0000	4213.4400	0	
	4	0	589.3800	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18659.5200		0
FEB	1	0	601.9200	.0000	4213.4400	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	599.8300	.0000	4213.7300	0	
	4	0	601.9200	.0000	4213.4400	0	
			MONTH EST.RATE	.0000	16854.0500		0
MARCH	1	0	599.8300	.0000	4682.1900	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	602.2116	.0000	4215.4500	0	
	4	0	1156.4785	.0000	6050.2400	0	
			MONTH EST.RATE	.0000	19161.3200		0
APRIL	1	0	601.9200	.0000	4338.4200	0	
	2	0	601.9200	.0000	4465.6900	0	
	3	0	601.9200	.0000	4213.4400	0	
	4	0	1586.6496	.0000	6704.1400	0	
			MONTH EST.RATE	.0000	19721.6900		0
MAY	1	0	805.1983	.0000	5347.6300	0	
	2	0	901.2816	.0000	6182.3200	0	
	3	1	923.0400	.0011	6461.2800	7	
	4	2	1828.7282	.0011	9230.4000	10	
			MONTH EST.RATE	.0006	27221.6300		16
JUNE	1	0	541.4400	.0000	4519.8400	0	
	2	0	537.6800	.0000	3790.2600	0	
	3	0	542.0016	.0000	3813.0200	0	
	4	0	542.0016	.0000	4873.5200	0	
			MONTH EST.RATE	.0000	16996.6400		0
JULY	1	0	795.9384	.0000	4727.5100	0	
	2	0	923.0400	.0000	6365.1200	0	
	3	153	910.2202	.1681	6022.6400	1012	
	4	63	875.7392	.0719	8104.8800	583	
			MONTH EST.RATE	.0600	25220.1500		1513

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BAY ANCHOVY
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	391	908.1612	.4305	6390.8000	2751	
		2	1920	1708.2806	1.1239	6461.2800	7262	
		3	3612	1846.0800	1.9566	6461.2800	12642	
		4	112	1846.0800	.0607	9230.4000	560	
				MONTH EST.RATE	.8929	28543.7600		25487
	SEPT	1	8	154.0800	.0519	6461.2800	335	
		2	11	1751.8392	.0063	6329.2000	40	
		3	62	923.0400	.0672	6291.7600	423	
		4	69	1728.4604	.0399	7427.6600	296	
				MONTH EST.RATE	.0413	26509.9000		1095
	OCT	1	1	676.8000	.0015	3831.9100	6	
		2	0	674.9200	.0000	3803.4200	0	
		3	0	473.0080	.0000	3813.1300	0	
		4	0	2974.9099	.0000	5436.9600	0	
				MONTH EST.RATE	.0004	16885.4200		7
	NOV	1	0	2710.2291	.0000	4742.9000	0	
		2	1	2417.9100	.0004	5659.3600	2	
		3	0	1615.6800	.0000	5646.1700	0	
		4	0	807.8400	.0000	7231.9400	0	
				MONTH EST.RATE	.0001	23280.3700		2
	DEC	1	0	807.8400	.0000	5138.2600	0	
		2	0	589.3800	.0000	3647.7800	0	
		3	0	601.9200	.0000	4213.4400	0	
		4	0	553.8500	.0000	6069.5800	0	
				MONTH EST.RATE	.0000	19069.0600		0
				ANNUAL EST.RATE	.0829			28120

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	599.8300	.0000	4213.4400	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	593.5600	.0000	4213.4400	0	
	4	0	589.3800	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18659.5200		0
FEB	1	0	601.9200	.0000	4213.4400	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	599.8300	.0000	4213.7300	0	
	4	0	601.9200	.0000	4213.4400	0	
			MONTH EST.RATE	.0000	16854.0500		0
MARCH	1	0	599.8300	.0000	4682.1900	0	
	2	1	601.9200	.0017	4213.4400	7	
	3	0	602.2116	.0000	4215.4500	0	
	4	0	1156.4785	.0000	6050.2400	0	
			MONTH EST.RATE	.0004	19161.3200		8
APRIL	1	0	601.9200	.0000	4338.4200	0	
	2	0	601.9200	.0000	4465.6900	0	
	3	1	601.9200	.0017	4213.4400	7	
	4	2	1586.6496	.0013	6704.1400	9	
			MONTH EST.RATE	.0008	19721.6900		16
MAY	1	1	805.1983	.0012	5347.6300	6	
	2	2	901.2816	.0022	6182.3200	14	
	3	13	923.0400	.0141	6461.2800	91	
	4	19	1828.7282	.0104	9230.4000	96	
			MONTH EST.RATE	.0070	27221.6300		191
JUNE	1	4	541.4400	.0074	4519.8400	33	
	2	3	537.6800	.0056	3790.2600	21	
	3	2	542.0016	.0037	3813.0200	14	
	4	1	542.0016	.0019	4873.5200	9	
			MONTH EST.RATE	.0047	16996.6400		80
JULY	1	3	795.9384	.0038	4727.5100	18	
	2	6	923.0400	.0065	6365.1200	41	
	3	2	910.2202	.0022	6022.6400	13	
	4	24	875.7392	.0274	8104.8800	222	
			MONTH EST.RATE	.0100	25220.1500		252

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	31	908.1612	.0341	6390.8000	218	
		2	801	1708.2806	.4689	6461.2800	3030	
		3	830	1846.0800	.4496	6461.2800	2905	
		4	188	1846.0800	.1018	9230.4000	940	
				MONTH EST.RATE	.2636	28543.7600		7524
	SEPT	1	67	154.0800	.4348	6461.2800	2809	
		2	114	1751.8392	.0651	6329.2000	412	
		3	625	923.0400	.6771	6291.7600	4260	
		4	477	1728.4604	.2760	7427.6600	2050	
				MONTH EST.RATE	.3633	26509.9000		9631
	OCT	1	22	676.8000	.0325	3831.9100	125	
		2	336	674.9200	.4978	3803.4200	1893	
		3	1599	473.0080	3.3805	3813.1300	12890	
		4	1659	2974.9099	.5577	5436.9600	3032	
				MONTH EST.RATE	1.1171	16885.4200		18863
	NOV	1	686	2710.2291	.2531	4742.9000	1200	
		2	369	2417.9100	.1526	5659.3600	864	
		3	510	1615.6800	.3157	5646.1700	1782	
		4	20	807.8400	.0248	7231.9400	179	
				MONTH EST.RATE	.1866	23280.3700		4344
	DEC	1	3	807.8400	.0037	5138.2600	19	
		2	1	589.3800	.0017	3647.7800	6	
		3	0	601.9200	.0000	4213.4400	0	
		4	0	553.8500	.0000	6069.5800	0	
				MONTH EST.RATE	.0014	19069.0600		27
				ANNUAL EST.RATE	.1629			40936

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEFISH
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	599.8300	.0000	4213.4400	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	593.5600	.0000	4213.4400	0	
	4	0	589.3800	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18659.5200		0
FEB	1	0	601.9200	.0000	4213.4400	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	599.8300	.0000	4213.7300	0	
	4	0	601.9200	.0000	4213.4400	0	
			MONTH EST.RATE	.0000	16854.0500		0
MARCH	1	0	599.8300	.0000	4682.1900	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	602.2116	.0000	4215.4500	0	
	4	0	1156.4785	.0000	6050.2400	0	
			MONTH EST.RATE	.0000	19161.3200		0
APRIL	1	0	601.9200	.0000	4338.4200	0	
	2	0	601.9200	.0000	4465.6900	0	
	3	0	601.9200	.0000	4213.4400	0	
	4	0	1586.6496	.0000	6704.1400	0	
			MONTH EST.RATE	.0000	19721.6900		0
MAY	1	0	805.1983	.0000	5347.6300	0	
	2	0	901.2816	.0000	6182.3200	0	
	3	0	923.0400	.0000	6461.2800	0	
	4	0	1828.7282	.0000	9230.4000	0	
			MONTH EST.RATE	.0000	27221.6300		0
JUNE	1	0	541.4400	.0000	4519.8400	0	
	2	0	537.6800	.0000	3790.2600	0	
	3	0	542.0016	.0000	3813.0200	0	
	4	0	542.0016	.0000	4873.5200	0	
			MONTH EST.RATE	.0000	16996.6400		0
JULY	1	0	795.9384	.0000	4727.5100	0	
	2	0	923.0400	.0000	6365.1200	0	
	3	0	910.2202	.0000	6022.6400	0	
	4	0	875.7392	.0000	8104.8800	0	
			MONTH EST.RATE	.0000	25220.1500		0

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEFISH
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	0	908.1612	.0000	6390.8000	0	
		2	1	1708.2806	.0006	6461.2800	4	
		3	0	1846.0800	.0000	6461.2800	0	
		4	0	1846.0800	.0000	9230.4000	0	
				MONTH EST.RATE	.0002	28543.7600		6
	SEPT	1	0	154.0800	.0000	6461.2800	0	
		2	0	1751.8392	.0000	6329.2000	0	
		3	0	923.0400	.0000	6291.7600	0	
		4	0	1728.4604	.0000	7427.6600	0	
				MONTH EST.RATE	.0000	26509.9000		0
	OCT	1	0	676.8000	.0000	3831.9100	0	
		2	0	674.9200	.0000	3803.4200	0	
		3	0	473.0080	.0000	3813.1300	0	
		4	0	2974.9099	.0000	5436.9600	0	
				MONTH EST.RATE	.0000	16885.4200		0
	NOV	1	0	2710.2291	.0000	4742.9000	0	
		2	0	2417.9100	.0000	5659.3600	0	
		3	0	1615.6800	.0000	5646.1700	0	
		4	0	807.8400	.0000	7231.9400	0	
				MONTH EST.RATE	.0000	23280.3700		0
	DEC	1	0	807.8400	.0000	5138.2600	0	
		2	0	589.3800	.0000	3647.7800	0	
		3	0	601.9200	.0000	4213.4400	0	
		4	0	553.8500	.0000	6069.5800	0	
				MONTH EST.RATE	.0000	19069.0600		0
				ANNUAL EST.RATE	*			6

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GOLDFISH
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	15	599.8300	.0250	4213.4400	105	
	2	16	601.9200	.0266	4213.4400	112	
	3	6	593.5600	.0101	4213.4400	43	
	4	2	589.3800	.0034	6019.2000	20	
			MONTH EST.RATE	.0163	18659.5200		304
FEB	1	11	601.9200	.0183	4213.4400	77	
	2	6	601.9200	.0140	4213.4400	42	
	3	5	599.8300	.0083	4213.7300	35	
	4	3	601.9200	.0050	4213.4400	21	
			MONTH EST.RATE	.0104	16854.0500		175
MARCH	1	3	599.8300	.0050	4682.1900	23	
	2	1	601.9200	.0017	4213.4400	7	
	3	24	602.2116	.0399	4215.4500	168	
	4	9	1156.4785	.0078	6050.2400	47	
			MONTH EST.RATE	.0136	19161.3200		261
APRIL	1	6	601.9200	.0100	4338.4200	43	
	2	5	601.9200	.0083	4465.6900	37	
	3	4	601.9200	.0067	4213.4400	28	
	4	26	1586.6496	.0164	6704.1400	110	
			MONTH EST.RATE	.0104	19721.6900		205
MAY	1	11	805.1983	.0137	5347.6300	73	
	2	19	901.2816	.0211	6182.3200	130	
	3	5	923.0400	.0054	6461.2800	35	
	4	6	1828.7282	.0033	9230.4000	30	
			MONTH EST.RATE	.0109	27221.6300		297
JUNE	1	0	541.4400	.0000	4519.8400	0	
	2	0	537.6800	.0000	3790.2600	0	
	3	2	542.0016	.0037	3813.0200	14	
	4	2	542.0016	.0037	4873.5200	18	
			MONTH EST.RATE	.0019	16996.6400		32
JULY	1	0	795.9384	.0000	4727.5100	0	
	2	0	923.0400	.0000	6365.1200	0	
	3	1	910.2202	.0011	6022.6400	7	
	4	1	875.7392	.0011	8104.8800	9	
			MONTH EST.RATE	.0006	25220.1500		15

NOTE.. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GOLDFISH
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	0	908.1612	.0000	6390.8000	0	
		2	2	1708.2806	.0012	6461.2800	8	
		3	2	1846.0800	.0011	6461.2800	7	
		4	1	1846.0800	.0005	9230.4000	5	
				MONTH EST.RATE	.0007	28543.7600		20
	SEPT	1	0	154.0800	.0000	6461.2800	0	
		2	0	1751.8392	.0000	6329.2000	0	
		3	0	923.0400	.0000	6291.7600	0	
		4	0	1728.4604	.0000	7427.6600	0	
				MONTH EST.RATE	.0000	26509.9000		0
	OCT	1	0	676.8000	.0000	3831.9100	0	
		2	0	674.9200	.0000	3803.4200	0	
		3	4	473.0080	.0085	3813.1300	32	
		4	0	2974.9099	.0000	5436.9600	0	
				MONTH EST.RATE	.0021	16885.4200		35
	NOV	1	0	2713.2291	.0000	4742.9000	0	
		2	1	2417.9100	.0004	5659.3600	2	
		3	2	1615.6800	.0012	5646.1700	7	
		4	0	807.8400	.0000	7231.9400	0	
				MONTH EST.RATE	.0004	23280.3700		9
	DEC	1	0	807.8400	.0000	5138.2600	0	
		2	1	589.3800	.0017	3647.7800	6	
		3	1	601.9200	.0017	4213.4400	7	
		4	3	553.8500	.0054	6069.5800	33	
				MONTH EST.RATE	.0022	19069.0600		42
				ANNUAL EST.RATE	.0058			1395

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	53	599.8300	.0884	4213.4400	372	
	2	24	601.9203	.0399	4213.4400	168	
	3	6	593.5600	.0101	4213.4400	43	
	4	6	589.3800	.0102	6019.2000	61	
			MONTH EST.RATE	.0322	18659.5200		694
FEB	1	18	601.9200	.0259	4213.4400	126	
	2	7	601.9200	.0116	4213.4400	49	
	3	9	599.8300	.0130	4213.7300	63	
	4	2	601.9200	.0033	4213.4400	14	
			MONTH EST.RATE	.0150	16854.0500		253
MARCH	1	1	599.8300	.0017	4682.1900	8	
	2	3	601.9200	.0020	4213.4400	21	
	3	14	602.2116	.0233	4215.4500	98	
	4	10	1156.4785	.0087	6050.2400	53	
			MONTH EST.RATE	.0097	19161.3200		186
APRIL	1	1	601.9200	.0017	4339.4200	7	
	2	0	601.9200	.0000	4465.6900	0	
	3	0	601.9200	.0000	4213.4400	0	
	4	7	1586.6496	.0044	6704.1400	29	
			MONTH EST.RATE	.0015	19721.6900		30
MAY	1	5	805.1983	.0062	5347.6300	33	
	2	8	901.2816	.0089	6182.3200	55	
	3	7	923.0400	.0076	6461.2800	49	
	4	3	1828.7282	.0016	9230.4000	15	
			MONTH EST.RATE	.0061	27221.6300		166
JUNE	1	1	541.4400	.0019	4519.8400	9	
	2	0	537.6800	.0000	3790.2600	0	
	3	2	542.0016	.0037	3813.0200	14	
	4	1	542.0016	.0019	4873.5200	9	
			MONTH EST.RATE	.0019	16996.6400		32
JULY	1	1	795.9384	.0013	4727.5100	6	
	2	1	923.0400	.0011	6365.1200	7	
	3	1	910.2202	.0011	6022.6400	7	
	4	2	875.7392	.0023	8104.8800	19	
			MONTH EST.RATE	.0015	25220.1500		38

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	1	908.1612	.0011	6390.8000	7	
		2	11	1708.2806	.0064	6461.2800	41	
		3	4	1846.0800	.0022	6461.2800	14	
		4	6	1846.0800	.0033	9230.4000	30	
				MONTH EST.RATE	.0033	28543.7600		94
	SEPT	1	5	154.0800	.0325	6461.2800	210	
		2	4	1751.8392	.0023	6329.2000	15	
		3	4	923.0400	.0043	6291.7600	27	
		4	4	1728.4604	.0023	7427.6600	17	
				MONTH EST.RATE	.0104	26509.9000		276
	OCT	1	1	676.8000	.0015	3831.9100	6	
		2	1	674.9200	.0015	3803.4200	6	
		3	13	473.0080	.0275	3813.1300	105	
		4	205	2974.9999	.0689	5436.9600	375	
				MONTH EST.RATE	.0249	16885.4200		420
	NOV	1	97	2710.2291	.0358	4742.9000	170	
		2	24	2417.9100	.0099	5659.3600	56	
		3	6	1615.6800	.0037	5646.1700	21	
		4	22	807.8400	.0272	7231.9400	197	
				MONTH EST.RATE	.0152	23280.3700		447
	DEC	1	3	807.8400	.0037	5138.2600	19	
		2	0	589.3800	.0000	3647.7800	0	
		3	3	601.9200	.0050	4213.4400	21	
		4	0	553.8500	.0000	6069.5800	0	
				MONTH EST.RATE	.0042	19069.0600		42
				ANNUAL EST.RATE	.0111			2678

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SHORTNOSE STURGEON
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	599.8300	.0000	4213.4400	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	593.5600	.0000	4213.4400	0	
	4	0	589.3800	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18659.5200		0
FEB	1	0	601.9200	.0000	4213.4400	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	599.8300	.0000	4213.7300	0	
	4	0	601.9200	.0000	4213.4400	0	
			MONTH EST.RATE	.0000	16854.0500		0
MARCH	1	0	599.8300	.0000	4682.1900	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	602.2116	.0000	4215.4500	0	
	4	0	1156.4785	.0000	6050.2400	0	
			MONTH EST.RATE	.0000	19161.3200		0
APRIL	1	0	601.9200	.0000	4338.4200	0	
	2	0	601.9200	.0000	4465.6900	0	
	3	0	601.9200	.0000	4213.4400	0	
	4	0	1586.6496	.0000	6704.1400	0	
			MONTH EST.RATE	.0000	19721.6900		0
MAY	1	0	805.1983	.0000	5347.6300	0	
	2	0	901.2816	.0000	6182.3200	0	
	3	0	923.0400	.0000	6461.2800	0	
	4	0	1828.7282	.0000	9230.4000	0	
			MONTH EST.RATE	.0000	27221.6300		0
JUNE	1	0	541.4400	.0000	4519.8400	0	
	2	0	537.6800	.0000	3790.2600	0	
	3	0	542.0016	.0000	3813.0200	0	
	4	0	542.0016	.0000	4873.5200	0	
			MONTH EST.RATE	.0000	16996.6400		0
JULY	1	0	795.9384	.0000	4727.5100	0	
	2	0	923.0400	.0000	6365.1200	0	
	3	0	910.2202	.0000	6022.6400	0	
	4	0	875.7392	.0000	8104.8800	0	
			MONTH EST.RATE	.0000	25220.1500		0

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SHORTNOSE STURGEON
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	0	908.1612	.0000	6390.8000	0	
		2	0	1708.2806	.0000	6461.2800	0	
		3	0	1846.0800	.0000	6461.2800	0	
		4	0	1846.0800	.0000	9230.4000	0	
				MONTH EST.RATE	.0000	28543.7600		0
	SEPT	1	0	154.0800	.0000	6461.2800	0	
		2	0	1751.8392	.0000	6329.2000	0	
		3	0	923.0400	.0000	6291.7600	0	
		4	0	1728.4604	.0000	7427.6600	0	
				MONTH EST.RATE	.0000	26509.9000		0
	OCT	1	0	676.8000	.0000	3831.9100	0	
		2	0	674.9200	.0000	3803.4200	0	
		3	0	473.0080	.0000	3813.1300	0	
		4	0	2974.9099	.0000	5436.9600	0	
				MONTH EST.RATE	.0000	16885.4200		0
	NOV	1	0	2710.2291	.0000	4742.9000	0	
		2	0	2417.9100	.0000	5659.3600	0	
		3	0	1615.6800	.0000	5646.1700	0	
		4	0	807.8400	.0000	7231.9400	0	
				MONTH EST.RATE	.0000	23280.3700		0
	DEC	1	0	807.8400	.0000	5138.2600	0	
		2	0	589.3800	.0000	3647.7800	0	
		3	0	601.9200	.0000	4213.4400	0	
		4	0	553.8500	.0000	6069.5800	0	
				MONTH EST.RATE	.0000	19069.0600		0
				ANNUAL EST.RATE	.0000			0

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SPOTTAIL SHINER
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	65	599.8300	.1084	4213.4400	457	
	2	85	601.9200	.1412	4213.4400	595	
	3	25	593.5600	.0421	4213.4400	177	
	4	62	589.3800	.1052	6019.2000	633	
			MONTH EST.RATE	.0992	18659.5200		1851
FEB	1	58	601.9200	.0964	4213.4400	406	
	2	80	601.9200	.1329	4213.4400	560	
	3	16	599.8300	.0267	4213.7300	113	
	4	28	601.9200	.0465	4213.4400	196	
			MONTH EST.RATE	.0756	16854.0500		1274
MARCH	1	51	599.8300	.0850	4682.1900	398	
	2	40	601.9200	.0665	4213.4400	280	
	3	127	602.2116	.2109	4215.4500	889	
	4	109	1156.4785	.0943	6050.2400	571	
			MONTH EST.RATE	.1142	19161.3200		2188
APRIL	1	24	601.9200	.0399	4338.4200	173	
	2	15	601.9200	.0249	4465.6900	111	
	3	33	601.9200	.0548	4213.4400	231	
	4	78	1586.6496	.0492	6704.1400	330	
			MONTH EST.RATE	.0422	19721.6900		832
MAY	1	6	805.1983	.0075	5347.6300	40	
	2	1	901.2816	.0011	6182.3200	7	
	3	8	923.0400	.0087	6461.2800	56	
	4	25	1828.7282	.0137	9230.4000	126	
			MONTH EST.RATE	.0078	27221.6300		212
JUNE	1	3	541.4400	.0055	4519.8400	25	
	2	2	537.6800	.0037	3790.2600	14	
	3	0	542.0016	.0000	3813.0200	0	
	4	2	542.0016	.0037	4873.5200	18	
			MONTH EST.RATE	.0032	16996.6400		54
JULY	1	0	795.9384	.0000	4727.5100	0	
	2	0	923.0400	.0000	6365.1200	0	
	3	0	910.2202	.0000	6022.6400	0	
	4	2	875.7392	.0023	8104.8800	19	
			MONTH EST.RATE	.0006	25220.1500		15

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SPOTTAIL SHINER
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	0	908.1612	.0000	6390.8000	0	
		2	18	1708.2806	.0105	6461.2800	68	
		3	1	1846.0800	.0005	6461.2800	3	
		4	6	1846.0800	.0033	9230.4000	30	
				MONTH EST.RATE	.0036	28543.7600		103
	SEPT	1	1	154.0800	.0065	6461.2800	42	
		2	4	1751.8392	.0023	6329.2000	15	
		3	0	923.0400	.0000	6291.7600	0	
		4	1	1728.4604	.0006	7427.6600	4	
				MONTH EST.RATE	.0024	26509.9000		64
	OCT	1	0	676.8000	.0000	3831.9100	0	
		2	0	674.9200	.0000	3803.4200	0	
		3	19	473.0080	.0402	3813.1300	153	
		4	71	2974.9099	.0239	5436.9600	130	
				MONTH EST.RATE	.0160	16885.4200		270
	NOV	1	142	2710.2291	.0524	4742.9000	249	
		2	61	2417.9100	.0252	5659.3600	143	
		3	38	1615.6800	.0235	5646.1700	133	
		4	12	807.8400	.0149	7231.9400	108	
				MONTH EST.RATE	.0290	23280.3700		675
	DEC	1	38	807.8400	.0470	5138.2600	241	
		2	16	589.3800	.0272	3647.7800	99	
		3	64	601.9200	.1063	4213.4400	448	
		4	16	553.8500	.0289	6069.5800	175	
				MONTH EST.RATE	.0524	19069.0600		999
				ANNUAL EST.RATE	.0372			8537

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR STRIPED BASS
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	2	599.8300	.0033	4213.4400	14	
	2	4	601.9200	.0067	4213.4400	28	
	3	0	593.5600	.0000	4213.4400	0	
	4	1	589.3800	.0017	6019.2000	10	
			MONTH EST.RATE	.0029	18659.5200		54
FEB	1	1	601.9200	.0017	4213.4400	7	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	599.8300	.0000	4213.7300	0	
	4	0	601.9200	.0000	4213.4400	0	
			MONTH EST.RATE	.0004	16854.0500		7
MARCH	1	0	599.8300	.0000	4682.1900	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	1	602.2116	.0017	4215.4500	7	
	4	3	1156.4785	.0026	6050.2400	16	
			MONTH EST.RATE	.0011	19161.3200		21
APRIL	1	0	601.9200	.0000	4338.4200	0	
	2	0	601.9200	.0000	4465.6900	0	
	3	0	601.9200	.0000	4213.4400	0	
	4	1	1586.6496	.0006	6704.1400	4	
			MONTH EST.RATE	.0002	19721.6900		4
MAY	1	0	805.1983	.0000	5347.6300	0	
	2	0	901.2816	.0000	6182.3200	0	
	3	0	923.0400	.0000	6461.2800	0	
	4	1	1828.7282	.0006	9230.4000	6	
			MONTH EST.RATE	.0002	27221.6300		5
JUNE	1	0	541.4400	.0000	4519.8400	0	
	2	0	537.6800	.0000	3790.2600	0	
	3	0	542.0016	.0000	3813.0200	0	
	4	0	542.0016	.0000	4873.5200	0	
			MONTH EST.RATE	.0000	16996.6400		0
JULY	1	0	795.9384	.0000	4727.5100	0	
	2	0	923.0400	.0000	6365.1200	0	
	3	6	910.2202	.0066	6022.6400	40	
	4	1	875.7392	.0011	8104.8800	9	
			MONTH EST.RATE	.0019	25220.1500		48

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR STRIPED BASS
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	1	908.1612	.0011	6390.8000	7	
		2	44	1708.2806	.0258	6461.2800	167	
		3	15	1846.0800	.0081	6461.2800	52	
		4	7	1846.0800	.0038	9230.4000	35	
				MONTH EST.RATE	.0097	28543.7600		277
	SEPT	1	3	154.0800	.0195	6461.2800	126	
		2	15	1751.8392	.0086	6329.2000	54	
		3	0	923.0400	.0000	6291.7600	0	
		4	2	1728.4604	.0012	7427.6600	9	
				MONTH EST.RATE	.0073	26509.9000		194
	OCT	1	1	676.8000	.0015	3831.9100	6	
		2	0	674.9200	.0000	3803.4200	0	
		3	0	473.0080	.0000	3813.1300	0	
		4	8	2974.9099	.0027	5436.9600	15	
				MONTH EST.RATE	.0011	16885.4200		19
	NOV	1	9	2710.2291	.0033	4742.9000	16	
		2	9	2417.9100	.0037	5659.3600	21	
		3	4	1615.6800	.0025	5646.1700	14	
		4	3	807.8400	.0037	7231.9400	27	
				MONTH EST.RATE	.0033	23280.3700		77
	DEC	1	21	807.8400	.0260	5138.2600	134	
		2	17	589.3800	.0288	3647.7800	105	
		3	19	601.9200	.0316	4213.4400	133	
		4	8	553.8503	.0144	6069.5800	87	
				MONTH EST.RATE	.0252	19069.0600		481
				ANNUAL EST.RATE	.0044			1187

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WEAKFISH
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	599.8300	.0000	4213.4400	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	593.5600	.0000	4213.4400	0	
	4	0	589.3800	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18659.5200		0
FEB	1	0	601.9200	.0000	4213.4400	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	599.8300	.0000	4213.7300	0	
	4	0	601.9200	.0000	4213.4400	0	
			MONTH EST.RATE	.0000	16854.0500		0
MARCH	1	0	599.8300	.0000	4682.1900	0	
	2	0	601.9200	.0000	4213.4400	0	
	3	0	602.2116	.0000	4215.4500	0	
	4	0	1156.4785	.0000	6050.2400	0	
			MONTH EST.RATE	.0000	19161.3200		0
APRIL	1	0	601.9200	.0000	4338.4200	0	
	2	0	601.9200	.0000	4465.6900	0	
	3	0	601.9200	.0000	4213.4400	0	
	4	0	1586.6496	.0000	6704.1400	0	
			MONTH EST.RATE	.0000	19721.6900		0
MAY	1	0	805.1983	.0000	5347.6300	0	
	2	0	901.2816	.0000	6182.3200	0	
	3	0	923.0400	.0000	6461.2800	0	
	4	0	1828.7282	.0000	9230.4000	0	
			MONTH EST.RATE	.0000	27221.6300		0
JUNE	1	0	541.4400	.0000	4519.8400	0	
	2	0	537.6800	.0000	3790.2600	0	
	3	0	542.0016	.0000	3813.0200	0	
	4	0	542.0016	.0000	4873.5200	0	
			MONTH EST.RATE	.0000	16996.6400		0
JULY	1	0	795.9384	.0000	4727.5100	0	
	2	0	923.0400	.0000	6365.1200	0	
	3	0	910.2202	.0000	6022.6400	0	
	4	0	875.7392	.0000	8104.8800	0	
			MONTH EST.RATE	.0000	25220.1500		0

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WEAKFISH
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	0	908.1612	.0000	6390.8000	0	
		2	0	1708.2806	.0000	6461.2800	0	
		3	0	1846.0800	.0000	6461.2800	0	
		4	0	1846.0800	.0000	9230.4000	0	
				MONTH EST.RATE	.0000	28543.7600		0
	SEPT	1	0	154.0800	.0000	6461.2800	0	
		2	0	1751.8392	.0000	6329.2000	0	
		3	0	923.0400	.0000	6291.7600	0	
		4	0	1728.4604.	.0000	7427.6600	0	
				MONTH EST.RATE	.0000	26509.9000		0
	OCT	1	0	676.8000	.0000	3831.9100	0	
		2	0	674.9200	.0000	3803.4200	0	
		3	0	473.0080	.0000	3813.1300	0	
		4	0	2974.9099	.0000	5436.9600	0	
				MONTH EST.RATE	.0000	16885.4200		0
	NOV	1	0	2710.2291	.0000	4742.9000	0	
		2	0	2417.9100	.0000	5659.3600	0	
		3	0	1615.6800	.0000	5646.1700	0	
		4	0	807.8400	.0000	7231.9400	0	
				MONTH EST.RATE	.0000	23280.3700		0
	DEC	1	0	807.8400	.0000	5138.2600	0	
		2	0	589.3800	.0000	3647.7800	0	
		3	0	601.9200	.0000	4213.4400	0	
		4	0	553.8500	.0000	6069.5800	0	
				MONTH EST.RATE	.0000	19069.0600		0
				ANNUAL EST.RATE	.0000			0

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE CATFISH
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	4	599.8300	.0067	4213.4400	28	
	2	2	601.9200	.0033	4213.4400	14	
	3	1	593.5600	.0017	4213.4400	7	
	4	1	589.3800	.0017	6019.2000	10	
			MONTH EST.RATE	.0034	18659.5200		63
FEB	1	6	601.9200	.0100	4213.4400	42	
	2	1	601.9200	.0017	4213.4400	7	
	3	1	599.8300	.0017	4213.7300	7	
	4	0	601.9200	.0000	4213.4400	0	
			MONTH EST.RATE	.0034	16854.0500		57
MARCH	1	1	599.8300	.0017	4682.1900	8	
	2	0	601.9200	.0000	4213.4400	0	
	3	6	602.2116	.0100	4215.4500	42	
	4	5	1156.4785	.0043	6050.2400	26	
			MONTH EST.RATE	.0040	19161.3200		77
APRIL	1	1	601.9200	.0017	4338.4200	7	
	2	0	601.9200	.0000	4465.6900	0	
	3	0	601.9200	.0000	4213.4400	0	
	4	5	1586.6496	.0032	6704.1400	21	
			MONTH EST.RATE	.0012	19721.6900		24
MAY	1	12	805.1983	.0149	5347.6300	80	
	2	3	901.2815	.0033	6182.3200	20	
	3	0	923.0400	.0000	6461.2800	0	
	4	2	1828.7282	.0011	9230.4000	10	
			MONTH EST.RATE	.0048	27221.6300		131
JUNE	1	2	541.4400	.0037	4519.8400	17	
	2	0	537.6800	.0000	3790.2600	0	
	3	0	542.0016	.0000	3813.0200	0	
	4	0	542.0016	.0000	4873.5200	0	
			MONTH EST.RATE	.0009	16996.6400		15
JULY	1	1	795.9384	.0013	4727.5100	6	
	2	0	923.0400	.0000	6365.1200	0	
	3	2	910.2202	.0022	6022.6400	13	
	4	0	875.7392	.0000	8104.8800	0	
			MONTH EST.RATE	.0009	25220.1500		23

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE CATFISH
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	0	908.1612	.0000	6390.8000	0	
		2	4	1708.2806	.0023	6461.2800	15	
		3	2	1846.0800	.0011	6461.2800	7	
		4	1	1846.0800	.0005	9230.4000	5	
				MONTH EST.RATE	.0010	28543.7600		29
	SEPT	1	0	154.0800	.0000	6461.2800	0	
		2	2	1751.8392	.0011	6329.2000	7	
		3	0	923.0400	.0000	6291.7600	0	
		4	2	1728.4604	.0012	7427.6600	9	
				MONTH EST.RATE	.0006	26509.9000		16
	OCT	1	1	676.8000	.0015	3831.9100	6	
		2	0	674.9200	.0000	3803.4200	0	
		3	1	473.0080	.0021	3813.1300	8	
		4	17	2974.9099	.0057	5436.9600	31	
				MONTH EST.RATE	.0023	16885.4200		39
	NOV	1	17	2710.2291	.0063	4742.9000	30	
		2	21	2417.9100	.0087	5659.3600	49	
		3	8	1615.6800	.0050	5646.1700	28	
		4	1	807.8400	.0012	7231.9400	9	
				MONTH EST.RATE	.0053	23280.3700		123
	DEC	1	0	807.8400	.0000	5138.2600	0	
		2	2	589.3800	.0034	3647.7800	12	
		3	0	601.9200	.0000	4213.4400	0	
		4	5	553.8500	.0090	6069.5800	55	
				MONTH EST.RATE	.0031	19069.0600		59
				ANNUAL EST.RATE	.0026			656

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	220	599.8300	.3668	4213.4400	1545	
	2	259	601.9200	.4303	4213.4400	1813	
	3	23	593.5600	.0388	4213.4400	163	
	4	28	589.3800	.0475	6019.2000	286	
			MONTH EST.RATE	.2209	18659.5200		4122
FEB	1	50	601.9200	.0831	4213.4400	350	
	2	14	601.9200	.0233	4213.4400	98	
	3	3	599.8300	.0050	4213.7300	21	
	4	2	601.9200	.0033	4213.4400	14	
			MONTH EST.RATE	.0287	16854.0500		484
MARCH	1	4	599.8300	.0067	4682.1900	31	
	2	58	601.9200	.0964	4213.4400	406	
	3	76	602.2116	.1262	4215.4500	532	
	4	90	1156.4785	.0778	6050.2400	471	
			MONTH EST.RATE	.0768	19161.3200		1472
APRIL	1	16	601.9200	.0266	4338.4200	115	
	2	119	601.9200	.1977	4465.6900	883	
	3	106	601.9200	.1761	4213.4400	742	
	4	1099	1586.6496	.6927	6704.1400	4644	
			MONTH EST.RATE	.2733	19721.6900		5390
MAY	1	333	805.1983	.4136	5347.6300	2212	
	2	198	901.2816	.2197	6182.3200	1358	
	3	207	923.0400	.2243	6461.2800	1449	
	4	338	1828.7282	.1848	9230.4000	1706	
			MONTH EST.RATE	.2606	27221.6300		7094
JUNE	1	78	541.4400	.1441	4519.8400	651	
	2	51	537.6800	.0949	3790.2600	360	
	3	40	542.0016	.0738	3813.0200	281	
	4	7	542.0016	.0129	4873.5200	63	
			MONTH EST.RATE	.0814	16996.6400		1384
JULY	1	4	795.9384	.0050	4727.5100	24	
	2	4	923.0400	.0043	6365.1200	27	
	3	11	910.2202	.0121	6022.6400	73	
	4	10	875.7392	.0114	8104.8800	92	
			MONTH EST.RATE	.0082	25220.1500		207

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	17	908.1612	.0187	6390.8000	120	
		2	2458	1708.2806	1.4389	6461.2800	9297	
		3	2290	1846.0800	1.2405	6461.2800	8015	
		4	412	1846.0800	.2232	9230.4000	2060	
				MONTH EST.RATE	.7303	28543.7600		20846
	SEPT	1	132	154.0800	.8567	6461.2800	5535	
		2	189	1751.8392	.1079	6329.2000	683	
		3	452	923.0400	.4897	6291.7600	3081	
		4	327	1728.4604	.1892	7427.6600	1405	
				MONTH EST.RATE	.4109	26509.9000		10893
	OCT	1	1	676.8000	.0015	3831.9100	6	
		2	46	674.9200	.0682	3803.4200	259	
		3	512	473.0080	1.0824	3813.1300	4127	
		4	2406	2974.9099	.8088	5436.9600	4397	
				MONTH EST.RATE	.4902	16885.4200		8277
	NOV	1	3995	2710.2291	1.4741	4742.9000	6992	
		2	2484	2417.9100	1.0273	5659.3600	5814	
		3	1058	1615.6800	.6548	5646.1700	3697	
		4	267	807.8400	.3305	7231.9400	2390	
				MONTH EST.RATE	.8717	23280.3700		20293
	DEC	1	521	807.8400	.6449	5138.2600	3314	
		2	455	589.3800	.7720	3647.7800	2816	
		3	310	601.9200	.5150	4213.4400	2170	
		4	432	553.8500	.7800	6069.5800	4734	
				MONTH EST.RATE	.6780	19069.0600		12929
				ANNUAL EST.RATE	.3443			93391

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	17667.6	599.8300	29.4544	4213.4400	124104.3	
	2	12279.8	601.9200	20.4011	4213.4400	85958.8	
	3	5129.0	593.5600	8.6411	4213.4400	36408.8	
	4	2959.0	589.3800	5.0205	6019.2000	30219.4	
			MONTH EST.RATE	15.8793	18659.5200		296300.1
FEB	1	4673.0	601.9200	7.7635	4213.4400	32711.0	
	2	2222.7	601.9200	3.6927	4213.4400	15559.0	
	3	2053.9	599.8300	3.4241	4213.7300	14428.2	
	4	931.2	601.9200	1.5471	4213.4400	6518.6	
			MONTH EST.RATE	4.1069	16854.0500		69217.9
MARCH	1	2487.5	599.8300	4.1470	4682.1900	19417.0	
	2	3770.4	601.9200	6.2640	4213.4400	26393.0	
	3	15594.9	602.2116	25.8961	4215.4500	109163.7	
	4	10334.2	1156.4785	8.9359	6050.2400	54064.3	
			MONTH EST.RATE	11.3108	19161.3200		216729.9
APRIL	1	3751.8	601.9200	6.2331	4338.4200	27041.8	
	2	4914.3	601.9200	8.1644	4465.6900	36459.7	
	3	3953.1	601.9200	6.5675	4213.4400	27671.8	
	4	21592.5	1586.6496	13.6089	6704.1400	91236.0	
			MONTH EST.RATE	8.6435	19721.6900		170464.4
MAY	1	9809.9	805.1983	12.1832	5347.6300	65151.2	
	2	11801.0	901.2816	13.0936	6182.3200	80948.8	
	3	5820.9	923.0400	6.3062	6461.2800	40746.1	
	4	10143.5	1828.7282	5.5468	9230.4000	51199.2	
			MONTH EST.RATE	9.2825	27221.6300		252684.8
JUNE	1	3446.7	541.4400	6.3658	4519.8400	28772.4	
	2	2763.3	537.6800	5.1393	3790.2600	19479.3	
	3	2809.3	542.0016	5.1832	3813.0200	19763.6	
	4	1155.4	542.0016	2.2055	4873.5200	10748.5	
			MONTH EST.RATE	4.7235	16996.6400		80283.6
JULY	1	1339.1	795.9384	1.6824	4727.5100	7953.6	
	2	900.0	923.0400	.9750	6365.1200	6206.0	
	3	4132.5	910.2202	4.5401	6022.6400	27343.4	
	4	2053.1	875.7392	2.3444	8104.8800	19001.1	
			MONTH EST.RATE	2.3855	25220.1500		60162.7

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	2264.6	908.1612	2.4936	6390.8000	15936.1	
		2	25668.6	1708.2806	15.0260	6461.2800	97087.2	
		3	23992.4	1846.0800	12.9964	6461.2800	83973.4	
		4	5518.7	1846.0800	2.9894	9230.4000	27593.4	
				MONTH EST.RATE	8.3764	28543.7600		239094.0
	SEPT	1	2077.5	154.0800	13.4833	6461.2800	87119.4	
		2	3779.6	1751.8392	2.1575	6329.2000	13655.2	
		3	3438.7	923.0400	3.7254	6291.7600	23439.3	
		4	3729.4	1728.4604	2.1576	7427.6600	16025.9	
				MONTH EST.RATE	5.3810	26509.9000		142649.8
	OCT	1	183.0	676.8000	.2704	3831.9100	1036.1	
		2	1142.1	674.9200	1.6922	3803.4200	6436.1	
		3	7040.2	473.0080	14.8839	3813.1300	56754.2	
		4	20470.0	2974.9099	6.8809	5436.9600	37411.2	
				MONTH EST.RATE	5.9319	16885.4200		100162.6
	NOV	1	22539.8	2710.2291	8.3166	4742.9000	39444.8	
		2	18819.7	2417.9100	7.7835	5659.3600	44049.6	
		3	8786.3	1615.6800	5.4381	5646.1700	30704.4	
		4	2448.0	807.8400	3.0303	7231.9400	21914.9	
				MONTH EST.RATE	6.1421	23280.3700		142990.4
	DEC	1	6492.3	807.8400	8.0366	5138.2600	41294.1	
		2	5109.9	589.3800	8.6700	3647.7800	31626.3	
		3	8419.2	601.9200	13.9872	4213.4400	58934.2	
		4	2616.5	553.8500	4.7242	6069.5800	28673.9	
				MONTH EST.RATE	8.8545	19069.0600		168847.0
				ANNUAL EST.RATE	7.5848			1939587.2

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	599.8300	.0000	4213.4400	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	593.5600	.0000	4213.4400	.0	
	4	.0	589.3800	.0000	6019.2000	.0	
			MONTH EST.RATE	.0000	18659.5200		.0
FEB	1	.0	601.9200	.0000	4213.4400	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	599.8300	.0000	4213.7300	.0	
	4	.0	601.9200	.0000	4213.4400	.0	
			MONTH EST.RATE	.0000	16854.0500		.0
MARCH	1	.0	599.8300	.0000	4682.1900	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	602.2116	.0000	4215.4500	.0	
	4	.0	1156.4785	.0000	6050.2400	.0	
			MONTH EST.RATE	.0000	19161.3200		.0
APRIL	1	.0	601.9200	.0000	4338.4200	.0	
	2	.0	601.9200	.0000	4465.6900	.0	
	3	374.6	601.9200	.6223	4213.4400	2622.0	
	4	298.5	1586.6496	.1881	6704.1400	1261.0	
			MONTH EST.RATE	.2026	19721.6900		3995.6
MAY	1	233.0	805.1983	.2894	5347.6300	1547.6	
	2	826.2	901.2816	.9167	6182.3200	5667.3	
	3	1411.4	923.0400	1.5291	6461.2800	9879.9	
	4	648.0	1828.7282	.3543	9230.4000	3270.3	
			MONTH EST.RATE	.7724	27221.6300		21026.0
JUNE	1	.0	541.4400	.0000	4519.8400	.0	
	2	.0	537.6800	.0000	3790.2600	.0	
	3	.0	542.0016	.0000	3813.0200	.0	
	4	.0	542.0016	.0000	4873.5200	.0	
			MONTH EST.RATE	.0000	16996.6400		.0
JULY	1	.0	795.9384	.0000	4727.5100	.0	
	2	11.6	923.0400	.0126	6365.1200	80.2	
	3	122.6	910.2202	.1347	6022.6400	811.2	
	4	19.3	875.7392	.0220	8104.8800	178.3	
			MONTH EST.RATE	.0423	25220.1500		1066.8

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	102.3	908.1612	.1127	6390.8000	720.2	
		2	3051.5	1708.2806	1.7863	6461.2800	11541.8	
		3	2913.7	1846.0800	1.5783	6461.2800	10197.8	
		4	476.2	1846.0800	.2580	9230.4000	2381.4	
				MONTH EST.RATE	.9338	28543.7600		26654.2
	SEPT	1	402.9	154.0800	2.6149	6461.2800	16895.6	
		2	185.2	1751.8392	.1057	6329.2000	669.0	
		3	272.3	923.0400	.2950	6291.7600	1856.1	
		4	255.5	1728.4604	.1478	7427.6600	1097.8	
				MONTH EST.RATE	.7909	26509.9000		20966.7
	OCT	1	83.6	676.8000	.1235	3831.9100	473.2	
		2	12.3	674.9200	.0182	3803.4200	69.2	
		3	348.6	473.0080	.7370	3813.1300	2810.3	
		4	2148.6	2974.9099	.7222	5436.9600	3926.6	
				MONTH EST.RATE	.4002	16885.4200		6757.5
	NOV	1	653.2	2710.2291	.2410	4742.9000	1143.0	
		2	1208.1	2417.9100	.4997	5659.3600	2828.0	
		3	384.2	1615.6800	.2378	5646.1700	1342.7	
		4	87.4	807.8400	.1082	7231.9400	782.5	
				MONTH EST.RATE	.2717	23280.3700		6325.3
	DEC	1	22.2	807.8400	.0275	5138.2600	141.3	
		2	.0	589.3800	.0000	3647.7800	.0	
		3	.0	601.9200	.0000	4213.4400	.0	
		4	.0	553.8500	.0000	6069.5800	.0	
				MONTH EST.RATE	.0069	19069.0600		131.6
				ANNUAL EST.RATE	.2851			86923.7

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	599.8300	.0000	4213.4400	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	593.5600	.0000	4213.4400	.0	
	4	.0	589.3800	.0000	6019.2800	.0	
			MONTH EST.RATE	.0000	18659.5200		.0
FEB	1	.0	601.9200	.0000	4213.4400	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	599.8300	.0000	4213.7300	.0	
	4	.0	601.9200	.0000	4213.4400	.0	
			MONTH EST.RATE	.0000	16854.0500		.0
MARCH	1	.0	599.8300	.0000	4682.1300	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	602.2116	.0000	4215.4500	.0	
	4	.0	1156.4785	.0000	6050.2400	.0	
			MONTH EST.RATE	.0000	19161.3200		.0
APRIL	1	.0	601.9200	.0000	4338.4200	.0	
	2	.0	601.9200	.0000	4465.6900	.0	
	3	.0	601.9200	.0000	4213.4400	.0	
	4	.0	1586.6496	.0000	6704.1400	.0	
			MONTH EST.RATE	.0000	19721.6900		.0
MAY	1	.0	805.1983	.0000	5347.6300	.0	
	2	.0	901.2816	.0000	6182.3200	.0	
	3	.0	923.0400	.0000	6461.2800	.0	
	4	.0	1828.7282	.0000	9230.4000	.0	
			MONTH EST.RATE	.0000	27221.6300		.0
JUNE	1	.0	541.4400	.0000	4519.8400	.0	
	2	.0	537.6800	.0000	3790.2600	.0	
	3	.0	542.0016	.0000	3813.0200	.0	
	4	.0	542.0016	.0000	4873.5200	.0	
			MONTH EST.RATE	.0000	16996.6400		.0
JULY	1	9.2	795.9384	.0116	4727.5100	54.8	
	2	20.7	923.0400	.0224	6365.1200	142.6	
	3	110.2	910.2202	.1211	6022.6400	729.3	
	4	24.7	875.7392	.0282	8104.8800	228.6	
			MONTH EST.RATE	.0458	25220.1500		1155.1

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	62.1	908.1612	.0684	6390.8000	437.1	
		2	837.3	1708.2806	.4901	6461.2800	3166.7	
		3	868.3	1846.0800	.4704	6461.2800	3039.4	
		4	122.8	1846.0800	.0665	9230.4000	613.8	
				MONTH EST.RATE	.2739	28543.7600		7818.1
	SEPT	1	152.4	154.0800	.9891	6461.2800	6390.9	
		2	99.4	1751.8392	.0567	6329.2000	358.9	
		3	95.8	923.0400	.1038	6291.7600	653.1	
		4	85.5	1728.4604	.0495	7427.6600	367.7	
				MONTH EST.RATE	.2998	26509.9000		7947.7
	OCT	1	.0	676.8000	.0000	3831.9100	.0	
		2	16.5	674.9200	.0245	3803.4200	93.2	
		3	266.9	473.0080	.5643	3813.1300	2151.7	
		4	528.6	2974.9099	.1777	5436.9600	966.1	
				MONTH EST.RATE	.1916	16885.4200		3235.2
	NOV	1	169.7	2710.2291	.0626	4742.9000	296.9	
		2	339.3	2417.9100	.1403	5659.3600	794.0	
		3	49.9	1615.6800	.0309	5646.1700	174.5	
		4	93.8	807.8400	.1161	7231.9400	839.6	
				MONTH EST.RATE	.0875	23280.3700		2037.0
	DEC	1	7.2	807.8400	.0089	5138.2600	45.7	
		2	.0	589.3800	.0000	3647.7800	.0	
		3	.0	601.9200	.0000	4213.4400	.0	
		4	11.1	553.8500	.0200	6069.5800	121.4	
				MONTH EST.RATE	.0072	19069.0600		137.3
				ANNUAL EST.RATE	.0755			22330.4

NOTE: * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC STURGEON
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	599.8300	.0000	4213.4400	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	593.5600	.0000	4213.4400	.0	
	4	.0	589.3800	.0000	6019.2000	.0	
			MONTH EST.RATE	.0000	18659.5200		.0
FEB	1	.0	601.9200	.0000	4213.4400	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	599.8300	.0000	4213.7300	.0	
	4	.0	601.9200	.0000	4213.4400	.0	
			MONTH EST.RATE	.0000	16854.0500		.0
MARCH	1	.0	599.8300	.0000	4682.1900	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	602.2116	.0000	4215.4500	.0	
	4	.0	1156.4785	.0000	6050.2400	.0	
			MONTH EST.RATE	.0000	19161.3200		.0
APRIL	1	.0	601.9200	.0000	4338.4200	.0	
	2	.0	601.9200	.0000	4465.6900	.0	
	3	.0	601.9200	.0000	4213.4400	.0	
	4	.0	1586.6496	.0000	6704.1400	.0	
			MONTH EST.RATE	.0000	19721.6900		.0
MAY	1	.0	805.1983	.0000	5347.6300	.0	
	2	.0	901.2816	.0000	6182.3200	.0	
	3	.0	923.0400	.0000	6461.2800	.0	
	4	.0	1828.7282	.0000	9230.4000	.0	
			MONTH EST.RATE	.0000	27221.6300		.0
JUNE	1	.0	541.4400	.0000	4519.8400	.0	
	2	.0	537.6800	.0000	3790.2600	.0	
	3	.0	542.0016	.0000	3813.0200	.0	
	4	.0	542.0016	.0000	4873.5200	.0	
			MONTH EST.RATE	.0000	16996.6400		.0
JULY	1	.0	795.9384	.0000	4727.5100	.0	
	2	.0	923.0400	.0000	6365.1200	.0	
	3	.0	910.2202	.0000	6022.6400	.0	
	4	.0	875.7392	.0000	8104.8800	.0	
			MONTH EST.RATE	.0000	25220.1500		.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC STURGEON
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	.0	908.1612	.0000	6390.8000	.0	
		2	.0	1708.2806	.0000	6461.2800	.0	
		3	.0	1846.0800	.0000	6461.2800	.0	
		4	.0	1846.0800	.0000	9230.4000	.0	
				MONTH EST.RATE	.0000	28543.7600		.0
	SEPT	1	.0	154.0800	.0000	6461.2800	.0	
		2	.0	1751.8392	.0000	6329.2000	.0	
		3	.0	923.0400	.0000	6291.7600	.0	
		4	.0	1728.4604	.0000	7427.6600	.0	
				MONTH EST.RATE	.0000	26509.9000		.0
	OCT	1	.0	676.8000	.0000	3831.9100	.0	
		2	.0	674.9200	.0000	3803.4200	.0	
		3	.0	473.0080	.0000	3813.1300	.0	
		4	.0	2974.9099	.0000	5436.9600	.0	
				MONTH EST.RATE	.0000	16885.4200		.0
	NOV	1	.0	2710.2291	.0000	4742.9000	.0	
		2	.0	2417.9100	.0000	5659.3600	.0	
		3	.0	1615.6800	.0000	5646.1700	.0	
		4	.0	807.8400	.0000	7231.9400	.0	
				MONTH EST.RATE	.0000	23280.3700		.0
	DEC	1	.0	807.8400	.0000	5138.2600	.0	
		2	.0	589.3800	.0000	3647.7800	.0	
		3	.0	601.9200	.0000	4213.4400	.0	
		4	.0	553.8500	.0000	6069.5800	.0	
				MONTH EST.RATE	.0000	19069.0600		.0
				ANNUAL EST.RATE	.0000			.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC TOMCOD
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	1202.7	599.8300	2.0051	4213.4400	8448.4	
	2	2474.0	601.9200	4.1102	4213.4400	17318.1	
	3	1297.3	593.5600	2.1856	4213.4400	9208.9	
	4	637.4	589.3809	1.0815	6019.2000	6509.8	
			MONTH EST.RATE	2.3456	18659.5200		43767.8
FEB	1	481.4	601.9200	.7998	4213.4400	3369.9	
	2	154.7	601.9200	.2570	4213.4400	1082.9	
	3	66.0	599.8300	.1100	4213.7300	463.5	
	4	50.9	601.9200	.0846	4213.4400	356.5	
			MONTH EST.RATE	.3129	16854.0500		5273.6
MARCH	1	17.8	599.8300	.0297	4682.1900	139.1	
	2	66.5	601.9200	.1105	4213.4400	465.6	
	3	31.3	602.2116	.0520	4215.4500	219.2	
	4	35.2	1156.4795	.0304	6050.2400	183.9	
			MONTH EST.RATE	.0557	19161.3200		1067.3
APRIL	1	.0	601.9200	.0000	4338.4200	.0	
	2	.0	601.9200	.0000	4465.6900	.0	
	3	.0	601.9200	.0000	4213.4400	.0	
	4	.0	1586.6496	.0000	6704.1400	.0	
			MONTH EST.RATE	.0000	19721.6900		.0
MAY	1	.0	805.1983	.0000	5347.6300	.0	
	2	.0	901.2816	.0000	6182.3200	.0	
	3	12.4	923.0400	.0134	6461.2800	86.6	
	4	51.2	1828.7282	.0280	9230.4000	258.5	
			MONTH EST.RATE	.0104	27221.6300		283.1
JUNE	1	13.1	541.4400	.0242	4519.8400	109.4	
	2	3.3	537.6800	.0061	3790.2600	23.1	
	3	3.3	542.0016	.0061	3813.0200	23.3	
	4	.0	542.0016	.0000	4873.5200	.0	
			MONTH EST.RATE	.0091	16996.6400		154.7
JULY	1	10.3	795.9384	.0129	4727.5100	61.0	
	2	.0	923.0400	.0000	6365.1200	.0	
	3	4.6	910.2202	.0051	6022.6400	30.7	
	4	.0	875.7392	.0000	8104.8800	.0	
			MONTH EST.RATE	.0045	25220.1500		113.5

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC TOMCOD
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	59.8	908.1612	.0659	6390.8003	421.2	
		2	90.1	1708.2806	.0527	6461.2800	340.5	
		3	32.7	1846.0800	.0177	6461.2800	114.4	
		4	14.7	1846.0800	.0080	9230.4000	73.8	
				MONTH EST.RATE	.0361	28543.7600		1030.4
	SEPT	1	.0	154.0800	.0000	6461.2800	.0	
		2	.0	1751.8392	.0000	6329.2000	.0	
		3	.0	923.0400	.0000	6291.7600	.0	
		4	.0	1728.4604	.0000	7427.6600	.0	
				MONTH EST.RATE	.0000	26509.9000		.0
	OCT	1	.0	676.8000	.0000	3831.9100	.0	
		2	.0	674.9200	.0000	3803.4200	.0	
		3	.0	473.0080	.0000	3813.1300	.0	
		4	226.0	2974.9099	.0760	5436.9600	413.2	
				MONTH EST.RATE	.0190	16885.4200		320.8
	NOV	1	92.0	2710.2291	.0340	4742.9000	161.3	
		2	116.6	2417.9100	.0482	5659.3600	272.8	
		3	19.6	1615.6800	.0121	5646.1700	68.3	
		4	.0	807.8400	.0000	7231.9400	.0	
				MONTH EST.RATE	.0236	23280.3700		549.4
	DEC	1	2277.3	807.8400	2.8190	5138.2600	14484.8	
		2	1176.1	589.3800	1.9955	3647.7800	7279.1	
		3	2495.0	601.9200	4.1451	4213.4400	17465.1	
		4	266.5	553.8500	.4812	6069.5800	2920.7	
				MONTH EST.RATE	2.3602	19069.0600		45006.8
				ANNUAL EST.RATE	.4314			97567.4

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BAY ANCHOVY
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	599.8300	.0000	4213.4400	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	593.5600	.0000	4213.4400	.0	
	4	.0	589.3800	.0000	6019.2000	.0	
			MONTH EST.RATE	.0000	18659.5200		.0
FEB	1	.0	601.9200	.0000	4213.4400	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	599.8300	.0000	4213.7300	.0	
	4	.0	601.9200	.0000	4213.4400	.0	
			MONTH EST.RATE	.0000	16854.0500		.0
MARCH	1	.0	599.8300	.0000	4682.1900	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	602.2116	.0000	4215.4500	.0	
	4	.0	1156.4785	.0000	6050.2400	.0	
			MONTH EST.RATE	.0000	19161.3200		.0
APRIL	1	.0	601.9200	.0000	4338.4200	.0	
	2	.0	601.9200	.0000	4465.6900	.0	
	3	.0	601.9200	.0000	4213.4400	.0	
	4	.0	1586.6496	.0000	6704.1400	.0	
			MONTH EST.RATE	.0000	19721.6900		.0
MAY	1	.0	805.1983	.0000	5347.6300	.0	
	2	.0	901.2816	.0000	6182.3200	.0	
	3	5.6	923.0400	.0061	6461.2800	39.4	
	4	7.4	1828.7282	.0041	9230.4000	37.8	
			MONTH EST.RATE	.0026	27221.6300		70.8
JUNE	1	.0	541.4400	.0000	4519.8400	.0	
	2	.0	537.6800	.0000	3790.2600	.0	
	3	.0	542.0016	.0000	3813.0200	.0	
	4	.0	542.0016	.0000	4873.5200	.0	
			MONTH EST.RATE	.0000	16996.6400		.0
JULY	1	.0	795.9384	.0000	4727.5100	.0	
	2	.0	923.0400	.0000	6365.1200	.0	
	3	487.8	910.2202	.5359	6022.6400	3227.5	
	4	191.8	875.7392	.2190	8104.8800	1775.0	
			MONTH EST.RATE	.1887	25220.1500		4759.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BAY ANCHOVY
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	1053.9	908.1612	1.2045	6390.8000	7697.7	
		2	5786.4	1708.2806	3.3873	6461.2800	21886.3	
		3	8992.2	1846.0800	4.8710	6461.2800	31472.9	
		4	265.1	1846.0800	.1436	9230.4000	1325.5	
				MONTH EST.RATE	2.4016	28543.7600		68550.7
	SEPT	1	27.2	154.0800	.1765	6461.2800	1140.4	
		2	38.3	1751.8392	.0219	6329.2000	138.6	
		3	159.0	923.0400	.1723	6291.7600	1084.1	
		4	122.3	1728.4604	.0708	7427.6600	525.9	
				MONTH EST.RATE	.1104	26509.9000		2926.7
	OCT	1	*	676.8000	**	3831.9100	**	
		2	.0	674.9200	.0000	3803.4200	.0	
		3	.0	473.0080	.0000	3813.1300	.0	
		4	.0	2974.9099	.0000	5436.9600	.0	
				MONTH EST.RATE	.0000	16885.4200		.0
	NOV	1	.0	2710.2291	.0000	4742.9000	.0	
		2	*	2417.9100	**	5659.3600	**	
		3	.0	1615.6800	.0000	5646.1700	.0	
		4	.0	807.8400	.0000	7231.9400	.0	
				MONTH EST.RATE	.0000	23280.3700		.0
	DEC	1	.0	807.8400	.0000	5138.2600	.0	
		2	.0	589.3800	.0000	3647.7800	.0	
		3	.0	601.9200	.0000	4213.4400	.0	
		4	.0	553.8500	.0000	6069.5800	.0	
				MONTH EST.RATE	.0000	19069.0600		.0
				ANNUAL EST.RATE	.2253			76307.2

NOTE: * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEFISH
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	599.8300	.0000	4213.4400	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	593.5600	.0000	4213.4400	.0	
	4	.0	589.3803	.0000	6019.2000	.0	
			MONTH EST.RATE	.0000	18659.5200		.0
FEB	1	.0	601.9200	.0000	4213.4400	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	599.8300	.0000	4213.7300	.0	
	4	.0	601.9200	.0000	4213.4400	.0	
			MONTH EST.RATE	.0000	16854.0500		.0
MARCH	1	.0	599.8300	.0000	4682.1900	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	602.2116	.0000	4215.4500	.0	
	4	.0	1156.4785	.0000	6050.2400	.0	
			MONTH EST.RATE	.0000	19161.3200		.0
APRIL	1	.0	601.9200	.0000	4338.4200	.0	
	2	.0	601.9200	.0000	4465.6900	.0	
	3	.0	601.9200	.0000	4213.4400	.0	
	4	.0	1586.6496	.0000	6704.1400	.0	
			MONTH EST.RATE	.0000	19721.6900		.0
MAY	1	.0	805.1983	.0000	5347.6300	.0	
	2	.0	901.2816	.0000	6182.3200	.0	
	3	.0	923.0400	.0000	6461.2800	.0	
	4	.0	1828.7282	.0000	9230.4000	.0	
			MONTH EST.RATE	.0000	27221.6300		.0
JUNE	1	.0	541.4400	.0000	4519.8400	.0	
	2	.0	537.6800	.0000	3790.2600	.0	
	3	.0	542.0016	.0000	3813.0200	.0	
	4	.0	542.0016	.0000	4873.5200	.0	
			MONTH EST.RATE	.0000	16996.6400		.0
JULY	1	.0	795.9384	.0000	4727.5100	.0	
	2	.0	923.0400	.0000	6365.1200	.0	
	3	.0	910.2202	.0000	6022.6400	.0	
	4	.0	875.7392	.0000	8104.8800	.0	
			MONTH EST.RATE	.0000	25220.1500		.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEFISH
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	.0	908.1612	.0000	6390.8000	.0	
		2	25.4	1708.2806	.0149	6461.2800	96.3	
		3	.0	1846.0800	.0000	6461.2800	.0	
		4	.0	1846.0800	.0000	9230.4000	.0	
				MONTH EST.RATE	.0037	28543.7600		105.6
	SEPT	1	.0	154.0800	.0000	6461.2800	.0	
		2	.0	1751.8392	.0000	6329.2000	.0	
		3	.0	923.0400	.0000	6291.7600	.0	
		4	.0	1728.4604	.0000	7427.6600	.0	
				MONTH EST.RATE	.0000	26509.9000		.0
	OCT	1	.0	676.8000	.0000	3831.9100	.0	
		2	.0	674.9200	.0000	3803.4200	.0	
		3	.0	473.0080	.0000	3813.1300	.0	
		4	.0	2974.9099	.0000	5436.9600	.0	
				MONTH EST.RATE	.0000	16885.4200		.0
	NOV	1	.0	2710.2291	.0000	4742.9000	.0	
		2	.0	2417.9100	.0000	5659.3600	.0	
		3	.0	1615.6800	.0000	5646.1700	.0	
		4	.0	807.8400	.0000	7231.9400	.0	
				MONTH EST.RATE	.0000	23280.3700		.0
	DEC	1	.0	807.8400	.0000	5138.2600	.0	
		2	.0	589.3800	.0000	3647.7800	.0	
		3	.0	601.9200	.0000	4213.4400	.0	
		4	.0	553.8500	.0000	6069.5800	.0	
				MONTH EST.RATE	.0000	19069.0600		.0
				ANNUAL EST.RATE	.0003			105.6

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	599.8300	.0000	4213.4400	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	593.5600	.0000	4213.4400	.0	
	4	.0	589.3800	.0000	6019.2000	.0	
			MONTH EST.RATE	.0000	18659.5200		.0
FEB	1	.0	601.9200	.0000	4213.4400	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	599.8300	.0000	4213.7300	.0	
	4	.0	601.9200	.0000	4213.4400	.0	
			MONTH EST.RATE	.0000	16854.0500		.0
MARCH	1	.0	599.8300	.0000	4682.1900	.0	
	2	262.2	601.9200	.4356	4213.4400	1835.4	
	3	.0	602.2116	.0000	4215.4500	.0	
	4	.0	1156.4785	.0000	6050.2400	.0	
			MONTH EST.RATE	.1089	19161.3200		2086.7
APRIL	1	.0	601.9200	.0000	4338.4200	.0	
	2	.0	601.9200	.0000	4465.6900	.0	
	3	222.1	601.9200	.3690	4213.4400	1554.8	
	4	228.8	1586.6496	.1442	6709.1400	966.7	
			MONTH EST.RATE	.1283	19721.6900		2530.3
MAY	1	274.9	805.1983	.3414	5347.6300	1825.7	
	2	267.1	901.2816	.2964	6182.3200	1832.4	
	3	285.4	923.0400	.3092	6461.2800	1997.8	
	4	1800.5	1828.7282	.9846	9230.4000	9088.3	
			MONTH EST.RATE	.4829	27221.6300		13145.3
JUNE	1	460.1	541.4400	.8498	4519.8400	3841.0	
	2	276.9	537.6800	.5150	3790.2600	1952.0	
	3	141.5	542.0016	.2611	3813.0200	995.6	
	4	*	542.0016	**	4873.5200	**	
			MONTH EST.RATE	.5420	16996.6400		9212.2
JULY	1	373.6	795.9384	.4694	4727.5100	2219.1	
	2	429.1	923.0400	.4649	6365.1200	2959.1	
	3	2.2	910.2202	.0024	6022.6400	14.5	
	4	41.6	875.7392	.0475	8104.8800	385.0	
			MONTH EST.RATE	.2461	25220.1500		6206.7

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	55.3	908.1612	.0609	6390.8000	389.2	
		2	1692.3	1708.2806	.9907	6461.2800	6401.2	
		3	2093.3	1846.0800	1.1339	6461.2800	7326.4	
		4	540.2	1846.0800	.2926	9230.4000	2700.8	
				MONTH EST.RATE	.6195	28543.7600		17682.9
	SEPT	1	143.3	154.0800	.9300	6461.2800	6009.0	
		2	401.3	1751.8392	.2291	6329.2000	1450.0	
		3	1506.1	923.0400	1.6317	6291.7600	10266.3	
		4	1293.5	1728.4604	.7484	7427.6600	5558.9	
				MONTH EST.RATE	.8848	26509.9000		23456.0
	OCT	1	45.4	676.8000	.0671	3831.9100	257.1	
		2	855.9	674.9200	1.3274	3803.4200	5048.7	
		3	3047.7	473.0080	6.4432	3813.1309	24568.8	
		4	3913.2	2974.9099	1.3154	5436.9600	7151.8	
				MONTH EST.RATE	2.2883	16885.4200		38638.9
	NOV	1	1429.7	2710.2291	.5275	4742.9000	2501.9	
		2	855.9	2417.9100	.3540	5659.3600	2003.4	
		3	1014.4	1615.6800	.6279	5646.1700	3545.2	
		4	76.3	807.8400	.0945	7231.9400	683.4	
				MONTH EST.RATE	.4010	23280.3700		9335.4
	DEC	1	11.1	807.8400	.0137	5138.2600	70.4	
		2	4.4	589.3800	.0075	3647.7800	27.4	
		3	.0	601.9200	.0000	4213.4400	.0	
		4	.0	553.8500	.0000	6069.5800	.0	
				MONTH EST.RATE	.0053	19069.0600		101.1
				ANNUAL EST.RATE	.4756			122395.5

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GOLDFISH
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	2477.1	599.8300	4.1297	4213.4400	17400.2	
	2	2439.0	601.9200	4.0520	4213.4400	17072.9	
	3	707.1	593.5600	1.1913	4213.4400	5019.5	
	4	68.6	589.3800	.1164	6019.2000	700.6	
			MONTH EST.RATE	2.3724	18659.5200		44267.8
FEB	1	906.2	601.9200	1.5055	4213.4400	6343.3	
	2	668.5	601.9200	1.1106	4213.4400	4679.4	
	3	1103.9	599.8300	1.8404	4213.7300	7754.9	
	4	397.5	601.9200	.6604	4213.4400	2782.6	
			MONTH EST.RATE	1.2752	16854.0500		21559.7
MARCH	1	1299.4	599.8300	2.1663	4682.1900	10143.0	
	2	15.8	601.9200	.0263	4213.4400	110.8	
	3	8951.8	602.2116	14.9313	4215.4500	62942.1	
	4	2956.5	1156.4785	2.5565	6050.2400	15467.4	
			MONTH EST.RATE	4.9261	19161.3200		94275.6
APRIL	1	3076.4	601.9200	5.1110	4338.4200	22173.7	
	2	1374.2	601.9200	2.2830	4465.6900	10195.2	
	3	21.0	601.9200	.0349	4213.4400	147.0	
	4	10691.2	1586.6496	6.7067	6704.1400	44962.7	
			MONTH EST.RATE	3.5339	19721.6900		69694.5
MAY	1	5461.8	805.1983	6.7832	5347.6300	36274.0	
	2	8416.8	901.2816	9.3387	6182.3200	57734.8	
	3	1657.6	923.0400	1.8391	6461.2800	11882.9	
	4	2649.7	1828.7282	1.4489	9230.4000	13373.9	
			MONTH EST.RATE	4.8545	27221.6300		132093.0
JUNE	1	.0	541.4400	.0000	4519.8400	.0	
	2	.0	537.6800	.0000	3790.2600	.0	
	3	1125.7	542.0016	2.0769	3813.0200	7919.3	
	4	432.0	542.0016	.7971	4873.5200	3884.7	
			MONTH EST.RATE	.7185	16996.6400		12212.1
JULY	1	.0	795.9384	.0000	4727.5100	.0	
	2	.0	923.0400	.0000	6365.1200	.0	
	3	416.5	910.2202	.4576	6022.6400	2756.0	
	4	504.4	875.7392	.5760	8104.8800	4668.4	
			MONTH EST.RATE	.2584	25220.1500		6516.9

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GOLDFISH
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	.0	908.1612	.0000	6390.8000	.0	
		2	311.4	1708.2806	.1823	6461.2800	1177.9	
		3	*	1846.0800	**	6461.2800	**	
		4	11.3	1846.0800	.0061	9230.4000	56.3	
				MONTH EST.RATE	.0628	28543.7600		1792.5
	SEPT	1	.0	154.0800	.0000	6461.2800	.0	
		2	.0	1751.8392	.0000	6329.2000	.0	
		3	.0	923.0400	.0000	6291.7600	.0	
		4	.0	1728.4604	.0000	7427.6600	.0	
				MONTH EST.RATE	.0000	26509.9000		.0
	OCT	1	.0	676.8000	.0000	3831.9100	.0	
		2	.0	674.9200	.0000	3803.4200	.0	
		3	1435.1	473.0080	3.0340	3813.1300	11569.0	
		4	.0	2974.9099	.0000	5436.9600	.0	
				MONTH EST.RATE	.7585	16885.4200		12807.6
	NOV	1	.0	2710.2291	.0000	4742.9000	.0	
		2	11.5	2417.9100	.0048	5659.3600	27.2	
		3	16.9	1615.6800	.0105	5646.1700	59.3	
		4	.0	807.8400	.0000	7231.9400	.0	
				MONTH EST.RATE	.0038	23280.3700		88.5
	DEC	1	.0	807.8400	.0000	5138.2600	.0	
		2	261.3	589.3800	.4434	3647.7800	1617.4	
		3	492.1	601.9200	.8176	4213.4400	3444.9	
		4	61.9	553.8500	.1118	6069.5800	678.6	
				MONTH EST.RATE	.3432	19069.0600		6544.5
				ANNUAL EST.RATE	1.5919			401852.7

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	4636.0	599.8300	7.7289	4213.4400	32565.3	
	2	1640.4	601.9200	2.7253	4213.4400	11482.9	
	3	426.4	593.5600	.7184	4213.4400	3026.9	
	4	475.9	589.3800	.8075	6019.2000	4860.5	
			MONTH EST.RATE	2.9950	18659.5200		55885.3
FEB	1	1180.3	601.9200	1.9609	4213.4400	8262.1	
	2	608.7	601.9200	1.0113	4213.4400	4261.1	
	3	542.5	599.8300	.9044	4213.7300	3810.9	
	4	121.0	601.9200	.2010	4213.4400	846.9	
			MONTH EST.RATE	1.0154	16854.0500		17181.0
MARCH	1	52.3	599.8300	.0872	4682.1900	408.3	
	2	120.1	601.9200	.1995	4213.4400	840.6	
	3	763.9	602.2116	1.2685	4215.4500	5347.3	
	4	826.0	1156.4785	.7142	6050.2400	4321.1	
			MONTH EST.RATE	.5674	19161.3200		10872.1
APRIL	1	2.8	601.9200	.0047	4338.4200	20.4	
	2	.0	601.9200	.0000	4465.6900	.0	
	3	.0	601.9200	.0000	4213.4400	.0	
	4	205.9	1586.6496	.1298	6704.1400	870.2	
			MONTH EST.RATE	.0336	19721.6900		662.6
MAY	1	298.6	805.1983	.3708	5347.6300	1982.9	
	2	418.1	901.2816	.4639	6182.3200	2868.0	
	3	326.1	923.0400	.3533	6461.2800	2282.8	
	4	241.4	1828.7282	.1320	9230.4000	1218.4	
			MONTH EST.RATE	.3300	27221.6300		8983.1
JUNE	1	100.2	541.4400	.1851	4519.8400	836.6	
	2	.0	537.6800	.0000	3790.2600	.0	
	3	113.3	542.0016	.2090	3813.0200	796.9	
	4	102.8	542.0016	.1857	4873.5200	924.5	
			MONTH EST.RATE	.1460	16996.6400		2481.5
JULY	1	88.7	795.9384	.1114	4727.5100	526.6	
	2	99.6	923.0400	.1079	6365.1200	686.8	
	3	90.8	910.2202	.0998	6022.6400	601.1	
	4	134.3	875.7392	.1534	8104.8800	1243.3	
			MONTH EST.RATE	.1181	25220.1500		2978.5

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	93.5	908.1612	.1030	6390.8000	658.3	
		2	681.7	1708.2806	.3991	6461.2800	2578.7	
		3	178.2	1846.0800	.0965	6461.2800	623.5	
		4	580.5	1846.0800	.3145	9230.4000	2903.0	
				MONTH EST.RATE	.2283	28543.7600		6516.5
	SEPT	1	216.2	154.0800	1.4032	6461.2800	9066.5	
		2	36.5	1751.8392	.0208	6329.2000	131.6	
		3	10.9	923.0400	.0118	6291.7600	74.2	
		4	50.6	1728.4604	.0293	7427.6600	217.6	
				MONTH EST.RATE	.3663	26509.9000		9710.6
	OCT	1	6.8	676.8000	.0101	3831.9100	38.7	
		2	1.5	674.9200	.0042	3803.4200	8.4	
		3	32.2	473.0080	.0661	3813.1300	259.7	
		4	787.1	2974.9099	.2646	5436.9600	1438.6	
				MONTH EST.RATE	.0863	16885.4200		1457.2
	NOV	1	471.0	2710.2291	.1738	4742.9000	824.3	
		2	80.1	2417.9100	.0331	5659.3600	187.3	
		3	97.8	1615.6800	.0605	5646.1700	341.6	
		4	182.5	807.8400	.2259	7231.9400	1633.7	
				MONTH EST.RATE	.1233	23280.3700		2870.5
	DEC	1	86.0	807.8400	.1065	5138.2600	547.2	
		2	.0	589.3800	.0000	3647.7800	.0	
		3	141.0	601.9200	.2343	4213.4400	987.2	
		4	.0	553.8500	.0000	6069.5800	.0	
				MONTH EST.RATE	.0852	19069.0600		1624.7
				ANNUAL EST.RATE	.5082			121223.6

NOTE.. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SHORTNOSE STURGEON
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	599.8300	.0000	4213.4400	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	593.5600	.0000	4213.4400	.0	
	4	.0	589.3800	.0000	6019.2000	.0	
			MONTH EST.RATE	.0000	18659.5200		.0
FEB	1	.0	601.9200	.0000	4213.4400	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	599.8300	.0000	4213.7300	.0	
	4	.0	601.9200	.0000	4213.4400	.0	
			MONTH EST.RATE	.0000	16854.0500		.0
MARCH	1	.0	599.8300	.0000	4682.1900	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	602.2116	.0000	4215.4500	.0	
	4	.0	1156.4785	.0000	6050.2400	.0	
			MONTH EST.RATE	.0000	19161.3200		.0
APRIL	1	.0	601.9200	.0000	4338.4200	.0	
	2	.0	601.9200	.0000	4465.6900	.0	
	3	.0	601.9200	.0000	4213.4400	.0	
	4	.0	1586.6496	.0000	6704.1400	.0	
			MONTH EST.RATE	.0000	19721.6900		.0
MAY	1	.0	805.1983	.0000	5347.6300	.0	
	2	.0	901.2816	.0000	6182.3200	.0	
	3	.0	923.0400	.0000	6461.2800	.0	
	4	.0	1828.7282	.0000	9230.4000	.0	
			MONTH EST.RATE	.0000	27221.6300		.0
JUNE	1	.0	541.4400	.0000	4519.8400	.0	
	2	.0	537.6800	.0000	3790.2600	.0	
	3	.0	542.0016	.0000	3813.0200	.0	
	4	.0	542.0016	.0000	4873.5200	.0	
			MONTH EST.RATE	.0000	16996.6400		.0
JULY	1	.0	795.9384	.0000	4727.5100	.0	
	2	.0	923.0400	.0000	6365.1200	.0	
	3	.0	910.2202	.0000	6022.6400	.0	
	4	.0	875.7392	.0000	8104.8800	.0	
			MONTH EST.RATE	.0000	25220.1500		.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SHORTNOSE STURGEON
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	.0	908.1612	.0000	6390.8000	.0	
		2	.0	1708.2806	.0000	6461.2800	.0	
		3	.0	1846.0800	.0000	6461.2800	.0	
		4	.0	1846.0800	.0000	9230.4000	.0	
				MONTH EST.RATE	.0000	28543.7600		.0
	SEPT	1	.0	154.0800	.0000	6461.2800	.0	
		2	.0	1751.8392	.0000	6329.2000	.0	
		3	.0	923.0400	.0000	6291.7600	.0	
		4	.0	1728.4604	.0000	7427.6600	.0	
				MONTH EST.RATE	.0000	26509.9000		.0
	OCT	1	.0	676.8000	.0000	3831.9100	.0	
		2	.0	674.9200	.0000	3803.4200	.0	
		3	.0	473.0080	.0000	3813.1300	.0	
		4	.0	2974.9099	.0000	5436.9600	.0	
				MONTH EST.RATE	.0000	16885.4200		.0
	NOV	1	.0	2710.2291	.0000	4742.9000	.0	
		2	.0	2417.9100	.0000	5659.3600	.0	
		3	.0	1615.6800	.0000	5646.1700	.0	
		4	.0	807.8400	.0000	7231.9400	.0	
				MONTH EST.RATE	.0000	23280.3700		.0
	DEC	1	.0	807.8400	.0000	5138.2600	.0	
		2	.0	589.3800	.0000	3647.7800	.0	
		3	.0	601.9200	.0000	4213.4400	.0	
		4	.0	553.8500	.0000	6069.5800	.0	
				MONTH EST.RATE	.0000	19069.0600		.0
				ANNUAL EST.RATE	.0000			.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SPOTTAIL SHINER
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	457.6	599.8300	.7629	4213.4400	3214.4	
	2	696.3	601.9200	1.1568	4213.4400	4874.1	
	3	257.0	593.5600	.4330	4213.4400	1824.4	
	4	307.5	589.3800	.5217	6019.2000	3140.2	
			MONTH EST.RATE	.7186	18659.5200		13408.7
FEB	1	382.2	601.9200	.6350	4213.4400	2675.5	
	2	454.2	601.9200	.7546	4213.4400	3179.5	
	3	92.3	599.8300	.1539	4213.7300	648.5	
	4	155.9	601.9200	.2590	4213.4400	1091.3	
			MONTH EST.RATE	.4506	16854.0500		7594.4
MARCH	1	390.4	599.8300	.6509	4682.1900	3047.6	
	2	274.4	601.9200	.4559	4213.4400	1920.9	
	3	902.5	602.2116	1.4986	4215.4500	6317.3	
	4	705.2	1156.4785	.6098	6050.2400	3689.4	
			MONTH EST.RATE	.8038	19161.3200		15401.9
APRIL	1	110.8	601.9200	.1841	4338.4200	798.7	
	2	109.7	601.9200	.1823	4465.6900	814.1	
	3	165.4	601.9200	.2748	4213.4400	1157.9	
	4	265.1	1586.6496	.1671	6704.1400	1120.3	
			MONTH EST.RATE	.2021	19721.6900		3985.8
MAY	1	24.7	805.1983	.0307	5347.6300	164.2	
	2	9.5	901.2816	.0105	6182.3200	64.9	
	3	90.1	923.0400	.0976	6461.2800	630.6	
	4	141.8	1828.7282	.0775	9230.4000	715.4	
			MONTH EST.RATE	.0541	27221.6300		1472.7
JUNE	1	24.5	541.4400	.0453	4519.8400	204.7	
	2	12.3	537.6800	.0229	3790.2600	86.8	
	3	.0	542.0016	.0000	3813.0200	.0	
	4	13.8	542.0016	.0255	4873.5200	124.3	
			MONTH EST.RATE	.0234	16996.6400		397.7
JULY	1	.0	795.9384	.0000	4727.5100	.0	
	2	.0	923.0400	.0000	6365.1200	.0	
	3	.0	910.2202	.0000	6022.6400	.0	
	4	1.4	875.7392	.0016	8104.8800	13.0	
			MONTH EST.RATE	.0004	25220.1500		10.1

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SPOTTAIL SHINER
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	.0	908.1612	.0000	6390.8000	.0	
		2	151.5	1708.2806	.0887	6461.2800	573.1	
		3	11.5	1846.0800	.0062	6461.2800	40.1	
		4	16.0	1846.0800	.0087	9230.4000	80.3	
				MONTH EST.RATE	.0259	28543.7600		739.3
	SEPT	1	3.8	154.0800	.0247	6461.2800	159.6	
		2	9.1	1751.8392	.0052	6329.2000	32.9	
		3	.0	923.0400	.0000	6291.7600	.0	
		4	2.5	1728.4604	.0015	7427.6600	11.1	
				MONTH EST.RATE	.0079	26509.9000		209.4
	OCT	1	.0	676.8000	.0000	3831.9100	.0	
		2	.0	674.9200	.0000	3803.4200	.0	
		3	105.1	473.0080	.2222	3813.1300	847.3	
		4	419.3	2974.9099	.1410	5436.9600	766.6	
				MONTH EST.RATE	.0908	16885.4200		1533.2
	NOV	1	724.3	2710.2291	.2673	4742.9000	1267.8	
		2	455.7	2417.9100	.1885	5659.3600	1066.8	
		3	206.4	1615.6800	.1278	5646.1700	721.6	
		4	97.2	807.8400	.1203	7231.9400	870.0	
				MONTH EST.RATE	.1760	23280.3700		4097.3
	DEC	1	192.1	807.8400	.2378	5138.2600	1221.9	
		2	136.1	589.3800	.2309	3647.7800	842.3	
		3	618.9	601.9200	1.0282	4213.4400	4332.3	
		4	115.7	553.8500	.2089	6069.5800	1267.9	
				MONTH EST.RATE	.4265	19069.0600		8133.0
				ANNUAL EST.RATE	.2483			56983.5

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR STRIPED BASS
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	6.9	599.8300	.0115	4213.4400	48.5	
	2	340.2	601.9200	.5652	4213.4400	2381.4	
	3	.0	593.5600	.0000	4213.4400	.0	
	4	10.6	589.3800	.0180	6019.2000	108.3	
			MONTH EST.RATE	.1487	18659.5200		2774.7
FEB	1	8.0	601.9200	.0133	4213.4400	56.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	599.8300	.0000	4213.7300	.0	
	4	.0	601.9200	.0000	4213.4400	.0	
			MONTH EST.RATE	.0033	16854.0500		55.6
MARCH	1	.0	599.8300	.0000	4682.1900	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	60.2	602.2116	.1000	4215.4500	421.5	
	4	25.4	1156.4785	.0220	6050.2400	133.1	
			MONTH EST.RATE	.0305	19161.3200		584.4
APRIL	1	.0	601.9200	.0000	4338.4200	.0	
	2	.0	601.9200	.0000	4465.6900	.0	
	3	.0	601.9200	.0000	4213.4400	.0	
	4	6.3	1586.6496	.0040	6704.1400	26.8	
			MONTH EST.RATE	.0010	19721.6900		19.7
MAY	1	.0	805.1983	.0000	5347.6300	.0	
	2	.0	901.2816	.0000	6182.3200	.0	
	3	.0	923.0400	.0000	6461.2800	.0	
	4	41.5	1828.7282	.0227	9230.4000	209.5	
			MONTH EST.RATE	.0057	27221.6300		155.2
JUNE	1	.0	541.4400	.0000	4519.8400	.0	
	2	.0	537.6800	.0000	3790.2600	.0	
	3	.0	542.0016	.0000	3813.0200	.0	
	4	.0	542.0016	.0000	4873.5200	.0	
			MONTH EST.RATE	.0000	16996.6400		.0
JULY	1	.0	795.9384	.0000	4727.5100	.0	
	2	.0	923.0400	.0000	6365.1200	.0	
	3	1637.8	910.2202	1.7993	6022.6400	10836.5	
	4	2.5	875.7392	.0029	8104.8800	23.5	
			MONTH EST.RATE	.4506	25220.1500		11364.2

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR STRIPED BASS
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	2.6	908.1612	.0029	6390.8000	18.5	
		2	293.4	1708.2806	.1718	6461.2800	1110.0	
		3	213.9	1846.0800	.1159	6461.2800	748.9	
		4	65.1	1846.0800	.0353	9230.4000	325.8	
				MONTH EST.RATE	.0815	28543.7600		2326.3
	SEPT	1	90.9	154.0800	.5900	6461.2800	3812.2	
		2	145.7	1751.8392	.0832	6329.2000	526.6	
		3	.0	923.0400	.0000	6291.7600	.0	
		4	15.4	1728.4604	.0089	7427.6600	66.1	
				MONTH EST.RATE	.1705	26509.9000		4519.9
	OCT	1	4.4	676.8000	.0065	3831.9100	24.9	
		2	.0	674.9200	.0000	3803.4200	.0	
		3	.0	473.0080	.0000	3813.1300	.0	
		4	33.4	2974.9099	.0112	5436.9600	60.9	
				MONTH EST.RATE	.0044	16885.4200		74.3
	NOV	1	153.4	2710.2291	.0566	4742.9000	268.4	
		2	46.3	2417.9100	.0192	5659.3600	108.7	
		3	12.0	1615.6800	.0074	5646.1700	41.8	
		4	15.6	807.8400	.0193	7231.9400	139.6	
				MONTH EST.RATE	.0256	23280.3700		596.0
	DEC	1	165.8	807.8400	.2052	5138.2600	1054.4	
		2	119.6	589.3800	.2029	3647.7800	740.1	
		3	237.6	601.9200	.3947	4213.4400	1663.0	
		4	48.3	553.8500	.0872	6069.5800	529.3	
				MONTH EST.RATE	.2225	19069.0600		4242.9
				ANNUAL EST.RATE	.0954			26713.2

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WEAKFISH
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	599.8300	.0000	4213.4400	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	593.5600	.0000	4213.4400	.0	
	4	.0	589.3800	.0000	6019.2000	.0	
			MONTH EST.RATE	.0000	18659.5200		.0
FEB	1	.0	601.9200	.0000	4213.4400	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	599.8300	.0000	4213.7300	.0	
	4	.0	601.9200	.0000	4213.4400	.0	
			MONTH EST.RATE	.0000	16854.0500		.0
MARCH	1	.0	599.8300	.0000	4682.1900	.0	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	.0	602.2116	.0000	4215.4500	.0	
	4	.0	1156.4785	.0000	6050.2400	.0	
			MONTH EST.RATE	.0000	19161.3200		.0
APRIL	1	.0	601.9200	.0000	4338.4200	.0	
	2	.0	601.9200	.0000	4465.6900	.0	
	3	.0	601.9200	.0000	4213.4400	.0	
	4	.0	1586.6496	.0000	6704.1400	.0	
			MONTH EST.RATE	.0000	19721.6900		.0
MAY	1	.0	805.1983	.0000	5347.6300	.0	
	2	.0	901.2816	.0000	6182.3200	.0	
	3	.0	923.0400	.0000	6461.2800	.0	
	4	.0	1828.7282	.0000	9230.4000	.0	
			MONTH EST.RATE	.0000	27221.6300		.0
JUNE	1	.0	541.4400	.0000	4519.8400	.0	
	2	.0	537.6800	.0000	3790.2600	.0	
	3	.0	542.0016	.0000	3813.0200	.0	
	4	.0	542.0016	.0000	4873.5200	.0	
			MONTH EST.RATE	.0000	16996.6400		.0
JULY	1	.0	795.9384	.0000	4727.5100	.0	
	2	.0	923.0400	.0000	6365.1200	.0	
	3	.0	910.2202	.0000	6022.6400	.0	
	4	.0	875.7392	.0000	8104.8800	.0	
			MONTH EST.RATE	.0000	25220.1500		.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WEAKFISH
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	.0	908.1612	.0000	6390.8000	.0	
		2	.0	1708.2806	.0000	6461.2800	.0	
		3	.0	1846.0800	.0000	6461.2800	.0	
		4	.0	1846.0800	.0000	9230.4000	.0	
				MONTH EST.RATE	.0000	28543.7600		.0
	SEPT	1	.0	154.0800	.0000	6461.2800	.0	
		2	.0	1751.8392	.0000	6329.2000	.0	
		3	.0	923.0400	.0000	6291.7600	.0	
		4	.0	1728.4604	.0000	7427.6600	.0	
				MONTH EST.RATE	.0000	26509.9000		.0
	OCT	1	.0	676.8000	.0000	3831.9100	.0	
		2	.0	674.9200	.0000	3803.4200	.0	
		3	.0	473.0080	.0000	3813.1300	.0	
		4	.0	2974.9099	.0000	5436.9600	.0	
				MONTH EST.RATE	.0000	16885.4200		.0
	NOV	1	.0	2710.2291	.0000	4742.9000	.0	
		2	.0	2417.9100	.0000	5659.3600	.0	
		3	.0	1615.6800	.0000	5646.1700	.0	
		4	.0	807.8400	.0000	7231.9400	.0	
				MONTH EST.RATE	.0000	23280.3700		.0
	DEC	1	.0	807.8400	.0000	5138.2600	.0	
		2	.0	589.3800	.0000	3647.7800	.0	
		3	.0	601.9200	.0000	4213.4400	.0	
		4	.0	553.8500	.0000	6069.5800	.0	
				MONTH EST.RATE	.0000	19069.0600		.0
				ANNUAL EST.RATE	.0000			.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE CATFISH
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	381.1	599.8300	.6354	4213.4400	2677.2	
	2	449.3	601.9200	.7464	4213.4400	3144.9	
	3	1058.3	593.5600	1.7830	4213.4400	7512.6	
	4	312.9	589.3800	.5309	6019.2000	3195.6	
			MONTH EST.RATE	.9239	18659.5200		17239.5
FEB	1	336.7	601.9200	.5594	4213.4400	2357.0	
	2	4.1	601.9200	.0068	4213.4400	28.7	
	3	159.9	599.8300	.2666	4213.7300	1123.4	
	4	.0	601.9200	.0000	4213.4400	.0	
			MONTH EST.RATE	.2082	16854.0500		3509.0
MARCH	1	146.5	599.8300	.2442	4682.1900	1143.4	
	2	.0	601.9200	.0000	4213.4400	.0	
	3	663.2	602.2116	1.1013	4215.4500	4642.5	
	4	36.1	1156.4785	.0312	6050.2400	188.8	
			MONTH EST.RATE	.3442	19161.3200		6595.3
APRIL	1	4.3	601.9200	.0071	4338.4200	30.8	
	2	.0	601.9200	.0000	4465.6900	.0	
	3	.0	601.9200	.0000	4213.4400	.0	
	4	73.2	1586.6496	.0461	6704.1400	309.1	
			MONTH EST.RATE	.0133	19721.6900		262.3
MAY	1	510.4	805.1983	.6339	5347.6300	3389.9	
	2	20.1	901.2816	.0223	6182.3200	137.9	
	3	.0	923.0400	.0000	6461.2800	.0	
	4	211.2	1828.7282	.1155	9230.4000	1066.1	
			MONTH EST.RATE	.1929	27221.6300		5251.1
JUNE	1	257.2	541.4400	.4750	4519.8400	2146.9	
	2	.0	537.6800	.0000	3790.2600	.0	
	3	.0	542.0016	.0000	3813.0200	.0	
	4	.0	542.0016	.0000	4873.5200	.0	
			MONTH EST.RATE	.1188	16996.6400		2019.2
JULY	1	417.8	795.9384	.5249	4727.5100	2481.5	
	2	.0	923.0400	.0000	6365.1200	.0	
	3	694.1	910.2202	.7626	6022.6400	4592.9	
	4	.0	875.7392	.0000	8104.8800	.0	
			MONTH EST.RATE	.3219	25220.1500		8118.4

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE CATFISH
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	.0	908.1612	.0000	6390.8000	.0	
		2	2135.3	1708.2806	1.2500	6461.2800	8076.6	
		3	61.3	1846.0800	.0332	6461.2800	214.5	
		4	169.9	1846.0800	.0920	9230.4000	849.2	
				MONTH EST.RATE	.3438	28543.7600		9813.3
	SEPT	1	.0	154.0800	.0000	6461.2800	.0	
		2	144.8	1751.8392	.0827	6329.2000	523.4	
		3	.0	923.0400	.0000	6291.7600	.0	
		4	250.5	1728.4604	.1449	7427.6600	1076.3	
				MONTH EST.RATE	.0569	26509.9000		1508.4
	OCT	1	35.0	676.8000	.0517	3831.9100	198.1	
		2	.0	674.9200	.0000	3803.4200	.0	
		3	3.4	473.0080	.0072	3813.1300	27.5	
		4	84.0	2974.9099	.0282	5436.9600	153.3	
				MONTH EST.RATE	.0218	15885.4200		368.1
	NOV	1	538.3	2710.2291	.1986	4742.9000	941.9	
		2	189.0	2417.9100	.0782	5659.3600	442.6	
		3	88.4	1615.6800	.0547	5646.1700	308.8	
		4	6.8	807.8400	.0084	7231.9400	60.7	
				MONTH EST.RATE	.0850	23280.3700		1978.8
	DEC	1	.0	807.8400	.0000	5138.2600	.0	
		2	8.3	589.3800	.0141	3647.7800	51.4	
		3	.0	601.9200	.0000	4213.4400	.0	
		4	22.3	553.8500	.0403	6069.5800	244.6	
				MONTH EST.RATE	.0136	19069.0600		259.3
				ANNUAL EST.RATE	.2204			56922.7

NOTE: * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	6228.0	599.8300	10.3829	4213.4400	43747.7	
	2	2750.0	601.9200	4.5687	4213.4400	19249.9	
	3	662.2	593.5600	1.1156	4213.4400	4700.5	
	4	674.4	589.3800	1.1443	6019.2000	6887.8	
			MONTH EST.RATE	4.3029	18659.5200		80290.0
FEB	1	581.3	601.9200	.9657	4213.4400	4068.9	
	2	155.7	601.9200	.2587	4213.4400	1090.0	
	3	16.7	599.8300	.0278	4213.7300	117.1	
	4	142.2	601.9200	.2362	4213.4400	995.2	
			MONTH EST.RATE	.3721	16854.0500		6271.4
MARCH	1	78.7	599.8300	.1312	4682.1900	614.3	
	2	2731.0	601.9200	4.5372	4213.4400	19117.2	
	3	2840.0	602.2116	4.7160	4215.4500	19880.1	
	4	3285.1	1156.4785	2.8406	6050.2400	17186.3	
			MONTH EST.RATE	3.0563	19161.3200		58562.7
APRIL	1	337.0	601.9200	.5599	4338.4200	2429.1	
	2	3185.8	601.9200	5.2927	4465.6900	23635.6	
	3	2226.1	601.9200	3.6983	4213.4400	15582.6	
	4	7722.1	1586.6496	4.8669	6704.1400	32628.4	
			MONTH EST.RATE	3.6045	19721.6900		71086.8
MAY	1	2251.0	805.1983	2.7956	5347.6300	14949.8	
	2	1233.1	901.2816	1.3682	6182.3200	8458.7	
	3	1628.4	923.0400	1.7642	6461.2800	11399.0	
	4	3493.1	1828.7282	1.9101	9230.4000	17631.0	
			MONTH EST.RATE	1.9595	27221.6300		53340.8
JUNE	1	2505.0	541.4400	4.6266	4519.8400	20911.5	
	2	2377.0	537.6800	4.4209	3790.2600	16756.4	
	3	1416.5	542.0016	2.6135	3813.0200	9965.3	
	4	294.2	542.0016	.5428	4873.5200	2645.3	
			MONTH EST.RATE	3.0510	16996.6400		51856.7
JULY	1	214.4	795.9384	.2694	4727.5100	1273.6	
	2	144.6	923.0400	.1567	6365.1200	997.4	
	3	172.7	910.2202	.1897	6022.6400	1142.5	
	4	453.9	875.7392	.5183	8104.8800	4200.8	
			MONTH EST.RATE	.2835	25220.1500		7149.9

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	95.6	908.1612	.1053	6390.8000	673.0	
		2	10159.1	1708.2806	5.9470	6461.2800	38425.2	
		3	8348.0	1846.0800	4.5220	6461.2800	29217.9	
		4	2236.8	1846.0800	1.2117	9230.4000	11184.5	
				MONTH EST.RATE	2.9465	28543.7600		84104.2
	SEPT	1	678.5	154.0800	4.4036	6461.2800	28452.9	
		2	1483.7	1751.8392	.8469	6329.2000	5360.2	
		3	1363.0	923.0400	1.4766	6291.7600	9290.4	
		4	1203.2	1728.4604	.6961	7427.6600	5170.4	
				MONTH EST.RATE	1.8558	26509.9000		49197.1
	OCT	1	6.5	676.8000	.0096	3831.9100	36.8	
		2	214.1	674.9200	.3172	3803.4200	1206.4	
		3	1789.9	473.0080	3.7841	3813.1300	14429.3	
		4	10880.4	2974.9099	3.6574	5436.9600	19885.1	
				MONTH EST.RATE	1.9421	16885.4200		32793.2
	NOV	1	16808.6	2710.2291	6.2019	4742.9000	29415.0	
		2	13895.9	2417.9100	5.7471	5659.3600	32524.9	
		3	6248.3	1615.6800	3.8673	5646.1700	21835.4	
		4	1400.4	807.8400	1.7335	7231.9400	12536.6	
				MONTH EST.RATE	4.3875	23280.3700		102142.6
	DEC	1	3437.0	807.8400	4.2546	5138.2600	21861.2	
		2	3074.0	589.3800	5.2157	3647.7800	19025.7	
		3	1867.0	601.9200	3.1017	4213.4400	13068.8	
		4	1201.0	553.8500	2.1685	6069.5800	13161.9	
				MONTH EST.RATE	3.6851	19069.0600		70271.4
				ANNUAL EST.RATE	2.6206			667066.8

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	1084	254.0404	4.2670	1844.6800	7871	
	2	1597	473.9362	3.3697	1846.7900	6223	
	3	2405	349.7163	6.8770	1577.6600	10850	
	4	578	452.0734	1.2786	2209.5000	2825	
			MONTH EST.RATE	3.9481	7478.6300		29526
FEB	1	626	229.4704	2.7280	1608.2600	4387	
	2	106	233.2872	.4544	1726.5700	785	
	3	108	264.9204	.4077	1809.3300	738	
	4	100	259.7063	.3851	1674.9800	645	
			MONTH EST.RATE	.9938	6819.1400		6777
MARCH	1	203	217.9122	.9316	1445.3700	1347	
	2	710	203.0400	3.4969	1432.4300	5009	
	3	1508	482.3750	3.1262	1652.4100	5166	
	4	1294	467.8614	2.7658	2341.3000	6476	
			MONTH EST.RATE	2.5801	6871.5100		17729
APRIL	1	222	234.3716	.9472	1728.3700	1637	
	2	693	234.3790	2.9568	1712.5800	5064	
	3	255	203.7418	1.2516	1577.6500	1975	
	4	1172	455.5969	2.5725	1838.2200	4729	
			MONTH EST.RATE	1.9320	6856.8200		13247
MAY	1	93	305.2590	.3047	1886.0800	575	
	2	546	294.2698	1.8554	1824.4500	3385	
	3	123	149.7675	.8213	990.5400	814	
	4	268	380.6237	.7041	1758.5600	1238	
			MONTH EST.RATE	.9214	6459.6300		5952
JUNE	1	772	422.2696	1.8282	2802.2400	5123	
	2	568	293.0586	1.9382	2488.2300	4823	
	3	298	418.4496	.7122	2720.9200	1938	
	4	47	293.3773	.1602	2749.9700	441	
			MONTH EST.RATE	1.1597	10761.3600		12480
JULY	1	33	285.3004	.1157	2124.3300	246	
	2	249	380.1098	.6551	2374.2200	1555	
	3	118	321.1553	.3674	2123.6700	780	
	4	243	413.5580	.5876	3884.0700	2282	
			MONTH EST.RATE	.4315	10506.2900		4533

NOTE: * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	109	327.7032	.3326	2344.1900	780	
		2	597	272.8884	2.1877	1922.9200	4207	
		3	389	279.1766	1.3934	1835.1100	2557	
		4	485	608.1302	.7975	3010.3700	2401	
				MONTH EST.RATE	1.1778	9112.5900		10733
	SEPT	1	617	267.1809	2.3093	1880.9600	4344	
		2	147	302.3208	.4862	1917.6900	932	
		3	358	306.8479	1.1667	1974.3700	2303	
		4	134	169.6100	.7901	2082.7800	1646	
				MONTH EST.RATE	1.1881	7855.8000		9333
	OCT	1	117	285.9980	.4091	1704.4700	697	
		2	2012	367.8888	5.4690	1684.9700	9215	
		3	5212	570.5035	9.1358	1791.0500	16363	
		4	4767	869.6156	5.4817	2968.5600	16273	
				MONTH EST.RATE	5.1239	8149.0500		41755
	NOV	1	3109	620.9467	5.0069	2124.2300	10636	
		2	484	318.8664	1.5179	2221.3700	3372	
		3	795	543.5213	1.4627	1950.1900	2853	
		4	853	239.1496	3.5658	2178.8900	7772	
				MONTH EST.RATE	2.8886	8474.6800		24480
	DEC	1	979	261.4086	3.7451	1777.9100	6658	
		2	561	263.7473	2.1270	1782.4300	3791	
		3	501	90.7200	5.5225	727.4900	4018	
		4	186	132.2300	1.4086	1434.7800	2018	
				MONTH EST.RATE	3.2003	5722.6100		18314
				ANNUAL EST.RATE	2.1288			194859

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	1	254.0404	.0039	1844.6800	7	
	2	0	473.9362	.0040	1846.7900	0	
	3	0	349.7163	.0000	1577.6600	0	
	4	0	452.0734	.0000	2209.5000	0	
			MONTH EST.RATE	.0010	7478.6300		7
FEB	1	0	229.4704	.0040	1608.2600	0	
	2	0	233.2872	.0040	1726.5700	0	
	3	0	264.9204	.0000	1809.3300	0	
	4	0	259.7063	.0040	1674.9800	0	
			MONTH EST.RATE	.0000	6819.1400		0
MARCH	1	0	217.9122	.0040	1445.3700	0	
	2	0	203.0400	.0040	1432.4300	0	
	3	3	482.3750	.0062	1652.4100	10	
	4	2	467.8614	.0043	2341.3000	10	
			MONTH EST.RATE	.0026	6871.5100		18
APRIL	1	0	234.3716	.0040	1728.3700	0	
	2	5	234.3790	.0213	1712.5800	36	
	3	0	203.7418	.0040	1577.6500	0	
	4	9	455.5969	.0198	1838.2200	36	
			MONTH EST.RATE	.0103	6856.8200		71
MAY	1	3	305.2590	.0058	1886.0800	18	
	2	224	294.2698	.7612	1824.4500	1389	
	3	11	149.7675	.0735	990.5400	73	
	4	11	380.6237	.0289	1758.5600	51	
			MONTH EST.RATE	.2184	6459.6300		1411
JUNE	1	3	422.2696	.0071	2802.2400	20	
	2	9	293.0586	.0307	2488.2300	76	
	3	0	418.4496	.0040	2720.9200	0	
	4	2	293.3773	.0068	2749.9700	19	
			MONTH EST.RATE	.0112	10761.3600		121
JULY	1	0	285.3004	.0000	2124.3300	0	
	2	18	380.1098	.0474	2374.2200	113	
	3	17	321.1553	.0529	2123.6700	112	
	4	36	413.5580	.0871	3884.0700	338	
			MONTH EST.RATE	.0469	10506.2900		493

NOTE: * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	17	327.7032	.0519	2344.1900	122	
		2	95	272.8884	.3481	1922.9200	669	
		3	79	279.1766	.2830	1835.1100	519	
		4	53	608.1302	.0872	3010.3700	263	
				MONTH EST.RATE	.1926	9112.5900		1755
	SEPT	1	53	267.1809	.1984	1880.9600	373	
		2	18	302.3208	.0595	1917.6900	114	
		3	40	306.8479	.1304	1974.3700	257	
		4	11	169.6100	.0649	2082.7800	135	
				MONTH EST.RATE	.1133	7855.8000		890
	OCT	1	17	285.9980	.0594	1704.4700	101	
		2	144	367.8888	.3914	1684.9700	659	
		3	241	570.5035	.4224	1791.0500	757	
		4	766	869.6156	.8809	2968.5600	2615	
				MONTH EST.RATE	.4385	8149.0500		3573
	NOV	1	329	620.9467	.5298	2124.2300	1125	
		2	114	318.8664	.3575	2221.3700	794	
		3	121	543.5213	.2226	1950.1900	434	
		4	9	239.1496	.0376	2178.8900	82	
				MONTH EST.RATE	.2869	8474.6800		2431
	DEC	1	13	261.4086	.0497	1777.9100	88	
		2	0	263.7473	.0000	1782.4300	0	
		3	0	90.7200	.0000	727.4900	0	
		4	0	132.2300	.0000	1434.7800	0	
				MONTH EST.RATE	.0124	5722.6100		71
				ANNUAL EST.RATE	.1112			10841

NOTE * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	254.0404	.0000	1844.6800	0	
	2	0	473.9362	.0000	1846.7900	0	
	3	0	349.7163	.0000	1577.6600	0	
	4	0	452.0734	.0000	2209.5000	0	
			MONTH EST.RATE	.0000	7478.6300		0
FEB	1	0	229.4704	.0000	1608.2600	0	
	2	0	233.2872	.0000	1726.5700	0	
	3	0	264.9204	.0000	1809.3300	0	
	4	0	259.7063	.0000	1674.9800	0	
			MONTH EST.RATE	.0000	6819.1400		0
MARCH	1	0	217.9122	.0000	1445.3700	0	
	2	0	203.0400	.0000	1432.4300	0	
	3	0	482.3750	.0000	1652.4100	0	
	4	0	467.8614	.0000	2341.3000	0	
			MONTH EST.RATE	.0000	6871.5100		0
APRIL	1	0	234.3716	.0000	1728.3700	0	
	2	0	234.3790	.0000	1712.5800	0	
	3	0	203.7418	.0000	1577.6500	0	
	4	0	455.5969	.0000	1838.2200	0	
			MONTH EST.RATE	.0000	6856.8200		0
MAY	1	0	305.2590	.0000	1886.0800	0	
	2	0	294.2698	.0000	1824.4500	0	
	3	0	149.7675	.0000	990.5400	0	
	4	0	380.6237	.0000	1758.5600	0	
			MONTH EST.RATE	.0000	6459.6300		0
JUNE	1	0	422.2696	.0000	2802.2400	0	
	2	0	293.0586	.0000	2488.2300	0	
	3	2	418.4496	.0048	2720.9200	13	
	4	1	293.3773	.0034	2749.9700	9	
			MONTH EST.RATE	.0021	10761.3600		23
JULY	1	3	285.3004	.0105	2124.3300	22	
	2	17	380.1098	.0447	2374.2200	106	
	3	19	321.1553	.0592	2123.6700	126	
	4	34	413.5580	.0822	3884.0700	319	
			MONTH EST.RATE	.0492	10506.2900		517

NOTE: * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	4	327.7032	.0122	2344.1900	29	
		2	43	272.8884	.1576	1922.9200	303	
		3	43	279.1766	.1540	1835.1100	283	
		4	37	608.1302	.0608	3010.3700	183	
				MONTH EST.RATE	.0962	9112.5900		877
	SEPT	1	12	267.1809	.0449	1880.9600	84	
		2	9	302.3208	.0298	1917.6900	57	
		3	11	306.8479	.0359	1974.3700	71	
		4	10	169.6100	.0590	2082.7800	123	
				MONTH EST.RATE	.0424	7855.8000		333
	OCT	1	3	285.9980	.0105	1704.4700	18	
		2	94	367.8888	.2555	1684.9700	431	
		3	228	570.5035	.3997	1791.0500	716	
		4	212	869.6156	.2438	2968.5600	724	
				MONTH EST.RATE	.2274	8149.0500		1853
	NOV	1	47	620.9467	.0757	2124.2300	161	
		2	13	318.8664	.0408	2221.3700	91	
		3	7	543.5213	.0129	1950.1900	25	
		4	31	239.1496	.1296	2178.8900	282	
				MONTH EST.RATE	.0648	8474.6800		549
	DEC	1	9	261.4086	.0344	1777.9100	61	
		2	0	263.7473	.0000	1782.4300	0	
		3	0	90.7200	.0000	727.4900	0	
		4	0	132.2300	.0000	1434.7800	0	
				MONTH EST.RATE	.0086	5722.6100		49
				ANNUAL EST.RATE	.0409			4201

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC STURGEON
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	254.0404	.0000	1844.6800	0	
	2	0	473.9362	.0000	1846.7900	0	
	3	0	349.7163	.0000	1577.6600	0	
	4	0	452.0734	.0000	2209.5000	0	
			MONTH EST.RATE	.0000	7478.6300		0
FEB	1	0	229.4704	.0000	1608.2600	0	
	2	0	233.2872	.0000	1726.5700	0	
	3	0	264.9204	.0000	1809.3300	0	
	4	0	259.7063	.0000	1674.9800	0	
			MONTH EST.RATE	.0000	6819.1400		0
MARCH	1	0	217.9122	.0000	1445.3700	0	
	2	0	203.0400	.0000	1432.4300	0	
	3	0	482.3750	.0000	1652.4100	0	
	4	0	467.8614	.0000	2341.3000	0	
			MONTH EST.RATE	.0000	6871.5100		0
APRIL	1	0	234.3716	.0000	1728.3700	0	
	2	0	234.3790	.0000	1712.5800	0	
	3	1	203.7418	.0049	1577.6500	8	
	4	0	455.5969	.0000	1838.2200	0	
			MONTH EST.RATE	.0012	6856.8200		8
MAY	1	0	305.2590	.0000	1886.0800	0	
	2	0	294.2698	.0000	1824.4500	0	
	3	0	149.7675	.0000	990.5400	0	
	4	0	380.6237	.0000	1758.5600	0	
			MONTH EST.RATE	.0000	6459.6300		0
JUNE	1	0	422.2696	.0000	2802.2400	0	
	2	0	293.0586	.0000	2488.2300	0	
	3	0	418.4496	.0000	2720.9200	0	
	4	0	293.3773	.0000	2749.9700	0	
			MONTH EST.RATE	.0000	10761.3600		0
JULY	1	0	285.3004	.0000	2124.3300	0	
	2	0	380.1098	.0000	2374.2200	0	
	3	0	321.1553	.0000	2123.6700	0	
	4	0	413.5580	.0000	3884.0700	0	
			MONTH EST.RATE	.0000	10506.2900		0

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC STURGEON
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	0	327.7032	.0000	2344.1900	0	
		2	0	272.8884	.0000	1922.9200	0	
		3	0	279.1766	.0000	1835.1100	0	
		4	0	608.1302	.0000	3010.3700	0	
				MONTH EST.RATE	.0000	9112.5900		0
	SEPT	1	0	267.1809	.0000	1880.9600	0	
		2	0	302.3208	.0000	1917.6900	0	
		3	0	306.8479	.0000	1974.3700	0	
		4	0	169.6100	.0000	2082.7800	0	
				MONTH EST.RATE	.0000	7855.8000		0
	OCT	1	0	285.9980	.0000	1704.4700	0	
		2	0	367.8888	.0000	1684.9700	0	
		3	0	570.5035	.0000	1791.0500	0	
		4	0	869.6156	.0000	2968.5600	0	
				MONTH EST.RATE	.0000	8149.0500		0
	NOV	1	0	620.9467	.0000	2124.2300	0	
		2	0	318.8664	.0000	2221.3700	0	
		3	0	543.5213	.0000	1950.1900	0	
		4	0	239.1496	.0000	2178.8900	0	
				MONTH EST.RATE	.0000	8474.6800		0
	DEC	1	0	261.4086	.0000	1777.9100	0	
		2	0	263.7473	.0000	1782.4300	0	
		3	0	90.7200	.0000	727.4900	0	
		4	0	132.2300	.0000	1434.7800	0	
				MONTH EST.RATE	.0000	5722.6100		0
				ANNUAL EST.RATE	.0001			8

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC TOMCOD
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	222	254.0404	.8739	1844.6800	1612	
	2	882	473.9362	1.8610	1846.7900	3437	
	3	2017	349.7163	5.7675	1577.6600	9099	
	4	434	452.0734	.9600	2209.5000	2121	
			MONTH EST.RATE	2.3626	7478.6300		17691
FEB	1	308	229.4704	1.3422	1608.2600	2159	
	2	29	233.2872	.1243	1726.5700	215	
	3	42	264.9204	.1585	1809.3300	287	
	4	17	259.7063	.0655	1674.9800	110	
			MONTH EST.RATE	.4226	6819.1400		2882
MARCH	1	44	217.9122	.2019	1445.3700	292	
	2	377	203.0400	1.8568	1432.4300	2660	
	3	65	482.3750	.1348	1652.4100	223	
	4	23	467.8614	.0492	2341.3000	115	
			MONTH EST.RATE	.5607	6871.5100		3853
APRIL	1	1	234.3716	.0043	1728.3700	7	
	2	0	234.3790	.0000	1712.5800	0	
	3	1	203.7418	.0049	1577.6500	8	
	4	0	455.5969	.0000	1838.2200	0	
			MONTH EST.RATE	.0023	6856.8200		16
MAY	1	0	305.2590	.0000	1886.0800	0	
	2	0	294.2698	.0000	1824.4500	0	
	3	0	149.7675	.0000	990.5400	0	
	4	1	380.6237	.0026	1758.5600	5	
			MONTH EST.RATE	.0007	6459.6300		5
JUNE	1	30	422.2696	.0710	2802.2400	199	
	2	12	293.0586	.0410	2488.2300	102	
	3	3	418.4496	.0072	2720.9200	20	
	4	0	293.3773	.0000	2749.9700	0	
			MONTH EST.RATE	.0298	10761.3600		321
JULY	1	0	285.3004	.0000	2124.3300	0	
	2	3	380.1098	.0079	2374.2200	19	
	3	0	321.1553	.0000	2123.6700	0	
	4	0	413.5580	.0000	3884.0700	0	
			MONTH EST.RATE	.0020	10506.2900		21

NOTE: * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC TOMCOD
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	0	327.7032	.0000	2344.1900	0	
		2	6	272.8884	.0220	1922.9200	42	
		3	0	279.1766	.0000	1835.1100	0	
		4	0	608.1302	.0000	3010.3700	0	
				MONTH EST.RATE	.0055	9112.5900		50
	SEPT	1	1	267.1809	.0037	1880.9600	7	
		2	0	302.3208	.0000	1917.6900	0	
		3	0	306.8479	.0000	1974.3700	0	
		4	0	169.6100	.0000	2082.7800	0	
				MONTH EST.RATE	.0009	7855.8000		7
	OCT	1	0	285.9980	.0000	1704.4700	0	
		2	0	367.8888	.0000	1684.9700	0	
		3	0	570.5035	.0000	1791.0500	0	
		4	3	869.6156	.0035	2968.5600	10	
				MONTH EST.RATE	.0009	8149.0500		7
	NOV	1	40	620.9467	.0644	2124.2300	137	
		2	0	318.8664	.0000	2221.3700	0	
		3	3	543.5213	.0055	1950.1900	11	
		4	26	239.1496	.1087	2178.8900	237	
				MONTH EST.RATE	.0447	8474.6800		379
	DEC	1	197	261.4086	.7536	1777.9100	1340	
		2	183	263.7473	.6939	1782.4300	1237	
		3	302	90.7200	3.3289	727.4900	2422	
		4	10	132.2300	.0756	1434.7800	108	
				MONTH EST.RATE	1.2130	5722.6100		6942
				ANNUAL EST.RATE	.3874			32174

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BAY ANCHOVY
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	254.0404	.0000	1844.6800	0	
	2	0	473.9362	.0000	1846.7900	0	
	3	0	349.7163	.0000	1577.6600	0	
	4	0	452.0734	.0000	2209.5000	0	
			MONTH EST.RATE	.0000	7478.6300		0
FEB	1	0	229.4704	.0000	1608.2600	0	
	2	0	233.2872	.0000	1726.5700	0	
	3	0	264.9204	.0000	1809.3300	0	
	4	0	259.7063	.0000	1674.9830	0	
			MONTH EST.RATE	.0000	6819.1400		0
MARCH	1	0	217.9122	.0000	1445.3709	0	
	2	0	203.0403	.0000	1432.4300	0	
	3	0	482.3750	.0000	1652.4100	0	
	4	0	467.8614	.0000	2341.3000	0	
			MONTH EST.RATE	.0000	6871.5100		0
APRIL	1	0	234.3716	.0000	1728.3700	0	
	2	0	234.3790	.0000	1712.5800	0	
	3	0	203.7418	.0000	1577.6500	0	
	4	0	455.5963	.0000	1838.2200	0	
			MONTH EST.RATE	.0000	6856.8200		0
MAY	1	0	305.2590	.0000	1886.0800	0	
	2	0	294.2698	.0000	1824.4500	0	
	3	0	149.7675	.0000	990.5400	0	
	4	0	380.6237	.0000	1758.5600	0	
			MONTH EST.RATE	.0000	6459.6300		0
JUNE	1	1	422.2696	.0024	2802.2400	7	
	2	0	293.0586	.0000	2488.2300	0	
	3	0	418.4496	.0000	2720.9200	0	
	4	0	293.3773	.0000	2749.9700	0	
			MONTH EST.RATE	.0006	10761.3600		6
JULY	1	0	285.3004	.0000	2124.3300	0	
	2	0	380.1098	.0000	2374.2200	0	
	3	16	321.1553	.0498	2123.6700	106	
	4	75	413.5580	.1814	3884.0700	705	
			MONTH EST.RATE	.0578	10506.2900		607

NOTE: * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BAY ANCHOVY
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	34	327.7032	.1038	2344.1900	243	
		2	26	272.8884	.0953	1922.9200	183	
		3	85	279.1766	.3045	1835.1100	559	
		4	26	608.1302	.0428	3010.3700	129	
				MONTH EST.RATE	.1366	9112.5900		1245
	SEPT	1	2	267.1809	.0075	1880.9600	14	
		2	3	302.3208	.0099	1917.6900	19	
		3	9	306.8479	.0293	1974.3700	58	
		4	1	169.6100	.0059	2082.7800	12	
				MONTH EST.RATE	.0132	7855.8000		104
	OCT	1	0	285.9980	.0000	1704.4700	0	
		2	0	367.8888	.0000	1684.9700	0	
		3	0	570.5035	.0000	1791.0500	0	
		4	0	869.6156	.0000	2968.5600	0	
				MONTH EST.RATE	.0000	8149.0500		0
	NOV	1	0	620.9467	.0000	2124.2300	0	
		2	0	318.8664	.0000	2221.3700	0	
		3	0	543.5213	.0000	1950.1900	0	
		4	0	239.1496	.0000	2178.8900	0	
				MONTH EST.RATE	.0000	8474.6800		0
	DEC	1	0	261.4086	.0000	1777.9100	0	
		2	0	263.7473	.0000	1782.4300	0	
		3	0	90.7200	.0000	727.4900	0	
		4	0	132.2300	.0000	1434.7800	0	
				MONTH EST.RATE	.0000	5722.6100		0
				ANNUAL EST.RATE	.0174			1962

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	254.0404	.0000	1844.6800	0	
	2	0	473.9362	.0000	1846.7900	0	
	3	0	349.7163	.0000	1577.6600	0	
	4	0	452.0734	.0000	2209.5000	0	
			MONTH EST.RATE	.0000	7478.6300		0
FEB	1	0	229.4704	.0000	1608.2600	0	
	2	0	233.2872	.0000	1726.5700	0	
	3	0	264.9204	.0000	1809.3300	0	
	4	0	259.7063	.0000	1674.9800	0	
			MONTH EST.RATE	.0000	6819.1400		0
MARCH	1	0	217.9122	.0000	1445.3700	0	
	2	0	203.0400	.0000	1432.4300	0	
	3	0	482.3750	.0000	1652.4100	0	
	4	0	467.8614	.0000	2341.3000	0	
			MONTH EST.RATE	.0000	6871.5100		0
APRIL	1	0	234.3716	.0000	1728.3700	0	
	2	0	234.3790	.0000	1712.5800	0	
	3	1	203.7418	.0049	1577.6500	8	
	4	1	455.5969	.0022	1838.2200	4	
			MONTH EST.RATE	.0018	6856.8200		12
MAY	1	2	305.2590	.0066	1886.0800	12	
	2	3	294.2698	.0102	1824.4500	19	
	3	1	149.7675	.0067	990.5400	7	
	4	9	380.6237	.0237	1758.5600	42	
			MONTH EST.RATE	.0118	6459.6500		76
JUNE	1	29	422.2696	.0687	2802.2400	193	
	2	39	293.0586	.1331	2488.2300	331	
	3	12	418.4496	.0287	2720.9200	78	
	4	4	293.3773	.0136	2749.9700	37	
			MONTH EST.RATE	.0610	10761.3600		656
JULY	1	2	285.3004	.0070	2124.3300	15	
	2	9	380.1098	.0237	2374.2200	56	
	3	1	321.1553	.0031	2123.6700	7	
	4	53	413.5580	.1282	3884.0700	498	
			MONTH EST.RATE	.0405	10506.2900		426

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	16	327.7032	.0488	2344.1900	114	
		2	44	272.8884	.1612	1922.9200	310	
		3	62	279.1766	.2221	1835.1100	408	
		4	142	608.1302	.2335	3010.3700	703	
				MONTH EST.RATE	.1664	9112.5900		1516
	SEPT	1	82	267.1809	.3069	1880.9600	577	
		2	79	302.3208	.2613	1917.6900	501	
		3	202	306.8479	.6583	1974.3700	1300	
		4	84	169.6100	.4953	2082.7800	1032	
				MONTH EST.RATE	.4305	7855.8000		3382
	OCT	1	26	285.9980	.0909	1704.4700	155	
		2	1135	367.8888	3.0852	1684.9700	5198	
		3	2319	570.5035	4.0648	1791.0500	7280	
		4	1160	869.6156	1.3339	2968.5600	3960	
				MONTH EST.RATE	2.1437	8149.0500		17469
	NOV	1	435	620.9467	.7005	2124.2300	1488	
		2	59	318.8664	.1850	2221.3700	411	
		3	211	543.5213	.3882	1950.1900	757	
		4	17	239.1496	.0711	2178.8900	155	
				MONTH EST.RATE	.3382	8474.6800		2849
	DEC	1	2	261.4086	.0077	1777.9100	14	
		2	0	263.7473	.0040	1782.4300	0	
		3	0	90.7200	.0000	727.4900	0	
		4	0	132.2300	.0040	1434.7800	0	
				MONTH EST.RATE	.0019	5722.6100		11
				ANNUAL EST.RATE	.2662			26397

NOTE: * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEFISH
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	254.0404	.0000	1844.6800	0	
	2	0	473.9362	.0000	1846.7900	0	
	3	0	349.7163	.0000	1577.6600	0	
	4	0	452.0734	.0000	2209.5000	0	
			MONTH EST.RATE	.0000	7478.6300		0
FEB	1	0	229.4704	.0000	1608.2600	0	
	2	0	233.2872	.0000	1726.5700	0	
	3	0	264.9204	.0000	1809.3300	0	
	4	0	259.7063	.0000	1674.9800	0	
			MONTH EST.RATE	.0000	6819.1400		0
MARCH	1	0	217.9122	.0000	1445.3700	0	
	2	0	203.0400	.0000	1432.4300	0	
	3	0	482.3750	.0000	1652.4100	0	
	4	0	467.8614	.0000	2341.3000	0	
			MONTH EST.RATE	.0000	6871.5100		0
APRIL	1	0	234.3716	.0000	1728.3700	0	
	2	0	234.3790	.0000	1712.5800	0	
	3	0	203.7418	.0000	1577.6500	0	
	4	0	455.5969	.0000	1838.2200	0	
			MONTH EST.RATE	.0000	6856.8200		0
MAY	1	0	305.2590	.0000	1886.0800	0	
	2	0	294.2698	.0000	1824.4500	0	
	3	0	149.7675	.0000	990.5400	0	
	4	0	380.6237	.0000	1758.5600	0	
			MONTH EST.RATE	.0000	6459.6300		0
JUNE	1	0	422.2696	.0000	2802.2400	0	
	2	0	293.0586	.0000	2488.2300	0	
	3	0	418.4496	.0000	2720.9200	0	
	4	0	293.3773	.0000	2749.9700	0	
			MONTH EST.RATE	.0000	10761.3600		0
JULY	1	0	285.3004	.0000	2124.3300	0	
	2	0	380.1098	.0000	2374.2200	0	
	3	0	321.1553	.0000	2123.6700	0	
	4	0	413.5580	.0000	3884.0700	0	
			MONTH EST.RATE	.0000	10506.2900		0

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEFISH
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	0	327.7032	.0000	2344.1900	0	
		2	0	272.8884	.0000	1922.9200	0	
		3	0	279.1766	.0000	1835.1100	0	
		4	0	608.1302	.0000	3010.3700	0	
				MONTH EST.RATE	.0000	9112.5900		0
	SEPT	1	0	267.1809	.0000	1880.9600	0	
		2	0	302.3208	.0000	1917.6900	0	
		3	0	306.8479	.0000	1974.3700	0	
		4	0	169.6100	.0000	2082.7800	0	
				MONTH EST.RATE	.0000	7855.8000		0
	OCT	1	0	285.9980	.0000	1704.4700	0	
		2	0	367.8888	.0000	1684.9700	0	
		3	0	570.5035	.0000	1791.0500	0	
		4	0	869.6156	.0000	2968.5600	0	
				MONTH EST.RATE	.0000	8149.0500		0
	NOV	1	0	620.9467	.0000	2124.2300	0	
		2	0	318.8664	.0000	2221.3700	0	
		3	0	543.5213	.0000	1950.1900	0	
		4	0	239.1496	.0000	2178.8900	0	
				MONTH EST.RATE	.0000	8474.6800		0
	DEC	1	0	261.4086	.0000	1777.9100	0	
		2	0	263.7473	.0000	1782.4300	0	
		3	0	90.7200	.0000	727.4900	0	
		4	0	132.2300	.0000	1434.7800	0	
				MONTH EST.RATE	.0000	5722.6100		0
				ANNUAL EST.RATE	.0000			0

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GOLDFISH
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	103	254.0404	.4055	1844.6800	748	
	2	66	473.9362	.1393	1846.7900	257	
	3	68	349.7163	.1944	1577.6600	307	
	4	32	452.0734	.0708	2209.5000	156	
			MONTH EST.RATE	.2025	7478.6300		1514
FEB	1	56	229.4704	.2440	1608.2600	392	
	2	21	233.2872	.0900	1726.5700	155	
	3	35	264.9204	.1321	1809.3300	239	
	4	21	259.7063	.0809	1674.9800	136	
			MONTH EST.RATE	.1368	6819.1400		933
MARCH	1	16	217.9122	.0734	1445.3700	106	
	2	28	203.0400	.1379	1432.4300	198	
	3	175	482.3750	.3628	1652.4100	599	
	4	28	467.8614	.0599	2341.3000	140	
			MONTH EST.RATE	.1585	6871.5100		1089
APRIL	1	7	234.3716	.0299	1728.3700	52	
	2	6	234.3790	.0256	1712.5800	44	
	3	2	203.7418	.0098	1577.6500	15	
	4	18	455.5969	.0395	1838.2200	73	
			MONTH EST.RATE	.0262	6856.8200		180
MAY	1	12	305.2593	.0393	1886.0800	74	
	2	6	294.2698	.0244	1824.4500	37	
	3	3	149.7675	.0240	990.5400	20	
	4	4	380.6237	.0105	1758.5600	18	
			MONTH EST.RATE	.0226	6459.6300		146
JUNE	1	4	422.2696	.0095	2802.2400	27	
	2	2	293.0586	.0068	2488.2300	17	
	3	4	418.4496	.0096	2720.9200	26	
	4	3	293.3773	.0102	2749.9700	28	
			MONTH EST.RATE	.0090	10761.3600		97
JULY	1	0	285.3004	.0000	2129.3300	0	
	2	2	380.1098	.0053	2374.2200	13	
	3	0	321.1553	.0000	2123.6700	0	
	4	0	413.5580	.0000	3884.0700	0	
			MONTH EST.RATE	.0013	10506.2900		14

NOTE: * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GOLDFISH
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	0	327.7032	.0000	2344.1900	0	
		2	0	272.8884	.0000	1922.9200	0	
		3	0	279.1766	.0000	1835.1100	0	
		4	0	608.1302	.0000	3010.3700	0	
				MONTH EST.RATE	.0000	9112.5900		0
	SEPT	1	0	267.1809	.0000	1880.9600	0	
		2	0	302.3208	.0000	1917.6900	0	
		3	0	306.8479	.0000	1974.3700	0	
		4	0	169.6100	.0000	2082.7800	0	
				MONTH EST.RATE	.0000	7855.8000		0
	OCT	1	0	285.9980	.0000	1704.4700	0	
		2	0	367.8888	.0000	1684.9700	0	
		3	3	570.5035	.0053	1791.0500	9	
		4	1	869.6156	.0012	2968.5600	4	
				MONTH EST.RATE	.0016	8149.0500		13
	NOV	1	1	620.9467	.0016	2124.2300	3	
		2	0	318.8664	.0000	2221.3700	0	
		3	1	543.5213	.0018	1950.1900	4	
		4	4	239.1496	.0167	2178.8900	36	
				MONTH EST.RATE	.0050	8474.6800		42
	DEC	1	5	261.4086	.0191	1777.9100	34	
		2	4	263.7473	.0152	1782.4300	27	
		3	12	90.7200	.1323	727.4900	96	
		4	5	132.2300	.0378	1434.7800	54	
				MONTH EST.RATE	.0511	5722.6100		292
				ANNUAL EST.RATE	.0512			4320

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	110	254.0404	.4330	1844.6800	799	
	2	73	473.9362	.1540	1846.7900	284	
	3	55	349.7163	.1573	1577.6600	248	
	4	18	452.0734	.0398	2209.5000	88	
			MONTH EST.RATE	.1960	7478.6300		1466
FEB	1	22	229.4704	.0959	1608.2600	154	
	2	11	233.2872	.0472	1726.5700	81	
	3	6	264.9204	.0227	1809.3300	41	
	4	8	259.7063	.0308	1674.9800	52	
			MONTH EST.RATE	.0492	6819.1400		336
MARCH	1	9	217.9122	.0413	1445.3700	60	
	2	6	203.0400	.0296	1432.4300	42	
	3	22	482.3750	.0456	1652.4100	75	
	4	10	467.8614	.0214	2341.3000	50	
			MONTH EST.RATE	.0345	6871.5100		237
APRIL	1	1	234.3716	.0043	1728.3700	7	
	2	0	234.3790	.0000	1712.5800	0	
	3	3	203.7418	.0147	1577.6500	23	
	4	18	455.5969	.0395	1838.2200	73	
			MONTH EST.RATE	.0146	6856.8200		100
MAY	1	5	305.2590	.0164	1886.0800	31	
	2	19	294.2698	.0646	1824.4500	118	
	3	10	149.7675	.0668	990.5400	66	
	4	30	380.6237	.0788	1758.5600	139	
			MONTH EST.RATE	.0567	6459.6300		366
JUNE	1	12	422.2696	.0284	2802.2400	80	
	2	13	293.0586	.0444	2488.2300	110	
	3	4	418.4496	.0096	2720.9200	26	
	4	2	293.3773	.0068	2749.9700	19	
			MONTH EST.RATE	.0223	10761.3600		240
JULY	1	6	285.3004	.0210	2124.3300	45	
	2	9	380.1098	.0237	2374.2200	56	
	3	4	321.1553	.0125	2123.6700	27	
	4	8	413.5580	.0193	3884.0700	75	
			MONTH EST.RATE	.0191	10506.2900		201

NOTE: * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	6	327.7032	.0183	2344.1900	43	
		2	4	272.8884	.0147	1922.9200	28	
		3	7	279.1766	.0251	1835.1100	46	
		4	11	608.1302	.0181	3010.3700	54	
				MONTH EST.RATE	.0191	9112.5900		174
	SEPT	1	20	267.1809	.0749	1880.9600	141	
		2	3	302.3208	.0059	1917.6900	19	
		3	5	306.8479	.0163	1974.3700	32	
		4	1	169.6100	.0059	2082.7800	12	
				MONTH EST.RATE	.0268	7855.8000		211
	OCT	1	13	285.9980	.0455	1704.4700	78	
		2	12	367.8888	.0326	1684.9700	55	
		3	35	570.5035	.0614	1791.0500	110	
		4	66	869.6156	.0759	2968.5600	225	
				MONTH EST.RATE	.0539	8149.0500		439
	NOV	1	32	620.9467	.0515	2124.2300	109	
		2	10	318.8664	.0314	2221.3700	70	
		3	9	543.5213	.0166	1950.1900	32	
		4	21	239.1496	.0878	2178.8900	191	
				MONTH EST.RATE	.0468	8474.6800		397
	DEC	1	3	261.4086	.0115	1777.9100	20	
		2	4	263.7473	.0152	1782.4300	27	
		3	4	90.7200	.0441	727.4900	32	
		4	7	132.2300	.0529	1434.7800	76	
				MONTH EST.RATE	.0309	5722.6100		177
				ANNUAL EST.RATE	.0475			4344

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SHORTNOSE STURGEON
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	254.0404	.0000	1844.6800	0	
	2	0	473.9362	.0000	1846.7900	0	
	3	0	349.7163	.0000	1577.6600	0	
	4	0	452.0734	.0000	2209.5000	0	
			MONTH EST.RATE	.0000	7478.6300		0
FEB	1	0	229.4704	.0000	1608.2600	0	
	2	0	233.2872	.0000	1726.5700	0	
	3	0	264.9204	.0000	1809.3300	0	
	4	0	259.7063	.0000	1674.9800	0	
			MONTH EST.RATE	.0000	6819.1400		0
MARCH	1	0	217.9122	.0000	1445.3700	0	
	2	0	203.0400	.0000	1432.4300	0	
	3	0	482.3750	.0000	1652.4100	0	
	4	0	467.8614	.0000	2341.3000	0	
			MONTH EST.RATE	.0000	6871.5100		0
APRIL	1	0	234.3716	.0000	1728.3700	0	
	2	0	234.3790	.0000	1712.5800	0	
	3	0	203.7418	.0000	1577.6500	0	
	4	0	455.5969	.0000	1838.2200	0	
			MONTH EST.RATE	.0000	6856.8200		0
MAY	1	0	305.2590	.0000	1886.0800	0	
	2	0	294.2698	.0000	1824.4500	0	
	3	0	149.7675	.0000	990.5400	0	
	4	0	380.6237	.0000	1758.5600	0	
			MONTH EST.RATE	.0000	6459.6300		0
JUNE	1	0	422.2696	.0000	2802.2400	0	
	2	0	293.0586	.0000	2488.2300	0	
	3	0	418.4496	.0000	2720.9200	0	
	4	0	293.3773	.0000	2749.9700	0	
			MONTH EST.RATE	.0000	10761.3600		0
JULY	1	0	285.3004	.0000	2124.3300	0	
	2	0	380.1098	.0000	2374.2200	0	
	3	0	321.1553	.0000	2123.6700	0	
	4	0	413.5580	.0000	3884.0700	0	
			MONTH EST.RATE	.0000	10506.2900		0

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SHORTNOSE STURGEON
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	0	327.7032	.0000	2344.1900	0	
		2	0	272.8884	.0000	1922.9200	0	
		3	0	279.1766	.0000	1835.1100	0	
		4	0	608.1302	.0000	3010.3700	0	
				MONTH EST.RATE	.0000	9112.5900		0
	SEPT	1	0	267.1809	.0000	1880.9600	0	
		2	0	302.3208	.0000	1917.6900	0	
		3	0	306.8479	.0000	1974.3700	0	
		4	0	169.6100	.0000	2082.7800	0	
				MONTH EST.RATE	.0000	7855.8000		0
	OCT	1	0	285.9980	.0000	1704.4700	0	
		2	0	367.8888	.0000	1684.9700	0	
		3	0	570.5035	.0000	1791.0500	0	
		4	0	869.6156	.0000	2968.5600	0	
				MONTH EST.RATE	.0000	8149.0500		0
	NOV	1	0	620.9467	.0000	2124.2300	0	
		2	0	318.8664	.0000	2221.3700	0	
		3	0	543.5213	.0000	1950.1900	0	
		4	0	239.1496	.0000	2178.8900	0	
				MONTH EST.RATE	.0000	8474.6800		0
	DEC	1	0	261.4086	.0000	1777.9100	0	
		2	0	263.7473	.0000	1782.4300	0	
		3	0	90.7200	.0000	727.4900	0	
		4	0	132.2300	.0000	1434.7800	0	
				MONTH EST.RATE	.0000	5722.6100		0
				ANNUAL EST.RATE	.0000			0

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SPOTTAIL SHINER
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	272	254.0404	1.0707	1844.6800	1975	
	2	159	473.9362	.3355	1846.7900	620	
	3	72	349.7163	.2059	1577.6600	325	
	4	23	452.0734	.0509	2209.5000	112	
			MONTH EST.RATE	.4158	7478.6300		3110
FEB	1	152	229.4704	.6624	1608.2600	1065	
	2	16	233.2872	.0686	1726.5700	118	
	3	9	264.9204	.0340	1809.3300	62	
	4	25	259.7063	.0963	1674.9800	161	
			MONTH EST.RATE	.2153	6819.1400		1468
MARCH	1	87	217.9122	.3992	1445.3700	577	
	2	102	203.0400	.5024	1432.4300	720	
	3	413	482.3750	.8562	1652.4100	1415	
	4	286	467.8614	.6113	2341.3000	1431	
			MONTH EST.RATE	.5923	6871.5100		4070
APRIL	1	19	234.3716	.0811	1728.3700	140	
	2	110	234.3790	.4693	1712.5800	804	
	3	71	203.7418	.3485	1577.6500	550	
	4	122	455.5969	.2678	1838.2200	492	
			MONTH EST.RATE	.2917	6856.8200		2000
MAY	1	4	305.2590	.0131	1886.0800	25	
	2	61	294.2698	.2073	1824.4500	378	
	3	5	149.7675	.0334	990.5400	33	
	4	17	380.6237	.0447	1758.5600	79	
			MONTH EST.RATE	.0746	6459.6300		482
JUNE	1	11	422.2696	.0261	2802.2400	73	
	2	19	293.0586	.0648	2488.2300	161	
	3	3	418.4496	.0072	2720.9200	20	
	4	1	293.3773	.0034	2749.9700	9	
			MONTH EST.RATE	.0254	10761.3600		273
JULY	1	0	285.3004	.0000	2124.3300	0	
	2	8	380.1098	.0211	2374.2200	50	
	3	1	321.1553	.0031	2123.6700	7	
	4	0	413.5580	.0000	3884.0700	0	
			MONTH EST.RATE	.0061	10506.2900		64

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SPOTTAIL SHINER
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	1	327.7032	.0031	2344.1900	7	
		2	3	272.8884	.0110	1922.9200	21	
		3	1	279.1766	.0036	1935.1100	7	
		4	1	608.1302	.0016	3010.3700	5	
				MONTH EST.RATE	.0048	9112.5900		44
	SEPT	1	3	267.1809	.0112	1880.9600	21	
		2	0	302.3208	.0000	1917.6900	0	
		3	0	306.8479	.0000	1974.3700	0	
		4	0	169.6100	.0000	2082.7800	0	
				MONTH EST.RATE	.0048	7855.8000		22
	OCT	1	0	285.9980	.0000	1704.4700	0	
		2	3	367.8888	.0082	1684.9700	14	
		3	17	570.5035	.0298	1791.0500	53	
		4	66	869.6156	.0759	2968.5600	225	
				MONTH EST.RATE	.0285	8149.0500		232
	NOV	1	94	620.9467	.1514	2124.2300	322	
		2	11	318.8664	.0345	2221.3700	77	
		3	21	543.5213	.0386	1950.1900	75	
		4	96	239.1496	.4014	2178.8900	875	
				MONTH EST.RATE	.1565	8474.6800		1326
	DEC	1	98	261.4086	.3749	1777.9100	667	
		2	76	263.7473	.2882	1782.4300	514	
		3	60	90.7200	.6614	727.4900	481	
		4	17	132.2300	.1286	1434.7800	185	
				MONTH EST.RATE	.3633	5722.6100		2079
				ANNUAL EST.RATE	.1814			15170

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR STRIPED BASS
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	17	254.0404	.0669	1844.6800	123	
	2	33	473.9362	.0696	1846.7900	129	
	3	9	349.7163	.0257	1577.6600	41	
	4	0	452.0734	.0000	2209.5000	0	
			MONTH EST.RATE	.0406	7478.6300		304
FEB	1	1	229.4704	.0044	1608.2600	7	
	2	0	233.2872	.0000	1726.5700	0	
	3	0	264.9204	.0000	1809.3300	0	
	4	1	259.7063	.0039	1674.9800	7	
			MONTH EST.RATE	.0021	6819.1400		14
MARCH	1	0	217.9122	.0000	1445.3700	0	
	2	0	203.0400	.0000	1432.4300	0	
	3	3	482.3750	.0062	1652.4100	10	
	4	2	467.8614	.0043	2341.3000	10	
			MONTH EST.RATE	.0026	6871.5100		18
APRIL	1	0	234.3716	.0000	1728.3700	0	
	2	0	234.3790	.0000	1712.5800	0	
	3	0	203.7418	.0000	1577.6500	0	
	4	1	455.5969	.0042	1838.2200	4	
			MONTH EST.RATE	.0006	6856.8200		4
MAY	1	0	305.2590	.0000	1886.0800	0	
	2	3	294.2698	.0102	1824.4500	19	
	3	1	149.7675	.0067	990.5400	7	
	4	2	380.6237	.0053	1758.5600	9	
			MONTH EST.RATE	.0036	6459.6300		36
JUNE	1	2	422.2696	.0047	2802.2400	13	
	2	1	293.0586	.0034	2488.2300	8	
	3	1	418.4496	.0024	2720.9200	7	
	4	0	293.3773	.0000	2749.9700	0	
			MONTH EST.RATE	.0026	10761.3600		28
JULY	1	1	285.3004	.0035	2124.3300	7	
	2	3	380.1098	.0079	2374.2200	19	
	3	2	321.1553	.0062	2123.6700	13	
	4	4	413.5580	.0097	3884.0700	38	
			MONTH EST.RATE	.0068	10506.2900		71

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR STRIPED BASS
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	1	327.7032	.0031	2344.1900	7	
		2	4	272.8884	.0147	1922.9200	28	
		3	2	279.1766	.0072	1835.1100	13	
		4	7	608.1302	.0115	3010.3700	35	
				MONTH EST.RATE	.0091	9112.5900		83
	SEPT	1	6	267.1809	.0225	1880.9600	42	
		2	4	302.3208	.0132	1917.6900	25	
		3	1	306.8479	.0033	1974.3700	7	
		4	0	169.6100	.0000	2082.7800	0	
				MONTH EST.RATE	.0098	7855.8000		77
	OCT	1	0	285.9980	.0000	1704.4700	0	
		2	9	367.8888	.0245	1684.9700	41	
		3	14	570.5035	.0245	1791.0500	44	
		4	27	869.6156	.0311	2968.5600	92	
				MONTH EST.RATE	.0240	8149.0500		163
	NOV	1	12	620.9467	.0193	2124.2300	41	
		2	2	318.8664	.0063	2221.3700	14	
		3	2	543.5213	.0037	1950.1900	7	
		4	26	239.1496	.1087	2178.8900	237	
				MONTH EST.RATE	.0345	8474.6800		292
	DEC	1	59	261.4086	.2257	1777.9100	401	
		2	48	263.7473	.1820	1782.4300	324	
		3	18	90.7200	.1984	727.4900	144	
		4	12	132.2300	.0908	1434.7800	130	
				MONTH EST.RATE	.1742	5722.6100		997
				ANNUAL EST.RATE	.0257			2087

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WEAKFISH
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	254.0404	.0000	1844.6800	0	
	2	0	473.9362	.0000	1846.7900	0	
	3	0	349.7163	.0000	1577.6600	0	
	4	0	452.0734	.0000	2209.5000	0	
			MONTH EST.RATE	.0000	7478.6300		0
FEB	1	0	229.4704	.0000	1608.2600	0	
	2	0	233.2872	.0000	1726.5700	0	
	3	0	264.9204	.0000	1809.3300	0	
	4	0	259.7063	.0000	1674.9800	0	
			MONTH EST.RATE	.0000	6819.1400		0
MARCH	1	0	217.9122	.0000	1445.3700	0	
	2	0	203.0400	.0000	1432.4300	0	
	3	0	482.3750	.0000	1652.4100	0	
	4	0	467.8614	.0000	2341.3000	0	
			MONTH EST.RATE	.0000	6871.5100		0
APRIL	1	0	234.3716	.0000	1728.3700	0	
	2	0	234.3790	.0000	1712.5800	0	
	3	0	203.7418	.0000	1577.6500	0	
	4	0	455.5969	.0000	1838.2200	0	
			MONTH EST.RATE	.0000	6856.8200		0
MAY	1	0	305.2590	.0000	1886.0800	0	
	2	0	294.2698	.0000	1824.4500	0	
	3	0	149.7675	.0000	990.5400	0	
	4	0	380.6237	.0000	1758.5600	0	
			MONTH EST.RATE	.0000	6459.6300		0
JUNE	1	0	422.2696	.0000	2802.2400	0	
	2	0	293.0586	.0000	2488.2300	0	
	3	0	418.4496	.0000	2720.9200	0	
	4	0	293.3773	.0000	2749.9700	0	
			MONTH EST.RATE	.0000	10761.3600		0
JULY	1	0	285.3004	.0000	2124.3300	0	
	2	0	380.1098	.0000	2374.2200	0	
	3	0	321.1553	.0000	2123.6700	0	
	4	0	413.5580	.0000	3884.0700	0	
			MONTH EST.RATE	.0000	10506.2900		0

NOTE: * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WEAKFISH
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	0	327.7032	.0000	2344.1900	0	
		2	0	272.8884	.0000	1922.9200	0	
		3	0	279.1766	.0000	1835.1100	0	
		4	0	608.1302	.0000	3010.3700	0	
				MONTH EST.RATE	.0000	9112.5900		0
	SEPT	1	0	267.1809	.0000	1880.9600	0	
		2	0	302.3208	.0000	1917.6900	0	
		3	0	306.8479	.0000	1974.3700	0	
		4	0	169.6100	.0000	2082.7800	0	
				MONTH EST.RATE	.0000	7855.8000		0
	OCT	1	0	285.9980	.0000	1704.4700	0	
		2	0	367.8888	.0000	1684.9700	0	
		3	0	570.5035	.0000	1791.0500	0	
		4	0	869.6156	.0000	2968.5600	0	
				MONTH EST.RATE	.0000	8149.0500		0
	NOV	1	0	620.9467	.0000	2124.2300	0	
		2	0	318.8664	.0000	2221.3700	0	
		3	0	543.5213	.0000	1950.1900	0	
		4	0	239.1496	.0000	2178.8900	0	
				MONTH EST.RATE	.0000	8474.6800		0
	DEC	1	0	261.4086	.0000	1777.9100	0	
		2	0	263.7473	.0000	1782.4300	0	
		3	0	90.7200	.0000	727.4900	0	
		4	0	132.2300	.0000	1434.7800	0	
				MONTH EST.RATE	.0000	5722.6100		0
				ANNUAL EST.RATE	.0000			0

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE CATFISH
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	7	254.0404	.0276	1844.6800	51	
	2	14	473.9362	.0295	1846.7900	54	
	3	27	349.7163	.0772	1577.6600	122	
	4	1	452.0734	.0022	2209.5000	5	
			MONTH EST.RATE	.0341	7478.6300		255
FEB	1	8	229.4704	.0349	1608.2600	56	
	2	1	233.2872	.0043	1726.5700	7	
	3	0	264.9204	.0000	1809.3300	0	
	4	0	259.7063	.0000	1674.9800	0	
			MONTH EST.RATE	.0098	6819.1400		67
MARCH	1	1	217.9122	.0046	1445.3700	7	
	2	3	203.0400	.0148	1432.4300	21	
	3	14	482.3750	.0290	1652.4100	48	
	4	4	467.8614	.0086	2341.3000	20	
			MONTH EST.RATE	.0143	6871.5100		98
APRIL	1	0	234.3716	.0000	1728.3700	0	
	2	0	234.3790	.0000	1712.5800	0	
	3	3	203.7418	.0147	1577.6500	23	
	4	2	455.5969	.0044	1838.2200	8	
			MONTH EST.RATE	.0048	6856.8200		33
MAY	1	2	305.2590	.0006	1886.0800	12	
	2	0	294.2698	.0000	1824.4500	0	
	3	1	149.7675	.0067	990.5400	7	
	4	1	380.6237	.0026	1758.5600	5	
			MONTH EST.RATE	.0040	6459.6300		26
JUNE	1	2	422.2696	.0047	2802.2400	13	
	2	2	293.0586	.0068	2488.2300	17	
	3	1	418.4496	.0024	2720.9200	7	
	4	0	293.3773	.0000	2749.9700	0	
			MONTH EST.RATE	.0035	10761.3600		38
JULY	1	3	285.3004	.0105	2124.3300	22	
	2	2	380.1098	.0053	2374.2200	13	
	3	1	321.1553	.0031	2123.6700	7	
	4	3	413.5580	.0073	3884.0700	28	
			MONTH EST.RATE	.0066	10506.2900		69

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE CATFISH
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	0	327.7032	.0000	2344.1900	0	
		2	1	272.8884	.0037	1922.9200	7	
		3	4	279.1766	.0143	1835.1100	26	
		4	4	608.1302	.0066	3010.3700	20	
				MONTH EST.RATE	.0062	9112.5900		56
	SEPT	1	2	267.1809	.0075	1880.9600	14	
		2	0	302.3208	.0000	1917.6900	0	
		3	1	306.8479	.0033	1974.3700	7	
		4	1	169.6100	.0059	2082.7800	12	
				MONTH EST.RATE	.0042	7855.8000		33
	OCT	1	2	285.9980	.0070	1704.4700	12	
		2	2	367.8888	.0054	1684.9700	9	
		3	13	570.5035	.0248	1791.0500	41	
		4	24	869.6156	.0276	2968.5600	82	
				MONTH EST.RATE	.0157	8149.0500		128
	NOV	1	37	620.9467	.0596	2124.2300	127	
		2	0	318.8664	.0000	2221.3700	0	
		3	2	543.5213	.0037	1950.1900	7	
		4	2	239.1496	.0084	2178.8900	18	
				MONTH EST.RATE	.0179	8474.6800		152
	DEC	1	1	261.4086	.0038	1777.9100	7	
		2	0	263.7473	.0000	1782.4300	0	
		3	1	90.7200	.0110	727.4900	8	
		4	1	132.2300	.0076	1434.7800	11	
				MONTH EST.RATE	.0056	5722.6100		32
				ANNUAL EST.RATE	.0106			987

NOTE: * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	199	254.0404	.7833	1844.6800	1445	
	2	231	473.9362	.4874	1846.7900	900	
	3	78	349.7163	.2230	1577.6600	352	
	4	29	452.0734	.0642	2209.5000	142	
			MONTH EST.RATE	.3895	7478.6300		2913
FEB	1	23	229.4704	.1042	1608.2600	161	
	2	5	233.2872	.0214	1726.5700	37	
	3	4	264.9204	.0151	1809.3300	27	
	4	6	259.7063	.0231	1674.9800	39	
			MONTH EST.RATE	.0400	6819.1400		273
MARCH	1	5	217.9122	.0230	1445.3700	33	
	2	152	203.0400	.7486	1432.4300	1072	
	3	399	482.3750	.8272	1652.4100	1367	
	4	539	467.8614	1.1521	2341.3000	2697	
			MONTH EST.RATE	.6887	6871.5100		4726
APRIL	1	159	234.3716	.6784	1728.3700	1173	
	2	530	234.3790	2.2613	1712.5800	3873	
	3	138	203.7418	.6743	1577.6500	1069	
	4	908	455.5969	1.9930	1838.2200	3664	
			MONTH EST.RATE	1.4025	6856.8200		9617
MAY	1	48	305.2590	.1572	1886.0800	296	
	2	159	294.2698	.5403	1824.4500	986	
	3	80	149.7675	.5342	990.5400	529	
	4	161	380.6237	.4230	1758.5600	744	
			MONTH EST.RATE	.4137	6459.6300		2672
JUNE	1	658	422.2696	1.5583	2802.2400	4367	
	2	458	293.0586	1.5628	2488.2300	3889	
	3	242	418.4496	.5783	2720.9200	1574	
	4	29	293.3773	.0989	2749.9700	272	
			MONTH EST.RATE	.9496	10761.3600		10219
JULY	1	10	285.3004	.0351	2124.3300	75	
	2	135	380.1098	.3552	2374.2200	843	
	3	41	321.1553	.1277	2123.6700	271	
	4	21	413.5580	.0508	3884.0700	197	
			MONTH EST.RATE	.1422	10506.2900		1494

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	21	327.7032	.0641	2344.1900	150	
		2	356	272.8884	1.3046	1922.9200	2509	
		3	94	279.1766	.3367	1835.1100	618	
		4	193	608.1302	.3174	3010.3700	955	
				MONTH EST.RATE	.5057	9112.5900		4608
	SEPT	1	417	267.1809	1.5607	1880.9600	2936	
		2	30	302.3208	.0992	1917.6900	190	
		3	86	306.8479	.2803	1974.3700	553	
		4	25	169.6100	.1474	2082.7800	307	
				MONTH EST.RATE	.5219	7855.8000		4100
	OCT	1	54	285.9980	.1888	1704.4700	322	
		2	607	367.8888	1.6500	1684.9700	2780	
		3	2328	570.5035	4.0806	1791.0500	7309	
		4	2381	869.6156	2.7380	2968.5600	8128	
				MONTH EST.RATE	2.1644	8149.0500		17638
	NOV	1	2023	620.9467	3.2579	2124.2300	6921	
		2	249	318.8664	.7809	2221.3700	1735	
		3	338	543.5213	.6219	1950.1900	1213	
		4	556	239.1496	2.3249	2178.8900	5066	
				MONTH EST.RATE	1.7464	8474.6800		14800
	DEC	1	528	261.4086	2.0198	1777.9100	3591	
		2	201	263.7473	.7621	1782.4300	1358	
		3	62	90.7200	.6834	727.4900	497	
		4	99	132.2300	.7487	1434.7800	1074	
				MONTH EST.RATE	1.0535	5722.6100		6029
				ANNUAL EST.RATE	.8348			79089

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	69565.6	254.0404	273.8368	1844.6800	505141.3	
	2	80178.5	473.9362	169.1757	1846.7900	312432.0	
	3	59566.7	349.7163	285.8509	1577.6600	450975.5	
	4	27862.3	452.0734	61.6343	2209.5000	136176.6	
			MONTH EST.RATE	197.6239	7478.6300		1477956.0
FEB	1	37334.6	229.4704	162.6990	1608.2600	261662.3	
	2	11321.5	233.2872	48.5303	1726.5700	83791.0	
	3	16766.5	264.9204	63.2888	1809.3300	114510.3	
	4	27010.4	259.7063	104.0036	1674.9800	174203.9	
			MONTH EST.RATE	94.6304	6819.1400		645297.9
MARCH	1	10856.2	217.9122	49.8192	1445.3700	72007.2	
	2	30270.3	203.0400	149.0854	1432.4300	213554.4	
	3	117751.8	482.3750	244.1084	1652.4100	403367.2	
	4	58926.3	467.8614	125.9482	2341.3000	294882.5	
			MONTH EST.RATE	142.2403	6871.5100		977405.6
APRIL	1	11546.0	234.3716	49.2637	1728.3700	85145.9	
	2	26515.0	234.3790	113.1287	1712.5800	193741.9	
	3	6980.2	203.7418	34.2640	1577.6500	54050.3	
	4	50260.3	455.5969	110.3175	1838.2200	202787.8	
			MONTH EST.RATE	76.7425	6856.8200		526209.5
MAY	1	8733.8	305.2590	28.6111	1886.0800	53962.8	
	2	68282.1	294.2698	232.0391	1824.4500	423343.7	
	3	5890.1	149.7675	39.3283	990.5400	38956.3	
	4	15318.5	380.6237	40.2458	1758.5600	70774.7	
			MONTH EST.RATE	85.0561	6459.6300		549430.9
JUNE	1	38814.7	422.2696	91.9192	2802.2400	257579.7	
	2	31602.9	293.0586	107.8382	2488.2300	268326.2	
	3	13409.4	418.4496	32.0454	2720.9200	87193.0	
	4	3916.5	293.3773	13.3497	2749.9700	36711.3	
			MONTH EST.RATE	61.2881	10761.3600		659543.3
JULY	1	2082.3	285.3004	7.2986	2124.3300	15504.6	
	2	7915.9	380.1098	20.8253	2374.2290	49443.8	
	3	3276.2	321.1553	10.2013	2123.6700	21664.2	
	4	2777.8	413.5580	6.7168	3884.0700	26088.5	
			MONTH EST.RATE	11.2645	10506.2900		118306.1

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	1878.4	327.7032	5.7320	2344.1900	13436.9	
		2	8992.4	272.8884	32.9527	1922.9200	63365.4	
		3	3886.0	279.1766	13.9195	1835.1100	25543.8	
		4	5083.3	608.1302	8.3589	3010.3700	25163.4	
				MONTH EST.RATE	15.2408	9112.5900		138883.2
	SEPT	1	7412.3	267.1809	27.7426	1880.9600	52182.7	
		2	1664.3	302.3208	5.5051	1917.6900	10557.1	
		3	2624.4	306.8479	8.5548	1974.3700	16886.4	
		4	1052.9	169.6100	6.2078	2082.7800	12929.5	
				MONTH EST.RATE	12.0021	7855.8000		94286.1
	OCT	1	1913.2	285.9980	6.6896	1704.4700	11402.2	
		2	10772.6	367.8888	29.2822	1684.9700	49339.6	
		3	22246.8	570.5035	38.9950	1791.0500	69842.0	
		4	35744.0	869.6156	41.1032	2968.5600	122017.3	
				MONTH EST.RATE	29.0185	8149.0500		236465.1
	NOV	1	30300.2	620.9467	48.7968	2124.2300	103655.6	
		2	5274.6	318.8664	16.5417	2221.3700	36745.2	
		3	7046.0	543.5213	12.9636	1953.1900	25281.5	
		4	12739.9	239.1496	53.2717	2178.8900	116073.2	
				MONTH EST.RATE	32.8935	8474.6800		278761.9
	DEC	1	21728.4	261.4086	83.1205	1777.9100	147780.8	
		2	16036.0	263.7473	60.8006	1782.4300	108372.8	
		3	16423.0	90.7200	181.0295	727.4900	131697.2	
		4	3255.0	132.2300	24.6162	1434.7800	35318.8	
				MONTH EST.RATE	87.3917	5722.6100		500108.6
				ANNUAL EST.RATE	70.4490			6202654.2

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	27.4	254.0404	.1079	1844.6800	199.0	
	2	.0	473.9362	.0000	1846.7900	.0	
	3	.0	349.7163	.0000	1577.6600	.0	
	4	.0	452.0734	.0000	2209.5000	.0	
			MONTH EST.RATE	.0270	7478.6300		201.9
FEB	1	.0	229.4704	.0000	1608.2600	.0	
	2	.0	233.2872	.0000	1726.5700	.0	
	3	.0	264.9204	.0000	1809.3300	.0	
	4	.0	259.7063	.0000	1674.9800	.0	
			MONTH EST.RATE	.0000	6819.1400		.0
MARCH	1	.0	217.9122	.0000	1445.3700	.0	
	2	.0	203.0400	.0000	1432.4300	.0	
	3	1122.0	482.3750	2.3260	1652.4100	3843.5	
	4	627.8	467.8614	1.3419	2341.3000	3141.8	
			MONTH EST.RATE	.9170	6871.5100		6301.2
APRIL	1	.0	234.3716	.0000	1728.3700	.0	
	2	1815.8	234.3790	7.7473	1712.5800	13267.9	
	3	.0	203.7418	.0000	1577.6500	.0	
	4	1923.4	455.5969	4.2217	1838.2200	7760.4	
			MONTH EST.RATE	2.9923	6856.8200		20517.7
MAY	1	769.8	305.2590	2.5218	1886.0800	4756.3	
	2	54034.5	294.2698	183.6223	1824.4500	335009.7	
	3	1860.2	149.7675	12.4206	990.5400	12303.1	
	4	1350.7	380.6237	3.5487	1758.5600	6240.6	
			MONTH EST.RATE	50.5284	6459.6300		326394.8
JUNE	1	464.1	422.2696	1.0991	2802.2400	3079.9	
	2	349.8	293.0586	1.1936	2488.2300	2970.0	
	3	.0	418.4496	.0000	2720.9200	.0	
	4	230.0	293.3773	.7840	2749.9700	2156.0	
			MONTH EST.RATE	.7692	10761.3600		8277.6
JULY	1	.0	285.3004	.0000	2124.3300	.0	
	2	426.2	383.1098	1.1213	2374.2200	2662.2	
	3	232.5	321.1553	.7240	2123.6700	1537.5	
	4	107.0	413.5580	.2587	3884.0700	1004.8	
			MONTH EST.RATE	.5260	10506.2900		5526.3

NOTE: * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	113.0	327.7032	.3448	2344.1900	808.3	
		2	1629.8	272.8884	5.9724	1922.9200	11484.4	
		3	794.2	279.1766	2.8448	1835.1100	5220.5	
		4	556.5	608.1302	.9151	3010.3700	2754.8	
				MONTH EST.RATE	2.5193	9112.5900		22957.3
	SEPT	1	578.2	267.1809	2.1641	1880.9600	4070.6	
		2	612.3	302.3208	2.0253	1917.6900	3883.9	
		3	472.9	306.8479	1.5412	1974.3700	3042.9	
		4	93.3	169.6100	.5501	2082.7800	1145.7	
				MONTH EST.RATE	1.5702	7855.8000		12335.2
	OCT	1	589.9	285.9980	2.0626	1704.4700	3515.6	
		2	1468.5	367.8888	3.9917	1684.9700	6725.9	
		3	2236.0	570.5035	3.9193	1791.0500	7019.7	
		4	5605.9	869.6156	6.4464	2968.5600	19136.5	
				MONTH EST.RATE	4.1050	8149.0500		33451.9
	NOV	1	3494.0	620.9467	5.6269	2124.2300	11952.8	
		2	1342.9	318.8664	4.2115	2221.3700	9355.3	
		3	1312.2	543.5213	2.4143	1950.1900	4708.3	
		4	216.2	239.1496	.9040	2178.8900	1969.7	
				MONTH EST.RATE	3.2892	8474.6800		27874.9
	DEC	1	321.5	261.4086	1.2299	1777.9100	2186.7	
		2	.0	263.7473	.0000	1782.4300	.0	
		3	.0	90.7200	.0000	727.4900	.0	
		4	.0	132.2300	.0000	1434.7800	.0	
				MONTH EST.RATE	.3075	5722.6100		1759.7
				ANNUAL EST.RATE	5.6293			465598.5

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	254.0404	.0000	1844.6800	.0	
	2	.0	473.9362	.0000	1846.7900	.0	
	3	.0	349.7163	.0000	1577.6600	.0	
	4	.0	452.0734	.0000	2209.5000	.0	
			MONTH EST.RATE	.0000	7478.6300		.0
FEB	1	.0	229.4704	.0000	1608.2600	.0	
	2	.0	233.2872	.0000	1726.5700	.0	
	3	.0	264.9204	.0000	1809.3300	.0	
	4	.0	259.7063	.0000	1674.9800	.0	
			MONTH EST.RATE	.0000	6819.1400		.0
MARCH	1	.0	217.9122	.0000	1445.3700	.0	
	2	.0	203.0400	.0000	1432.4300	.0	
	3	.0	482.3750	.0000	1652.4100	.0	
	4	.0	467.8614	.0000	2341.3000	.0	
			MONTH EST.RATE	.0000	6871.5100		.0
APRIL	1	.0	234.3716	.0000	1728.3700	.0	
	2	.0	234.3790	.0000	1712.5800	.0	
	3	.0	203.7418	.0000	1577.6500	.0	
	4	.0	455.5969	.0000	1838.2200	.0	
			MONTH EST.RATE	.0000	6856.8200		.0
MAY	1	.0	305.2590	.0000	1886.0800	.0	
	2	.0	294.2698	.0000	1824.4500	.0	
	3	.0	149.7675	.0000	990.5400	.0	
	4	.0	380.6237	.0000	1758.5600	.0	
			MONTH EST.RATE	.0000	6459.6300		.0
JUNE	1	.0	422.2696	.0000	2802.2400	.0	
	2	.0	293.0586	.0000	2488.2300	.0	
	3	.4	418.4496	.0010	2720.9200	2.7	
	4	.1	293.3773	.0003	2749.9700	.8	
			MONTH EST.RATE	.0003	10761.3600		3.2
JULY	1	2.5	285.3004	.0088	2124.3300	18.7	
	2	16.9	380.1098	.0445	2374.2200	105.7	
	3	6.8	321.1553	.0212	2123.6700	45.0	
	4	70.2	413.5580	.1698	3884.0700	659.5	
			MONTH EST.RATE	.0611	10506.2900		641.9

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	3.3	327.7032	.01u1	2344.1900	23.7	
		2	112.0	272.8884	.41u4	1922.9200	789.2	
		3	146.1	279.1766	.52u3	1835.1100	960.3	
		4	121.4	608.1302	.1996	3010.3700	600.9	
				MONTH EST.RATE	.2859	9112.5900		2605.3
	SEPT	1	50.6	267.1809	.1894	1880.9600	356.3	
		2	45.1	302.3208	.1492	1917.6900	286.1	
		3	55.4	306.8479	.1806	1974.3700	356.6	
		4	61.2	169.6100	.3608	2082.7800	751.5	
				MONTH EST.RATE	.2200	7855.8000		1728.3
	OCT	1	22.4	285.9980	.0783	1704.4700	133.5	
		2	615.2	367.8888	1.6722	1684.9700	2817.6	
		3	1347.2	570.5035	2.3614	1791.0500	4229.4	
		4	1568.7	869.6156	1.8039	2968.5600	5355.0	
				MONTH EST.RATE	1.4790	8149.0500		12052.4
	NOV	1	338.5	620.9467	.5451	2124.2300	1157.9	
		2	75.5	318.8664	.2368	2221.3700	526.0	
		3	53.0	543.5213	.0975	1950.1900	190.1	
		4	192.6	239.1496	.8054	2178.8900	1754.9	
				MONTH EST.RATE	.4212	8474.6800		3569.5
	DEC	1	42.4	261.4086	.1622	1777.9100	288.4	
		2	.0	263.7473	.00u0	1782.4300	.0	
		3	.0	90.7200	.00u0	727.4900	.0	
		4	.0	132.2300	.00u0	1434.7800	.0	
				MONTH EST.RATE	.0406	5722.6100		232.3
				ANNUAL EST.RATE	.2090			20832.9

NOTE: * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC STURGEON
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	254.0404	.0000	1844.6800	.0	
	2	.0	473.9362	.0000	1846.7900	.0	
	3	.0	349.7163	.0000	1577.6600	.0	
	4	.0	452.0734	.0000	2209.5000	.0	
			MONTH EST.RATE	.0000	7478.6300		.0
FEB	1	.0	229.4704	.0000	1608.2600	.0	
	2	.0	233.2872	.0000	1726.5700	.0	
	3	.0	264.9204	.0000	1809.3300	.0	
	4	.0	259.7063	.0000	1674.9800	.0	
			MONTH EST.RATE	.0000	6819.1400		.0
MARCH	1	.0	217.9122	.0000	1445.3700	.0	
	2	.0	203.0400	.0000	1432.4300	.0	
	3	.0	482.3750	.0000	1652.4100	.0	
	4	.0	467.8614	.0000	2341.3000	.0	
			MONTH EST.RATE	.0000	6871.5100		.0
APRIL	1	.0	234.3716	.0000	1728.3700	.0	
	2	.0	234.3790	.0000	1712.5800	.0	
	3	88.0	203.7418	.4319	1577.6500	681.4	
	4	.0	455.5969	.0000	1838.2200	.0	
			MONTH EST.RATE	.1080	6856.8200		740.5
MAY	1	.0	305.2590	.0000	1886.0800	.0	
	2	.0	294.2698	.0000	1824.4500	.0	
	3	.0	149.7675	.0000	990.5400	.0	
	4	.0	380.6237	.0000	1758.5600	.0	
			MONTH EST.RATE	.0000	6459.6300		.0
JUNE	1	.0	422.2696	.0000	2802.2400	.0	
	2	.0	293.0586	.0000	2488.2300	.0	
	3	.0	418.4496	.0000	2720.9200	.0	
	4	.0	293.3773	.0000	2749.9700	.0	
			MONTH EST.RATE	.0000	10761.3600		.0
JULY	1	.0	285.3004	.0000	2124.3300	.0	
	2	.0	380.1098	.0000	2374.2200	.0	
	3	.0	321.1553	.0000	2123.6700	.0	
	4	.0	413.5580	.0000	3884.0700	.0	
			MONTH EST.RATE	.0000	10506.2900		.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC STURGEON
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	.0	327.7032	.0000	2344.1900	.0	
		2	.0	272.8884	.0000	1922.9200	.0	
		3	.0	279.1766	.0000	1835.1100	.0	
		4	.0	608.1302	.0000	3010.3700	.0	
				MONTH EST.RATE	.0000	9112.5900		.0
	SEPT	1	.0	267.1809	.0000	1880.9600	.0	
		2	.0	302.3208	.0000	1917.6900	.0	
		3	.0	306.8479	.0000	1974.3700	.0	
		4	.0	169.6100	.0000	2082.7800	.0	
				MONTH EST.RATE	.0000	7855.8000		.0
	OCT	1	.0	285.9980	.0000	1704.4700	.0	
		2	.0	367.8888	.0000	1684.9700	.0	
		3	.0	570.5035	.0000	1791.0500	.0	
		4	.0	869.6156	.0000	2968.5600	.0	
				MONTH EST.RATE	.0000	8149.0500		.0
	NOV	1	.0	620.9467	.0000	2124.2300	.0	
		2	.0	318.8664	.0000	2221.3700	.0	
		3	.0	543.5213	.0000	1950.1900	.0	
		4	.0	239.1496	.0000	2178.8900	.0	
				MONTH EST.RATE	.0000	8474.6800		.0
	DEC	1	.0	261.4086	.0000	1777.9100	.0	
		2	.0	263.7473	.0000	1782.4300	.0	
		3	.0	90.7200	.0000	727.4900	.0	
		4	.0	132.2300	.0000	1434.7800	.0	
				MONTH EST.RATE	.0000	5722.6100		.0
				ANNUAL EST.RATE	.0090			740.5

NOTE: * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC TOMCOD
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	7523.7	254.0404	29.6162	1844.6800	54632.4	
	2	27518.8	473.9362	58.0644	1846.7900	107232.8	
	3	59669.5	349.7163	171.1945	1577.6600	270086.7	
	4	12464.6	452.0734	27.5721	2209.5000	60920.6	
			MONTH EST.RATE	71.6118	7478.6300		535558.2
FEB	1	8353.0	229.4704	36.4012	1608.2600	58542.6	
	2	501.0	233.2872	3.8622	1726.5700	6668.4	
	3	1204.6	264.9204	4.5470	1809.3300	8227.0	
	4	485.5	259.7063	1.8694	1674.9800	3131.2	
			MONTH EST.RATE	11.6760	6819.1400		79579.4
MARCH	1	1114.6	217.9122	5.1149	1445.3700	7392.9	
	2	9391.0	203.0400	46.2520	1432.4300	66252.8	
	3	1682.6	482.3750	3.4862	1652.4100	5763.9	
	4	772.0	467.8614	1.6501	2341.3000	3863.4	
			MONTH EST.RATE	14.1263	6871.5100		97069.0
APRIL	1	26.6	234.3716	.1135	1728.3700	196.2	
	2	.0	234.3790	.0000	1712.5800	.0	
	3	24.2	203.7418	.1188	1577.6500	187.4	
	4	.0	455.5969	.0000	1838.2200	.0	
			MONTH EST.RATE	.0581	6856.8200		398.4
MAY	1	.0	305.2590	.0000	1886.0800	.0	
	2	.0	294.2698	.0000	1824.4500	.0	
	3	.0	149.7675	.0000	990.5400	.0	
	4	70.1	380.6237	.1842	1758.5600	323.9	
			MONTH EST.RATE	.0461	6459.6300		297.8
JUNE	1	80.8	422.2696	.1914	2802.2400	536.3	
	2	27.8	293.0586	.0949	2488.2300	236.1	
	3	69.1	418.4496	.1651	2720.9200	449.2	
	4	.0	293.3773	.0000	2749.9700	.0	
			MONTH EST.RATE	.1129	10761.3600		1215.0
JULY	1	.0	285.3004	.0000	2124.3300	.0	
	2	77.2	380.1098	.2031	2374.2200	482.2	
	3	.0	321.1553	.0000	2123.6700	.0	
	4	.0	413.5580	.0000	3884.0700	.0	
			MONTH EST.RATE	.0508	10506.2900		533.7

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC TOMCOD
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	.0	327.7032	.0000	2344.1900	.0	
		2	24.8	272.8884	.0909	1922.9200	174.8	
		3	.0	279.1766	.0000	1835.1100	.0	
		4	.0	608.1302	.0000	3010.3700	.0	
				MONTH EST.RATE	.0227	9112.5900		206.9
	SEPT	1	3.8	267.1809	.0142	1880.9600	26.7	
		2	.0	302.3208	.0000	1917.6900	.0	
		3	.0	306.8479	.0000	1974.3700	.0	
		4	.0	169.6100	.0000	2082.7800	.0	
				MONTH EST.RATE	.0036	7855.8000		28.3
	OCT	1	.0	285.9980	.0000	1704.4700	.0	
		2	.0	367.8888	.0000	1684.9700	.0	
		3	.0	570.5035	.0000	1791.0500	.0	
		4	35.4	869.6156	.0407	2968.5600	120.8	
				MONTH EST.RATE	.0102	8149.0500		83.1
	NOV	1	928.3	620.9467	1.4950	2124.2300	3175.7	
		2	.0	318.8664	.0000	2221.3700	.0	
		3	96.0	543.5213	.1766	1950.1900	344.4	
		4	813.4	239.1496	3.4012	2178.8900	7410.8	
				MONTH EST.RATE	1.2682	8474.6800		10747.6
	DEC	1	7117.7	261.4086	27.2283	1777.9100	48409.5	
		2	7399.2	263.7473	28.0541	1782.4300	50004.5	
		3	9962.0	90.7200	109.8104	727.4900	79886.0	
		4	416.1	132.2300	3.1468	1434.7800	4515.0	
				MONTH EST.RATE	42.0559	5722.6100		240692.4
				ANNUAL EST.RATE	11.7534			966409.8

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BAY ANCHOVY
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	254.0404	.0000	1844.6800	.0	
	2	.0	473.9362	.0000	1846.7900	.0	
	3	.0	349.7163	.0000	1577.6600	.0	
	4	.0	452.0734	.0000	2209.5000	.0	
			MONTH EST.RATE	.0000	7478.6300		.0
FEB	1	.0	229.4704	.0000	1608.2600	.0	
	2	.0	233.2872	.0000	1726.5700	.0	
	3	.0	264.9204	.0000	1809.3300	.0	
	4	.0	259.7063	.0000	1674.9800	.0	
			MONTH EST.RATE	.0000	6819.1400		.0
MARCH	1	.0	217.9122	.0000	1445.3700	.0	
	2	.0	203.0400	.0000	1432.4300	.0	
	3	.0	482.3750	.0000	1652.4100	.0	
	4	.0	467.8614	.0000	2341.3000	.0	
			MONTH EST.RATE	.0000	6871.5100		.0
APRIL	1	.0	234.3716	.0000	1728.3700	.0	
	2	.0	234.3793	.0000	1712.5800	.0	
	3	.0	203.7418	.0000	1577.6500	.0	
	4	.0	455.5969	.0000	1838.2200	.0	
			MONTH EST.RATE	.0000	6856.8200		.0
MAY	1	.0	305.2590	.0000	1886.0800	.0	
	2	.0	294.2698	.0000	1824.4500	.0	
	3	.0	149.7675	.0000	990.5400	.0	
	4	.0	380.6237	.0000	1758.5600	.0	
			MONTH EST.RATE	.0000	6459.6300		.0
JUNE	1	*	422.2696	**	2802.2400	**	
	2	.0	293.0586	.0000	2488.2300	.0	
	3	.0	418.4496	.0000	2720.9200	.0	
	4	.0	293.3773	.0000	2749.9700	.0	
			MONTH EST.RATE	.0000	10761.3600		.0
JULY	1	.0	285.3004	.0000	2124.3300	.0	
	2	.0	380.1098	.0000	2374.2200	.0	
	3	62.8	321.1553	.1955	2123.6700	415.2	
	4	225.1	413.5580	.5443	3884.0700	2114.1	
			MONTH EST.RATE	.1850	10506.2900		1943.7

NOTE: * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BAY ANCHOVY
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	44.9	327.7032	.1370	2344.1900	321.2	
		2	40.3	272.8884	.1477	1922.9200	284.0	
		3	156.7	279.1766	.5613	1835.1100	1030.0	
		4	41.8	608.1302	.0687	3010.3700	206.8	
				MONTH EST.RATE	.2287	9112.5900		2084.0
	SEPT	1	3.5	267.1809	.0131	1880.9600	24.6	
		2	5.7	302.3208	.0189	1917.6900	36.2	
		3	16.9	306.8479	.0551	1974.3700	108.8	
		4	*	169.6100	**	2082.7800	**	
				MONTH EST.RATE	.0290	7855.8000		227.8
	OCT	1	.0	285.9980	.0000	1704.4700	.0	
		2	.0	367.8888	.0000	1684.9700	.0	
		3	.0	570.5035	.0000	1791.0500	.0	
		4	.0	869.6156	.0000	2968.5600	.0	
				MONTH EST.RATE	.0000	8149.0500		.0
	NOV	1	.0	620.9467	.0000	2124.2300	.0	
		2	.0	318.8664	.0000	2221.3700	.0	
		3	.0	543.5213	.0000	1950.1900	.0	
		4	.0	239.1496	.0000	2178.8900	.0	
				MONTH EST.RATE	.0000	8474.6800		.0
	DEC	1	.0	261.4086	.0000	1777.9100	.0	
		2	.0	263.7473	.0000	1782.4300	.0	
		3	.0	90.7200	.0000	727.4900	.0	
		4	.0	132.2300	.0000	1434.7800	.0	
				MONTH EST.RATE	.0000	5722.6100		.0
				ANNUAL EST.RATE	.0369			4255.5

NOTE: * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	254.0404	.0000	1844.6800	.0	
	2	.0	473.9362	.0000	1846.7900	.0	
	3	.0	349.7163	.0000	1577.6600	.0	
	4	.0	452.0734	.0000	2209.5000	.0	
			MONTH EST.RATE	.0000	7478.6300		.0
FEB	1	.0	229.4704	.0000	1608.2600	.0	
	2	.0	233.2872	.0000	1726.5700	.0	
	3	.0	264.9204	.0000	1809.3300	.0	
	4	.0	259.7063	.0000	1674.9800	.0	
			MONTH EST.RATE	.0000	6819.1400		.0
MARCH	1	.0	217.9122	.0000	1445.3700	.0	
	2	.0	203.0400	.0000	1432.4300	.0	
	3	.0	482.3750	.0000	1652.4100	.0	
	4	.0	467.8614	.0000	2341.3000	.0	
			MONTH EST.RATE	.0000	6871.5100		.0
APRIL	1	.0	234.3716	.0000	1728.3700	.0	
	2	.0	234.3790	.0000	1712.5800	.0	
	3	231.8	203.7418	1.1387	1577.6500	1794.9	
	4	268.5	455.5969	.5893	1838.2200	1083.3	
			MONTH EST.RATE	.4318	6856.8200		2960.8
MAY	1	469.1	305.2590	1.5367	1886.0800	2898.3	
	2	500.8	294.2698	1.7018	1824.4500	3104.8	
	3	251.1	149.7675	1.6766	990.5400	1660.7	
	4	1312.7	380.6237	3.4488	1758.5600	6064.9	
			MONTH EST.RATE	2.0910	6459.6300		13507.1
JUNE	1	3176.3	422.2696	7.5220	2802.2400	21078.4	
	2	5070.2	293.0586	17.3010	2488.2300	43048.9	
	3	1138.5	418.4496	2.7208	2720.9200	7403.1	
	4	541.0	293.3773	1.8440	2749.9700	5070.9	
			MONTH EST.RATE	7.3420	10761.3600		79063.7
JULY	1	166.3	285.3004	.5829	2124.3300	1238.3	
	2	523.5	380.1098	1.3772	2374.2200	3269.8	
	3	*	321.1553	**	2123.6700	**	
	4	140.3	413.5580	.3393	3884.0700	1317.9	
			MONTH EST.RATE	.7665	10506.2900		8053.1

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	19.7	327.7032	.0601	2344.1900	140.9	
		2	152.3	272.8884	.5581	1922.9200	1073.2	
		3	108.4	279.1766	.3883	1835.1100	712.6	
		4	246.9	608.1302	.4060	3010.3700	1222.2	
				MONTH EST.RATE	.3531	9112.5900		3217.7
	SEPT	1	59.5	267.1809	.2227	1880.9600	418.9	
		2	208.3	302.3208	.6890	1917.6900	1321.3	
		3	372.2	306.8479	1.2130	1974.3700	2394.9	
		4	250.4	169.6100	1.4763	2082.7800	3074.8	
				MONTH EST.RATE	.9003	7855.8000		7072.6
	OCT	1	82.0	285.9980	.2867	1704.4700	488.7	
		2	2551.5	367.8888	6.9355	1684.9700	11686.1	
		3	4441.7	570.5035	7.7856	1791.0500	13944.4	
		4	1583.2	869.6156	2.2846	2968.5600	6770.1	
				MONTH EST.RATE	4.3221	8148.0500		35221.0
	NOV	1	1341.8	620.9467	2.1609	2124.2300	4590.2	
		2	143.4	318.8664	.4497	2221.3700	999.0	
		3	442.3	543.5213	.8138	1950.1900	1587.1	
		4	156.5	239.1496	.6544	2178.8900	1425.9	
				MONTH EST.RATE	1.0197	8474.6800		8641.6
	DEC	1	4.7	261.4086	.0180	1777.9100	32.0	
		2	.0	263.7473	.0000	1782.4300	.0	
		3	.0	90.7200	.0000	727.4900	.0	
		4	.0	132.2300	.0000	1434.7800	.0	
				MONTH EST.RATE	.0045	5722.6100		25.8
				ANNUAL EST.RATE	1.4363			157763.4

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEFISH
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	254.0404	.0000	1844.6800	.0	
	2	.0	473.9362	.0000	1846.7900	.0	
	3	.0	349.7163	.0000	1577.6600	.0	
	4	.0	452.0734	.0000	2209.5000	.0	
			MONTH EST.RATE	.0000	7478.6350		.0
FEB	1	.0	229.4704	.0000	1608.2600	.0	
	2	.0	233.2872	.0000	1726.5700	.0	
	3	.0	264.9204	.0000	1809.3300	.0	
	4	.0	259.7063	.0000	1674.9800	.0	
			MONTH EST.RATE	.0000	6819.1400		.0
MARCH	1	.0	217.9122	.0000	1445.3700	.0	
	2	.0	203.0400	.0000	1432.4300	.0	
	3	.0	482.3750	.0000	1652.4100	.0	
	4	.0	467.8614	.0000	2341.3000	.0	
			MONTH EST.RATE	.0000	6871.5100		.0
APRIL	1	.0	234.3716	.0000	1728.3700	.0	
	2	.0	234.3790	.0000	1712.5800	.0	
	3	.0	203.7418	.0000	1577.6500	.0	
	4	.0	455.5969	.0000	1838.2200	.0	
			MONTH EST.RATE	.0000	6856.8200		.0
MAY	1	.0	305.2590	.0000	1886.0800	.0	
	2	.0	294.2698	.0000	1824.4500	.0	
	3	.0	149.7675	.0000	990.5400	.0	
	4	.0	380.6237	.0000	1758.5600	.0	
			MONTH EST.RATE	.0000	6459.6300		.0
JUNE	1	.0	422.2696	.0000	2802.2400	.0	
	2	.0	293.0586	.0000	2488.2300	.0	
	3	.0	418.4496	.0000	2720.9200	.0	
	4	.0	293.3773	.0000	2749.9700	.0	
			MONTH EST.RATE	.0000	10761.3600		.0
JULY	1	.0	285.3004	.0000	2124.3300	.0	
	2	.0	380.1098	.0000	2374.2200	.0	
	3	.0	321.1553	.0000	2123.6700	.0	
	4	.0	413.5580	.0000	3884.0700	.0	
			MONTH EST.RATE	.0000	10506.2900		.0

NOTE: * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEFISH
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	.0	327.7032	.0000	2344.1900	.0	
		2	.0	272.8884	.0000	1922.9200	.0	
		3	.0	279.1766	.0000	1835.1100	.0	
		4	.0	608.1302	.0000	3010.3700	.0	
				MONTH EST.RATE	.0000	9112.5900		.0
	SEPT	1	.0	267.1809	.0000	1880.9600	.0	
		2	.0	302.3208	.0000	1917.6900	.0	
		3	.0	306.8479	.0000	1974.3700	.0	
		4	.0	169.6100	.0000	2082.7800	.0	
				MONTH EST.RATE	.0000	7855.8000		.0
	OCT	1	.0	285.9980	.0000	1704.4700	.0	
		2	.0	367.8888	.0000	1684.9700	.0	
		3	.0	570.5035	.0000	1791.0500	.0	
		4	.0	869.6156	.0000	2968.5600	.0	
				MONTH EST.RATE	.0000	8149.0500		.0
	NOV	1	.0	620.9467	.0000	2124.2300	.0	
		2	.0	318.8664	.0000	2221.3700	.0	
		3	.0	543.5213	.0000	1950.1900	.0	
		4	.0	239.1496	.0000	2178.8900	.0	
				MONTH EST.RATE	.0000	8474.6800		.0
	DEC	1	.0	261.4086	.0000	1777.9100	.0	
		2	.0	263.7473	.0000	1782.4300	.0	
		3	.0	90.7200	.0000	727.4900	.0	
		4	.0	132.2300	.0000	1434.7800	.0	
				MONTH EST.RATE	.0000	5722.6100		.0
				ANNUAL EST.RATE	.0000			.0

NOTE: * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GOLDFISH
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	27525.1	254.0404	108.3493	1844.6800	199869.8	
	2	18272.6	473.9362	38.5550	1846.7900	71203.0	
	3	18504.6	349.7163	52.9132	1577.6600	83479.0	
	4	10554.0	452.0734	24.2306	2209.5000	53537.5	
			MONTH EST.RATE	56.0120	7478.6300		418893.0
FEB	1	18344.8	229.4704	79.9441	1638.2600	128570.9	
	2	7149.7	233.2872	30.6476	1726.5700	52915.2	
	3	14103.6	264.9204	53.2371	1809.3300	96323.5	
	4	6370.8	259.7063	24.5308	1674.9800	41088.6	
			MONTH EST.RATE	47.0899	6819.1400		321112.6
MARCH	1	5191.0	217.9122	23.8245	1445.3700	34430.9	
	2	8578.4	203.0400	42.2498	1432.4300	60519.9	
	3	63287.0	482.3750	131.1988	1652.4100	216794.2	
	4	7693.9	467.8614	16.4448	2341.3000	38502.2	
			MONTH EST.RATE	53.4287	6871.5100		367135.8
APRIL	1	1868.5	234.3716	7.9724	1728.3700	13779.3	
	2	648.2	234.3790	2.7656	1712.5800	4736.3	
	3	696.0	203.7418	3.4161	1577.6500	5389.4	
	4	5345.6	455.5969	11.7332	1838.2200	21568.2	
			MONTH EST.RATE	6.4718	6856.8200		44376.0
MAY	1	4584.2	305.2590	15.0174	1886.0800	28324.0	
	2	2534.8	294.2698	8.6139	1824.4500	15715.6	
	3	752.1	149.7675	5.0218	990.5400	4974.3	
	4	1328.3	380.6237	3.4898	1758.5600	6137.0	
			MONTH EST.RATE	8.0357	6459.6300		51907.6
JUNE	1	790.3	422.2696	1.8716	2802.2400	5244.7	
	2	356.2	293.0586	1.2155	2488.2300	3024.4	
	3	1159.2	418.4496	2.7702	2720.9200	7537.5	
	4	884.4	293.3773	3.0146	2749.9700	8290.1	
			MONTH EST.RATE	2.2160	10761.3600		23868.7
JULY	1	.0	285.3004	.0000	2124.3300	.0	
	2	648.7	380.1098	1.7066	2374.2200	4051.8	
	3	.0	321.1553	.0000	2123.6700	.0	
	4	.0	413.5580	.0000	3884.0700	.0	
			MONTH EST.RATE	.4267	10506.2900		4483.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GOLDFISH
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	.0	327.7032	.0000	2344.1900	.0	
		2	.0	272.8884	.0000	1922.9200	.0	
		3	.0	279.1766	.0000	1835.1100	.0	
		4	.0	608.1302	.0000	3010.3700	.0	
				MONTH EST.RATE	.0000	9112.5900		.0
	SEPT	1	.0	267.1809	.0000	1880.9600	.0	
		2	.0	302.3208	.0000	1917.6900	.0	
		3	.0	306.8479	.0000	1974.3700	.0	
		4	.0	169.6100	.0000	2082.7800	.0	
				MONTH EST.RATE	.0000	7855.8000		.0
	OCT	1	.0	285.9980	.0000	1704.4700	.0	
		2	.0	367.8888	.0000	1684.9700	.0	
		3	322.9	570.5035	.5680	1791.0500	1013.7	
		4	405.0	869.6156	.4657	2968.5600	1382.5	
				MONTH EST.RATE	.2579	8149.0500		2101.6
	NOV	1	2.4	620.9467	.0039	2124.2300	8.3	
		2	.0	318.8664	.0000	2221.3700	.0	
		3	20.4	543.5213	.0375	1950.1900	73.1	
		4	329.6	239.1496	1.3782	2178.8900	3002.9	
				MONTH EST.RATE	.3549	8474.6800		3007.7
	DEC	1	852.7	261.4086	3.2619	1777.9100	5799.4	
		2	792.8	263.7473	3.0059	1782.4300	5357.8	
		3	898.7	90.7200	9.9063	727.4900	7206.7	
		4	111.5	132.2300	.8432	1434.7800	1209.8	
				MONTH EST.RATE	4.2543	5722.6100		24345.7
				ANNUAL EST.RATE	14.8792			1261231.7

NOTE: * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	9252.5	254.0404	36.4214	1844.6800	67185.8	
	2	5463.0	473.9362	11.5269	1846.7900	21287.8	
	3	4472.6	349.7163	12.7852	1577.6600	20177.0	
	4	1584.8	452.0734	3.5056	2209.5000	7745.6	
			MONTH EST.RATE	16.0608	7478.6300		120112.8
FEB	1	1575.2	229.4704	6.8645	1608.2600	11039.9	
	2	760.1	233.2872	3.2582	1726.5700	5625.5	
	3	481.7	264.9204	1.8183	1809.3300	3289.9	
	4	694.0	259.7063	2.6723	1674.9800	4476.0	
			MONTH EST.RATE	3.6533	6819.1400		24912.4
MARCH	1	789.2	217.9122	3.6216	1445.3700	5234.6	
	2	374.0	203.0400	1.8420	1432.4300	2638.5	
	3	1670.4	482.3750	3.4629	1652.4100	5722.1	
	4	853.0	467.8614	1.8232	2341.3000	4268.7	
			MONTH EST.RATE	2.6874	6871.5100		18466.5
APRIL	1	79.9	234.3716	.3409	1728.3700	589.2	
	2	.0	234.3790	.0000	1712.5800	.0	
	3	195.4	203.7418	.9591	1577.6500	1513.1	
	4	1293.8	455.5969	2.8398	1838.2200	5220.2	
			MONTH EST.RATE	1.0350	6856.8200		7096.8
MAY	1	369.2	305.2590	1.2095	1886.0800	2281.2	
	2	1723.3	294.2698	5.8562	1824.4500	10684.3	
	3	760.8	149.7675	5.0759	950.5400	5031.8	
	4	2479.7	380.6237	6.5148	1758.5600	11456.7	
			MONTH EST.RATE	4.6651	6459.6300		30134.8
JUNE	1	873.1	422.2696	2.0676	2802.2400	5793.9	
	2	636.3	293.0586	2.1712	2488.2300	5402.4	
	3	277.9	418.4496	.6641	2720.9200	1807.0	
	4	85.0	293.3773	.2897	2749.9700	796.7	
			MONTH EST.RATE	1.2982	10761.3600		13970.4
JULY	1	527.7	285.3004	1.8496	2124.3300	3929.2	
	2	786.7	380.1098	2.0697	2374.2200	4913.9	
	3	183.3	321.1553	.5708	2123.6700	1212.2	
	4	579.7	413.5580	1.4017	3884.0700	5444.3	
			MONTH EST.RATE	1.4730	10506.2900		15475.8

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	961.7	327.7032	1.7141	2344.1900	4018.2	
		2	225.4	272.8884	.8260	1922.9200	1588.3	
		3	574.5	279.1766	2.0578	1835.1100	3776.3	
		4	707.0	608.1302	1.1626	3010.3700	3499.9	
				MONTH EST.RATE	1.4401	9112.5900		13123.0
	SEPT	1	668.6	267.1809	2.5024	1880.9600	4706.9	
		2	216.8	302.3208	.7171	1917.6900	1375.2	
		3	361.9	306.8479	1.1794	1974.3700	2328.6	
		4	143.8	169.6100	.8478	2082.7800	1765.8	
				MONTH EST.RATE	1.3117	7855.8000		10304.5
	OCT	1	425.4	285.9980	1.4874	1704.4700	2535.2	
		2	352.9	367.8888	.9593	1684.9700	1616.4	
		3	629.5	570.5035	1.1034	1791.0500	1976.2	
		4	1635.9	869.6156	1.8812	2968.5600	5584.5	
				MONTH EST.RATE	1.3588	8149.0500		11064.8
	NOV	1	925.7	620.9467	1.4908	2124.2300	3166.8	
		2	485.3	318.8664	1.5220	2221.3700	3380.9	
		3	646.0	543.5213	1.1886	1950.1900	2318.0	
		4	872.9	239.1496	3.6500	2178.8900	7952.9	
				MONTH EST.RATE	1.9629	8474.6800		16634.9
	DEC	1	175.0	261.4086	.6695	1777.9100	1190.3	
		2	330.4	263.7473	1.2527	1782.4300	2232.9	
		3	139.4	90.7200	1.5366	727.4900	1117.9	
		4	304.0	132.2300	2.2990	1434.7800	3298.6	
				MONTH EST.RATE	1.4395	5722.6100		8237.7
				ANNUAL EST.RATE	3.1987			289534.4

NOTE: * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SHORTNOSE STURGEON
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	254.0404	.0000	1844.6800	.0	
	2	.0	473.9362	.0000	1846.7900	.0	
	3	.0	349.7163	.0000	1577.6600	.0	
	4	.0	452.0734	.0000	2209.5000	.0	
			MONTH EST.RATE	.0000	7478.6300		.0
FEB	1	.0	229.4704	.0000	1608.2600	.0	
	2	.0	233.2872	.0000	1726.5700	.0	
	3	.0	264.9204	.0000	1809.3300	.0	
	4	.0	259.7063	.0000	1674.9800	.0	
			MONTH EST.RATE	.0000	6819.1400		.0
MARCH	1	.0	217.9122	.0000	1445.3700	.0	
	2	.0	203.0400	.0000	1432.4300	.0	
	3	.0	482.3750	.0000	1652.4100	.0	
	4	.0	467.8614	.0000	2341.3000	.0	
			MONTH EST.RATE	.0000	6871.5100		.0
APRIL	1	.0	234.3716	.0000	1728.3700	.0	
	2	.0	234.3790	.0000	1712.5800	.0	
	3	.0	203.7418	.0000	1577.6500	.0	
	4	.0	455.5969	.0000	1838.2200	.0	
			MONTH EST.RATE	.0000	6856.8200		.0
MAY	1	.0	305.2590	.0000	1886.0800	.0	
	2	.0	294.2698	.0000	1824.4500	.0	
	3	.0	149.7675	.0000	990.5400	.0	
	4	.0	380.6237	.0000	1758.5600	.0	
			MONTH EST.RATE	.0000	6459.6300		.0
JUNE	1	.0	422.2696	.0000	2802.2400	.0	
	2	.0	293.0586	.0000	2488.2300	.0	
	3	.0	418.4496	.0000	2720.9200	.0	
	4	.0	293.3773	.0000	2749.9700	.0	
			MONTH EST.RATE	.0000	10761.3600		.0
JULY	1	.0	285.3004	.0000	2124.3300	.0	
	2	.0	380.1098	.0000	2374.2200	.0	
	3	.0	321.1553	.0000	2123.6700	.0	
	4	.0	413.5580	.0000	3884.0700	.0	
			MONTH EST.RATE	.0000	10506.2900		.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SHORTNOSE STURGEON
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	.0	327.7032	.0000	2344.1900	.0	
		2	.0	272.8884	.0000	1922.9200	.0	
		3	.0	279.1766	.0000	1835.1100	.0	
		4	.0	608.1302	.0000	3010.3700	.0	
				MONTH EST.RATE	.0000	9112.5900		.0
	SEPT	1	.0	267.1809	.0000	1880.9600	.0	
		2	.0	302.3208	.0000	1917.6900	.0	
		3	.0	306.8479	.0000	1974.3700	.0	
		4	.0	169.6100	.0000	2082.7800	.0	
				MONTH EST.RATE	.0000	7855.8000		.0
	OCT	1	.0	285.9980	.0000	1704.4700	.0	
		2	.0	367.8888	.0000	1684.9700	.0	
		3	.0	570.5035	.0000	1791.0500	.0	
		4	.0	869.6156	.0000	2968.5600	.0	
				MONTH EST.RATE	.0000	8149.0500		.0
	NOV	1	.0	620.9467	.0000	2124.2300	.0	
		2	.0	318.8664	.0000	2221.3700	.0	
		3	.0	543.5213	.0000	1950.1900	.0	
		4	.0	239.1496	.0000	2178.8900	.0	
				MONTH EST.RATE	.0000	8474.6800		.0
	DEC	1	.0	261.4086	.0000	1777.9100	.0	
		2	.0	263.7473	.0000	1782.4300	.0	
		3	.0	90.7200	.0000	727.4900	.0	
		4	.0	132.2300	.0000	1434.7800	.0	
				MONTH EST.RATE	.0000	5722.6100		.0
				ANNUAL EST.RATE	.0000			.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SPOTTAIL SHINER
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	2004.9	254.0404	7.8921	1844.6800	14558.4	
	2	1565.4	473.9362	3.3030	1846.7900	6099.9	
	3	688.3	349.7163	1.9682	1577.6600	3105.2	
	4	214.1	452.0734	.4736	2209.5000	1046.4	
			MONTH EST.RATE	3.4092	7478.6300		25496.1
FEB	1	1497.6	229.4704	6.5263	1608.2600	10496.0	
	2	132.3	233.2872	.5671	1726.5700	979.1	
	3	66.3	264.9204	.2503	1809.3300	452.9	
	4	252.1	259.7063	.9707	1674.9800	1625.9	
			MONTH EST.RATE	2.0786	6819.1400		14174.3
MARCH	1	1017.4	217.9122	4.6689	1445.3700	6748.3	
	2	1184.0	203.0400	5.8314	1432.4300	8353.1	
	3	4297.4	482.3750	8.9088	1652.4100	14721.0	
	4	3202.4	467.8614	6.8448	2341.3000	16025.7	
			MONTH EST.RATE	6.5635	6871.5100		45101.2
APRIL	1	201.9	234.3716	.8615	1728.3700	1489.0	
	2	1281.0	234.3790	5.4635	1712.5800	9360.1	
	3	863.3	203.7418	4.2372	1577.6500	6684.8	
	4	1362.1	455.5969	2.9897	1838.2200	5495.7	
			MONTH EST.RATE	3.3885	6856.8200		23234.3
MAY	1	52.7	305.2590	.1726	1886.0800	325.5	
	2	613.2	294.2698	2.0838	1824.4500	3801.8	
	3	23.8	149.7675	.1589	990.5400	157.4	
	4	101.0	380.6237	.2654	1758.5600	466.7	
			MONTH EST.RATE	.6702	6459.6300		4329.2
JUNE	1	91.9	422.2696	.2176	2802.2400	609.8	
	2	126.7	293.0586	.4323	2488.2300	1075.7	
	3	30.8	418.4496	.0736	2720.9200	200.3	
	4	6.8	293.3773	.0232	2749.9700	63.8	
			MONTH EST.RATE	.1887	10761.3600		2009.1
JULY	1	.0	285.3004	.0000	2124.3300	.0	
	2	54.5	380.1098	.1434	2374.2200	340.5	
	3	16.4	321.1553	.0511	2123.6700	108.5	
	4	.0	413.5580	.0000	3884.0700	.0	
			MONTH EST.RATE	.0486	10506.2900		510.6

NOTE: * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SPOTTAIL SHINER
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	*	327.7032	**	2344.1900	**	
		2	23.8	272.8884	.0862	1922.9200	167.7	
		3	*	279.1766	**	1835.1100	**	
		4	7.1	608.1302	.0117	3010.3700	35.2	
				MONTH EST.RATE	.0495	9112.5900		451.1
	SEPT	1	16.3	267.1809	.0610	1880.9600	114.7	
		2	.0	302.3208	.0000	1917.6900	.0	
		3	.0	306.8479	.0000	1974.3700	.0	
		4	.0	169.6100	.0000	2082.7800	.0	
				MONTH EST.RATE	.0153	7855.8000		120.2
	OCT	1	.0	285.9980	.0000	1704.4700	.0	
		2	29.4	367.8888	.0799	1684.9700	134.6	
		3	169.5	570.5035	.2971	1791.0500	532.1	
		4	520.4	869.6156	.5984	2968.5600	1776.4	
				MONTH EST.RATE	.2439	8149.0500		1987.6
	NOV	1	893.8	620.9467	1.4394	2124.2300	3057.6	
		2	99.4	318.8664	.3117	2221.3700	692.4	
		3	207.1	543.5213	.3810	1950.1900	743.0	
		4	1011.6	239.1496	4.2300	2178.8900	9216.7	
				MONTH EST.RATE	1.5905	8474.6800		13479.0
	DEC	1	1054.0	261.4086	4.0320	1777.9100	7168.5	
		2	816.8	263.7473	3.0969	1782.4300	5520.0	
		3	684.9	90.7200	7.5496	727.4900	5492.3	
		4	130.7	132.2300	.9884	1434.7800	1418.1	
				MONTH EST.RATE	3.9167	5722.6100		22413.7
				ANNUAL EST.RATE	1.8468			153306.4

NOTE: * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR STRIPED BASS
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	3498.5	254.0404	13.7714	1844.6800	25403.8	
	2	4992.2	473.9362	10.5335	1846.7900	19453.2	
	3	1360.7	349.7163	3.8909	1577.6600	6138.5	
	4	.0	452.0734	.0000	2209.5000	.0	
			MONTH EST.RATE	7.0490	7478.6300		52716.9
FEB	1	325.8	229.4704	1.4198	1608.2600	2283.4	
	2	.0	233.2872	.0000	1726.5700	.0	
	3	.0	264.9204	.0000	1809.3300	.0	
	4	123.7	259.7063	.4763	1674.9800	797.8	
			MONTH EST.RATE	.4740	6819.1400		3232.3
MARCH	1	.0	217.9122	.0000	1445.3700	.0	
	2	.0	203.0400	.0000	1432.4300	.0	
	3	1306.4	482.3750	2.7083	1652.4100	4475.2	
	4	137.5	467.8614	.2939	2341.3000	688.1	
			MONTH EST.RATE	.7506	6871.5100		5157.8
APRIL	1	.0	234.3716	.0000	1728.3700	.0	
	2	.0	234.3790	.0000	1712.5800	.0	
	3	.0	203.7418	.0000	1577.6500	.0	
	4	9.7	455.5969	.0213	1838.2200	39.2	
			MONTH EST.RATE	.0053	6856.8200		36.3
MAY	1	.0	305.2590	.0000	1886.0800	.0	
	2	33.4	294.2698	.1135	1824.4500	207.1	
	3	6.9	149.7675	.0461	990.5400	45.7	
	4	38.1	380.6237	.1001	1758.5600	176.0	
			MONTH EST.RATE	.0649	6459.6300		419.2
JUNE	1	54.3	422.2696	.1286	2802.2400	360.4	
	2	8.6	293.0586	.0294	2488.2300	73.2	
	3	142.3	418.4496	.3401	2720.9200	925.4	
	4	.0	293.3773	.0000	2749.9700	.0	
			MONTH EST.RATE	.1245	10761.3600		1339.8
JULY	1	55.2	285.3004	.1935	2124.3300	411.1	
	2	63.1	380.1098	.1660	2374.2200	394.1	
	3	400.4	321.1553	1.2468	2123.6700	2647.8	
	4	191.4	413.5580	.4628	3884.0700	1797.5	
			MONTH EST.RATE	.5143	10506.2900		5434.9

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR STRIPED BASS
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	147.7	327.7032	.4507	2344.1900	1056.5	
		2	78.1	272.8884	.2862	1922.9200	550.3	
		3	10.9	279.1766	.0390	1835.1100	71.6	
		4	393.6	608.1302	.6472	3010.3700	1948.3	
				MONTH EST.RATE	.3558	9112.5900		3242.3
	SEPT	1	159.1	267.1809	.5955	1880.9600	1120.1	
		2	142.1	302.3208	.4740	1917.6900	901.3	
		3	12.0	306.8479	.0391	1974.3700	77.2	
		4	.0	169.6100	.0000	2082.7800	.0	
				MONTH EST.RATE	.2762	7855.8000		2169.8
	OCT	1	.0	285.9980	.0000	1704.4700	.0	
		2	242.2	367.8888	.6584	1684.9700	1109.4	
		3	67.3	570.5035	.1180	1791.0500	211.3	
		4	808.0	869.6156	.9292	2968.5600	2758.4	
				MONTH EST.RATE	.4264	8149.0500		3474.8
	NOV	1	834.3	620.9467	1.3436	2124.2300	2854.1	
		2	334.7	318.8664	1.0497	2221.3700	2331.8	
		3	102.9	543.5213	.1893	1950.1900	369.2	
		4	470.2	239.1496	1.9661	2178.8900	4283.9	
				MONTH EST.RATE	1.1372	8474.6800		9637.4
	DEC	1	2701.6	261.4086	10.3348	1777.9100	18374.3	
		2	2114.4	263.7473	8.0168	1782.4300	14289.4	
		3	1489.0	90.7200	16.4131	727.4900	11940.4	
		4	571.5	132.2300	4.3220	1434.7800	6201.1	
				MONTH EST.RATE	9.7717	5722.6100		55919.6
				ANNUAL EST.RATE	1.7461			142781.1

NOTE:* * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WEAKFISH
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	254.0404	.0000	1844.6800	.0	
	2	.0	473.9362	.0000	1846.7900	.0	
	3	.0	349.7163	.0000	1577.6600	.0	
	4	.0	452.0734	.0000	2209.5000	.0	
			MONTH EST.RATE	.0000	7478.6300		.0
FEB	1	.0	229.4704	.0000	1608.2600	.0	
	2	.0	233.2872	.0000	1726.5700	.0	
	3	.0	264.9204	.0000	1809.3300	.0	
	4	.0	259.7063	.0000	1674.9800	.0	
			MONTH EST.RATE	.0000	6819.1400		.0
MARCH	1	.0	217.9122	.0000	1445.3700	.0	
	2	.0	203.0400	.0000	1432.4300	.0	
	3	.0	482.3750	.0000	1652.4100	.0	
	4	.0	467.8614	.0000	2341.3000	.0	
			MONTH EST.RATE	.0000	6871.5100		.0
APRIL	1	.0	234.3716	.0000	1728.3700	.0	
	2	.0	234.3790	.0000	1712.5800	.0	
	3	.0	203.7418	.0000	1577.6500	.0	
	4	.0	455.5969	.0000	1838.2200	.0	
			MONTH EST.RATE	.0000	6856.8200		.0
MAY	1	.0	305.2590	.0000	1886.0800	.0	
	2	.0	294.2698	.0000	1824.4500	.0	
	3	.0	149.7675	.0000	990.5400	.0	
	4	.0	380.6237	.0000	1758.5600	.0	
			MONTH EST.RATE	.0000	6459.6300		.0
JUNE	1	.0	422.2696	.0000	2802.2400	.0	
	2	.0	293.0586	.0000	2488.2300	.0	
	3	.0	418.4496	.0000	2720.9200	.0	
	4	.0	293.3773	.0000	2749.9700	.0	
			MONTH EST.RATE	.0000	10761.3600		.0
JULY	1	.0	285.3004	.0000	2124.3300	.0	
	2	.0	380.1098	.0000	2374.2200	.0	
	3	.0	321.1553	.0000	2123.6700	.0	
	4	.0	413.5580	.0000	3884.0700	.0	
			MONTH EST.RATE	.0000	10506.2900		.0

NOTE: * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WEAKFISH
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	.0	327.7032	.0000	2344.1900	.0	
		2	.0	272.8884	.0000	1922.9200	.0	
		3	.0	279.1766	.0000	1835.1100	.0	
		4	.0	608.1302	.0000	3010.3700	.0	
				MONTH EST.RATE	.0000	9112.5900		.0
	SEPT	1	.0	267.1809	.0000	1880.9600	.0	
		2	.0	302.3208	.0000	1917.6900	.0	
		3	.0	306.8479	.0000	1974.3700	.0	
		4	.0	169.6100	.0000	2082.7800	.0	
				MONTH EST.RATE	.0000	7855.8000		.0
	OCT	1	.0	285.9980	.0000	1704.4700	.0	
		2	.0	367.8888	.0000	1684.9700	.0	
		3	.0	570.5035	.0000	1791.0500	.0	
		4	.0	869.6156	.0000	2968.5600	.0	
				MONTH EST.RATE	.0000	8149.0500		.0
	NOV	1	.0	620.9467	.0000	2124.2300	.0	
		2	.0	318.8664	.0000	2221.3700	.0	
		3	.0	543.5213	.0000	1950.1900	.0	
		4	.0	239.1496	.0000	2178.8900	.0	
				MONTH EST.RATE	.0000	8474.6800		.0
	DEC	1	.0	261.4086	.0000	1777.9100	.0	
		2	.0	263.7473	.0000	1782.4300	.0	
		3	.0	90.7200	.0000	727.4900	.0	
		4	.0	132.2300	.0000	1434.7800	.0	
				MONTH EST.RATE	.0000	5722.6100		.0
				ANNUAL EST.RATE	.0000			.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE CATFISH
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	2075.3	254.0404	8.1692	1844.6800	15069.6	
	2	7178.9	473.9362	15.1474	1846.7900	27974.1	
	3	7108.2	349.7163	20.3256	1577.6600	32066.9	
	4	266.3	452.0734	.5851	2209.5000	1301.6	
			MONTH EST.RATE	11.0578	7478.6300		82697.2
FEB	1	2884.5	229.4704	12.5703	1608.2600	20216.3	
	2	361.8	233.2872	1.5509	1726.5700	2677.7	
	3	.0	264.9204	.0000	1809.3300	.0	
	4	.0	259.7063	.0000	1674.9800	.0	
			MONTH EST.RATE	3.5363	6819.1400		24073.6
MARCH	1	4.2	217.9122	.0193	1445.3700	27.9	
	2	1149.4	203.0400	5.6610	1432.4300	8109.0	
	3	2783.3	482.3750	5.7700	1652.4100	9534.4	
	4	344.9	467.8614	.7372	2341.3000	1726.0	
			MONTH EST.RATE	3.0469	6871.5100		20936.8
APRIL	1	.0	234.3716	.0000	1728.3700	.0	
	2	.0	234.3790	.0000	1712.5800	.0	
	3	774.2	203.7418	3.7999	1577.6500	5994.9	
	4	93.8	455.5969	.2059	1838.2200	378.5	
			MONTH EST.RATE	1.0015	6856.8200		6867.1
MAY	1	18.5	305.2590	.0606	1886.0800	114.3	
	2	.0	294.2698	.0000	1824.4500	.0	
	3	1178.8	149.7675	7.8709	990.5400	7796.4	
	4	104.0	380.6237	.2732	1758.5600	480.4	
			MONTH EST.RATE	2.0512	6459.6300		13250.0
JUNE	1	583.9	422.2696	1.3828	2802.2400	3874.9	
	2	52.9	293.0586	.1845	2488.2500	449.1	
	3	79.5	418.4496	.1900	2720.9200	517.0	
	4	.0	293.3773	.0000	2749.9700	.0	
			MONTH EST.RATE	.4383	10761.3600		4716.7
JULY	1	514.7	285.3004	1.8041	2124.3300	3832.5	
	2	40.1	380.1098	.1055	2374.2200	250.5	
	3	35.2	321.1553	.1096	2123.6700	232.8	
	4	118.7	413.5580	.2870	3884.0700	1114.7	
			MONTH EST.RATE	.5706	10506.2900		6057.9

NOTE: * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE CATFISH
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	.0	327.7032	.0000	2344.1900	.0	
		2	32.9	272.8884	.1206	1922.9200	231.9	
		3	636.0	279.1766	2.2781	1835.1100	4180.6	
		4	552.3	608.1302	.9082	3010.3700	2734.0	
				MONTH EST.RATE	.8267	9112.5900		7533.4
	SEPT	1	43.5	267.1809	.1628	1880.9600	306.2	
		2	.0	302.3208	.0000	1917.6900	.0	
		3	297.5	306.8479	.9695	1974.3700	1914.2	
		4	151.6	169.6100	.8938	2082.7800	1861.6	
				MONTH EST.RATE	.5065	7855.8000		3979.0
	OCT	1	10.4	285.9980	.0364	1704.4700	62.0	
		2	55.1	367.8888	.1498	1684.9700	252.4	
		3	839.5	570.5035	1.4715	1791.0500	2635.5	
		4	1140.7	869.6156	1.3117	2968.5600	3893.9	
				MONTH EST.RATE	.7424	8149.0500		6049.9
	NOV	1	565.8	620.9467	.9112	2124.2300	1935.6	
		2	.0	318.8664	.0000	2221.3700	.0	
		3	201.5	543.5213	.3707	1950.1900	722.9	
		4	10.4	239.1496	.0435	2178.8900	94.8	
				MONTH EST.RATE	.3314	8474.6800		2808.5
	DEC	1	3.0	261.4086	.0115	1777.9100	20.4	
		2	.0	263.7473	.0000	1782.4300	.0	
		3	5.1	90.7200	.0562	727.4900	40.9	
		4	2.3	132.2300	.0174	1434.7800	25.0	
				MONTH EST.RATE	.0213	5722.6100		121.9
				ANNUAL EST.RATE	2.0109			179092.0

NOTE: * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	10021.4	254.0404	39.4481	1844.6800	72769.1	
	2	6746.0	473.9362	14.2340	1846.7900	26287.2	
	3	2571.6	349.7163	7.3534	1577.6600	11601.2	
	4	329.1	452.0734	.7280	2209.5000	1608.5	
			MONTH EST.RATE	15.4409	7478.6300		115476.8
FEB	1	226.4	229.4704	.9866	1608.2600	1586.7	
	2	102.2	233.2872	.4381	1726.5700	756.4	
	3	124.1	264.9204	.4684	1809.3300	847.5	
	4	360.9	259.7063	1.3897	1674.9800	2327.7	
			MONTH EST.RATE	.8207	6819.1400		5596.5
MARCH	1	148.5	217.9122	.6815	1445.3700	985.0	
	2	7409.0	203.0400	36.4904	1432.4300	52269.9	
	3	23553.2	482.3750	48.8276	1652.4100	80683.2	
	4	30757.2	467.8614	65.7400	2341.3000	153917.1	
			MONTH EST.RATE	37.9349	6871.5100		260670.0
APRIL	1	8322.4	234.3716	35.5094	1728.3700	61373.4	
	2	20575.3	234.3790	89.4931	1712.5800	153264.1	
	3	2878.0	203.7418	14.1257	1577.6500	22285.4	
	4	35765.8	455.5969	78.5032	1838.2200	144306.2	
			MONTH EST.RATE	54.4079	6856.8200		373065.2
MAY	1	1919.9	305.2590	6.2894	1886.0800	11862.3	
	2	6540.5	294.2698	22.2262	1824.4500	40550.6	
	3	988.9	149.7675	6.6049	990.5400	6540.4	
	4	5303.3	380.6237	13.9332	1758.5600	24502.4	
			MONTH EST.RATE	12.2629	6459.6300		79213.8
JUNE	1	30430.0	422.2696	72.0630	2802.2400	201937.8	
	2	23549.4	293.0586	80.3573	2488.2300	199947.4	
	3	8649.0	418.4496	20.6682	2720.9200	56239.2	
	4	1503.3	293.3773	5.1241	2749.9700	14091.1	
			MONTH EST.RATE	44.5554	10761.3600		479455.2
JULY	1	643.8	285.3004	2.2566	2124.3300	4793.8	
	2	4879.8	380.1098	12.8379	2374.2200	30480.0	
	3	1433.8	321.1553	4.4645	2123.6700	9481.1	
	4	1109.7	413.5580	2.6833	3884.0700	10422.1	
			MONTH EST.RATE	5.5606	10506.2900		58421.3

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	714.1	327.7032	2.1791	2344.1900	5108.2	
		2	5910.7	272.8884	21.6598	1922.9200	41650.1	
		3	1111.2	279.1766	3.9803	1835.1100	7304.3	
		4	2185.7	608.1302	3.5941	3010.3700	10819.6	
				MONTH EST.RATE	7.8533	9112.5900		71563.9
	SEPT	1	5455.5	267.1809	20.4188	1880.9600	38406.9	
		2	405.6	302.3208	1.3416	1917.6900	2572.8	
		3	489.3	306.8479	1.5946	1974.3700	3148.3	
		4	351.3	169.6130	2.0712	2082.7800	4313.9	
				MONTH EST.RATE	6.3566	7855.8000		49936.2
	OCT	1	657.4	285.9980	2.2986	1704.4700	3917.9	
		2	5321.3	367.8888	14.4644	1684.9700	24372.1	
		3	11596.1	570.5035	20.3261	1791.0500	36405.1	
		4	17719.2	869.6156	20.3759	2968.5600	60487.1	
				MONTH EST.RATE	14.3663	8149.0500		117071.7
	NOV	1	17369.2	620.9467	27.9721	2124.2300	59419.2	
		2	2278.6	318.8664	7.1459	2221.3700	15873.7	
		3	2658.7	543.5213	4.8916	1950.1900	9539.5	
		4	5703.3	239.1496	23.8483	2178.8900	51962.8	
				MONTH EST.RATE	15.9645	8474.6800		135294.0
	DEC	1	7330.0	261.4086	28.0444	1777.9100	49853.3	
		2	3194.9	263.7473	12.1135	1782.4300	21591.5	
		3	664.2	90.7200	7.3214	727.4900	5326.2	
		4	555.7	132.2300	4.2025	1434.7800	6029.7	
				MONTH EST.RATE	12.9195	5722.6100		73933.3
				ANNUAL EST.RATE	19.0368			1819697.9

NOTE: * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

APPENDIX-10 Special Studies

- Gear Comparison Study: Otter vs Yankee Trawls
- Roseton Bubbler

TABLE A-18

ACTUAL NUMBER OF TOTAL AND SELECTED SPECIES COLLECTED FROM THE OTTER AND YANKEE TRAWLS ON 11-12 OCTOBER

Roseton and Danskammer Point Vicinity - 1979

DAY

STATION		OTTER							YANKEE						
		ASD	AW	BA	BBH	RSM	WP	TOTAL	ASD	AW	BA	BBH	RSM	WP	TOTAL
RDW	S	0	0	0	0	0	0	0	41	0	0	624	0	0	665
	M	0	0	0	0	0	0	1	0	0	0	1	0	1	2
	B	0	0	0	0	0	25	63	NS	NS	NS	NS	NS	NS	NS
RDCH	S	0	0	0	0	0	0	0	37	0	0	2028	0	0	2065
	M	0	0	0	0	0	0	0	0	4	0	0	0	1	5
	B	8	0	0	0	2	37	136	NS	NS	NS	NS	NS	NS	NS
RDE	S	0	0	0	0	0	0	0	52	0	0	473	0	0	525
	M	0	0	0	0	0	0	0	0	3	0	1	0	2	7
	B	6	0	0	0	0	19	27	NS	NS	NS	NS	NS	NS	NS

NIGHT

STATION		OTTER							YANKEE						
		ASD	AW	BA	BBH	RSM	WP	TOTAL	ASD	AW	BA	BBH	RSM	WP	TOTAL
RDW	S	0	0	0	0	0	0	0	0	32	0	2	0	0	34
	M	0	2	0	18	0	2	24	20	44	0	469	0	49	584
	B	0	0	0	24	0	24	67	NS	NS	NS	NS	NS	NS	NS
RDCH	S	0	0	0	0	0	0	0	0	11	12	1	0	0	25
	M	1	5	0	53	0	1	61	30	58	4	841	0	42	979
	B	44	8	0	748	1	11	819	NS	NS	NS	NS	NS	NS	NS
RDE	S	0	1	0	0	0	0	1	0	0	0	0	0	0	0
	M	0	0	0	0	0	0	0	17	28	1	80	0	264	400
	B	0	0	0	0	0	1	2	NS	NS	NS	NS	NS	NS	NS

NS - No sample
S - Surface.
M - Mid.
B - Bottom.
AW - Alewife.
ASD - American shad.
BA - Bay anchovy.
BBH - Blueback herring.
RSM - Rainbow smelt.
WP - White perch
Total - Total fish.

TABLE A-19

ACTUAL NUMBER OF TOTAL AND SELECTED SPECIES COLLECTED FROM THE OTTER AND YANKEE TRAWLS ON 18-19 OCTOBER

Roseton and Danskammer Point Vicinity - 1979

DAY

STATION		OTTER ASD	AW	BA	BBH	RSM	WP	TOTAL	YANKEE ASD	AW	BA	BBH	RSM	WP	TOTAL
ROW	S	11	1	0	68	0	0	80	99	27	0	594	0	0	721
	M	1	0	0	2	0	0	4	0	0	0	0	0	1	2
	B	0	0	0	0	0	24	28	NS	NS	NS	NS	NS	NS	NS
ROCH	S	16	0	0	92	0	0	108	59	1	0	411	1	0	472
	M	11	0	0	1	0	0	12	3	1	0	0	0	0	4
	B	2	0	0	0	0	7	10	NS	NS	NS	NS	NS	NS	NS
ROE	S	1	1	0	7172	0	0	7174	42	0	0	15088	0	0	15130
	M	18	37	0	1	0	0	56	10	15	1	9	16	1	52
	B	3	0	0	4	0	2	9	NS	NS	NS	NS	NS	NS	NS

NIGHT

STATION		OTTER ASD	AW	BA	BBH	RSM	WP	TOTAL	YANKEE ASD	AW	BA	BBH	RSM	WP	TOTAL
ROW	S	0	2	0	23	0	0	25	0	6	0	44	0	1	52
	M	4	7	0	156	0	6	173	28	23	0	472	0	32	558
	B	2	2	0	81	0	28	146	NS	NS	NS	NS	NS	NS	NS
ROCH	S	0	0	0	2	0	0	2	0	2	0	3	0	0	7
	M	1	5	0	38	0	4	48	33	64	0	542	0	45	687
	B	15	15	0	216	0	16	266	NS	NS	NS	NS	NS	NS	NS
ROE	S	0	0	0	1	0	1	2	1	5	0	15	2	6	
	M	1	1	0	53	0	39	97	20	35	0	788	1	214	1063
	B	6	10	0	356	0	8	385	NS	NS	NS	NS	NS	NS	NS

NS - No sample
S - Surface.
M - Mid.
B - Bottom.
AW - Alewife.
ASD - American shad.
BA - Bay anchovy.
BBH - Blueback herring.
RSM - Rainbow smelt.
WP - White perch
Total - Total fish.

TABLE A-20

ACTUAL NUMBER OF TOTAL AND SELECTED SPECIES COLLECTED FROM THE OTTER AND YANKEE TRAWLS ON 25-26 OCTOBER

Roseton and Danskammer Point Vicinity - 1979

DAY

STATION		OTTER							YANKEE						
		ASD	AW	BA	BBH	RSM	WP	TOTAL	ASD	AW	BA	BBH	RSM	WP	TOTAL
RDW	S	9	1	0	1	0	3	14	124	7	0	69	0	0	201
	M	0	1	0	0	0	0	1	2	0	0	2	0	6	14
	B	0	0	0	0	0	5	7	NS	NS	NS	NS	NS	NS	NS
RDCH	S	4	0	0	3	0	0	7	63	0	0	176	0	0	241
	M	14	10	0	11	0	0	35	1	1	0	1	0	5	10
	B	1	0	0	0	0	6	7	NS	NS	NS	NS	NS	NS	NS
RDE	S	2	0	0	16	0	0	18	19	1	0	1077	0	1	1099
	M	2	0	0	10	0	3	15	0	3	0	0	0	7	11
	B	0	0	0	1	0	16	23	NS	NS	NS	NS	NS	NS	NS

NIGHT

STATION		OTTER							YANKEE						
		ASD	AW	BA	BBH	RSM	WP	TOTAL	ASD	AW	BA	BBH	RSM	WP	TOTAL
RDW	S	0	9	0	2	0	0	11	0	13	0	14	0	2	29
	M	1	1	0	13	0	18	36	5	4	0	22	0	23	55
	B	3	1	0	1	0	2	7	NS	NS	NS	NS	NS	NS	NS
RDCH	S	0	0	0	0	0	0	0	0	1	1	2	1	2	6
	M	0	0	0	0	0	1	1	1	7	0	2	0	3	73
	B	1	0	0	2	0	0	102	NS	NS	NS	NS	NS	NS	NS
RDE	S	0	3	0	0	0	0	3	2	2	0	1	0	2	7
	M	3	2	0	2	1	16	24	4	7	0	4	0	31	46
	B	0	0	0	0	0	3	4	NS	NS	NS	NS	NS	NS	NS

NS - No sample
S - Surface.
M - Mid.
B - Bottom.
AW - Alewife.
ASD - American shad.
BA - Bay anchovy.
BBH - Blueback herring.
RSM - Rainbow smelt.
WP - White perch
Total - Total fish.

CENTRAL HUDSON GAS & ELECTRIC CORP.
1977 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
ROSETON STATION-BUBBLER OFF - DAY

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/22		0	135.3600	.0000	541.4400	0
79/10/25		2	133.4801	.0150	541.4400	8
79/10/30		3	135.3600	.0222	541.4400	12
79/11/01		1	135.9204	.0074	553.1000	4
79/11/05		0	165.4996	.0000	807.8400	0
79/11/09		2	201.9600	.0059	807.8400	8

NOTE: * LESS THAN 0.0.01
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
ROSETON STATION-BUBBLER OFF - NIGHT

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/22		10	135.3600	.0739	541.4400	40
79/10/25		7	135.3600	.0517	541.4400	28
79/10/30		14	135.3600	.1034	541.4400	56
79/11/01		13	144.2400	.1317	553.1000	73
79/11/05		10	201.9600	.0495	807.8400	40
79/11/08		23	201.9600	.1139	807.8400	92

* LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
ROSETON STATION-BUBBLER OFF - DAWN

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/22		9	131.6000	.0684	541.4400	37
79/10/25		16	127.8400	.1252	541.4400	68
79/10/30		11	135.3600	.0813	541.4400	44
79/11/01		1	136.2900	.0073	553.1000	4
79/11/05		5	238.4195	.0210	807.8400	17
79/11/08		19	196.3500	.0968	807.8400	78

NOTE: * LESS THAN 0.5 FISH
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR ALE-IFE
ROSETON STATION-BUBBLER OFF - DUSK

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/22		1	135.3600	.0074	541.4400	4
79/10/25		30	135.3600	.2246	541.4400	120
79/10/30		15	135.3600	.0960	541.4400	52
79/11/01		2	136.6596	.0146	553.1000	8
79/11/05		5	201.9600	.0257	807.8400	24
79/11/08		8	201.9600	.0396	807.8400	32

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
ROSETON STATION-BUBBLER OFF - DAY

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/23		0	135.3600	.0000	541.4400	0
79/10/25		0	133.4801	.0000	541.4400	0
79/10/30		1	135.3600	.0074	541.4400	4
79/11/01		0	135.9204	.0000	553.1000	0
79/11/05		1	165.4996	.0060	807.8400	5
79/11/08		1	201.9600	.0050	807.8400	4

NOTE: * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
ROSETON STATION-BUBBLER OFF - NIGHT

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/22		7	135.3600	.0517	541.4400	28
79/10/25		6	135.3600	.0443	541.4400	24
79/10/30		3	135.3600	.0222	541.4400	12
79/11/01		3	144.2400	.0208	553.1000	12
79/11/05		4	201.9600	.0198	807.8400	16
79/11/08		1	201.9600	.0050	807.8400	4

NOTE: * LESS THAN .0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
ROSETON STATION-BUBBLER OFF - DAWN

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/22		8	131.6000	.0608	541.4400	33
79/10/25		14	127.8400	.1095	541.4400	59
79/10/30		3	135.3600	.0222	541.4400	12
79/11/01		2	136.2900	.0147	553.1000	8
79/11/05		2	238.4195	.0084	807.8400	7
79/11/08		5	196.3500	.0255	807.8400	21

NOTE: * LESS THAN .0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
ROSETON STATION-BUBBLER OFF - DUSK

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/22		6	135.3600	.0443	541.4400	24
79/10/25		4	135.3600	.0296	541.4400	16
79/10/31		3	135.3600	.0222	541.4400	12
79/11/01		0	136.6596	.0000	553.1000	0
79/11/05		3	201.9600	.0149	807.8400	12
79/11/08		2	201.9600	.0099	807.8400	8

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
ROSETON STATION-BUBBLER OFF - DAY

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/22		6	135.3600	.0443	541.4400	24
79/10/25		5	133.4401	.0375	541.4400	20
79/10/30		6	135.3600	.0443	541.4400	24
79/11/01		6	135.9204	.0441	553.1000	24
79/11/05		0	165.4995	.0000	807.8400	0
79/11/08		2	201.9600	.0099	807.8400	8

NOTE: * LESS THAN 0.5000
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
ROSETON STATION-BUBBLER OFF - NIGHT

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/22		347	135.3600	2.5635	541.4400	1388
79/10/25		125	135.3600	.9235	541.4400	500
79/10/30		57	135.3600	.4211	541.4400	228
79/11/01		81	144.2400	.5616	553.1000	311
79/11/05		157	201.9600	.7774	807.8400	628
79/11/08		32	201.9600	.1585	807.8400	128

NOTE: * LESS THAN 1.0000
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
ROSETON STATION-BUBBLER OFF - DAWN

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/22		57	131.6000	.4331	541.4400	234
79/10/29		138	127.8400	1.0795	541.4400	584
79/10/30		62	135.3600	.4580	541.4400	248
79/11/01		15	136.2900	.1101	553.1000	61
79/11/05		48	238.4195	.2013	807.8400	163
79/11/06		46	196.3500	.2343	807.8400	189

NOTE: * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
ROSETON STATION-BUBBLER OFF - DUSK

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/29		70	135.3600	.5171	541.4400	280
79/10/30		31	135.3600	.2290	541.4400	124
79/10/31		64	135.3600	.4728	541.4400	256
79/11/01		30	136.6596	.2195	553.1000	121
79/11/02		43	201.9600	.2129	807.8400	172
79/11/03		17	201.9600	.0842	807.8400	68

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
ROSETON STATION-BUBBLER OFF - DAY

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/22		12	135.3600	.0867	541.4400	48
79/10/29		13	133.4801	.0974	541.4400	53
79/10/30		1	135.3600	.0074	541.4400	4
79/11/01		2	135.9204	.0147	553.1000	8
79/11/05		0	165.4996	.0000	807.8400	0
79/11/08		3	201.9600	.0149	807.8400	12

NOTE: * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
ROSETON STATION-BUBBLER OFF - NIGHT

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/22		17	135.3600	.1256	541.4400	68
79/10/25		3	135.3600	.0242	541.4400	12
79/10/30		0	135.3600	.0000	541.4400	0
79/11/01		2	144.2400	.0139	553.1000	8
79/11/05		1	201.9600	.0050	807.8400	4
79/11/08		4	201.9600	.0198	807.8400	16

NOTE: * LESS THAN 0.0001
** LESS THAT 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
ROSETON STAION-BUBBLER OFF - DAWN

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATE*FLOW)
79/10/22		7	131.6000	.0562	541.4400	29
79/10/25		2	127.8400	.0156	541.4400	8
79/10/30		1	135.3600	.0074	541.4400	4
79/11/01		0	136.2900	.0000	553.1000	0
79/11/05		3	238.4195	.0126	807.8400	10
79/11/09		3	196.3500	.0153	807.8400	12

NOTE - * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
ROSETON STATION-RUBBLER OFF - DUSK

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/22		17	135.3600	.1256	541.4400	68
79/10/25		17	135.3600	.1256	541.4400	68
79/10/30		6	135.3600	.0443	541.4400	24
79/11/01		39	136.6596	.2854	553.1000	158
79/11/05		6	201.9600	.0297	807.8400	24
79/11/08		0	201.9600	.0000	807.8400	0

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
ROSETON STATION-BUBBLER OFF - DAY

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/22		1	135.3600	.0074	541.4400	4
79/10/25		3	133.4801	.0225	541.4400	12
79/10/30		8	135.3600	.0591	541.4400	32
79/11/01		27	135.9204	.1987	553.1000	110
79/11/05		19	165.4996	.1149	807.8400	93
79/11/08		18	201.9600	.0891	807.8400	72

.0E+ = A LESS THAN 5.0E01
** = LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1977 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
ROSETON STATION-BUBBLER OFF - NIGHT

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
77/10/22		62	135.3600	.458[illegible]	541.4400	248
77/10/25		184	135.3600	1.35[illegible]3	541.4400	736
77/10/30		290	135.3600	2.14[illegible]4	541.4400	1160
77/11/01		477	144.2400	3.30[illegible]0	553.1000	1829
77/11/05		261	201.9600	1.29[illegible]3	807.8400	1044
77/11/08		354	201.9600	1.75[illegible]8	807.8400	1416

[illegible]. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
ROSETON STATION-BUBBLER OFF - DAWN

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/22		21	131.6000	.1596	541.4400	86
79/10/29		43	127.8400	.3429	541.4400	169
79/10/30		25	135.3600	.1847	541.4400	100
79/11/01		212	136.2900	1.5555	553.1000	860
79/11/05		79	238.4195	.3314	807.8400	268
79/11/08		140	196.3500	.7120	807.8400	576

KEY: * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
ROSETON STATION-BUBBLER OFF - DUSK

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/22		164	135.3600	1.21e6	541.4400	656
79/10/25		133	135.3600	.98e6	541.4400	532
79/10/30		61	135.3600	.45e7	541.4400	244
79/11/01		389	136.6536	2.84e5	553.1000	1574
79/11/05		644	201.9600	3.20e6	807.8400	2592
79/11/09		292	201.9600	1.44e8	807.8400	1168

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
ROSETON STATION-BUBBLER ON - DAY

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/23		5	128.5898	.0389	541.4400	21
79/10/26		1	135.3600	.0074	541.4400	4
79/10/29		0	90.2400	.0000	541.4400	0
79/11/02		1	135.3600	.0074	541.4400	4
79/11/06		2	201.9600	.0099	807.8400	8
79/11/09		0	201.9600	.0000	807.8400	0

NOTE: * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
ROSETON STATION-BUBBLER ON - NIGHT

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/23		13	67.6800	.1921	541.4400	104
79/10/26		7	135.3600	.0517	541.4400	28
79/10/29		45	135.3600	.3325	541.4400	180
79/11/02		21	135.3600	.1551	541.4400	84
79/11/06		13	201.9600	.0644	807.8400	52
79/11/09		4	201.9600	.0198	807.8400	16

NOTE: * LESS THAN 1.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
ROSETON STATION-BUBBLER ON - DAWN

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/23		17	101.5200	.1675	541.4400	91
79/10/26		22	135.3600	.1625	541.4400	88
79/10/29		12	135.3600	.0887	541.4400	48
79/11/02		3	135.3600	.0222	541.4400	12
79/11/06		12	201.9600	.0594	807.8400	48
79/11/09		10	201.9600	.0495	807.8400	40

NOTE: * LESS THAN 1.0000
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
ROSETON STATION-BUBBLER ON - DUSK

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/25		1	28.2000	.0355	541.4400	19
79/10/26		63	135.3600	.4654	541.4400	252
79/10/29		57	135.3600	.4211	541.4400	228
79/11/02		1	135.3600	.0074	541.4400	4
79/11/06		7	201.9600	.0347	807.8400	28
79/11/09		22	201.9600	.1089	807.8400	88

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
ROSETON STATION-BUBBLER ON - DAY

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/23		2	128.5898	.0156	541.4400	8
79/10/26		1	135.3600	.0074	541.4400	4
79/10/29		0	90.2400	.0000	541.4400	0
79/11/02		0	135.3600	.0000	541.4400	0
79/11/06		0	201.9600	.0000	807.8400	0
79/11/09		0	201.9600	.0000	807.8400	0

NOTE - * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1977 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
ROSETON STATION-BUBBLER ON - NIGHT

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
77/10/23		2	67.6800	.0296	541.4400	16
77/10/26		3	135.3600	.0222	541.4400	12
77/10/29		0	135.3600	.0000	541.4400	0
77/11/02		1	135.3600	.0074	541.4400	4
77/11/06		3	201.9600	.0149	807.8400	12
77/11/09		4	201.9600	.0198	807.8400	16

NOTE. * LESS THAN .0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
ROSETON STATION-BUBBLER ON - DAWN

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/25		9	101.5200	.0887	541.4400	48
79/10/26		13	135.3600	.0960	541.4400	52
79/10/29		3	135.3600	.0222	541.4400	12
79/11/02		2	135.3600	.0148	541.4400	8
79/11/06		5	201.9600	.0248	807.8400	20
79/11/09		3	201.9600	.0149	807.8400	12

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
ROSETON STATION-BUBBLER ON - DUSK

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/23		0	28.2000	.0000	541.4400	0
79/10/26		6	135.3600	.0443	541.4400	24
79/10/29		3	135.3600	.0222	541.4400	12
79/11/02		4	135.3600	.0296	541.4400	16
79/11/06		4	201.9600	.0198	807.8400	16
79/11/09		18	201.9600	.0891	807.8400	72

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
ROSETON STATION-BUBBLER ON - DAY

DATE	DAILY INTERVAL	NO. FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/23		5	128.5898	.03c9	541.4400	21
79/10/26		9	135.3600	.06c5	541.4400	36
79/10/29		2	90.2400	.02c2	541.4400	12
79/11/02		5	135.3600	.03c9	541.4400	20
79/11/06		2	201.9600	.00c9	807.8400	8
79/11/09		4	201.9600	.01c8	807.8400	16

NOTE: * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1977 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
ROSETON STATION-BUBBLER ON - NIGHT

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
77/10/23		134	67.6800	2.03*0	541.4400	1104
77/10/26		53	135.3600	.39*6	541.4400	212
77/10/29		45	135.3600	.33*5	541.4400	180
77/11/02		85	135.3600	.62*0	541.4400	340
77/11/06		96	201.9600	.47*3	807.8400	384
77/11/09		24	201.9600	.11*8	807.8400	96

NOTE: * LESS THAN 0.0.01
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
ROSETON STATION-BUBBLER ON - DAWN

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/23		180	181.5200	.9850	541.4400	533
79/10/26		124	135.3600	.9161	541.4400	496
79/10/29		125	135.3600	.9235	541.4400	500
79/11/02		41	135.3600	.3029	541.4400	164
79/11/06		13	201.9600	.0941	807.8400	76
79/11/09		15	201.9600	.0743	807.8400	60

NOTE: * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
ROSETON STATION-BUBBLER ON - DUSK

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/23		3	28.2000	.1064	541.4400	58
79/10/26		31	135.3600	.2290	541.4400	124
79/10/29		56	135.3600	.4137	541.4400	224
79/11/02		28	135.3600	.2069	541.4400	112
79/11/06		30	201.9600	.1485	807.8400	120
79/11/09		13	201.9600	.0644	807.8400	52

CENTRAL HUDSON GAS & ELECTRIC CORP.
1977 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
ROSETON STATION-BUBBLER ON - DAY

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
77/10/23		6	128.5808	.0467	541.4400	25
77/10/26		4	135.3600	.0296	541.4400	16
77/10/29		0	90.2400	.0000	541.4400	0
77/11/02		7	135.3600	.0517	541.4400	28
77/11/05		0	201.9600	.0000	807.8400	0
77/11/09		1	201.9600	.0050	807.8400	4

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
ROSETON STATION-BUBBLER ON - NIGHT

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/23		50	67.6800	.7368	541.4400	400
79/10/24		8	135.3600	.0591	541.4400	32
79/10/25		3	135.3600	.0222	541.4400	12
79/11/02		2	135.3600	.0148	541.4400	8
79/11/06		0	201.9600	.0000	807.8400	0
79/11/09		8	201.9600	.0396	807.8400	32

NOTE - * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
ROSETON STATION-BUBBLER OT - DAWN

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/23		8	181.5200	.0768	541.4400	43
79/10/26		2	135.3600	.0148	541.4400	8
79/10/29		1	135.3600	.0074	541.4400	4
79/11/02		2	135.3600	.0148	541.4400	8
79/11/06		2	201.9600	.0099	807.8400	8
79/11/09		0	201.9600	.0000	807.8400	0

NOTE: * LESS THAN .0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
ROSETON STATION-BUBBLER ON - DUSK

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/23		7	28.2000	.2482	541.4400	134
79/10/26		14	135.3600	.1034	541.4400	76
79/10/29		1	135.3600	.0074	541.4400	4
79/11/02		26	135.3600	.1921	541.4400	104
79/11/06		5	201.9600	.0248	807.8400	20
79/11/09		0	201.9600	.0000	807.8400	0

CENTRAL HUDSON GAS & ELECTRIC CORP.
1977 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
ROSETON STATION-BUBBLER ON - DAY

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
77/10/23		0	128.6898	.0000	541.4400	0
77/10/24		3	135.3600	.0591	541.4400	32
77/10/25		2	90.2400	.0222	541.4400	12
77/11/02		114	135.3600	.8422	541.4400	456
77/11/04		2	201.9600	.0099	807.8400	8
77/11/05		13	201.9600	.0644	807.8400	52

* LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
ROSETON STATION-BUBBLER ON - NIGHT

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/25		185	67.6800	2.7335	541.4400	1480
79/10/26		311	135.3600	2.2976	541.4400	1244
79/10/29		251	135.3600	1.8543	541.4400	1004
79/11/02		235	135.3600	1.7361	541.4400	940
79/11/06		455	201.9600	2.2529	807.8400	1824
79/11/09		909	201.9600	4.5029	807.8400	3636

NOTE: * LESS THAN .0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1977 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
ROSETON STATION-HUBBLER ON - DAWN

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/25		65	101.5200	.6403	541.4400	347
79/10/26		17	135.3600	.1256	541.4400	68
79/10/29		80	135.3600	.5910	541.4400	320
79/11/02		293	135.3600	2.1646	541.4400	1172
79/11/05		82	201.9600	.4060	807.8400	328
79/11/09		117	201.9600	.5793	807.8400	468

NOTE: * LESS THAN 0.01 I
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

DAILY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
ROSETON STATION-BUBBLER ON - DUSK

DATE	DAILY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	DAILY FLOW(MG)	EST. NO. (RATEXFLOW)
79/10/23		46	28.2000	1.6312	541.4400	883
79/10/28		255	135.3600	1.8829	541.4400	1020
79/10/29		104	135.3600	1.4332	541.4400	776
79/11/02		504	135.3600	3.7234	541.4400	2016
79/11/06		197	201.9600	.9754	807.8400	788
79/11/09		183	201.9600	.9061	807.8400	732

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
RDE	[illegible]	BOT	4/11/79	1619	1624	1540.0	196.0000	.00	.00	.00	.00	.00	.00	
RDE	[illegible]	SUR	4/11/79	0037	0042	2050.0	241.0000	.00	.00	.00	.00	.00	.00	
RDE	[illegible]	BOT	4/12/79	0037	0042	2320.0	273.0000	.00	.00	.00	.00	.00	.00	
RDW	[illegible]	SUR	4/11/79	1513	1518	2110.0	249.0000	.00	.00	.00	.00	.00	.00	**
RDW	[illegible]	BOT	4/11/79	1513	1518	1870.0	220.0000	.00	.00	.00	.00	.00	.00	
RDW	[illegible]	SUR	4/11/79	2259	2304	1940.0	229.0000	.00	.00	.00	.00	.00	.00	
RDW	[illegible]	BOT	4/11/79	2315	2320	1980.0	233.0000	.00	.00	.00	.00	.00	.00	
RDCH	[illegible]	SUR	4/11/79	1535	1540	2080.0	246.0000	.00	.00	.00	.00	.00	.00	**
RDCH	[illegible]	BOT	4/11/79	1535	1540	1850.0	218.0000	.00	.00	.00	.00	.00	.00	
RDCH	[illegible]	MID	4/11/79	1537	1542	1770.0	209.0000	.00	.00	.00	.00	.00	.00	
RDCH	[illegible]	SUR	4/11/79	2333	2338	2030.0	239.0000	.00	.00	.00	.00	.00	.00	
RDCH	[illegible]	BOT	4/11/79	2333	2338	1640.0	193.0000	.00	.00	.00	.00	.00	.00	
RDCH	[illegible]	MID	4/11/79	2333	2338	2170.0	256.0000	.00	.00	.00	.00	.00	.00	
RDR	[illegible]	MID	4/11/79	1555	1600	1850.0	218.0000	.00	.00	.00	.00	.00	.00	**
RDR	[illegible]	SUR	4/11/79	1602	1608	2570.0	303.0000	.00	.00	.00	.00	.00	.00	
RDR	[illegible]	BOT	4/11/79	1603	1608	2070.0	246.0000	.00	.00	.00	.00	.00	.00	
RDP	[illegible]	MID	4/12/79	0006	0011	2060.0	243.0000	.00	.00	.00	.00	.00	.00	
RDR	[illegible]	SUR	4/12/79	0022	0027	2460.0	289.0000	.00	.00	.00	.00	.00	.00	
RDR	[illegible]	BOT	4/12/79	0022	0027	2390.0	280.0000	.00	.00	.00	.00	.00	.00	
RDE	[illegible]	SUR	4/17/79	1245	1250	2130.0	247.0000	.00	.00	.00	.00	.00	.00	**
RDE	[illegible]	BOT	4/17/79	1245	1250	1990.0	234.0000	.00	.00	.00	.00	.00	.00	
RDE	[illegible]	SUR	4/17/79	0055	0059	1930.0	227.0000	.00	.00	.00	.00	.00	.00	
RDE	[illegible]	BOT	4/17/79	0050	0055	1790.0	210.0000	.00	.00	.00	.00	.00	.00	
RDW	[illegible]	SUR	4/17/79	1119	1124	1670.0	195.0000	.00	.00	.00	.00	.00	.00	**
RDW	[illegible]	BOT	4/17/79	1119	1124	1920.0	226.0000	.00	.00	.00	.00	.00	.00	
RDW	[illegible]	SUR	4/17/79	2305	2310	2100.0	247.0000	.00	.00	.00	.00	.00	.00	
RDW	[illegible]	BOT	4/17/79	2305	2310	2110.0	249.0000	.00	.00	.00	.00	.00	.00	
RDCH	[illegible]	SUR	4/17/79	1135	1140	1950.0	230.0000	.00	.00	.00	.00	.00	.00	**
RDCH	[illegible]	BOT	4/17/79	1135	1140	1980.0	233.0000	.00	.00	.00	.00	.00	.00	
RDCH	[illegible]	MID	4/17/79	1151	1156	2240.0	264.0000	.00	.00	.00	.00	.00	.00	
RDCH	[illegible]	SUR	4/17/79	2321	2326	2040.0	240.0000	.00	.00	.00	.00	.00	.00	
RDCH	[illegible]	BOT	4/17/79	2321	2326	1750.0	206.0000	.00	.00	.00	.00	.00	.00	
RDCH	[illegible]	MID	4/17/79	2338	2343	2350.0	277.0000	.00	.00	.00	.00	.00	.00	
RDR	[illegible]	MID	4/17/79	1204	1209	2130.0	251.0000	.00	.00	.00	.00	.00	.00	**
RDR	[illegible]	SUR	4/17/79	1224	1234	1750.0	206.0000	.00	.00	.00	.00	.00	.00	
RDR	[illegible]	BOT	4/17/79	1229	1234	1850.0	218.0000	.00	.00	.00	.00	.00	.00	
RDS	[illegible]	MID	4/17/79	2350	2355	2220.0	262.0000	.00	.00	.00	.00	.00	.00	
RDR	[illegible]	SUR	4/18/79	0034	0039	2070.0	244.0000	.00	.00	.00	.00	.00	.00	
RDR	[illegible]	BOT	4/18/79	0034	0039	2050.0	241.0000	.00	.00	.00	.00	.00	.00	
RDE	[illegible]	SUR	4/24/79	1337	1342	2200.0	259.0000	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
RCE	[illegible]	BOT	4/24/79	1357	1342	1950.0	239.0000	.00	.00	.00	.00	.00	.00	
RCE	0560292	SUR	4/25/79	0013	0018	2010.0	237.0000	.00	.00	.00	.00	.00	.00	
RCE	0560293	BOT	4/25/79	0040	0045	1960.0	231.0000	.00	.00	.00	.00	.00	.00	
RCW	[illegible]	SUR	4/24/79	1058	1103	2110.0	249.0000	.00	.00	.00	.00	.00	.00	**
RCW	0560295	BOT	4/24/79	1058	1103	2310.0	272.0000	.00	.00	.00	.00	.00	.00	
RCW	0560284	SUR	4/24/79	2301	2306	2050.0	241.0000	.00	.00	.00	.00	.00	.00	
RCW	0560285	BOT	4/24/79	2301	2306	2180.0	257.0000	.00	.00	.00	.00	.00	.00	
RCCH	[illegible]	SUR	4/24/79	1127	1132	1780.0	210.0000	.00	.00	.00	.00	.00	.00	**
RCCH	0560277	BOT	4/24/79	1127	1132	2190.0	258.0000	.00	.00	.00	.00	.00	.00	
RCCH	[illegible]	MID	4/24/79	1142	1147	2040.0	240.0000	.00	.00	.00	.00	.00	.00	
RCCH	[illegible]	SUR	4/24/79	2318	2323	1830.0	216.0000	.00	.00	.00	.00	.00	.00	
RCCH	0560287	BOT	4/24/79	2318	2323	1810.0	213.0000	.00	.00	.00	.00	.00	.00	
RCCH	[illegible]	MID	4/24/79	2332	2337	2360.0	278.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	MID	4/24/79	1309	1314	2090.0	246.0000	.00	.00	.00	.00	.00	.00	**
RCR	[illegible]	SUR	4/24/79	1322	1327	2180.0	257.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	BOT	4/24/79	1322	1327	2060.0	243.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	MID	4/24/79	2344	2349	2020.0	238.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	SUR	4/24/79	2357	0002	2100.0	247.0000	.00	.00	.00	.00	.00	.00	
RCR	0560291	BOT	4/24/79	2357	0002	1830.0	216.0000	.00	.00	.00	.00	.00	.00	
RCE	[illegible]	SUR	5/01/79	1406	1411	1960.0	231.0000	.00	.00	.00	.00	.00	.00	**
RCE	[illegible]	BOT	5/01/79	1406	1411	1970.0	232.0000	.00	.00	.00	.00	.00	.00	
RCE	[illegible]	SUR	5/02/79	0033	0038	2010.0	237.0000	.00	.00	.00	.00	.00	.00	
RCE	[illegible]	BOT	5/02/79	0033	0038	2190.0	258.0000	.00	.00	.00	.00	.00	.00	
RCW	[illegible]	SUR	5/01/79	1157	1202	2040.0	240.0000	20.35	.00	.00	.00	.00	.00	**
RCW	0560299	BOT	5/01/79	1157	1202	2050.0	241.0000	12.45	.00	.00	.00	.00	.00	
RCW	0560304	SUR	5/01/79	2330	2335	2080.0	245.0000	.00	.00	.00	.00	.00	.00	
RCW	[illegible]	BOT	5/01/79	2330	2335	2250.0	265.0000	3.77	.00	.00	.00	.00	.00	
RCCH	[illegible]	SUR	5/01/79	1222	1227	1835.0	216.0000	.00	.00	.00	.00	.00	.00	**
RCCH	[illegible]	BOT	5/01/79	1222	1227	1480.0	174.0000	.00	.00	.00	.00	.00	.00	
RCCH	[illegible]	MID	5/01/79	1326	1331	1840.0	217.0000	.00	.00	.00	.00	.00	.00	
RCCH	[illegible]	SUR	5/01/79	2344	2349	2230.0	263.0000	.00	.00	.00	.00	.00	.00	
RCCH	[illegible]	BOT	5/01/79	2344	2349	1990.0	234.0000	.00	.00	.00	.00	.00	.00	
RCCH	[illegible]	MID	5/01/79	2354	2359	2530.0	298.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	MID	5/01/79	1338	1343	2060.0	243.0000	.00	.00	.00	.00	.00	.00	**
RCR	[illegible]	SUR	5/01/79	1352	1357	1930.0	227.0000	.00	.00	.00	.00	.00	.00	
RCR	0560301	BOT	5/01/79	1352	1357	1890.0	223.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	MID	5/02/79	0009	0014	2300.0	271.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	SUR	5/02/79	0021	0026	2230.0	263.0000	.00	.00	.00	.00	.00	.00	
RCR	0560311	BOT	5/02/79	0021	0026	2070.0	244.0000	.00	.00	.00	.00	.00	.00	
RCE	0560322	SUR	5/08/79	1349	1354	2420.0	285.0000	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
RDE	[illegible]	BOT	5/06/79	1349	1354	2360.0	278.0000	3.60	.00	.00	.00	.00	.00	
RDE	[illegible]	SUR	5/09/79	0044	0049	2070.0	244.0000	.00	.00	.00	.00	.00	.00	
RDE	[illegible]	BOT	5/09/79	0044	0049	2260.0	269.0000	.00	.00	.00	.00	.00	.00	
RDW	[illegible]	SUR	5/08/79	1140	1145	2010.0	237.0000	.00	.00	.00	.00	.00	.00	**
RDW	[illegible]	BOT	5/08/79	1140	1145	2190.0	258.0000	3.88	.00	.00	.00	.00	.00	
RDW	[illegible]	SUR	5/04/79	2330	2335	2090.0	246.0000	4.07	.00	.00	.00	.00	.00	
RDW	[illegible]	BOT	5/04/79	2330	2335	2340.0	276.0000	18.12	.00	.00	.00	.00	.00	
RDCH	[illegible]	SUR	5/08/79	1246	1251	2060.0	243.0000	.00	.00	.00	.00	.00	.00	**
RDCH	[illegible]	BOT	5/08/79	1246	1251	2210.0	260.0000	.00	.00	.00	.00	.00	.00	
RDCH	[illegible]	MID	5/08/79	1306	1311	2220.0	262.0000	.00	.00	.00	.00	.00	.00	
RDCH	[illegible]	SUR	5/04/79	2346	2351	2450.0	289.0000	.00	.00	.00	.00	.00	.00	
RDCH	[illegible]	BOT	5/04/79	2346	2351	2030.0	239.0000	.00	.00	.00	.00	.00	.00	
RDCH	[illegible]	MID	5/09/79	0001	0006	2150.0	253.0000	3.95	.00	.00	.00	.00	.00	
RDR	[illegible]	MID	5/08/79	1318	1323	2170.0	256.0000	.00	.00	.00	.00	.00	.00	**
RDR	[illegible]	SUR	5/04/79	1332	1337	2210.0	260.0000	.00	.00	.00	.00	.00	.00	
RDR	[illegible]	BOT	5/08/79	1332	1337	2100.0	247.0000	.00	.00	.00	.00	.00	.00	
RDR	[illegible]	MID	5/09/79	0015	0020	2390.0	282.0000	.00	.00	.00	.00	.00	.00	
RDR	[illegible]	SUR	5/09/79	0029	0034	2140.0	252.0000	.00	.00	.00	.00	.00	.00	
RDR	[illegible]	BOT	5/09/79	0029	0034	1890.0	223.0000	.00	.00	.00	.00	.00	.00	
RDE	[illegible]	SUR	5/15/79	1316	1321	2100.0	247.0000	.00	4.05	.00	4.05	.00	.00	**
RDE	[illegible]	BOT	5/15/79	1316	1321	1810.0	213.0000	9.39	14.08	4.69	9.39	.00	.00	
RDE	[illegible]	SUR	5/14/79	0048	0053	1950.0	230.0000	.00	30.43	.00	30.43	.00	.00	
RDE	[illegible]	BOT	5/16/79	0048	0053	1720.0	203.0000	.00	4.93	.00	4.93	.00	.00	
RDW	[illegible]	SUR	5/15/79	1154	1159	2110.0	249.0000	20.08	16.06	12.05	4.02	.00	.00	**
RDW	[illegible]	BOT	5/15/79	1154	1159	2130.0	253.0000	11.86	11.86	11.86	.00	.00	.00	
RDW	[illegible]	SUR	5/15/79	2352	2358	1930.0	227.0000	.00	4.41	4.41	.00	.00	.00	
RDW	[illegible]	BOT	5/15/79	2353	2358	1930.0	227.0000	17.62	4.41	.00	4.41	.00	.00	
RDCH	[illegible]	SUR	5/15/79	1214	1219	1980.0	233.0000	.00	.00	.00	.00	.00	.00	**
RDCH	[illegible]	BOT	5/15/79	1214	1219	2030.0	239.0000	.00	8.37	8.37	.00	.00	.00	
RDCH	[illegible]	MID	5/15/79	1232	1237	2280.0	269.0000	.00	3.72	3.72	.00	.00	.00	
RDCH	[illegible]	SUR	5/15/79	2350	2355	2090.0	238.0000	.00	8.40	4.20	4.20	.00	.00	
RDCH	[illegible]	BOT	5/15/79	2350	2355	1830.0	216.0000	.00	.00	.00	.00	.00	.00	
RDCH	[illegible]	MID	5/14/79	0006	0011	2250.0	265.0000	.00	.00	.00	.00	.00	.00	
RDR	[illegible]	MID	5/15/79	1247	1252	1940.0	229.0000	4.37	21.83	8.73	13.10	.00	.00	**
RDR	[illegible]	SUR	5/15/79	1302	1307	1850.0	219.0000	.00	.00	.00	.00	.00	.00	
RDR	[illegible]	BOT	5/15/79	1302	1307	1820.0	214.0000	.00	14.02	.00	14.02	.00	.00	
RDR	[illegible]	MID	5/15/79	0019	0024	2250.0	265.0000	.00	18.87	.00	11.32	.00	7.55	
RDR	[illegible]	SUR	5/14/79	0033	0038	2030.0	239.0000	.00	8.37	.00	8.37	.00	.00	
RDR	[illegible]	BOT	5/14/79	0033	0038	2040.0	240.0000	4.17	12.50	8.33	4.17	.00	.00	
RDC	[illegible]	SUR	5/22/79	1337	1342	2020.0	238.0000	.00	117.65	.00	117.65	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
ROE	[illegible]	BOT	5/22/79	1357	1342	1770.0	209.0000	4.78	47.85	.00	47.85	.00	.00	
ROE	[illegible]	SUR	5/23/79	0115	0120	2420.0	238.0000	4.20	109.24	.00	109.24	.00	.00	
ROE	[illegible]	BOT	5/23/79	0115	0120	1910.0	225.0000	.00	173.33	.00	173.33	.00	.00	
ROW	[illegible]	SUR	5/22/79	1218	1223	2490.0	246.0000	.00	48.78	.00	48.78	.00	.00	**
ROW	[illegible]	BOT	5/22/79	1218	1223	1850.0	218.0000	4.59	27.52	.00	27.52	.00	.00	
ROW	[illegible]	SUR	5/22/79	2340	2345	2030.0	239.0000	4.18	133.89	.00	133.89	.00	.00	
ROW	[illegible]	BOT	5/22/79	2340	2345	2100.0	247.0000	.00	36.44	.00	36.44	.00	.00	
ROCH	[illegible]	SUR	5/23/79	1232	1237	2040.0	239.0000	.00	16.74	.00	16.74	.00	.00	**
ROCH	[illegible]	BOT	5/23/79	1232	1237	1670.0	197.0000	.00	76.14	.00	76.14	.00	.00	
ROCH	[illegible]	MID	5/22/79	1249	1254	2090.0	245.0000	.00	138.78	.00	138.78	.00	.00	
ROCH	[illegible]	SUR	5/23/79	0000	0005	2380.0	245.0000	.00	420.41	.00	420.41	.00	.00	
ROCH	[illegible]	BOT	5/23/79	0000	0005	2190.0	258.0000	3.88	364.34	.00	364.34	.00	.00	
ROCH	[illegible]	MID	5/23/79	0014	0019	2410.0	284.0000	.00	545.77	.00	545.77	.00	.00	
ROR	[illegible]	MID	5/22/79	1313	1318	1990.0	236.0000	.00	1091.30	.00	1091.30	.00	.00	**
ROR	[illegible]	SUR	5/23/79	1325	1330	2190.0	258.0000	.00	7.75	.00	7.75	.00	.00	
ROR	[illegible]	BOT	5/22/79	1325	1330	1760.0	207.0000	.00	1014.49	.00	1014.49	.00	.00	
ROR	[illegible]	MID	5/23/79	0042	0047	2550.0	298.0000	.00	640.94	10.07	630.87	.00	.00	
ROR	[illegible]	SUR	5/23/79	0059	0104	2080.0	245.0000	.00	836.73	.00	836.73	.00	.00	
ROR	[illegible]	BOT	5/23/79	0059	0104	2090.0	236.0000	.00	288.14	.00	288.14	.00	.00	
ROE	[illegible]	SUR	5/25/79	1254	1259	2110.0	249.0000	12.05	60.24	.00	60.24	.00	.00	**
ROE	[illegible]	BOT	5/25/79	1254	1259	1980.0	233.0000	4.29	107.30	.00	107.30	.00	.00	
ROE	[illegible]	SUR	5/26/79	0054	0059	2580.0	304.0000	.00	62.50	.00	62.50	.00	.00	
ROE	[illegible]	BOT	5/26/79	0054	0059	2380.0	280.0000	.00	32.14	.00	32.14	.00	.00	
ROW	[illegible]	SUR	5/25/79	1134	1139	2275.0	267.0000	86.14	14.98	.00	14.98	.00	.00	**
ROW	[illegible]	BOT	5/25/79	1134	1139	2250.0	265.0000	83.02	101.89	.00	101.89	.00	.00	
ROW	[illegible]	SUR	5/25/79	2334	2339	2140.0	252.0000	23.81	226.19	.00	226.19	.00	.00	
ROW	[illegible]	BOT	5/25/79	2334	2339	2140.0	252.0000	71.43	31.75	.00	31.75	.00	.00	
ROCH	[illegible]	SUR	5/25/79	1154	1159	2140.0	252.0000	.00	571.43	.00	571.43	.00	.00	**
ROCH	[illegible]	BOT	5/25/79	1154	1159	1520.0	179.0000	22.35	547.49	.00	547.49	.00	.00	
ROCH	[illegible]	MID	5/25/79	1213	1218	2060.0	243.0000	.00	3703.70	.00	3703.70	.00	.00	
ROCH	[illegible]	SUR	5/26/79	2353	2358	2160.0	254.0000	.00	535.43	.00	535.43	.00	.00	
ROCH	[illegible]	BOT	5/25/79	2353	2358	2060.0	236.0000	4.24	444.92	.00	444.92	.00	.00	
ROCH	[illegible]	MID	5/26/79	0010	0015	2030.0	239.0000	.00	100.42	.00	100.42	.00	.00	
ROR	[illegible]	MID	5/25/79	1227	1232	2060.0	243.0000	.00	2131.69	.00	2131.69	.00	.00	**
ROR	[illegible]	SUR	5/25/79	1239	1244	2130.0	251.0000	.00	31.87	.00	31.87	.00	.00	
ROR	[illegible]	BOT	5/25/79	1239	1244	1600.0	188.0000	.00	559.51	10.64	547.87	.00	.00	
ROR	[illegible]	MID	5/26/79	0023	0028	2060.0	243.0000	.00	4913.58	164.61	4748.97	.00	.00	
ROR	[illegible]	SUR	5/26/79	0037	0042	2170.0	256.0000	.00	643.41	.00	643.41	.00	.00	
ROR	[illegible]	BOT	5/26/79	0037	0042	2060.0	236.0000	.00	88.98	.00	88.98	.00	.00	
ROE	[illegible]	SUR	5/29/79	1329	1334	2280.0	269.0000	.00	63.20	.00	63.20	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
RDE	[illegible]	BOT	5/29/79	1329	1334	2293.0	270.0000	.00	318.52	.00	318.52	.00	.00	
RDE	[illegible]	SUR	5/29/79	0049	0054	2080.0	245.0000	.00	477.55	.00	477.55	.00	.00	
RDE	[illegible]	BOT	5/29/79	0049	0054	1870.0	220.0000	.00	440.91	.00	440.91	.00	.00	
RDW	[illegible]	SUR	5/29/79	1154	1159	2010.0	237.0000	4.22	12.66	4.22	8.44	.00	.00	**
RDW	[illegible]	BOT	5/29/79	1154	1159	1770.0	231.0000	34.63	4.33	.00	4.33	.00	.00	
RDW	[illegible]	SUR	5/29/79	2332	2337	2130.0	250.0000	64.00	92.00	.00	92.00	.00	.00	
RDW	[illegible]	BOT	5/29/79	2332	2337	2110.0	249.0000	92.37	76.31	.00	76.31	.00	.00	
RDCH	[illegible]	SUR	5/29/79	1224	1229	2130.0	247.0000	.00	4.05	.00	4.05	.00	.00	**
RDCH	[illegible]	BOT	5/29/79	1224	1229	2220.0	262.0000	3.82	38.17	.00	38.17	.00	.00	
RDCH	[illegible]	MID	5/29/79	1241	1246	2370.0	279.0000	.00	724.01	.00	724.01	.00	.00	
RDCH	[illegible]	SUR	5/29/79	2348	2353	2060.0	243.0000	16.46	1547.33	205.76	1341.56	.00	.00	
RDCH	[illegible]	BOT	5/29/79	2348	2353	2000.0	236.0000	.00	457.63	.00	457.63	.00	.00	
RDCH	[illegible]	MID	5/30/79	0005	0010	2130.0	251.0000	3.98	1390.44	.00	1390.44	.00	.00	
RDW	[illegible]	MID	5/29/79	1257	1302	2290.0	269.0000	.00	992.28	.00	992.28	.00	.00	**
RDW	[illegible]	SUR	5/29/79	1312	1317	2210.0	260.0000	3.85	126.92	3.85	123.08	.00	.00	
RDW	[illegible]	BOT	5/29/79	1312	1317	2350.0	277.0000	14.44	429.60	.00	429.60	.00	.00	
RDW	[illegible]	MID	5/30/79	0019	0024	2390.0	282.0000	.00	1539.01	.00	1539.01	.00	.00	
RDW	[illegible]	SUR	5/30/79	0033	0038	1800.0	212.0000	4.72	1061.32	.00	1061.32	.00	.00	
RDW	[illegible]	BOT	5/30/79	0033	0038	1920.0	226.0000	.00	924.78	.00	924.78	.00	.00	
RDE	[illegible]	SUR	6/01/79	1335	1340	2040.0	240.0000	.00	104.17	.00	104.17	.00	.00	**
RDE	[illegible]	BOT	6/01/79	1335	1340	2210.0	260.0000	.00	584.62	.00	584.62	.00	.00	
RDL	[illegible]	SUR	6/02/79	0042	0047	2160.0	254.0000	.00	913.39	.00	913.39	.00	.00	
RDE	[illegible]	BOT	6/02/79	0042	0047	2180.0	257.0000	.00	264.59	.00	264.59	.00	.00	
RDW	[illegible]	SUR	6/01/79	1155	1200	2300.0	271.0000	.00	110.70	3.69	107.01	.00	.00	**
RDW	[illegible]	BOT	6/01/79	1155	1200	2270.0	267.0000	164.79	56.18	11.24	44.94	.00	.00	
RDW	[illegible]	SUR	6/01/79	2332	2337	2110.0	249.0000	.00	.00	.00	.00	.00	.00	
RDW	[illegible]	BOT	6/01/79	2332	2337	2060.0	243.0000	172.84	102.89	12.35	90.53	.00	.00	
RDCH	[illegible]	SUR	6/01/79	1220	1225	1860.0	221.0000	.00	212.12	4.33	207.79	.00	.00	**
RDCH	[illegible]	BOT	6/01/79	1220	1225	1390.0	164.0000	1520.73	597.56	.00	597.56	.00	.00	
RDCH	[illegible]	MID	6/01/79	1243	1248	2280.0	269.0000	7.43	401.49	.00	401.49	.00	.00	
RDCH	[illegible]	SUR	6/01/79	2348	2353	2160.0	253.0000	.00	229.25	15.81	213.44	.00	.00	
RDCH	[illegible]	BOT	6/01/79	2348	2353	1820.0	212.0000	4.72	358.49	18.87	339.62	.00	.00	
RDCH	[illegible]	MID	6/02/79	0004	0009	2430.0	284.0000	.00	288.70	.00	288.70	.00	.00	
RDW	[illegible]	MID	6/01/79	1300	1305	2350.0	274.0000	.00	580.29	18.25	562.04	.00	.00	**
RDW	[illegible]	SUR	6/01/79	1312	1317	2260.0	263.0000	.00	70.63	.00	70.63	.00	.00	
RDW	[illegible]	BOT	6/01/79	1312	1317	1660.0	193.0000	93.26	357.51	.00	357.51	.00	.00	
RDW	[illegible]	MID	6/02/79	0011	0016	2320.0	238.0000	.00	205.88	.00	205.88	.00	.00	
RDW	[illegible]	SUR	6/02/79	0028	0033	1980.0	233.0000	.00	643.78	.00	643.78	.00	.00	
RDW	[illegible]	BOT	6/02/79	0028	0033	1860.0	219.0000	9.13	205.48	.00	205.48	.00	.00	
RDE	[illegible]	SUR	6/[illegible]/79	1243	1248	1910.0	225.0000	.00	893.33	13.33	880.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
RCE	05e0442	BOT	5/08/79	1243	1248	1880.0	221.0000	13.57	742.08	.00	742.08	.00	.00	
RCE	05e0452	SUR	5/08/79	0100	0105	2340.0	276.0000	.00	97.83	.00	97.83	.00	.00	
RCE	05e0463	BOT	5/08/79	0100	0105	2230.0	263.0000	.00	577.36	.00	577.36	.00	.00	
RCW	05e0434	SUR	5/05/79	1132	1137	2010.0	237.0000	4.22	16.88	4.22	12.66	.00	.00	**
RCW	05e0443	BOT	5/05/79	1405	1410	2130.0	251.0000	147.41	83.67	.00	83.67	.00	.00	
RCW	05e0444	SUR	5/05/79	2335	2342	2210.0	260.0000	.00	38.46	.00	38.46	.00	.00	
RCW	05e0445	BOT	5/05/79	2335	2340	2200.0	260.0000	3.77	120.75	3.77	116.98	.00	.00	
RCCH	05e0435	SUR	5/05/79	1148	1153	2000.0	236.0000	.00	72.03	.00	72.03	.00	.00	**
RCCH	05e0436	BOT	5/05/79	1148	1153	1930.0	227.0000	.00	61.67	.00	61.67	.00	.00	
RCCH	05e0437	MID	5/05/79	1202	1207	1910.0	234.0000	.00	81.20	.00	81.20	.00	.00	
RCCH	05e0446	SUR	5/05/79	2353	2358	2220.0	259.0000	.00	108.11	.00	108.11	.00	.00	
RCCH	05e0447	BOT	5/05/79	2353	2358	2250.0	265.0000	.00	37.74	.00	37.74	.00	.00	
RCCH	05e0448	MID	5/05/79	0012	0017	2410.0	284.0000	.00	183.10	3.52	179.58	.00	.00	
RCE	05e0438	MID	5/08/79	1215	1220	2180.0	257.0000	.00	451.36	7.78	443.58	.00	.00	**
RCW	05e0439	SUR	5/05/79	1228	1233	1910.0	224.0000	.00	80.36	.00	80.36	.00	.00	
RCR	05e0440	BOT	5/05/79	1228	1235	2060.0	243.0000	.00	711.93	.00	711.93	.00	.00	
RCH	05e0449	MID	5/08/79	0024	0029	2290.0	270.0000	.00	103.70	.00	103.70	.00	.00	
RCR	05e0450	SUR	5/08/79	0042	0047	2070.0	244.0000	.00	131.15	.00	131.15	.00	.00	
RCR	05e0451	BOT	5/08/79	0042	0047	1960.0	231.0000	.00	155.84	.00	155.84	.00	.00	
RCE	05e [illegible]	SUR	5/08/79	1254	1259	1960.0	231.0000	.00	43.29	.00	43.29	.00	.00	**
RCE	05e0453	BOT	5/08/79	1254	1259	1920.0	226.0000	.00	4517.70	.00	4517.70	.00	.00	
RCE	05e0472	SUR	5/09/79	0052	0057	1810.0	213.0000	4.69	131.46	.00	131.46	.00	.00	
RCE	05e0473	BOT	5/09/79	0052	0057	1850.0	218.0000	.00	148.79	18.35	128.44	.00	.00	
RCW	05e0454	SUR	5/08/79	1134	1143	2030.0	239.0000	29.29	79.50	4.18	75.31	.00	.00	**
RCW	05e0455	BOT	5/08/79	1138	1143	2470.0	291.0000	85.91	51.59	3.44	48.11	.00	.00	
RCW	05e0464	SUR	5/08/79	2353	2358	2140.0	253.0000	162.06	43.48	3.95	39.53	.00	.00	
RCW	05e0465	BOT	5/08/79	2353	2359	2270.0	266.0000	456.17	18.80	.00	18.80	.00	.00	
RCCH	05e0456	SUR	5/08/79	1159	1204	2060.0	243.0000	.00	185.19	12.35	172.84	.00	.00	**
RCCH	05e0457	BOT	5/08/79	1159	1204	2160.0	253.0000	.00	150.20	.00	150.20	.00	.00	
RCCH	05e0458	MID	5/08/79	1212	1217	2260.0	266.0000	.00	217.86	.00	217.86	.00	.00	
RCCH	05e0466	SUR	5/09/79	2351	2356	1970.0	232.0000	4.31	538.79	.00	538.79	.00	.00	
RCCH	05e0467	BOT	5/09/79	2351	2356	1650.0	194.0000	15.46	159.79	.00	159.79	.00	.00	
RCCH	05e0468	MID	5/09/79	0007	0012	2150.0	254.0000	3.94	318.90	.00	318.90	.00	.00	
RCR	05e0459	MID	5/08/79	1227	1232	2100.0	247.0000	.00	1052.63	.00	1052.63	.00	.00	**
RCR	05e0460	SUR	5/08/79	1238	1243	2110.0	249.0000	.00	24.10	.00	24.10	.00	.00	
RCR	05e0461	BOT	5/08/79	1238	1243	1970.0	232.0000	.00	77.59	.00	77.59	.00	.00	
RCR	05e0469	MID	5/09/79	0021	0026	1900.0	224.0000	.00	678.57	.00	678.57	.00	.00	
RCR	05e0470	SUR	5/09/79	0035	0040	2050.0	241.0000	.00	1448.13	.00	1448.13	.00	.00	
RCR	05e0471	BOT	5/09/79	0035	0040	1522.0	179.0000	15.76	279.33	.00	279.33	.00	.00	
RCE	05e0482	SUR	5/12/79	1346	1351	1910.0	224.0000	8.93	13.39	.00	13.39	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
RCC	[illegible]	BOT	6/12/79	1346	1351	2040.0	240.0000	50.00	16.67	.00	16.67	.00	.00	
RCL	[illegible]	SUR	6/13/79	0041	0046	1960.0	231.0000	.00	25.97	.00	25.97	.00	.00	
RCE	[illegible]	BOT	6/13/79	0041	0046	1920.0	226.0000	22.12	70.80	.00	70.80	.00	.00	
RCL	[illegible]	SUR	6/13/79	1210	1215	2250.0	265.0000	15.09	26.42	.00	26.42	.00	.00	**
RCW	[illegible]	BOT	6/13/79	1210	1215	2270.0	267.0000	52.43	74.91	.00	74.91	.00	.00	
RCL	[illegible]	SUR	6/13/79	2331	2336	1490.0	217.0000	32.26	147.47	.00	147.47	.00	.00	
RCE	[illegible]	BOT	6/13/79	2331	2336	1470.0	220.0000	50.00	59.09	.00	59.09	.00	.00	
RCCH	[illegible]	SUR	6/13/79	1229	1234	2090.0	246.0000	.00	.00	.00	.00	.00	.00	**
RCCH	[illegible]	BOT	6/14/79	1229	1234	2040.0	240.0000	8.33	475.00	16.67	458.33	.00	.00	
RCCH	[illegible]	MID	6/13/79	1307	1312	2200.0	236.0000	.00	258.47	.00	258.47	.00	.00	
RCCH	[illegible]	SUR	6/13/79	2347	2352	2310.0	272.0000	.00	397.06	.00	397.06	.00	.00	
RCCH	[illegible]	BOT	6/13/79	2347	2352	2060.0	243.0000	.00	576.13	.00	576.13	.00	.00	
RCCH	[illegible]	MID	6/13/79	0003	0008	2250.0	265.0000	.00	433.96	.00	433.96	.00	.00	
RCR	[illegible]	MID	6/14/79	1317	1322	2090.0	246.0000	.00	40.65	.00	40.65	.00	.00	**
RCR	[illegible]	SUR	6/12/79	1331	1336	1950.0	224.0000	.00	35.71	.00	35.71	.00	.00	
RCR	[illegible]	BOT	6/14/79	1331	1336	1940.0	229.0000	4.37	78.60	.00	78.60	.00	.00	
RCR	[illegible]	MID	6/13/79	0016	0021	2230.0	263.0000	.00	589.35	.00	589.35	.00	.00	
RCR	[illegible]	SUR	6/13/79	0027	0032	2070.0	239.0000	.00	326.36	.00	326.36	.00	.00	
RCR	[illegible]	BOT	6/13/79	0027	0032	1810.0	213.0000	.00	248.83	.00	248.83	.00	.00	
RCE	[illegible]	SUR	6/15/79	1255	1300	2280.0	245.0000	.00	32.65	.00	32.65	.00	.00	**
RCE	[illegible]	BOT	6/15/79	1255	1300	2220.0	262.0000	.00	64.89	.00	64.89	.00	.00	
RCE	[illegible]	SUR	6/15/79	0109	0113	1760.0	230.0000	.00	339.13	.00	339.13	.00	.00	
RCE	[illegible]	BOT	6/15/79	0108	0113	2040.0	240.0000	.00	211.38	.00	211.38	.00	.00	
RCW	[illegible]	SUR	6/15/79	1130	1135	2110.0	249.0000	.00	192.77	.00	192.77	.00	.00	**
RCW	[illegible]	BOT	6/15/79	1130	1135	2260.0	263.0000	83.65	19.01	.00	19.01	.00	.00	
RCW	[illegible]	SUR	6/15/79	2332	2337	2030.0	239.0000	.00	456.07	.00	456.07	.00	.00	
RCW	[illegible]	BOT	6/15/79	2332	2337	2060.0	246.0000	48.78	382.11	.00	382.11	.00	.00	
RCCH	[illegible]	SUR	6/15/79	1155	1200	2350.0	274.0000	.00	62.04	.00	62.04	.00	.00	**
RCCH	[illegible]	BOT	6/15/79	1155	1200	1660.0	194.0000	20.62	417.53	.00	417.53	.00	.00	
RCCH	[illegible]	MID	6/15/79	1210	1215	2190.0	257.0000	.00	918.29	.00	918.29	.00	.00	
RCCH	[illegible]	SUR	6/15/79	2356	2359	1970.0	247.0000	.00	334.80	.00	334.80	.00	.00	
RCCH	[illegible]	BOT	6/15/79	2350	2355	2000.0	236.0000	16.95	508.47	.00	508.47	.00	.00	
RCCH	[illegible]	MID	6/15/79	0008	0013	1940.0	229.0000	.00	668.12	.00	668.12	.00	.00	
RCR	[illegible]	MID	6/15/79	1225	1230	2130.0	250.0000	.00	887.60	15.50	872.09	.00	.00	**
RCR	[illegible]	SUR	6/15/79	1239	1244	2390.0	271.0000	.00	7.38	.00	7.38	.00	.00	
RCR	[illegible]	BOT	6/15/79	1239	1244	2110.0	247.0000	.00	400.81	.00	400.81	.00	.00	
RCR	[illegible]	MID	6/15/79	0022	0027	2090.0	246.0000	.00	951.22	.00	951.22	.00	.00	
RCR	[illegible]	SUR	6/15/79	0036	0041	2190.0	257.0000	.00	860.56	.00	860.56	.00	.00	
RCR	[illegible]	BOT	6/15/79	0050	0055	1950.0	231.0000	21.65	1489.18	.00	1489.18	.00	.00	
RCE	[illegible]	SUR	6/15/79	1320	1325	2110.0	249.0000	.00	12.05	.00	12.05	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
RCE	[illegible]	BOT	6/19/79	1321	1325	1750.0	206.0000	.00	19.42	.00	19.42	.00	.00	
RCE	[illegible]	SUR	6/20/79	0102	0107	2240.0	276.0000	.00	257.25	.00	257.25	.00	.00	
RCE	[illegible]	BOT	6/20/79	0102	0107	2260.0	239.0000	8.37	322.18	.00	322.18	.00	.00	
RCE	[illegible]	SUR	6/19/79	1322	1326	2260.0	270.0000	.00	33.33	.00	33.33	.00	.00	**
RCW	[illegible]	BOT	6/19/79	1322	1328	1940.0	233.0000	4.29	472.10	.00	472.10	.00	.00	
RCW	[illegible]	SUR	6/19/79	2332	2337	2160.0	251.0000	.00	219.12	.00	219.12	.00	.00	
RCW	[illegible]	BOT	6/19/79	2332	2337	2010.0	236.0000	.00	211.86	.00	211.86	.00	.00	
RCCH	[illegible]	SUR	6/19/79	1226	1231	2200.0	259.0000	.00	.00	.00	.00	.00	.00	**
RCCH	[illegible]	BOT	6/19/79	1226	1231	1470.0	173.0000	.00	1161.85	.00	1161.85	.00	.00	
RCCH	[illegible]	MID	6/19/79	1240	1245	2050.0	241.0000	.00	464.73	.00	464.73	.00	.00	
RCCH	[illegible]	SUR	6/19/79	2356	2359	2040.0	240.0000	.00	1250.00	.00	1250.00	.00	.00	
RCCH	[illegible]	BOT	6/19/79	2350	2355	1770.0	209.0000	.00	827.75	.00	827.75	.00	.00	
RCCH	[illegible]	MID	6/20/79	0008	0013	2030.0	239.0000	.00	426.78	.00	426.78	.00	.00	
RCW	[illegible]	MID	6/19/79	1251	1256	2100.0	247.0000	.00	279.35	.00	279.35	.00	.00	**
RCR	[illegible]	SUR	6/19/79	1304	1309	1580.0	186.0000	.00	5.43	.00	5.43	.00	.00	
RCR	[illegible]	BOT	6/19/79	1304	1309	2320.0	273.0000	7.33	538.46	.00	538.46	.00	.00	
RCR	[illegible]	MID	6/20/79	0026	0031	1900.0	224.0000	.00	1102.68	.00	1102.68	.00	.00	
RCR	[illegible]	SUR	6/20/79	0043	0048	2260.0	266.0000	.00	267.49	.00	267.49	.00	.00	
RCW	[illegible]	BOT	6/20/79	0043	0048	1820.0	214.0000	.00	1107.42	18.69	1088.79	.00	.00	
RCE	[illegible]	SUR	6/22/79	1247	1252	2070.0	244.0000	.00	8.20	.00	8.20	.00	.00	**
RCE	[illegible]	BOT	6/22/79	1247	1252	1930.0	227.0000	4.41	158.59	.00	158.59	.00	.00	
RCE	[illegible]	SUR	6/23/79	0047	0052	1730.0	204.0000	.00	122.55	.00	122.55	.00	.00	
RCE	[illegible]	BOT	6/23/79	0047	0052	1760.0	234.0000	.00	161.76	.00	161.76	.00	.00	
RCW	[illegible]	SUR	6/22/79	1138	1142	1970.0	232.0000	8.62	77.59	.00	77.59	.00	.00	**
RCW	[illegible]	BOT	6/22/79	1138	1142	2250.0	265.0000	7.55	41.51	.00	41.51	.00	.00	
RCW	[illegible]	SUR	6/23/79	2334	2339	2060.0	243.0000	.00	53.50	.00	53.50	.00	.00	
RCW	[illegible]	BOT	6/23/79	2334	2339	2250.0	265.0000	.00	30.19	.00	30.19	.00	.00	
RCCH	[illegible]	SUR	6/22/79	1156	1201	1870.0	220.0000	.00	22.73	.00	22.73	.00	.00	**
RCCH	[illegible]	BOT	6/22/79	1156	1201	1460.0	172.0000	.00	352.94	.00	352.94	.00	.00	
RCCH	[illegible]	MID	6/22/79	1207	1212	2040.0	240.0000	.00	220.83	.00	220.83	.00	.00	
RCCH	[illegible]	SUR	6/23/79	2353	2358	2160.0	254.0000	.00	334.65	.00	334.65	.00	.00	
RCCH	[illegible]	MID	6/23/79	0005	0010	2020.0	238.0000	.00	357.14	.00	357.14	.00	.00	
RCCH	[illegible]	BOT	6/23/79	0005	0010	1590.0	186.0000	.00	1854.84	.00	1854.84	.00	.00	
RDR	[illegible]	MID	6/22/79	1219	1224	1910.0	225.0000	.00	177.78	.00	177.78	.00	.00	**
RDR	[illegible]	SUR	6/22/79	1232	1237	2070.0	244.0000	.00	8.20	.00	8.20	.00	.00	
RDR	[illegible]	BOT	6/22/79	1232	1237	1540.0	181.0000	.00	5718.23	.00	5718.23	.00	.00	
RDR	[illegible]	MID	6/23/79	0020	0025	1940.0	229.0000	.00	1179.04	.00	1179.04	.00	.00	
RDR	[illegible]	BOT	6/23/79	0020	0025	2170.0	256.0000	.00	722.66	.00	722.66	.00	.00	
RDR	[illegible]	SUR	6/23/79	0032	0037	2060.0	243.0000	.00	390.95	.00	390.95	.00	.00	
RCE	[illegible]	SUR	6/26/79	1245	1250	2190.0	258.0000	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
RCE	[illegible]	BOT	6/26/79	1245	1250	1[illegible]0.0	198.0000	10.10	20.20	.00	20.20	.00	.00	
RCE	[illegible]	SUR	6/27/79	0112	0117	2090.0	246.0000	.00	410.57	.00	410.57	.00	.00	
RCE	[illegible]	BOT	6/27/79	0112	0117	1750.0	207.0000	.00	560.39	.00	550.72	9.66	.00	
RCW	[illegible]	SUR	6/26/79	1134	1139	2140.0	252.0000	3.97	15.87	.00	15.87	.00	.00	**
RCW	[illegible]	BOT	6/26/79	1134	1139	2170.0	256.0000	.00	27.34	.00	27.34	.00	.00	
RCW	[illegible]	SUR	6/26/79	2343	2348	2080.0	245.0000	.00	61.22	.00	44.90	16.33	.00	
RCW	[illegible]	BOT	6/26/79	2343	2348	1780.0	210.0000	4.76	128.57	.00	114.29	14.29	.00	
RCCH	[illegible]	SUR	6/26/79	1149	1154	2180.0	257.0000	.00	3.89	.00	3.89	.00	.00	**
RCCH	[illegible]	BOT	6/26/79	1149	1154	1650.0	192.0000	.00	395.83	.00	395.83	.00	.00	
RCCH	[illegible]	MID	6/26/79	1205	1210	2210.0	260.0000	.00	26.92	.00	26.92	.00	.00	
RCCH	[illegible]	SUR	6/27/79	0001	0006	2090.0	246.0000	.00	89.43	.00	89.43	.00	.00	
RCCH	[illegible]	BOT	6/27/79	0001	0006	1520.0	179.0000	11.17	139.66	.00	139.66	.00	.00	
RCCH	[illegible]	MID	6/27/79	0025	0030	2120.0	250.0000	.00	136.00	.00	124.00	12.00	.00	
RDR	[illegible]	MID	6/26/79	1217	1222	2370.0	279.0000	.00	107.53	.00	107.53	.00	.00	**
RDR	[illegible]	SUR	6/26/79	1230	1235	2070.0	256.0000	.00	.00	.00	.00	.00	.00	
RDR	[illegible]	BOT	6/26/79	1230	1235	1840.0	217.0000	.00	502.30	.00	502.30	.00	.00	
RDR	[illegible]	MID	6/27/79	0134	0143	2150.0	257.0000	.00	420.23	.00	420.23	.00	.00	
RDR	[illegible]	SUR	6/27/79	0053	0058	2410.0	284.0000	.00	598.59	.00	598.59	.00	.00	
RDR	[illegible]	BOT	6/27/79	0052	0058	1900.0	224.0000	.00	236.61	.00	232.14	4.46	.00	
RCE	[illegible]	SUR	7/03/79	1259	1304	2120.0	250.0000	.00	.00	.00	.00	.00	.00	**
RCE	[illegible]	BOT	7/03/79	1259	1304	1920.0	226.0000	.00	8.85	.00	8.85	.00	.00	
RCE	[illegible]	SUR	7/04/79	0040	0045	2060.0	245.0000	.00	28.57	.00	28.57	.00	.00	
RCE	[illegible]	BOT	7/04/79	0040	0045	1850.0	218.0000	.00	97.22	.00	64.81	32.41	.00	
RCW	[illegible]	SUR	7/03/79	1150	1155	2120.0	250.0000	.00	.00	.00	.00	.00	.00	**
RCW	[illegible]	BOT	7/03/79	1150	1155	2100.0	250.0000	.00	20.00	.00	20.00	.00	.00	
RCW	[illegible]	SUR	7/03/79	2332	2337	2130.0	247.0000	.00	12.15	.00	12.15	.00	.00	
RCW	[illegible]	BOT	7/03/79	2332	2337	2070.0	244.0000	.00	114.75	.00	114.75	.00	.00	
RCCH	[illegible]	SUR	7/03/79	1206	1211	2120.0	250.0000	.00	.00	.00	.00	.00	.00	**
RCCH	[illegible]	BOT	7/03/79	1206	1211	2000.0	241.0000	.00	219.92	.00	219.92	.00	.00	
RCCH	[illegible]	MID	7/03/79	1219	1224	2080.0	243.0000	.00	.00	.00	.00	.00	.00	
RCCH	[illegible]	SUR	7/03/79	2346	2351	1860.0	219.0000	.00	13.70	.00	13.70	.00	.00	
RCCH	[illegible]	BOT	7/03/79	2346	2351	2420.0	285.0000	.00	31.58	.00	31.58	.00	.00	
RCCH	[illegible]	MID	7/04/79	0000	0005	2310.0	271.0000	.00	84.87	.00	84.87	.00	.00	
RDR	[illegible]	MID	7/03/79	1231	1236	2140.0	252.0000	.00	3.97	.00	3.97	.00	.00	**
RDR	[illegible]	SUR	7/03/79	1245	1250	2210.0	260.0000	.00	.00	.00	.00	.00	.00	
RDR	[illegible]	BOT	7/03/79	1245	1250	1660.0	231.0000	.00	194.81	.00	194.81	.00	.00	
RDR	[illegible]	MID	7/04/79	0013	0018	2190.0	258.0000	.00	135.66	.00	135.66	.00	.00	
RDR	[illegible]	SUR	7/04/79	0025	0030	2090.0	246.0000	.00	12.20	.00	12.20	.00	.00	
RDR	[illegible]	BOT	7/04/79	0025	0030	2080.0	245.0000	.00	114.29	.00	114.29	.00	.00	
RCE	[illegible]	SUR	7/10/79	1327	1332	2200.0	259.0000	.00	3.86	.00	3.86	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
RSE	[illegible]	BOT	7/10/79	1327	1332	1770.0	211.0000	.00	52.13	.00	52.13	.00	.00	
RSR	[illegible]	SUR	7/11/79	0745	0750	2260.0	266.0000	.00	18.80	.00	18.80	.00	.00	
RSE	[illegible]	BOT	7/11/79	0748	0756	1860.0	223.0000	.00	251.12	.00	219.73	31.39	.00	
RSW	[illegible]	SUR	7/11/79	1135	1140	1970.0	234.0000	.00	12.82	.00	12.82	.00	.00	**
RSW	[illegible]	BOT	7/11/79	1135	1140	2330.0	279.0000	.00	50.21	.00	50.21	.00	.00	
RSW	[illegible]	SUR	7/11/79	2353	2358	2150.0	253.0000	.00	39.53	.00	39.53	.00	.00	
RSW	[illegible]	BOT	7/12/79	2353	2358	2330.0	274.0000	.00	29.20	.00	21.90	7.30	.00	
RSCH	[illegible]	SUR	7/10/79	1153	1158	2320.0	273.0000	.00	.00	.00	.00	.00	.00	**
RSCH	[illegible]	BOT	7/10/79	1153	1158	1650.0	192.0000	.00	145.83	.00	140.63	5.21	.00	
RSCH	[illegible]	MID	7/10/79	1211	1216	2256.0	266.0000	.00	7.52	.00	7.52	.00	.00	
RSCH	[illegible]	SUR	7/10/79	2350	2355	2030.0	243.0000	.00	11.41	.00	11.41	.00	.00	
RSCH	[illegible]	BOT	7/10/79	2350	2355	1770.0	211.0000	.00	9.48	.00	9.48	.00	.00	
RSCH	[illegible]	MID	7/11/79	0007	0012	2070.0	246.0000	.00	52.85	.00	52.85	.00	.00	
RSR	[illegible]	MID	7/10/79	1225	1230	1860.0	223.0000	.00	.00	.00	.00	.00	.00	**
RSR	[illegible]	SUR	7/10/79	1305	1310	2350.0	280.0000	.00	.00	.00	.00	.00	.00	
RSR	[illegible]	BOT	7/10/79	1305	1310	2370.0	279.0000	.00	827.96	.00	827.96	.00	.00	
RSR	[illegible]	MID	7/11/79	0019	0024	2110.0	249.0000	.00	120.48	.00	120.48	.00	.00	
RSR	[illegible]	SUR	7/11/79	0022	0027	2210.0	260.0000	.00	11.54	.00	11.54	.00	.00	
RSR	[illegible]	BOT	7/11/79	0032	0037	1970.0	232.0000	.00	56.52	.00	56.52	.00	.00	
RSE	[illegible]	SUR	7/17/79	1258	1303	2170.0	258.0000	.00	.00	.00	.00	.00	.00	**
RSE	[illegible]	BOT	7/17/79	1258	1303	1910.0	226.0000	.00	.00	.00	.00	.00	.00	
RSE	[illegible]	SUR	7/17/79	0352	0358	2230.0	265.0000	.00	.00	.00	.00	.00	.00	
RSL	[illegible]	BOT	7/17/79	0353	0358	1970.0	234.0000	.00	38.46	.00	8.55	29.91	.00	
RSW	[illegible]	SUR	7/17/79	1123	1128	2150.0	253.0000	.00	.00	.00	.00	.00	.00	**
RSW	[illegible]	BOT	7/17/79	1123	1128	2070.0	236.0000	.00	8.47	.00	.00	8.47	.00	
RSW	[illegible]	SUR	7/17/79	2331	2336	2110.0	249.0000	.00	12.05	.00	12.05	.00	.00	
RSW	[illegible]	BOT	7/17/79	2331	2336	2090.0	245.0000	.00	57.14	.00	36.73	20.41	.00	
RSCH	[illegible]	SUR	7/17/79	1150	1155	2240.0	264.0000	.00	.00	.00	.00	.00	.00	**
RSCH	[illegible]	BOT	7/17/79	1150	1155	1710.0	202.0000	.00	180.00	.00	150.00	30.00	.00	
RSCH	[illegible]	MID	7/17/79	1204	1209	2460.0	290.0000	.00	.00	.00	.00	.00	.00	
RSCH	[illegible]	SUR	7/17/79	2347	2352	2170.0	256.0000	.00	.00	.00	.00	.00	.00	
RSCH	[illegible]	BOT	7/17/79	2347	2352	1850.0	218.0000	.00	126.17	.00	93.46	32.71	.00	
RSCH	[illegible]	MID	7/18/79	0004	0009	2350.0	280.0000	.00	17.86	.00	17.86	.00	.00	
RSW	[illegible]	MID	7/17/79	1228	1233	1510.0	177.0000	.00	.00	.00	.00	.00	.00	**
RSR	[illegible]	SUR	7/17/79	1241	1246	2190.0	257.0000	.00	.00	.00	.00	.00	.00	
RSR	[illegible]	BOT	7/17/79	1241	1246	1730.0	204.0000	.00	88.24	.00	83.33	4.90	.00	
RSR	[illegible]	MID	7/18/79	0021	0026	2570.0	303.0000	.00	16.50	.00	16.50	.00	.00	
RSR	[illegible]	SUR	7/18/79	0036	0041	2283.0	269.0000	.00	3.72	.00	3.72	.00	.00	
RSR	[illegible]	BOT	7/18/79	0036	0041	1870.0	220.0000	.00	100.00	.00	77.27	22.73	.00	
RSL	[illegible]	SUR	7/24/79	1235	1240	2030.0	239.0000	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./100 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
RCE	[illegible]	MCT	7/24/79	1235	1240	1880.0	221.0000	.00	4.52	.00	4.52	.00	.00	
RCE	[illegible]	SUR	7/24/79	0037	0042	1860.0	219.0000	.00	.00	.00	.00	.00	.00	
RCE	[illegible]	MCT	7/25/79	0037	0042	1780.0	210.0000	.00	47.62	.00	4.76	42.86	.00	
RCW	[illegible]	SUR	7/24/79	1135	1135	1940.0	229.0000	.00	.00	.00	.00	.00	.00	**
RCW	[illegible]	MCT	7/24/79	1135	1135	2120.0	250.0000	.00	52.00	.00	20.00	32.00	.00	
RCW	[illegible]	SUR	7/24/79	2333	2338	1670.0	197.0000	.00	25.38	.00	.00	25.38	.00	
RCW	[illegible]	MCT	7/24/79	2333	2338	2030.0	239.0000	.00	54.39	.00	8.37	46.03	.00	
RCCH	[illegible]	SUR	7/24/79	1145	1150	1840.0	223.0000	.00	.00	.00	.00	.00	.00	**
RCCH	[illegible]	MCT	7/24/79	1145	1150	1910.0	225.0000	.00	4.44	.00	.00	4.44	.00	
RCCH	[illegible]	MID	7/24/79	1202	1207	1960.0	231.0000	.00	.00	.00	.00	.00	.00	
RCCH	[illegible]	SUR	7/24/79	2346	2351	1640.0	193.0000	.00	.00	.00	.00	.00	.00	
RCCH	[illegible]	MCT	7/24/79	2346	2351	1320.0	155.0000	.00	.00	.00	.00	.00	.00	
RCCH	[illegible]	MID	7/24/79	2359	0004	2110.0	249.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	MID	7/24/79	1212	1217	1900.0	224.0000	.00	.00	.00	.00	.00	.00	**
RCR	[illegible]	SUR	7/24/79	1225	1230	1960.0	231.0000	.00	.00	.00	.00	.00	.00	
RCW	[illegible]	MCT	7/24/79	1225	1230	1500.0	177.0000	.00	5.65	.00	.00	5.65	.00	
RCR	[illegible]	MID	7/25/79	0011	0016	2070.0	244.0000	.00	4.10	.00	.00	4.10	.00	
RCR	[illegible]	SUR	7/25/79	0023	0028	1850.0	218.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	MCT	7/25/79	0023	0028	1530.0	180.0000	.00	.00	.00	.00	.00	.00	
RCE	[illegible]	SUR	7/31/79	1258	1303	1870.0	220.0000	.00	.00	.00	.00	.00	.00	**
RCE	[illegible]	MCT	7/31/79	1258	1303	1980.0	233.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	SUR	8/01/79	0105	0110	1980.0	233.0000	.00	.00	.00	.00	.00	.00	
RCE	[illegible]	MCT	8/01/79	0105	0110	1640.0	193.0000	.00	25.91	.00	.00	25.91	.00	
RCW	[illegible]	SUR	7/31/79	1141	1146	2020.0	238.0000	.00	.00	.00	.00	.00	.00	**
RCW	[illegible]	MCT	7/31/79	1141	1146	1870.0	220.0000	.00	.00	.00	.00	.00	.00	
RCW	[illegible]	SUR	7/31/79	2343	2348	1940.0	229.0000	.00	.00	.00	.00	.00	.00	
RCW	[illegible]	MCT	7/31/79	2343	2348	1970.0	234.0000	.00	8.55	.00	.00	8.55	.00	
RCCH	[illegible]	SUR	7/31/79	1157	1202	1850.0	218.0000	.00	.00	.00	.00	.00	.00	**
RCCH	[illegible]	MCT	7/31/79	1157	1202	1590.0	187.0000	.00	5.35	.00	.00	5.35	.00	
RCCH	[illegible]	MID	7/31/79	1216	1221	2340.0	276.0000	.00	.00	.00	.00	.00	.00	
RCCH	[illegible]	SUR	8/01/79	0101	0106	1850.0	212.0000	.00	.00	.00	.00	.00	.00	
RCCH	[illegible]	MCT	8/01/79	0101	0106	1640.0	188.0000	.00	5.05	.00	5.05	.00	.00	
RCCH	[illegible]	MID	8/01/79	0115	0120	2040.0	246.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	MID	7/31/79	1228	1233	2040.0	246.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	SUR	7/31/79	1243	1248	1950.0	230.0000	.00	.00	.00	.00	.00	.00	**
RCR	[illegible]	MCT	7/31/79	1243	1248	1590.0	183.0000	.00	10.93	.00	5.46	5.46	.00	
RCR	[illegible]	MID	8/01/79	0032	0037	1800.0	212.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	SUR	8/01/79	0047	0052	1870.0	220.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	MCT	8/01/79	0047	0052	1640.0	193.0000	.00	15.54	.00	.00	15.54	.00	
RCE	[illegible]	SUR	8/07/79	1309	1314	1870.0	220.0000	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WITH PEACH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
RCE	[illegible]	BOT	8/07/79	1319	1314	1[illegible]	194.0000	.00	.00	.00	.00	.00	.00	
RCE	[illegible]	SUR	8/06/79	0107	0112	2100.0	247.0000	.00	.00	.00	.00	.00	.00	
RCE	[illegible]	BOT	8/06/79	0107	0112	1940.0	229.0000	.00	21.83	.00	.00	21.83	.00	
RCW	[illegible]	SUR	8/07/79	1142	1147	1820.0	214.0000	.00	.00	.00	.00	.00	.00	**
RCW	[illegible]	BOT	8/07/79	1142	1147	1770.0	209.0000	.00	14.35	.00	.00	14.35	.00	
RCW	[illegible]	SUR	8/06/79	2330	2335	1760.0	207.0000	.00	.00	.00	.00	.00	.00	
RCW	[illegible]	BOT	8/06/79	2331	2335	2[illegible]	243.0000	.00	65.84	.00	.00	65.84	.00	
RCCH	[illegible]	SUR	8/07/79	1206	1211	2010.0	237.0000	.00	.00	.00	.00	.00	.00	**
RCCH	[illegible]	BOT	8/07/79	1206	1211	2040.0	240.0000	.00	4.17	.00	.00	4.17	.00	
RCCH	[illegible]	MID	8/07/79	1220	1225	2020.0	238.0000	.00	.00	.00	.00	.00	.00	
RCCH	[illegible]	SUR	8/06/79	2349	2354	2070.0	244.0000	.00	.00	.00	.00	.00	.00	
RCCH	[illegible]	MID	8/06/79	0009	0014	2061.0	243.0000	.00	.00	.00	.00	.00	.00	
RCCH	[illegible]	BOT	8/06/79	0009	0014	1510.0	178.0000	.00	5.62	.00	.00	5.62	.00	
RCR	[illegible]	MID	8/07/79	1236	1241	1770.0	209.0000	.00	.00	.00	.00	.00	.00	**
RCR	[illegible]	SUR	8/07/79	1251	1256	1760.0	208.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	BOT	8/07/79	1251	1256	1430.0	168.0000	.00	5.95	.00	.00	5.95	.00	
RCR	[illegible]	MID	8/06/79	0025	0030	2100.0	247.0000	.00	4.05	.00	4.05	.00	.00	
RCR	[illegible]	SUR	8/06/79	0038	0043	2120.0	237.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	BOT	8/06/79	0038	0043	1410.0	166.0000	.00	6.02	.00	.00	6.02	.00	
RCE	[illegible]	SUR	8/14/79	1251	1256	2020.0	238.0000	.00	.00	.00	.00	.00	.00	**
RCE	[illegible]	BOT	8/14/79	1251	1256	2020.0	238.0000	.00	.00	.00	.00	.00	.00	
RCE	[illegible]	SUR	8/15/79	0046	0051	2310.0	272.0000	.00	.00	.00	.00	.00	.00	
RCE	[illegible]	BOT	8/15/79	0046	0051	1860.0	219.0000	.00	.00	.00	.00	.00	.00	
RCW	[illegible]	SUR	8/14/79	1131	1136	2411.0	284.0000	.00	.00	.00	.00	.00	.00	**
RCW	[illegible]	BOT	8/14/79	1131	1136	2410.0	283.0000	.00	.00	.00	.00	.00	.00	
RCW	[illegible]	SUR	8/14/79	2336	2341	2080.0	245.0000	.00	.00	.00	.00	.00	.00	
RCW	[illegible]	BOT	8/14/79	2336	2341	2070.0	244.0000	.00	12.30	.00	.00	12.30	.00	
RCCH	[illegible]	SUR	8/14/79	1150	1155	2030.0	239.0000	.00	.00	.00	.00	.00	.00	**
RCCH	[illegible]	BOT	8/14/79	1150	1155	1840.0	193.0000	.00	10.36	.00	.00	10.36	.00	
RCCH	[illegible]	MID	8/14/79	1207	1212	2410.0	284.0000	.00	.00	.00	.00	.00	.00	
RCCH	[illegible]	SUR	8/14/79	2351	2356	2040.0	240.0000	.00	.00	.00	.00	.00	.00	
RCCH	[illegible]	BOT	8/14/79	2351	2356	1850.0	218.0000	.00	9.17	.00	.00	9.17	.00	
RCCH	[illegible]	MID	8/15/79	0008	0013	2130.0	250.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	MID	8/14/79	1221	1226	2150.0	253.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	SUR	8/14/79	1234	1239	1[illegible]	22[illegible].0000	.00	.00	.00	.00	.00	.00	**
RCR	[illegible]	BOT	8/14/79	1234	1239	2010.0	236.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	MID	8/15/79	0026	0031	2160.	254.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	SUR	8/15/79	0032	0037	2080.0	245.0000	.00	.00	.00	.00	.00	.00	
RCR	[illegible]	BOT	8/15/79	0032	0037	1680.0	198.0000	.00	5.05	.00	.00	5.05	.00	
RCE	[illegible]	SUR	8/28/79	1313	1318	2070.0	244.0000	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./100 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
RCE	C1C0723	BOT	6/28/79	1312	1319	1740.0	205.0000	.00	.00	.00	.00	.00	.00	
RCF	C1C0732	SUR	6/29/79	0050	0057	2020.0	234.0000	.00	.00	.00	.00	.00	.00	
RCE	C1C0753	BOT	6/29/79	0052	0057	2040.0	240.0000	.00	4.08	.00	.00	4.08	.00	
RCE	C1C0714	SUR	6/29/79	1204	1209	2040.0	240.0000	.00	.00	.00	.00	.00	.00	**
RCW	C1C0715	BOT	6/29/79	1204	1209	2040.0	240.0000	.00	.00	.00	.00	.00	.00	
RCW	C1C0729	SUR	6/29/79	2336	2338	2030.0	240.0000	.00	.00	.00	.00	.00	.00	
RCW	C1C0727	BOT	6/29/79	2336	2338	1960.0	231.0000	.00	12.99	.00	.00	12.99	.00	
RCCH	C1C0716	SUR	6/29/79	1221	1226	2040.0	240.0000	.00	.00	.00	.00	.00	.00	**
RCCH	C1C0717	BOT	6/29/79	1221	1226	1980.0	234.0000	.00	.00	.00	.00	.00	.00	
RCCH	C1C0711	MID	6/29/79	1235	1240	2050.0	239.0000	.00	.00	.00	.00	.00	.00	
RCCH	C1C0718	BOT	6/28/79	2349	2354	1790.0	210.0000	.00	4.76	.00	.00	4.76	.00	
RCCH	C1C0737	SUR	6/29/79	0008	0013	2070.0	244.0000	.00	.00	.00	.00	.00	.00	
RCCH	C1C0729	MID	6/29/79	0008	0013	2020.0	238.0000	.00	.00	.00	.00	.00	.00	
RCR	C1C0719	MID	6/29/79	1247	1252	1980.0	233.0000	.00	.00	.00	.00	.00	.00	
RCR	C1C0731	SUR	6/28/79	1300	1305	1970.0	232.0000	.00	.00	.00	.00	.00	.00	**
RCR	C1C0721	BOT	6/28/79	1300	1305	1650.0	194.0000	.00	.00	.00	.00	.00	.00	
RCR	C1C0729	MID	6/29/79	0022	0027	2110.0	249.0000	.00	.00	.00	.00	.00	.00	
RCW	C1C0735	SUR	6/29/79	0037	0042	1960.0	231.0000	.00	.00	.00	.00	.00	.00	
RCR	C1C0731	BOT	6/29/79	0037	0042	2060.0	243.0000	.00	4.12	.00	.00	4.12	.00	
RCC	C1C0742	SUR	7/11/79	1229	1234	1980.0	233.0000	.00	.00	.00	.00	.00	.00	**
RCC	C1C0743	BOT	7/11/79	1229	1234	2030.0	239.0000	.00	.00	.00	.00	.00	.00	
RCE	C1C0752	SUR	7/12/79	0039	0044	2020.0	238.0000	.00	.00	.00	.00	.00	.00	
RCC	C1C0753	BOT	7/12/79	0039	0044	1810.0	213.0000	.00	4.69	.00	.00	4.69	.00	
RCW	C1C0734	SUR	7/11/79	1111	1116	1960.0	231.0000	.00	.00	.00	.00	.00	.00	**
RCW	C1C0735	BOT	7/11/79	1111	1116	1920.0	226.0000	.00	.00	.00	.00	.00	.00	
RCW	C1C0744	SUR	7/11/79	2312	2317	2040.0	240.0000	.00	.00	.00	.00	.00	.00	
RCW	C1C0745	BOT	7/11/79	2312	2317	2070.0	247.0000	.00	3.75	.00	.00	3.75	.00	
RCCH	C1C0731	SUR	7/11/79	1131	1136	2050.0	241.0000	.00	.00	.00	.00	.00	.00	**
RCCH	C1C0737	BOT	7/11/79	1131	1136	1420.0	167.0000	.00	.00	.00	.00	.00	.00	
RCCH	C1C0738	MID	7/11/79	1100	1105	2690.0	317.0000	.00	.00	.00	.00	.00	.00	
RCCH	C1C0746	SUR	7/11/79	2330	2335	1990.0	234.0000	.00	.00	.00	.00	.00	.00	
RCCH	C1C0747	BOT	7/11/79	2330	2335	1490.0	176.0000	.00	.00	.00	.00	.00	.00	
RCCH	C1C0748	MID	7/11/79	2347	2352	2060.0	243.0000	.00	.00	.00	.00	.00	.00	
RCR	C1C0739	MID	7/11/79	1202	1207	1650.0	194.0000	.00	.00	.00	.00	.00	.00	
RCR	C1C0742	SUR	7/11/79	1215	1220	2050.0	239.0000	.00	.00	.00	.00	.00	.00	**
RCR	C1C0741	BOT	7/11/79	1215	1220	2050.0	239.0000	.00	.00	.00	.00	.00	.00	
RCR	C1C0745	MID	7/11/79	0003	0008	2220.0	262.0000	.00	.00	.00	.00	.00	.00	
RCR	C1C0750	SUR	7/12/79	0023	0028	2010.0	237.0000	.00	.00	.00	.00	.00	.00	
RCR	C1C0751	BOT	7/12/79	0023	0028	1960.0	231.0000	.00	.00	.00	.00	.00	.00	
C1	C1C0732	SUR	6/29/79	1150	1155	1970.0	46.0000	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (LARVAE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
DI	[illegible]	BOT	1/09/79	1130	1140	1530.0	44.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	1/09/79	1210	1220	1400.0	43.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	BOT	1/09/79	1200	1210	1350.0	46.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	SUR	1/09/79	2345	2355	1540.0	42.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	BOT	1/09/79	2345	2355	1700.0	51.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	SUR	1/10/79	0009	0019	1540.0	46.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	1/10/79	0009	0019	1830.0	54.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	1/23/79	1125	1135	1210.0	36.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	BOT	1/23/79	1125	1135	1400.0	42.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	SUR	1/23/79	1143	1153	1280.0	38.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	1/23/79	1143	1153	1520.0	45.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	1/23/79	2315	2325	1210.0	36.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	BOT	1/23/79	2315	2325	1370.0	41.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	SUR	1/24/79	2345	2355	1380.0	41.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	1/24/79	2345	2355	1170.0	34.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	2/06/79	1142	1152	1700.0	50.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	2/06/79	1142	1152	2090.0	61.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	2/06/79	1200	1210	1600.0	47.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	BOT	2/06/79	1200	1210	1700.0	50.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	SUR	2/06/79	2315	2325	1490.0	44.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	2/06/79	2315	2325	1600.0	47.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	2/06/79	2335	2345	1400.0	41.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	BOT	2/06/79	2335	2345	1440.0	42.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	SUR	2/13/79	1110	1120	1540.0	37.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	2/13/79	1110	1120	1430.0	42.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	2/13/79	1145	1155	1410.0	41.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	2/13/79	1145	1155	1640.0	48.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	2/13/79	2320	2330	1510.0	44.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	2/13/79	2320	2330	1590.0	46.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	2/13/79	2347	2357	1210.0	34.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	2/13/79	2347	2357	1490.0	43.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	2/20/79	1122	1132	1560.0	46.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	2/20/79	1122	1132	1490.0	44.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	2/20/79	1148	1158	1460.0	43.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	2/20/79	1148	1158	1830.0	54.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	2/20/79	2331	2341	1640.0	49.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	2/20/79	2331	2341	1770.0	52.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	2/20/79	2339	2349	1580.0	46.0000	.00	.00	.00	.00	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
CI	[illegible]	BOT	5/2[illegible]/79	2335	2345	1830.0	54.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/27/79	1109	1119	820.0	29.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/27/79	1109	1119	970.0	29.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/27/79	1124	1134	910.0	27.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/27/79	1124	1134	890.0	26.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/27/79	2318	2328	1140.0	34.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/27/79	2318	2328	1370.0	41.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/27/79	2333	2343	1110.0	33.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/27/79	2333	2343	1130.0	34.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/28/79	1150	1200	970.0	29.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/28/79	1150	1200	1170.0	35.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/28/79	1207	1217	940.0	29.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/28/79	1207	1217	1070.0	31.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/28/79	2349	2359	1030.0	30.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/28/79	2349	2359	1250.0	36.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/29/79	0007	0017	1010.0	29.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/29/79	0007	0017	1260.0	37.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/15/79	1139	1149	950.0	28.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/15/79	1139	1149	1040.0	31.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/15/79	1150	1200	960.0	28.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/15/79	1150	1200	1090.0	32.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/15/79	2347	2357	950.0	27.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/15/79	2347	2357	1160.0	34.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/16/79	0005	0015	1110.0	32.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/16/79	0005	0015	1090.0	31.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/2[illegible]/79	1138	1148	1350.0	38.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/2[illegible]/79	1138	1148	1660.0	48.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/2[illegible]/79	1150	1200	1240.0	36.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/2[illegible]/79	1150	1200	1570.0	46.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/2[illegible]/79	2345	2355	1410.0	41.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/2[illegible]/79	2345	2355	1770.0	52.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/21/79	0005	0015	1530.0	46.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/21/79	0005	0015	1750.0	51.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/27/79	1142	1152	1380.0	42.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/27/79	1142	1152	1190.0	35.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/27/79	1215	1225	1010.0	30.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/27/79	1215	1225	1140.0	35.0000	.00	.00	.00	.00	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
DI	[illegible]	SUR	3/27/79	2350	0000	690.0	20.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	3/27/79	2350	0000	770.0	23.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	3/28/79	0020	0030	870.0	26.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	3/28/79	0020	0030	840.0	25.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	4/11/79	1515	1525	1090.0	32.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	4/11/79	1515	1525	1200.0	35.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	4/11/79	1535	1545	970.0	29.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	BOT	4/11/79	1535	1545	1150.0	34.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	SUR	4/11/79	2335	2345	850.0	25.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	BOT	4/11/79	2335	2345	850.0	25.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	SUR	4/11/79	2349	2359	870.0	26.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	4/11/79	2349	2359	880.0	26.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	4/17/79	1130	1140	1600.0	47.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	4/17/79	1130	1140	1800.0	54.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	4/17/79	1147	1157	1550.0	46.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	4/17/79	1147	1157	1910.0	53.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	4/17/79	2345	2355	1450.0	43.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	4/17/79	2345	2355	1600.0	47.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	4/18/79	0010	0020	1410.0	41.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	4/18/79	0010	0020	1560.0	46.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	4/24/79	1130	1140	660.0	19.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	4/24/79	1130	1140	[illegible]	20.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	4/24/79	1150	1200	880.0	26.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	4/24/79	1150	1200	920.0	27.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	4/24/79	2330	2340	870.0	26.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	4/24/79	2330	2340	960.0	28.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	4/24/79	2346	2356	980.0	29.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	4/24/79	2346	2356	1070.0	31.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	5/01/79	1155	1205	1490.0	44.0000	40.90	.00	.00	.00	.00	.00
DI	[illegible]	BOT	5/01/79	1155	1205	1730.0	53.0000	18.87	.00	.00	.00	.00	.00
DI	[illegible]	SUR	5/01/79	1215	1225	1770.0	52.0000	19.23	.00	.00	.00	.00	.00
DI	[illegible]	BOT	5/01/79	1215	1225	1610.0	47.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	5/02/79	0020	0030	1480.0	44.0000	45.45	.00	.00	.00	.00	.00
DI	[illegible]	BOT	5/02/79	0020	0030	1760.0	50.0000	60.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	5/02/79	0040	0050	1410.0	41.0000	48.78	.00	.00	.00	.00	.00
DI	[illegible]	BOT	5/02/79	0040	0050	1610.0	47.0000	21.28	.00	.00	.00	.00	.00
DI	[illegible]	SUR	5/08/79	1200	1210	1120.0	33.0000	60.61	.00	.00	.00	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
CI	[illegible]	BOT	5/29/79	1200	1210	1630.0	36.0000	66.67	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/29/79	1220	1230	1240.0	38.0000	78.95	26.32	26.32	.00	.00	.00
CI	[illegible]	BOT	5/29/79	1220	1230	1410.0	41.0000	121.95	24.39	24.39	.00	.00	.00
CI	[illegible]	SUR	5/29/79	0001	0011	1300.0	39.0000	205.13	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/29/79	0001	0011	1440.0	44.0000	204.55	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/29/79	0023	0033	1450.0	43.0000	139.53	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/29/79	0023	0033	1510.0	44.0000	45.45	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/15/79	1200	1210	1060.0	31.0000	129.03	64.52	64.52	.00	.00	.00
CI	[illegible]	BOT	5/15/79	1200	1210	900.0	27.0000	551.72	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/15/79	1224	1234	950.0	28.0000	107.14	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/15/79	1224	1234	870.0	29.0000	241.38	68.97	68.97	.00	.00	.00
CI	[illegible]	SUR	5/16/79	0000	0010	640.0	19.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/16/79	0000	0010	600.0	18.0000	166.67	55.56	55.56	.00	.00	.00
CI	[illegible]	SUR	5/16/79	0019	0029	590.0	17.0000	58.82	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/16/79	0019	0029	490.0	14.0000	214.29	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/22/79	1205	1215	540.0	16.0000	187.50	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/22/79	1205	1215	620.0	18.0000	166.67	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/22/79	1240	1250	770.0	23.0000	130.43	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/22/79	1240	1250	740.0	22.0000	181.82	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/23/79	0000	0010	410.0	12.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/23/79	0000	0010	530.0	16.0000	.00	62.50	.00	62.50	.00	.00
CI	[illegible]	SUR	5/23/79	0015	0025	540.0	16.0000	.00	62.50	.00	62.50	.00	.00
CI	[illegible]	BOT	5/23/79	0015	0025	620.0	18.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/25/79	1205	1215	450.0	13.0000	153.85	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/25/79	1205	1215	490.0	14.0000	428.57	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/25/79	1240	1250	490.0	14.0000	.00	214.29	.00	214.29	.00	.00
CI	[illegible]	BOT	5/25/79	1240	1250	540.0	19.0000	157.89	157.89	.00	157.89	.00	.00
CI	[illegible]	SUR	5/26/79	0000	0010	760.0	22.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	5/26/79	0000	0010	960.0	25.0000	40.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/26/79	0020	0030	270.0	9.0000	.00	222.22	.00	222.22	.00	.00
CI	[illegible]	BOT	5/26/79	0020	0030	470.0	14.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/29/79	1200	1210	780.0	23.0000	86.96	86.96	.00	86.96	.00	.00
CI	[illegible]	BOT	5/29/79	1200	1210	930.0	27.0000	296.30	74.07	.00	74.07	.00	.00
CI	[illegible]	SUR	5/29/79	1215	1225	910.0	27.0000	222.22	37.04	.00	37.04	.00	.00
CI	[illegible]	BOT	5/29/79	1215	1225	760.0	22.0000	272.73	.00	.00	.00	.00	.00
CI	[illegible]	SUR	5/30/79	0000	0010	720.0	21.0000	142.86	1380.95	47.62	1333.33	.00	.00
CI	[illegible]	BOT	5/30/79	0000	0010	960.0	28.0000	.00	785.71	.00	785.71	.00	.00
CI	[illegible]	SUR	5/30/79	0016	0026	930.0	27.0000	.00	444.44	.00	444.44	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MICRONS NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
DI	[illegible]	BOT	5/31/79	0016	0026	940.0	26.0000	142.86	250.00	.00	250.00	.00	.00
DI	[illegible]	SUR	6/01/79	1200	1210	1490.0	41.0000	73.17	97.56	.00	97.56	.00	.00
DI	[illegible]	BOT	6/01/79	1200	1210	2480.0	73.0000	.00	54.79	.00	54.79	.00	.00
DI	[illegible]	SUR	6/01/79	1220	1230	1890.0	56.0000	35.71	71.43	17.86	53.57	.00	.00
DI	[illegible]	BOT	6/01/79	1220	1230	1980.0	58.0000	34.48	120.69	.00	120.69	.00	.00
DI	[illegible]	SUR	6/02/79	0005	0015	1930.0	57.0000	.00	35.09	.00	35.09	.00	.00
DI	[illegible]	BOT	6/02/79	0005	0015	2810.0	59.0000	33.90	101.69	16.95	84.75	.00	.00
DI	[illegible]	SUR	6/02/79	0030	0040	1880.0	55.0000	.00	18.18	.00	18.18	.00	.00
DI	[illegible]	BOT	6/02/79	0030	0040	2810.0	59.0000	33.90	50.85	.00	50.85	.00	.00
DI	[illegible]	SUR	6/05/79	1200	1210	2490.0	72.0000	152.78	41.67	.00	41.67	.00	.00
DI	[illegible]	BOT	6/05/79	1200	1210	2580.0	75.0000	40.00	40.00	.00	40.00	.00	.00
DI	[illegible]	SUR	6/05/79	1219	1229	2290.0	67.0000	104.48	59.70	14.93	44.78	.00	.00
DI	[illegible]	BOT	6/05/79	1219	1229	2480.0	73.0000	82.19	13.70	.00	13.70	.00	.00
DI	[illegible]	SUR	6/06/79	0000	0010	2260.0	66.0000	90.91	90.91	.00	90.91	.00	.00
DI	[illegible]	BOT	6/06/79	0000	0010	2210.0	65.0000	292.31	76.92	.00	76.92	.00	.00
DI	[illegible]	SUR	6/06/79	0015	0025	2450.0	72.0000	194.44	69.44	.00	69.44	.00	.00
DI	[illegible]	BOT	6/06/79	0015	0025	2620.0	77.0000	363.64	12.99	.00	12.99	.00	.00
DI	[illegible]	SUR	6/08/79	1200	1210	2620.0	77.0000	285.71	51.95	.00	51.95	.00	.00
DI	[illegible]	BOT	6/08/79	1200	1210	3060.0	90.0000	244.44	77.78	.00	77.78	.00	.00
DI	[illegible]	SUR	6/08/79	1220	1230	2660.0	76.0000	78.95	13.16	.00	13.16	.00	.00
DI	[illegible]	BOT	6/08/79	1220	1230	2680.0	79.0000	405.06	.00	.00	.00	.00	.00
DI	[illegible]	SUR	6/13/79	0000	0010	1700.0	50.0000	220.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	6/13/79	0000	0010	1820.0	54.0000	705.70	18.52	.00	18.52	.00	.00
DI	[illegible]	SUR	6/13/79	0015	0025	1590.0	46.0000	304.35	43.49	21.74	21.74	.00	.00
DI	[illegible]	BOT	6/13/79	0015	0025	1760.0	52.0000	403.85	76.92	.00	76.92	.00	.00
DI	[illegible]	SUR	6/13/79	1200	1210	2001.0	59.0000	186.44	220.34	33.90	186.44	.00	.00
DI	[illegible]	BOT	6/13/79	1200	1210	2240.0	66.0000	333.33	272.73	60.61	212.12	.00	.00
DI	[illegible]	SUR	6/13/79	1220	1230	1910.0	56.0000	142.86	339.29	53.57	285.71	.00	.00
DI	[illegible]	BOT	6/13/79	1220	1230	1940.0	57.0000	210.53	350.88	17.54	333.33	.00	.00
DI	[illegible]	SUR	6/14/79	0000	0010	1560.0	46.0000	65.22	65.22	.00	65.22	.00	.00
DI	[illegible]	BOT	6/14/79	0000	0010	1660.0	49.0000	102.04	61.22	.00	61.22	.00	.00
DI	[illegible]	SUR	6/14/79	0015	0025	1490.0	43.0000	23.26	46.51	.00	46.51	.00	.00
DI	[illegible]	BOT	6/14/79	0015	0025	1470.0	43.0000	23.26	46.51	.00	46.51	.00	.00
DI	[illegible]	SUR	6/15/79	1200	1210	2270.0	66.0000	281.54	246.15	.00	246.15	.00	.00
DI	[illegible]	BOT	6/15/79	1200	1210	2270.0	66.0000	75.76	30.30	.00	30.30	.00	.00
DI	[illegible]	SUR	6/15/79	1220	1230	1970.0	58.0000	34.48	51.72	.00	51.72	.00	.00
DI	[illegible]	BOT	6/15/79	1220	1230	2170.0	64.0000	31.25	31.25	.00	31.25	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (Cu. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
CI	[illegible]	SUR	6/16/79	0010	0010	2096.0	61.0000	.00	262.30	.00	262.30	.00	.00
CI	[illegible]	BOT	6/16/79	0000	0010	2150.0	63.0000	15.87	253.97	.00	253.97	.00	.00
CI	[illegible]	SUR	6/16/79	0022	0032	2070.0	61.0000	32.79	196.72	.00	196.72	.00	.00
CI	[illegible]	BOT	6/16/79	0022	0032	2170.0	64.0000	.00	140.63	.00	140.63	.00	.00
CI	[illegible]	SUR	6/19/79	1200	1210	2540.0	75.0000	13.33	26.67	.00	26.67	.00	.00
CI	[illegible]	BOT	6/19/79	1200	1210	2740.0	81.0000	.00	61.73	.00	61.73	.00	.00
CI	[illegible]	SUR	6/19/79	1216	1226	2732.0	80.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	6/19/79	1216	1226	2940.0	86.0000	.00	23.26	11.63	11.63	.00	.00
CI	[illegible]	SUR	6/22/79	0010	0020	2120.0	62.0000	32.26	193.55	.00	193.55	.00	.00
CI	[illegible]	BOT	6/22/79	0010	0020	2290.0	67.0000	59.70	313.43	.00	313.43	.00	.00
CI	[illegible]	SUR	6/22/79	0040	0050	2240.0	66.0000	.00	151.52	.00	151.52	.00	.00
CI	[illegible]	BOT	6/22/79	0040	0050	2470.0	72.0000	27.78	208.33	.00	208.33	.00	.00
CI	[illegible]	SUR	6/22/79	1200	1210	1770.0	52.0000	38.46	134.62	.00	134.62	.00	.00
CI	[illegible]	BOT	6/22/79	1200	1210	1900.0	55.0000	.00	72.73	.00	72.73	.00	.00
CI	[illegible]	SUR	6/22/79	1220	1230	1920.0	54.0000	.00	111.11	.00	111.11	.00	.00
CI	[illegible]	BOT	6/22/79	1220	1230	1920.0	56.0000	.00	71.43	.00	71.43	.00	.00
CI	[illegible]	SUR	6/23/79	0000	0010	1380.0	41.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	6/23/79	0000	0010	1500.0	44.0000	.00	45.45	.00	45.45	.00	.00
CI	[illegible]	SUR	6/23/79	0017	0027	1393.0	41.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	6/23/79	0017	0027	1490.0	43.0000	23.26	93.02	.00	93.02	.00	.00
CI	[illegible]	SUR	6/26/79	1200	1210	1690.0	50.0000	.00	80.00	.00	80.00	.00	.00
CI	[illegible]	BOT	6/26/79	1200	1210	1670.0	50.0000	.00	220.00	.00	220.00	.00	.00
CI	[illegible]	SUR	6/26/79	1220	1230	1980.0	46.0000	.00	21.74	.00	21.74	.00	.00
CI	[illegible]	BOT	6/26/79	1220	1230	1740.0	51.0000	.00	98.04	19.61	78.43	.00	.00
CI	[illegible]	SUR	6/27/79	0010	0010	1270.0	37.0000	.00	162.16	.00	162.16	.00	.00
CI	[illegible]	BOT	6/27/79	0000	0010	1560.0	46.0000	.00	217.39	.00	130.43	86.96	.00
CI	[illegible]	SUR	6/27/79	0020	0030	1380.0	41.0000	.00	146.34	.00	146.34	.00	.00
CI	[illegible]	BOT	6/27/79	0020	0030	2010.0	59.0000	.00	152.54	.00	67.80	84.75	.00
CI	[illegible]	SUR	7/03/79	1204	1214	2000.0	59.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	7/03/79	1204	1214	2197.0	64.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	7/03/79	1220	1230	2060.0	61.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	BOT	7/03/79	1220	1230	2190.0	64.0000	.00	.00	.00	.00	.00	.00
CI	[illegible]	SUR	7/04/79	0000	0010	1770.0	52.0000	.00	38.46	.00	38.46	.00	.00
CI	[illegible]	BOT	7/04/79	0000	0010	2060.0	60.0000	.00	33.33	.00	33.33	.00	.00
CI	[illegible]	SUR	7/04/79	0021	0031	1800.0	54.0000	.00	37.04	.00	37.04	.00	.00
CI	[illegible]	BOT	7/04/79	0021	0031	1790.0	52.0000	.00	76.92	.00	76.92	.00	.00
CI	[illegible]	SUR	7/11/79	1240	1250	1[illegible]	48.0000	.00	104.17	.00	104.17	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
DI	[illegible]	BOT	7/10/79	1245	1255	2020.0	59.0000	16.95	.00	.00	.00	.00	.00
DI	[illegible]	SUR	7/10/79	1305	1315	1980.0	46.0000	.00	65.22	.00	65.22	.00	.00
DI	[illegible]	BOT	7/10/79	1305	1315	1760.0	52.0000	.00	115.38	.00	115.38	.00	.00
DI	[illegible]	SUR	7/11/79	0000	0010	1250.0	37.0000	.00	243.24	.00	81.08	162.16	.00
DI	[illegible]	BOT	7/11/79	0000	0010	1260.0	37.0000	.00	270.27	.00	189.19	81.08	.00
DI	[illegible]	SUR	7/11/79	0015	0025	980.0	29.0000	.00	310.34	.00	206.90	103.45	.00
DI	[illegible]	BOT	7/11/79	0015	0025	1440.0	42.0000	.00	166.67	.00	119.05	47.62	.00
DI	[illegible]	SUR	7/17/79	1200	1210	690.0	20.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	7/17/79	1200	1210	1190.0	32.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	7/17/79	1220	1230	2270.0	66.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	7/17/79	1220	1230	1290.0	38.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	7/18/79	0000	0010	1570.0	49.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	7/18/79	0000	0010	2140.0	63.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	7/18/79	0030	0040	990.0	28.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	7/18/79	0030	0040	1490.0	44.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	7/24/79	1230	1240	2500.0	74.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	7/24/79	1230	1240	2910.0	86.0000	.00	34.88	.00	34.88	.00	.00
DI	[illegible]	SUR	7/24/79	1300	1310	1960.0	58.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	7/24/79	1300	1310	2610.0	77.0000	.00	38.96	.00	38.96	.00	.00
DI	[illegible]	SUR	7/25/79	0000	0010	1770.0	52.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	7/25/79	0000	0010	1960.0	58.0000	.00	465.52	.00	.00	465.52	.00
DI	[illegible]	SUR	7/25/79	0015	0025	1390.0	41.0000	.00	24.39	.00	24.39	.00	.00
DI	[illegible]	BOT	7/25/79	0015	0025	1820.0	54.0000	.00	407.41	.00	18.52	388.89	.00
DI	[illegible]	SUR	7/31/79	1200	1210	2630.0	77.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	7/31/79	1200	1210	3260.0	95.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	7/31/79	1220	1230	2530.0	74.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	7/31/79	1220	1230	2490.0	73.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	8/01/79	0000	0010	1770.0	52.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	8/01/79	0000	0010	1890.0	56.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	8/01/79	0021	0031	1660.0	50.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	8/01/79	0021	0031	2040.0	60.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	8/07/79	1200	1210	470.0	14.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	8/07/79	1200	1210	510.0	15.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	8/07/79	1220	1230	730.0	21.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	8/07/79	1220	1230	390.0	11.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	8/09/79	0000	0010	620.0	18.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	8/09/79	0000	0010	1470.0	44.0000	.00	45.45	.00	.00	45.45	.00
DI	[illegible]	SUR	8/09/79	0025	0035	1380.0	41.0000	.00	.00	.00	.00	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./100 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
DI	[illegible]	BOT	8/29/79	0025	0035	1600.0	47.0000	.00	42.55	.00	.00	42.55	.00
DI	[illegible]	SUR	8/14/79	1213	1223	720.0	21.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	8/14/79	1213	1223	1830.0	56.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	8/14/79	1229	1239	1700.0	50.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	8/14/79	1229	1239	1960.0	58.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	8/15/79	0000	0010	390.0	11.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	8/15/79	0000	0010	1330.0	39.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	8/15/79	0020	0030	1190.0	34.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	8/15/79	0020	0030	1290.0	38.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	8/24/79	1235	1245	1960.0	55.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	BOT	8/24/79	1235	1245	2330.0	66.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	SUR	8/29/79	1250	1300	1640.0	48.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	8/29/79	1250	1300	2050.0	60.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	8/29/79	0000	0010	1910.0	54.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	BOT	8/29/79	0000	0010	2020.0	59.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	SUR	8/29/79	0020	0030	1940.0	57.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	8/29/79	0020	0030	2150.0	63.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	9/11/79	1130	1140	2120.0	62.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	BOT	9/11/79	1130	1140	2180.0	64.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	SUR	9/11/79	1147	1157	2000.0	60.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	9/11/79	1147	1157	2060.0	61.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	SUR	9/11/79	2330	2340	1520.0	45.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	BOT	9/11/79	2330	2340	1720.0	51.0000	NA	NA	NA	NA	NA	NA
DI	[illegible]	SUR	9/12/79	0005	0015	1460.0	43.0000	.00	.00	.00	.00	.00	.00
DI	[illegible]	BOT	9/12/79	0005	0015	1490.0	44.0000	.00	.00	.00	.00	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
RI	0551101	SUR	1/09/79	1205	1220	740.0	22.0000	NA	NA	NA	NA	NA	NA	**
RI	0551102	MID	1/09/79	1205	1220	710.0	21.0000	NA	NA	NA	NA	NA	NA	
RI	0551103	BOT	1/09/79	1205	1220	1160.0	34.0000	NA	NA	NA	NA	NA	NA	
RI	0551130	SUR	1/10/79	0010	0025	560.0	16.0000	.00	.00	.00	.00	.00	.00	
RI	0551131	MID	1/10/79	0010	0025	720.0	21.0000	.00	.00	.00	.00	.00	.00	
RI	0551132	BOT	1/10/79	0010	0025	1130.0	33.0000	.00	.00	.00	.00	.00	.00	
RI*	0551094	SUR	1/09/79	1207	1222	560.0	16.0000	.00	.00	.00	.00	.00	.00	**
RI*	0551095	MID	1/09/79	1207	1222	610.0	18.0000	.00	.00	.00	.00	.00	.00	
RI*	0551096	BOT	1/09/79	1207	1222	850.0	25.0000	.00	.00	.00	.00	.00	.00	
RI*	0551097	SUR	1/10/79	0005	0020	570.0	17.0000	NA	NA	NA	NA	NA	NA	
RI*	0551098	MID	1/10/79	0005	0020	1270.0	37.0000	NA	NA	NA	NA	NA	NA	
RI*	0551099	BOT	1/10/79	0005	0020	1200.0	35.0000	NA	NA	NA	NA	NA	NA	
RI	0551106	SUR	1/23/79	1125	1140	750.0	22.0000	.00	.00	.00	.00	.00	.00	**
RI	0551107	MID	1/23/79	1125	1140	580.0	17.0000	.00	.00	.00	.00	.00	.00	
RI	0551108	BOT	1/23/79	1125	1140	1020.0	30.0000	.00	.00	.00	.00	.00	.00	
RI	0551109	SUR	1/23/79	2315	2330	650.0	19.0000	NA	NA	NA	NA	NA	NA	
RI	0551110	MID	1/23/79	2315	2330	590.0	17.0000	NA	NA	NA	NA	NA	NA	
RI	0551111	BOT	1/23/79	2315	2330	1180.0	35.0000	NA	NA	NA	NA	NA	NA	
RI*	0551103	SUR	1/23/79	1120	1135	880.0	26.0000	NA	NA	NA	NA	NA	NA	**
RI*	0551104	MID	1/23/79	1120	1135	910.0	27.0000	NA	NA	NA	NA	NA	NA	
RI*	0551105	BOT	1/23/79	1120	1135	1570.0	47.0000	NA	NA	NA	NA	NA	NA	
RI*	0551112	SUR	1/23/79	2323	2338	710.0	21.0000	.00	.00	.00	.00	.00	.00	
RI*	0551113	MID	1/23/79	2323	2338	710.0	21.0000	.00	.00	.00	.00	.00	.00	
RI*	0551114	BOT	1/23/79	2323	2338	1200.0	35.0000	.00	.00	.00	.00	.00	.00	
RI	0551115	SUR	2/06/79	1123	1138	640.0	19.0000	NA	NA	NA	NA	NA	NA	**
RI	0551116	MID	2/06/79	1123	1138	1060.0	31.0000	NA	NA	NA	NA	NA	NA	
RI	0551117	BOT	2/06/79	1123	1138	1150.0	34.0000	NA	NA	NA	NA	NA	NA	
RI	0551124	SUR	2/06/79	2330	2345	780.0	23.0000	.00	.00	.00	.00	.00	.00	
RI	0551125	MID	2/06/79	2330	2345	940.0	28.0000	.00	.00	.00	.00	.00	.00	
RI	0551126	BOT	2/06/79	2330	2345	1220.0	36.0000	.00	.00	.00	.00	.00	.00	
RI*	0551118	SUR	2/06/79	1132	1147	1110.0	33.0000	.00	.00	.00	.00	.00	.00	**
RI*	0551119	MID	2/06/79	1132	1147	760.0	22.0000	.00	.00	.00	.00	.00	.00	
RI*	0551120	BOT	2/06/79	1132	1147	1240.0	38.0000	.00	.00	.00	.00	.00	.00	
RI*	0551121	SUR	2/06/79	2325	2340	590.0	17.0000	NA	NA	NA	NA	NA	NA	
RI*	0551122	MID	2/06/79	2325	2340	920.0	27.0000	NA	NA	NA	NA	NA	NA	
RI*	0551123	BOT	2/06/79	2325	2340	1480.0	44.0000	NA	NA	NA	NA	NA	NA	
RI	0551127	SUR	2/13/79	1115	1130	550.0	16.0000	.00	.00	.00	.00	.00	.00	**
RI	0551128	MID	2/13/79	1115	1130	1360.0	40.0000	.00	.00	.00	.00	.00	.00	
RI	0551129	BOT	2/13/79	1115	1130	1000.0	29.0000	.00	.00	.00	.00	.00	.00	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
RI	[illegible]1133	SUR	2/13/79	2340	2355	740.0	23.0000	.00	.00	.00	.00	.00	.00	
RI	0551134	MID	2/13/79	2340	2355	910.0	27.0000	.00	.00	.00	.00	.00	.00	
RI	0551135	BOT	2/13/79	2340	2355	670.0	20.0000	.00	.00	.00	.00	.00	.00	
RI*	0551150	SUR	2/13/79	1122	1137	730.0	21.0000	.00	.00	.00	.00	.00	.00	
RI*	0551151	MID	2/13/79	1122	1137	690.0	20.0000	.00	.00	.00	.00	.00	.00	**
RI*	0551152	BOT	2/13/79	1122	1137	1400.0	41.0000	.00	.00	.00	.00	.00	.00	
RI*	0551136	SUR	2/13/79	2350	0005	920.0	27.0000	.00	.00	.00	.00	.00	.00	
RI*	0551137	MID	2/13/79	2350	0005	660.0	19.0000	.00	.00	.00	.00	.00	.00	
RI*	0551138	BOT	2/13/79	2350	0005	720.0	21.0000	.00	.00	.00	.00	.00	.00	
RI	0551139	SUR	2/20/79	1145	1200	1200.0	35.0000	.00	.00	.00	.00	.00	.00	
RI	0551140	MID	2/20/79	1145	1200	1330.0	39.0000	.00	.00	.00	.00	.00	.00	**
RI	0551141	BOT	2/20/79	1145	1200	1940.0	57.0000	.00	.00	.00	.00	.00	.00	
RI	0551142	SUR	2/20/79	1210	1225	890.0	26.0000	.00	.00	.00	.00	.00	.00	
RI	0551143	MID	2/20/79	1210	1225	1310.0	38.0000	.00	.00	.00	.00	.00	.00	
RI	0551144	BOT	2/20/79	1210	1225	2090.0	61.0000	.00	.00	.00	.00	.00	.00	
RI	0551145	SUR	2/20/79	2325	2340	1060.0	31.0000	.00	.00	.00	.00	.00	.00	
RI	0551146	MID	2/20/79	2325	2340	1410.0	39.0000	.00	.00	.00	.00	.00	.00	
RI	0551147	BOT	2/20/79	2325	2340	1990.0	59.0000	.00	.00	.00	.00	.00	.00	
RI	0551148	SUR	2/20/79	2350	0005	990.0	29.0000	.00	.00	.00	.00	.00	.00	
RI	0551149	MID	2/20/79	2350	0005	1470.0	43.0000	.00	.00	.00	.00	.00	.00	
RI	0551150	BOT	2/20/79	2350	0005	1980.0	58.0000	.00	.00	.00	.00	.00	.00	
RI	0551151	SUR	2/27/79	1115	1130	800.0	24.0000	.00	.00	.00	.00	.00	.00	
RI	0551152	MID	2/27/79	1115	1130	830.0	24.0000	.00	.00	.00	.00	.00	.00	
RI	0551153	BOT	2/27/79	1115	1130	1090.0	32.0000	.00	.00	.00	.00	.00	.00	
RI	0551154	SUR	2/27/79	1136	1151	760.0	22.0000	.00	.00	.00	.00	.00	.00	
RI	0551155	MID	2/27/79	1136	1151	840.0	24.0000	.00	.00	.00	.00	.00	.00	
RI	0551156	BOT	2/27/79	1136	1151	1120.0	33.0000	.00	.00	.00	.00	.00	.00	
RI	0551157	SUR	2/27/79	2320	2335	990.0	29.0000	.00	.00	.00	.00	.00	.00	
RI	0551158	MID	2/27/79	2320	2335	1080.0	32.0000	.00	.00	.00	.00	.00	.00	
RI	0551159	BOT	2/27/79	2320	2335	1350.0	40.0000	.00	.00	.00	.00	.00	.00	
RI	0551160	SUR	2/27/79	2340	2355	1070.0	31.0000	.00	.00	.00	.00	.00	.00	
RI	0551161	MID	2/27/79	2340	2355	1060.0	31.0000	.00	.00	.00	.00	.00	.00	
RI	0551162	BOT	2/27/79	2340	2355	1390.0	41.0000	.00	.00	.00	.00	.00	.00	
RI	0551163	SUR	3/06/79	1205	1220	840.0	25.0000	.00	.00	.00	.00	.00	.00	
RI	0551164	MID	3/06/79	1205	1220	1100.0	32.0000	.00	.00	.00	.00	.00	.00	
RI	0551165	BOT	3/06/79	1205	1220	740.0	23.0000	.00	.00	.00	.00	.00	.00	
RI	0551166	SUR	3/06/79	1234	1249	930.0	27.0000	.00	.00	.00	.00	.00	.00	
RI	0551167	MID	3/06/79	1234	1249	1210.0	36.0000	.00	.00	.00	.00	.00	.00	
RI	0551168	BOT	3/06/79	1234	1249	600.0	18.0000	.00	.00	.00	.00	.00	.00	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
RI	0551169	SUR	5/06/79	2352	0007	550.0	16.0000	.00	.00	.00	.00	.00	.00
RI	0551170	BOT	5/06/79	2352	0007	1650.0	49.0000	.00	.00	.00	.00	.00	.00
RI	0551171	MID	5/07/79	0018	0033	770.0	23.0000	.00	.00	.00	.00	.00	.00
RI	0551172	SUR	5/07/79	0043	0058	730.0	21.0000	.00	.00	.00	.00	.00	.00
RI	0551173	MID	5/07/79	0043	0058	970.0	29.0000	.00	.00	.00	.00	.00	.00
RI	0551174	BOT	5/07/79	0043	0058	1310.0	39.0000	.00	.00	.00	.00	.00	.00
RI	0551175	SUR	5/13/79	1131	1146	620.0	18.0000	.00	.00	.00	.00	.00	.00
RI	0551176	MID	5/13/79	1131	1146	1210.0	36.0000	.00	.00	.00	.00	.00	.00
RI	0551177	BOT	5/13/79	1131	1146	1350.0	40.0000	.00	.00	.00	.00	.00	.00
RI	0551178	SUR	5/13/79	1154	1209	730.0	21.0000	.00	.00	.00	.00	.00	.00
RI	0551179	MID	5/13/79	1154	1209	1190.0	35.0000	.00	.00	.00	.00	.00	.00
RI	0551180	BOT	5/13/79	1154	1209	1330.0	39.0000	.00	.00	.00	.00	.00	.00
RI	0551181	SUR	5/13/79	2340	2355	870.0	26.0000	.00	.00	.00	.00	.00	.00
RI	0551182	MID	5/13/79	2340	2355	1170.0	34.0000	.00	.00	.00	.00	.00	.00
RI	0551183	BOT	5/13/79	2340	2355	1340.0	39.0000	.00	.00	.00	.00	.00	.00
RI	0551184	SUR	5/14/79	0001	0016	890.0	26.0000	.00	.00	.00	.00	.00	.00
RI	0551185	MID	5/14/79	0001	0016	1150.0	34.0000	.00	.00	.00	.00	.00	.00
RI	0551186	BOT	5/14/79	0001	0016	1330.0	39.0000	.00	.00	.00	.00	.00	.00
RI	0551187	SUR	5/20/79	1425	1440	850.0	25.0000	.00	.00	.00	.00	.00	.00
RI	0551188	MID	5/20/79	1425	1440	690.0	20.0000	.00	.00	.00	.00	.00	.00
RI	0551189	BOT	5/20/79	1425	1440	810.0	24.0000	.00	.00	.00	.00	.00	.00
RI	0551190	SUR	5/20/79	1446	1501	770.0	23.0000	.00	.00	.00	.00	.00	.00
RI	0551191	MID	5/20/79	1446	1501	600.0	18.0000	.00	.00	.00	.00	.00	.00
RI	0551192	BOT	5/20/79	1446	1501	860.0	25.0000	.00	.00	.00	.00	.00	.00
RI	0551193	SUR	5/21/79	2335	2350	550.0	16.0000	.00	.00	.00	.00	.00	.00
RI	0551194	MID	5/21/79	2335	2350	1240.0	36.0000	.00	.00	.00	.00	.00	.00
RI	0551195	BOT	5/21/79	2335	2350	1150.0	33.0000	.00	.00	.00	.00	.00	.00
RI	0551196	SUR	5/21/79	0000	0015	570.0	16.0000	.00	.00	.00	.00	.00	.00
RI	0551197	MID	5/21/79	0000	0015	1140.0	34.0000	.00	.00	.00	.00	.00	.00
RI	0551198	BOT	5/21/79	0000	0015	1060.0	32.0000	.00	.00	.00	.00	.00	.00
RI	0551199	SUR	5/27/79	1135	1150	1160.0	34.0000	.00	.00	.00	.00	.00	.00
RI	0551200	MID	5/27/79	1135	1150	1560.0	46.0000	.00	.00	.00	.00	.00	.00
RI	0551201	BOT	5/27/79	1135	1150	1010.0	30.0000	.00	.00	.00	.00	.00	.00
RI	0551202	SUR	5/27/79	1200	1215	740.0	22.0000	.00	.00	.00	.00	.00	.00
RI	0551203	MID	5/27/79	1200	1215	1420.0	42.0000	.00	.00	.00	.00	.00	.00
RI	0551204	BOT	5/27/79	1200	1215	1040.0	31.0000	.00	.00	.00	.00	.00	.00
RI	0551205	SUR	5/27/79	2330	2345	1220.0	36.0000	.00	.00	.00	.00	.00	.00
RI	0551206	MID	5/27/79	2330	2345	1360.0	40.0000	.00	.00	.00	.00	.00	.00
RI	0551207	BOT	5/27/79	2330	2345	790.0	23.0000	.00	.00	.00	.00	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
RI	0551208	SUR	3/27/79	2355	0010	720.0	21.0000	.00	.00	.00	.00	.00	.00
RI	0551209	MID	3/27/79	2355	0010	1380.0	41.0000	.00	.00	.00	.00	.00	.00
RI	0551210	BOT	3/27/79	2355	0010	780.0	23.0000	.00	.00	.00	.00	.00	.00
RI	0551211	SUR	4/11/79	1538	1553	960.0	28.0000	.00	.00	.00	.00	.00	.00
RI	0551212	MID	4/11/79	1538	1553	1420.0	42.0000	.00	.00	.00	.00	.00	.00
RI	0551213	BOT	4/11/79	1538	1553	810.0	24.0000	.00	.00	.00	.00	.00	.00
RI	0551214	SUR	4/11/79	1550	1605	960.0	28.0000	NA	NA	NA	NA	NA	NA
RI	0551215	MID	4/11/79	1550	1605	1300.0	38.0000	NA	NA	NA	NA	NA	NA
RI	0551216	BOT	4/11/79	1550	1605	610.0	18.0000	NA	NA	NA	NA	NA	NA
RI	0551217	SUR	4/11/79	2345	0000	1070.0	31.0000	NA	NA	NA	NA	NA	NA
RI	0551218	MID	4/11/79	2345	0000	1310.0	39.0000	NA	NA	NA	NA	NA	NA
RI	0551219	BOT	4/11/79	2345	0000	990.0	29.0000	NA	NA	NA	NA	NA	NA
RI	0551220	SUR	4/12/79	0015	0030	940.0	28.0000	.00	.00	.00	.00	.00	.00
RI	0551221	MID	4/12/79	0015	0030	1580.0	46.0000	.00	.00	.00	.00	.00	.00
RI	0551222	BOT	4/12/79	0015	0030	750.0	22.0000	.00	.00	.00	.00	.00	.00
RI	0551223	SUR	4/17/79	1122	1137	1160.0	34.0000	.00	.00	.00	.00	.00	.00
RI	0551224	MID	4/17/79	1122	1137	2140.0	63.0000	.00	.00	.00	.00	.00	.00
RI	0551225	BOT	4/17/79	1122	1137	1790.0	53.0000	.00	.00	.00	.00	.00	.00
RI	0551226	SUR	4/17/79	1141	1156	1060.0	31.0000	.00	.00	.00	.00	.00	.00
RI	0551227	MID	4/17/79	1141	1156	1730.0	50.0000	.00	.00	.00	.00	.00	.00
RI	0551228	BOT	4/17/79	1141	1156	1150.0	34.0000	.00	.00	.00	.00	.00	.00
RI	0551229	SUR	4/17/79	2330	2345	1130.0	33.0000	.00	.00	.00	.00	.00	.00
RI	0551230	MID	4/17/79	2330	2345	1790.0	53.0000	.00	.00	.00	.00	.00	.00
RI	0551231	BOT	4/17/79	2330	2345	1260.0	38.0000	.00	.00	.00	.00	.00	.00
RI	0551232	SUR	4/18/79	0020	0035	1000.0	29.0000	.00	.00	.00	.00	.00	.00
RI	0551233	MID	4/18/79	0020	0035	1830.0	54.0000	.00	.00	.00	.00	.00	.00
RI	0551234	BOT	4/18/79	0020	0035	1780.0	52.0000	.00	.00	.00	.00	.00	.00
RI	0551235	SUR	4/24/79	1130	1145	680.0	20.0000	.00	.00	.00	.00	.00	.00
RI	0551236	MID	4/24/79	1130	1145	1400.0	41.0000	.00	.00	.00	.00	.00	.00
RI	0551237	BOT	4/24/79	1130	1145	560.0	16.0000	.00	.00	.00	.00	.00	.00
RI	0551238	SUR	4/24/79	1201	1216	720.0	21.0000	.00	.00	.00	.00	.00	.00
RI	0551239	MID	4/24/79	1201	1216	1510.0	44.0000	.00	.00	.00	.00	.00	.00
RI	0551240	BOT	4/24/79	1201	1216	580.0	17.0000	.00	.00	.00	.00	.00	.00
RI	0551241	SUR	4/24/79	2330	2345	950.0	27.0000	.00	.00	.00	.00	.00	.00
RI	0551242	MID	4/24/79	2330	2345	1660.0	49.0000	.00	.00	.00	.00	.00	.00
RI	0551243	BOT	4/24/79	2330	2345	540.0	15.0000	.00	.00	.00	.00	.00	.00
RI	0551244	SUR	4/24/79	2355	0010	850.0	25.0000	.00	.00	.00	.00	.00	.00
RI	0551245	MID	4/24/79	2355	0010	1320.0	39.0000	.00	.00	.00	.00	.00	.00
RI	0551246	BOT	4/24/79	2355	0010	660.0	18.0000	.00	.00	.00	.00	.00	.00

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RI	0551247	SUR	5/01/79	1207	1222	1260.0	31.0000	.00	.00	.00	.00	.00	.00	
RI	0551248	MID	5/01/79	1207	1222	1640.0	48.0000	.00	.00	.00	.00	.00	.00	
RI	0551249	BOT	5/01/79	1207	1222	2010.0	61.0000	.00	.00	.00	.00	.00	.00	
RI	0551252	SUR	5/02/79	0020	0035	1180.0	35.0000	28.57	.00	.00	.00	.00	.00	
RI	0551254	MID	5/02/79	0020	0035	1670.0	49.0000	.00	.00	.00	.00	.00	.00	
RI	0551255	BOT	5/02/79	0020	0035	1740.0	51.0000	.00	.00	.00	.00	.00	.00	
RI*	0551256	SUR	5/01/79	1215	1230	610.0	18.0000	.00	.00	.00	.00	.00	.00	**
RI*	0551257	MID	5/01/79	1215	1230	1390.0	41.0000	.00	.00	.00	.00	.00	.00	
RI*	0551258	BOT	5/01/79	1215	1230	1010.0	29.0000	.00	.00	.00	.00	.00	.00	
RI*	0551256	SUR	5/02/79	0021	0036	580.0	17.0000	.00	.00	.00	.00	.00	.00	
RI*	0551257	MID	5/02/79	0021	0036	1360.0	40.0000	.00	.00	.00	.00	.00	.00	
RI*	0551258	BOT	5/02/79	0021	0036	1200.0	35.0000	.00	.00	.00	.00	.00	.00	
RI	0551262	SUR	5/08/79	1228	1243	1010.0	30.0000	.00	.00	.00	.00	.00	.00	**
RI	0551263	MID	5/08/79	1228	1243	1500.0	44.0000	.00	.00	.00	.00	.00	.00	
RI	0551264	BOT	5/08/79	1228	1243	1890.0	56.0000	.00	.00	.00	.00	.00	.00	
RI	0551265	SUR	5/09/79	0015	0030	810.0	24.0000	.00	.00	.00	.00	.00	.00	
RI	0551266	MID	5/09/79	0015	0030	1240.0	36.0000	.00	.00	.00	.00	.00	.00	
RI	0551267	BOT	5/09/79	0015	0030	1990.0	59.0000	16.95	.00	.00	.00	.00	.00	
RI*	0551259	SUR	5/08/79	1222	1237	660.0	19.0000	.00	.00	.00	.00	.00	.00	**
RI*	0551260	MID	5/08/79	1222	1237	1030.0	30.0000	.00	.00	.00	.00	.00	.00	
RI*	0551261	BOT	5/08/79	1222	1237	1380.0	41.0000	.00	.00	.00	.00	.00	.00	
RI*	0551268	SUR	5/09/79	0023	0038	630.0	18.0000	.00	.00	.00	.00	.00	.00	
RI*	0551269	MID	5/09/79	0023	0038	910.0	27.0000	.00	.00	.00	.00	.00	.00	
RI*	0551270	BOT	5/09/79	0023	0038	620.0	18.0000	166.67	.00	.00	.00	.00	.00	
RI	0551271	SUR	5/15/79	1200	1215	950.0	28.0000	71.43	.00	.00	.00	.00	.00	**
RI	0551272	MID	5/15/79	1200	1215	920.0	27.0000	37.04	.00	.00	.00	.00	.00	
RI	0551273	BOT	5/15/79	1200	1215	1450.0	43.0000	.00	23.26	.00	23.26	.00	.00	
RI	0551279	SUR	5/16/79	0014	0029	740.0	22.0000	.00	.00	.00	.00	.00	.00	
RI	0551280	MID	5/16/79	0014	0029	1140.0	34.0000	.00	.00	.00	.00	.00	.00	
RI	0551281	BOT	5/16/79	0014	0029	1210.0	36.0000	.00	83.33	.00	83.33	.00	.00	
RI*	0551274	SUR	5/15/79	1205	1220	790.0	23.0000	.00	.00	.00	.00	.00	.00	**
RI*	0551275	MID	5/15/79	1205	1220	1540.0	46.0000	.00	.00	.00	.00	.00	.00	
RI*	0551276	BOT	5/15/79	1205	1220	1420.0	42.0000	23.81	.00	.00	.00	.00	.00	
RI*	0551277	MID	5/16/79	0011	0026	1850.0	54.0000	18.52	.00	.00	.00	.00	.00	
RI*	0551278	BOT	5/16/79	0011	0026	1300.0	38.0000	.00	.00	.00	.00	.00	.00	
RI*	0551282	SUR	5/16/79	0050	0105	730.0	21.0000	.00	.00	.00	.00	.00	.00	
RI	0551283	MID	5/22/79	1204	1219	1140.0	34.0000	.00	.00	.00	.00	.00	.00	**
RI	0551284	BOT	5/22/79	1204	1219	1810.0	53.0000	.00	18.87	.00	18.87	.00	.00	
RI	0551285	SUR	5/23/79	0000	0015	590.0	17.0000	1.82	117.65	58.82	58.82	.00	.00	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
RI	0551295	MID	5/23/79	0000	0015	1170.0	34.0000	.00	.00	.00	.00	.00	.00	
RI	0551291	BOT	5/23/79	0000	0015	1940.0	57.0000	17.54	35.09	.00	35.09	.00	.00	
RI*	0551296	SUR	5/22/79	1218	1233	1020.0	30.0000	33.33	100.00	.00	100.00	.00	.00	**
RI*	0551287	MID	5/22/79	1218	1233	1280.0	38.0000	78.95	26.32	.00	26.32	.00	.00	
RI*	0551288	BOT	5/22/79	1218	1233	1280.0	38.0000	263.16	26.32	.00	26.32	.00	.00	
RI*	0551292	SUR	5/23/79	0005	0020	800.0	24.0000	.00	41.67	.00	41.67	.00	.00	
RI*	0551293	MID	5/23/79	0005	0020	1270.0	37.0000	54.05	54.05	.00	54.05	.00	.00	
RI*	0551294	BOT	5/23/79	0005	0020	1395.0	41.0000	97.56	121.95	.00	121.95	.00	.00	
RI	0551297	SUR	5/25/79	1225	1240	750.0	22.0000	45.45	.00	.00	.00	.00	.00	**
RI	0551298	MID	5/25/79	1225	1240	1140.0	34.0000	.00	29.41	.00	29.41	.00	.00	
RI	0551299	BOT	5/25/79	1225	1240	1360.0	40.0000	150.00	.00	.00	.00	.00	.00	
RI	0551301	SUR	5/26/79	0000	0015	970.0	29.0000	.00	34.48	.00	34.48	.00	.00	
RI	0551302	MID	5/26/79	0000	0015	1310.0	38.0000	105.26	.00	.00	.00	.00	.00	
RI	0551303	BOT	5/26/79	0000	0015	1330.0	39.0000	76.92	51.28	.00	51.28	.00	.00	
RI*	0551295	MID	5/25/79	1221	1236	1660.0	49.0000	.00	265.31	.00	265.31	.00	.00	**
RI*	0551296	BOT	5/25/79	1221	1236	1850.0	54.0000	55.56	92.59	.00	92.59	.00	.00	
RI*	0551300	SUR	5/26/79	1258	1313	750.0	22.0000	.00	181.82	.00	181.82	.00	.00	
RI*	0551304	SUR	5/26/79	0005	0020	730.0	21.0000	.00	142.86	.00	142.86	.00	.00	
RI*	0551305	MID	5/26/79	0005	0020	1190.0	34.0000	58.82	58.82	.00	58.82	.00	.00	
RI	0551307	SUR	5/25/79	1215	1230	720.0	21.0000	238.10	47.62	.00	47.62	.00	.00	**
RI	0551308	MID	5/25/79	1215	1230	1370.0	40.0000	.00	125.00	25.00	100.00	.00	.00	
RI	0551309	BOT	5/25/79	1215	1230	1670.0	49.0000	20.41	204.08	.00	204.08	.00	.00	
RI	0551313	SUR	5/31/79	0000	0015	960.0	16.0000	.00	375.00	.00	375.00	.00	.00	
RI	0551314	MID	5/31/79	0000	0015	1490.0	44.0000	68.18	227.27	22.73	204.55	.00	.00	
RI	0551315	BOT	5/31/79	0000	0015	1720.0	51.0000	.00	156.86	.00	156.86	.00	.00	
RI*	0551310	SUR	5/25/79	1310	1325	950.0	16.0000	.00	62.50	.00	62.50	.00	.00	
RI*	0551311	MID	5/25/79	1310	1325	1360.0	40.0000	200.00	25.00	.00	25.00	.00	.00	**
RI*	0551312	BOT	5/25/79	1310	1325	1290.0	38.0000	78.95	52.63	.00	52.63	.00	.00	
RI*	0551316	SUR	5/31/79	0010	0025	740.0	22.0000	772.73	227.27	.00	227.27	.00	.00	
RI*	0551317	MID	5/31/79	0010	0025	1890.0	56.0000	17.86	607.14	.00	607.14	.00	.00	
RI*	0551318	BOT	5/31/79	0010	0025	1440.0	42.0000	.00	238.10	.00	238.10	.00	.00	
RI	0551322	SUR	6/01/79	1215	1230	970.0	29.0000	.00	34.48	.00	34.48	.00	.00	**
RI	0551323	MID	6/01/79	1215	1230	1790.0	51.0000	.00	98.04	19.61	78.43	.00	.00	
RI	0551324	BOT	6/01/79	1215	1230	2010.0	59.0000	322.03	101.69	.00	101.69	.00	.00	
RI	0551325	SUR	6/02/79	0007	0022	770.0	23.0000	.00	.00	.00	.00	.00	.00	
RI	0551326	MID	6/02/79	0007	0022	1450.0	44.0000	136.36	22.73	.00	22.73	.00	.00	
RI	0551327	BOT	6/02/79	0007	0022	1510.0	44.0000	.00	22.73	.00	22.73	.00	.00	
RI	0551328	SUR	6/02/79	0221	0236	1520.0	45.0000	.00	155.56	.00	155.56	.00	.00	
RI	0551329	MID	6/02/79	0221	0236	1600.0	49.0000	.00	163.27	.00	163.27	.00	.00	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
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RI	0551330	BOT	6/02/79	0221	0236	2210.0	65.0000	.00	15.38	.00	15.38	.00	.00	
RI*	0551319	SUR	6/01/79	1205	1220	810.0	24.0000	.00	.00	.00	.00	.00	.00	**
RI*	0551320	MID	6/01/79	1205	1220	1060.0	31.0000	129.03	32.26	.00	32.26	.00	.00	
RI*	0551321	BOT	6/01/79	1205	1220	1540.0	40.0000	.00	75.00	.00	75.00	.00	.00	
RI*	0551331	SUR	6/05/79	1201	1216	1340.0	41.0000	146.34	.00	.00	.00	.00	.00	
RI*	0551332	MID	6/05/79	1201	1216	1500.0	46.0000	43.48	108.70	.00	65.22	.00	43.48	
RI*	0551333	BOT	6/05/79	1201	1216	910.0	27.0000	111.11	37.04	.00	37.04	.00	.00	
RI*	0551334	SUR	6/05/79	1229	1244	740.0	22.0000	136.36	.00	.00	.00	.00	.00	
RI*	0551335	MID	6/05/79	1229	1244	1910.0	56.0000	71.43	35.71	.00	35.71	.00	.00	
RI*	0551336	BOT	6/05/79	1229	1244	1650.0	49.0000	81.63	20.41	.00	20.41	.00	.00	
RI*	0551337	SUR	6/06/79	0008	0023	870.0	26.0000	.00	.00	.00	.00	.00	.00	
RI*	0551338	MID	6/06/79	0008	0023	1270.0	38.0000	52.63	52.63	.00	52.63	.00	.00	
RI*	0551339	BOT	6/06/79	0008	0023	1030.0	30.0000	.00	.00	.00	.00	.00	.00	
RI*	0551340	SUR	6/06/79	0032	0047	760.0	22.0000	136.36	.00	.00	.00	.00	.00	
RI*	0551341	MID	6/06/79	0032	0047	1190.0	35.0000	285.71	57.14	.00	57.14	.00	.00	
RI*	0551342	BOT	6/06/79	0032	0047	790.0	23.0000	1086.96	.00	.00	.00	.00	.00	
RI*	0551343	SUR	6/08/79	1205	1220	980.0	29.0000	.00	.00	.00	.00	.00	.00	
RI*	0551344	MID	6/08/79	1205	1220	1210.0	36.0000	.00	.00	.00	.00	.00	.00	
RI*	0551345	BOT	6/08/79	1205	1220	920.0	27.0000	74.07	.00	.00	.00	.00	.00	
RI*	0551346	SUR	6/08/79	1230	1245	800.0	24.0000	.00	.00	.00	.00	.00	.00	
RI*	0551347	MID	6/08/79	1230	1245	1330.0	39.0000	.00	.00	.00	.00	.00	.00	
RI*	0551348	BOT	6/08/79	1230	1245	820.0	24.0000	41.67	.00	.00	.00	.00	.00	
RI*	0551349	SUR	6/09/79	0000	0015	560.0	16.0000	.00	62.50	.00	62.50	.00	.00	
RI*	0551350	MID	6/09/79	0000	0015	1360.0	38.0000	26.32	105.26	.00	105.26	.00	.00	
RI*	0551351	BOT	6/09/79	0000	0015	1300.0	38.0000	.00	26.32	.00	26.32	.00	.00	
RI*	0551352	MID	6/09/79	0022	0037	1460.0	42.0000	.00	166.67	.00	166.67	.00	.00	
RI*	0551353	BOT	6/09/79	0022	0037	960.0	28.0000	107.14	35.71	.00	35.71	.00	.00	
RI*	0551354	SUR	6/09/79	0050	0105	610.0	18.0000	.00	55.56	.00	55.56	.00	.00	
RI*	0551355	SUR	6/12/79	1200	1215	660.0	20.0000	.00	.00	.00	.00	.00	.00	
RI*	0551356	MID	6/12/79	1200	1215	970.0	26.0000	.00	.00	.00	.00	.00	.00	
RI*	0551357	BOT	6/12/79	1200	1215	1060.0	31.0000	64.52	32.26	.00	32.26	.00	.00	
RI*	0551358	SUR	6/12/79	1230	1245	690.0	20.0000	.00	.00	.00	.00	.00	.00	
RI*	0551359	MID	6/12/79	1230	1245	800.0	24.0000	.00	.00	.00	.00	.00	.00	
RI*	0551360	BOT	6/12/79	1230	1245	1220.0	35.0000	.00	.00	.00	.00	.00	.00	
RI*	0551361	SUR	6/13/79	0008	0023	800.0	24.0000	.00	41.67	.00	41.67	.00	.00	
RI*	0551362	MID	6/13/79	0008	0023	820.0	24.0000	83.33	83.33	.00	83.33	.00	.00	
RI*	0551363	BOT	6/13/79	0008	0023	1210.0	36.0000	27.78	27.78	.00	27.78	.00	.00	
RI*	0551364	SUR	6/13/79	0045	0100	880.0	26.0000	.00	38.46	.00	38.46	.00	.00	
RI*	0551365	MID	6/13/79	0045	0100	1180.0	35.0000	.00	28.57	.00	28.57	.00	.00	

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RI*	0551366	BOT	6/13/79	0045	0100	1050.0	31.0000	.00	.00	.00	.00	.00	.00
RI*	0551367	MID	6/15/79	1200	1215	760.0	22.0000	.00	.00	.00	.00	.00	.00
RI*	0551368	BOT	6/15/79	1200	1215	1040.0	31.0000	.00	.00	.00	.00	.00	.00
RI*	0551369	SUR	6/15/79	1235	1250	720.0	21.0000	.00	.00	.00	.00	.00	.00
RI*	0551370	MID	6/15/79	1235	1250	1046.0	31.0000	.00	64.52	.00	64.52	.00	.00
RI*	0551371	BOT	6/15/79	1235	1250	700.0	21.0000	.00	95.24	.00	95.24	.00	.00
RI*	0551372	SUR	6/15/79	1335	1350	710.0	21.0000	.00	.00	.00	.00	.00	.00
RI*	0551373	SUR	6/16/79	0001	0016	790.0	23.0000	.00	130.43	.00	130.43	.00	.00
RI*	0551374	MID	6/16/79	0001	0016	1140.0	34.0000	.00	235.29	.00	235.29	.00	.00
RI*	0551375	BOT	6/16/79	0001	0016	850.0	25.0000	.00	40.00	.00	40.00	.00	.00
RI*	0551376	SUR	6/16/79	0023	0038	730.0	21.0000	.00	.00	.00	.00	.00	.00
RI*	0551377	MID	6/16/79	0023	0038	980.0	29.0000	.00	206.90	.00	206.90	.00	.00
RI*	0551378	BOT	6/16/79	0023	0038	1190.0	35.0000	.00	28.57	.00	28.57	.00	.00
RI*	0551379	SUR	6/19/79	1210	1225	850.0	25.0000	.00	40.00	.00	40.00	.00	.00
RI*	0551380	MID	6/19/79	1210	1225	1150.0	34.0000	117.65	205.88	.00	205.88	.00	.00
RI*	0551381	BOT	6/19/79	1210	1225	1840.0	54.0000	.00	37.04	.00	37.04	.00	.00
RI*	0551382	SUR	6/19/79	1259	1314	590.0	17.0000	.00	58.82	.00	58.82	.00	.00
RI*	0551383	MID	6/19/79	1259	1314	1070.0	31.0000	.00	32.26	.00	32.26	.00	.00
RI*	0551384	BOT	6/19/79	1259	1314	810.0	24.0000	.00	41.67	.00	41.67	.00	.00
RI*	0551385	SUR	6/20/79	0000	0015	690.0	25.0000	.00	40.00	.00	40.00	.00	.00
RI*	0551386	MID	6/20/79	0000	0015	1240.0	31.0000	.00	161.29	.00	161.29	.00	.00
RI*	0551387	BOT	6/20/79	0000	0015	980.0	26.0000	76.92	38.46	.00	38.46	.00	.00
RI*	0551388	SUR	6/20/79	0030	0045	960.0	28.0000	35.71	178.57	.00	178.57	.00	.00
RI*	0551389	MID	6/20/79	0030	0045	1040.0	32.0000	.00	62.50	.00	62.50	.00	.00
RI*	0551390	BOT	6/20/79	0030	0045	570.0	17.0000	.00	235.29	.00	235.29	.00	.00
RI*	0551391	SUR	6/22/79	1205	1220	850.0	25.0000	.00	.00	.00	.00	.00	.00
RI*	0551392	MID	6/22/79	1205	1220	1580.0	46.0000	.00	.00	.00	.00	.00	.00
RI*	0551393	BOT	6/22/79	1205	1220	1100.0	30.0000	.00	.00	.00	.00	.00	.00
RI*	0551394	SUR	6/22/79	1230	1245	730.0	21.0000	.00	.00	.00	.00	.00	.00
RI*	0551395	MID	6/22/79	1230	1245	1510.0	44.0000	22.73	22.73	.00	22.73	.00	.00
RI*	0551396	BOT	6/22/79	1230	1245	720.0	21.0000	.00	.00	.00	.00	.00	.00
RI*	0551397	SUR	6/23/79	0000	0015	980.0	29.0000	.00	.00	.00	.00	.00	.00
RI*	0551398	MID	6/23/79	0000	0015	1900.0	56.0000	.00	35.71	.00	35.71	.00	.00
RI*	0551399	BOT	6/23/79	0000	0015	2040.0	61.0000	.00	32.79	.00	32.79	.00	.00
RI*	0551400	SUR	6/23/79	0030	0045	870.0	26.0000	.00	.00	.00	.00	.00	.00
RI*	0551401	MID	6/23/79	0030	0045	1590.0	47.0000	.00	63.83	.00	63.83	.00	.00
RI*	0551402	BOT	6/23/79	0030	0045	1570.0	46.0000	.00	.00	.00	.00	.00	.00
RI*	0551403	SUR	6/26/79	1153	1208	650.0	18.0000	.00	.00	.00	.00	.00	.00

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RI*	0551474	MID	6/26/79	1153	1208	1310.0	39.0000	.00	.00	.00	.00	.00	.00	
RI*	0551475	BOT	6/26/79	1153	1208	1610.0	47.0000	.00	42.55	.00	42.55	.00	.00	
SI*	0551476	SUR	6/26/79	1225	1240	590.0	17.6000	.00	.00	.00	.00	.00	.00	
RI*	0551477	MID	6/26/79	1225	1240	1230.0	36.0000	.00	.00	.00	.00	.00	.00	
RI*	0551478	BOT	6/26/79	1225	1240	1690.0	50.0000	.00	.00	.00	.00	.00	.00	
RI*	0551409	SUR	6/27/79	0000	0015	720.0	21.0000	.00	285.71	.00	238.10	47.62	.00	
RI*	0551410	MID	6/27/79	0000	0015	1210.0	36.0000	.00	277.78	.00	277.78	.00	.00	
RI*	0551411	BOT	6/27/79	0000	0015	1600.0	47.0000	.00	468.09	.00	468.09	.00	.00	
RI*	0551412	SUR	6/27/79	0020	0035	640.0	19.0000	.00	526.32	.00	526.32	.00	.00	
RI*	0551413	MID	6/27/79	0020	0035	1200.0	38.0000	.00	500.00	.00	500.00	.00	.00	
RI*	0551414	BOT	6/27/79	0020	0035	1650.0	49.0000	.00	693.88	.00	632.65	61.22	.00	
RI*	0551415	SUR	7/03/79	1200	1215	660.0	19.0000	.00	.00	.00	.00	.00	.00	
RI*	0551416	MID	7/03/79	1200	1215	1340.0	39.0000	.00	.00	.00	.00	.00	.00	
RI*	0551417	BOT	7/03/79	1200	1215	1470.0	43.0000	.00	23.26	.00	23.26	.00	.00	
RI*	0551418	SUR	7/03/79	1230	1245	870.0	26.0000	.00	.00	.00	.00	.00	.00	
RI*	0551419	MID	7/03/79	1230	1245	1270.0	37.0000	.00	.00	.00	.00	.00	.00	
RI*	0551420	BOT	7/03/79	1230	1245	1380.0	41.0000	.00	24.39	.00	24.39	.00	.00	
RI*	0551421	SUR	7/04/79	0000	0015	600.0	20.0000	.00	150.00	.00	150.00	.00	.00	
RI*	0551422	MID	7/04/79	0000	0015	1180.0	35.0000	.00	.00	.00	.00	.00	.00	
RI*	0551423	BOT	7/04/79	0000	0015	990.0	29.0000	.00	.00	.00	.00	.00	.00	
RI*	0551424	SUR	7/04/79	0022	0037	570.0	17.0000	.00	294.12	.00	294.12	.00	.00	
RI*	0551425	MID	7/04/79	0022	0037	1400.0	41.0000	.00	24.39	.00	24.39	.00	.00	
RI*	0551426	BOT	7/04/79	0022	0037	1190.0	35.0000	.00	.00	.00	.00	.00	.00	
PI	0551430	SUR	7/10/79	1203	1218	570.0	17.0000	.00	.00	.00	.00	.00	.00	**
RI	0551431	MID	7/10/79	1203	1218	1170.0	34.0000	.00	29.41	.00	29.41	.00	.00	
RI	0551432	BOT	7/10/79	1203	1218	1270.0	37.0000	.00	27.03	.00	27.03	.00	.00	
PI	0551433	SUR	7/11/79	0000	0015	910.0	26.0000	.00	76.92	.00	38.46	38.46	.00	
RI	0551434	MID	7/11/79	0000	0015	600.0	17.0000	.00	.00	.00	.00	.00	.00	
RI	0551435	BOT	7/11/79	0000	0015	1590.0	45.0000	.00	44.44	.00	44.44	.00	.00	
RI*	0551427	SUR	7/10/79	1201	1216	670.0	23.0000	.00	.00	.00	.00	.00	.00	**
RI*	0551428	MID	7/10/79	1201	1216	1770.0	52.0000	.00	57.69	.00	57.69	.00	.00	
RI*	0551429	BOT	7/10/79	1201	1216	1520.0	45.0000	.00	66.67	.00	66.67	.00	.00	
RI*	0551437	MID	7/11/79	0020	0035	1420.0	42.0000	.00	23.81	.00	23.81	.00	.00	
RI*	0551436	SUR	7/11/79	0020	0035	590.0	17.0000	.00	.00	.00	.00	.00	.00	
RI*	0551438	BOT	7/11/79	0020	0035	1570.0	46.0000	.00	65.22	.00	43.48	21.74	.00	
RI	0551439	SUR	7/17/79	1145	1200	1670.0	49.0000	.00	.00	.00	.00	.00	.00	**
RI	0551440	MID	7/17/79	1145	1200	1540.0	45.0000	.00	.00	.00	.00	.00	.00	
RI	0551441	BOT	7/17/79	1145	1200	1070.0	31.0000	.00	.00	.00	.00	.00	.00	
RI	0551442	MID	7/17/79	0007	0022	1480.0	44.0000	.00	.00	.00	.00	.00	.00	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
RI	0551448	BOT	7/16/79	0007	0022	1400.0	41.0000	.00	48.78	.00	48.78	.00	.00	
RI*	0551442	SUR	7/17/79	1231	1246	600.0	18.0000	.00	.00	.00	.00	.00	.00	**
RI*	0551443	MID	7/17/79	1231	1246	1780.0	52.0000	.00	.00	.00	.00	.00	.00	
RI*	0551444	BOT	7/17/79	1305	1320	1120.0	33.0000	.00	.00	.00	.00	.00	.00	
RI*	0551447	SUR	7/16/79	0016	0031	1970.0	58.0000	.00	17.24	.00	.00	17.24	.00	
RI*	0551445	MID	7/16/79	0016	0031	1840.0	54.0000	.00	74.07	.00	55.56	18.52	.00	
RI*	0551446	BOT	7/16/79	0016	0031	1920.0	56.0000	.00	89.29	.00	53.57	35.71	.00	
RI	0551451	SUR	7/24/79	1200	1215	750.0	22.0000	.00	.00	.00	.00	.00	.00	**
RI	0551452	MID	7/24/79	1200	1215	590.0	17.0000	.00	.00	.00	.00	.00	.00	
RI	0551453	BOT	7/24/79	1200	1215	710.0	21.0000	.00	.00	.00	.00	.00	.00	
RI	0551457	BOT	7/25/79	0010	0025	1510.0	44.0000	.00	22.73	.00	22.73	.00	.00	
RI	0551451	SUR	7/25/79	0100	0115	900.0	26.0000	.00	.00	.00	.00	.00	.00	
RI	0551452	MID	7/25/79	0100	0115	1170.0	34.0000	.00	.00	.00	.00	.00	.00	
RI*	0551454	SUR	7/24/79	1205	1220	2080.0	61.0000	.00	.00	.00	.00	.00	.00	**
RI*	0551455	MID	7/24/79	1205	1220	1940.0	57.0000	.00	.00	.00	.00	.00	.00	
RI*	0551456	BOT	7/24/79	1205	1220	1380.0	41.0000	.00	.00	.00	.00	.00	.00	
RI*	0551458	SUR	7/25/79	0015	0030	2110.0	62.0000	.00	16.13	.00	16.13	.00	.00	
RI*	0551459	MID	7/25/79	0015	0030	2710.0	79.0000	.00	25.32	.00	.00	25.32	.00	
RI*	0551460	BOT	7/25/79	0015	0030	1270.0	38.0000	.00	.00	.00	.00	.00	.00	
RI	0551463	SUR	7/31/79	1200	1215	1640.0	48.0000	.00	.00	.00	.00	.00	.00	**
RI	0551464	MID	7/31/79	1200	1215	2160.0	63.0000	.00	.00	.00	.00	.00	.00	
RI	0551465	BOT	7/31/79	1200	1215	910.0	26.0000	.00	.00	.00	.00	.00	.00	
RI	0551469	SUR	8/ 1/79	0002	0017	1900.0	56.0000	.00	.00	.00	.00	.00	.00	
RI	0551470	MID	8/ 1/79	0002	0017	2300.0	61.0000	.00	.00	.00	.00	.00	.00	
RI	0551471	BOT	8/ 1/79	0002	0017	640.0	19.0000	.00	.00	.00	.00	.00	.00	
RI*	0551466	SUR	7/31/79	1205	1220	1700.0	51.0000	.00	.00	.00	.00	.00	.00	**
RI*	0551467	MID	7/31/79	1205	1220	1530.0	45.0000	.00	.00	.00	.00	.00	.00	
RI*	0551468	BOT	7/31/79	1205	1220	1210.0	36.0000	.00	.00	.00	.00	.00	.00	
RI*	0551472	SUR	8/ 1/79	0004	0019	1630.0	48.0000	.00	.00	.00	.00	.00	.00	
RI*	0551473	MID	8/ 1/79	0004	0019	2760.0	81.0000	.00	.00	.00	.00	.00	.00	
RI*	0551474	BOT	8/ 1/79	0004	0019	1190.0	35.0000	.00	.00	.00	.00	.00	.00	
RI	0551479	SUR	8/ 7/79	1202	1217	1710.0	50.0000	.00	.00	.00	.00	.00	.00	**
RI	0551481	MID	8/ 7/79	0000	0015	570.0	17.0000	.00	.00	.00	.00	.00	.00	
RI	0551483	BOT	8/ 7/79	0005	0110	610.0	18.0000	.00	.00	.00	.00	.00	.00	
RI*	0551475	SUR	8/ 7/79	1207	1222	730.0	20.0000	.00	.00	.00	.00	.00	.00	**
RI*	0551476	MID	8/ 7/79	1207	1222	3430.0	95.0000	.00	.00	.00	.00	.00	.00	
RI*	0551477	BOT	8/ 7/79	1207	1222	1630.0	45.0000	.00	.00	.00	.00	.00	.00	
RI*	0551484	MID	8/ 9/79	0122	0137	2670.0	84.0000	.00	23.81	.00	.00	23.81	.00	
RI*	0551485	BOT	8/09/79	0122	0137	620.0	18.0000	.00	.00	.00	.00	.00	.00	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1979 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE NOT ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
RI*	0551493	SUR	8/15/79	1201	1216	2920.0	86.0000	.00	.00	.00	.00	.00	.00	
RI*	0551494	MID	8/15/79	1225	1240	1250.0	37.0000	.00	.00	.00	.00	.00	.00	
RI*	0551496	SUR	8/15/79	1248	1303	3640.0	107.0000	.00	.00	.00	.00	.00	.00	
RI*	0551497	SUR	8/15/79	0132	0147	2470.0	73.0000	.00	.00	.00	.00	.00	.00	
RI*	0551498	MID	8/15/79	0153	0208	3450.0	101.0000	.00	.00	.00	.00	.00	.00	
RI*	0551499	BOT	8/15/79	0153	0208	1870.0	55.0000	.00	.00	.00	.00	.00	.00	
RI*	0551500	SUR	8/15/79	0238	0253	3400.0	100.0000	.00	.00	.00	.00	.00	.00	
RI*	0551491	MID	8/15/79	0238	0253	1110.0	33.0000	.00	.00	.00	.00	.00	.00	
RI	0551499	BOT	8/28/79	1232	1247	1810.0	53.0000	NA	NA	NA	NA	NA	NA	**
RI*	0551502	SUR	8/28/79	1240	1255	860.0	25.0000	.00	.00	.00	.00	.00	.00	**
RI*	0551501	MID	8/28/79	1240	1255	550.0	16.0000	.00	.00	.00	.00	.00	.00	
RI*	0551502	BOT	8/28/79	1240	1255	1760.0	52.0000	.00	.00	.00	.00	.00	.00	
RI*	0551505	SUR	8/28/79	2347	0002	650.0	19.0000	.00	.00	.00	.00	.00	.00	
RI*	0551504	MID	8/28/79	2347	0002	770.0	23.0000	.00	.00	.00	.00	.00	.00	
RI*	0551507	BOT	8/28/79	2347	0002	840.0	25.0000	.00	.00	.00	.00	.00	.00	
RI*	0551508	SUR	8/29/79	0015	0030	870.0	26.0000	NA	NA	NA	NA	NA	NA	
RI*	0551509	MID	8/29/79	0015	0030	860.0	25.0000	NA	NA	NA	NA	NA	NA	
RI*	0551510	BOT	8/29/79	0015	0030	950.0	28.0000	NA	NA	NA	NA	NA	NA	
RI*	0551511	SUR	9/11/79	1140	1155	2450.0	72.0000	NA	NA	NA	NA	NA	NA	
RI*	0551512	BOT	9/11/79	1140	1155	550.0	16.0000	NA	NA	NA	NA	NA	NA	
RI*	0551513	MID	9/11/79	1205	1220	730.0	21.0000	NA	NA	NA	NA	NA	NA	
RI*	0551514	SUR	9/11/79	1230	1245	780.0	23.0000	.00	.00	.00	.00	.00	.00	
RI*	0551515	MID	9/11/79	1230	1245	670.0	20.0000	.00	.00	.00	.00	.00	.00	
RI*	0551516	BOT	9/11/79	1230	1245	590.0	17.0000	.00	.00	.00	.00	.00	.00	
RI*	0551517	SUR	9/11/79	2330	2345	2710.0	79.0000	.00	.00	.00	.00	.00	.00	
RI*	0551518	MID	9/11/79	2330	2345	670.0	20.0000	.00	.00	.00	.00	.00	.00	
RI*	0551520	SUR	9/12/79	0013	0028	2500.0	74.0000	NA	NA	NA	NA	NA	NA	
RI*	0551521	MID	9/12/79	0013	0028	570.0	17.0000	NA	NA	NA	NA	NA	NA	

APPENDIX-3 Ichthyoplankton Length Frequency: Data Collected in the Roseton and Danskammer Point Vicinity

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/31/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
4.1- 5.0		4																1		
5.1- 6.0	1											2	1		2					1
6.1- 7.0		1					1						1							
MEAN/DEPTH	5.4	5.1					6.2					5.9	6.2		5.7			4.4	5.6	
STD ERR		.53										.15	.15		.00					
MEAN/TRANS	5.2						6.2				5.9			5.3			4.4		5.6	
STD ERR	.27										.15			.14						
MEAN/DAY					5.3										5.7					
STD ERR					.28										.23					
RANGE(IN)	5.4	4.6					6.2					5.7	6.0		5.7			4.4	5.6	
(MAX)	5.4	5.4					6.2					6.0	6.3		5.7			4.4	5.6	
NO.LVNG(D)	1	5	0	0	0	0	1	0	0	0	0	2	2	0	2	0	0	1	1	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/31/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
4.1- 5.0		4						1		
5.1- 6.0	1	2	1		2				1	
6.1- 7.0		1	1				1			
MEAN/DEPTH	5.4	5.3	6.2		5.7		6.2	4.4	5.6	
STD ERR		.27	.15		.00					
MEAN/TRANS	5.3		5.9			5.3			5.6	
STD ERR	.23		.14			.90				
MEAN/DATE					5.5					
STD ERR					.17					
RANGE(MIN)	5.4	4.6	6.0		5.7		6.2	4.4	5.6	
(MAX)	5.4	6.4	6.3		5.7		6.2	4.4	5.6	
NO.LENGTH	1	7	2	0	2	0	1	1	1	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/28/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
5.1- 6.0											1				1					
6.1- 7.0		2									1									
MEAN/DEPTH		5.6									5.9				5.7					
STD ERR		.10									.50									
MEAN/TRANS		5.6									5.9			5.7						
STD ERR		.10									.50									
MEAN/DATE					5.6										5.8					
STD ERR					.10										.30					
RANGE(MIN)		5.5									5.4				5.7					
(MAX)		6.7									6.4				5.7					
NO.LENG'D	0	2	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/04/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
5.1- 6.0	1				1					
6.1- 7.0	1	2								
MEAN/DEPTH	5.9	6.6			5.7					
STD ERR	.50	.15								
MEAN/TRANS	6.3			5.7						
STD ERR	.29									
MEAN/DATE					6.1					
STD ERR					.25					
RANGE(MIN)	5.4	6.5			5.7					
(MAX)	6.4	6.7			5.7					
NO.LENGTHD	2	2	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0		1																		
4.1- 5.0		1																		
5.1- 6.0	3				1															
6.1- 7.0		3								1										
7.1- 8.0													1							
MEAN/DEPTH	5.6	5.5			5.4					6.3			7.4							
STD ERR	.23	.50																		
MEAN/TRANS	5.6			5.4						6.3				7.4						
STD ERR	.31																			
MEAN/DATE					5.6															
STD ERR					.25															
RANGE(MIN)	5.2	3.8			5.4					6.3			7.4							
(MAX)	6.0	6.3			5.4					6.3			7.4							
NO.LENGTHS	3	5	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0		1								
4.1- 5.0		1								
5.1- 6.0	3				1					
6.1- 7.0		3								1
7.1- 8.0			1							
MEAN/DEPTH	5.6	5.5	7.4		5.4					6.3
STD ERR	.23	.50								
MEAN/TRANS	5.8			6.4					6.3	
STD ERR	.31			1.00						
MEAN/DATE					5.8					
STD ERR					.28					
RANGE(MIN)	5.2	3.8	7.4		5.4					6.3
(MAX)	6.0	6.3	7.4		5.4					6.3
NO.LENG'D	3	5	1	0	1	0	0	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/23/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
4.1- 5.0															1					
MEAN/DEPTH															4.9					
STD ERR																				
MEAN/TRANS														4.9						
STD ERR																				
MEAN/DATE															4.9					
STD ERR																				
RANGE(MIN)															4.9					
(MAX)															4.9					
NO.LENGTHD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 5/22/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
4.1- 5.0					1					
MEAN/DEPTH					4.9					
STD ERR										
MEAN/TRANS				4.9						
STD ERR										
MEAN/DATE					4.9					
STD ERR										
RANGE(MIN)					4.9					
(MAX)					4.9					
NO.LENGTHD	0	0	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/23/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
4.1- 5.0															2			1		
5.1- 6.0	9	4			6			9			9	1			5			7		
6.1- 7.0		1			2						1	3	1					1		
7.1- 8.0												1								
MEAN/DEPTH	5.6	5.7			5.8			5.6			5.6	6.2	6.1		5.4			5.6		
STD ERR	.09	.16			.13			.09			.09	.27			.12			.14		
MEAN/TRANS	5.6			5.8			5.6				5.8			5.5			5.6			
STD ERR	.08			.13			.09				.12			.14			.14			
MEAN/DATE					5.6										5.7					
STD ERR					.06										.08					
RANGE(MIN)	5.1	5.2			5.1			5.1			5.2	5.4	6.1		4.9			4.7		
(MAX)	5.8	6.1			6.3			5.9			6.2	7.1	6.1		5.8			6.1		
NO.LENGTHD	9	5	0	0	8	0	0	9	0	0	10	5	1	0	7	0	0	9	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
4.1- 5.0					2			1		
5.1- 6.0	18	5			11			16		
6.1- 7.0	1	4	1		2			1		
7.1- 8.0		1								
MEAN/DEPTH	5.6	5.9	6.1		5.6			5.6		
STD ERR	.07	.17			.10			.08		
MEAN/TRANS	5.7			5.6			5.6			
STD ERR	.06			.10			.08			
MEAN/DATE					5.6					
STD ERR					.05					
RANGE(MIN)	5.1	5.2	6.1		4.9			4.7		
(MAX)	6.2	7.1	6.1		6.3			6.1		
NO.LENGTH	19	10	1	0	15	0	0	18	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/11/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0		1																		
4.1- 5.0					1															
5.1- 6.0					1		1													
6.1- 7.0															1					
MEAN/DEPTH		4.0			5.2		5.4								6.3					
STD ERR					.20															
MEAN/TRANS	4.0			5.2			5.4							6.3						
STD ERR				.20																
MEAN/DATE					4.9										6.3					
STD ERR					.33															
RANGE(MIN)		4.0			5.0		5.4								6.3					
(MAX)		4.0			5.4		5.4								6.3					
NO.LENG'D	0	1	0	0	2	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
3.1- 4.0		1								
4.1- 5.0					1					
5.1- 6.0					1		1			
6.1- 7.0					1					
MEAN/DEPTH		4.0			5.6		5.4			
STD ERR					.38					
MEAN/TRANS		4.0			5.6		5.4			
STD ERR					.38					
MEAN/DATE					5.2					
STD ERR					.37					
RANGE(MIN)		4.0			5.0		5.4			
(MAX)		4.0			6.3		5.4			
NO.LENGTHD	0	1	0	0	3	0	1	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
4.1- 5.0		1																		
5.1- 6.0		2																		
MEAN/DEPTH		5.6																		
STD ERR		.32																		
MEAN/TRANS	5.6																			
STD ERR	.32																			
MEAN/DATE					5.6															
STD ERR					.32															
RANGE(MIN)		5.0																		
(MAX)		6.0																		
NO.LENGTHD	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 6/25/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED — WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
4.1- 5.0		1								
5.1- 6.0		2								
MEAN/DEPTH		5.6								
STD ERR		.32								
MEAN/TRANS		5.6								
STD ERR		.32								
MEAN/DATE					5.6					
STD ERR					.32					
RANGE(MIN)		5.0								
(MAX)		6.3								
NO.LENGTH	0	3	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
4.1- 5.0		1																		
5.1- 6.0	1						1													
MEAN/DEPTH	5.1	4.9					5.5													
STD ERR																				
MEAN/TRANS	5.0						5.5													
STD ERR	.10																			
MEAN/DATE					5.2															
STD ERR					.18															
RANGE(MIN)	5.1	4.9					5.5													
(MAX)	5.1	4.9					5.5													
NO.LENG'D	1	1	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/13/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
4.1- 5.0		1								
5.1- 6.0	1						1			
MEAN/DEPTH	5.1	4.9					5.5			
STD ERR										
MEAN/TRANS	5.0						5.5			
STD ERR	.10									
MEAN/DATE					5.2					
STD ERR					.18					
RANGE(MIN)	5.1	4.9					5.5			
(MAX)	5.1	4.9					5.5			
NO.LENGTHD	1	1	0	0	0	0	1	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/01/79

LENGTH(MM)	DAY										NIGHT									
INTERVAL	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
4.1- 5.0																		1		
5.1- 6.0																		1		
6.1- 7.0								1												
MEAN/DEPTH							6.3										5.4			
STD ERR																	.55			
MEAN/TRANS							6.3									5.4				
STD ERR																.55				
MEAN/DATE					6.3										5.4					
STD ERR															.55					
RANGE(MIN)							6.3										4.9			
(MAX)							6.3										6.0			
NO.LENGTHS	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/21/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
4.1- 5.0								1		
5.1- 6.0								1		
6.1- 7.0								1		
MEAN/DEPTH								5.7		
STD ERR								.43		
MEAN/TRANS							5.7			
STD ERR							.43			
MEAN/DATE					5.7					
STD ERR					.43					
RANGE(MIN)								4.9		
(MAX)								6.3		
NO.LENGTHD	0	0	0	0	0	0	0	3	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/03/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
5.1- 6.0										1			1		2					
6.1- 7.0			2						8	19	1	3	1			1				
7.1- 8.0		1	1			1			18	7	1	1				2				
8.1- 9.0										1						1				
MEAN/DEPTH		7.5	7.1			7.4			7.3	6.9	7.0	6.9	6.4		5.9	7.4				
STD ERR			.21						.09		.70		.40		.05					
										.10		.23				.31				
MEAN/TRANS		7.5		7.1			7.4			7.1		6.9			6.2			7.4		
STD ERR				.21						.07		.23			.21			.31		
MEAN/DATE					7.1											6.8				
STD ERR					.07											.19				
RANGE(MIN)		7.5	6.8			7.4			6.2	5.8	6.3	6.5	6.0		5.9	6.7				
(MAX)		7.5	7.5			7.4			7.9	8.1	7.7	7.5	6.8		6.0	8.2				
NO.LENGTHD	0	1	3	0	0	1	0	0	26	28	2	4	2	0	2	4	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/09/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
5.1- 6.0			1		2					1
6.1- 7.0	1	3	3			1			8	19
7.1- 8.0	1	2	1			3			18	7
8.1- 9.0						1				1
MEAN/DEPTH	7.0	7.0	6.8		5.9	7.4			7.3	6.9
STD ERR	.70	.21	.24		.05	.24			.09	.10
MEAN/TRANS	7.0		6.6			7.4			7.1	
STD ERR	.21		.23			.24			.07	
MEAN/DATE					7.0					
STD ERR					.06					
RANGE(MIN)	6.3	6.5	6.0		5.9	6.7			6.2	5.8
(MAX)	7.7	7.5	7.5		6.0	8.2			7.9	8.1
NO.LENG'D	2	5	5	0	2	5	0	0	26	28

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
4.1- 5.0																		1		
5.1- 6.0	1						1													1
6.1- 7.0	2	5		3		4	5	3	7		3	1				2		2	1	
7.1- 8.0	5	1	9	5	1	7	13	1	19	2	3	2				6		4	8	1
8.1- 9.0			2	1		1	6	1	13	1						1		2	3	
9.1- 10.0							1		2										1	
10.1- 11.0	1																		1	
MEAN/DEPTH	7.4	6.7	7.7	7.2	7.8	7.3	7.7	6.9	7.8	8.0	6.9	7.0				7.4		7.3	8.0	6.7
STD ERR	.52	.14	.14	.16		.20	.14	.45	.12	.23	.14	.25				.17		.37	.27	1.15
MEAN/TRANS	7.1		7.5			7.5			7.8		7.0						7.3		7.8	
STD ERR	.32		.11			.12			.11		.12						.20		.28	
MEAN/DATE					7.6										7.4					
STD ERR					.07										.14					
RANGE(MIN)	5.2	6.2	7.1	6.7	7.8	6.2	6.0	6.1	6.1	7.6	6.6	6.5				6.7		5.0	6.5	5.5
(MAX)	11.0	7.2	8.6	8.3	7.8	8.6	9.1	8.5	9.7	8.4	7.4	7.3				8.1		8.9	10.7	7.8
NO.LENGTHS	9	6	11	9	1	12	26	5	41	3	6	3	0	0	0	9	0	9	14	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/13/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
4.1- 5.0								1		
5.1- 6.0	1						1			1
6.1- 7.0	5	6		3		6	5	5	8	
7.1- 8.0	8	3	9	5	1	13	13	5	27	3
8.1- 9.0			2	1		2	6	3	16	1
9.1- 10.0							1		3	
10.1- 11.0	1								1	
MEAN/DEPTH	7.2	6.8	7.7	7.2	7.8	7.4	7.7	7.2	7.9	7.5
STD ERR	.32	.12	.14	.16		.14	.14	.28	.11	.51
MEAN/TRANS	7.0			7.5			7.4		7.8	
STD ERR	.25			.11			.10		.11	
MEAN/DATE					7.5					
STD ERR					.07					
RANGE(MIN)	5.2	6.2	7.1	6.7	7.8	6.2	6.0	5.0	6.1	5.5
(MAX)	11.0	7.3	8.6	8.3	7.8	8.6	9.1	8.9	10.7	8.4
NO.LENGTHD	15	9	11	9	1	21	26	14	55	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

LENGTH(MM)	DAY										NIGHT									
INTERVAL	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
5.1- 6.0							1		1		2				1			4		
6.1- 7.0	2		2	2		2	1		6	3	1	2		2		1		8	1	1
7.1- 8.0	3		2	1		1	5		9	4		6		3	4	1		8	4	4
8.1- 9.0	5		1	1			14		3			2		7		4	2	5	8	14
9.1- 10.0	1		1				8	2		1		2		2				10	13	8
10.1- 11.0						1	20			2		2		2				3	6	14
11.1- 12.0							5	1		3					1			2	4	14
12.1- 13.0							1			3									4	3
13.1- 14.0										1										2
MEAN/DEPTH	7.8		7.8	7.1		7.9	9.6	10.1	7.3	9.7	5.7	8.4		8.4	8.1	8.0	8.3	8.2	9.7	10.1
STD ERR	.29		.46				.18		.18		.33				.78		.20		.24	
				.58		1.00		.66		.60		.36		.28		.33		.27		.19
MEAN/TRANS	7.8			7.5			9.5			8.4		7.9			8.3			8.2		9.9	
STD ERR	.29			.35			.18			.36		.39			.29			.23		.15	
MEAN/DATE						8.9										9.1				
STD ERR						.16										.13				
RANGE(MIN)	6.1		6.6	6.1		6.5	6.0	9.2	5.6	5.2	5.2	6.1		6.5	6.0	6.9	8.1	5.7	6.7	7.0
(MAX)	9.1		9.6	8.6		10.8	12.3	11.4	8.7	13.9	6.3	10.8		10.3	11.7	9.0	8.5	12.0	12.7	13.6
NO.LENGTHS	11	9	6	4	0	4	55	3	19	17	3	14	0	16	6	6	2	40	40	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST CHANNEL					ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
5.1- 6.0	2				1		1	4	1	
6.1- 7.0	3	2	2	4		3	1	8	7	4
7.1- 8.0	3	6	2	4	4	2	5	8	13	8
8.1- 9.0	5	2	1	8		4	16	5	11	14
9.1- 10.0	1	2	1	2			8	12	13	9
10.1- 11.0		2		2		1	20	3	6	16
11.1- 12.0					1		5	3	4	17
12.1- 13.0							1		4	6
13.1- 14.0										3
MEAN/DEPTH	7.4	8.4	7.8	8.2	8.1	7.9	9.5	8.3	8.9	10.0
STD ERR	.34	.36	.46	.27	.78	.41	.18	.27	.23	.20
MEAN/TRANS	7.9			8.1			8.9		9.5	
STD ERR	.26			.23			.16		.15	
MEAN/DATE					9.0					
STD ERR					.10					
RANGE(MIN)	5.2	5.1	6.6	6.1	6.0	6.5	6.0	5.7	5.6	6.2
(MAX)	9.1	10.8	9.6	10.3	11.7	10.8	12.3	12.0	12.7	13.9
NO.LENGTH	14	14	6	20	6	10	57	43	59	77

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/23/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
4.1- 5.0								1							1			1	2	
5.1- 6.0					1		1	1	2		4	1	1		3		1	11	1	1
6.1- 7.0			2	1	2	1	2		1		9	4	3		7	1		2	3	4
7.1- 8.0		3	7	2	10	8		1	7	1	5		5		8	2	5	5	1	10
8.1- 9.0	1		15	14	21	21	7	3	15	4	13	3	9		13	6	10	12	11	19
9.1- 10.0	1	4	30	15	15	26	15	2	21	9	12	10	17		15	12	20	9	26	17
10.1- 11.0			3	6	2	4	22		6	5	6	10	7		3	12	10	3	5	4
11.1- 12.0		1	2	11			5		3	5		17	2		1	7	4	6	5	3
12.1- 13.0			1	8			4	1	2	7		3	2		2	13	6	1	2	1
13.1- 14.0				3			3		2	1		5				5	1	1	2	1
14.1- 15.0							1			4		2	1			2	1		2	
15.1- 16.0									1								1			
16.1- 17.0																	1			
MEAN/DEPTH	9.1	9.1	9.1	10.2	8.6	9.0	10.3	8.5	9.4	11.1	8.3	10.7	9.3		8.5	10.9	10.2	8.5	9.6	8.8
STD ERR	.55	.44	.14	.21	.13	.10	.21	.82	.22	.32	.22	.27	.23		.22	.24	.26	.30	.25	.19
MEAN/TRANS	9.1			9.4			9.5		10.0		9.6			8.9			9.9		9.2	
STD ERR	.36			.11			.14		.20		.21			.16			.17		.16	
MEAN/DATE					9.6										9.5					
STD ERR					.08										.09					
RANGE(MIN)	8.5	7.6	5.2	7.0	5.9	7.0	6.0	4.9	5.5	7.7	5.5	6.0	5.6		4.9	6.5	6.0	4.7	4.7	6.0
(MAX)	9.6	11.2	12.7	15.8	10.5	13.6	14.8	13.0	15.1	15.0	10.7	14.4	14.2		12.5	15.0	16.2	13.5	14.8	13.7
TOTAL(%)	2	8	62	58	52	60	60	9	61	36	49	55	47	0	53	60	60	51	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
4.1- 5.0					1			2	2	
5.1- 6.0	4	1	1		4		2	12	3	1
6.1- 7.0	9	4	5	1	9	2	2	2	4	4
7.1- 8.0	5	3	12	2	18	10	5	6	8	11
8.1- 9.0	14	3	24	14	34	27	17	15	26	23
9.1- 10.0	13	14	47	15	31	38	35	11	47	26
10.1- 11.0	6	10	10	6	5	16	32	3	11	9
11.1- 12.0		18	4	11	1	7	9	6	8	8
12.1- 13.0		3	3	8	2	13	10	2	4	8
13.1- 14.0		5		3		5	4	1	4	2
14.1- 15.0		2	1			2	2		2	4
15.1- 16.0							1		1	
16.1- 17.0							1			
MEAN/DEPTH	8.5	10.5	9.2	10.2	8.6	9.9	10.2	8.5	9.5	9.7
STD ERR	.22	.25	.13	.21	.13	.16	.17	.28	.17	.20
MEAN/TRANS	9.5		9.2				9.8		9.6	
STD ERR	.22		.09				.11		.13	
MEAN/DATE					9.5					
STD ERR					.06					
RANGE(MIN)	5.5	6.0	5.6	7.0	4.9	6.5	6.0	4.7	4.7	6.0
(MAX)	10.7	14.4	14.2	13.8	12.5	15.0	16.2	13.5	15.1	15.0
NO.LENGTH	51	53	137	50	103	120	120	60	120	96

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/23/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
4.1- 5.0	1	2																		
5.1- 6.0	5		2		1	1		2		2	1	1			2			2		4
6.1- 7.0	22	6	10	9	2	7	5	16	8	8	9	12	2	5	5	1	5	9	1	14
7.1- 8.0	16	8	15	22	16	22	29	25	17	21	16	21	6	4	16	6	13	24	7	16
8.1- 9.0	3	1	13	14	4	19	14	5	17	8	13	8	4	2	11	7	15	11	8	4
9.1- 10.0	3	2	2	4	3	3	1	2	3	2	2	3	2	2	2		2	2	2	1
10.1- 11.0	1	1	1	1	7	2	2	1	4	4	1	3	6	3	6	4	3	3	6	6
11.1- 12.0	6	3	11	6	5	4	5	5	7	9	9	9	14	9	4	16	7	4	12	11
12.1- 13.0	1	2	6	4	3	2	2	2	4	6	8	3	23	11	10	17	14	5	14	2
13.1- 14.0					1			1			1		1	3	3	7	1		3	2
14.1- 15.0							1	1					2	1	1	1			2	
15.1- 16.0					1		1												3	
16.1- 17.0																1			2	
MEAN/DEPTH	7.7	8.2	8.9	8.5	9.4	8.3	8.6	8.0	8.8	8.8	9.0	8.6	11.1	10.6	9.5	11.3	9.6	8.4	11.2	8.6
STD ERR	.25	.43	.27	.22	.34	.20	.24	.26	.22	.26	.29	.25	.25	.38	.30	.27	.28	.24	.32	.29
MEAN/TRANS	7.8		8.9			8.3			8.8		8.8		10.4			9.8			9.9	
STD ERR	.20		.16			.14			.17		.19		.18			.18			.24	
MEAN/DATE					8.5										9.8					
STD ERR					.08										.10					
RANGE(MIN)	4.7	5.0	5.1	6.2	5.8	5.6	6.6	5.6	6.4	6.0	5.3	6.0	6.7	6.2	5.6	7.0	6.2	6.0	6.4	5.3
(MAX)	12.1	12.4	12.8	12.8	15.7	13.0	15.7	14.3	12.2	12.6	13.3	12.8	14.6	14.3	15.0	16.1	14.0	12.9	16.4	13.7
NO.LENGTH	60	25	60	60	43	60	60	60	60	60	60	60	60	40	60	60	60	60	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/23/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
4.1- 5.0	1	2								
5.1- 6.0	6	1	2		3	1		4		6
6.1- 7.0	31	18	12	14	7	8	10	25	9	22
7.1- 8.0	34	29	21	26	32	28	42	49	24	37
8.1- 9.0	16	9	17	16	15	26	29	16	25	12
9.1- 10.0	5	5	4	6	5	3	3	4	5	3
10.1- 11.0	2	4	7	4	13	6	5	4	10	10
11.1- 12.0	15	12	25	15	9	20	12	9	19	20
12.1- 13.0	9	5	29	15	13	19	16	7	18	8
13.1- 14.0	1		1	3	4	7	1	1	3	2
14.1- 15.0			2	1	1	1	1	1	2	
15.1- 16.0					1		1		3	
16.1- 17.0						1			2	
MEAN/DEPTH	8.4	8.5	10.0	9.4	9.4	9.8	9.1	8.2	10.3	8.7
STD ERR	.19	.22	.21	.23	.23	.22	.19	.18	.22	.20
MEAN/TRANS	8.4		9.6			9.0			9.4	
STD ERR	.14		.13			.12			.15	
MEAN/DATE					9.2					
STD ERR					.07					
RANGE(MIN)	4.7	5.0	5.1	6.2	5.6	5.6	6.2	5.6	6.4	5.3
(MAX)	13.3	12.8	14.6	14.3	15.7	16.1	15.7	14.3	16.4	13.7
NO.LENGTHS	120	85	120	101	103	120	120	120	120	120

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
4.1- 5.0														1						
5.1- 6.0	2		1	3	1		2			1				1			2	1		2
6.1- 7.0	1	5	4	2	3	3	5	1	2	5		2		1	5		4	1	5	2
7.1- 8.0	20	16	4	21	8	22	14	16	24	23		6	1	9	12		6	9	8	14
8.1- 9.0	22	15	22	13	6	19	13	33	26	14		27	1	13	20	5	13	30	18	19
9.1- 10.0	7	1	9		5	9	3	9	1	2		16	3	3	8	4	4	6	3	8
10.1- 11.0	3	3	1	6	4	1	11	1	2	4		2	5	7	2	2	3	2	1	3
11.1- 12.0	1	10	7	6	8	4	10		5	6		5	24	15	6	15	10	2	6	2
12.1- 13.0	3	9	6	5	12	1	1		1	3		2	19	9	4	22	8	6	10	6
13.1- 14.0	5		5	2	2	1				1			7	1	1	7	5	2	6	1
14.1- 15.0			1		5											2			2	1
15.1- 16.0				2	4					1					1	3		1	1	1
16.1- 17.0																				1
MEAN/DEPTH	8.8	9.3	9.6	9.2	10.8	8.6	9.0	8.4	8.5	8.8		9.2	11.7	10.0	9.2	12.0	10.1	9.3	10.1	9.3
STD ERR	.22	.26	.29	.30	.35	.18	.23	.09	.16	.26		.17	.15	.26	.25	.20	.31	.25	.33	.30
MEAN/TRANS	9.0			9.3			8.7			8.6		9.2		10.3			10.5			9.7
STD ERR	.17			.19			.10			.15		.17		.15			.17			.22
MEAN/DATE					9.1										10.1					
STD ERR					.09										.09					
RANGE(MIN)	5.8	6.7	6.0	5.4	5.8	6.2	5.6	7.3	6.9	5.2		6.6	7.9	4.8	6.3	8.7	5.8	5.6	6.3	5.5
(MAX)	13.6	12.6	14.1	13.3	15.6	13.4	12.2	10.9	12.1	15.1		12.5	13.5	13.6	15.8	15.3	13.8	15.5	15.3	16.7
NO.LENGTHS	60	59	60	60	58	60	59	60	60	60	0	60	60	60	59	60	55	60	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/21/79

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
	DAY/NIGHT COMBINED									
4.1- 5.0				1						
5.1- 6.0	2		1	4	1		4	1		3
6.1- 7.0	1	7	4	3	8	3	9	2	7	7
7.1- 8.0	23	22	5	30	23	22	20	25	32	37
8.1- 9.0	20	42	23	26	26	24	26	63	43	33
9.1- 10.0	7	17	12	3	13	13	7	15	4	10
10.1- 11.0	3	5	6	13	6	3	14	3	3	7
11.1- 12.0	1	15	31	21	14	19	20	2	11	8
12.1- 13.0	3	11	25	14	16	23	9	6	11	9
13.1- 14.0	3		12	3	3	8	5	2	6	2
14.1- 15.0			1		5	2			2	1
15.1- 16.0				2	5	3		1	1	2
16.1- 17.0										1
MEAN/DEPTH	8.8	9.2	10.7	9.6	10.0	10.3	9.5	8.8	9.3	9.0
STD ERR	.22	.15	.19	.20	.23	.20	.20	.14	.20	.20
MEAN/TRANS	9.1		10.1			9.6			9.2	
STD ERR	.13		.12			.11			.14	
MEAN/DAY					9.6					
STD ERR					.06					
RANGE(MIN)	5.3	6.6	6.0	4.8	5.3	6.2	5.6	5.6	6.3	5.2
(MAX)	13.6	12.6	14.1	15.3	15.8	15.3	13.8	15.5	15.3	16.7
NO.LENGTHS	69	119	120	120	117	120	114	120	120	120

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
4.1- 5.0	2																			
5.1- 6.0	7	3	1	1		1	3	1	1			14			1	1	4			
6.1- 7.0	5	2	2	1		10	4		3	4	2	17	1	12	7	2	7	2		
7.1- 8.0	3	1	1	2		8	8	5	5	10	5	8	3	12	8	8	4	4		1
8.1- 9.0	4	2	6		1	19	20	18	20	18	5	9	8	19	17	17	24	22	2	19
9.1- 10.0		3	4	2	1	18	14	21	15	22	13	3	22	17	20	20	10	21		26
10.1- 11.0		1	1		1	4	1	3	8	3	4	1	4		7	2	1	3		12
11.1- 12.0		1	2	2			2	7	4	3	8	3	3			5	3	1	4	2
12.1- 13.0		1					6	2	3		13	2	13			4	7	6	5	
13.1- 14.0		3					1				7	3	4			1			2	
14.1- 15.0							1	2			3		2					1	2	
15.1- 16.0								1												
16.1- 17.0					1															
MEAN/DEPTH	6.6	9.3	8.7	8.6	11.1	8.4	9.1	9.6	9.2	8.9	10.8	7.8	10.4	8.2	8.7	9.3	8.9	9.4	12.1	9.4
STD ERR	.26	.69	.41	.79	1.70	.16	.24	.23	.19	.15	.28	.29	.25	.14	.16	.20	.24	.19	.45	.10
MEAN/TRANS	7.8		9.0			9.0			9.3		9.3		9.1			9.2			10.0	
STD ERR	.40		.41			.13			.12		.24		.13			.12			.17	
MEAN/DATE					8.9										9.3					
STD ERR					.09										.08					
RANGE(MIN)	4.8	5.4	5.3	5.6	8.6	5.6	5.3	5.7	5.8	6.4	6.2	5.4	6.3	6.2	5.8	6.0	5.6	6.5	8.3	7.5
(MAX)	8.7	13.9	11.5	11.6	16.1	10.9	14.6	15.1	13.0	12.3	14.9	13.7	14.3	9.9	10.5	13.5	13.0	14.3	14.5	11.3
NO.LENG'S	21	17	17	8	4	60	60	60	60	60	60	60	60	60	60	60	60	60	15	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED: WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
4.1- 5.0	2									
5.1- 6.0	7	17	1	1	1	2	7	1	1	
6.1- 7.0	7	19	3	13	7	12	11	2	3	4
7.1- 8.0	8	9	4	14	8	16	12	9	6	11
8.1- 9.0	9	11	14	19	18	36	44	40	22	37
9.1- 10.0	13	6	26	19	21	38	24	42	15	49
10.1- 11.0	4	2	5		8	6	2	6	8	15
11.1- 12.0	8	4	5	2		5	5	8	8	5
12.1- 13.0	13	3	13			4	13	8	8	
13.1- 14.0	7	6	4			1	1		2	
14.1- 15.0	3		2				1	3	2	
15.1- 16.0								1		
16.1- 17.0					1					
MEAN/DEPTH	9.7	8.1	10.0	8.3	8.8	8.9	9.0	9.5	9.8	9.2
STD ERR	.32	.28	.23	.15	.19	.13	.17	.15	.22	.09
MEAN/TRANS	8.9		9.1			9.1			9.4	
STD ERR	.21		.12			.09			.10	
MEAN/DATE					9.1					
STD ERR					.06					
RANGE(MIN)	4.8	5.4	5.3	5.6	5.8	5.6	5.3	5.7	5.8	6.4
(MAX)	14.9	13.9	14.3	11.6	16.1	13.5	14.6	15.1	14.5	12.0
#D.LEVG*D	81	77	77	68	64	120	120	120	75	120

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/03/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
5.1- 6.0	2	1										1			1		1			1
6.1- 7.0	4	2			1	2	4	2			2	3						4		
7.1- 8.0	6	3	4	3	1	5	7	3	2	1	6	12	4	5	5	5		5		2
8.1- 9.0	13	4	12	3	4	10	16	2	8	2	7	12	11	9	18	8	9	11	2	7
9.1- 10.0	9	5	13	9	6	15	12	4	11	2	12	19	16	14	19	14	13	19	7	7
10.1- 11.0	4	3	11	6	2	11	15	7	28	9	9	6	16	10	8	24	14	14	15	11
11.1- 12.0	3	1	9	4	1	10	6	4	9	1	11	1	6	7	5	6	12	4	14	12
12.1- 13.0	1		2	2	2	4		1	2		3	2	3	5		1	6		4	1
13.1- 14.0	3	2	6	5	2	1					2	4		3	3		4		4	8
14.1- 15.0	1		2	3		2		2		2	6		3	5	1	1	1	1	12	9
15.1- 16.0	2									1			1			1		2	2	
16.1- 17.0		2		1						2	2			2						1
17.1- 18.0			1		1															
18.1- 19.0				1																
19.1- 20.0																				
20.1- 21.0		1																		
21.1- 22.0																				1
MEAN/DEPTH	9.4	10.3	10.5	11.2	10.4	9.9	9.3	10.1	10.2	11.4	10.6	9.3	10.1	10.7	9.6	10.0	10.6	9.7	11.9	11.5
STD ERR	.34	.76	.27	.42	.57	.23	.17	.41	.13	.60	.30	.23	.22	.28	.21	.18	.22	.23	.24	.35
MEAN/TRANS	9.7		10.7			9.7			10.5		9.9		10.1			10.1			11.7	
STD ERR	.34		.22			.14			.18		.20		.14			.12			.21	
MEAN/DATE					10.1										10.4					
STD ERR					.11										.08					
RANGE(MIN)	5.2	5.4	7.5	7.4	6.6	6.8	6.8	6.2	7.7	7.6	6.8	5.8	7.2	7.5	6.0	7.3	5.6	6.5	8.3	5.2
(MAX)	15.4	20.8	17.4	18.7	17.9	15.0	11.6	14.5	12.2	16.5	16.8	14.9	15.3	17.0	14.4	15.2	14.9	15.9	15.4	21.7
NO.LENGTH	48	24	60	37	20	60	60	25	60	20	60	60	60	60	60	60	60	60	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
5.1- 6.0	2	2			1		1			1
6.1- 7.0	6	5			1	2	4	6		
7.1- 8.0	12	15	8	8	6	13	7	8	2	3
8.1- 9.0	20	16	23	12	22	18	25	13	10	9
9.1- 10.0	21	24	29	23	25	29	25	23	18	9
10.1- 11.0	13	9	27	16	10	35	29	21	43	20
11.1- 12.0	14	2	15	11	6	16	18	8	23	13
12.1- 13.0	4	2	3	7	2	5	6	1	6	1
13.1- 14.0	5	6	6	8	5	1	4		4	8
14.1- 15.0	7		5	8	1	3	1	3	12	11
15.1- 16.0	2		1			1		2	2	1
16.1- 17.0	2	2		3						3
17.1- 18.0			1		1					
18.1- 19.0				1						
19.1- 20.0										
20.1- 21.0		1								
21.1- 22.0										1
MEAN/DEPTH	10.0	9.6	10.3	10.9	9.8	10.0	10.0	9.8	11.0	11.5
STD ERR	.23	.27	.17	.24	.21	.15	.15	.20	.16	.30
MEAN/TRANS	9.8		10.4			9.9			11.2	
STD ERR	.18		.12			.09			.15	
MEAN/DATE					10.3					
STD ERR					.07					
RANGE(MIN)	5.2	5.4	7.2	7.4	6.3	6.8	5.6	6.2	7.7	5.2
(MAX)	16.8	20.8	17.4	18.7	17.9	15.2	14.9	15.9	15.4	21.7
NO.LENGTH	108	84	120	97	80	120	120	85	120	80

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
5.1- 6.0				1			3				1			2			1			
6.1- 7.0				1				2	4	1			3		1		4	2	1	
7.1- 8.0			1	1		1	2	3	2	4	1			2	1		5	3		1
8.1- 9.0	1			6		3	4	10	11	14	5	4	6	6	4	2	14	10	5	7
9.1- 10.0	1	2	2			13	10	5	17	17	13	14	6	13	14	11	13	15	14	16
10.1- 11.0	2		2	3		10	5	4	15	16	19	17	15	10	8	25	12	16	22	15
11.1- 12.0	1			2	1	4	1	1	9	6	12	13	4	15	9	10	9	6	10	9
12.1- 13.0			1	2		13	2	1		2	5	6	9	8	9	10	1	5	5	8
13.1- 14.0				2		3	1	4	1		1	5	5	2	7	2		2	3	4
14.1- 15.0							1				3		3	2	5		1			
15.1- 16.0				1		1	1						6		1			1		
16.1- 17.0						2			1			1	2							
17.1- 18.0															1					
18.1- 19.0	1												1							
MEAN/DEPTH	11.6	9.9	9.9	10.2	11.1	11.2	9.9	9.6	9.9	9.7	10.7	11.0	11.7	10.5	11.4	10.9	9.5	10.2	10.6	10.6
STD ERR	1.41	.95	.68	.62		.28	.44	.36	.22	.16	.21	.19	.33	.23	.28	.16	.21	.22	.17	.18
MEAN/TRANS	11.1		10.2			10.4			9.8		10.8		11.2			10.2			10.6	
STD ERR	1.07		.48			.21			.14		.14		.17			.12			.12	
MEAN/DATE					10.1										10.7					
STD ERR					.12										.07					
RANGE(MIN)	8.6	9.8	7.1	5.7	11.1	7.1	5.3	6.6	6.4	6.8	5.9	8.8	6.8	5.5	7.0	8.5	5.9	6.2	6.3	7.4
(MAX)	18.3	9.9	12.1	15.2	11.1	16.8	15.3	13.7	17.0	12.5	14.7	16.2	18.9	14.6	17.3	13.5	14.1	15.6	13.3	13.7
NO.LENGTHS	6	2	6	19	1	50	30	30	60	60	60	60	60	60	60	60	60	60	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
5.1- 6.0	1			3			4			
6.1- 7.0			3	1	1		4	4	5	1
7.1- 8.0	1		1	3	1	1	7	6	2	5
8.1- 9.0	6	4	6	12	4	5	18	20	16	21
9.1- 10.0	14	15	8	13	14	24	23	20	31	33
10.1- 11.0	21	17	17	13	8	35	17	20	37	31
11.1- 12.0	13	13	4	17	10	14	10	7	19	15
12.1- 13.0	5	6	10	10	9	23	3	6	5	10
13.1- 14.0	1	5	5	4	7	5	1	6	4	4
14.1- 15.0	3		3	2	5		2			
15.1- 16.0			6	1	1	1	1	1		
16.1- 17.0		1	2			2			1	
17.1- 18.0					1					
18.1- 19.0	1		1							
MEAN/DEPTH	10.7	11.0	11.6	10.5	11.4	11.0	9.6	10.0	10.2	10.2
STD ERR	.22	.19	.31	.23	.27	.15	.20	.19	.14	.13
MEAN/TRANS	10.9		11.1			10.3			10.2	
STD ERR	.15		.16			.11			.10	
MEAN/DATE					10.5					
STD ERR					.06					
RANGE(MIN)	5.9	8.8	6.8	5.5	7.0	7.1	5.3	6.2	6.3	6.8
(MAX)	18.3	16.2	18.9	15.2	17.3	16.8	15.3	15.6	17.3	13.7
NO.LENGTH	66	62	66	79	61	110	90	90	120	120

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
5.1- 6.0	4	2		1		1						2								
6.1- 7.0	5	3	3			2		1	5	2		2			2	2				1
7.1- 8.0	4	3	6	1	1	6	2	1	5	5		3	4	1	2	2	3		7	3
8.1- 9.0	5		4	2	1	4	5	2	6	6	1	3	11	1	3	3	2	2	7	6
9.1- 10.0	4	4	15	1	3	6	4	1	12	11	5	7	6	9	9	4	6	10	18	13
10.1- 11.0	4	1	15	3	5	8	5	1	14	14	3	4	10	11	12	11	20	18	9	21
11.1- 12.0	4	1	5	2	1	6	4	2	13	7	8	11	12	12	10	20	6	13	15	10
12.1- 13.0	1		4	2	1	6	3	2	3	2	11	8	7	9	4	13	10	9	4	5
13.1- 14.0			2	2	1	4		1	1	4	9	5	2	9	6	3	1	5		1
14.1- 15.0			1				1			2	2	3	2	1		2	2	1		
15.1- 16.0	1		3			1			1		5	4	3	3	4		2			
16.1- 17.0			1			2	1					1	1		3		1	1		
17.1- 18.0						1					3	4			2		4			
18.1- 19.0											2	1	1	2	1		2	1		
19.1- 20.0											3	1		2	1		1			
20.1- 21.0					1							1								
21.1- 22.0																				
22.1- 23.0											1				1					
23.1- 24.0											1									
MEAN/DEPTH	8.8	8.2	10.4	10.5	11.1	10.8	10.6	10.2	10.0	10.3	13.4	12.1	11.0	12.1	12.0	11.2	12.0	11.4	10.1	10.2
STD ERR	.42	.51	.29	.64	.84	.39	.41	.66	.24	.25	.45	.44	.31	.32	.42	.21	.37	.22	.18	.18
MEAN/TRANS	8.6		10.5			10.6			10.2		12.7		11.7			11.5			10.1	
STD ERR	.33		.26			.27			.17		.31		.21			.16			.13	
MEAN/DATE					10.2										11.5					
STD ERR					.13										.11					
RANGE(MIN)	5.5	5.5	6.5	5.6	7.3	5.7	7.7	6.8	6.2	6.9	8.2	5.6	7.1	7.4	6.7	6.5	7.3	8.4	7.2	6.9
(MAX)	15.4	11.9	16.4	13.7	20.3	18.0	16.7	13.3	15.6	14.8	24.0	20.8	18.6	19.3	23.0	14.2	19.2	18.3	12.4	13.1
NO.LENGTHS	32	14	60	14	14	47	25	11	60	51	60	60	59	60	60	60	60	60	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
5.1- 6.0	4	4		1		1				
6.1- 7.0	5	5	3		2	4		1	5	3
7.1- 8.0	4	6	10	2	3	8	5	1	12	6
8.1- 9.0	6	3	15	3	4	7	7	4	13	12
9.1- 10.0	9	11	21	10	12	10	10	11	30	24
10.1- 11.0	13	9	25	14	17	19	25	19	23	35
11.1- 12.0	12	12	18	14	11	26	10	15	28	17
12.1- 13.0	12	8	11	11	5	19	13	11	7	7
13.1- 14.0	9	5	4	11	7	7	1	6	1	5
14.1- 15.0	2	3	3	1		2	3	1		2
15.1- 16.0	6	4	6	3	4	1	2		1	
16.1- 17.0		1	2		3	2	2	1		
17.1- 18.0	3	4			2	1	4			
18.1- 19.0	2	1	1	2	1		2	1		
19.1- 20.0	3	1		2	1		1			
20.1- 21.0		1			1					
21.1- 22.0										
22.1- 23.0	1				1					
23.1- 24.0	1									
MEAN/DEPTH	11.8	11.3	10.7	11.8	11.8	11.0	11.6	11.2	10.0	10.3
STD ERR	.39	.41	.21	.29	.38	.21	.30	.22	.15	.15
MEAN/TRANS	11.6		11.3			11.2			10.1	
STD ERR	.28		.17			.14			.11	
MEAN/DATE					11.1					
STD ERR					.09					
RANGE(MIN)	5.5	5.5	6.5	5.6	6.7	5.7	7.3	6.8	6.2	6.3
(MAX)	24.0	20.8	18.6	19.3	23.0	18.0	19.2	18.3	15.6	14.8
NO.LENGTH	92	74	119	74	74	107	85	71	123	111

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/11/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
5.1- 6.0										1										
6.1- 7.0									2								1			
7.1- 8.0									2	1			1		1			1		
8.1- 9.0									5	1			2		1	2	1	1	2	2
9.1- 10.0				1					9		2		1		2	5	2	1	1	
10.1- 11.0							1	1	7		3	2	9	2	5	5	5	3	2	6
11.1- 12.0						1	1		14	1	7	1	16	11	6	3	5	10	12	9
12.1- 13.0						1	1	3	12	1	10	5	15	9	12	12	13	8	14	13
13.1- 14.0					1	2	1	1	6		3	12	10	10	12	11	17	13	10	20
14.1- 15.0					2		1	2	2		5	7		6	13	6	12	10	9	8
15.1- 16.0							3	2			3	3	4	5	4	1	4	3	5	2
16.1- 17.0									1		2	3	2	4	2				3	
17.1- 18.0											1			3						
18.1- 19.0											1	1		3	2	1			1	
19.1- 20.0											1	5		6						
20.1- 21.0												1		1		1			1	
21.1- 22.0								1				2						1		
22.1- 23.0																				
23.1- 24.0																				
24.1- 25.0											1									
MEAN/DEPTH			9.8	14.2	12.8	13.6	14.4	11.2	9.2		13.5	15.2	12.2	14.5	13.1	12.6	12.9	12.9	13.2	12.8
STD ERR				.39		.64		.25			.47		.23		.27		.23		.28	
					.50		.88		1.36			.45		.36		.33		.30		.18
MEAN/TRANS			13.1			13.8		11.0			14.4		13.3				12.8		13.0	
STD ERR			1.13			.48		.25			.34		.18				.16		.17	
MEAN/DATE				11.8											13.3					
STD ERR				.26											.10					
RANGE(MIN)			9.8	13.4	11.8	10.7	11.0	6.4	5.6		9.3	10.5	7.7	10.5	7.8	8.2	6.3	7.3	8.3	8.4
(MAX)			9.8	14.7	14.0	15.4	21.2	16.1	13.0		24.5	22.0	16.5	20.5	18.3	20.1	15.4	21.6	21.0	15.3
NO.LENGTHS	0	0	0	1	5	4	8	10	60	5	39	42	60	60	60	47	60	51	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/17/79

LENGTH(MM)	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
5.1- 6.0										1
6.1- 7.0							1		2	
7.1- 8.0			1		1			1	2	1
8.1- 9.0			2		1	2	1	1	7	3
9.1- 10.0	2		1	1	2	5	2	1	10	
10.1- 11.0	3	2	9	2	5	5	6	4	9	6
11.1- 12.0	7	1	16	11	6	4	6	10	25	10
12.1- 13.0	10	5	15	9	12	13	14	11	26	14
13.1- 14.0	3	12	10	10	13	13	18	14	16	20
14.1- 15.0	5	7		6	15	6	13	12	11	8
15.1- 16.0	3	3	4	5	4	1	7	5	5	2
16.1- 17.0	2	3	2	4	2				4	
17.1- 18.0	1			3						
18.1- 19.0	1	1		3	2	1			1	
19.1- 20.0	1	5		6						
20.1- 21.0		1		1		1			1	
21.1- 22.0		2						2		
22.1- 23.0										
23.1- 24.0										
24.1- 25.0	1									
MEAN/DEPTH	13.5	15.2	12.2	14.4	13.2	12.6	13.0	13.2	12.2	12.5
STD ERR	.47		.23		.26		.22		.21	
		.45		.36		.30		.29		.23
MEAN/TRANS	14.4		13.3			12.9			12.3	
STD ERR	.34		.18			.15			.16	
MEAN/DATE					13.0					
STD ERR					.19					
RANGE(MIN)	9.3	10.5	7.7	9.8	7.8	8.2	6.3	7.3	6.4	5.6
(MAX)	24.5	22.0	16.5	20.5	18.3	20.1	15.4	21.6	21.3	15.3
NO.LENGTH	39	42	90	61	63	51	98	61	125	65

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
5.1- 6.0							1			1										
6.1- 7.0							2									1				
7.1- 8.0		2				1	5		1					1	2	1				
8.1- 9.0	2						5		1				1		6					
9.1- 10.0						1	5		1						6	4		2		
10.1- 11.0			1	1		2	3		2	3	3		3	1	6	8	1	2		
11.1- 12.0		2	1				5		1	2			3		1	6		1	3	
12.1- 13.0			3	2			10	1	2	1	2	4	1	5	3	6	2	1	3	
13.1- 14.0	1	2	2	13		1	1	1	6	1	8	7	6	8	9	11	7		8	4
14.1- 15.0	2			18		1	4		3	2	14	22	10	7	8	7	5	2	5	6
15.1- 16.0	1		2	17			7	2	3		15	16	5	14	12	3	7	2	27	6
16.1- 17.0	2			4			1		1	3	14	7	3	11	3	1	4		12	11
17.1- 18.0		1		5					1		4	2	2	2	1		7	1	2	6
18.1- 19.0		1										2	1	1			6			7
19.1- 20.0													1	2	1		6			10
20.1- 21.0														3	2	1	8			2
21.1- 22.0								1					2	2			4			2
22.1- 23.0														1			3			3
23.1- 24.0														2						1
24.1- 25.0																				2
MEAN/DEPTH	15.6	12.9	13.0	14.9		11.2	11.4	15.7	13.1	12.7	15.0	15.1	14.7	15.9	13.2	12.6	17.6	13.1	15.1	17.8
STD ERR	1.15	1.42	.53	.17		1.00	.42	1.58	.53	.43	.21	.17	.46	.40	.41	.35	.39	.84	.18	.35
MEAN/TRANS	13.2		14.6			11.7			13.0		15.1		14.6			15.1			16.5	
STD ERR	.89		.18			.41			.45		.13		.26			.34			.23	
MEAN/DATE					13.2										15.3					
STD ERR					.21										.13					
RANGE(MIN)	8.3	7.8	10.5	10.7		8.0	5.7	12.5	8.0	6.0	10.3	12.4	9.0	7.2	7.2	6.7	10.7	9.5	11.1	13.4
(MAX)	17.0	18.8	15.2	18.0		14.4	16.9	21.5	17.4	16.7	17.3	18.8	21.5	23.7	21.0	21.0	22.5	17.6	17.3	24.5
NO.LENGTH	8	8	9	60	0	6	49	5	22	13	60	60	38	60	60	49	60	11	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
6.1- 7.0							1			1
7.1- 8.0		2		1	2	2	5		1	
8.1- 9.0	2		1		5		5		1	
9.1- 10.0					6	5	5	2	1	
10.1- 11.0	5		4	2	6	10	4	2	2	3
11.1- 12.0		2	4		1	6	5	1	4	2
12.1- 13.0	2	4	4	7	3	6	12	2	5	1
13.1- 14.0	9	9	8	21	9	12	8	1	14	5
14.1- 15.0	16	22	10	25	8	8	9	2	8	8
15.1- 16.0	16	16	7	31	12	3	14	4	30	6
16.1- 17.0	16	7	3	15	3	1	5		13	14
17.1- 18.0	4	3	2	7	1		7	1	3	6
18.1- 19.0		3	1	1			6			7
19.1- 20.0			1	2	1		6			10
20.1- 21.0				3	2	1	8			2
21.1- 22.0			2	2			4	1		2
22.1- 23.0				1			3			3
23.1- 24.0				2						1
24.1- 25.0										2
MEAN/DEPTH	14.9	14.8	14.4	15.4	13.2	12.5	14.8	13.9	14.6	16.9
STD ERR	.23	.23	.48	.22	.41	.33	.41	.80	.22	.39
MEAN/TRANS	14.8		14.6			14.0			15.7	
STD ERR	.16		.19			.29			.24	
MEAN/DATE					14.7					
STD ERR					.12					
RANGE(MIN)	8.3	7.8	9.0	7.2	7.2	6.7	5.7	9.5	8.0	6.0
(MAX)	17.3	16.8	21.5	23.7	21.0	21.0	22.5	21.5	17.4	24.5
NO.LENGTH	68	68	47	120	60	55	109	16	82	73

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
6.1- 7.0							2		1											
7.1- 8.0						1	1											1		
8.1- 9.0			1			2	6		1			1	2			3		1		
9.1- 10.0		1				4	3		3		2	3	4	3		1	6	2	1	3
10.1- 11.0						1	3		1		5	4	3	1		1	3	4	4	1
11.1- 12.0						1	1		2		6	2	4	2		5	2	2	1	
12.1- 13.0				1			3		1		5	3	8	3		4	4	3	1	
13.1- 14.0									2		5	4	4	4		2	1	1	4	
14.1- 15.0							1		2		5	2	5	2	1	2	7	2	7	1
15.1- 16.0		1									5	1	4	6	1	3	3	1	2	2
16.1- 17.0									2		7	2	5	7		1	4	4	10	5
17.1- 18.0	1							1			9	4	1	8	2	1	8	5	3	2
18.1- 19.0		1									3	1	3	11	1		8	3	3	4
19.1- 20.0	1										7	5	1	5	1		8	3	1	5
20.1- 21.0		1									1	1		4	3		5	4	1	6
21.1- 22.0												5		3			1	1		
22.1- 23.0												1		1				1	2	2
23.1- 24.0												2								1
MEAN/DEPTH	18.4	16.1	8.7	12.2		9.4	9.7	18.0	12.0		15.2	16.0	13.5	16.6	18.5	12.3	16.0	15.5	15.5	17.4
STD ERR	1.15	2.39				.43	.46		.75		.40	.71	.43	.41	.81	.56	.46	.67	.48	.69
MEAN/TRANS	16.8		10.5			9.9			12.0		15.5		15.6			15.1			16.3	
STD ERR	1.62		1.75			.43			.75		.37		.32			.35			.42	
MEAN/DATE					11.3										15.6					
STD ERR					.47										.18					
RANGE(MIN)	17.2	9.4	8.7	12.2		7.2	6.7	18.0	6.9		9.4	9.0	8.3	9.2	14.4	7.4	9.2	7.7	9.5	8.7
(MAX)	19.5	23.3	8.7	12.2		11.7	14.5	18.0	16.2		20.1	24.0	19.2	22.2	21.0	17.3	22.0	22.6	22.7	23.1
NO.LENG'D	2	4	1	1	0	9	20	1	15	0	60	41	44	60	9	24	60	38	40	33

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 6/2./79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
6.1- 7.0							2		1	
7.1- 8.0						4	1	1		
8.1- 9.0		1	3			3	6	1	1	1
9.1- 10.0	2	4	4	3		5	9	2	4	3
10.1- 11.0	5	4	3	1		2	6	4	5	1
11.1- 12.0	6	2	4	2		6	3	2	3	
12.1- 13.0	5	3	8	4		4	7	3	2	
13.1- 14.0	5	4	4	4		2	1	1	1	
14.1- 15.0	5	2	5	2	1	2	8	2	3	1
15.1- 16.0	6	2	4	6	1	3	3	1	2	2
16.1- 17.0	7	2	5	7		1	4	4	12	5
17.1- 18.0	10	4	1	8	2	1	8	6	3	2
18.1- 19.0	3	2	3	11	1		8	3	3	4
19.1- 20.0	8	5	1	5	1		8	3	1	5
20.1- 21.0	1	2		4	3		5	4	1	6
21.1- 22.0		5		3			1	1		
22.1- 23.0		1		1				1	2	2
23.1- 24.0		2								1
MEAN/DEPTH	15.3	16.0	13.4	16.6	18.5	11.5	14.4	15.6	14.0	17.4
STD ERR	.40	.57	.43	.41	.81	.48	.48	.66	.45	.69
MEAN/TRANS	15.5		15.5			14.1			15.6	
STD ERR	.36		.33			.34			.41	
MEAN/DATE					15.1					
STD ERR					.18					
RANGE(MIN)	9.4	9.3	9.3	9.2	14.4	7.2	6.7	7.7	6.9	8.7
(MAX)	20.1	24.0	19.2	22.2	21.0	17.3	22.0	22.6	22.7	23.1
NO.LENGTHD	62	45	45	61	9	33	80	39	55	33

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
8.1- 9.0									1											
9.1- 10.0																		1		1
10.1- 11.0														1		1			1	
11.1- 12.0	1																			
12.1- 13.0	1			1								1								1
13.1- 14.0									2	1				3		2			1	1
14.1- 15.0																	3	1	2	4
15.1- 16.0																1	1	1		1
16.1- 17.0				1										1					1	
17.1- 18.0												1					2			5
18.1- 19.0																	3			
19.1- 20.0								1				1		2			8			2
20.1- 21.0											1	1		3	1		5			5
21.1- 22.0								1				4		1			8		2	7
22.1- 23.0	1											4		1			7			8
23.1- 24.0												5								1
24.1- 25.0												4		1			2			
25.1- 26.0												1		1				1		
26.1- 27.0																	2			
27.1- 28.0																				
28.1- 29.0																				
29.1- 30.0																	1			
MEAN/DEPTH	15.5		14.8			20.4			11.9	13.3	20.1	22.2		18.7	20.6	13.4	20.7	16.3	16.4	19.3
STD ERR	3.70		2.00			.85			1.45		.62			1.22		.96	.47	3.21	1.57	.58
MEAN/TRANS	15.5		14.8			20.4			12.3		22.1			18.9			19.8		18.8	
STD ERR	3.70		2.00			.85			1.08		.60			1.14			.56		.57	
MEAN/DAY					15.1												19.8			
STD ERR					1.35												.34			
RANGE(MIN)	11.2		12.8			19.5			9.0	13.3	20.1	12.3		10.7	20.6	10.9	14.3	9.7	10.7	9.7
(MAX)	22.9		16.8			21.2			13.4	13.3	20.1	25.5		25.7	20.6	15.5	29.4	25.1	21.9	23.3
NO.LENGTH	3	0	0	2	0	0	0	2	3	1	1	22	0	14	1	4	42	4	7	36

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
8.1- 9.0									1	
9.1- 10.0								1		1
10.1- 11.0				1		1			1	
11.1- 12.0	1									
12.1- 13.0	1	1		1						1
13.1- 14.0				3		2			3	2
14.1- 15.0							3	1	2	4
15.1- 16.0						1	1	1		1
16.1- 17.0				2					1	
17.1- 18.0		1					2			5
18.1- 19.0							3			
19.1- 20.0		1		2			8	1		2
20.1- 21.0	1	1		3	1		5			5
21.1- 22.0		4		1			8	1	2	7
22.1- 23.0	1	4		1			7			8
23.1- 24.0		5								1
24.1- 25.0		4		1			2			
25.1- 26.0		1		1				1		
26.1- 27.0							2			
27.1- 28.0										
28.1- 29.0										
29.1- 30.0							1			
MEAN/DEPTH	16.7	22.2		18.2	20.6	13.4	20.7	17.6	15.0	19.1
STD ERR	2.86						.47		1.32	
		.62		1.13		.96		2.22		.59
MEAN/TRAN	21.5			18.4			19.8		18.2	
STD ERR	.76			1.07			.54		.59	
MEAN/DATE					19.4					
STD ERR					.35					
RANGE(MIN)	11.2	12.3		10.7	20.6	10.9	14.3	9.7	9.0	9.7
(MAX)	22.9	25.5		25.7	20.6	15.5	29.4	25.1	21.9	23.3
NO.LENGTHS	4	22	0	16	1	4	42	6	10	37

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/13/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
8.1- 9.0																1				
9.1- 10.0									1					1		1	1			
10.1- 11.0			1						1		1					2	1			
11.1- 12.0				1							1			1			1			
12.1- 13.0			1												1					
13.1- 14.0														1						
14.1- 15.0																				
15.1- 16.0				1							1									
16.1- 17.0																	1		1	
17.1- 18.0														1					1	
18.1- 19.0			1								1			1						
19.1- 20.0												1			1		1	1		
20.1- 21.0											1	1					1		1	
21.1- 22.0												2		1						1
22.1- 23.0												3								5
23.1- 24.0		1									4	3					1			2
24.1- 25.0											1	3					1			
25.1- 26.0											1									
MEAN/DEPTH	23.0		13.7	13.6					10.1		20.3	22.9		13.6	15.9	9.7	17.0	19.8	18.5	22.8
STD ERR			2.24						.40		1.65				3.55		2.12		1.27	
				1.65								.41		1.90		.53				.19
MEAN/TRANS	23.0			13.7					10.0		21.7			15.7			15.0		21.6	
STD ERR				1.33					.40		.82			1.34			1.65		.68	
MEAN/DATE					14.3											19.3				
STD ERR					1.68											.70				
RANGE (MIN)	23.0		13.7	12.0					9.6		10.7	20.0		9.7	12.3	8.6	9.1	19.8	16.8	22.0
(MAX)	23.0		18.1	15.3					10.4		25.5	25.0		22.0	19.4	11.0	24.5	19.8	21.0	23.5
NO.LENGTHD	0	1	3	2	0	0	0	0	2	0	11	13	0	6	2	4	8	1	3	8

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/13/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
8.1- 9.0						1				
9.1- 10.0				1		1	1		1	
10.1- 11.0	1		1			2	1		1	
11.1- 12.0	1			2			1			
12.1- 13.0			1		1					
13.1- 14.0				1						
14.1- 15.0										
15.1- 16.0	1			1						
16.1- 17.0							1		1	
17.1- 18.0				1					1	
18.1- 19.0	1		1	1						
19.1- 20.0		1			1		1	1		
20.1- 21.0	1	1					1		1	
21.1- 22.0		2		1						1
22.1- 23.0		5								5
23.1- 24.0	4	4					1			2
24.1- 25.0	1	3					1			
25.1- 26.0	1									
MEAN/DEPTH	20.3	23.6	13.7	15.1	15.9	9.7	17.0	19.8	15.1	22.8
STD ERR	1.65	.58	2.24	1.46	3.55	.53	2.12		2.21	.19
MEAN/TRANS	21.8		14.9			15.0			19.9	
STD ERR	.79		1.38			1.65			1.34	
MEAN/DATE					18.6					
STD ERR					.68					
RANGE (MIN)	15.7	20.0	10.7	9.7	12.3	8.6	9.1	19.8	9.6	22.0
(MAX)	25.5	25.0	18.1	22.0	19.4	11.0	24.5	19.8	21.0	23.5
NO.LENGTHS	11	14	3	8	2	4	8	1	5	8

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
10.1- 11.0									1			1		1						
11.1- 12.0													1							
12.1- 13.0																				
13.1- 14.0																	1			1
14.1- 15.0																1	3			2
15.1- 16.0																				1
16.1- 17.0												1								
17.1- 18.0																	1			
18.1- 19.0																				
19.1- 20.0														1						1
20.1- 21.0												1								
21.1- 22.0																				
22.1- 23.0														1	1					
23.1- 24.0																				
24.1- 25.0																		1		
MEAN/DEPTH									10.5			15.8	11.8	17.5	23.0	13.7	14.1	24.5		14.7
STD ERR																	.93			
												2.89		3.41						1.22
MEAN/TRANS									10.5		15.8			17.5			15.5		14.7	
STD ERR											2.89			2.57			1.63		1.22	
MEAN/DATE				10.5											15.8					
STD ERR															.95					
RANGE(MIN)									10.5			11.0	11.8	11.0	23.0	13.7	12.1	24.5		12.1
(MAX)									10.5			21.0	11.8	22.5	23.0	13.7	17.6	24.5		19.2
NO.LENGTH	0	0	0	0	0	0	0	0	1	0	0	3	1	5	1	1	5	1	0	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
10.1- 11.0		1		1					1	
11.1- 12.0			1							
12.1- 13.0							1			1
13.1- 14.0						1	3			2
14.1- 15.0										1
15.1- 16.0		1								
16.1- 17.0										
17.1- 18.0							1			
18.1- 19.0										
19.1- 20.0				1						1
20.1- 21.0		1								
21.1- 22.0										
22.1- 23.0				1	1					
23.1- 24.0										
24.1- 25.0								1		
MEAN/DEPTH	15.8	11.8	17.5	23.0	13.7	14.1	24.5	10.5	14.7	
STD ERR	2.89		3.41			.93			1.22	
MEAN/TRANS	15.8		17.5			15.5			14.3	
STD ERR	2.89		2.57			1.63			1.22	
MEAN/DATE	15.6									
STD ERR	.94									
RANGE(MIN)	11.0	11.8	11.0	23.0	13.7	12.1	24.5	10.5	12.1	
(MAX)	21.0	11.8	22.5	23.0	13.7	17.6	24.5	10.5	19.2	
NO.LENGTH	3	1	3	1	1	5	1	1	5	

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
10.1- 11.0														1						
11.1- 12.0																				
12.1- 13.0																				
13.1- 14.0													1							
14.1- 15.0																	1		1	
15.1- 16.0																				
16.1- 17.0																	1		1	
17.1- 18.0																			1	
18.1- 19.0																			1	
19.1- 20.0																			1	
20.1- 21.0																				
21.1- 22.0																			1	
22.1- 23.0												1								
23.1- 24.0												1								
MEAN/DEPTH												23.3	13.8	10.1			15.8		18.0	
STD ERR												.75					1.05		1.06	
MEAN/TRANS												23.3		12.0			15.8		18.0	
STD ERR												.75		1.85			1.05		1.06	
MEAN/DATE														17.5						
STD ERR														1.16						
RANGE(MIN)												22.5	13.8	10.1			14.7		14.2	
(MAX)												24.0	13.8	10.1			16.8		22.0	
NO.LENGTH	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0	0	2	0	6	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED — WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
10.1- 11.0				1						
11.1- 12.0										
12.1- 13.0										
13.1- 14.0			1							
14.1- 15.0							1		1	
15.1- 16.0										
16.1- 17.0							1		1	
17.1- 18.0									1	
18.1- 19.0									1	
19.1- 20.0									1	
20.1- 21.0										
21.1- 22.0									1	
22.1- 23.0		1								
23.1- 24.0		1								
MEAN/DEPTH	23.5		13.8	10.1			15.8		18.0	
STD ERR	.75						1.05		1.06	
MEAN/TRANS	23.5			12.0			15.8		18.0	
STD ERR	.75			1.85			1.05		1.06	
MEAN/DATE					17.5					
STD ERR					1.16					
RANGE(MIN)	22.5		13.8	10.1			14.7		14.2	
(MAX)	24.0		13.8	10.1			16.8		22.0	
NO.LENGTHD	0	2	1	1	0	0	2	0	6	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
23.1- 24.0												4								3
24.1- 25.0												2								3
25.1- 26.0												2								3
26.1- 27.0												1								
27.1- 28.0												1								
28.1- 29.0																				
29.1- 30.0																				
30.1- 31.0																				1
MEAN/DEPTH												24.9							31.0	24.6
STD ERR												.40								.24
MEAN/TRANS											24.9								25.2	
STD ERR											.40								.68	
MEAN/DATE														25.0						
STD ERR														.39						
RANGE(MIN)												23.7							31.0	23.7
(MAX)												27.5							31.0	25.6
NO.LEVG'D	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	1	9

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
23.1- 24.0		4								3
24.1- 25.0		2								3
25.1- 26.0		2								3
26.1- 27.0		1								
27.1- 28.0		1								
28.1- 29.0										
29.1- 30.0										
30.1- 31.0									1	
MEAN/DEPTH		24.9							31.0	24.6
STD ERR		.40								.24
MEAN/TRANS	24.9								25.2	
STD ERR	.40								.68	
MEAN/DATE					25.0					
STD ERR					.39					
RANGE(MIN)		23.7							31.0	23.7
(MAX)		27.5							31.0	25.6
NO.LENGTH	0	10	0	0	0	0	0	0	1	9

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
23.1- 24.0	1																			
24.1- 25.0																				2
25.1- 26.0												1								2
26.1- 27.0												3								2
27.1- 28.0												1								
28.1- 29.0												1								2
29.1- 30.0												1								
30.1- 31.0																	1			
31.1- 32.0														2						
32.1- 33.0															1					
33.1- 34.0																		1		
MEAN/DEPTH	23.4										27.7			31.5	32.5		31.0	34.0		26.2
STD ERR											.52			.15						.53
MEAN/TRANS	23.4										27.7			31.8			32.5			26.2
STD ERR											.52			.36			1.50			.53
MEAN/DATE							23.4								28.2					
STD ERR															.61					
RANGE(MIN)	23.4										26.0			31.3	32.5		31.0	34.0		24.3
(MAX)	23.4										30.0			31.6	32.5		31.0	34.0		28.5
NO.LENGTHD	1	0	0	0	0	0	0	0	0	0	0	7	0	2	1	0	1	1	0	8

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			ROR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
23.1- 24.0	1									
24.1- 25.0										2
25.1- 26.0		1								2
26.1- 27.0		3								2
27.1- 28.0		1								
28.1- 29.0		1								2
29.1- 30.0		1								
30.1- 31.0							1			
31.1- 32.0				2						
32.1- 33.0					1					
33.1- 34.0								1		
MEAN/DEPTH	23.4	27.7		31.5	32.5		31.0	34.0		26.2
STD ERR		.52		.15						.53
MEAN/TRANS	27.2			31.8			32.5			26.2
STD ERR	.70			.36			1.50			.53
MEAN/DATE					28.0					
STD ERR					.63					
RANGE(MIN)	23.4	26.0		31.3	32.5		31.0	34.0		24.3
(MAX)	23.4	30.0		31.6	32.5		31.0	34.0		28.5
NO.LENG'D	1	7	0	2	1	0	1	1	0	8

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
23.1- 24.0		1																		5
24.1- 25.0												4		2					1	8
25.1- 26.0											2	5		1	1			1		6
26.1- 27.0											1	1		2				1	2	12
27.1- 28.0											3	6				1			1	7
28.1- 29.0											3	8	1	1				1	1	9
29.1- 30.0												4					3		1	2
30.1- 31.0											1	7			1			4		1
31.1- 32.0												2		1				2		1
32.1- 33.0												1			1			2		
33.1- 34.0														2	1			1		1
34.1- 35.0														1				1		
35.1- 36.0																		1		
36.1- 37.0																		2		
37.1- 38.0																				
38.1- 39.0											1									
MEAN/DEPTH		23.5									28.9	28.5	29.0	29.1	30.9	27.5	29.8	32.0	27.4	27.0
STD ERR											1.07	.36		1.28	1.90		.17	.78	.70	.28
MEAN/TRANS	23.5										28.6			29.6			31.4		27.0	
STD ERR											.36			.98			.68		.26	
MEAN/DATE					23.5										28.5					
STD ERR															.25					
RANGE(MIN)		23.5									25.5	25.0	29.0	24.5	25.5	27.5	29.5	26.0	25.0	24.0
(MAX)		23.5									38.5	33.0	29.0	35.0	34.0	27.5	30.0	36.5	30.0	33.5
NO.LENG'D	0	1	0	0	0	0	0	0	0	0	11	38	1	10	4	1	3	16	6	52

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
23.1- 24.0		1								5
24.1- 25.0		4		2					1	8
25.1- 26.0	2	5		1	1			1		6
26.1- 27.0	1	1		2				1	2	12
27.1- 28.0	3	6				1			1	7
28.1- 29.0	3	8	1	1				1	1	9
29.1- 30.0		4					3		1	2
30.1- 31.0	1	7			1			4		1
31.1- 32.0		2		1				2		1
32.1- 33.0		1			1			2		
33.1- 34.0				2	1			1		1
34.1- 35.0				1				1		
35.1- 36.0								1		
36.1- 37.0								2		
37.1- 38.0										
38.1- 39.0	1									
MEAN/DEPTH	28.9	28.4	29.0	29.1	30.9	27.5	29.8	32.0	27.4	27.0
STD ERR	1.07	.37		1.28	1.90		.17	.78	.70	.28
MEAN/TRANS	28.5			29.6			31.4		27.0	
STD ERR	.37			.98			.68		.26	
MEAN/DATE					28.4					
STD ERR					.25					
RANGE(MIN)	25.5	23.5	29.0	24.5	25.5	27.5	29.5	26.0	25.0	24.0
(MAX)	38.5	33.0	29.0	35.0	34.0	27.5	30.0	36.5	30.0	33.5
NO.LENG'D	11	39	1	10	4	1	3	16	6	52

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
23.1- 24.0																			1	
24.1- 25.0												1								
25.1- 26.0																	1			
26.1- 27.0																				1
27.1- 28.0												1								
28.1- 29.0												2								
29.1- 30.0												1			1					
30.1- 31.0														1	1					2
31.1- 32.0												1			2			1		1
32.1- 33.0												2		1				1		
33.1- 34.0															1					
34.1- 35.0															1			4		
35.1- 36.0																		1		
36.1- 37.0																		1		1
MEAN/DEPTH												29.6		32.0	32.2		25.5	34.6	23.5	31.4
STD ERR												.96		1.00	.78			.52		1.61
MEAN/TRANS											29.6			32.1			33.6		30.1	
STD ERR											.96			.60			1.11		1.86	
MEAN/DATE															31.5					
STD ERR															.61					
RANGE(MIN)												24.5		31.0	29.5		25.5	32.0	23.5	27.0
(MAX)												32.5		33.0	35.0		25.5	36.5	23.5	37.0
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	8	0	2	6	0	1	8	1	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
23.1- 24.0									1	
24.1- 25.0		1								
25.1- 26.0							1			
26.1- 27.0										1
27.1- 28.0		1								
28.1- 29.0		2								
29.1- 30.0		1			1					
30.1- 31.0				1	1					2
31.1- 32.0		1			2			1		1
32.1- 33.0		2		1				1		
33.1- 34.0					1					
34.1- 35.0					1			4		
35.1- 36.0								1		
36.1- 37.0								1		1
MEAN/DEPTH		29.6		32.0	32.2		25.5	34.6	23.5	31.4
STD ERR		.96		1.00	.78			.52		1.61
MEAN/TRANS		29.6		32.1			33.6		30.1	
STD ERR		.96		.60			1.11		1.86	
MEAN/DATE					31.5					
STD ERR					.61					
RANGE(MIN)		24.5		31.0	29.5		25.5	32.0	23.5	27.0
(MAX)		32.5		33.0	35.0		25.5	36.5	23.5	37.0
NO.LENG'D	0	8	0	2	6	0	1	8	1	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
29.1- 30.0												1								
30.1- 31.0																				
31.1- 32.0																				
32.1- 33.0																	1			
MEAN/DEPTH												29.5					32.5			
STD ERR																				
MEAN/TRANS												29.5					32.5			
STD ERR																				
MEAN/DATE															31.0					
STD ERR															1.50					
RANGE(MIN)												29.5					32.5			
(MAX)												29.5					32.5			
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
29.1- 30.0		1								
30.1- 31.0										
31.1- 32.0										
32.1- 33.0							1			
MEAN/DEPTH	29.5					32.5				
STD ERR										
MEAN/TRANS	29.5					32.5				
STD ERR										
MEAN/DATE					31.0					
STD ERR					1.50					
RANGE(MIN)	29.5					32.5				
(MAX)	29.5					32.5				
NO.LENG'D	0	1	0	0	0	0	1	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/01/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
4.1- 5.0		4																2		
5.1- 6.0	1											2	1		2			1	1	
6.1- 7.0		1					1	1					1							
MEAN/DEPTH	5.4	5.1					6.2	6.3				5.9	6.2		5.7			5.1	5.6	
STD ERR		.33										.15	.15		.00			.47		
MEAN/TRANS		5.2					6.3					5.9			5.9		5.1		5.6	
STD ERR		.27					.05					.15			.14		.47			
MEAN/DATE					5.4										5.6					
STD ERR					.27										.18					
RANGE(MIN)	5.4	4.6					6.2	6.3				5.7	6.0		5.7			4.4	5.6	
(MAX)	5.4	6.4					6.2	6.3				6.0	6.3		5.7			6.0	5.6	
NO.LENG'D	1	5	0	0	0	0	1	1	0	0	0	2	2	0	2	0	0	3	1	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/01/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
4.1- 5.0		4						2		
5.1- 6.0	1	2	1		2			1	1	
6.1- 7.0		1	1				1	1		
MEAN/DEPTH	5.4	5.3	6.2		5.7		6.2	5.4	5.6	
STD ERR		.27	.15		.00			.45		
MEAN/TRANS	5.3			5.9			5.6		5.6	
STD ERR	.23			.14			.38			
MEAN/DATE					5.5					
STD ERR					.15					
RANGE(MIN)	5.4	4.6	6.0		5.7		6.2	4.4	5.6	
(MAX)	5.4	6.4	6.3		5.7		6.2	6.3	5.6	
NO.LENG'D	1	7	2	0	2	0	1	4	1	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/08/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
5.1- 6.0										1	1		1		3					
6.1- 7.0		2	2						8	19	2	3	1			1				
7.1- 8.0		1	1			1			18	7	1	1				2				
8.1- 9.0										1						1				
MEAN/DEPTH		6.9	7.1			7.4			7.3	6.9	6.5	6.9	6.4		5.9	7.4				
STD ERR		.31	.21						.09	.10	.47	.23	.40		.09	.31				
MEAN/TRANS		6.9		7.1			7.4			7.1		6.7		6.1			7.4			
STD ERR		.31		.21						.07		.26		.19			.31			
MEAN/DATE					7.1										6.7					
STD ERR					.07										.19					
RANGE(MIN)		6.5	6.8			7.4			6.2	5.8	5.4	6.5	6.0		5.7	6.7				
(MAX)		7.5	7.5			7.4			7.9	8.1	7.7	7.5	6.8		6.0	8.2				
NO.LENG'D	0	3	3	0	0	1	0	0	26	28	4	4	2	0	3	4	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/08/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
5.1- 6.0	1		1		3					1
6.1- 7.0	2	5	3			1			8	19
7.1- 8.0	1	2	1			3			18	7
8.1- 9.0						1				1
MEAN/DEPTH	6.5	6.9	6.8		5.9	7.4			7.3	6.9
STD ERR	.47	.17	.24		.09	.24			.09	.10
MEAN/TRANS	6.7		6.5			7.4			7.1	
STD ERR	.20		.23			.24			.07	
MEAN/DATE					7.0					
STD ERR					.07					
RANGE(MIN)	5.4	6.5	6.0		5.7	6.7			6.2	5.8
(MAX)	7.7	7.5	7.5		6.0	8.2			7.9	8.1
NO.LENG'D	4	7	5	0	3	5	0	0	26	28

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0		1																		
4.1- 5.0		1																1		
5.1- 6.0	4				1		1													1
6.1- 7.0	2	8		3		4	5	3	7	1	3	1				2		2	1	
7.1- 8.0	5	1	9	5	1	7	13	1	19	2	3	2	1			6		4	8	1
8.1- 9.0			2	1		1	6	1	13	1						1		2	3	
9.1- 10.0							1		2										1	
10.1- 11.0	1																		1	
MEAN/DEPTH	6.9	6.2	7.7	7.2	6.6	7.3	7.7	6.9	7.8	7.6	6.9	7.0	7.4			7.4		7.3	8.0	6.7
STD ERR	.45	.29	.14	.16	1.20	.20	.14	.45	.12	.46	.14	.25				.17		.37	.27	1.15
MEAN/TRANS	6.6		7.4			7.5			7.8		7.0		7.4			7.3			7.8	
STD ERR	.28		.14			.12			.12		.12					.20			.28	
MEAN/DATE				7.4										7.4						
STD ERR				.08										.14						
RANGE(MIN)	5.2	3.8	7.1	6.7	5.4	6.2	6.0	6.1	6.1	6.3	6.6	6.5	7.4			6.7		5.0	6.5	5.5
(MAX)	11.0	7.2	8.6	8.3	7.8	8.6	9.1	8.5	9.7	8.4	7.4	7.3	7.4			8.1		8.9	10.7	7.8
NO.LENGTH	12	11	11	9	2	12	26	5	41	4	6	3	1	0	0	9	0	9	14	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0		1								
4.1- 5.0		1						1		
5.1- 6.0	4				1		1			1
6.1- 7.0	5	9		3		6	5	5	8	1
7.1- 8.0	8	3	10	5	1	13	13	5	27	3
8.1- 9.0			2	1		2	6	3	16	1
9.1- 10.0							1		3	
10.1- 11.0	1								1	
MEAN/DEPTH	6.9	6.4	7.7	7.2	6.6	7.4	7.7	7.2	7.9	7.3
STD ERR	.30	.25	.13	.16	1.20	.14	.14	.28	.11	.46
MEAN/TRANS	6.7		7.4			7.4			7.8	
STD ERR	.20		.14			.10			.11	
MEAN/DATE					7.4					
STD ERR					.07					
RANGE(MIN)	5.2	3.8	7.1	6.7	5.4	6.2	6.0	5.0	6.1	5.5
(MAX)	11.0	7.3	8.6	8.3	7.8	8.6	9.1	8.9	10.7	8.4
NO.LENG'D	18	14	12	9	2	21	26	14	55	6

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
4.1- 5.0															1					
5.1- 6.0							1		1		2				1			4		
6.1- 7.0	2		2	2		2	1		6	3	1	2		2		1		8	1	1
7.1- 8.0	3		2	1		1	5		9	4		6		3	4	1		8	4	4
8.1- 9.0	5		1	1			14		3			2		7		4	2	5	8	14
9.1- 10.0	1		1				8	2		1		2		2				10	13	8
10.1- 11.0						1	20			2		2		2				3	6	14
11.1- 12.0							5	1		3					1			2	4	14
12.1- 13.0							1			3									4	3
13.1- 14.0										1										2
MEAN/DEPTH	7.8		7.8	7.1		7.9	9.6	10.1	7.3	9.7	5.7	8.4		8.4	7.6	8.0	8.3	8.2	9.7	10.1
STD ERR	.29		.46				.18		.18		.33				.80		.20		.24	
				.58		1.00		.66		.60		.36		.28		.33		.27		.19
MEAN/TRANS	7.8			7.5			9.5		8.4		7.9			8.2			8.2		9.9	
STD ERR	.29			.35			.18		.36		.39			.31			.23		.15	
MEAN/DATE					8.9										9.1					
STD ERR					.16										.13					
RANGE(MIN)	6.1		6.6	6.1		6.5	6.0	9.2	5.6	6.2	5.2	6.1		6.5	4.9	6.9	8.1	5.7	6.7	7.0
(MAX)	9.1		9.6	8.6		10.8	12.3	11.4	8.7	13.9	6.3	10.8		10.3	11.7	9.0	8.5	12.0	12.7	13.6
NO.LENG'D	11	0	6	4	0	4	55	3	19	17	3	14	0	16	7	6	2	40	40	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
4.1- 5.0					1					
5.1- 6.0	2				1		1	4	1	
6.1- 7.0	3	2	2	4		3	1	8	7	4
7.1- 8.0	3	6	2	4	4	2	5	8	13	8
8.1- 9.0	5	2	1	8		4	16	5	11	14
9.1- 10.0	1	2	1	2			8	12	13	9
10.1- 11.0		2		2		1	20	3	6	16
11.1- 12.0					1		5	3	4	17
12.1- 13.0							1		4	6
13.1- 14.0										3
MEAN/DEPTH	7.4	8.4	7.8	8.2	7.6	7.9	9.5	8.3	8.9	10.0
STD ERR	.34	.36	.46	.27	.80	.41	.18	.27	.23	.20
MEAN/TRANS	7.9		8.0			8.9			9.5	
STD ERR	.26		.25			.16			.15	
MEAN/DATE					9.0					
STD ERR					.10					
RANGE(MIN)	5.2	6.1	6.6	6.1	4.9	6.5	6.0	5.7	5.6	6.2
(MAX)	9.1	10.8	9.6	10.3	11.7	10.8	12.3	12.0	12.7	13.9
NO.LENG'D	14	14	6	20	7	10	57	43	59	77

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
4.1- 5.0								1							3			2	2	
5.1- 6.0	9	4			7		1	10	2		13	2	1		8		1	18	1	1
6.1- 7.0		1	2	1	4	1	2		1		10	7	4		7	1		3	3	4
7.1- 8.0		3	7	2	10	8		1	7	1	5	1	5		8	2	5	5	1	10
8.1- 9.0	1		15	14	21	21	7	3	15	4	13	3	9		13	6	10	12	11	19
9.1- 10.0	1	4	30	15	16	26	15	2	21	9	12	10	17		15	12	20	9	26	17
10.1- 11.0			3	6	2	4	22		6	5	6	10	7		3	12	10	3	5	4
11.1- 12.0		1	2	11			5		3	5		17	2		1	7	4	6	5	3
12.1- 13.0			1	8			4	1	2	7		3	2		2	13	6	1	2	1
13.1- 14.0				3			3		2	1		5				5	1	1	2	1
14.1- 15.0							1			4		2	1			2	1		2	
15.1- 16.0									1								1			
16.1- 17.0																	1			
MEAN/DEPTH	6.1	7.8	9.1	10.2	8.2	9.0	10.3	7.1	9.4	11.1	7.8	10.3	9.2		8.2	10.9	10.2	8.1	9.6	8.8
STD ERR	.45	.55	.14	.21	.17	.10	.21	.53	.22	.32	.23	.30	.24		.23	.24	.26	.29	.25	.19
MEAN/TRANS	7.0		9.2			9.3			10.0		9.1		8.6			9.7			9.2	
STD ERR	.39		.12			.15			.20		.22		.17			.18			.16	
MEAN/DATE					9.3										9.2					
STD ERR					.09										.09					
RANGE(MIN)	5.1	5.2	6.2	7.0	5.1	7.0	6.0	4.9	5.5	7.7	5.2	5.4	5.6		4.9	6.5	6.0	4.7	4.7	6.0
(MAX)	9.6	11.2	12.7	13.8	10.5	10.6	14.8	13.0	15.1	15.0	10.7	14.4	14.2		12.5	15.0	16.2	13.5	14.8	13.7
NO.LENG'D	11	13	60	60	60	60	60	18	60	36	59	60	48	0	60	60	60	60	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
4.1- 5.0					3			3	2	
5.1- 6.0	22	6	1		15		2	28	3	1
6.1- 7.0	10	8	6	1	11	2	2	3	4	4
7.1- 8.0	5	4	12	2	18	10	5	6	8	11
8.1- 9.0	14	3	24	14	34	27	17	15	26	23
9.1- 10.0	13	14	47	15	31	38	35	11	47	26
10.1- 11.0	6	10	10	6	5	16	32	3	11	9
11.1- 12.0		18	4	11	1	7	9	6	8	8
12.1- 13.0		3	3	8	2	13	10	2	4	8
13.1- 14.0		5		3		5	4	1	4	2
14.1- 15.0		2	1			2	2		2	4
15.1- 16.0							1		1	
16.1- 17.0							1			
MEAN/DEPTH	7.6	9.9	9.2	10.2	8.2	9.9	10.2	7.8	9.5	9.7
STD ERR	.22	.29	.13	.21	.14	.16	.17	.26	.17	.20
MEAN/TRANS	8.7		9.0				9.5		9.6	
STD ERR	.20		.10				.12		.13	
MEAN/DATE					9.3					
STD ERR					.07					
RANGE(MIN)	5.1	5.2	5.6	7.0	4.9	6.5	6.0	4.7	4.7	6.0
(MAX)	10.7	14.4	14.2	13.8	12.5	15.0	16.2	13.5	15.1	15.0
NO.LENG'D	70	73	108	60	120	120	120	78	120	96

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
4.1- 5.0	1	2																		
5.1- 6.0	5		2		1	1		2		2	1	1			2			2		4
6.1- 7.0	22	6	10	9	2	7	5	16	8	8	9	12	2	5	5	1	5	9	1	14
7.1- 8.0	18	8	15	22	16	22	29	25	17	21	16	21	6	4	16	6	13	24	7	16
8.1- 9.0	3	1	13	14	4	19	14	5	17	8	13	8	4	2	11	7	15	11	8	4
9.1- 10.0	3	2	2	4	3	3	1	2	3	2	2	3	2	2	2		2	2	2	1
10.1- 11.0	1	1	1	1	7	2	2	1	4	4	1	3	6	3	6	4	3	3	6	6
11.1- 12.0	6	3	11	6	5	4	5	5	7	9	9	9	14	9	4	16	7	4	12	11
12.1- 13.0	1	2	6	4	3	2	2	2	4	6	8	3	23	11	10	17	14	5	14	2
13.1- 14.0					1			1			1		1	3	3	7	1		3	2
14.1- 15.0							1	1					2	1	1	1			2	
15.1- 16.0					1		1												3	
16.1- 17.0																1			2	
MEAN/DEPTH	7.7	8.2	8.9	8.5	9.4	8.3	8.6	8.0	8.8	8.8	9.0	8.6	11.1	10.6	9.5	11.3	9.6	8.4	11.2	8.6
STD ERR	.23	.43	.27	.22	.34	.20	.24	.26	.22	.26	.29	.25	.25	.38	.30	.27	.28	.24	.32	.29
MEAN/TRANS	7.8		8.9			8.3			8.8		8.8		10.4				9.8		9.9	
STD ERR	.20		.16			.14			.17		.19		.18				.18		.24	
MEAN/DATE					8.5										9.8					
STD ERR					.08										.10					
RANGE(MIN)	4.7	5.0	5.1	6.2	5.8	5.6	6.6	5.6	6.4	6.0	5.3	6.0	6.7	6.2	5.6	7.0	6.2	6.0	6.4	5.3
(MAX)	12.1	12.4	12.8	12.8	15.7	13.0	15.7	14.3	12.2	12.6	13.3	12.8	14.6	14.3	15.0	16.1	14.0	12.9	16.4	13.7
NO.LENG'D	60	25	60	60	43	60	60	60	60	60	60	60	60	40	60	60	60	60	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
4.1- 5.0	1	2								
5.1- 6.0	6	1	2		3	1		4		6
6.1- 7.0	31	18	12	14	7	8	10	25	9	22
7.1- 8.0	34	29	21	26	32	28	42	49	24	37
8.1- 9.0	16	9	17	16	15	26	29	16	25	12
9.1- 10.0	5	5	4	6	5	3	3	4	5	3
10.1- 11.0	2	4	7	4	13	6	5	4	10	10
11.1- 12.0	15	12	25	15	9	20	12	9	19	20
12.1- 13.0	9	5	29	15	13	19	16	7	18	8
13.1- 14.0	1		1	3	4	7	1	1	3	2
14.1- 15.0			2	1	1	1	1	1	2	
15.1- 16.0					1		1		3	
16.1- 17.0						1			2	
MEAN/DEPTH	8.4	8.5	10.0	9.4	9.4	9.8	9.1	8.2	10.0	8.7
STD ERR	.19	.22	.21	.23	.23	.22	.19	.18	.22	.20
MEAN/TRANS	8.4			9.6			9.0		9.4	
STD ERR	.14			.13			.12		.15	
MEAN/DATE					9.2					
STD ERR					.07					
RANGE(MIN)	4.7	5.0	5.1	6.2	5.6	5.6	6.2	5.6	6.4	5.3
(MAX)	13.3	12.8	14.6	14.3	15.7	16.1	15.7	14.3	16.4	13.7
NO.LENG'D	120	85	120	100	103	120	120	120	120	120

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0		1																		
4.1- 5.0					1									1						
5.1- 6.0	2		1	3	2		3			1				1			2	1		2
6.1- 7.0	1	5	4	2	3	3	5	1	2	5		2		1	6		4	1	5	2
7.1- 8.0	20	16	4	21	8	22	14	16	24	23		6	1	9	12		6	9	8	14
8.1- 9.0	20	15	22	13	6	19	13	33	25	14		27	1	13	20	5	13	30	18	19
9.1- 10.0	7	1	9		5	9	3	9	1	2		16	3	3	8	4	4	6	3	8
10.1- 11.0	3	3	1	6	4	1	11	1	2	4		2	5	7	2	2	3	2	1	3
11.1- 12.0	1	10	7	6	8	4	10		5	6		5	24	15	6	15	10	2	6	2
12.1- 13.0	3	9	6	5	12	1	1		1	3		2	19	9	4	22	8	6	10	6
13.1- 14.0	3		5	2	2	1				1			7	1	1	7	5	2	6	1
14.1- 15.0			1		5											2			2	1
15.1- 16.0				2	4					1					1	3		1	1	1
16.1- 17.0																				1
MEAN/DEPTH	8.8	9.2	9.6	9.2	10.6	8.6	9.0	8.4	8.5	8.8		9.2	11.7	10.0	9.1	12.0	10.1	9.3	10.1	9.3
STD ERR	.22	.28	.28	.30	.36	.18	.23	.09	.16	.26		.17	.15	.26	.25	.20	.31	.25	.33	.30
MEAN/TRANS	9.0		9.8			8.7			8.6		9.2		10.3			10.5			9.7	
STD ERR	.18		.19			.10			.15		.17		.15			.17			.22	
MEAN/DATE					9.1										10.1					
STD ERR					.08										.09					
RANGE(MIN)	5.8	4.0	6.0	5.4	5.0	6.2	5.4	7.0	6.9	5.2		6.6	7.9	4.8	6.3	8.7	5.8	5.6	6.3	5.5
(MAX)	13.6	12.6	14.1	15.3	15.6	13.4	12.2	10.9	12.1	15.1		12.5	13.5	13.6	15.8	15.3	13.8	15.5	15.3	16.7
NO.LENG'D	60	60	60	60	60	60	60	60	60	60	0	60	60	60	60	60	55	60	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0		1								
4.1- 5.0				1	1					
5.1- 6.0	2		1	4	2		5	1		3
6.1- 7.0	1	7	4	3	9	3	9	2	7	7
7.1- 8.0	20	22	5	30	20	22	20	25	32	37
8.1- 9.0	20	42	23	26	26	24	26	63	43	33
9.1- 10.0	7	17	12	3	13	13	7	15	4	10
10.1- 11.0	3	5	6	13	6	3	14	3	3	7
11.1- 12.0	1	15	31	21	14	19	20	2	11	8
12.1- 13.0	3	11	25	14	16	23	9	6	11	9
13.1- 14.0	3		12	3	3	8	5	2	6	2
14.1- 15.0			1		5	2			2	1
15.1- 16.0				2	5	3		1	1	2
16.1- 17.0										1
MEAN/DEPTH	8.8	9.2	10.7	9.6	9.9	10.3	9.5	8.8	9.3	9.0
STD ERR	.22	.16	.19	.20	.23	.20	.20	.14	.20	.20
MEAN/TRANS	9.1		10.0			9.5			9.2	
STD ERR	.13		.12			.11			.14	
MEAN/DATE					9.5					
STD ERR					.06					
RANGE(MIN)	5.8	4.0	6.0	4.8	5.0	6.2	5.4	5.6	6.3	5.2
(MAX)	13.6	12.6	14.1	15.3	15.8	15.3	13.8	15.5	15.3	16.7
NO.LENG'D	60	120	120	120	120	120	115	120	120	120

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
4.1- 5.0	2	1																		
5.1- 6.0	7	5	1	1		1	3	1	1			14			1	1	4			
6.1- 7.0	5	2	2	1		10	4		3	4	2	17	1	12	7	2	7	2		
7.1- 8.0	3	1	1	2		8	8	5	6	10	5	8	3	12	8	8	4	4		1
8.1- 9.0	4	2	6		1	19	20	18	20	18	5	9	8	19	17	17	24	22	2	19
9.1- 10.0		3	4	2	1	18	14	21	15	22	13	3	22	17	20	20	10	21		26
10.1- 11.0		1	1		1	4	1	3	8	3	4	1	4		7	2	1	3		12
11.1- 12.0		1	2	2			2	7	4	3	8	3	3			5	3	1	4	2
12.1- 13.0		1					6	2	3		13	2	13			4	7	6	5	
13.1- 14.0		3					1				7	3	4			1			2	
14.1- 15.0							1	2			3		2					1	2	
15.1- 16.0								1												
16.1- 17.0					1															
MEAN/DEPTH	6.6	8.7	8.7	8.6	11.1	8.4	9.1	9.6	9.2	8.9	10.8	7.8	10.4	8.2	8.7	9.3	8.9	9.4	12.1	9.4
STD ERR	.26	.66	.41	.79	1.70	.16	.24	.23	.19	.15	.28	.29	.25	.14	.16	.20	.24	.19	.45	.10
MEAN/TRANS	7.6		9.0			9.0			9.0		9.3		9.1			9.2			10.0	
STD ERR	.38		.41			.13			.12		.24		.13			.12			.17	
MEAN/DATE					8.9										9.3					
STD ERR					.09										.08					
RANGE(MIN)	4.8	5.0	5.3	5.6	8.6	5.6	5.3	5.7	5.8	6.4	6.2	5.4	6.3	6.2	5.8	6.0	5.6	6.5	8.3	7.5
(MAX)	8.7	13.9	11.5	11.6	16.1	10.9	14.6	15.1	13.0	12.0	14.9	13.7	14.3	9.9	10.5	13.5	13.0	14.3	14.5	11.3
NO.LENG'D	21	20	17	8	4	60	60	60	60	60	60	60	60	60	60	60	60	60	15	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
4.1- 5.0	2	1								
5.1- 6.0	7	19	1	1	1	2	7	1	1	
6.1- 7.0	7	19	3	13	7	12	11	2	3	4
7.1- 8.0	8	9	4	14	8	16	12	9	6	11
8.1- 9.0	9	11	14	19	18	36	44	40	22	37
9.1- 10.0	13	6	26	19	21	38	24	42	15	48
10.1- 11.0	4	2	5		8	6	2	6	8	15
11.1- 12.0	8	4	5	2		5	5	8	8	5
12.1- 13.0	13	3	13			4	13	8	8	
13.1- 14.0	7	6	4			1	1		2	
14.1- 15.0	3		2				1	3	2	
15.1- 16.0								1		
16.1- 17.0					1					
MEAN/DEPTH	9.7	8.0	10.0	8.3	8.8	8.9	9.0	9.5	9.8	9.2
STD ERR	.30	.28	.23	.15	.19	.13	.17	.15	.22	.09
MEAN/TRANS	8.9		9.1			9.1			9.4	
STD ERR	.21		.12			.09			.10	
MEAN/DATE					9.1					
STD ERR					.06					
RANGE(MIN)	4.8	5.0	5.3	5.6	5.8	5.6	5.3	5.7	5.8	6.4
(MAX)	14.9	13.9	14.3	11.6	16.1	13.5	14.6	15.1	14.5	12.0
NO.LENG'D	81	80	77	68	64	120	120	120	75	120

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
5.1- 6.0	2	1										1			1		1			1
6.1- 7.0	4	2			1	2	4	2			2	3						4		
7.1- 8.0	6	3	4	3	1	5	7	3	2	1	6	12	4	5	5	5		5		2
8.1- 9.0	13	4	12	3	4	10	16	2	8	2	7	12	11	9	18	8	9	11	2	7
9.1- 10.0	9	5	13	9	6	15	12	4	11	2	12	19	16	14	19	14	13	19	7	7
10.1- 11.0	4	3	11	6	2	11	15	7	28	9	9	6	16	10	8	24	14	14	15	11
11.1- 12.0	3	1	9	4	1	10	6	4	9	1	11	1	6	7	5	6	12	4	14	12
12.1- 13.0	1		2	2	2	4		1	2		3	2	3	5		1	6		4	1
13.1- 14.0	3	2	6	5	2	1					2	4		3	3		4		4	8
14.1- 15.0	1		2	3		2		2		2	6		3	5	1	1	1	1	12	9
15.1- 16.0	2									1			1			1		2	2	
16.1- 17.0		2		1						2	2			2						1
17.1- 18.0			1		1															
18.1- 19.0				1																
19.1- 20.0																				
20.1- 21.0		1																		
21.1- 22.0																				1
MEAN/DEPTH	9.4	10.3	10.5	11.2	10.4	9.9	9.3	10.1	10.2	11.4	10.6	9.3	10.1	10.7	9.6	10.0	10.6	9.7	11.9	11.5
STD ERR	.34	.76	.27	.42	.57	.23	.17	.41	.13	.60	.30	.23	.22	.28	.21	.18	.22	.23	.24	.35
MEAN/TRANS	9.7		10.7			9.7			10.5		9.9		10.1			10.1			11.7	
STD ERR	.34		.22			.14			.18		.20		.14			.12			.21	
MEAN/DATE					10.1										10.4					
STD ERR					.11										.08					
RANGE(MIN)	5.2	5.4	7.5	7.4	6.6	6.8	6.8	6.2	7.7	7.6	6.8	5.8	7.2	7.5	6.0	7.3	5.6	6.5	8.3	5.2
(MAX)	15.4	20.8	17.4	18.7	17.9	15.0	11.6	14.5	12.2	16.5	16.8	14.0	15.3	17.0	14.4	15.2	14.9	15.9	15.4	21.7
NO.LENG'D	48	24	60	37	20	60	60	25	60	20	60	60	60	60	60	60	60	60	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
5.1- 6.0	2	2			1		1			1
6.1- 7.0	6	5			1	2	4	6		
7.1- 8.0	12	15	8	8	6	10	7	8	2	3
8.1- 9.0	20	16	23	12	22	18	25	13	10	9
9.1- 10.0	21	24	29	23	25	29	25	23	18	9
10.1- 11.0	13	9	27	16	10	35	29	21	43	20
11.1- 12.0	14	2	15	11	6	16	18	8	23	13
12.1- 13.0	4	2	5	7	2	5	6	1	6	1
13.1- 14.0	5	6	6	8	5	1	4		4	8
14.1- 15.0	7		5	8	1	3	1	3	12	11
15.1- 16.0	2		1			1		2	2	1
16.1- 17.0	2	2		3						3
17.1- 18.0			1		1					
18.1- 19.0				1						
19.1- 20.0										
20.1- 21.0		1								
21.1- 22.0										1
MEAN/DEPTH	10.0	9.6	10.3	10.9	9.8	10.0	10.0	9.8	11.0	11.5
STD ERR	.23	.27	.17	.24	.21	.15	.15	.20	.16	.30
MEAN/TRANS	9.8		10.4			9.9			11.2	
STD ERR	.18		.12			.09			.15	
MEAN/DATE					10.3					
STD ERR					.07					
RANGE(MIN)	5.2	5.4	7.2	7.4	6.0	6.8	5.6	6.2	7.7	5.2
(MAX)	16.8	20.8	17.4	18.7	17.9	15.2	14.9	15.9	15.4	21.7
NO.LENG'D	108	84	120	97	80	120	120	85	120	80

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
4.1- 5.0		1																		
5.1- 6.0	1			1			4				1			2			1			
6.1- 7.0				1				2	4	1			3		1		4	2	1	
7.1- 8.0			1	1		1	2	3	2	4	1			2	1		5	3		1
8.1- 9.0	1			6		3	4	10	11	14	5	4	6	6	4	2	14	10	5	7
9.1- 10.0	1	2	2			13	10	5	17	17	13	14	6	13	14	11	13	15	14	16
10.1- 11.0	2		2	3		10	5	4	15	16	19	17	15	10	8	25	12	16	22	15
11.1- 12.0	1			2	1	4	1	1	9	6	12	13	4	15	9	10	9	6	10	9
12.1- 13.0			1	2		13	2	1		2	5	6	9	8	9	10	1	5	5	8
13.1- 14.0				2		3	1	4	1		1	5	5	2	7	2		2	3	4
14.1- 15.0							1				3		3	2	5		1			
15.1- 16.0				1		1	1						6		1			1		
16.1- 17.0						2			1			1	2							
17.1- 18.0															1					
18.1- 19.0	1												1							
MEAN/DEPTH	10.7	8.2	9.9	10.2	11.1	11.2	9.7	9.6	9.9	9.7	10.7	11.0	11.7	10.5	11.4	10.9	9.5	10.2	10.6	10.6
STD ERR	1.51	1.65	.68	.62		.28	.44	.36	.22	.16	.21	.19	.33	.23	.28	.16	.21	.22	.17	.18
MEAN/TRANS	9.9		10.2			10.4			9.8		10.8		11.2			10.2			10.6	
STD ERR	1.18		.48			.21			.14		.14		.17			.12			.12	
MEAN/DATE					10.1										10.7					
STD ERR					.13										.07					
RANGE(MIN)	5.1	4.9	7.1	5.7	11.1	7.1	5.3	6.6	6.4	6.8	5.9	8.8	6.8	5.5	7.0	8.5	5.9	6.2	6.3	7.4
(MAX)	18.3	9.9	12.1	15.2	11.1	16.8	15.3	13.7	17.0	12.5	14.7	16.2	18.9	14.6	17.3	13.5	14.1	15.6	13.3	13.7
NO.LENG'D	7	3	6	19	1	50	31	30	60	60	60	60	60	60	60	60	60	60	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
4.1- 5.0		1								
5.1- 6.0	2			3			5			
6.1- 7.0			3	1	1		4	4	5	1
7.1- 8.0	1		1	3	1	1	7	6	2	5
8.1- 9.0	6	4	6	12	4	5	18	20	16	21
9.1- 10.0	14	16	8	13	14	24	23	20	31	33
10.1- 11.0	21	17	17	13	8	35	17	20	37	31
11.1- 12.0	13	13	4	17	10	14	10	7	19	15
12.1- 13.0	5	6	10	10	9	23	3	6	5	10
13.1- 14.0	1	5	5	4	7	5	1	6	4	4
14.1- 15.0	3		3	2	5		2			
15.1- 16.0			6	1	1	1	1	1		
16.1- 17.0		1	2			2			1	
17.1- 18.0					1					
18.1- 19.0	1		1							
MEAN/DEPTH	10.7	10.9	11.6	10.5	11.4	11.0	9.6	10.0	10.2	10.2
STD ERR	.24	.21	.31	.23	.27	.15	.20	.19	.14	.13
MEAN/TRANS	10.8		11.1			10.3			10.2	
STD ERR	.16		.16			.11			.10	
MEAN/DATE					10.5					
STD ERR					.06					
RANGE(MIN)	5.1	4.9	6.8	5.5	7.0	7.1	5.3	6.2	6.3	6.8
(MAX)	18.3	16.2	18.9	15.2	17.3	16.8	15.3	15.6	17.0	13.7
NO.LENG'D	67	63	66	79	61	110	91	90	120	120

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
5.1- 6.0	4	2		1		1						2								
6.1- 7.0	5	3	3			2		1	5	2		2			2	2				1
7.1- 8.0	4	3	6	1	1	6	2	1	5	3		3	4	1	2	2	3		7	3
8.1- 9.0	5		4	2	1	4	5	2	6	6	1	3	11	1	3	3	2	2	7	6
9.1- 10.0	4	4	15	1	3	6	4	1	12	11	5	7	6	9	9	4	6	10	18	13
10.1- 11.0	4	1	15	3	5	8	5	1	14	14	9	4	10	11	12	11	20	18	9	21
11.1- 12.0	4	1	6	2	1	6	4	2	13	7	8	11	12	12	10	20	6	13	15	10
12.1- 13.0	1		4	2	1	6	3	2	3	2	11	8	7	9	4	13	10	9	4	5
13.1- 14.0			2	2	1	4		1	1	4	9	5	2	9	6	3	1	5		1
14.1- 15.0			1				1			2	2	3	2	1		2	2	1		
15.1- 16.0	1		3			1			1		5	4	3	3	4		2			
16.1- 17.0			1			2	1					1	1		3		1	1		
17.1- 18.0						1					3	4			2		4			
18.1- 19.0											2	1	1	2	1		2	1		
19.1- 20.0											3	1		2	1		1			
20.1- 21.0					1							1								
21.1- 22.0																				
22.1- 23.0											1				1					
23.1- 24.0											1									
MEAN/DEPTH	8.8	8.2	10.4	10.5	11.1	10.8	10.6	10.2	10.0	10.3	13.4	12.1	11.0	12.1	12.0	11.2	12.0	11.4	10.1	10.2
STD ERR	.42	.51	.29	.64	.84	.39	.41	.66	.24	.25	.43	.44	.31	.32	.42	.21	.37	.22	.18	.18
MEAN/TRANS	8.6		10.5			10.6			10.2		12.7		11.7			11.5			10.1	
STD ERR	.33		.26			.27			.17		.31		.21			.16			.13	
MEAN/DATE					10.2										11.5					
STD ERR					.13										.11					
RANGE(MIN)	5.5	5.5	6.5	5.6	7.3	5.7	7.7	6.8	6.2	6.9	8.2	5.6	7.1	7.4	6.7	6.5	7.3	8.4	7.2	6.9
(MAX)	15.4	11.9	16.4	13.7	20.3	18.0	16.7	13.3	15.6	14.8	24.0	20.8	18.6	19.3	23.0	14.2	19.2	18.3	12.4	13.1
NO.LENG'D	32	14	60	14	14	47	25	11	60	51	60	60	59	60	60	60	60	60	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
5.1- 6.0	4	4		1		1				
6.1- 7.0	5	5	3		2	4		1	5	3
7.1- 8.0	4	6	10	2	3	8	5	1	12	6
8.1- 9.0	6	3	15	3	4	7	7	4	13	12
9.1- 10.0	9	11	21	10	12	10	10	11	30	24
10.1- 11.0	13	5	25	14	17	19	25	19	23	35
11.1- 12.0	12	12	18	14	11	26	10	15	28	17
12.1- 13.0	12	8	11	11	5	19	13	11	7	7
13.1- 14.0	9	5	4	11	7	7	1	6	1	5
14.1- 15.0	2	3	3	1		2	3	1		2
15.1- 16.0	6	4	6	3	4	1	2		1	
16.1- 17.0		1	2		3	2	2	1		
17.1- 18.0	3	4			2	1	4			
18.1- 19.0	2	1	1	2	1		2	1		
19.1- 20.0	3	1		2	1		1			
20.1- 21.0		1			1					
21.1- 22.0										
22.1- 23.0	1				1					
23.1- 24.0	1									
MEAN/DEPTH	11.8	11.3	10.7	11.8	11.8	11.0	11.6	11.2	10.0	10.3
STD ERR	.39	.41	.21	.29	.38	.21	.30	.22	.15	.15
MEAN/TRANS	11.6		11.3			11.2			10.1	
STD ERR	.28		.17			.14			.11	
MEAN/DATE					11.1					
STD ERR					.09					
RANGE(MIN)	5.5	5.5	6.5	5.6	6.7	5.7	7.3	6.8	6.2	6.9
(MAX)	24.0	20.8	18.6	19.3	23.0	18.0	19.2	18.3	15.6	14.8
NO.LENGTH	92	74	119	74	74	107	85	71	120	111

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/19/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
5.1- 6.0										1										
6.1- 7.0									2								1			
7.1- 8.0									2	1				1		1		1		
8.1- 9.0									5	1				2		1	2	1	1	2	2
9.1- 10.0				1					9		2			1		2	5	2	1	1	
10.1- 11.0							1	1	7		3	2	9	2	5	5	5	3	2	6
11.1- 12.0						1	1		14	1	7	1	16	11	6	3	5	10	12	9
12.1- 13.0						1	1	3	12	1	10	5	15	9	12	12	13	8	14	13
13.1- 14.0					1	2	1	1	6		3	12	10	10	12	11	17	13	10	20
14.1- 15.0					2		1	2	2		5	7		6	13	6	12	10	9	8
15.1- 16.0							3	2			3	3	4	5	4	1	4	3	5	2
16.1- 17.0									1		2	3	2	4	2				3	
17.1- 18.0											1			3						
18.1- 19.0											1	1		3	2	1			1	
19.1- 20.0											1	5		6						
20.1- 21.0												1		1		1			1	
21.1- 22.0								1				2						1		
22.1- 23.0																				
23.1- 24.0																				
24.1- 25.0											1									
MEAN/DEPTH				9.8	14.2	12.8	13.6	14.4	11.2	9.2	13.5	15.2	12.2	14.5	13.1	12.6	12.9	12.9	13.2	12.8
STD ERR					.39		.64		.25		.47		.23		.27		.23		.28	
						.50		.88		1.36		.45		.36		.33		.30		.18
MEAN/TRANS				13.1			13.8		11.0		14.4			13.3			12.8		13.0	
STD ERR				1.13			.48		.26		.34			.18			.16		.17	
MEAN/DATE					11.8										13.3					
STD ERR					.26										.10					
RANGE(MIN)				9.8	13.4	11.8	10.7	11.0	6.4	5.6	9.3	10.5	7.7	10.5	7.8	8.2	6.3	7.3	8.3	8.4
(MAX)				9.8	14.7	14.0	15.4	21.2	16.1	13.0	24.5	22.0	16.5	20.5	18.3	20.1	15.4	21.6	21.0	15.3
NO.LENG'D	0	0	0	1	3	4	8	10	60	5	39	42	60	60	60	47	60	51	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/19/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
5.1- 6.0										1
6.1- 7.0							1		2	
7.1- 8.0			1		1			1	2	1
8.1- 9.0			2		1	2	1	1	7	3
9.1- 10.0	2		1	1	2	5	2	1	10	
10.1- 11.0	3	2	9	2	5	5	6	4	9	6
11.1- 12.0	7	1	16	11	6	4	6	10	26	10
12.1- 13.0	10	5	15	9	12	13	14	11	26	14
13.1- 14.0	3	12	10	10	13	13	18	14	16	20
14.1- 15.0	5	7		6	15	6	13	12	11	8
15.1- 16.0	3	3	4	5	4	1	7	5	5	2
16.1- 17.0	2	3	2	4	2				4	
17.1- 18.0	1			3						
18.1- 19.0	1	1		3	2	1			1	
19.1- 20.0	1	5		6						
20.1- 21.0		1		1		1			1	
21.1- 22.0		2						2		
22.1- 23.0										
23.1- 24.0										
24.1- 25.0	1									
MEAN/DEPTH	13.5	15.2	12.2	14.4	13.2	12.6	13.0	13.2	12.2	12.5
STD ERR	.47	.45	.23	.36	.26	.30	.22	.29	.21	.23
MEAN/TRANS	14.4		13.3			12.9			12.3	
STD ERR	.34		.18			.15			.16	
MEAN/DATE					13.0					
STD ERR					.10					
RANGE(MIN)	9.3	10.5	7.7	9.8	7.8	8.2	6.3	7.3	6.4	5.6
(MAX)	24.5	22.0	16.5	20.5	18.3	20.1	15.4	21.6	21.0	15.3
NO.LENGTH	39	42	60	61	63	51	68	61	120	65

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
5.1- 6.0							1			1										
6.1- 7.0							2									1				
7.1- 8.0		2				1	5		1					1	2	1				
8.1- 9.0	2						5		1				1		6					
9.1- 10.0						1	5		1						6	4		2		
10.1- 11.0			1	1		2	3		2	3	3		3	1	6	8	1	2		
11.1- 12.0		2	1				5		1	2			3		1	6		1	3	
12.1- 13.0			3	2			10	1	2	1	2	4	1	5	3	6	2	1	3	
13.1- 14.0	1	2	2	13		1	1	1	6	1	8	7	6	8	9	11	7		8	4
14.1- 15.0	2			18		1	4		3	2	14	22	10	7	8	7	5	2	5	6
15.1- 16.0	1		2	17			7	2	3		15	16	5	14	12	3	7	2	27	6
16.1- 17.0	2			4			1		1	3	14	7	3	11	3	1	4		12	11
17.1- 18.0		1		5					1		4	2	2	2	1		7	1	2	6
18.1- 19.0		1										2	1	1			6			7
19.1- 20.0													1	2	1		6			10
20.1- 21.0														3	2	1	8			2
21.1- 22.0								1					2	2			4			2
22.1- 23.0														1			3			3
23.1- 24.0														2						1
24.1- 25.0																				2
MEAN/DEPTH	13.6	12.9	13.0	14.9		11.2	11.4	15.7	13.1	12.7	15.0	15.1	14.7	15.9	13.2	12.6	17.6	13.1	15.1	17.8
STD ERR	1.15	1.42	.53	.17		1.00	.42	1.58	.53	.83	.21	.17	.46	.40	.41	.35	.39	.84	.18	.35
MEAN/TRANS	13.2		14.6			11.7			13.0		15.1		14.6			15.1			16.5	
STD ERR	.89		.18			.41			.45		.13		.26			.34			.23	
MEAN/DATE					13.2										15.3					
STD ERR					.21										.13					
RANGE(MIN)	8.3	7.8	10.5	10.7		8.0	5.7	12.5	8.0	6.0	10.3	12.4	9.0	7.2	7.2	6.7	10.7	9.5	11.1	13.4
(MAX)	17.0	18.8	15.2	18.0		14.4	16.9	21.5	17.4	16.7	17.3	18.8	21.5	23.7	21.0	21.0	22.5	17.6	17.3	24.5
NO.LENG'D	8	8	9	60	0	6	49	5	22	13	60	60	38	60	60	49	60	11	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
5.1- 6.0							1			1
6.1- 7.0						1	2			
7.1- 8.0		2		1	2	2	5		1	
8.1- 9.0	2		1		6		5		1	
9.1- 10.0					6	5	5	2	1	
10.1- 11.0	3		4	2	6	10	4	2	2	3
11.1- 12.0		2	4		1	6	5	1	4	2
12.1- 13.0	2	4	4	7	3	6	12	2	5	1
13.1- 14.0	9	9	8	21	9	12	8	1	14	5
14.1- 15.0	16	22	10	25	8	8	9	2	8	8
15.1- 16.0	16	16	7	31	12	3	14	4	30	6
16.1- 17.0	16	7	3	15	3	1	5		13	14
17.1- 18.0	4	3	2	7	1		7	1	3	6
18.1- 19.0		3	1	1			6			7
19.1- 20.0			1	2	1		6			10
20.1- 21.0				3	2	1	8			2
21.1- 22.0			2	2			4	1		2
22.1- 23.0				1			3			3
23.1- 24.0				2						1
24.1- 25.0										2
MEAN/DEPTH	14.9	14.8	14.4	15.4	13.2	12.5	14.8	13.9	14.6	16.9
STD ERR	.23		.40		.41		.41		.22	
		.23		.22		.33		.80		.39
MEAN/TRANS	14.8		14.6			14.0			15.7	
STD ERR	.16		.19			.29			.24	
MEAN/DATE				14.7						
STD ERR				.12						
RANGE(MIN)	8.3	7.8	9.0	7.2	7.2	6.7	5.7	9.5	8.0	6.0
(MAX)	17.3	18.8	21.5	23.7	21.0	21.0	22.5	21.5	17.4	24.5
NO.LENG'D	68	68	47	120	60	55	109	16	82	73

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
6.1- 7.0							2		1											
7.1- 8.0						1	1									3		1		
8.1- 9.0			1			2	6		1			1	2			1		1		1
9.1- 10.0		1				4	3		3		2	3	4	3		1	6	2	1	3
10.1- 11.0						1	3		1		5	4	3	1		1	3	4	4	1
11.1- 12.0						1	1		2		6	2	4	2		5	2	2	1	
12.1- 13.0				1			3		1		5	3	8	3		4	4	3	1	
13.1- 14.0									2		5	4	4	4		2	1	1	4	
14.1- 15.0							1		2		5	2	5	2	1	2	7	2	7	1
15.1- 16.0		1									5	1	4	6	1	3	3	1	2	2
16.1- 17.0									2		7	2	5	7		1	4	4	10	5
17.1- 18.0	1							1			9	4	1	8	2	1	8	5	3	2
18.1- 19.0		1									3	1	3	11	1		8	3	3	4
19.1- 20.0	1										7	5	1	5	1		8	3	1	5
20.1- 21.0		1									1	1		4	3		5	4	1	6
21.1- 22.0												5		3			1	1		
22.1- 23.0												1		1				1	2	2
23.1- 24.0												6								4
24.1- 25.0												2								3
25.1- 26.0												2								3
26.1- 27.0												1								
27.1- 28.0												1								
28.1- 29.0																				
29.1- 30.0																				
30.1- 31.0																			1	
MEAN/DEPTH	18.4	16.1	8.7	12.2		9.4	9.7	18.0	12.0		15.2	17.8	13.5	16.6	18.5	12.3	16.0	15.5	15.9	18.9
STD ERR	1.15	2.39				.43	.46		.75		.40	.76	.43	.41	.81	.56	.46	.67	.60	.71
MEAN/TRANS	16.8		10.5				9.9		12.0		16.4		15.6			15.1			17.4	
STD ERR	1.62		1.75				.43		.75		.43		.32			.35			.49	
MEAN/DATE				11.3											16.0					
STD ERR				.47											.20					
RANGE(MIN)	17.2	9.4	8.7	12.2		7.2	6.7	18.0	6.9		9.4	9.0	8.3	9.2	14.4	7.4	9.2	7.7	9.5	8.7
(MAX)	19.5	20.3	8.7	12.2		11.7	14.5	18.0	16.2		20.1	27.5	19.2	22.2	21.0	17.3	22.0	22.6	31.0	25.6
NO.LENG'D	2	4	1	1	0	9	20	1	15	0	60	51	44	60	9	24	60	38	41	42

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
6.1- 7.0							2		1	
7.1- 8.0						4	1	1		
8.1- 9.0		1	3			3	6	1	1	1
9.1- 10.0	2	4	4	3		5	9	2	4	3
10.1- 11.0	5	4	3	1		2	6	4	5	1
11.1- 12.0	6	2	4	2		6	3	2	3	
12.1- 13.0	5	3	8	4		4	7	3	2	
13.1- 14.0	5	4	4	4		2	1	1	6	
14.1- 15.0	5	2	5	2	1	2	8	2	9	1
15.1- 16.0	5	2	4	6	1	3	3	1	2	2
16.1- 17.0	7	2	5	7		1	4	4	12	5
17.1- 18.0	10	4	1	8	2	1	8	6	3	2
18.1- 19.0	3	2	3	11	1		8	3	3	4
19.1- 20.0	8	5	1	5	1		8	3	1	5
20.1- 21.0	1	2		4	3		5	4	1	6
21.1- 22.0		5		3			1	1		
22.1- 23.0		1		1				1	2	2
23.1- 24.0		6								4
24.1- 25.0		2								3
25.1- 26.0		2								3
26.1- 27.0		1								
27.1- 28.0		1								
28.1- 29.0										
29.1- 30.0										
30.1- 31.0									1	
MEAN/DEPTH	15.3	17.6	13.4	16.6	18.5	11.5	14.4	15.6	14.8	18.9
STD ERR	.40	.72	.43	.41	.81	.48	.48	.66	.54	.71
MEAN/TRANS	16.4		15.5			14.1			16.6	
STD ERR	.41		.33			.34			.48	
MEAN/DATE				15.5						
STD ERR				.20						
RANGE(MIN)	9.4	9.0	8.3	9.2	14.4	7.2	6.7	7.7	6.9	8.7
(MAX)	20.1	27.5	19.2	22.2	21.0	17.3	22.0	22.6	31.0	25.6
NO.LENG'D	62	55	45	61	9	33	80	39	56	42

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
8.1- 9.0									1											
9.1- 10.0																		1		1
10.1- 11.0														1		1			1	
11.1- 12.0	1																			
12.1- 13.0	1			1								1								1
13.1- 14.0									2	1				3		2			1	1
14.1- 15.0																	3	1	2	4
15.1- 16.0																1	1	1		1
16.1- 17.0				1										1					1	
17.1- 18.0												1					2			5
18.1- 19.0																	3			
19.1- 20.0								1				1		2			8			2
20.1- 21.0											1	1		3	1		5			5
21.1- 22.0								1				4		1			8		2	7
22.1- 23.0	1											4		1			7			8
23.1- 24.0	1											5								1
24.1- 25.0												4		1			2			2
25.1- 26.0												2		1				1		2
26.1- 27.0												3					2			2
27.1- 28.0												1								
28.1- 29.0												1								2
29.1- 30.0												1					1			
30.1- 31.0																	1			
31.1- 32.0														2						
32.1- 33.0															1					
33.1- 34.0																		1		
MEAN/DEPTH	17.5		14.8			20.4			11.9	13.3	20.1	23.5	20.3		26.5	13.4	21.0	19.8	16.4	20.5
STD ERR	3.27								1.45						5.95		.52		1.57	
			2.00			.85						.66	1.52			.96		4.33		.63
MEAN/TRANS	17.5		14.8			20.4			12.3		23.4		21.0				20.3		20.0	
STD ERR	3.27		2.00			.85			1.08		.65		1.51				.64		.62	
MEAN/DATE				15.8											20.9					
STD ERR				1.40											.38					
RANGE(MIN)	11.2		12.8			19.5			9.0	13.3	20.1	12.3	10.7		20.6	10.9	14.3	9.7	10.7	9.7
(MAX)	23.4		16.8			21.2			13.4	13.3	20.1	30.0	31.6		32.5	15.5	31.0	34.0	21.9	28.5
NO.LENG'D	4	0	0	2	0	0	0	2	3	1	1	29	0	16	2	4	43	5	7	44

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
8.1- 9.0									1	
9.1- 10.0								1		1
10.1- 11.0				1		1			1	
11.1- 12.0	1									
12.1- 13.0	1	1		1						1
13.1- 14.0				3		2			3	2
14.1- 15.0							3	1	2	4
15.1- 16.0						1	1	1		1
16.1- 17.0				2					1	
17.1- 18.0		1					2			5
18.1- 19.0							3			
19.1- 20.0		1		2			8	1		2
20.1- 21.0	1	1		3	1		5			5
21.1- 22.0		4		1			8	1	2	7
22.1- 23.0	1	4		1			7			8
23.1- 24.0	1	5								1
24.1- 25.0		4		1			2			2
25.1- 26.0		2		1				1		2
26.1- 27.0		3					2			2
27.1- 28.0		1								
28.1- 29.0		1								2
29.1- 30.0		1					1			
30.1- 31.0							1			
31.1- 32.0				2						
32.1- 33.0					1					
33.1- 34.0								1		
MEAN/DEPTH	18.0	23.5		19.7	26.5	13.4	21.0	20.0	15.0	20.4
STD ERR	2.59	.66		1.42	5.95		.96	3.00	1.32	.64
MEAN/TRANS	22.7			20.4			20.3		19.4	
STD ERR	.74			1.43			.61		.64	
MEAN/DATE					20.5					
STD ERR					.38					
RANGE(MIN)	11.2	12.3		10.7	20.6	10.9	14.3	9.7	9.0	9.7
(MAX	23.4	30.0		31.6	32.5	15.5	31.0	34.0	21.9	28.5
NO.LENG'S	5	29	0	18	2	4	43	7	10	45

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
8.1- 9.0																1				
9.1- 10.0									1					1		1	1			
10.1- 11.0			1						1		1					2	1			
11.1- 12.0				1							1			1			1			
12.1- 13.0			1												1					
13.1- 14.0														1						
14.1- 15.0																				
15.1- 16.0				1							1									
16.1- 17.0																	1		1	
17.1- 18.0														1					1	
18.1- 19.0			1								1			1						
19.1- 20.0												1			1			1		
20.1- 21.0											1	1					1		1	
21.1- 22.0												2		1						1
22.1- 23.0												3								5
23.1- 24.0		2									4	3					1			7
24.1- 25.0											1	7		2			1		1	8
25.1- 26.0											3	5		1	1			1		6
26.1- 27.0											1	1		2				1	2	12
27.1- 28.0											3	6				1			1	7
28.1- 29.0											3	8	1	1				1	1	9
29.1- 30.0												4					3		1	2
30.1- 31.0											1	7			1			4		1
31.1- 32.0												2		1				2		1
32.1- 33.0												1			1			2		
33.1- 34.0														2	1			1		1
34.1- 35.0														1				1		
35.1- 36.0																		1		
36.1- 37.0																		2		
37.1- 38.0																				
38.1- 39.0											1									
MEAN/DEPTH	23.5		13.7	13.6					10.0		24.6	27.1	29.0	24.1	25.9	13.3	20.5	31.3	24.5	26.4
STD ERR	.00		2.24	1.65					.40		1.34	.45		1.98	3.51	3.58	2.36	1.03	1.59	.30
MEAN/TRANS	23.5		13.7						10.0		26.3			24.7			24.9		26.2	
STD ERR	.00		1.33						.40		.52			1.63			1.61		.34	
MEAN/DATE				15.1											25.9					
STD ERR				1.82											.40					

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANVEL S	NIGHT CHANVEL M	NIGHT CHANVEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
RANGE(MIN)		23.5	10.7	12.0					9.6		10.7	20.0	29.0	9.7	12.3	8.6	9.1	19.8	16.8	22.0
(MAX)		23.5	18.1	15.3					10.4		38.5	33.0	29.0	35.0	34.0	27.5	30.0	36.5	30.0	33.5
NO.LENG'D	0	2	3	2	0	0	0	0	2	0	22	51	1	16	6	5	11	17	9	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
8.1- 9.0						1				
9.1- 10.0				1		1	1		1	
10.1- 11.0	1		1			2	1		1	
11.1- 12.0	1			2			1			
12.1- 13.0			1		1					
13.1- 14.0				1						
14.1- 15.0										
15.1- 16.0	1			1						
16.1- 17.0							1		1	
17.1- 18.0				1					1	
18.1- 19.0	1		1	1						
19.1- 20.0		1			1		1	1		
20.1- 21.0	1	1					1		1	
21.1- 22.0		2		1						1
22.1- 23.0		3								5
23.1- 24.0	4	5					1			7
24.1- 25.0	1	7		2			1		1	8
25.1- 26.0	3	5		1	1			1		6
26.1- 27.0	1	1		2				1	2	12
27.1- 28.0	3	6				1			1	7
28.1- 29.0	3	8	1	1				1	1	9
29.1- 30.0		4					3		1	2
30.1- 31.0	1	7			1			4		1
31.1- 32.0		2		1				2		1
32.1- 33.0		1			1			2		
33.1- 34.0				2	1			1		1
34.1- 35.0				1				1		
35.1- 36.0								1		
36.1- 37.0								2		
37.1- 38.0										
38.1- 39.0	1									
MEAN/DEPTH	24.6	26.9	17.6	22.9	25.9	13.3	20.5	31.3	21.8	26.4
STD ERR	1.34	.44	4.13	1.93	3.51	3.58	2.36	1.03	2.18	.30
MEAN/TRANS	26.2		22.8			24.9			25.7	
STD ERR	.51		1.57			1.61			.46	
MEAN/DATE				25.4						
STD ERR				.42						

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
RANGE(MIN)	10.7	21.0	10.7	9.7	12.3	8.6	9.1	19.8	9.6	22.0
(MAX)	38.5	33.0	29.0	35.0	34.0	27.5	30.0	36.5	30.0	33.5
NO.LENG'D	22	53	4	18	6	5	11	17	11	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
10.1- 11.0									1			1		1						
11.1- 12.0													1							
12.1- 13.0																	1			1
13.1- 14.0																1	3			2
14.1- 15.0																				1
15.1- 16.0												1								
16.1- 17.0																				
17.1- 18.0																	1			
18.1- 19.0																				
19.1- 20.0														1						1
20.1- 21.0												1								
21.1- 22.0																				
22.1- 23.0														1	1					
23.1- 24.0																			1	
24.1- 25.0												1						1		
25.1- 26.0																	1			
26.1- 27.0																				1
27.1- 28.0												1								
28.1- 29.0												2								
29.1- 30.0												1			1					
30.1- 31.0														1	1					2
31.1- 32.0												1			2			1		1
32.1- 33.0												2		1				1		
33.1- 34.0															1					
34.1- 35.0															1			4		
35.1- 36.0																		1		
36.1- 37.0																		1		1
MEAN/DEPTH									10.5			25.9	11.8	23.3	30.9	13.7	16.0	33.4	23.5	23.0
STD ERR															1.47		2.05			
												2.17		4.02				1.21		2.95
MEAN/TRANS									10.5		25.9			26.5			25.7		23.1	
STD ERR											2.17			2.28			2.48		2.67	
MEAN/DATE				10.5											25.4					
STD ERR															1.20					
RANGE(MIN)									10.5			11.0	11.8	11.0	23.0	13.7	12.1	24.5	23.5	12.1
(MAX)									10.5			32.5	11.8	33.0	35.0	13.7	25.5	36.5	23.5	37.0
NO LENGTH	0	0	0	0	0	0	0	0	1	0	0	11	1	5	7	1	6	8	1	10

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
10.1- 11.0		1		1					1	
11.1- 12.0			1							
12.1- 13.0							1			1
13.1- 14.0						1	3			2
14.1- 15.0										1
15.1- 16.0		1								
16.1- 17.0										
17.1- 18.0							1			
18.1- 19.0										
19.1- 20.0				1						1
20.1- 21.0		1								
21.1- 22.0										
22.1- 23.0				1	1					
23.1- 24.0									1	
24.1- 25.0		1						1		
25.1- 26.0							1			
26.1- 27.0										1
27.1- 28.0		1								
28.1- 29.0		2								
29.1- 30.0		1			1					
30.1- 31.0				1	1					2
31.1- 32.0		1			2			1		1
32.1- 33.0		2		1				1		
33.1- 34.0					1					
34.1- 35.0					1			4		
35.1- 36.0								1		
36.1- 37.0								1		1
MEAN/DEPTH		25.9	11.8	23.3	30.9	13.7	16.0	33.4	17.0	23.0
STD ERR					1.47		2.05		6.50	
		2.17		4.02				1.21		2.95
MEAN/TRANS		25.9		26.5			25.7			22.0
STD ERR		2.17		2.28			2.48			2.65
MEAN/DATE					25.1					
STD ERR					1.21					
RANGE(MI		11.0	11.8	11.0	23.0	13.7	12.1	24.5	10.5	12.1
(MAX.		32.5	11.8	33.0	35.0	13.7	25.5	36.5	23.5	37.0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY										NIGHT									
	WEST		CHANNEL			ROR			EAST		WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
10.1- 11.0														1						
11.1- 12.0																				
12.1- 13.0																				
13.1- 14.0													1							
14.1- 15.0																	1		1	
15.1- 16.0																				
16.1- 17.0																	1		1	
17.1- 18.0																			1	
18.1- 19.0																			1	
19.1- 20.0																			1	
20.1- 21.0																				
21.1- 22.0																			1	
22.1- 23.0												1								
23.1- 24.0												1								
24.1- 25.0																				
25.1- 26.0																				
26.1- 27.0																				
27.1- 28.0																				
28.1- 29.0																				
29.1- 30.0												1								
30.1- 31.0																				
31.1- 32.0																				
32.1- 33.0																	1			
MEAN/DEPTH												25.3	13.8	10.1			21.3		18.0	
STD ERR																	5.62		1.06	
												2.13								
MEAN/TRANS												25.3		12.0			21.3		18.0	
STD ERR												2.13		1.85			5.62		1.06	
MEAN/DATE															19.4					
STD ERR															1.65					
RANGE(MIN)												22.5	13.8	10.1			14.7		14.2	
(MAX)												29.5	13.8	10.1			32.5		22.0	
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	3	1	1	0	0	3	0	6	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
10.1- 11.0				1						
11.1- 12.0										
12.1- 13.0										
13.1- 14.0			1							
14.1- 15.0							1		1	
15.1- 16.0										
16.1- 17.0							1		1	
17.1- 18.0									1	
18.1- 19.0									1	
19.1- 20.0									1	
20.1- 21.0										
21.1- 22.0									1	
22.1- 23.0		1								
23.1- 24.0		1								
24.1- 25.0										
25.1- 26.0										
26.1- 27.0										
27.1- 28.0										
28.1- 29.0										
29.1- 30.0		1								
30.1- 31.0										
31.1- 32.0										
32.1- 33.0							1			
MEAN/DEPTH	25.3		13.8	10.1			21.3		18.0	
STD ERR	2.13						5.62		1.06	
MEAN/TRANS	25.3		12.0				21.3		18.0	
STD ERR	2.13		1.85				5.62		1.06	
MEAN/DATE				19.4						
STD ERR				1.65						
RANGE(MIN)	22.5		13.8	10.1			14.7		14.2	
(MAX)	29.5		13.8	10.1			32.5		22.0	
NO.LENGTH	0	3	1	1	0	0	3	0	6	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
8.1- 9.0								1												
9.1- 10.0																				
10.1- 11.0					1											1				
MEAN/DEPTH					10.7			8.3								10.4				
STD ERR																				
MEAN/TRANS				10.7			8.3										10.4			
STD ERR																				
MEAN/DATE					9.5										10.4					
STD ERR					1.20															
RANGE(MIN)					10.7			8.3								10.4				
(MAX)					10.7			8.3								10.4				
NO.LENG'D	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
8.1- 9.0								1		
9.1- 10.0										
10.1- 11.0					1	1				
MEAN/DEPTH					10.7	10.4		8.3		
STD ERR										
MEAN/TRANS				10.7			9.4			
STD ERR							1.05			
MEAN/DATE					9.8					
STD ERR					.75					
RANGE(MIN)					10.7	10.4		8.3		
(MAX)					10.7	10.4		8.3		
NO.LENG'D	0	0	0	0	1	1	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
11.1- 12.0				1																
MEAN/DEPTH				11.4																
STD ERR																				
MEAN/TRANS				11.4																
STD ERR																				
MEAN/DATE					11.4															
STD ERR																				
RANGE(MIN)				11.4																
(MAX)				11.4																
NO.LENG'D	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
11.1- 12.0				1						
MEAN/DEPTH				11.4						
STD ERR										
MEAN/TRANS				11.4						
STD ERR										
MEAN/DATE					11.4					
STD ERR										
RANGE(MIN)				11.4						
(MAX)				11.4						
NO.LENG'D	0	0	0	1	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
9.1- 10.0				1																
10.1- 11.0																2				
11.1- 12.0																				
12.1- 13.0				1																
MEAN/DEPTH				11.1												10.3				
STD ERR				1.10												.10				
MEAN/TRANS				11.1													10.3			
STD ERR				1.10													.10			
MEAN/DATE					11.1										10.3					
STD ERR					1.10										.10					
RANGE(MIN)				10.0												10.2				
(MAX)				12.2												10.4				
NO.LENG'D	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
9.1- 10.0				1						
10.1- 11.0						2				
11.1- 12.0										
12.1- 13.0				1						
MEAN/DEPTH				11.1		10.3				
STD ERR				1.10		.10				
MEAN/TRANS				11.1			10.3			
STD ERR				1.10			.10			
MEAN/DATE					10.7					
STD ERR					.51					
RANGE(MIN)				10.0		10.2				
(MAX)				12.2		10.4				
NO.LENG'D	0	0	0	2	0	2	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
7.1- 8.0								1												
8.1- 9.0							1	1												
9.1- 10.0		1						1												
10.1- 11.0																				
11.1- 12.0																1				
MEAN/DEPTH		10.0					8.4	8.7								11.2				
STD ERR								.64												
MEAN/TRANS	10.0						8.6										11.2			
STD ERR							.46													
MEAN/DATE					8.9										11.2					
STD ERR					.45															
RANGE(MIN)		10.0					8.4	7.7								11.2				
(MAX)		10.0					8.4	9.9								11.2				
NO.LENG'D	0	1	0	0	0	0	1	3	0	0	0	0	0	0	0	1	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
7.1- 8.0								1		
8.1- 9.0							1	1		
9.1- 10.0		1						1		
10.1- 11.0										
11.1- 12.0						1				
MEAN/DEPTH		10.0				11.2	8.4	8.7		
STD ERR								.64		
MEAN/TRANS	10.0						9.2			
STD ERR							.62			
MEAN/DATE					9.3					
STD ERR					.53					
RANGE(MIN)		10.0				11.2	8.4	7.7		
(MAX)		10.0				11.2	8.4	9.9		
NO.LENG'D	0	1	0	0	0	1	1	3	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
10.1- 11.0															1					
MEAN/DEPTH															10.2					
STD ERR																				
MEAN/TRANS														10.2						
STD ERR																				
MEAN/DATE															10.2					
STD ERR																				
RANGE(MIN)															10.2					
(MAX)															10.2					
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
10.1- 11.0					1					
MEAN/DEPTH					10.2					
STD ERR										
MEAN/TRANS				10.2						
STD ERR										
MEAN/DATE					10.2					
STD ERR										
RANGE(MIN)					10.2					
(MAX)					10.2					
NO.LENG'D	0	0	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
10.1- 11.0																1				
11.1- 12.0												1						1		
MEAN/DEPTH												11.1				10.6		11.1		
STD ERR																				
MEAN/TRANS											11.1						10.9			
STD ERR																	.25			
MEAN/DATE															10.9					
STD ERR															.17					
RANGE(MIN)												11.1				10.6		11.1		
(MAX)												11.1				10.6		11.1		
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
10.1- 11.0						1				
11.1- 12.0		1						1		
MEAN/DEPTH		11.1				10.6		11.1		
STD ERR										
MEAN/TRANS	11.1						10.9			
STD ERR							.25			
MEAN/DATE					10.9					
STD ERR					.17					
RANGE(MIN)		11.1				10.6		11.1		
(MAX)		11.1				10.6		11.1		
NO.LENG'D	0	1	0	0	0	1	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
11.1- 12.0			1			2	1													
12.1- 13.0									1		1									
13.1- 14.0																				
14.1- 15.0																				
15.1- 16.0																1				
MEAN/DEPTH			11.5			11.6	11.5		12.5		12.5					15.6				
STD ERR						.35														
MEAN/TRANS			11.5			11.5			12.5		12.5						15.6			
STD ERR						.20														
MEAN/DATE					11.7										14.1					
STD ERR					.22										1.55					
RANGE(MIN)			11.5			11.2	11.5		12.5		12.5					15.6				
(MAX)			11.5			11.9	11.5		12.5		12.5					15.6				
NO.LENG'D	0	0	1	0	0	2	1	0	1	0	1	0	0	0	0	1	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
11.1- 12.0			1			2	1			
12.1- 13.0	1								1	
13.1- 14.0										
14.1- 15.0										
15.1- 16.0						1				
MEAN/DEPTH	12.5		11.5			12.9	11.5		12.5	
STD ERR						1.37				
MEAN/TRANS	12.5		11.5			12.6			12.5	
STD ERR						1.03				
MEAN/DATE				12.4						
STD ERR				.57						
RANGE(MIN)	12.5		11.5			11.2	11.5		12.5	
(MAX)	12.5		11.5			15.6	11.5		12.5	
NO.LENG'D	1	0	1	0	0	3	1	0	1	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
11.1- 12.0											1									
12.1- 13.0		1																		
13.1- 14.0											1					1				
14.1- 15.0											1									
15.1- 16.0												1								
16.1- 17.0																				
17.1- 18.0												1								
18.1- 19.0												1								
MEAN/DEPTH		12.9									13.3	17.2				13.4				
STD ERR											1.05									
												.94								
MEAN/TRANS	12.9										15.3						13.4			
STD ERR											1.06									
MEAN/DATE					12.9											15.0				
STD ERR																.94				
RANGE(MIN)		12.9									11.3	15.3				13.4				
(MAX)		12.9									14.8	18.3				13.4				
NO.LENG'D	0	1	0	0	0	0	0	0	0	0	3	3	0	0	0	1	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
11.1- 12.0	1									
12.1- 13.0		1								
13.1- 14.0	1					1				
14.1- 15.0	1									
15.1- 16.0		1								
16.1- 17.0										
17.1- 18.0		1								
18.1- 19.0		1								
MEAN/DEPTH	13.3	16.1				13.4				
STD ERR	1.05									
		1.26								
MEAN/TRANS	14.9						13.4			
STD ERR	.96									
MEAN/DATE					14.7					
STD ERR					.85					
RANGE(MIN)	11.3	12.9				13.4				
(MAX)	14.8	18.3				13.4				
NO.LENG'D	3	4	0	0	0	1	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
10.1- 11.0													2							
11.1- 12.0													3			2				
12.1- 13.0								1				1	1							
13.1- 14.0	1			2									1							
14.1- 15.0										1	1		4			1			1	1
15.1- 16.0	1									2	1		5	1		4				
16.1- 17.0				1					1		4	1	3	2		3		1		
17.1- 18.0			1								3	2	2			4				
18.1- 19.0									1				1	3						
19.1- 20.0																1				
MEAN/DEPTH	14.6		17.1	14.7				12.3	17.3	15.3	16.7	16.1	14.6	17.2		16.0		16.1	14.4	15.0
STD ERR	.55								.95		.35		.50							
				1.11						.58		1.14		.51		.53				
MEAN/TRANS	14.6			15.3			12.3			16.1	16.5			15.1			16.0			14.7
STD ERR	.55			.99						.65	.40			.45			.49			.30
MEAN/DATE					15.2															
STD ERR					.51															
															15.7					
															.28					
RANGE(MIN)	14.0		17.1	13.4				12.3	16.3	14.1	14.8	12.7	10.6	15.7		11.7		16.1	14.4	15.0
(MAX)	15.1		17.1	16.9				12.3	18.2	15.9	17.9	17.7	18.9	18.3		19.1		16.1	14.4	15.0
NO.LENG'D	2	0	1	3	0	0	0	1	2	3	9	4	22	6	0	15	0	1	1	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
10.1- 11.0			2							
11.1- 12.0			3			2				
12.1- 13.0		1	1					1		
13.1- 14.0	1		1	2						
14.1- 15.0	1		4			1			1	2
15.1- 16.0	2		5	1		4				2
16.1- 17.0	4	1	3	3		3		1	1	
17.1- 18.0	3	2	3			4				
18.1- 19.0			1	3					1	
19.1- 20.0						1				
MEAN/DEPTH	16.3	16.1	14.7	16.3		16.0		14.2	16.3	15.2
STD ERR	.39		.49						1.10	
	1.14			.61		.53		1.90		.42
MEAN/TRANS	16.2		15.2			15.8			15.7	
STD ERR	.40		.41			.51			.52	
MEAN/DATE					15.6					
STD ERR					.24					
RANGE(MIN)	14.0	12.7	10.6	13.4		11.7		12.3	14.4	14.1
(MAX)	17.9	17.7	18.9	18.3		19.1		16.1	18.2	15.9
NO.LENG'D	11	4	23	9	0	15	0	2	3	4

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
9.1- 10.0																				
10.1- 11.0			1													1				
11.1- 12.0																				
12.1- 13.0									1											
13.1- 14.0				2		1		1								1				1
14.1- 15.0						1	1					2				1				
15.1- 16.0			1			1						4	1			1		1	1	2
16.1- 17.0	1					1	1		1			1	2		1					1
17.1- 18.0			2		1		2					2	11			2			5	
18.1- 19.0			1					1				3	8			1			1	
19.1- 20.0													7			2			1	
20.1- 21.0													2							
21.1- 22.0																1				
MEAN/DEPTH	16.1		15.8	13.8	17.1	15.1	16.4	16.0	14.6			16.6	18.3	16.6	16.8	17.2		14.6	17.5	14.7
STD ERR			1.37				.77		1.65				.21		.73				.53	
				.25		.58		2.65				.47				1.04				.58
MEAN/TRANS	16.1			15.5			15.8		14.6		16.6			18.0			16.9		16.4	
STD ERR				.92			.57		1.65		.47			.23			.97		.54	
MEAN/DATE					15.6										17.3					
STD ERR					.45										.23					
RANGE(MIN)	16.1		10.8	13.5	17.1	13.6	14.4	13.4	13.0			14.5	15.7	16.6	13.2	9.7		14.6	14.4	12.9
(MAX)	16.1		18.1	14.0	17.1	16.2	18.0	18.7	16.3			18.9	20.8	16.6	18.8	21.6		14.6	19.8	16.1
NO.LENG'D	1	0	5	2	1	4	4	2	2	0	0	12	31	1	8	10	0	1	8	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
9.1- 10.0						1				
10.1- 11.0			1							
11.1- 12.0										
12.1- 13.0									1	1
13.1- 14.0				2	1	1		1		
14.1- 15.0		2			1	2	1	1	1	2
15.1- 16.0		4	2		1	1				1
16.1- 17.0	1	1	2	1		3	1		1	1
17.1- 18.0		2	13		3	2	2		5	
18.1- 19.0		3	9		3	1		1	1	
19.1- 20.0			7			2			1	
20.1- 21.0			2							
21.1- 22.0						1				
MEAN/DEPTH	16.1	16.6	18.0	14.7	16.9	16.6	16.4	15.6	16.9	14.7
STD ERR		.47	.29	.96	.64	.79	.77	1.60	.62	.58
MEAN/TRANS	16.6		17.6			16.4			16.2	
STD ERR	.43		.28			.58			.52	
MEAN/DATE					17.0					
STD ERR					.22					
RANGE(MIN)	16.1	14.5	10.8	13.5	13.2	9.7	14.4	13.4	13.0	12.9
(MAX)	16.1	18.9	20.8	16.6	18.8	21.6	18.0	18.7	19.8	16.1
NO.LENG'D	1	12	36	3	9	14	4	3	10	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
14.1- 15.0											1	1		1						
15.1- 16.0											2		1			1	1			
16.1- 17.0											1		1			1	2			2
17.1- 18.0														1						
18.1- 19.0	1												1		1		2			1
19.1- 20.0											1			1		1	2		1	
20.1- 21.0																				
21.1- 22.0																1				
MEAN/DEPTH	18.2										16.2	14.3	16.9	17.6	18.4	18.3	17.6		19.4	17.0
STD ERR											.82		.87				.60			
														1.42		1.36				.67
MEAN/TRANS	18.2										15.9			17.4			17.9		17.6	
STD ERR											.74			.66			.59		.77	
MEAN/DATE					18.2											17.3				
STD ERR																.36				
RANGE(MIN)	18.2										14.9	14.3	15.4	15.0	18.4	15.7	15.2		19.4	16.2
(MAX)	18.2										19.4	14.3	18.4	19.9	18.4	21.4	19.2		19.4	18.3
NO.LENG'D	1	0	0	0	0	0	0	0	0	0	5	1	3	3	1	4	7	0	1	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
14.1- 15.0	1	1		1						
15.1- 16.0	2		1			1	1			
16.1- 17.0	1		1			1	2			2
17.1- 18.0				1						
18.1- 19.0	1		1		1		2			1
19.1- 20.0	1			1		1	2		1	
20.1- 21.0										
21.1- 22.0						1				
MEAN/DEPTH	16.6	14.3	16.9	17.6	18.4	18.3	17.6		19.4	17.0
STD ERR	.74		.87				.60			
				1.42		1.36				.67
MEAN/TRANS	16.2			17.4			17.9		17.6	
STD ERR	.71			.66			.59		.77	
MEAN/DATE					17.3					
STD ERR					.34					
RANGE(MIN)	14.9	14.3	15.4	15.0	18.4	15.7	15.2		19.4	16.2
(MAX)	19.4	14.3	18.4	19.9	18.4	21.4	19.2		19.4	18.3
NO.LENG'D	6	1	3	3	1	4	7	0	1	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
13.1- 14.0													3			1				
14.1- 15.0													1			1				
15.1- 16.0	1											2	2			1				
16.1- 17.0											1		2							
17.1- 18.0											1		4	1					1	
18.1- 19.0	1								1					2	1				1	
19.1- 20.0											2	1			2				10	
20.1- 21.0									2		3	2	1	1					4	
21.1- 22.0										1	5	1		1					4	
22.1- 23.0									2		2	1		1					1	
23.1- 24.0											3									
MEAN/DEPTH	16.8								21.0	21.1	21.0	19.3	16.1	19.9	18.9	14.8			20.1	
STD ERR	1.35								.85		.51		.50		.33				.25	
												.99		.68		.52				
MEAN/TRANS	16.8								21.0		20.5			17.5			14.8		20.1	
STD ERR	1.35								.69		.48			.51			.52		.25	
MEAN/DATE				19.9											19.2					
STD ERR				.90											.31					
RANGE(MIN)	15.4								18.3	21.1	16.2	15.7	13.8	18.0	18.3	13.9			17.9	
(MAX)	18.1								22.9	21.1	23.8	22.4	20.2	22.2	19.4	15.7			22.4	
NO.LENG'D	2	0	0	0	0	0	0	0	5	1	17	7	13	6	3	3	0	0	21	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
13.1- 14.0			3			1				
14.1- 15.0			1			1				
15.1- 16.0	1	2	2			1				
16.1- 17.0	1		2							
17.1- 18.0	1		4	1					1	
18.1- 19.0	1			2	1				2	
19.1- 20.0	2	1			2				10	
20.1- 21.0	3	2	1	1					6	
21.1- 22.0	5	1		1					4	1
22.1- 23.0	2	1		1					3	
23.1- 24.0	3									
MEAN/DEPTH	20.6	19.3	16.1	19.9	18.9	14.8			20.3	21.1
STD ERR	.56		.50		.33				.26	
		.99		.68		.52				
MEAN/TRANS	20.3		17.5			14.8			20.3	
STD ERR	.49		.51			.52			.25	
MEAN/DATE					19.3					
STD ERR					.29					
RANGE(MIN)	15.4	15.7	13.8	18.0	18.3	13.9			17.9	21.1
(MAX)	23.8	22.4	20.2	22.2	19.4	15.7			22.9	21.1
NO.LENG'D	19	7	13	6	3	3	0	0	26	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

	DAY										NIGHT									
LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
15.1- 16.0														1			1			
16.1- 17.0													1	1						
17.1- 18.0						1						1							2	
18.1- 19.0		1												1					1	
19.1- 20.0				1										1						
20.1- 21.0											2	1								
21.1- 22.0											2									
22.1- 23.0																				
23.1- 24.0														1						
MEAN/DEPTH		18.8		19.2		17.7					21.2	19.1	16.5	18.9			15.1		17.8	
STD ERR											.26								.44	
												1.20		1.45						
MEAN/TRANS	18.8			19.2			17.7				20.5			18.5			15.1		17.8	
STD ERR											.57			1.25					.44	
MEAN/DATE					18.6										18.9					
STD ERR					.45										.62					
RANGE(MIN)		18.8		19.2		17.7					20.7	17.9	16.5	15.9			15.1		17.1	
(MAX)		18.8		19.2		17.7					21.8	20.3	16.5	23.9			15.1		18.6	
NO.LENGTH	0	1	0	1	0	1	0	0	0	0	4	2	1	5	0	0	1	0	3	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
15.1- 16.0				1			1			
16.1- 17.0			1	1						
17.1- 18.0		1				1			2	
18.1- 19.0		1		1					1	
19.1- 20.0				2						
20.1- 21.0	2	1								
21.1- 22.0	2									
22.1- 23.0										
23.1- 24.0				1						
MEAN/DEPTH	21.2	19.0	16.5	18.9		17.7	15.1		17.8	
STD ERR	.26								.44	
		.70		1.19						
MEAN/TRANS	20.3			18.6			16.4		17.8	
STD ERR	.54			1.06			1.30		.44	
MEAN/DATE					18.8					
STD ERR					.52					
RANGE(MIN)	20.7	17.9	16.5	15.9		17.7	15.1		17.1	
(MAX)	21.8	20.3	16.5	23.9		17.7	15.1		18.6	
NO.LENG'D	4	3	1	6	0	1	1	0	3	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

LENGTH(MM) INTERVAL	DAY										NIGHT									
	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
16.1- 17.0																				
17.1- 18.0													2							
18.1- 19.0																				
19.1- 20.0												1		1						
20.1- 21.0							1											1		
21.1- 22.0														1						
22.1- 23.0														2						
23.1- 24.0														2						
24.1- 25.0														1						
25.1- 26.0																				
26.1- 27.0																	1			
27.1- 28.0														1						
MEAN/DEPTH							20.9					19.2	16.8	23.0			27.0	20.9		
STD ERR													.05							
														.83						
MEAN/TRANS							20.9					19.2		21.8			24.0			
STD ERR														1.07			3.05			
MEAN/DATE					20.9										21.9					
STD ERR															.94					
RANGE(MIN)							20.9					19.2	16.7	19.2			27.0	20.9		
(MAX)							20.9					19.2	16.8	27.4			27.0	20.9		
NO.LENG'D	0	0	0	0	0	0	1	0	0	0	0	1	2	8	0	0	1	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
16.1- 17.0			2							
17.1- 18.0										
18.1- 19.0										
19.1- 20.0		1		1						
20.1- 21.0							1	1		
21.1- 22.0				1						
22.1- 23.0				2						
23.1- 24.0				2						
24.1- 25.0				1						
25.1- 26.0										
26.1- 27.0							1			
27.1- 28.0				1						
MEAN/DEPTH		19.2	16.8	23.0			24.0	20.9		
STD ERR			.05				3.05			
				.83						
MEAN/TRANS		19.2		21.8			22.9			
STD ERR				1.07			2.03			
MEAN/DATE					21.8					
STD ERR					.87					
RANGE(MIN)		19.2	16.7	19.2			20.9	20.9		
(MAX)		19.2	16.8	27.4			27.0	20.9		
NO.LENG'D	0	1	2	8	0	0	2	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/19/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
20.1- 21.0																			1	
21.1- 22.0																			1	
22.1- 23.0																				
23.1- 24.0													1	2						
24.1- 25.0																				
25.1- 26.0														1						
MEAN/DEPTH													23.9	24.3					21.3	
STD ERR														.60					.75	
MEAN/TRANS														24.2					21.3	
STD ERR														.44					.75	
MEAN/DATE															23.2					
STD ERR															.71					
RANGE(MIN)													23.9	23.5					20.5	
(MAX)													23.9	25.5					22.0	
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	2	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/19/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
20.1- 21.0									1	
21.1- 22.0									1	
22.1- 23.0										
23.1- 24.0			1	2						
24.1- 25.0										
25.1- 26.0				1						
MEAN/DEPTH			23.9	24.3					21.3	
STD ERR				.60					.75	
MEAN/TRANS				24.2					21.3	
STD ERR				.44					.75	
MEAN/DATE					23.2					
STD ERR					.71					
RANGE(MIN)			23.9	23.5					20.5	
(MAX)			23.9	25.5					22.0	
NO.LENG'D	0	0	1	3	0	0	0	0	2	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANVEL S	NIGHT CHANVEL M	NIGHT CHANVEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
22.1- 23.0											1		1						1	
23.1- 24.0		1									1									
24.1- 25.0																				
25.1- 26.0												1								
26.1- 27.0																				
27.1- 28.0																				
28.1- 29.0														1						1
29.1- 30.0																				
30.1- 31.0														1						
31.1- 32.0														2						
32.1- 33.0														1						
33.1- 34.0														1						
MEAN/DEPTH		23.5									23.5	25.6	23.0	31.6					23.0	28.3
STD ERR											.45			.79						
MEAN/TRANS	23.5										24.2			30.4					25.7	
STD ERR											.76			1.40					2.65	
MEAN/DATE				23.5											28.0					
STD ERR															1.21					
RANGE(MIN)		23.5									23.0	25.6	23.0	28.5					23.0	28.3
(MAX)		23.5									23.9	25.6	23.0	34.0					23.0	28.3
NO.LENG'D	0	1	0	0	0	0	0	0	0	0	2	1	1	6	0	0	0	0	1	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
22.1- 23.0	1		1						1	
23.1- 24.0	1	1								
24.1- 25.0										
25.1- 26.0		1								
26.1- 27.0										
27.1- 28.0										
28.1- 29.0				1						1
29.1- 30.0										
30.1- 31.0				1						
31.1- 32.0				2						
32.1- 33.0				1						
33.1- 34.0				1						
MEAN/DEPTH	23.5	24.5	23.0	31.6					23.0	28.3
STD ERR	.45	1.05		.79						
MEAN/TRANS	24.0			30.4					25.7	
STD ERR	.56			1.40					2.65	
MEAN/DATE					27.7					
STD ERR					1.17					
RANGE(MIN)	23.0	23.5	23.0	28.5					23.0	28.3
(MAX)	23.9	25.6	23.0	34.0					23.0	28.3
NO.LENG'D	2	2	1	6	0	0	0	0	1	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY										NIGHT									
	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
24.1- 25.0																	1			
MEAN/DEPTH																	24.2			
STD ERR																				
MEAN/TRANS																	24.2			
STD ERR																				
MEAN/DATE															24.2					
STD ERR																				
RANGE(MIN)																	24.2			
(MAX)																	24.2			
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
24.1- 25.0							1			
MEAN/DEPTH							24.2			
STD ERR										
MEAN/TRANS							24.2			
STD ERR										
MEAN/DATE					24.2					
STD ERR										
RANGE(MIN)							24.2			
(MAX)							24.2			
NO.LENG'D	0	0	0	0	0	0	1	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
24.1- 25.0											1									
MEAN/DEPTH											24.3									
STD ERR																				
MEAN/TRANS											24.3									
STD ERR																				
MEAN/DATE																				
STD ERR											24.3									
RANGE(MIN)											24.3									
(MAX)											24.3									
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
24.1- 25.0	1									
MEAN/DEPTH	24.3									
STD ERR										
MEAN/TRANS	24.3									
STD ERR										
MEAN/DATE					24.3					
STD ERR										
RANGE(MIN)	24.3									
(MAX)	24.3									
NO.LENGTHD	1	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
28.1- 29.0																				1
MEAN/DEPTH																				28.6
STD ERR																				
MEAN/TRANS																				28.6
STD ERR																				
MEAN/DATE															28.6					
STD ERR																				
RANGE(MIN)																				28.6
(MAX)																				28.6
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
28.1- 29.0										1
MEAN/DEPTH										28.6
STD ERR										
MEAN/TRANS									28.6	
STD ERR										
MEAN/DATE					28.6					
STD ERR										
RANGE(MIN)										28.6
(MAX)										28.6
NO.LENG'D	0	0	0	0	0	0	0	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/19/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
25.1- 26.0														1						1
26.1- 27.0														1			1			
27.1- 28.0																				
28.1- 29.0																				
29.1- 30.0														1						
30.1- 31.0														2						
MEAN/DEPTH														28.9			26.5			25.2
STD ERR														1.03						
MEAN/TRANS														28.9			26.5			25.2
STD ERR														1.03						
MEAN/DATE															28.0					
STD ERR															.92					
RANGE(MIN)														26.0			26.5			25.2
(MAX)														31.0			26.5			25.2
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	1	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/19/79

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
	DAY/NIGHT COMBINED									
25.1- 26.0				1						1
26.1- 27.0				1			1			
27.1- 28.0										
28.1- 29.0										
29.1- 30.0				1						
30.1- 31.0				2						
MEAN/DEPTH				28.9			26.5			25.2
STD ERR				1.03						
MEAN/TRANS				28.9			26.5		25.2	
STD ERR				1.03						
MEAN/DATE					28.0					
STD ERR					.92					
RANGE(MIN)				26.0			26.5			25.2
(MAX)				31.0			26.5			25.2
NO.LENG'D	0	0	0	5	0	0	1	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
25.1- 26.0											2									
26.1- 27.0																	1			
27.1- 28.0											1									
28.1- 29.0																				
29.1- 30.0											1						1		1	
30.1- 31.0																				
31.1- 32.0																				1
32.1- 33.0																	1			
33.1- 34.0																				
34.1- 35.0																	1			
MEAN/DEPTH											27.0						31.0		30.0	31.6
STD ERR											.97						1.81			
MEAN/TRANS											27.0						31.0		30.8	
STD ERR											.97						1.81		.80	
MEAN/DATE														29.4						
STD ERR														.99						
RANGE(MIN)											25.2						26.5		30.0	31.6
(MAX)											29.5						35.0		30.0	31.6
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	0	1	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
25.1- 26.0	2									
26.1- 27.0							1			
27.1- 28.0	1									
28.1- 29.0										
29.1- 30.0	1						1		1	
30.1- 31.0										
31.1- 32.0										1
32.1- 33.0							1			
33.1- 34.0										
34.1- 35.0							1			
MEAN/DEPTH	27.0						31.0		30.0	31.6
STD ERR	.97						1.81			
MEAN/TRANS	27.0						31.0		30.8	
STD ERR	.97						1.81		.80	
MEAN/DATE					29.4					
STD ERR					.99					
RANGE(MIN)	25.2						26.5		30.0	31.6
(MAX)	29.5						35.0		30.0	31.6
NO.LENG'D	4	0	0	0	0	0	4	0	1	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY										NIGHT									
	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
28.1- 29.0																				1
29.1- 30.0																				
30.1- 31.0														1						
31.1- 32.0																				
32.1- 33.0																		1		
MEAN/DEPTH														31.0				32.8		28.6
STD ERR																				
MEAN/TRANS														31.0			32.8			28.6
STD ERR																				
MEAN/DATE															30.8					
STD ERR															1.22					
RANGE(MIN)														31.0				32.8		28.6
(MAX)														31.0				32.8		28.6
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
	DAY/NIGHT COMBINED									
28.1- 29.0										1
29.1- 30.0										
30.1- 31.0				1						
31.1- 32.0										
32.1- 33.0								1		
MEAN/DEPTH				31.0				32.8		28.6
STD ERR										
MEAN/TRANS				31.0			32.8			28.6
STD ERR										
MEAN/DATE					30.8					
STD ERR					1.22					
RANGE(MIN)				31.0				32.8		28.6
(MAX)				31.0				32.8		28.6
NO.LENG'D	0	0	0	1	0	0	0	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

LENGTH(MM) INTERVAL	DAY										NIGHT									
	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
33.1- 34.0														1						
34.1- 35.0																				
35.1- 36.0																				
36.1- 37.0																				
37.1- 38.0																				
38.1- 39.0																	1			
MEAN/DEPTH														33.5			39.0			
STD ERR																				
MEAN/TRANS														33.5			39.0			
STD ERR																				
MEAN/DATE															36.3					
STD ERR															2.75					
RANGE(MIN)														33.5			39.0			
(MAX)														33.5			39.0			
NO.LENGTH	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
33.1- 34.0				1						
34.1- 35.0										
35.1- 36.0										
36.1- 37.0										
37.1- 38.0										
38.1- 39.0							1			
MEAN/DEPTH				33.5			39.0			
STD ERR										
MEAN/TRANS				33.5			39.0			
STD ERR										
MEAN/DATE					36.3					
STD ERR					2.75					
RANGE(MIN)				33.5			39.0			
(MAX)				33.5			39.0			
NO.LENG'D	0	0	0	1	0	0	1	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

LENGTH(MM) INTERVAL	DAY										NIGHT									
	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
40.1- 41.0																	1			
41.1- 42.0																				
42.1- 43.0																				
43.1- 44.0																				
44.1- 45.0																				
45.1- 46.0																				
46.1- 47.0																				1
MEAN/DEPTH																	41.0			46.5
STD ERR																				
MEAN/TRANS																	41.0			46.5
STD ERR																				
MEAN/DATE															43.8					
STD ERR															2.75					
RANGE(MIN)																	41.0			46.5
(MAX)																	41.0			46.5
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
40.1- 41.0							1			
41.1- 42.0										
42.1- 43.0										
43.1- 44.0										
44.1- 45.0										
45.1- 46.0										
46.1- 47.0										1
MEAN/DEPTH							41.0			46.5
STD ERR										
MEAN/TRANS							41.0			46.5
STD ERR										
MEAN/DATE					43.8					
STD ERR					2.75					
RANGE(MIN)							41.0			46.5
(MAX)							41.0			46.5
NO.LENG'D	0	0	0	0	0	0	1	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
8.1- 9.0								1												
9.1- 10.0																				
10.1- 11.0					1											2				
11.1- 12.0												1						1		
MEAN/DEPTH					10.7			8.3				11.1				10.5		11.1		
STD ERR																.10				
MEAN/TRANS				10.7			8.3				11.1						10.7			
STD ERR																	.21			
MEAN/DATE					9.5										10.8					
STD ERR					1.20										.18					
RANGE(MIN)					10.7			8.3				11.1				10.4		11.1		
(MAX)					10.7			8.3				11.1				10.6		11.1		
NO.LENG'D	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	2	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
8.1- 9.0								1		
9.1- 10.0										
10.1- 11.0					1	2				
11.1- 12.0		1						1		
MEAN/DEPTH		11.1			10.7	10.5		9.7		
STD ERR						.10		1.40		
MEAN/TRANS	11.1			10.7			10.1			
STD ERR							.62			
MEAN/DATE					10.4					
STD ERR					.43					
RANGE(MIN)		11.1			10.7	10.4		8.3		
(MAX)		11.1			10.7	10.6		11.1		
NO.LENG'D	0	1	0	0	1	2	0	2	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
11.1- 12.0			1	1		2	1													
12.1- 13.0									1		1									
13.1- 14.0																				
14.1- 15.0																				
15.1- 16.0																1				
MEAN/DEPTH			11.5	11.4		11.6	11.5		12.5		12.5					15.6				
STD ERR						.35														
MEAN/TRANS				11.5			11.5		12.5		12.5						15.6			
STD ERR				.05			.20													
MEAN/DATE					11.7															
STD ERR					.19															
RANGE(MIN)			11.5	11.4		11.2	11.5		12.5		12.5					15.6				
(MAX)			11.5	11.4		11.9	11.5		12.5		12.5					15.6				
NO.LENG'D	0	0	1	1	0	2	1	0	1	0	1	0	0	0	0	1	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
11.1- 12.0			1	1		2	1			
12.1- 13.0	1								1	
13.1- 14.0										
14.1- 15.0										
15.1- 16.0						1				
MEAN/DEPTH	12.5		11.5	11.4		12.9	11.5		12.5	
STD ERR						1.37				
MEAN/TRANS	12.5		11.5			12.6			12.5	
STD ERR			.05			1.03				
MEAN/DATE			12.3							
STD ERR			.51							
RANGE(MIN)	12.5		11.5	11.4		11.2	11.5		12.5	
(MAX)	12.5		11.5	11.4		15.6	11.5		12.5	
NO.LENG'D	1	0	1	1	0	3	1	0	1	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
9.1- 10.0				1																
10.1- 11.0																2				
11.1- 12.0											1									
12.1- 13.0		1		1																
13.1- 14.0											1					1				
14.1- 15.0											1									
15.1- 16.0												1								
16.1- 17.0																				
17.1- 18.0												1								
18.1- 19.0												1								
MEAN/DEPTH		12.9		11.1							13.3	17.2				11.3				
STD ERR				1.10							1.05	.94				1.03				
MEAN/TRANS	12.9			11.1							15.3						11.3			
STD ERR				1.10							1.06						1.03			
MEAN/DATE				11.7										13.9						
STD ERR				.87										.99						
RANGE(MIN)		12.9		10.0							11.3	15.3				10.2				
(MAX)		12.9		12.2							14.8	18.3				13.4				
NO.LENG'D	0	1	0	2	0	0	0	0	0	0	3	3	0	0	0	3	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
9.1- 10.0				1						
10.1- 11.0						2				
11.1- 12.0	1									
12.1- 13.0		1		1						
13.1- 14.0	1					1				
14.1- 15.0	1									
15.1- 16.0		1								
16.1- 17.0										
17.1- 18.0		1								
18.1- 19.0		1								
MEAN/DEPTH	13.3	16.1		11.1		11.3				
STD ERR	1.05	1.26		1.10		1.03				
MEAN/TRANS	14.9			11.1			11.3			
STD ERR	.96			1.10			1.03			
MEAN/DATE					13.4					
STD ERR					.81					
RANGE(MIN)	11.3	12.9		10.0		10.2				
(MAX)	14.8	18.3		12.2		13.4				
NO.LENG'D	3	4	0	2	0	3	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
7.1- 8.0								1												
8.1- 9.0							1	1												
9.1- 10.0		1						1												
10.1- 11.0													2							
11.1- 12.0													3			3				
12.1- 13.0								1				1	1							
13.1- 14.0	1			2									1							
14.1- 15.0										1	1		4			1			1	1
15.1- 16.0	1									2	1		5	1		4				
16.1- 17.0				1					1		4	1	3	2		3		1		
17.1- 18.0			1								3	2	2			4				
18.1- 19.0									1				1	3						
19.1- 20.0																1				
MEAN/DEPTH	14.6	10.0	17.1	14.7			8.4	9.6	17.3	15.3	16.7	16.1	14.6	17.2		15.7		16.1	14.4	15.0
STD ERR	.55								.95		.35		.50							
				1.11				1.00		.58		1.14		.51		.58				
MEAN/TRANS	13.0			15.3			9.4			16.1	16.5			15.1			15.7			14.7
STD ERR	1.55			.99			.81			.65	.40			.45			.54			.30
MEAN/DATE					13.4										15.6					
STD ERR					.81										.28					
RANGE(MIN)	14.0	10.0	17.1	13.4			8.4	7.7	16.3	14.1	14.8	12.7	10.6	15.7		11.2		16.1	14.4	15.0
(MAX)	15.1	10.0	17.1	16.9			8.4	12.3	18.2	15.9	17.9	17.7	18.9	18.3		19.1		16.1	14.4	15.0
NO.LENG'D	2	1	1	3	0	0	1	4	2	3	9	4	22	6	0	16	0	1	1	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
7.1- 8.0								1		
8.1- 9.0							1	1		
9.1- 10.0		1						1		
10.1- 11.0			2							
11.1- 12.0			3			3				
12.1- 13.0		1	1					1		
13.1- 14.0	1		1	2						
14.1- 15.0	1		4			1			1	2
15.1- 16.0	2		5	1		4				2
16.1- 17.0	4	1	3	3		3		1	1	
17.1- 18.0	3	2	3			4				
18.1- 19.0			1	3					1	
19.1- 20.0						1				
MEAN/DEPTH	16.3	14.9	14.7	16.3		15.7	8.4	10.9	16.3	15.2
STD ERR	.39		.49						1.10	
		1.50		.61		.58		1.51		.42
MEAN/TRANS	15.9			15.2			14.3			15.7
STD ERR	.54			.41			.73			.52
MEAN/DATE					15.1					
STD ERR					.30					
RANGE(MIN)	14.0	10.0	10.6	13.4		11.2	8.4	7.7	14.4	14.1
(MAX)	17.9	17.7	18.9	18.3		19.1	8.4	16.1	18.2	15.9
NO.LENG'D	11	5	23	9	0	16	1	5	3	4

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
9.1- 10.0																1				
10.1- 11.0			1												1					
11.1- 12.0																				
12.1- 13.0									1											1
13.1- 14.0				2		1		1							1					
14.1- 15.0						1	1				2				1	1		1	1	2
15.1- 16.0			1			1					4		1		1					1
16.1- 17.0	1					1	1		1		1		2	1		2				1
17.1- 18.0			2		1		2				2		11		2	2			5	
18.1- 19.0			1					1			3		8		3	1			1	
19.1- 20.0													7			2			1	
20.1- 21.0													2							
21.1- 22.0																1				
MEAN/DEPTH	16.1		15.8	13.8	17.1	15.1	16.4	16.0	14.6		16.6		18.3	16.6	16.1	17.2		14.6	17.5	14.7
STD ERR			1.37				.77		1.65				.21		.98				.53	
				.25		.58		2.65			.47					1.04				.58
MEAN/TRANS	16.1			15.5			15.8		14.6		16.6			17.8			16.9		16.4	
STD ERR				.92			.57		1.65		.47			.30			.97		.54	
MEAN/DATE					15.6										17.3					
STD ERR					.45										.24					
RANGE(MIN)	16.1		10.8	13.5	17.1	13.6	14.4	13.4	13.0		14.5		15.7	16.6	10.2	9.7		14.6	14.4	12.9
(MAX)	16.1		18.1	14.0	17.1	16.2	18.0	18.7	16.3		18.9		20.8	16.6	18.8	21.6		14.6	19.8	16.1
NO.LENG'D	1	0	5	2	1	4	4	2	2	0	0	12	31	1	9	10	0	1	8	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
9.1- 10.0						1				
10.1- 11.0			1		1					
11.1- 12.0										
12.1- 13.0									1	1
13.1- 14.0				2	1	1		1		
14.1- 15.0		2			1	2	1	1	1	2
15.1- 16.0		4	2		1	1				1
16.1- 17.0	1	1	2	1		3	1		1	1
17.1- 18.0		2	13		3	2	2		5	
18.1- 19.0		3	9		3	1		1	1	
19.1- 20.0			7			2			1	
20.1- 21.0			2							
21.1- 22.0						1				
MEAN/DEPTH	16.1	16.6	18.0	14.7	16.2	16.6	16.4	15.6	16.9	14.7
STD ERR		.47	.29	.96	.88	.79	.77	1.60	.62	.58
MEAN/TRANS	16.6		17.4			16.4			16.2	
STD ERR	.43		.31			.58			.52	
MEAN/DATE					16.9					
STD ERR					.22					
RANGE(MIN)	16.1	14.5	10.8	13.5	10.2	9.7	14.4	13.4	13.0	12.9
(MAX)	16.1	18.9	20.8	16.6	18.8	21.6	18.0	18.7	19.8	16.1
NO.LENG'D	1	12	36	3	10	14	4	3	10	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
14.1- 15.0											1	1		1						
15.1- 16.0											2		1			1	1			
16.1- 17.0											1		1			1	2			2
17.1- 18.0														1						
18.1- 19.0	1												1		1		2			1
19.1- 20.0											1			1		1	2		1	
20.1- 21.0																				
21.1- 22.0																1				
MEAN/DEPTH	18.2										16.2	14.3	16.9	17.6	18.4	18.3	17.6		19.4	17.0
STD ERR											.82		.87				.60			
														1.42		1.36				.67
MEAN/TRANS	18.2										15.9			17.4			17.9		17.6	
STD ERR											.74			.66			.59		.77	
MEAN/DATE					18.2										17.3					
STD ERR															.36					
RANGE(MIN)	18.2										14.9	14.3	15.4	15.0	18.4	15.7	15.2		19.4	16.2
(MAX)	18.2										19.4	14.3	18.4	19.9	18.4	21.4	19.2		19.4	18.3
NO.LENG'D	1	0	0	0	0	0	0	0	0	0	5	1	3	3	1	4	7	0	1	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
14.1- 15.0	1	1		1						
15.1- 16.0	2		1			1	1			
16.1- 17.0	1		1			1	2			2
17.1- 18.0				1						
18.1- 19.0	1		1		1		2			1
19.1- 20.0	1			1		1	2		1	
20.1- 21.0										
21.1- 22.0						1				
MEAN/DEPTH	16.6	14.3	16.9	17.6	18.4	18.3	17.6		19.4	17.0
STD ERR	.74		.87				.60			
				1.42		1.36				.67
MEAN/TRANS	16.2			17.4			17.9		17.6	
STD ERR	.71			.66			.59		.77	
MEAN/DATE					17.3					
STD ERR					.34					
RANGE(MIN)	14.9	14.3	15.4	15.0	18.4	15.7	15.2		19.4	16.2
(MAX)	19.4	14.3	18.4	19.9	18.4	21.4	19.2		19.4	18.3
NO.LENG'D	6	1	3	3	1	4	7	0	1	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
13.1- 14.0													3			1				
14.1- 15.0													1			1				
15.1- 16.0	1											2	2			1				
16.1- 17.0											1		2							
17.1- 18.0											1		4	1					1	
18.1- 19.0	1								1					2	1				1	
19.1- 20.0											2	1			2				10	
20.1- 21.0									2		3	2	1	1					4	
21.1- 22.0										1	5	1		1					4	
22.1- 23.0									2		2	1		1					1	
23.1- 24.0											3									
MEAN/DEPTH	16.8								21.0	21.1	21.0	19.3	16.1	19.9	18.9	14.8			20.1	
STD ERR	1.35								.85		.51	.99	.50	.68	.33	.52			.25	
MEAN/TRANS	16.8								21.0		20.5		17.5			14.8			20.1	
STD ERR	1.35								.69		.48		.51			.52			.25	
MEAN/DATE				19.9											19.2					
STD ERR				.90											.31					
RANGE(MIN)	15.4								18.3	21.1	16.2	15.7	13.8	18.0	18.3	13.9			17.9	
(MAX)	18.1								22.9	21.1	23.8	22.4	20.2	22.2	19.4	15.7			22.4	
NO.LENG'D	2	0	0	0	0	0	0	0	5	1	17	7	13	6	3	3	0	0	21	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
13.1- 14.0			3			1				
14.1- 15.0			1			1				
15.1- 16.0	1	2	2			1				
16.1- 17.0	1		2							
17.1- 18.0	1		4	1					1	
18.1- 19.0	1			2	1				2	
19.1- 20.0	2	1			2				10	
20.1- 21.0	3	2	1	1					6	
21.1- 22.0	5	1		1					4	1
22.1- 23.0	2	1		1					3	
23.1- 24.0	3									
MEAN/DEPTH	20.6	19.3	16.1	19.9	18.9	14.8			20.3	21.1
STD ERR	.56	.99	.50	.68	.33	.52			.26	
MEAN/TRANS	20.3		17.5			14.8			20.3	
STD ERR	.49		.51			.52			.25	
MEAN/DATE	19.3									
STD ERR	.29									
RANGE(MIN)	15.4	15.7	13.8	18.0	18.3	13.9			17.9	21.1
(MAX)	23.8	22.4	20.2	22.2	19.4	15.7			22.9	21.1
NO.LENG'D	19	7	13	6	3	3	0	0	26	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
15.1- 16.0														1			1			
16.1- 17.0													1	1						
17.1- 18.0						1						1							2	
18.1- 19.0		1												1					1	
19.1- 20.0				1										1						
20.1- 21.0											2	1								
21.1- 22.0											2									
22.1- 23.0																				
23.1- 24.0														1						
24.1- 25.0											1									
MEAN/DEPTH		18.8		19.2		17.7					21.8	19.1	16.5	18.9			15.1		17.8	
STD ERR											.65								.44	
												1.20		1.45						
MEAN/TRANS	18.8		19.2			17.7					21.1			18.5			15.1		17.8	
STD ERR											.72			1.25					.44	
MEAN/DATE					18.6										19.2					
STD ERR					.45										.66					
RANGE(MIN)		18.8		19.2		17.7					20.7	17.9	16.5	15.9			15.1		17.1	
(MAX)		18.8		19.2		17.7					24.3	20.3	16.5	23.9			15.1		18.6	
NO.LENG'D	0	1	0	1	0	1	0	0	0	0	5	2	1	5	0	0	1	0	3	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
15.1- 16.0				1			1			
16.1- 17.0			1	1						
17.1- 18.0		1				1			2	
18.1- 19.0		1		1					1	
19.1- 20.0				2						
20.1- 21.0	2	1								
21.1- 22.0	2									
22.1- 23.0										
23.1- 24.0				1						
24.1- 25.0	1									
MEAN/DEPTH	21.8	19.0	16.5	18.9		17.7	15.1		17.8	
STD ERR	.65	.70		1.19					.44	
MEAN/TRANS	20.8			18.6			16.4		17.8	
STD ERR	.69			1.06			1.30		.44	
MEAN/DATE					19.1					
STD ERR					.57					
RANGE(MIN)	20.7	17.9	16.5	15.9		17.7	15.1		17.1	
(MAX)	24.3	20.3	16.5	23.9		17.7	15.1		18.6	
NO.LENGTH	5	3	1	6	0	1	1	0	3	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
16.1- 17.0													2							
17.1- 18.0																				
18.1- 19.0																				
19.1- 20.0												1		1						
20.1- 21.0							1											1		
21.1- 22.0														1						
22.1- 23.0														2						
23.1- 24.0														2						
24.1- 25.0														1						
25.1- 26.0																				
26.1- 27.0																	1			
27.1- 28.0														1						
28.1- 29.0																				1
MEAN/DEPTH							20.9					19.2	16.8	23.0			27.0	20.9		28.6
STD ERR													.05							
														.83						
MEAN/TRANS							20.9				19.2			21.8			24.0		28.6	
STD ERR														1.07			3.05			
MEAN/DATE				20.9											22.4					
STD ERR															.99					
RANGE(MIN)							20.9					19.2	16.7	19.2			27.0	20.9		28.6
(MAX)							20.9					19.2	16.8	27.4			27.0	20.9		28.6
NO.LENG'D	0	0	0	0	0	0	1	0	0	0	0	1	2	8	0	0	1	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
16.1- 17.0			2							
17.1- 18.0										
18.1- 19.0										
19.1- 20.0		1		1						
20.1- 21.0							1	1		
21.1- 22.0				1						
22.1- 23.0				2						
23.1- 24.0				2						
24.1- 25.0				1						
25.1- 26.0										
26.1- 27.0							1			
27.1- 28.0				1						
28.1- 29.0										1
MEAN/DEPTH		19.2	16.8	23.0			24.0	20.9		28.6
STD ERR			.05				3.05			
				.83						
MEAN/TRANS	19.2			21.8			22.9		28.6	
STD ERR				1.07			2.03			
MEAN/DATE					22.3					
STD ERR					.93					
RANGE(MIN)		19.2	16.7	19.2			20.9	20.9		28.6
(MAX)		19.2	16.8	27.4			27.0	20.9		28.6
NO.LENG'D	0	1	2	8	0	0	2	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/19/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
20.1- 21.0																			1	
21.1- 22.0																			1	
22.1- 23.0																				
23.1- 24.0													1	2						
24.1- 25.0																				
25.1- 26.0														2						1
26.1- 27.0														1			1			
27.1- 28.0																				
28.1- 29.0																				
29.1- 30.0														1						
30.1- 31.0														2						
MEAN/DEPTH													23.9	27.2			26.5		21.3	25.2
STD ERR														1.06					.75	
MEAN/TRANS														26.8			26.5		22.6	
STD ERR														1.00					1.39	
MEAN/DATE															25.8					
STD ERR															.89					
RANGE(MIN)													23.9	23.5			26.5		20.5	25.2
(MAX)													23.9	31.0			26.5		22.0	25.2
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	1	8	0	0	1	0	2	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/19/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
20.1- 21.0									1	
21.1- 22.0									1	
22.1- 23.0										
23.1- 24.0			1	2						
24.1- 25.0										
25.1- 26.0				2						1
26.1- 27.0				1			1			
27.1- 28.0										
28.1- 29.0										
29.1- 30.0				1						
30.1- 31.0				2						
MEAN/DEPTH			23.9	27.2			26.5		21.3	25.2
STD ERR				1.06					.75	
MEAN/TRANS				26.8			26.5		22.6	
STD ERR				1.00					1.39	
MEAN/DATE					25.8					
STD ERR					.89					
RANGE(MIN)			23.9	23.5			26.5		20.5	25.2
(MAX)			23.9	31.0			26.5		22.0	25.2
NO.LENG'D	0	0	1	8	0	0	1	0	2	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
22.1- 23.0											1		1						1	
23.1- 24.0		1									1									
24.1- 25.0																				
25.1- 26.0											2	1								
26.1- 27.0																	1			
27.1- 28.0											1									
28.1- 29.0														1						1
29.1- 30.0											1						1		1	
30.1- 31.0														1						
31.1- 32.0														2						1
32.1- 33.0														1			1			
33.1- 34.0														1						
34.1- 35.0																	1			
MEAN/DEPTH		23.5									25.8	25.6	23.0	31.6			31.0		26.5	30.0
STD ERR											.98						1.81		3.50	
														.79						1.65
MEAN/TRANS	23.5										25.8			30.4			31.0		28.2	
STD ERR											.83			1.40			1.81		1.87	
MEAN/DATE				23.5											28.6					
STD ERR															.80					
RANGE(MIN)		23.5									23.0	25.6	23.0	28.5			26.5		23.0	28.3
(MAX)		23.5									29.5	25.6	23.0	34.0			35.0		30.0	31.6
NO.LENG'D	0	1	0	0	0	0	0	0	0	0	6	1	1	6	0	0	4	0	2	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
22.1- 23.0	1		1						1	
23.1- 24.0	1	1								
24.1- 25.0										
25.1- 26.0	2	1								
26.1- 27.0							1			
27.1- 28.0	1									
28.1- 29.0				1						1
29.1- 30.0	1						1		1	
30.1- 31.0				1						
31.1- 32.0				2						1
32.1- 33.0				1			1			
33.1- 34.0				1						
34.1- 35.0							1			
MEAN/DEPTH	25.8	24.5	23.0	31.6			31.0		26.5	30.0
STD ERR	.98	1.05		.79			1.81		3.50	1.65
MEAN/TRANS	25.5			30.4			31.0		28.2	
STD ERR	.77			1.40			1.81		1.87	
MEAN/DATE					28.4					
STD ERR					.79					
RANGE(MIN)	23.0	23.5	23.0	28.5			26.5		23.0	28.3
(MAX)	29.5	25.6	23.0	34.0			35.0		30.0	31.6
NO.LENG'D	6	2	1	6	0	0	4	0	2	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
24.1- 25.0																	1			
25.1- 26.0																				
26.1- 27.0																				
27.1- 28.0																				
28.1- 29.0																				1
29.1- 30.0																				
30.1- 31.0														1						
31.1- 32.0																				
32.1- 33.0																		1		
MEAN/DEPTH														31.0			24.2	32.8		28.6
STD ERR																				
MEAN/TRANS														31.0			28.5			28.6
STD ERR																	4.30			
MEAN/DATE															29.2					
STD ERR															1.86					
RANGE(MIN)														31.0			24.2	32.8		28.6
(MAX)														31.0			24.2	32.8		28.6
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RCR S	RCR M	RCR B	EAST S	EAST B
24.1- 25.0							1			
25.1- 26.0										
26.1- 27.0										
27.1- 28.0										
28.1- 29.0										1
29.1- 30.0										
30.1- 31.0				1						
31.1- 32.0										
32.1- 33.0								1		
MEAN/DEPTH				31.0			24.2	32.8		28.6
STD ERR										
MEAN/TRANS				31.0			28.5			28.6
STD ERR							4.30			
MEAN/DATE					29.2					
STD ERR					1.86					
RANGE(MIN)				31.0			24.2	32.8		28.6
(MAX)				31.0			24.2	32.8		28.6
NO.LENGTH	0	0	0	1	0	0	1	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
33.1- 34.0														1						
34.1- 35.0																				
35.1- 36.0																				
36.1- 37.0																				
37.1- 38.0																				
38.1- 39.0																	1			
MEAN/DEPTH														33.5			39.0			
STD ERR																				
MEAN/TRANS														33.5			39.0			
STD ERR																				
MEAN/DATE															36.3					
STD ERR															2.75					
RANGE(MIN)														33.5			39.0			
(MAX)														33.5			39.0			
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
33.1- 34.0				1						
34.1- 35.0										
35.1- 36.0										
36.1- 37.0										
37.1- 38.0										
38.1- 39.0							1			
MEAN/DEPTH				33.5			39.0			
STD ERR										
MEAN/TRANS				33.5			39.0			
STD ERR										
MEAN/DATE					36.3					
STD ERR					2.75					
RANGE(MIN)				33.5			39.0			
(MAX)				33.5			39.0			
NO.LENGTH	0	0	0	1	0	0	1	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
40.1- 41.0																	1			
41.1- 42.0																				
42.1- 43.0																				
43.1- 44.0																				
44.1- 45.0																				
45.1- 46.0																				
46.1- 47.0																				1
MEAN/DEPTH																	41.0			46.5
STD ERR																				
MEAN/TRANS																	41.0			46.5
STD ERR																				
MEAN/DATE															43.8					
STD ERR															2.75					
RANGE(MIN)																	41.0			46.5
(MAX)																	41.0			46.5
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
40.1- 41.0							1			
41.1- 42.0										
42.1- 43.0										
43.1- 44.0										
44.1- 45.0										
45.1- 46.0										
46.1- 47.0										1
MEAN/DEPTH							41.0			46.5
STD ERR										
MEAN/TRANS							41.0		46.5	
STD ERR										
MEAN/DATE					43.8					
STD ERR					2.75					
RANGE(MIN)							41.0			46.5
(MAX)							41.0			46.5
NO.LENG'D	0	0	0	0	0	0	1	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 03/20/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
5.1- 6.0																				1
6.1- 7.0	2	4	1	4		2	1	6			3	3	3	5	7		1	3	4	8
7.1- 8.0	5	6	3	9	1	14	3		3		5	4	2	6	8	3	8	2	2	4
MEAN/DEPTH	7.2	7.0	7.1	7.2	7.5	7.2	7.1	6.6	7.2		7.2	7.3	6.9	7.1	7.2	7.4	7.3	7.1	6.9	6.8
STD ERR	.11		.24				.14		.07		.13		.21		.10		.07		.16	
		.13		.11		.06		.12				.22		.10		.15		.19		.12
MEAN/TRAN	7.1			7.2			7.1		7.2		7.2			7.1			7.3		6.8	
STD ERR	.09			.09			.07		.07		.12			.07			.07		.10	
MEAN/DATE					7.1										7.1					
STD ERR					.05										.05					
RANGE(MIN)	6.8	6.3	6.4	6.4	7.5	6.6	6.7	6.1	7.1		6.7	6.4	6.2	6.5	6.6	7.2	6.9	6.7	6.2	5.9
(MAX)	7.6	7.5	7.5	7.8	7.5	7.5	7.3	6.9	7.3		7.7	7.9	7.4	7.8	7.7	7.7	7.6	7.6	7.3	7.5
NO.LENGTHS	7	10	4	13	1	16	4	6	3	0	8	7	5	11	15	3	9	5	6	13

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/20/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
5.1- 6.0										1
6.1- 7.0	5	7	4	9	7	2	2	9	4	8
7.1- 8.0	10	10	5	15	9	17	11	2	5	4
MEAN/DEPTH	7.2	7.1	7.0	7.1	7.2	7.3	7.3	6.8	7.0	6.8
STD ERR	.08		.10		.09		.07		.11	
		.12		.07		.05		.13		.12
MEAN/TRANS	7.2			7.1			7.1		6.9	
STD ERR	.07			.05			.05		.09	
MEAN/DATE					7.1					
STD ERR					.03					
RANGE(MIN)	6.7	6.3	6.2	6.4	6.6	6.6	6.7	6.1	6.2	5.9
(MAX)	7.7	7.9	7.5	7.8	7.7	7.7	7.6	7.6	7.3	7.5
NO.LARVAE	15	17	9	24	16	19	13	11	9	13

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 03/27/79

LENGTH(MM)	DAY										NIGHT									
INTERVAL	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
6.1- 7.0			1		1			1					3	1						
7.1- 8.0			1				1							1						
MEAN/DEPTH			7.1		7.0		7.3	6.9					6.8	7.2						
STD ERR			.40										.09							
														.15						
MEAN/TRANS				7.1			7.1							7.0						
STD ERR				.25			.20							.10						
MEAN/DATE					7.1										7.0					
STD ERR					.14										.10					
RANGE(MIN)			6.7		7.0		7.3	6.9					6.7	7.0						
(MAX)			7.3		7.0		7.3	6.9					7.0	7.3						
NO.LENGTHD	0	0	2	0	1	0	1	1	0	0	0	0	3	2	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/27/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
6.1- 7.0			4	1	1			1		
7.1- 8.0			1	1			1			
MEAN/DEPTH			6.9	7.2	7.0		7.3	6.9		
STD ERR			.15							
				.15						
MEAN/TRANS				7.0			7.1			
STD ERR				.10			.20			
MEAN/DATE					7.0					
STD ERR					.09					
RANGE(MIN)			6.7	7.0	7.0		7.3	6.9		
(MAX)			7.5	7.3	7.0		7.3	6.9		
NO.LEGGED	0	0	5	2	1	0	1	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 11/20/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
5.1- 6.0							2													3
6.1- 7.0	4	4	1	3	2	2	8	6		1		1	7	2	2	5	1	4	4	5
7.1- 8.0	11	8	8	6	5	5	6	2	4		6	4	31	7	2	23	10	6	4	9
8.1- 9.0				1																
MEAN/DEPTH	7.3	7.2	7.2	7.3	7.3	7.4	6.9	6.9	7.5	7.0	7.6	7.2	7.3	7.2	7.2	7.4	7.5	7.1	6.8	6.9
STD ERR	.08		.11		.15		.14		.06		.07		.05		.24		.08		.18	
		.13		.13		.15		.11				.20		.09		.07		.06		.14
MEAN/TRANS	7.3		7.4			7.0			7.4		7.4		7.3			7.3			6.8	
STD ERR	.07		.04			.09			.10		.11		.04			.05			.11	
MEAN/DATE					7.2										7.2					
STD ERR					.05										.04					
RANGE(MIN)	6.7	6.3	6.9	6.6	6.8	6.9	5.9	6.5	7.3	7.0	7.4	6.5	6.7	6.8	6.9	6.4	7.0	6.8	6.2	5.7
(MAX)	7.9	8.3	7.9	8.1	7.9	8.0	7.9	7.3	7.6	7.0	7.8	7.7	8.0	7.6	7.9	7.9	7.9	7.4	7.3	7.6
NO.LENGTHS	15	12	9	10	7	7	16	8	4	1	6	5	38	9	4	28	11	10	8	17

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 6/20/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
5.1- 6.0							2			3
6.1- 7.0	4	5	8	5	4	7	9	10	4	6
7.1- 8.0	17	12	39	13	7	28	16	8	8	9
8.1- 9.0				1						
MEAN/STA	7.4	7.2	7.4	7.2	7.3	7.4	7.1	7.0	7.0	6.9
STD ERR	.07		.04		.12		.10		.15	
		.11		.08		.06		.06		.14
MEAN/TRANS	7.3			7.3			7.2		6.9	
STD ERR	.06			.04			.05		.10	
MEAN/DATE					7.2					
STD ERR					.03					
RANGE(MIN)	6.9	6.3	6.7	6.6	6.8	6.4	5.9	6.5	6.2	5.7
(MAX)	7.9	8.0	8.0	8.1	7.9	8.0	7.9	7.4	7.6	7.6
NO.LENGTD	21	17	47	19	11	35	27	18	12	18

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 6/27/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
6.1- 7.0	3	10	1	2							2	4	1		1	1	1		1	
7.1- 8.0	3	6	5	1	1			3	1	2	4	1	6	2	3		1			
MEAN/DEPTH	7.1	7.0	7.4	6.8	7.2			7.4	7.2	7.3	7.3	6.7	7.4	7.2	7.2	6.5	7.1		6.9	
STD ERR	.05		.12								.13		.09		.19		.50			
		.07		.22				.13		.05		.19		.05						
MEAN/TRAWL	7.0			7.2			7.4		7.2		7.0			7.3			6.9		6.9	
STD ERR	.05			.13			.13		.03		.13			.08			.35			
MEAN/DATE					7.1										7.1					
STD ERR					.05										.08					
RANGE(MIN)	7.0	6.9	7.0	6.5	7.2			7.3	7.2	7.2	6.9	6.2	6.9	7.1	6.7	6.5	6.6		6.9	
(MAX)	7.3	7.4	7.8	7.2	7.2			7.7	7.2	7.3	7.7	7.3	7.7	7.2	7.6	6.5	7.6		6.9	
NO.LENGTHD	6	16	6	3	1	0	0	3	1	2	6	5	7	2	4	1	2	0	1	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1977 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/27/77

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
6.1- 7.0	5	14	2	2	1	1	1		1	
7.1- 8.0	7	7	11	3	4		1	3	1	2
MEAN/DEPTH	7.2	6.9	7.4	6.9	7.2	6.5	7.1	7.4	7.1	7.3
STD ERR	.07	.07	.07	.15	.15		.50	.13	.15	.05
MEAN/TRANS	7.0		7.3				7.2		7.2	
STD ERR	.05		.07				.21		.09	
MEAN/GATE					7.1					
STD ERR					.04					
RANGE(MIN)	6.9	6.2	6.9	6.5	6.7	6.5	6.6	7.3	6.9	7.2
(MAX)	7.7	7.4	7.8	7.2	7.6	6.5	7.6	7.7	7.2	7.3
NO.LENGTHS	12	21	13	5	5	1	2	3	2	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
41.1- 42.0																				1
42.1- 43.0																				
43.1- 44.0																				
44.1- 45.0																				
45.1- 46.0																				
46.1- 47.0																				
47.1- 48.0																				1
48.1- 49.0																				1
MEAN/SEPIA																				46.3
STD ERR																				2.19
MEAN/TRAN.																				46.3
STD ERR																				2.19
MEAN/DATE															46.3					
STD ERR															2.19					
RANGE(MIN)																				42.0
(MAX)																				49.0
NO.LENGTHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
41.1- 42.0										1
42.1- 43.0										
43.1- 44.0										
44.1- 45.0										
45.1- 46.0										
46.1- 47.0										
47.1- 48.0										1
48.1- 49.0										1
MEAN/DEPTH									46.3	
STD ERR									2.19	
MEAN/TRAN									46.3	
STD ERR									2.19	
MEAN/DATE					46.3					
STD ERR					2.19					
RANGE(MIN)									42.0	
(MAX)									49.0	
NO.LENGTHS	0	0	0	0	0	0	0	0	0	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 10/25/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
54.1- 55.0												1								
55.1- 56.0																				
56.1- 57.0																				
57.1- 58.0																		1		
MEAN/DEPTH												55.0						58.0		
STD ERR																				
MEAN/TRANS												55.0					58.0			
STD ERR																				
MEAN/DATE															56.5					
STD ERR															1.50					
RANGE(MIN)												55.0						58.0		
(MAX)												55.0						58.0		
NO.LENGTHS	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/25/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			ROR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
54.1- 55.0		1								
55.1- 56.0										
56.1- 57.0										
57.1- 58.0								1		
MEAN/DEPTH		55.0						58.0		
STD ERR										
MEAN/TRANS	55.0					58.0				
STD ERR										
MEAN/DATE					56.5					
STD ERR					1.50					
RANGE(MIN)		55.0						58.0		
(MAX)		55.0						58.0		
NO.LENGTHD	0	1	0	0	0	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 09/27/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
54.1- 55.0															1					
55.1- 56.0					1															
MEAN/DEPTH				56.0										55.0						
STD ERR																				
MEAN/TRANS			56.0										55.0							
STD ERR																				
MEAN/DATE				56.0										55.0						
STD ERR																				
RANGE(MIN)				56.0										55.0						
(MAX)				56.0										55.0						
NO.LENGTHS	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/29/79

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RCR S	RCR M	RCR B	EAST S	EAST B
	DAY/NIGHT COMBINED									
54.1- 55.0					1					
55.1- 56.0					1					
MEAN/DEPTH					55.5					
STD ERR					.50					
MEAN/TRANS				55.5						
STD ERR				.50						
MEAN/DATE					55.5					
STD ERR					.50					
RANGE(MIN)					55.0					
(MAX)					56.0					
NO.LENGTH	0	0	0	0	2	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/21/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
6.1- 7.0					1															
7.1- 8.0																				
8.1- 9.0																				
9.1- 10.0																				
10.1- 11.0																				
11.1- 12.0																				
12.1- 13.0																				
13.1- 14.0																				
14.1- 15.0																				
15.1- 16.0																				
16.1- 17.0																				
17.1- 18.0																				
18.1- 19.0																				
19.1- 20.0																				
20.1- 21.0																				
21.1- 22.0																				
22.1- 23.0																				
23.1- 24.0																				
24.1- 25.0																				
25.1- 26.0																				
26.1- 27.0																				
27.1- 28.0																				
28.1- 29.0																				
29.1- 30.0																				
30.1- 31.0																				
31.1- 32.0																				
32.1- 33.0																				
33.1- 34.0																				
34.1- 35.0																				
35.1- 36.0																				
36.1- 37.0																				
37.1- 38.0																				
38.1- 39.0																				
39.1- 40.0																				
40.1- 41.0																				
41.1- 42.0																				
42.1- 43.0																				
43.1- 44.0																				
44.1- 45.0																				
45.1- 46.0																				
46.1- 47.0																				

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/21/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
47.1- 48.0																				
48.1- 49.0																				
49.1- 50.0																				
50.1- 51.0																				
51.1- 52.0																				
52.1- 53.0																				
53.1- 54.0																				
54.1- 55.0																				
55.1- 56.0																				
56.1- 57.0											1									
MEAN/DEPTH				6.8							57.0									
STD ERR																				
MEAN/TRANS			6.8								57.0									
STD ERR																				
MEAN/DATE				6.8										57.0						
STD ERR																				
RANGE(MIN)				6.8							57.0									
(MAX)				6.8							57.0									
NO.LEAG'S	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/21/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
6.1- 7.0					1					
7.1- 8.0										
8.1- 9.0										
9.1- 10.0										
10.1- 11.0										
11.1- 12.0										
12.1- 13.0										
13.1- 14.0										
14.1- 15.0										
15.1- 16.0										
16.1- 17.0										
17.1- 18.0										
18.1- 19.0										
19.1- 20.0										
20.1- 21.0										
21.1- 22.0										
22.1- 23.0										
23.1- 24.0										
24.1- 25.0										
25.1- 26.0										
26.1- 27.0										
27.1- 28.0										
28.1- 29.0										
29.1- 30.0										
30.1- 31.0										
31.1- 32.0										
32.1- 33.0										
33.1- 34.0										
34.1- 35.0										
35.1- 36.0										
36.1- 37.0										
37.1- 38.0										
39.1- 40.0										
40.1- 41.0										
41.1- 42.0										
42.1- 43.0										
43.1- 44.0										
44.1- 45.0										
45.1- 46.0										
46.1- 47.0										

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM)	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
47.1- 48.0										
48.1- 49.0										
49.1- 50.0										
50.1- 51.0										
51.1- 52.0										
52.1- 53.0										
53.1- 54.0										
54.1- 55.0										
55.1- 56.0										
56.1- 57.0		1								
MEAN/DATE	57.0				6.8					
STD ERR										
MEAN/TRANS	57.0			6.8						
STD ERR										
MEAN/DATE					31.4					
STD ERR					25.10					
RANGE(MIN)	57.0				6.8					
(MAX)	57.0				6.8					
NO.LENGTHS	0	1	1	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
53.1- 54.0												1								
MEAN/DEPTH												54.0								
STD ERR																				
MEAN/TRANS												54.0								
STD ERR																				
MEAN/DATE															54.0					
STD ERR																				
RANGE(MIN)												54.0								
(MAX)												54.0								
NO.LENGTHD	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
53.1- 54.0		1								
MEAN/DEPTH		54.0								
STD ERR										
MEAN/TRANS	54.0									
STD ERR										
MEAN/DATE					54.0					
STD ERR										
RANGE(MIN)		54.0								
(MAX)		54.0								
NO.LENGTHD	0	1	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
71.1- 72.0		1																		
MEAN/DEPTH		72.0																		
STD ERR																				
MEAN/TRANS	72.0																			
STD ERR																				
MEAN/DATE				72.0																
STD ERR																				
RANGE(MIN)		72.0																		
(MAX)		72.0																		
NO.LENGTHD	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/03/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
71.1- 72.0		1								
MEAN/DEPTH		72.0								
STD ERR										
MEAN/TRANS	72.0									
STD ERR										
MEAN/DATE					72.0					
STD ERR										
RANGE(MIN)		72.0								
(MAX)		72.0								
NO.LENGTHS	0	1	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
68.1- 69.0					1															
69.1- 70.0																				
70.1- 71.0																				
71.1- 72.0																				
72.1- 73.0																				
73.1- 74.0																				
74.1- 75.0																				
75.1- 76.0																				
76.1- 77.0																				
77.1- 78.0																				
78.1- 79.0																				
79.1- 80.0					1															
MEAN/DEPTH					74.5															
STD ERR					5.50															
MEAN/TRANS				74.5																
STD ERR				5.50																
MEAN/DATE					74.5															
STD ERR					5.50															
RANGE(MIN)					69.0															
(MAX)					80.0															
NO.LENGTH	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
68.1- 69.0					1					
69.1- 70.0										
70.1- 71.0										
71.1- 72.0										
72.1- 73.0										
73.1- 74.0										
74.1- 75.0										
75.1- 76.0										
76.1- 77.0										
77.1- 78.0										
78.1- 79.0										
79.1- 80.0					1					
MEAN/CCPTH					74.5					
STD ERR					5.50					
MEAN/TRANS				74.5						
STD ERR				5.50						
MEAN/DATE					74.5					
STD ERR					5.50					
RANGE (MIN)					69.0					
(MAX)					80.0					
NO.LENGTH	0	0	0	0	2	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			ROR			EAST		WEST		CHANNEL			ROR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
71.1- 72.0					1															
72.1- 73.0																				
73.1- 74.0																				
74.1- 75.0								1												
75.1- 76.0																				
76.1- 77.0																				
77.1- 78.0																				
78.1- 79.0																				
79.1- 80.0																				
80.1- 81.0																				
81.1- 82.0																				
82.1- 83.0																				
83.1- 84.0																				
84.1- 85.0					1															
MEAN/DEPTH					78.5			75.0												
STD ERR					6.50															
MEAN/TRANS				78.5			75.0													
STD ERR				6.50																
MEAN/DATE					77.3															
STD ERR					3.93															
RANGE(MIN)					72.0			75.0												
(MAX)					85.0			75.0												
NO.LENGTH'D	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
71.1- 72.0					1					
72.1- 73.0										
73.1- 74.0										
74.1- 75.0								1		
75.1- 76.0										
76.1- 77.0										
77.1- 78.0										
78.1- 79.0										
79.1- 80.0										
80.1- 81.0										
81.1- 82.0										
82.1- 83.0										
83.1- 84.0										
84.1- 85.0					1					
MEAN/DEPTH				78.5			75.0			
STD ERR				6.50						
MEAN/TRANS			78.5			75.0				
STD ERR			6.50							
MEAN/DATE				77.5						
STD ERR				3.93						
RANGE(MIN)				72.0			75.0			
(MAX)				85.0			75.0			
NO.LENGTHD	0	0	0	0	2	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
74.1- 75.0															1					
MEAN/DEPTH															75.0					
STD ERR																				
MEAN/TRANS														75.0						
STD ERR																				
MEAN/DATE															75.0					
STD ERR																				
RANGE(MIN)															75.0					
(MAX)															75.0					
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RCR			EAST	
	S	B	S	M	B	S	M	B	S	B
74.1- 75.0					1					
MEAN/DEPTH					75.0					
STD ERR										
MEAN/TRANS				75.0						
STD ERR										
MEAN/DATE					75.0					
STD ERR										
RANGE(MIN)					75.0					
(MAX)					75.0					
NO.LENG'D	0	0	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/12/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
80.1- 81.0																				1
MEAN/DEPTH																				81.0
STD ERR																				
MEAN/TRANS																			81.0	
STD ERR																				
MEAN/DATE															81.0					
STD ERR																				
RANGE(MIN)																				81.0
(MAX)																				81.0
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
80.1- 81.0										1
MEAN/DEPTH										81.0
STD ERR										
MEAN/TRANS										81.0
STD ERR										
MEAN/DATE					81.0					
STD ERR										
RANGE(MIN)										81.0
(MAX)										81.0
NO.LENG'D	0	0	0	0	0	0	0	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
73.1- 74.0															1					
74.1- 75.0																				
75.1- 76.0																				
76.1- 77.0																				
77.1- 78.0																				
78.1- 79.0																				
79.1- 80.0																				
80.1- 81.0																				
81.1- 82.0																		1		
82.1- 83.0																				
83.1- 84.0																				
84.1- 85.0																				
85.1- 86.0																				
86.1- 87.0																				
87.1- 88.0																				
88.1- 89.0																				
89.1- 90.0															1					
MEAN/DEPTH															82.0			82.0		
STD ERR															8.00					
MEAN/TRANS														82.0			82.0			
STD ERR														8.00						
MEAN/DATE															82.0					
STD ERR															4.62					
RANGE(MIN)															74.0			82.0		
(MAX)															90.0			82.0		
NO.LENGTHD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM)	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
73.1- 74.0					1					
74.1- 75.0										
75.1- 76.0										
76.1- 77.0										
77.1- 78.0										
78.1- 79.0										
79.1- 80.0										
80.1- 81.0										
81.1- 82.0								1		
82.1- 83.0										
83.1- 84.0										
84.1- 85.0										
85.1- 86.0										
86.1- 87.0										
87.1- 88.0										
88.1- 89.0										
89.1- 90.0					1					
MEAN/DEPTH					82.0			82.0		
STD ERR					8.00					
MEAN/TRANS				82.0			82.0			
STD ERR				8.00						
MEAN/DATE					82.0					
STD ERR					4.62					
RANGE(MIN)					74.0			82.0		
(MAX)					90.0			82.0		
NO.LENGTH	0	0	0	0	2	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 7/24/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
77.1- 78.0					1															
79.1- 80.0																		1		
MEAN/DEPTH					78.0													79.0		
STD ERR																				
MEAN/TRANS				78.0													79.0			
STD ERR																				
MEAN/DATE					78.0										79.0					
STD ERR																				
RANGE(MIN)					78.0													79.0		
(MAX)					78.0													79.0		
NO.LENGTH	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
77.1- 78.0					1					
78.1- 79.0								1		
MEAN/DEPTH					78.0			79.0		
STD ERR										
MEAN/TRANS				78.0			79.0			
STD ERR										
MEAN/DATE					78.5					
STD ERR					.50					
RANGE(MIN)					78.0			79.0		
(MAX)					78.0			79.0		
NO.LENGTH	0	0	0	0	1	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 03/20/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
5.1- 6.0							2													4
6.1- 7.0	6	8	2	7	2	4	9	12		1	3	4	10	7	9	5	2	7	8	13
7.1- 8.0	16	14	11	15	6	19	9	2	7		11	8	33	13	10	26	18	8	6	13
8.1- 9.0				1																
MEAN/DEPTH	7.3	7.1	7.4	7.2	7.3	7.3	7.0	6.8	7.3	7.0	7.4	7.2	7.3	7.1	7.2	7.4	7.4	7.1	6.8	6.8
STD ERR	.07	.09	.12	.08	.13	.06	.12	.09	.07		.09	.15	.05	.07	.09	.06	.05	.07	.12	.10
MEAN/TRANS	7.2		7.3			7.0			7.3		7.3		7.2			7.3			6.8	
STD ERR	.06		.06			.06			.07		.08		.04			.04			.08	
MEAN/DATE	7.2										7.2									
STD ERR	.03										.03									
RANGE(MIN)	6.8	6.3	6.4	6.4	6.8	6.6	5.9	6.1	7.1	7.0	6.7	6.4	6.2	6.5	6.6	6.4	6.9	6.7	6.2	5.7
(MAX)	7.9	8.0	7.9	8.1	7.9	8.0	7.9	7.3	7.6	7.0	7.8	7.9	8.0	7.8	7.9	7.9	7.9	7.6	7.3	7.6
NO.LENG'D	22	22	13	23	8	23	20	14	7	1	14	12	43	20	19	31	20	15	14	30

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 03/20/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
5.1- 6.0							2			4
6.1- 7.0	9	12	12	14	11	9	11	19	8	14
7.1- 8.0	27	22	44	28	16	45	27	10	13	13
8.1- 9.0				1						
MEAN/DEPTH	7.3	7.2	7.3	7.2	7.2	7.3	7.2	6.9	7.0	6.8
STD ERR	.05	.08	.05	.05	.07	.04	.07	.06	.10	.09
MEAN/TRANS	7.2			7.2			7.2		6.9	
STD ERR	.05			.03			.04		.07	
MEAN/DATE					7.2					
STD ERR					.02					
RANGE(MIN)	6.7	6.3	6.2	6.4	6.6	6.4	5.9	6.1	6.2	5.7
(MAX)	7.9	8.0	8.0	8.1	7.9	8.0	7.9	7.6	7.6	7.6
NO.LENG'D	36	34	56	43	27	54	40	29	21	31

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 03/27/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
6.1- 7.0	3	10	2	2	1			1			2	4	4	1	1	1	1		1	
7.1- 8.0	3	6	6	1	1		1	3	1	2	4	1	6	3	3		1			
MEAN/DEPTH	7.1	7.0	7.3	6.8	7.1		7.3	7.3	7.2	7.3	7.3	6.7	7.2	7.1	7.2	6.5	7.1		6.9	
STD ERR	.05	.07	.13	.22	.10			.16		.05	.13	.19	.11	.06	.19		.50			
MEAN/TRANS	7.0		7.2				7.3		7.2		7.0		7.2				6.9		6.9	
STD ERR	.05		.11				.13		.03		.13		.07				.35			
MEAN/DATE					7.1										7.1					
STD ERR					.05										.07					
RANGE(MIN)	7.0	6.5	6.7	6.5	7.0		7.3	6.9	7.2	7.2	6.9	6.2	6.7	7.0	6.7	6.5	6.6		6.9	
(MAX)	7.3	7.4	7.8	7.2	7.2		7.3	7.7	7.2	7.3	7.7	7.3	7.7	7.3	7.6	6.5	7.6		6.9	
NO.LENG'D	6	16	8	3	2	0	1	4	1	2	6	5	10	4	4	1	2	0	1	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 03/27/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
6.1- 7.0	5	14	6	3	2	1	1	1	1	
7.1- 8.0	7	7	12	4	4		2	3	1	2
MEAN/DEPTH	7.2	6.9	7.3	7.0	7.2	6.5	7.2	7.3	7.1	7.3
STD ERR	.07	.07	.08	.12	.13		.30	.16	.15	.05
MEAN/TRANS	7.0		7.2				7.2		7.2	
STD ERR	.05		.06				.16		.09	
MEAN/DATE					7.1					
STD ERR					.04					
RANGE(MIN)	6.9	6.2	6.7	6.5	6.7	6.5	6.6	6.9	6.9	7.2
(MAX)	7.7	7.4	7.8	7.3	7.6	6.5	7.6	7.7	7.2	7.3
NO.LENG'D	12	21	18	7	6	1	3	4	2	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
41.1- 42.0																				1
42.1- 43.0																				
43.1- 44.0																				
44.1- 45.0																				
45.1- 46.0																				
46.1- 47.0																				1
47.1- 48.0																				1
48.1- 49.0																				
MEAN/DEPTH																				46.3
STD ERR																				2.19
MEAN/TRANS																			46.3	
STD ERR																			2.19	
MEAN/DATE															46.3					
STD ERR															2.19					
RANGE(MIN)																				42.0
(MAX)																				49.0
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
41.1- 42.0										1
42.1- 43.0										
43.1- 44.0										
44.1- 45.0										
45.1- 46.0										
46.1- 47.0										
47.1- 48.0										1
48.1- 49.0										1
MEAN/DEPTH										46.3
STD ERR										2.19
MEAN/TRANS									46.3	
STD ERR									2.19	
MEAN/DATE					46.3					
STD ERR					2.19					
RANGE(MIN)										42.0
(MAX)										49.0
NO.LENG'D	0	0	0	0	0	0	0	0	0	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
54.1- 55.0												1								
55.1- 56.0																				
56.1- 57.0																				
57.1- 58.0																		1		
MEAN/DEPTH												55.0						58.0		
STD ERR																				
MEAN/TRANS												55.0					58.0			
STD ERR																				
MEAN/DATE															56.5					
STD ERR															1.50					
RANGE(MIN)												55.0						58.0		
(MAX)												55.0						58.0		
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
54.1- 55.0		1								
55.1- 56.0										
56.1- 57.0										
57.1- 58.0								1		
MEAN/DEPTH		55.0						58.0		
STD ERR										
MEAN/TRANS	55.0						58.0			
STD ERR										
MEAN/DATE					56.5					
STD ERR					1.50					
RANGE(MIN)		55.0						58.0		
(MAX)		55.0						58.0		
NO.LENG'D	0	1	0	0	0	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
54.1- 55.0															1					
55.1- 56.0					1															
MEAN/DEPTH					56.0										55.0					
STD ERR																				
MEAN/TRANS				56.0										55.0						
STD ERR																				
MEAN/DATE					56.0										55.0					
STD ERR																				
RANGE(MIN)					56.0										55.0					
(MAX)					56.0										55.0					
NO.LENG'D	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
54.1- 55.0					1					
55.1- 56.0					1					
MEAN/DEPTH					55.5					
STD ERR					.50					
MEAN/TRANS				55.5						
STD ERR				.50						
MEAN/DATE					55.5					
STD ERR					.50					
RANGE(MIN)					55.0					
(MAX)					56.0					
NO.LENG'D	0	0	0	0	2	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
6.1- 7.0					1															
7.1- 8.0																				
8.1- 9.0																				
9.1- 10.0																				
10.1- 11.0																				
11.1- 12.0																				
12.1- 13.0																				
13.1- 14.0																				
14.1- 15.0																				
15.1- 16.0																				
16.1- 17.0																				
17.1- 18.0																				
18.1- 19.0																				
19.1- 20.0																				
20.1- 21.0																				
21.1- 22.0																				
22.1- 23.0																				
23.1- 24.0																				
24.1- 25.0																				
25.1- 26.0																				
26.1- 27.0																				
27.1- 28.0																				
28.1- 29.0																				
29.1- 30.0																				
30.1- 31.0																				
31.1- 32.0																				
32.1- 33.0																				
33.1- 34.0																				
34.1- 35.0																				
35.1- 36.0																				
36.1- 37.0																				
37.1- 38.0																				
38.1- 39.0																				
39.1- 40.0																				
40.1- 41.0																				
41.1- 42.0																				
42.1- 43.0																				
43.1- 44.0																				
44.1- 45.0																				
45.1- 46.0																				
46.1- 47.0																				

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY										NIGHT									
	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
47.1- 48.0																				
48.1- 49.0																				
49.1- 50.0																				
50.1- 51.0																				
51.1- 52.0																				
52.1- 53.0																				
53.1- 54.0																				
54.1- 55.0																				
55.1- 56.0																				
56.1- 57.0												1								
MEAN/DEPTH					6.8							57.0								
STD ERR																				
MEAN/TRANS				6.8								57.0								
STD ERR																				
MEAN/DATE					6.8															
STD ERR																				
RANGE(MIN)					6.8							57.0								
(MAX)					6.8							57.0								
NO.LENG'D	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
6.1- 7.0					1					
7.1- 8.0										
8.1- 9.0										
9.1- 10.0										
10.1- 11.0										
11.1- 12.0										
12.1- 13.0										
13.1- 14.0										
14.1- 15.0										
15.1- 16.0										
16.1- 17.0										
17.1- 18.0										
18.1- 19.0										
19.1- 20.0										
20.1- 21.0										
21.1- 22.0										
22.1- 23.0										
23.1- 24.0										
24.1- 25.0										
25.1- 26.0										
26.1- 27.0										
27.1- 28.0										
28.1- 29.0										
29.1- 30.0										
30.1- 31.0										
31.1- 32.0										
32.1- 33.0										
33.1- 34.0										
34.1- 35.0										
35.1- 36.0										
36.1- 37.0										
37.1- 38.0										
38.1- 39.0										
39.1- 40.0										
40.1- 41.0										
41.1- 42.0										
42.1- 43.0										
43.1- 44.0										
44.1- 45.0										
45.1- 46.0										
46.1- 47.0										

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
47.1- 48.0										
48.1- 49.0										
49.1- 50.0										
50.1- 51.0										
51.1- 52.0										
52.1- 53.0										
53.1- 54.0										
54.1- 55.0										
55.1- 56.0										
56.1- 57.0		1								
MEAN/DEPTH		57.0			6.8					
STD ERR										
MEAN/TRANS	57.0			6.8						
STD ERR										
MEAN/DATE					31.9					
STD ERR					25.10					
RANGE(MIN)		57.0			6.8					
(MAX)		57.0			6.8					
NO.LENG'D	0	1	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
53.1- 54.0												1								
MEAN/DEPTH												54.0								
STD ERR																				
MEAN/TRANS												54.0								
STD ERR																				
MEAN/DATE																				
STD ERR																				
RANGE(MIN)												54.0								
(MAX)												54.0								
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
53.1- 54.0		1								
MEAN/DEPTH		54.0								
STD ERR										
MEAN/TRANS	54.0									
STD ERR										
MEAN/DATE					54.0					
STD ERR										
RANGE(MIN)		54.0								
(MAX)		54.0								
NO.LENG'D	0	1	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/18/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
71.1- 72.0		1																		
MEAN/DEPTH		72.0																		
STD ERR																				
MEAN/TRANS	72.0																			
STD ERR																				
MEAN/DATE				72.0																
STD ERR																				
RANGE(MIN)		72.0																		
(MAX)		72.0																		
NO.LENG'D	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
71.1- 72.0		1								
MEAN/DEPTH		72.0								
STD ERR										
MEAN/TRANS	72.0									
STD ERR										
MEAN/DATE					72.0					
STD ERR										
RANGE(MIN)		72.0								
(MAX)		72.0								
NO.LENG'D	0	1	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
68.1- 69.0					1															
69.1- 70.0																				
70.1- 71.0																				
71.1- 72.0																				
72.1- 73.0																				
73.1- 74.0																				
74.1- 75.0																				
75.1- 76.0																				
76.1- 77.0																				
77.1- 78.0																				
78.1- 79.0																				
79.1- 80.0					1															
MEAN/DEPTH					74.5															
STD ERR					5.50															
MEAN/TRANS				74.5																
STD ERR				5.50																
MEAN/DATE					74.5															
STD ERR					5.50															
RANGE(MIN)					69.0															
(MAX)					80.0															
NO.LENG'D	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
68.1- 69.0					1					
69.1- 70.0										
70.1- 71.0										
71.1- 72.0										
72.1- 73.0										
73.1- 74.0										
74.1- 75.0										
75.1- 76.0										
76.1- 77.0										
77.1- 78.0										
78.1- 79.0										
79.1- 80.0					1					
MEAN/DEPTH					74.5					
STD ERR					5.50					
MEAN/TRANS				74.5						
STD ERR				5.50						
MEAN/DATE					74.5					
STD ERR					5.50					
RANGE(MIN)					69.0					
(MAX)					80.0					
NO.LENG'D	0	0	0	0	2	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/ 2/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
71.1- 72.0					1															
72.1- 73.0																				
73.1- 74.0																				
74.1- 75.0								1												
75.1- 76.0																				
76.1- 77.0																				
77.1- 78.0																				
78.1- 79.0																				
79.1- 80.0																				
80.1- 81.0																				
81.1- 82.0																				
82.1- 83.0																				
83.1- 84.0																				
84.1- 85.0					1															
MEAN/DEPTH				78.5			75.0													
STD ERR				6.50																
MEAN/TRANS			78.5			75.0														
STD ERR			6.50																	
MEAN/DATE				77.3																
STD ERR				3.93																
RANGE(MIN)				72.0			75.0													
(MAX)				85.0			75.0													
NO.LENG'D	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
71.1- 72.0					1					
72.1- 73.0										
73.1- 74.0										
74.1- 75.0								1		
75.1- 76.0										
76.1- 77.0										
77.1- 78.0										
78.1- 79.0										
79.1- 80.0										
80.1- 81.0										
81.1- 82.0										
82.1- 83.0										
83.1- 84.0										
84.1- 85.0					1					
MEAN/DEPTH				78.5				75.0		
STD ERR				6.50						
MEAN/TRANS			78.5				75.0			
STD ERR			6.50							
MEAN/DATE				77.3						
STD ERR				3.93						
RANGE(MIN)				72.0				75.0		
(MAX)				85.0				75.0		
NO.LENG'D	0	0	0	0	2	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
74.1- 75.0															1					
MEAN/DEPTH															75.0					
STD ERR																				
MEAN/TRANS														75.0						
STD ERR																				
MEAN/DATE															75.0					
STD ERR																				
RANGE(MIN)															75.0					
(MAX)															75.0					
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
74.1- 75.0					1					
MEAN/DEPTH					75.0					
STD ERR										
MEAN/TRANS				75.0						
STD ERR										
MEAN/DATE					75.0					
STD ERR										
RANGE(MIN)					75.0					
(MAX)					75.0					
NO.LENG'D	0	0	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
80.1- 81.0																				1
MEAN/DEPTH																				81.0
STD ERR																				
MEAN/TRANS																				81.0
STD ERR																				
MEAN/DATE															81.0					
STD ERR																				
RANGE(MIN)																				81.0
(MAX)																				81.0
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
80.1- 81.0										1
MEAN/DEPTH										81.0
STD ERR										
MEAN/TRANS									81.0	
STD ERR										
MEAN/DATE					81.0					
STD ERR										
RANGE(MIN)										81.0
(MAX)										81.0
NO.LENG'D	0	0	0	0	0	0	0	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
73.1- 74.0															1					
74.1- 75.0																				
75.1- 76.0																				
76.1- 77.0																				
77.1- 78.0																				
78.1- 79.0																				
79.1- 80.0																				
80.1- 81.0																				
81.1- 82.0																		1		
82.1- 83.0																				
83.1- 84.0																				
84.1- 85.0																				
85.1- 86.0																				
86.1- 87.0																				
87.1- 88.0																				
88.1- 89.0																				
89.1- 90.0															1					
MEAN/DEPTH															82.0			82.0		
STD ERR															8.00					
MEAN/TRANS														82.0			82.0			
STD ERR														8.00						
MEAN/DATE															82.0					
STD ERR															4.62					
RANGE(MIN)															74.0			82.0		
(MAX)															90.0			82.0		
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
73.1- 74.0					1					
74.1- 75.0										
75.1- 76.0										
76.1- 77.0										
77.1- 78.0										
78.1- 79.0										
79.1- 80.0										
80.1- 81.0										
81.1- 82.0								1		
82.1- 83.0										
83.1- 84.0										
84.1- 85.0										
85.1- 86.0										
86.1- 87.0										
87.1- 88.0										
88.1- 89.0										
89.1- 90.0					1					
MEAN/DEPTH				82.0				82.0		
STD ERR				8.00						
MEAN/TRANS			82.0				82.0			
STD ERR			8.00							
MEAN/DATE				82.0						
STD ERR				4.62						
RANGE(MIN)				74.0				82.0		
(MAX)				90.0				82.0		
NO.LENG'D	0	0	0	0	2	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
77.1- 78.0					1															
78.1- 79.0																		1		
MEAN/DEPTH					78.0													79.0		
STD ERR																				
MEAN/TRANS				78.0													79.0			
STD ERR																				
MEAN/DATE					78.0										79.0					
STD ERR																				
RANGE(MIN)					78.0													79.0		
(MAX)					78.0													79.0		
NO.LENG'D	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
77.1- 78.0					1					
78.1- 79.0								1		
MEAN/DEPTH					78.0			79.0		
STD ERR										
MEAN/TRANS				78.0			79.0			
STD ERR										
MEAN/DATE					78.5					
STD ERR					.50					
RANGE(MIN)					78.0			79.0		
(MAX)					78.0			79.0		
NO.LENG'D	0	0	0	0	1	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/09/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
6.1- 7.0																1				
MEAN/DEPTH																6.4				
STD ERR																				
MEAN/TRANS																	6.4			
STD ERR																				
MEAN/DATE															6.4					
STD ERR																				
RANGE(MIN)																6.4				
(MAX)																6.4				
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/08/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
6.1- 7.0						1				
MEAN/DEPTH						6.4				
STD ERR										
MEAN/TRANS							6.4			
STD ERR										
MEAN/DATE					6.4					
STD ERR										
RANGE(MIN)						6.4				
(MAX)						6.4				
NO.LENG'D	0	0	0	0	0	1	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
3.1- 4.0		5						4				6								
4.1- 5.0	2	7		2	14			7			1		5			2	2	4		
5.1- 6.0		4		8	22	1	2	4	2		2	1	27			43	3	8		
6.1- 7.0			1	1	2								4		1	11				
MEAN/DEPTH	4.6	4.5	6.8	5.6	5.2	5.5	5.5	4.6	5.4		5.2	3.9	5.6		6.4	5.7	5.3	5.2		
STD ERR	.05				.10		.15		.30		.48		.07				.31			
		.13		.12				.17				.23				.06		.17		
MEAN/TRANS	4.5			5.3			4.8		5.4		4.3			5.6			5.6			
STD ERR	.13			.09			.16		.30		.28			.07			.06			
MEAN/DATE					5.0										5.5					
STD ERR					.08										.06					
RANGE(MIN)	4.5	3.9	6.8	4.8	4.1	5.5	5.3	3.5	5.1		4.2	3.4	4.5		6.4	4.4	4.5	4.2		
(MAX)	4.6	5.9	6.8	6.1	6.3	5.5	5.6	5.7	5.7		5.7	5.2	6.7		6.4	6.7	6.0	6.0		
NO.LENGTH	2	16	1	11	38	1	2	15	2	0	3	7	36	0	1	56	5	12	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0		11						4		
4.1- 5.0	3	7	5	2	14	2	2	11		
5.1- 6.0	2	5	27	8	22	44	5	12	2	
6.1- 7.0			5	1	3	11				
MEAN/DEPTH	4.9	4.3	5.6	5.6	5.2	5.7	5.3	4.9	5.4	
STD ERR	.31		.08		.10		.22		.30	
		.13		.12		.05		.13		
MEAN/TRANS	4.4			5.4			5.4		5.4	
STD ERR	.13			.06			.07		.30	
MEAN/DATE					5.3					
STD ERR					.05					
RANGE(MIN)	4.2	3.4	4.5	4.8	4.1	4.4	4.5	3.5	5.1	
(MAX)	5.7	5.9	6.8	6.1	6.4	6.7	6.0	6.9	5.7	
NO.LENGTHS	5	23	37	11	39	57	7	27	2	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

	DAY										NIGHT									
LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
3.1- 4.0																			3	
4.1- 5.0	2	6			1			3	1		1	2	3				3	1	5	3
5.1- 6.0		17		2	8		1	23			1	2	3	4	3	7	11	5	6	20
6.1- 7.0	3	33		5	18			7			10	5	8	7	5	26	7	12	3	2
7.1- 8.0		1		1										1		1		1		
8.1- 9.0					1															
MEAN/DEPTH	5.8	6.1		6.4	6.2		5.1	5.7	5.0		6.3	5.8	6.0	6.4	6.2	6.5	5.8	6.3	5.1	5.6
STD ERR	.35				.11						.16		.24		.14		.15		.24	
		.09		.20				.09				.23		.14		.08		.13		.08
MEAN/TRANS	6.1			6.2			5.7		5.0		6.1			6.2			6.2		5.4	
STD ERR	.09			.10			.09				.14			.12			.07		.11	
MEAN/DATE					6.0										6.0					
STD ERR					.06										.06					
RANGE(MIN)	4.9	4.1		5.5	5.0		5.1	4.1	5.0		5.0	4.5	4.1	5.8	5.7	5.1	4.2	4.8	3.2	4.8
(MAX)	6.6	7.1		7.1	8.2		5.1	6.8	5.0		7.0	6.6	7.0	7.2	6.9	7.1	7.0	7.1	6.2	6.5
NO.LENGTHD	5	57	0	8	28	0	1	33	1	0	12	9	14	12	8	34	21	19	17	25

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0									3	
4.1- 5.0	3	8	3		1		3	4	6	3
5.1- 6.0	1	19	3	6	11	7	12	28	6	20
6.1- 7.0	13	38	8	12	23	26	7	19	3	2
7.1- 8.0		1		2		1		1		
8.1- 9.0					1					
MEAN/DEPTH	6.1	6.1	6.0	6.4	6.2	6.5	5.8	5.9	5.1	5.6
STD ERR	.15		.24		.09		.14		.22	
		.06		.11		.08		.08		.08
MEAN/TRANS	6.1			6.2			6.1		5.4	
STD ERR	.07			.08			.06		.11	
MEAN/DATE					6.0					
STD ERR					.04					
RANGE(MIN)	4.9	4.1	4.1	5.5	5.0	5.1	4.2	4.1	3.2	4.8
(MAX)	7.0	7.1	7.0	7.2	8.2	7.1	7.0	7.1	6.2	6.5
NO.LENG'D	17	66	14	20	36	34	22	52	18	25

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
2.1- 3.0																				1
3.1- 4.0	2	1		2			5			1	1				1			2		
4.1- 5.0	10	5		9		2	18	1			5	1	1		6		4	4		
5.1- 6.0	16	10	2	14	17		21	29			24	2	21		36	5	13	43	1	
6.1- 7.0	6	3		6	43		2	25			13	10	23		16	1	2	6		
7.1- 8.0												2				1				
MEAN/DEPTH	5.4	5.3	5.8	5.3	6.2	4.4	5.0	6.0		4.0	5.8	6.4	6.0		5.7	6.0	5.5	5.6	5.4	3.0
STD ERR	.14		.25		.04		.10				.09		.07		.09		.10			
		.13		.15		.10		.06				.19				.32		.08		
MEAN/TRANS	5.4			5.9			5.5		4.0		6.0			5.9			5.6		4.2	
STD ERR	.10			.07			.08				.09			.06			.06		1.20	
MEAN/DATE					5.6										5.8					
STD ERR					.05										.04					
RANGE(MIN)	3.5	4.0	5.5	3.5	5.3	4.3	3.5	5.0		4.0	3.9	4.1	4.9		3.1	5.1	4.9	3.6	5.4	3.0
(MAX)	6.5	6.3	6.0	6.9	6.8	4.5	6.7	6.9		4.0	6.9	7.2	7.0		7.0	7.7	6.5	6.8	5.4	3.0
NO.LENGTH	34	19	2	31	60	2	46	55	0	1	43	15	45	0	59	7	19	55	1	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/23/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
2.1- 3.0										1
3.1- 4.0	3	1		2	1		5	2		1
4.1- 5.0	15	6	1	9	6	2	22	5		
5.1- 6.0	40	12	23	14	53	5	34	72	1	
6.1- 7.0	19	13	23	6	59	1	4	31		
7.1- 8.0		2				1				
MEAN/DEPTH	5.6	5.8	6.0	5.3	5.9	5.6	5.1	5.8	5.4	3.5
STD ERR	.08		.07		.05		.08			
		.15		.15		.34		.05		.50
MEAN/TRANS	5.7			5.9			5.5		4.1	
STD ERR	.07			.05			.05		.70	
MEAN/DATE					5.7					
STD ERR					.03					
RANGE(MIN)	3.5	4.0	4.0	3.5	3.1	4.3	3.5	3.6	5.4	3.0
(MAX)	6.9	7.2	7.0	6.9	7.0	7.7	6.7	6.9	5.4	4.0
NO.LENG'D	77	34	47	31	119	9	65	110	1	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
2.1- 3.0					2			1												
3.1- 4.0	6			8	14		6	31	4	8	2	6	2					12		1
4.1- 5.0				2		3	7	11	1	1		2	4		1	3	3	40		
5.1- 6.0				1	6	1	4	7			2		6	7	9			7	1	
6.1- 7.0					1						1		2	3	2					
MEAN/DEPTH	3.9			4.0	4.1	4.5	4.5	4.0	3.7	3.7	5.1	3.8	5.1	5.8	5.6	4.6	4.4	4.4	5.9	4.0
STD ERR	.06				.22		.18		.19		.52		.24		.14		.07			
				.20		.26		.10		.09		.13		.17		.23		.06		
MEAN/TRANS	3.9			4.1			4.2		3.7		4.3			5.4			4.4		4.9	
STD ERR	.06			.16			.09		.08		.27			.12			.06		.95	
MEAN/DATE					4.1										4.7					
STD ERR					.07										.07					
RANGE(MIN)	3.7			3.2	2.9	4.2	3.5	3.0	3.1	3.1	3.7	3.4	3.6	5.2	4.5	4.2	4.3	3.5	5.9	4.0
(MAX)	4.0			5.5	6.3	5.3	6.0	5.7	4.2	4.1	6.2	4.3	6.6	6.7	6.6	5.0	4.5	5.7	5.9	4.0
NO.LENGTHD	6	0	0	11	23	4	17	50	5	9	5	8	14	10	12	3	3	59	1	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RCR			EAST	
	S	B	S	M	B	S	M	B	S	B
2.1- 3.0					2			1		
3.1- 4.0	8	6	2	8	14		6	43	4	9
4.1- 5.0		2	4	2	1	6	10	51	1	1
5.1- 6.0	2		6	8	15	1	4	14	1	
6.1- 7.0	1		2	3	3					
MEAN/DEPTH	4.4	3.8	5.1	4.9	4.6	4.5	4.5	4.2	4.1	3.7
STD ERR	.30		.24		.20		.15		.39	
		.13		.23		.16		.06		.09
MEAN/TRANS	4.2			4.8			4.3		3.9	
STD ERR	.19			.13			.06		.16	
MEAN/DATE					4.4					
STD ERR					.05					
RANGE(MIN)	3.7	3.4	3.6	3.2	2.9	4.2	3.5	3.0	3.1	3.1
(MAX)	6.2	4.3	6.6	6.7	6.6	5.3	6.0	5.7	5.9	4.1
NO.LENGTHS	11	8	14	21	35	7	20	109	6	10

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
2.1- 3.0				1																
3.1- 4.0		4		1				2		5		5	4					1	1	
4.1- 5.0		7		4			4	8		6		5	26	2	1	16	5		11	
5.1- 6.0		1	1	23			2	5				1	27	2	1	35	2	1	29	1
6.1- 7.0		1		1									3		2	8			1	
MEAN/DEPTH		4.4	5.9	5.2			5.0	4.8		4.1		4.2	5.0	5.0	5.6	5.4	5.0	4.2	5.3	5.1
STD ERR		.25		.12			.20	.16		.17		.14	.08	.33	.42	.07	.19	.90	.08	
MEAN/TRANS		4.4		5.3			4.8			4.1		4.2		5.1			5.3			5.3
STD ERR		.25		.12			.13			.17		.14		.08			.07			.08
MEAN/DATE					4.8										5.2					
STD ERR					.09										.05					
RANGE(MIN)		3.1	5.9	3.0			4.5	3.9		3.2		3.8	3.7	4.1	4.5	4.2	4.5	3.3	3.5	5.1
(MAX)		6.2	5.9	6.2			5.7	5.9		4.9		5.5	6.6	5.7	6.4	6.4	5.9	5.1	6.1	5.1
NO.LENGTHS	0	13	1	30	0	0	6	15	0	11	0	11	60	4	4	59	7	2	42	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/31/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
2.1- 3.0				1						
3.1- 4.0		9	4	1				3	1	5
4.1- 5.0		12	26	6	1	16	9	8	11	6
5.1- 6.0		2	28	25	1	35	4	6	29	1
6.1- 7.0		1	3	1	2	8			1	
MEAN/DEPTH		4.3	5.0	5.2	5.6	5.4	5.0	4.7	5.3	4.2
STD ERR			.08		.42		.13		.08	
		.15		.11		.07		.17		.17
MEAN/TRANS		4.3		5.1			5.2			5.0
STD ERR		.15		.07			.07			.09
MEAN/DATE					5.1					
STD ERR					.04					
RANGE(MIN)		3.1	3.7	3.0	4.5	4.2	4.5	3.3	3.5	3.2
(MAX)		6.2	6.6	6.2	6.4	6.4	5.9	5.9	6.1	5.1
NO.LENGTHS	0	24	61	34	4	59	13	17	42	12

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0	1	2			1			1		1								1		
4.1- 5.0	1	1		1	1								1			2				3
5.1- 6.0	5	2		2	10			1		9			4	4		4	2			11
6.1- 7.0					1			1		2										1
MEAN/DEPTH	5.2	4.7		5.4	5.3			5.1		5.7			5.3	5.8		5.2	5.6	3.4		5.4
STD ERR	.29				.16								.31				.35			
		.43		.25				.73		.19				.05		.22				.12
MEAN/TRANS	5.0			5.3			5.1		5.7					5.5			5.1		5.4	
STD ERR	.24			.14			.73		.19					.19			.27		.12	
MEAN/DATE					5.3															
STD ERR					.11															
RANGE(MIN)	3.6	3.6		4.9	4.0			3.7		3.8			4.1	5.7		4.3	5.2	3.4		4.5
(MAX)	5.8	5.7		5.7	6.4			6.1		6.2			5.8	5.9		5.9	5.9	3.4		6.1
NO.LENGTH	7	5	0	3	13	0	0	3	0	12	0	0	5	4	0	6	2	1	0	15

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0	1	2			1			2		1
4.1- 5.0	1	1	1	1	1	2				3
5.1- 6.0	5	2	4	6	10	4	2	1		20
6.1- 7.0					1			1		3
MEAN/DEPTH	5.2	4.7	5.3	5.6	5.3	5.2	5.6	4.7		5.5
STD ERR	.29		.31		.10		.35			
		.43		.13		.22		.67		.11
MEAN/TRANS	5.3			5.4			5.1		5.5	
STD ERR	.24			.11			.25		.11	
MEAN/DATE					5.3					
STD ERR					.08					
RANGE(MIN)	3.6	3.6	4.1	4.9	4.0	4.3	5.2	3.4		3.8
(MAX)	5.8	5.7	5.8	5.9	6.4	5.9	5.9	6.1		6.2
NO.LENG'D	7	5	5	7	13	6	2	4	0	27

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0	1																	1		
4.1- 5.0	2	8	1	1			1			4				1	2		1	2		1
5.1- 6.0	12	25	4	12	10		2	14		27	2		15	31	25	3	7	2	4	4
6.1- 7.0	1	1	1	2	1	1		1		9			4	3	6		1	1	1	
MEAN/DEPTH	5.4	5.4	5.8	5.6	5.7	6.1	4.9	5.8		5.6	5.4		5.8	5.6	5.6	5.6	5.5	5.2	5.9	5.4
STD ERR	.16	.07	.16	.10	.07		.44	.07		.08	.15		.08	.05	.08	.12	.14	.37	.12	.23
MEAN/TRANS	5.4		5.6			5.6			5.6		5.4		5.6			5.4			5.6	
STD ERR	.07		.06			.11			.08		.15		.04			.14			.15	
MEAN/DATE				5.5										5.6						
STD ERR				.04										.04						
RANGE(MIN)	3.6	4.3	5.0	5.0	5.3	6.1	4.1	5.2		4.4	5.2		5.2	4.7	4.2	5.4	5.0	4.0	5.5	4.6
(MAX)	6.1	6.2	6.1	6.3	6.1	6.1	5.6	6.1		6.6	5.5		6.6	6.2	6.2	5.8	6.5	6.1	6.2	6.0
NO.LENG'D	16	34	6	15	11	1	3	15	0	40	2	0	19	35	33	3	9	6	5	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0	1							1		
4.1- 5.0	2	8	1	2	2		2	2		5
5.1- 6.0	14	25	19	43	35	3	9	16	4	31
6.1- 7.0	1	1	5	5	7	1	1	2	1	9
MEAN/DEPTH	5.4	5.4	5.8	5.6	5.6	5.7	5.4	5.6	5.9	5.6
STD ERR	.14	.07	.07	.05	.06	.15	.16	.12	.12	.07
MEAN/TRANS	5.4			5.6			5.5		5.6	
STD ERR	.07			.03			.09		.07	
MEAN/DATE					5.6					
STD ERR					.03					
RANGE(MIN)	3.6	4.3	5.1	4.7	4.2	5.4	4.1	4.0	5.5	4.4
(MAX)	6.1	6.2	6.6	6.3	6.2	6.1	6.5	6.1	6.2	6.6
NO.LENGTHS	18	34	25	53	44	4	12	21	5	45

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
3.1- 4.0	1	1			1						4				2		2			
4.1- 5.0	9	13		2	2						2	2	2	3	4					
5.1- 6.0	13	44		6	10						2	3	5	1	8	2	2	1		
6.1- 7.0		2																		
MEAN/DEPTH	5.0	5.3		5.4	5.1						4.4	5.1	5.1	4.8	4.9	5.8	4.6	5.6		
STD ERR	.14				.15						.24		.25		.21		.76			
		.07		.15								.15		.11		.10				
MEAN/TRANS	5.2			5.2							4.6			4.9			5.1			
STD ERR	.06			.11							.19			.13			.47			
MEAN/DATE					5.2										4.9					
STD ERR					.06										.12					
RANGE(MIN)	3.1	3.9		4.6	3.8						3.5	4.7	4.1	4.6	3.5	5.7	3.1	5.6		
(MAX)	6.0	6.1		5.8	5.5						5.2	5.4	5.7	5.1	5.8	5.9	6.0	5.6		
NO.LENGTHD	22	60	0	8	13	0	0	0	0	0	8	5	7	4	14	2	4	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
3.1- 4.0	5	1			3		2			
4.1- 5.0	10	15	2	5	6					
5.1- 6.0	15	47	5	7	18	2	2	1		
6.1- 7.0		2								
MEAN/DEPTH	4.8	5.3	5.1	5.2	5.0	5.8	4.6	5.6		
STD ERR	.15	.06	.25	.14	.13	.10	.76			
MEAN/TRANS	5.1		5.1				5.1			
STD ERR	.06		.09				.47			
MEAN/DATE					5.1					
STD ERR					.05					
RANGE(MIN)	3.1	3.9	4.1	4.6	3.5	5.7	3.1	5.6		
(MAX)	6.0	6.1	5.7	5.8	5.9	5.9	6.0	5.6		
NO.LENG'D	30	65	7	12	27	2	4	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
3.1- 4.0		1				1	1	1			1	1		1				3		
4.1- 5.0				1				5			1	3	3	4			2	7		
5.1- 6.0	3			7	13		1	13			3	7	4	19	4	2	4	3		
6.1- 7.0															1					
7.1- 8.0															1					
MEAN/DEPTH	5.8	4.0		5.4	5.5	3.6	4.5	5.1			4.9	5.1	5.0	5.3	5.8	5.3	5.1	4.6		
STD ERR	.03				.06		.90				.23		.15		.29		.19			
				.16				.11				.17		.13		.20		.15		
MEAN/TRANS	5.3			5.4			5.0				5.0			5.4			4.8			
STD ERR	.44			.07			.13				.13			.11			.12			
MEAN/DATE					5.2										5.1					
STD ERR					.08										.07					
RANGE(MIN)	5.7	4.0		4.4	5.1	3.6	3.6	4.0			4.0	3.9	4.4	3.9	5.2	5.1	4.3	3.9		
(MAX)	5.8	4.0		6.0	6.0	3.6	5.4	5.9			5.3	5.7	5.4	6.0	7.1	5.5	5.7	5.4		
NO.LENS*D	3	1	0	8	13	1	2	19	0	0	5	11	7	24	6	2	6	13	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/13/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0	1	2		1		1	1	4		
4.1- 5.0	1	3	3	5			2	12		
5.1- 6.0	6	7	4	26	17	2	5	16		
6.1- 7.0					1					
7.1- 8.0					1					
MEAN/DEPTH	5.2	5.0	5.0	5.3	5.6	4.7	4.9	4.9		
STD ERR	.21		.15		.11		.24			
		.18		.10		.58		.10		
MEAN/TRANS	5.1			5.4			4.9			
STD ERR	.13			.07			.09			
MEAN/DATE					5.2					
STD ERR					.06					
RANGE(MIN)	4.0	3.9	4.4	3.9	5.1	3.6	3.6	3.9		
(MAX)	5.8	5.7	5.4	6.0	7.1	5.5	5.7	5.9		
NO.LENG'D	8	12	7	32	19	3	8	32	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/13/79

LENGTH(MM)	DAY										NIGHT									
INTERVAL	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
4.1- 5.0		4														3	1	1		1
5.1- 6.0		23		2	1							2		5			2	1		
6.1- 7.0		1												1						
MEAN/DEPTH		5.5		5.5	5.8							5.7		5.7		4.9	5.2	5.2		4.3
STD ERR		.06		.15								.20		.18			.45			
																.22		.20		
MEAN/TRANS		5.5		5.6								5.7		5.7			5.1			4.3
STD ERR		.06		.15								.20		.18			.16			
MEAN/DATE					5.5										5.3					
STD ERR					.06										.14					
RANGE(MIN)		4.6		5.3	5.8							5.5		5.1		4.4	4.3	5.0		4.3
(MAX)		6.1		5.6	5.8							5.9		6.3		5.6	5.8	5.4		4.3
NO.LENG'D	0	28	0	2	1	0	0	0	0	0	2	0	6	0	0	5	3	2	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/19/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
4.1- 5.0		4				3	1	1		1
5.1- 6.0	2	23	5	2	1	2	2	1		
6.1- 7.0		1	1							
MEAN/DEPTH	5.7	5.5	5.7	5.5	5.8	4.9	5.2	5.2		4.3
STD ERR	.20		.19				.45			
		.06		.15		.22		.20		
MEAN/TRANS	5.5			5.6			5.1		4.3	
STD ERR	.06			.13			.16			
MEAN/DATE					5.4					
STD ERR					.06					
RANGE(MIN)	5.5	4.6	5.1	5.3	5.8	4.4	4.3	5.0		4.3
(MAX)	5.9	6.1	6.3	5.6	5.8	5.6	5.8	5.4		4.3
NO.LENG'D	2	28	6	2	1	5	3	2	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

LENGTH(MM)	DAY											NIGHT										
	WEST		CHANNEL			RDR			EAST			WEST		CHANNEL			RDR			EAST		
INTERVAL	S	B	S	M	B	S	M	B	S	B		S	B	S	M	B	S	M	B	S	B	
3.1- 4.0	1																					
4.1- 5.0		1						2							1	1						
5.1- 6.0	1			1				13											1			
MEAN/DEPTH	4.8	4.9		5.6				5.3							4.1	5.0			5.8			
STD ERR	.85							.06														
MEAN/TRANS		4.8		5.6			5.3								4.6			5.8				
STD ERR		.49					.06								.45							
MEAN/DATE					5.3											5.0						
STD ERR					.10											.49						
RANGE(MIN)	3.9	4.9		5.6				4.9							4.1	5.0			5.8			
(MAX)	5.6	4.9		5.6				5.9							4.1	5.0			5.8			
NO.LENG'D	2	1	0	1	0	0	0	15	0	0		0	0	0	1	1	0	0	1	0	0	

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0	1									
4.1- 5.0		1		1	1			2		
5.1- 6.0	1			1				14		
MEAN/DEPTH	4.8	4.9		4.9	5.0			5.4		
STD ERR	.85									
				.75				.07		
MEAN/TRANS	4.8			4.9			5.4			
STD ERR	.49			.44			.07			
MEAN/DATE					5.2					
STD ERR					.10					
RANGE(MIN)	3.9	4.9		4.1	5.0			4.9		
(MAX)	5.6	4.9		5.6	5.0			5.9		
NO.LENG'D	2	1	0	2	1	0	0	16	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0	1																			
4.1- 5.0					2											1				
5.1- 6.0														1	1	1	2			
MEAN/DEPTH	3.9				4.5									5.6	5.8	5.3	5.6			
STD ERR					.35												.05			
																.45				
MEAN/TRANS	3.9			4.5										5.7			5.4			
STD ERR				.35										.10			.20			
MEAN/DATE					4.3										5.5					
STD ERR					.27										.15					
RANGE(MIN)	3.9				4.1									5.6	5.8	4.8	5.5			
(MAX)	3.9				4.8									5.6	5.8	5.7	5.6			
NO.LENG'D	1	0	0	0	2	0	0	0	0	0	0	0	0	1	1	2	2	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
3.1- 4.0	1									
4.1- 5.0					2	1				
5.1- 6.0				1	1	1	2			
MEAN/DEPTH	3.9			5.6	4.9	5.3	5.6			
STD ERR					.49		.05			
						.45				
MEAN/TRANS	3.9			5.1			5.4			
STD ERR				.39			.20			
MEAN/DATE					5.1					
STD ERR					.24					
RANGE(MIN)	3.9			5.6	4.1	4.8	5.5			
(MAX)	3.9			5.6	5.8	5.7	5.6			
NO.LENGTHS	1	0		1	3	2	2	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
5.1- 6.0																1				
MEAN/DEPTH																5.7				
STD ERR																				
MEAN/TRANS																	5.7			
STD ERR																				
MEAN/DATE															5.7					
STD ERR																				
RANGE(MIN)																5.7				
(MAX)																5.7				
NO.LENGTD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
5.1- 6.0						1				
MEAN/CRPTR						5.7				
STD ERR										
MEAN/TRANS							5.7			
STD ERR										
MEAN/DATE					5.7					
STD ERR										
RANGE(MIN)						5.7				
(MAX)						5.7				
NO.LENGTHS	0	0	0	0	0	1	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 6/17/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
5.1- 6.0								1												
MEAN/DEPTH STD ERR								5.4												
MEAN/TRANS STD ERR							5.4													
MEAN/DATE STD ERR					5.4															
RANGE(MIN)								5.4												
(MAX)								5.4												
NO.LENGTHS	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
5.1- 6.0								1		
MEAN/DEPTH								5.4		
STD ERR										
MEAN/TRANS							5.4			
STD ERR										
MEAN/DATE					5.4					
STD ERR										
RANGE(MIN)								5.4		
(MAX)								5.4		
NO.LENG'D	0	0	0	0	5	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
5.1- 6.0				1			1	1				1		3			1	3	2	2	4
6.1- 7.0		2		14			7	19		1		18	4	21	13	6	22	15	9	18	20
7.1- 8.0		1		1			1	7					1	3			3	1	12	1	3
8.1- 9.0														1							
MEAN/DEPTH		6.8		6.6			6.7	6.8		7.0		6.5	6.7	6.6	6.6	6.8	6.7	6.6	6.9	6.6	6.5
STD ERR							.13					.06		.10		.07		.10		.08	
		.24		.10				.07					.14		.07		.06		.10		.09
MEAN/TRANS		6.8		6.6			6.8			7.0		6.5			6.6			6.7		6.6	
STD ERR		.24		.10			.06					.06			.07			.05		.06	
MEAN/DATE					6.7											6.6					
STD ERR					.05											.03					
RANGE(MIN)		6.5		5.7			5.8	5.9		7.0		5.8	6.3	5.7	6.1	6.6	5.7	5.5	5.9	5.8	5.8
(MAX)		7.3		7.2			7.2	7.5		7.0		7.0	7.1	8.6	6.9	7.0	7.1	7.1	7.6	7.2	7.9
NO.LENGTH	0	3	1	16	0	0	9	27	0	1		19	5	28	13	6	26	19	23	21	27

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
	DAY/NIGHT COMBINED									
5.1- 6.0	1		3	1		1	4	3	2	4
6.1- 7.0	18	6	21	27	6	22	22	28	18	21
7.1- 8.0		2	3	1		3	2	19	1	3
8.1- 9.0			1							
MEAN/DEPTH	6.5	6.7	6.6	6.6	6.8	6.7	6.6	6.8	6.6	6.6
STD ERR	.06		.10		.07		.08		.08	
		.12		.06		.06		.06		.09
MEAN/TRANS	6.6		6.6			6.7			6.6	
STD ERR	.06		.05			.04			.06	
MEAN/DATE					6.7					
STD ERR					.03					
RANGE(MIN)	5.8	6.3	5.7	5.7	6.6	5.7	5.5	5.9	5.8	5.8
(MAX)	7.0	7.3	8.6	7.2	7.0	7.1	7.2	7.6	7.2	7.9
NO.LENGTHS	19	8	28	29	6	26	28	50	21	28

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
5.1- 6.0				2									2				14	2		
6.1- 7.0				17			9				1		8	1	1	7	15	3	1	1
7.1- 8.0		1		3			5	5					4			5	10		2	
8.1- 9.0													1				1			
MEAN/DEPTH		7.4		6.6			6.9	7.5			6.3		6.9	6.6	6.1	7.1	6.5	6.5	7.5	6.9
STD ERR							.12						.15				.13		.25	
				.09				.14								.12		.22		
MEAN/TRAWL		7.4		6.6			7.0				6.3			6.8			6.6			7.4
STD ERR				.09			.11							.14			.10			.23
MEAN/DATE					6.8										6.7					
STD ERR					.03										.08					
RANGE(MIN)		7.4		5.8			6.3	7.1			6.3		6.0	6.6	6.1	6.5	5.1	6.0	7.0	6.9
(MAX)		7.4		7.4			7.7	7.8			6.3		8.1	6.6	6.1	7.7	8.2	7.0	7.8	6.9
NO.LENGTHD	0	1	0	22	0	0	14	5	0	0	1	0	15	1	1	12	40	5	3	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
5.1- 6.0			2	2			14	2		
6.1- 7.0	1		8	18	1	7	24	3	1	1
7.1- 8.0		1	4	3		5	15	5	2	
8.1- 9.0			1				1			
MEAN/DEPTH	6.3	7.4	6.9	6.6	6.1	7.1	6.6	7.0	7.5	6.9
STD ERR			.15				.10		.25	
				.09		.12		.20		
MEAN/TRAN.	6.9			6.7			6.7		7.4	
STD ERR	.55			.08			.08		.23	
MEAN/DATE					6.7					
STD ERR					.05					
RANGE(MIN)	6.3	7.4	6.0	5.8	6.1	6.5	5.1	6.0	7.0	6.9
(MAX)	6.3	7.4	8.1	7.4	6.1	7.7	8.2	7.8	7.8	6.9
NO.LENGTHD	1	1	15	23	1	12	54	10	3	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/20/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
4.1- 5.0							1							1						
5.1- 6.0				6			4	8			2	2		9			3	2		
6.1- 7.0				4			3	2		1				3			2	4	1	
7.1- 8.0					1		1											1		
8.1- 9.0				1										1						
9.1- 10.0																				
10.1- 11.0															1					
MEAN/DEPTH				6.2	8.0		6.1	5.6		6.5	5.3	5.9	6.0	10.2			6.1	6.4	6.8	
STD ERR							.28				.10		.21					.19		
				.31				.14				.05					.15			
MEAN/TRANS				6.4			5.9			6.5		5.6		6.3				6.3		
STD ERR				.32			.15					.19		.34				.12		
MEAN/DATE					6.1										6.2					
STD ERR					.15										.17					
RANGE(MIN)				5.3	8.0		4.7	5.1		6.5	5.2	5.9	5.0	10.2			5.7	5.8	6.8	
(MAX)				9.0	8.0		7.7	8.4		6.5	5.4	6.0	8.3	10.2			6.5	7.2	6.8	
NO. LEVIED	0	0	0	11	1	0	9	10	0	1	2	2	14	1	0	0	5	7	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
4.1- 5.0			1				1			
5.1- 6.0	2	2	9	6		3	6	8		
6.1- 7.0			3	4		2	7	3		1
7.1- 8.0					1		2			
8.1- 9.0			1	1						
9.1- 10.0										
10.1- 11.0				1						
MEAN/DEPTH	5.3	5.9	6.0	6.5	8.0	6.1	6.2	5.8		6.5
STD ERR	.10		.21				.17			
		.05		.44		.15		.16		
MEAN/TRANS	5.6			6.3			6.0		6.5	
STD ERR	.19			.23			.11			
MEAN/DATE					8.1					
STD ERR					.11					
RANGE(MIN)	5.2	5.9	5.0	5.3	8.0	5.7	4.7	5.1		6.5
(MAX)	5.4	6.0	8.3	10.2	8.0	6.5	7.7	6.8		6.5
NO.LENGTHS	2	2	14	12	1	5	16	11	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/21/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
3.1- 4.0					7															
4.1- 5.0					15															
5.1- 6.0					8			1												
6.1- 7.0				1																
7.1- 8.0																				
8.1- 9.0		1												1					2	
9.1- 10.0																1			1	1
MEAN/DEPTH		8.9		6.6	4.6			5.7						8.3		9.6			9.0	9.1
STD ERR					.15														.52	
MEAN/TRANS		8.9		4.7			5.7							8.3			9.6		9.0	
STD ERR				.16															.37	
MEAN/DATE					4.8										9.0					
STD ERR					.21										.29					
RANGE(MIN)		8.9		6.6	3.4			5.7						8.3		9.6			8.3	9.1
(MAX)		8.9		6.6	8.0			5.7						8.3		9.6			10.0	9.1
NO.LENGTH	0	1	0	1	25	0	0	1	0	0	0	0	0	1	0	1	0	0	3	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RER			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0					7					
4.1- 5.0					10					
5.1- 6.0					8			1		
6.1- 7.0				1						
7.1- 8.0										
8.1- 9.0		1		1					2	
9.1- 10.0						1			1	1
MEAN/DEPTH		8.9		7.4	4.6	9.6		5.7	9.0	9.1
STD ERR					.15				.52	
				.35						
MEAN/TRANS	8.9			4.8			7.7		9.0	
STD ERR				.21			1.95		.37	
MEAN/DATE					5.5					
STD ERR					.35					
RANGE(MIN)		8.9		6.6	3.4	9.6		5.7	8.3	9.1
(MAX)		8.9		8.3	6.0	9.6		5.7	10.0	9.1
NO.LENGTH	0	1	3	2	25	1	0	1	3	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/25/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
4.1- 5.0								1						1			1			1
5.1- 6.0							1	5	1	5	4			22	12		11	3		1	32
6.1- 7.0								1		3		2		2	1		4				10
7.1- 8.0										1											
8.1- 9.0					1																2
MEAN/DEPTH					9.0		5.7	5.6	5.4	6.3	5.7	6.5	5.6	5.8		5.8	5.6		5.7	5.9
STD ERR								.16		.23	.13	.10	.07	.07		.09	.15			.10
MEAN/TRANS				9.0			5.7		6.2		6.0			5.7			5.8		5.9	
STD ERR							.14		.23		.19			.05			.08		.10	
MEAN/DATE					6.1											5.8				
STD ERR					.21											.05				
RANGE(MIN)					9.0		5.7	5.0	5.4	5.7	5.4	6.4	4.7	5.2		4.8	5.4		5.7	4.8
(MAX)					9.0		5.7	6.4	5.4	8.0	6.0	6.6	6.1	6.1		6.3	5.9		5.7	9.0
NO.LENGTHD	0	0	0	0	1	0	1	7	1	9	4	2	25	13	0	16	3	0	1	45

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/09/79

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RCR S	RCR M	RCR B	EAST S	EAST B
	DAY/NIGHT COMBINED									
4.1- 5.0			1			1		1		1
5.1- 6.0	4		22	12		11	4	5	2	37
6.1- 7.0		2	2	1		4		1		13
7.1- 8.0										1
8.1- 9.0					1					2
MEAN/DEPTH	5.7	6.5	5.[illegible]	5.8	9.0	5.8	5.6	5.6	5.6	6.0
STD ERR	.13		.07				.11		.15	
		.19		.07		.09		.16		.09
MEAN/TRANS	6.0			5.7			5.7		5.9	
STD ERR	.17			.10			.07		.09	
MEAN/DATE					5.9					
STD ERR					.05					
RANGE(MIN)	5.4	5.4	4.7	5.2	9.0	4.8	5.4	5.0	5.4	4.8
(MAX)	6.0	6.6	6.1	6.1	9.0	6.3	5.9	6.4	5.7	9.0
NO.LENGTHD	4	2	25	13	1	16	4	7	2	54

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/[illegible]/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
4.1- 5.0																		1		
5.1- 6.0	2				1		2			4		3	10	1		4	1	3	1	3
6.1- 7.0	2	1			4					13			2			2	1	2		2
7.1- [illegible]										1										
8.1- 9.0										2										
9.1- 10.0																				
10.1- 11.0																			1	
MEAN/DEPTH	6.1	6.7			6.1		5.8			6.5		5.3	5.8	5.8		5.8	6.4	5.9	8.4	6.0
STD ERR	.21				.05		.10						.08				.45		2.50	
										.18		.19				.12		.29		.07
MEAN/TRANS	6.2			6.1			5.8			6.5		5.3		5.8			5.9			6.7
STD ERR	.21			.05			.10			.18		.19		.08			.14			.71
MEAN/DATE					6.3										6.0					
STD ERR					.12										.15					
RANGE(MIN)	5.5	6.7			6.0		5.7			5.6		5.1	5.3	5.8		5.5	5.9	4.7	5.9	5.8
(MAX)	6.4	6.7			6.3		5.9			8.6		5.7	6.3	5.8		6.2	6.8	6.7	10.9	6.2
NO.LENG'D	4	1	0	0	5	0	2	0	0	20	0	3	12	1	0	6	2	6	2	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/04/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
4.1- 5.0								1		
5.1- 6.0	2	3	10	1	1	4	3	3	1	7
6.1- 7.0	2	1	2		4	2	1	2		15
7.1- 8.0										1
8.1- 9.0										2
9.1- 10.0										
10.1- 11.0									1	
MEAN/DEPTH	6.1	5.7	5.8	5.8	6.1	5.8	6.1	5.9	8.4	6.4
STD ERR	.21		.09		.05		.25		2.50	
		.37				.12		.29		.15
MEAN/TRANS	5.9			5.9			5.9		6.5	
STD ERR	.21			.07			.13		.22	
MEAN/DATE					6.1					
STD ERR					.10					
RANGE(MIN)	5.5	5.1	5.3	5.8	6.0	5.5	5.7	4.7	5.9	5.6
(MAX)	6.4	6.7	6.3	5.8	6.3	6.2	6.8	6.7	10.9	8.6
NO.LESIONS	4	4	12	1	5	6	4	6	2	25

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
4.1- 5.0																	1			
5.1- 6.0					10		2				3	1	2	6	2		3			
6.1- 7.0	3				4						1	2	3	2	1			1		
7.1- 8.0																				
8.1- 9.0					1															
9.1- 10.0																				
10.1- 11.0																				
11.1- 12.0																				
12.1- 13.0																				
13.1- 14.0																				1
14.1- 15.0																				1
MEAN/DEPTH	5.6				6.0		5.6				5.7	6.0	6.0	5.9	6.0		5.3	6.7		14.1
STD ERR	.03				.17		.10				.20		.20		.26		.24			
												.44		.22						.65
MEAN/TRANS	5.6			6.0			5.6				5.8			6.0			5.6			14.1
STD ERR	.03			.17			.10				.21			.13			.33			.65
MEAN/DATE					6.1										6.4					
STD ERR					.14										.40					
RANGE(MIN)	5.6				5.3		5.5				5.3	5.2	5.6	5.1	5.6		4.9	6.7		13.5
(MAX)	5.6				8.1		5.7				6.2	6.7	6.6	6.8	6.5		6.0	6.7		14.8
NO.LENGTH	3	0	0	0	15	0	2	0	0	0	4	3	5	8	3	0	4	1	0	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
4.1- 5.0							1			
5.1- 6.0	3	1	2	6	12		5			
6.1- 7.0	4	2	3	2	5			1		
7.1- 8.0										
8.1- 9.0					1					
9.1- 10.0										
10.1- 11.0										
11.1- 12.0										
12.1- 13.0										
13.1- 14.0										1
14.1- 15.0										1
MEAN/DEPTH	6.0	6.0	6.0	5.9	6.0		5.4	6.7		14.1
STD ERR	.21		.28		.15		.16			
		.44		.22						.65
MEAN/TRANS	6.0			6.0			5.6			14.1
STD ERR	.19			.11			.23			.65
MEAN/DATE					6.3					
STD ERR					.25					
RANGE(MIN)	5.3	5.2	5.6	5.1	5.3		4.9	6.7		13.5
(MAX)	6.6	6.7	6.6	6.8	8.1		6.0	6.7		14.8
NO.LENGTHD	7	3	5	8	18	0	6	1	0	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

	DAY										NIGHT									
LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
4.1- 5.0				1										5						
5.1- 6.0	2	1		11			3	3			3			23	11	1	4	2	2	1
6.1- 7.0	2			1	1		2				1	1			9		3	8		1
7.1- 8.0				2								1					1	2	1	1
8.1- 9.0																			1	
MEAN/DEPTH	6.1	6.9		5.9	6.6		6.0	5.9			5.7	7.4	5.2	5.9	5.6	6.1	6.4	6.9	6.7	
STD ERR	.14						.15				.21		.05				.16		.49	
				.19				.00				.45		.09		.27		.61		
MEAN/TRANS	6.1			5.9			5.9				6.3			5.5			6.4		6.7	
STD ERR	.11			.18			.09				.39			.07			.16		.49	
MEAN/DATE					5.9										5.9					
STD ERR					.10										.08					
RANGE(MIN)	5.9	6.0		4.4	6.6		5.7	5.9			5.2	6.9	4.6	5.3	5.6	5.3	5.7	5.7	5.8	
(MAX)	6.5	6.0		7.5	6.6		6.5	5.9			6.2	7.8	5.7	6.7	5.6	7.6	7.5	8.1	7.5	
NO.LENGTH	4	1	0	15	1	0	5	3	0	0	4	2	28	20	1	8	12	4	3	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
4.1- 5.0			5	1						
5.1- 6.0	5	1	23	22	1	4	5	5	1	
6.1- 7.0	3	1		10	1	3	10		1	
7.1- 8.0		1		2		1	2	1	1	
8.1- 9.0								1		
MEAN/DEPTH	5.9	6.9	5.2	5.9	6.1	6.1	6.3	6.5	6.7	
STD ERR	.14		.05		.50		.13		.49	
		.52		.10		.27		.38		
MEAN/TRANS	6.2			5.6			6.3		6.7	
STD ERR	.21			.07			.12		.49	
MEAN/DATE					5.9					
STD ERR					.07					
RANGE(MIN)	5.2	6.6	4.6	4.4	5.6	5.3	5.7	5.7	5.8	
(MAX)	6.5	7.8	5.7	7.5	6.8	7.6	7.5	8.1	7.5	
NO.LEADED	8	3	28	35	2	8	17	7	3.	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/19/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
5.1- 6.0		6		3			1	2			3	1	22	8	3	12	9	1	9	1
6.1- 7.0	2	4										1	19	5	9	5	9	4	2	2
7.1- 8.0		1										1	1		1	1	1	1		2
8.1- 9.0																1	1			
9.1- 10.0																				
10.1- 11.0																				
11.1- 12.0																				
12.1- 13.0																				
13.1- 14.0					1															
14.1- 15.0					1															
15.1- 16.0																				
16.1- 17.0																				
17.1- 18.0																				
18.1- 19.0					1															
MEAN/DEPTH	6.3	6.1		9.0	15.5		5.4	5.8			5.8	6.4	6.0	5.9	6.4	6.1	6.4	6.4	5.8	6.8
STD ERR	.20				1.63						.15		.07		.15		.15		.15	
		.13		.21				.15				.38		.12		.16		.17		.29
MEAN/TRANS	6.1			10.5			5.6				6.1			6.1			6.3		6.1	
STD ERR	.12			2.35			.15				.23			.06			.10		.18	
MEAN/DATE					7.2										6.1					
STD ERR					.75										.05					
RANGE(MIN)	6.1	5.6		5.1	13.1		5.4	5.6			5.5	6.0	5.4	5.1	5.5	5.2	5.7	5.9	5.2	5.9
(MAX)	6.5	7.1		13.8	18.6		5.4	5.9			6.0	7.2	7.5	6.6	7.2	8.1	8.4	7.1	7.0	7.4
NO.LENGTHS	2	11	0	3	3	0	1	2	0	0	3	3	33	13	13	19	20	6	11	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
5.1- 6.0	3	7	22	11	3	12	10	3	9	1
6.1- 7.0	2	3	10	5	9	5	9	4	2	2
7.1- 8.0		2	1		1	1	1	1		2
8.1- 9.0						1	1			
9.1- 10.0										
10.1- 11.0										
11.1- 12.0										
12.1- 13.0										
13.1- 14.0					1					
14.1- 15.0					1					
15.1- 16.0										
16.1- 17.0										
17.1- 18.0										
18.1- 19.0					1					
MEAN/DEPTH	6.0	6.1	6.3	5.8	8.1	6.1	6.3	6.2	5.8	6.8
STD ERR	.16		.07		.96		.15		.15	
		.13		.11		.16		.17		.29
MEAN/TRANS	6.1			6.5			6.2		6.1	
STD ERR	.19			.26			.09		.18	
MEAN/DATE					6.3					
STD ERR					.12					
RANGE(MIN)	5.5	5.6	5.4	5.1	5.5	5.2	5.4	5.6	5.2	5.8
(MAX)	6.5	7.2	7.5	8.6	18.6	8.1	8.4	7.1	7.0	7.4
NO.LENGTD	5	14	33	16	16	19	21	8	11	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
4.1- 5.0										1										
5.1- 6.0		2		1	7			2		2	1	1		5	13		1	1		
6.1- 7.0					2			6		1			2	4	12	1	2	3		
7.1- 8.0		1			1			6			1		2	1	2	1	3			
8.1- 9.0								6								1	1			
9.1- 10.0								1												
10.1- 11.0																				
11.1- 12.0																	1			
12.1- 13.0								2												
13.1- 14.0																				
14.1- 15.0																	1			
15.1- 16.0																				
16.1- 17.0																				
17.1- 18.0																				
18.1- 19.0																				
19.1- 20.0																				1
MEAN/DEPTH		6.0		5.7	6.0			7.9		5.6	6.7	5.4	7.2	6.2	6.1	7.2	8.4	6.4		19.1
STD ERR					.19						1.00		.20		.12		.89			
		.58						.39		.36				.26		.52		.17		
MEAN/TRANS		6.0			6.0			7.9		5.6		6.3			6.3			7.7		19.1
STD ERR		.58			.17			.39		.36		.72			.11			.55		
MEAN/DATE					7.0										6.8					
STD ERR					.28										.27					
RANGE(MIN)		5.4			5.7	5.2		5.8		5.0	5.7	5.4	6.7	5.2	5.2	6.3	5.9	5.9		19.1
(MAX)		7.2			5.7	7.1		12.0		6.6	7.7	5.4	7.5	7.8	7.5	8.1	14.1	6.6		19.1
NO.LENGTH	0	3	0	1	10	0	0	23	0	4	2	1	4	10	27	3	9	4	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

LENGTH(MM)	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
4.1- 5.0										1
5.1- 6.0	1	3		6	20		1	3		2
6.1- 7.0			2	4	14	1	2	9		1
7.1- 8.0	1	1	2	1	3	1	3	6		
8.1- 9.0						1	1	6		
9.1- 10.0								1		
10.1- 11.0										
11.1- 12.0							1			
12.1- 13.0								2		
13.1- 14.0										
14.1- 15.0							1			
15.1- 16.0										
16.1- 17.0										
17.1- 18.0										
18.1- 19.0										
19.1- 20.0										1
MEAN/DEPTH	6.7	5.9	7.2	6.1	6.1	7.2	8.4	7.7		8.3
STD ERR	1.00	.44	.20	.24	.10	.62	.89	.35		2.71
MEAN/TRANS	6.2		6.2			7.8			8.3	
STD ERR	.42		.09			.32			2.71	
MEAN/DATE					6.3					
STD ERR					.20					
RANGE(MIN)	5.7	5.4	6.7	5.2	5.2	6.3	5.9	5.8		5.0
(MAX)	7.7	7.2	7.5	7.8	7.5	8.1	14.1	12.6		19.1
NO.LENGTHS	2	4	4	11	37	3	9	27	0	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
4.1- 5.0		1											1				1			
5.1- 6.0		1		2	3		1	5						1			20	2	1	2
6.1- 7.0		1			1												1	1	5	3
7.1- 8.0					1								1	1	1	2	4		1	1
8.1- 9.0								1									1	2		2
9.1- 10.0																	1	2		
10.1- 11.0		1							1									1		1
11.1- 12.0												1	1						1	
12.1- 13.0																	2		3	
13.1- 14.0																				1
14.1- 15.0											1							1		
15.1- 16.0																				
16.1- 17.0																			1	1
MEAN/DEPTH		6.8		5.4	6.2		5.2	6.1	10.8		14.1	11.5	8.0	6.4	7.7	7.8	6.5	8.7	9.3	9.6
STD ERR					.25								2.04				.37		1.02	
		1.34		.10				.49						.75		.25		.95		1.04
MEAN/TRANS	6.8		6.0			5.9			10.8		12.8		7.4				7.1		9.0	
STD ERR	1.34		.23			.43					1.30		.99				.36		.72	
MEAN/DATE					6.4										7.9					
STD ERR					.90										.35					
RANGE(MIN)		5.0		5.3	5.9		5.2	5.5	10.8		14.1	11.5	5.0	5.6	7.7	7.5	4.9	5.4	6.0	5.5
(MAX)		10.7		5.5	7.2		5.2	8.5	10.8		14.1	11.5	11.9	7.1	7.7	8.0	12.9	14.3	16.5	16.2
NO.LENGTHD	0	4	0	2	5	0	1	6	1	0	1	1	3	2	1	2	30	9	12	11

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/25/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
4.1- 5.0		1	1				1			
5.1- 6.0		1		3	3		21	7	1	2
6.1- 7.0		1			1		1	1	5	3
7.1- 8.0			1	1	2	2	4		1	1
8.1- 9.0							1	3		2
9.1- 10.0							1	2		
10.1- 11.0		1						1	1	1
11.1- 12.0		1	1						1	
12.1- 13.0							2		3	
13.1- 14.0										1
14.1- 15.0	1							1		
15.1- 16.0										
16.1- 17.0									1	1
MEAN/DEPTH	14.1	7.7	8.0	5.9	6.6	7.8	6.5	7.6	9.4	8.6
STD ERR		1.41	2.04	.41	.32	.25	.36	.68	.95	1.04
MEAN/TRANS		8.8		6.5			6.9		9.1	
STD ERR		1.57		.49			.32		.69	
MEAN/DATE					7.6					
STD ERR					.2?					
RANGE(MIN)	14.1	5.0	5.0	5.3	5.9	7.5	4.9	5.4	6.0	5.5
(MAX)	14.1	11.5	11.9	7.1	7.7	8.0	12.9	14.3	16.5	16.2
NO.LENGTHS	1	5	3	4	6	2	31	15	13	11

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			ROR			EAST		WEST		CHANNEL			ROR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
5.1- 6.0														1	1			2		
6.1- 7.0					3									1	1	1				
7.1- 8.0														1		2	1			2
8.1- 9.0														1		1		1		
9.1- 10.0																			1	
10.1- 11.0																				
11.1- 12.0		1																		
12.1- 13.0								1												
13.1- 14.0																				
14.1- 15.0																				
15.1- 16.0												1								
16.1- 17.0																		1		
MEAN/DEPTH		11.6			6.2			12.6				15.7		6.9	6.3	7.7	7.5	9.1	9.8	7.6
STD ERR					.06										.55					
														.60		.40		2.43		.30
MEAN/TRANS		11.6			6.2			12.6				15.7		6.7			8.3			8.3
STD ERR					.06									.43			1.04			.75
MEAN/DATE					8.6										8.2					
STD ERR					1.43										.68					
RANGE(MIN)		11.6			6.1			12.6				15.7		5.7	5.7	6.5	7.5	5.7	9.8	7.3
(MAX)		11.6			6.3			12.6				15.7		8.1	6.8	8.3	7.5	16.1	9.8	7.9
NO.LEAVED	0	1	0	0	3	0	0	1	0	0	0	1	0	4	2	4	1	4	1	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
5.1- 6.0				1	1			2		
6.1- 7.0				1	4	1				
7.1- 8.0				1		2	1			2
8.1- 9.0				1		1		1		
9.1- 10.0									1	
10.1- 11.0										
11.1- 12.0		1								
12.1- 13.0								1		
13.1- 14.0										
14.1- 15.0										
15.1- 16.0		1								
16.1- 17.0								1		
MEAN/DEPTH	13.7		6.9	6.2	7.7	7.5	9.8	9.8	7.6	
STD ERR	2.05		.60	.19	.40		2.01		.30	
MEAN/TRANS	13.7		6.5		8.7			8.3		
STD ERR	2.05		.29		1.03			.75		
MEAN/DATE				8.3						
STD ERR				.60						
RANGE(MIN)	11.6		5.7	5.7	6.5	7.5	5.7	9.8	7.3	
(MAX)	15.7		8.1	6.8	8.3	7.5	15.1	9.8	7.9	
NO.LENGTD	0	2	0	4	5	4	1	5	1	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
7.1- 8.0									1											
8.1- 9.0																				
9.1- 10.0							1										1			
10.1- 11.0							1											1		
11.1- 12.0							4										1			2
12.1- 13.0							6													2
13.1- 14.0							4													2
14.1- 15.0							1													3
15.1- 16.0							2													2
16.1- 17.0							1													
MEAN/DEPTH							12.9		7.4								10.6	10.8		13.8
STD ERR							.40										1.15			.46
MEAN/TRANS							12.9		7.4								10.6			13.8
STD ERR							.40										.67			.46
MEAN/DATE				12.6										13.1						
STD ERR				.46										.52						
RANGE(MIN)							9.2		7.4								9.4	10.8		11.2
(MAX)							16.5		7.4								11.7	10.8		16.0
NO.LENGTH	0	0	0	0	0	0	0	20	0	1	0	0	0	0	0	0	2	1	0	11

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
7.1- 8.0										1
8.1- 9.0										
9.1- 10.0							1	1		
10.1- 11.0								2		
11.1- 12.0							1	4		2
12.1- 13.0								6		2
13.1- 14.0								4		2
14.1- 15.0								1		3
15.1- 16.0								2		2
16.1- 17.0								1		
MEAN/DEPTH							10.6	12.8		13.2
STD ERR							1.15			
								.39		.67
MEAN/TRANS							12.6		13.2	
STD ERR							.39		.67	
MEAN/DATE					12.9					
STD ERR					.34					
RANGE(MIN)							9.4	9.2		7.4
(MAX)							11.7	16.5		16.0
NO.LENGTHS	0	0	0	0	0	0	2	21	0	12

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM)	DAY										NIGHT									
	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
9.1- 10.0															1					
10.1- 11.0															1					
11.1- 12.0																				
12.1- 13.0																				
13.1- 14.0					1										3					1
14.1- 15.0															1			2		
15.1- 16.0													1		5					1
16.1- 17.0															2					
17.1- 18.0																	2			
18.1- 19.0																	1			
MEAN/DEPTH					13.5									15.9	14.4		17.6	14.3		14.6
STD ERR															.58		.26			
																		.05		1.10
MEAN/TRANS				13.5										14.5			16.3			14.6
STD ERR														.55			.84			1.10
MEAN/DATE					13.5										14.9					
STD ERR															.45					
RANGE(MIN)					13.5									15.9	10.0		17.2	14.2		13.5
(MAX)					13.5									15.9	16.6		18.1	14.3		15.7
NO.LENGTHS	0	0	0	0	1	0	0	0	0	0	0	0	0	1	13	0	3	2	0	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			ROR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
9.1- 10.0					1					
10.1- 11.0					1					
11.1- 12.0										
12.1- 13.0										
13.1- 14.0					4					1
14.1- 15.0					1			2		
15.1- 16.0				1	5					1
16.1- 17.0					2					
17.1- 18.0							2			
18.1- 19.0							1			
MEAN/DEPTH				15.9	14.3		17.6	14.3		14.6
STD ERR					.54		.26			
								.05		1.10
MEAN/TRANS				14.4			16.3			14.6
STD ERR				.51			.84			1.10
MEAN/DATE					14.9					
STD ERR					.43					
RANGE(MIN)				15.9	10.0		17.2	14.2		13.5
(MAX)				15.9	16.6		18.1	14.3		15.7
NO.LENGTH	0	0	2	1	14	0	3	2	0	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
13.1- 14.0												1								
14.1- 15.0																				
15.1- 16.0																				
16.1- 17.0													1							
17.1- 18.0																				
18.1- 19.0		1																		
MEAN/DEPTH		18.6										13.4	16.9							
STD ERR																				
MEAN/TRANS	18.6										13.4		16.9							
STD ERR																				
MEAN/DATE					18.6										15.2					
STD ERR															1.75					
RANGE(MIN)		18.6										13.4	16.9							
(MAX)		18.6										13.4	16.9							
NO.LENGTHD	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
13.1- 14.0		1								
14.1- 15.0										
15.1- 16.0										
16.1- 17.0			1							
17.1- 18.0										
18.1- 19.0		1								
MEAN/DEPTH		16.0	16.9							
STD ERR		2.60								
MEAN/TRANS	16.0		16.9							
STD ERR	2.60									
MEAN/DATE					16.3					
STD ERR					1.53					
RANGE(MIN)		13.4	16.9							
(MAX)		18.6	16.9							
NO.LENGTHS	0	2	1	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM)	DAY										NIGHT									
INTERVAL	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
16.1- 17.0																				1
17.1- 18.0																				
18.1- 19.0																				
19.1- 20.0											1	1								
20.1- 21.0												1								1
21.1- 22.0												1								
MEAN/DEPTH											19.7	20.7								18.4
STD ERR												.61								1.80
MEAN/TRANS											20.5								18.4	
STD ERR											.50								1.80	
MEAN/DATE															19.8					
STD ERR															.71					
RANGE(MIN)											19.7	19.6								16.6
(MAX)											19.7	21.7								20.2
NO.LENGTH	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
16.1- 17.0										1
17.1- 18.0										
18.1- 19.0										
19.1- 20.0	1	1								
20.1- 21.0		1								1
21.1- 22.0		1								
MEAN/DEPTH	19.7	20.7								18.4
STD ERR		.61								1.80
MEAN/TRANS	20.5								18.4	
STD ERR	.50								1.80	
MEAN/DATE					19.8					
STD ERR					.71					
RANGE(MIN)	19.7	19.6								16.6
(MAX)	19.7	21.7								20.2
NO.LENG'D	1	3	0	0	0	0	0	0	0	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
20.1- 21.0																				1
MEAN/DEPTH																				20.1
STD ERR																				
MEAN/TRANS																			20.1	
STD ERR																				
MEAN/DATE															20.1					
STD ERR																				
RANGE(MIN)																				20.1
(MAX)																				20.1
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
20.1- 21.0										1
MEAN/DEPTH										20.1
STD ERR										
MEAN/TRANS									20.1	
STD ERR										
MEAN/DATE					20.1					
STD ERR										
RANGE(MIN)										20.1
(MAX)										20.1
NO.LENGTH	0	0	0	0	0	0	0	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
17.1- 18.0					1															
18.1- 19.0																				2
19.1- 20.0																				1
20.1- 21.0								1												1
21.1- 22.0										1										1
22.1- 23.0																				
23.1- 24.0																				
24.1- 25.0												1								
25.1- 26.0																				1
26.1- 27.0																				1
27.1- 28.0																				1
28.1- 29.0																				
29.1- 30.0																				
30.1- 31.0																				
31.1- 32.0																				
32.1- 33.0																				
33.1- 34.0																				1
MEAN/DEPTH					17.5			20.5		22.0		25.0								23.7
STD ERR																				1.75
MEAN/TRANS				17.5			20.5			22.0		25.0								23.7
STD ERR																				1.75
MEAN/DATE					20.0										23.9					
STD ERR					1.32										1.57					
RANGE(MIN)					17.5			20.5		22.0		25.0								18.6
(MAX)					17.5			20.5		22.0		25.0								34.0
NO.LENG'D	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	9

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
17.1- 18.0					1					
18.1- 19.0										2
19.1- 20.0										1
20.1- 21.0								1		1
21.1- 22.0										2
22.1- 23.0										
23.1- 24.0										
24.1- 25.0		1								
25.1- 26.0										1
26.1- 27.0										1
27.1- 28.0										1
28.1- 29.0										
29.1- 30.0										
30.1- 31.0										
31.1- 32.0										
32.1- 33.0										
33.1- 34.0										1
MEAN/DEPTH	25.0		17.5			20.5			23.6	
STD ERR									1.57	
MEAN/TRANS	25.0		17.5			20.5			23.6	
STD ERR									1.57	
MEAN/DATE					23.0					
STD ERR					1.31					
RANGE(MID)	25.0		17.5			20.5			18.6	
(MAX)	25.0		17.5			20.5			34.0	
NO.LENGTH	0	1	0	0	1	0	0	1	0	10

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/27/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
6.1- 7.0	3	10	1	2							2	4	1		1	1	1		1	
7.1- 8.0	3	6	5	1	1			3	1	2	4	1	6	2	3		1			
MEAN/DEPTH	7.1	7.0	7.4	8.8	7.2			7.4	7.2	7.3	7.3	6.7	7.4	7.2	7.2	6.5	7.1		6.9	
STD ERR	.05		.12								.13		.09		.19		.50			
		.07		.22				.13		.05		.19		.05						
MEAN/DATE	7.0			7.2			7.4		7.2		7.0			7.3			6.9		6.9	
STD ERR	.05			.13			.13		.03		.13			.08			.35			
MEAN/DATE					7.1										7.1					
STD ERR					.05										.08					
RANGE(MIN)	7.3	6.9	7.0	6.5	7.2			7.3	7.2	7.2	6.9	6.2	6.9	7.1	6.7	6.5	6.6		6.9	
(MAX)	7.3	7.4	7.8	7.2	7.2			7.7	7.2	7.3	7.7	7.3	7.7	7.2	7.6	6.5	7.6		6.9	
NO.LENGTD	6	16	6	3	1	0	0	3	1	2	6	5	7	2	4	1	2	0	1	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1977 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/27/77

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
6.1- 7.0	5	14	2	2	1	1	1		1	
7.1- 8.0	7	7	11	3	4		1	3	1	2
MEAN/STRATA	7.2	6.9	7.4	6.9	7.2	6.5	7.1	7.4	7.1	7.3
STD ERR	.07		.07		.15		.50		.15	
		.07		.15				.13		.05
MEAN/TRANS	7.0		7.3			7.2			7.2	
STD ERR	.05		.07			.21			.09	
MEAN/CATCH					7.1					
STD ERR					.04					
RANGE(MIN)	6.9	6.2	6.9	6.5	6.7	6.5	6.6	7.3	6.9	7.2
(MAX)	7.7	7.4	7.8	7.2	7.6	6.5	7.6	7.7	7.2	7.3
NO.LENGTHS	12	21	13	5	5	1	2	3	2	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			ROR			EAST		WEST		CHANNEL			ROR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
41.1- 42.0																				1
42.1- 43.0																				
43.1- 44.0																				
44.1- 45.0																				
45.1- 46.0																				
46.1- 47.0																				
47.1- 48.0																				1
48.1- 49.0																				1
MEAN/DATE																				46.3
STD ERR																				2.19
MEAN/TRAN																				46.3
STD ERR																				2.19
MEAN/DATE														46.3						
STD ERR														2.19						
RANGE(MIN)																				42.0
(MAX)																				49.0
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
41.1- 42.0										1
42.1- 43.0										
43.1- 44.0										
44.1- 45.0										
45.1- 46.0										
46.1- 47.0										
47.1- 48.0										1
48.1- 49.0										1
MEAN/DEPTH										46.3
STD ERR										2.19
MEAN/PASS									46.3	
STD ERR									2.19	
MEAN/DATE					46.3					
STD ERR					2.19					
RANGE(MIN)										42.0
(MAX)										49.0
NO.LENGTHD	0	0	0	0	0	0	0	0	0	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
54.1- 55.0												1								
55.1- 56.0																				
56.1- 57.0																				
57.1- 58.0																		1		
MEAN/DEPTH												55.0						58.0		
STD ERR																				
MEAN/TRANS												55.0					58.0			
STD ERR																				
MEAN/DATE															56.5					
STD ERR															1.50					
RANGE(MIN)												55.0						58.0		
(MAX)												55.0						58.0		
NO.LENGTHS	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/25/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
54.1- 55.0		1								
55.1- 56.0										
56.1- 57.0										
57.1- 58.0								1		
MEAN/DEPTH		55.0						58.0		
STD ERR										
MEAN/TRANS	55.0						58.0			
STD ERR										
MEAN/DATE					56.5					
STD ERR					1.50					
RANGE(MIN)		55.0						58.0		
(MAX)		55.0						58.0		
NO.LENGTHD	0	1	0	0	0	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 09/20/79

	DAY										NIGHT									
LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
54.1- 55.0															1					
55.1- 56.0					1															
MEAN/DEPTH				56.0										55.0						
STD ERR																				
MEAN/TRANS			56.0										55.0							
STD ERR																				
MEAN/DATE				56.0										55.0						
STD ERR																				
RANGE(MIN)				56.0										55.0						
(MAX)				56.0										55.0						
NO.LEAGED	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			RCR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
54.1- 55.0					1					
55.1- 56.0					1					
MEAN/DEPTH					55.5					
STD ERR					.50					
MEAN/TRANS				55.5						
STD ERR				.50						
MEAN/DATE					55.5					
STD ERR					.50					
RANGE(MIN)					55.0					
(MAX)					56.0					
NO.LENGTH	0	0	0	0	2	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 6/21/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
6.1- 7.0					1															
7.1- 8.0																				
8.1- 9.0																				
9.1- 10.0																				
10.1- 11.0																				
11.1- 12.0																				
12.1- 13.0																				
13.1- 14.0																				
14.1- 15.0																				
15.1- 16.0																				
16.1- 17.0																				
17.1- 18.0																				
18.1- 19.0																				
19.1- 20.0																				
20.1- 21.0																				
21.1- 22.0																				
22.1- 23.0																				
23.1- 24.0																				
24.1- 25.0																				
25.1- 26.0																				
26.1- 27.0																				
27.1- 28.0																				
28.1- 29.0																				
29.1- 30.0																				
30.1- 31.0																				
31.1- 32.0																				
32.1- 33.0																				
33.1- 34.0																				
34.1- 35.0																				
35.1- 36.0																				
36.1- 37.0																				
37.1- 38.0																				
38.1- 39.0																				
39.1- 40.0																				
40.1- 41.0																				
41.1- 42.0																				
42.1- 43.0																				
43.1- 44.0																				
44.1- 45.0																				
45.1- 46.0																				
46.1- 47.0																				

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
47.1- 48.0																				
48.1- 49.0																				
49.1- 50.0																				
50.1- 51.0																				
51.1- 52.0																				
52.1- 53.0																				
53.1- 54.0																				
54.1- 55.0																				
55.1- 56.0																				
56.1- 57.0												1								
MEAN/DEPTH				6.8								57.0								
STD ERR																				
MEAN/TRANS			6.8								57.0									
STD ERR																				
MEAN/CAT				6.8											57.0					
STD ERR																				
RANGE(MIN)				6.8								57.0								
(MAX)				6.8								57.0								
NO.LEAD'D	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/21/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
6.1- 7.0					1					
7.1- 8.0										
8.1- 9.0										
9.1- 10.0										
10.1- 11.0										
11.1- 12.0										
12.1- 13.0										
13.1- 14.0										
14.1- 15.0										
15.1- 16.0										
16.1- 17.0										
17.1- 18.0										
18.1- 19.0										
19.1- 20.0										
20.1- 21.0										
21.1- 22.0										
22.1- 23.0										
23.1- 24.0										
24.1- 25.0										
25.1- 26.0										
26.1- 27.0										
27.1- 28.0										
28.1- 29.0										
29.1- 30.0										
30.1- 31.0										
31.1- 32.0										
32.1- 33.0										
33.1- 34.0										
34.1- 35.0										
35.1- 36.0										
36.1- 37.0										
37.1- 38.0										
38.1- 39.0										
39.1- 40.0										
40.1- 41.0										
41.1- 42.0										
42.1- 43.0										
43.1- 44.0										
44.1- 45.0										
45.1- 46.0										
46.1- 47.0										

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
47.1- 48.0										
48.1- 49.0										
49.1- 50.0										
50.1- 51.0										
51.1- 52.0										
52.1- 53.0										
53.1- 54.0										
54.1- 55.0										
55.1- 56.0										
56.1- 57.0		1								
MEAN/DEPTH	57.0			6.8						
STD ERR										
MEAN/TRANS	57.0			6.8						
STD ERR										
MEAN/DATE					31.4					
STD ERR					25.10					
RANGE(MIN)	57.0				6.8					
(MAX)	57.0				6.8					
NO.LENGTHS	0	1	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
53.1- 54.0												1								
MEAN/DEPTH												54.0								
STD ERR																				
MEAN/TRANS												54.0								
STD ERR																				
MEAN/DATE															54.0					
STD ERR																				
RANGE(MIN)												54.0								
(MAX)												54.0								
NO.LEGGED	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
53.1- 54.0		1								
MEAN/DEPTH		54.0								
STD ERR										
MEAN/TRANS	54.0									
STD ERR										
MEAN/DATE					54.0					
STD ERR										
RANGE(MIN)		54.0								
(MAX)		54.0								
NO.LENG'D	0	1	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
71.1- 72.0		1																		
MEAN/DEPTH		72.0																		
STD ERR																				
MEAN/TRANS	72.0																			
STD ERR																				
MEAN/DATE				72.0																
STD ERR																				
RANGE(MIN)		72.0																		
(MAX)		72.0																		
NO.LENG'D	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
	DAY/NIGHT COMBINED									
71.1- 72.0		1								
MEAN/DEPTH		72.0								
STD ERR										
MEAN/TRANS	72.0									
STD ERR										
MEAN/DATE					72.0					
STD ERR										
RANGE(MIN)		72.0								
(MAX)		72.0								
NO.LENGTHD	0	1	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
68.1- 69.0					1															
69.1- 70.0																				
70.1- 71.0																				
71.1- 72.0																				
72.1- 73.0																				
73.1- 74.0																				
74.1- 75.0																				
75.1- 76.0																				
76.1- 77.0																				
77.1- 78.0																				
78.1- 79.0																				
79.1- 80.0					1															
MEAN/DEPTH					74.5															
STD ERR					5.50															
MEAN/TRANS				74.5																
STD ERR				5.50																
MEAN/DATE					74.5															
STD ERR					5.50															
RANGE(MIN)					69.0															
(MAX)					80.0															
NO.LENGTH	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
68.1- 69.0					1					
69.1- 70.0										
70.1- 71.0										
71.1- 72.0										
72.1- 73.0										
73.1- 74.0										
74.1- 75.0										
75.1- 76.0										
76.1- 77.0										
77.1- 78.0										
78.1- 79.0										
79.1- 80.0					1					
MEAN/DEPTH					74.5					
STD ERR					5.50					
MEAN/TRANS				74.5						
STD ERR				5.50						
MEAN/DATE					74.5					
STD ERR					5.50					
RANGE (MIN)					69.0					
(MAX)					80.0					
NO.LENGTHS	0	0	0	0	2	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
71.1- 72.0					1															
72.1- 73.0																				
73.1- 74.0																				
74.1- 75.0								1												
75.1- 76.0																				
76.1- 77.0																				
77.1- 78.0																				
78.1- 79.0																				
79.1- 80.0																				
80.1- 81.0																				
81.1- 82.0																				
82.1- 83.0																				
83.1- 84.0																				
84.1- 85.0					1															
MEAN/DEPTH				78.5			75.0													
STD ERR				6.50																
MEAN/TRANS			78.5			75.0														
STD ERR			6.50																	
MEAN/DATE				77.3																
STD ERR				3.93																
RANGE(MIN)				72.0			75.0													
(MAX)				85.0			75.0													
NO.LENGTHS	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
71.1- 72.0					1					
72.1- 73.0										
73.1- 74.0										
74.1- 75.0								1		
75.1- 76.0										
76.1- 77.0										
77.1- 78.0										
78.1- 79.0										
79.1- 80.0										
80.1- 81.0										
81.1- 82.0										
82.1- 83.0										
83.1- 84.0										
84.1- 85.0					1					
MEAN/DEPTH					78.5			75.0		
STD ERR					6.50					
MEAN/TRANS				78.5			75.0			
STD ERR				6.50						
MEAN/DATE					77.3					
STD ERR					3.93					
RANGE(MIN)					72.0			75.0		
(MAX)					85.0			75.0		
NO.LENGTHS	0	0	0	0	2	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
74.1- 75.0															1					
MEAN/DEPTH															75.0					
STD ERR																				
MEAN/TRANS														75.0						
STD ERR																				
MEAN/DATE															75.0					
STD ERR																				
RANGE(MIN)															75.0					
(MAX)															75.0					
NO.LENGTHD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
74.1- 75.0					1					
MEAN/DEPTH					75.0					
STD ERR										
MEAN/TRANS				75.0						
STD ERR										
MEAN/DATE					75.0					
STD ERR										
RANGE(MIN)					75.0					
(MAX)					75.0					
NO.LENG'D	0	0	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/13/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
80.1- 81.0																				1
MEAN/DEPTH																				81.0
STD ERR																				
MEAN/TRANS																			81.0	
STD ERR																				
MEAN/DATE														81.0						
STD ERR																				
RANGE(MIN)																				81.0
(MAX)																				81.0
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/13/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
80.1- 81.0										1
MEAN/DEPTH										81.0
STD ERR										
MEAN/TRANS									81.0	
STD ERR										
MEAN/DATE					81.0					
STD ERR										
RANGE(MIN)										81.0
(MAX)										81.0
NO.LENG'D	0	0	0	0	0	0	0	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM) INTERVAL	DAY										NIGHT									
	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
73.1- 74.0															1					
74.1- 75.0																				
75.1- 76.0																				
76.1- 77.0																				
77.1- 78.0																				
78.1- 79.0																				
79.1- 80.0																				
80.1- 81.0																				
81.1- 82.0																		1		
82.1- 83.0																				
83.1- 84.0																				
84.1- 85.0																				
85.1- 86.0																				
86.1- 87.0																				
87.1- 88.0																				
88.1- 89.0																				
89.1- 90.0															1					
MEAN/DEPTH															82.0			82.0		
STD ERR															8.00					
MEAN/TRANS														82.0			82.0			
STD ERR														8.00						
MEAN/DATE															82.0					
STD ERR															4.62					
RANGE(MIN)															74.0			82.0		
(MAX)															90.0			82.0		
NO.LENGTH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			ROR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
73.1- 74.0					1					
74.1- 75.0										
75.1- 76.0										
76.1- 77.0										
77.1- 78.0										
78.1- 79.0										
79.1- 80.0										
80.1- 81.0										
81.1- 82.0								1		
82.1- 83.0										
83.1- 84.0										
84.1- 85.0										
85.1- 86.0										
86.1- 87.0										
87.1- 88.0										
88.1- 89.0										
89.1- 90.0					1					
MEAN/DEPTH					82.0			82.0		
STD ERR					8.00					
MEAN/TRANS				82.0			82.0			
STD ERR				8.00						
MEAN/DATE					82.0					
STD ERR					4.62					
RANGE(MIN)					74.0			82.0		
(MAX)					90.0			82.0		
NO.LENGTH	0	0	0	0	2	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
77.1- 78.0					1															
79.1- 80.0																		1		
MEAN/DEPTH					78.0													79.0		
STD ERR																				
MEAN/TRANS				78.0													79.0			
STD ERR																				
MEAN/DATE					78.0										79.0					
STD ERR																				
RANGE(MIN)					78.0													79.0		
(MAX)					78.0													79.0		
NO.LENGTH'D	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
77.1- 78.0					1					
78.1- 79.0								1		
MEAN/DEPTH					78.0			79.0		
STD ERR										
MEAN/TRANS				78.0			79.0			
STD ERR										
MEAN/DATE					78.5					
STD ERR					.50					
RANGE(MIN)					78.0			79.0		
(MAX)					78.0			79.0		
NO.LENGTHS	0	0	0	0	1	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 03/20/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
5.1- 6.0							2													4
6.1- 7.0	6	8	2	7	2	4	9	12		1	3	4	10	7	9	5	2	7	8	13
7.1- 8.0	16	14	11	15	6	19	9	2	7		11	8	33	13	10	26	18	8	6	13
8.1- 9.0				1																
MEAN/DEPTH	7.3	7.1	7.4	7.2	7.3	7.3	7.0	6.8	7.3	7.0	7.4	7.2	7.3	7.1	7.2	7.4	7.4	7.1	6.8	6.8
STD ERR	.07	.09	.12	.08	.13	.06	.12	.09	.07		.09	.15	.05	.07	.09	.06	.05	.07	.12	.10
MEAN/TRANS	7.2		7.3			7.0			7.3		7.3		7.2			7.3			6.8	
STD ERR	.06		.06			.06			.07		.08		.04			.04			.08	
MEAN/DATE					7.2										7.2					
STD ERR					.03										.03					
RANGE(MIN)	6.8	6.3	6.4	6.4	6.8	6.6	5.9	6.1	7.1	7.0	6.7	6.4	6.2	6.5	6.6	6.4	6.9	6.7	6.2	5.7
(MAX)	7.9	8.0	7.9	8.1	7.9	8.0	7.9	7.3	7.6	7.0	7.8	7.9	8.0	7.8	7.9	7.9	7.9	7.6	7.3	7.6
NO.LENG'D	22	22	13	23	8	23	20	14	7	1	14	12	43	20	19	31	20	15	14	30

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 03/20/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
5.1- 6.0							2			4
6.1- 7.0	9	12	12	14	11	9	11	19	8	14
7.1- 8.0	27	22	44	28	16	45	27	10	13	13
8.1- 9.0				1						
MEAN/DEPTH	7.3	7.2	7.3	7.2	7.2	7.3	7.2	6.9	7.0	6.8
STD ERR	.05		.05		.07		.07		.10	
		.08		.05		.04		.06		.09
MEAN/TRANS	7.2			7.2			7.2		6.9	
STD ERR	.05			.03			.04		.07	
MEAN/DATE					7.2					
STD ERR					.02					
RANGE(MIN)	6.7	6.3	6.2	6.4	6.6	6.4	5.9	6.1	6.2	5.7
(MAX)	7.9	8.0	8.0	8.1	7.9	8.0	7.9	7.6	7.6	7.6
NO.LENG'D	36	34	56	43	27	54	40	29	21	31

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 03/27/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
6.1- 7.0	3	10	2	2	1			1			2	4	4	1	1	1	1		1	
7.1- 8.0	3	6	6	1	1		1	3	1	2	4	1	6	3	3		1			
MEAN/DEPTH	7.1	7.0	7.3	6.8	7.1		7.3	7.3	7.2	7.3	7.3	6.7	7.2	7.1	7.2	6.5	7.1		6.9	
STD ERR	.05	.07	.13	.22	.10			.16		.05	.13	.19	.11	.06	.19		.50			
MEAN/TRANS	7.0			7.2			7.3		7.2		7.0			7.2			6.9		6.9	
STD ERR	.05			.11			.13		.03		.13			.07			.35			
MEAN/DATE					7.1										7.1					
STD ERR					.05										.07					
RANGE(MIN)	7.0	6.5	6.7	6.5	7.0		7.3	6.9	7.2	7.2	6.9	6.2	6.7	7.0	6.7	6.5	6.6		6.9	
(MAX)	7.3	7.4	7.8	7.2	7.2		7.3	7.7	7.2	7.3	7.7	7.3	7.7	7.3	7.6	6.5	7.6		6.9	
NO.LENG'D	6	16	8	3	2	0	1	4	1	2	6	5	10	4	4	1	2	0	1	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 03/27/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
6.1- 7.0	5	14	6	3	2	1	1	1	1	
7.1- 8.0	7	7	12	4	4		2	3	1	2
MEAN/DEPTH	7.2	6.9	7.3	7.0	7.2	6.5	7.2	7.3	7.1	7.3
STD ERR	.07	.07	.08	.12	.13		.30	.16	.15	.05
MEAN/TRANS	7.0		7.2				7.2		7.2	
STD ERR	.05		.06				.16		.09	
MEAN/DATE					7.1					
STD ERR					.04					
RANGE(MIN)	6.9	6.2	6.7	6.5	6.7	6.5	6.6	6.9	6.9	7.2
(MAX)	7.7	7.4	7.8	7.3	7.6	6.5	7.6	7.7	7.2	7.3
NO.LENG'D	12	21	18	7	6	1	3	4	2	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

	DAY										NIGHT									
LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
41.1- 42.0																				1
42.1- 43.0																				
43.1- 44.0																				
44.1- 45.0																				
45.1- 46.0																				
46.1- 47.0																				
47.1- 48.0																				1
48.1- 49.0																				1
MEAN/DEPTH																				46.3
STD ERR																				2.19
MEAN/TRANS																			46.3	
STD ERR																			2.19	
MEAN/DATE															46.3					
STD ERR															2.19					
RANGE(MIN)																				42.0
(MAX)																				49.0
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
41.1- 42.0										1
42.1- 43.0										
43.1- 44.0										
44.1- 45.0										
45.1- 46.0										
46.1- 47.0										
47.1- 48.0										1
48.1- 49.0										1
MEAN/DEPTH										46.3
STD ERR										2.19
MEAN/TRANS									46.3	
STD ERR									2.19	
MEAN/DATE					46.3					
STD ERR					2.19					
RANGE(MIN)										42.0
(MAX)										49.0
NO.LENG'D	0	0	0	0	0	0	0	0	0	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

LENGTH(MM) INTERVAL	DAY										NIGHT									
	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
54.1- 55.0												1								
55.1- 56.0																				
56.1- 57.0																				
57.1- 58.0																		1		
MEAN/DEPTH												55.0						58.0		
STD ERR																				
MEAN/TRANS												55.0					58.0			
STD ERR																				
MEAN/DATE															56.5					
STD ERR															1.50					
RANGE(MIN)												55.0						58.0		
(MAX)												55.0						58.0		
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
54.1- 55.0		1								
55.1- 56.0										
56.1- 57.0										
57.1- 58.0								1		
MEAN/DEPTH	55.0							58.0		
STD ERR										
MEAN/TRANS	55.0						58.0			
STD ERR										
MEAN/DATE					56.5					
STD ERR					1.50					
RANGE(MIN)	55.0							58.0		
(MAX)	55.0							58.0		
NO.LENG'D	0	1	0	0	0	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

	DAY										NIGHT									
LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
54.1- 55.0															1					
55.1- 56.0					1															
MEAN/DEPTH					56.0										55.0					
STD ERR																				
MEAN/TRANS				56.0										55.0						
STD ERR																				
MEAN/DATE					56.0										55.0					
STD ERR																				
RANGE(MIN)					56.0										55.0					
(MAX)					56.0										55.0					
NO.LENG'D	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
54.1- 55.0					1					
55.1- 56.0					1					
MEAN/DEPTH					55.5					
STD ERR					.50					
MEAN/TRANS				55.5						
STD ERR				.50						
MEAN/DATE					55.5					
STD ERR					.50					
RANGE(MIN)					55.0					
(MAX)					56.0					
NO.LENG'D	0	0	0	0	2	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
6.1- 7.0					1															
7.1- 8.0																				
8.1- 9.0																				
9.1- 10.0																				
10.1- 11.0																				
11.1- 12.0																				
12.1- 13.0																				
13.1- 14.0																				
14.1- 15.0																				
15.1- 16.0																				
16.1- 17.0																				
17.1- 18.0																				
18.1- 19.0																				
19.1- 20.0																				
20.1- 21.0																				
21.1- 22.0																				
22.1- 23.0																				
23.1- 24.0																				
24.1- 25.0																				
25.1- 26.0																				
26.1- 27.0																				
27.1- 28.0																				
28.1- 29.0																				
29.1- 30.0																				
30.1- 31.0																				
31.1- 32.0																				
32.1- 33.0																				
33.1- 34.0																				
34.1- 35.0																				
35.1- 36.0																				
36.1- 37.0																				
37.1- 38.0																				
38.1- 39.0																				
39.1- 40.0																				
40.1- 41.0																				
41.1- 42.0																				
42.1- 43.0																				
43.1- 44.0																				
44.1- 45.0																				
45.1- 46.0																				
46.1- 47.0																				

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
47.1- 48.0																				
48.1- 49.0																				
49.1- 50.0																				
50.1- 51.0																				
51.1- 52.0																				
52.1- 53.0																				
53.1- 54.0																				
54.1- 55.0																				
55.1- 56.0																				
56.1- 57.0												1								
MEAN/DEPTH					6.8							57.0								
STD ERR																				
MEAN/TRANS				6.8								57.0								
STD ERR																				
MEAN/DATE					6.8										57.0					
STD ERR																				
RANGE(MIN)					6.8							57.0								
(MAX)					6.8							57.0								
NO.LENG'D	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
6.1- 7.0					1					
7.1- 8.0										
8.1- 9.0										
9.1- 10.0										
10.1- 11.0										
11.1- 12.0										
12.1- 13.0										
13.1- 14.0										
14.1- 15.0										
15.1- 16.0										
16.1- 17.0										
17.1- 18.0										
18.1- 19.0										
19.1- 20.0										
20.1- 21.0										
21.1- 22.0										
22.1- 23.0										
23.1- 24.0										
24.1- 25.0										
25.1- 26.0										
26.1- 27.0										
27.1- 28.0										
28.1- 29.0										
29.1- 30.0										
30.1- 31.0										
31.1- 32.0										
32.1- 33.0										
33.1- 34.0										
34.1- 35.0										
35.1- 36.0										
36.1- 37.0										
37.1- 38.0										
38.1- 39.0										
39.1- 40.0										
40.1- 41.0										
41.1- 42.0										
42.1- 43.0										
43.1- 44.0										
44.1- 45.0										
45.1- 46.0										
46.1- 47.0										

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
47.1- 48.0										
48.1- 49.0										
49.1- 50.0										
50.1- 51.0										
51.1- 52.0										
52.1- 53.0										
53.1- 54.0										
54.1- 55.0										
55.1- 56.0										
56.1- 57.0		1								
MEAN/DEPTH		57.0			6.8					
STD ERR										
MEAN/TRANS	57.0			6.8						
STD ERR										
MEAN/DATE					31.9					
STD ERR					25.10					
RANGE(MIN)		57.0			6.8					
(MAX)		57.0			6.8					
NO.LENG'D	0	1	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
53.1- 54.0												1								
MEAN/DEPTH												54.0								
STD ERR																				
MEAN/TRANS												54.0								
STD ERR																				
MEAN/DATE															54.0					
STD ERR																				
RANGE(MIN)												54.0								
(MAX)												54.0								
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
53.1- 54.0		1								
MEAN/DEPTH		54.0								
STD ERR										
MEAN/TRANS	54.0									
STD ERR										
MEAN/DATE					54.0					
STD ERR										
RANGE(MIN)		54.0								
(MAX)		54.0								
NO.LENG'D	0	1	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/18/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
71.1- 72.0		1																		
MEAN/DEPTH		72.0																		
STD ERR																				
MEAN/TRANS	72.0																			
STD ERR																				
MEAN/DATE				72.0																
STD ERR																				
RANGE(MIN)		72.0																		
(MAX)		72.0																		
NO.LENG'D	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
71.1- 72.0		1								
MEAN/DEPTH		72.0								
STD ERR										
MEAN/TRANS	72.0									
STD ERR										
MEAN/DATE					72.0					
STD ERR										
RANGE(MIN)		72.0								
(MAX)		72.0								
NO.LENG'D	0	1	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
68.1- 69.0					1															
69.1- 70.0																				
70.1- 71.0																				
71.1- 72.0																				
72.1- 73.0																				
73.1- 74.0																				
74.1- 75.0																				
75.1- 76.0																				
76.1- 77.0																				
77.1- 78.0																				
78.1- 79.0																				
79.1- 80.0					1															
MEAN/DEPTH					74.5															
STD ERR					5.50															
MEAN/TRANS				74.5																
STD ERR				5.50																
MEAN/DATE					74.5															
STD ERR					5.50															
RANGE(MIN)					69.0															
(MAX)					80.0															
NO.LENG'D	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
68.1- 69.0					1					
69.1- 71.0										
70.1- 71.0										
71.1- 72.0										
72.1- 73.0										
73.1- 74.0										
74.1- 75.0										
75.1- 76.0										
76.1- 77.0										
77.1- 78.0										
78.1- 79.0										
79.1- 80.0					1					
MEAN/DEPTH					74.5					
STD ERR					5.50					
MEAN/TRANS				74.5						
STD ERR				5.50						
MEAN/DATE					74.5					
STD ERR					5.50					
RANGE(MIN)					69.0					
(MAX)					80.0					
NO.LENG'D	0	0	0	0	2	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/ 2/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
71.1- 72.0					1															
72.1- 73.0																				
73.1- 74.0																				
74.1- 75.0								1												
75.1- 76.0																				
76.1- 77.0																				
77.1- 78.0																				
78.1- 79.0																				
79.1- 80.0																				
80.1- 81.0																				
81.1- 82.0																				
82.1- 83.0																				
83.1- 84.0																				
84.1- 85.0					1															
MEAN/DEPTH					78.5			75.0												
STD ERR					6.50															
MEAN/TRANS				78.5			75.0													
STD ERR				6.50																
MEAN/DATE					77.3															
STD ERR					3.93															
RANGE(MIN)					72.0			75.0												
(MAX)					85.0			75.0												
NO.LENG'D	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
71.1- 72.0					1					
72.1- 73.0										
73.1- 74.0										
74.1- 75.0								1		
75.1- 76.0										
76.1- 77.0										
77.1- 78.0										
78.1- 79.0										
79.1- 80.0										
80.1- 81.0										
81.1- 82.0										
82.1- 83.0										
83.1- 84.0										
84.1- 85.0					1					
MEAN/DEPTH					78.5			75.0		
STD ERR					6.50					
MEAN/TRANS				78.5			75.0			
STD ERR				6.50						
MEAN/DATE					77.3					
STD ERR					3.93					
RANGE(MIN)					72.0			75.0		
(MAX)					85.0			75.0		
NO.LENG'D	0	0	0	0	2	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY										NIGHT									
	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
74.1- 75.0															1					
MEAN/DEPTH															75.0					
STD ERR																				
MEAN/TRANS														75.0						
STD ERR																				
MEAN/DATE															75.0					
STD ERR																				
RANGE(MIN)															75.0					
(MAX)															75.0					
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
74.1- 75.0					1					
MEAN/DEPTH					75.0					
STD ERR										
MEAN/TRANS				75.0						
STD ERR										
MEAN/DATE					75.0					
STD ERR										
RANGE(MIN)					75.0					
(MAX)					75.0					
NO.LENG'D	0	0	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 03/27/79

LENGTH(MM)	DAY										NIGHT									
INTERVAL	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
6.1- 7.0			1		1			1					3	1						
7.1- 8.0			1				1							1						
MEAN/DEPTH			7.1		7.0		7.3	6.9					6.8	7.2						
STD ERR			.40										.09							
														.15						
MEAN/TRANS				7.1			7.1							7.0						
STD ERR				.23			.20							.10						
MEAN/DATE					7.1										7.0					
STD ERR					.14										.10					
RANGE(MIN)			6.7		7.0		7.3	6.9					6.7	7.0						
(MAX)			7.5		7.0		7.3	6.9					7.0	7.3						
NO.LENGTHS	0	0	2	0	1	0	1	1	0	0	0	0	3	2	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/27/79

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
	DAY/NIGHT COMBINED									
6.1- 7.0			4	1	1			1		
7.1- 8.0			1	1			1			
MEAN/DEPTH			6.9	7.2	7.0		7.3	6.9		
STD ERR			.15							
				.15						
MEAN/TRANS				7.0			7.1			
STD ERR				.10			.20			
MEAN/DAY					7.0					
STD ERR					.09					
RANGE(MIN)			6.7	7.0	7.0		7.3	6.9		
(MAX)			7.5	7.3	7.0		7.3	6.9		
NO.LENGTHS	0	0	5	2	1	0	1	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 5/20/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
5.1- 6.0							2													
6.1- 7.0	4	4	1	3	2	2	8	6		1		1	7	2	2	5	1	4	4	3
7.1- 8.0	11	8	8	6	5	5	6	2	4		6	4	31	7	2	23	10	6	4	5
8.1- 9.0				1																9
MEAN/DEPTH	7.3	7.2	7.6	7.3	7.3	7.4	6.9	6.9	7.5	7.0	7.6	7.2	7.3	7.2	7.2	7.4	7.5	7.1	6.8	
STD ERR	.08		.11		.15		.14		.06		.07		.05		.24		.08		.18	6.9
		.13		.13		.15		.11				.20		.09		.07		.06		.14
MEAN/TRANS	7.3			7.4			7.0		7.4		7.4			7.3			7.3		6	
STD ERR	.07			.04			.09		.10		.11			.04			.05		.8	
																			.11	
MEAN/DATE					7.2										7.2					
STD ERR					.05										.04					
RANGE(MIN)	6.9	6.3	6.9	6.6	6.8	6.9	5.9	6.5	7.3	7.0	7.4	6.5	6.7	6.8	6.9	6.4	7.0			
(MAX)	7.9	8.0	7.9	8.1	7.9	8.0	7.9	7.3	7.6	7.0	7.8	7.7	8.0	7.6	7.9	7.9	7.9	6.8	6.2	5.7
																		7.4	7.3	7.6
NO.LENGTHS	15	12	9	10	7	7	16	8	4	1	6	5	38	9	4	28	11	10	8	17

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 6/23/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
5.1- 6.0							2			3
6.1- 7.0	4	5	8	5	4	7	9	10	4	6
7.1- 8.0	17	12	39	13	7	28	16	8	8	9
8.1- 9.0				1						
MEAN/DEPTH	7.4	7.2	7.4	7.2	7.3	7.4	7.1	7.0	7.0	6.9
STD ERR	.07		.04		.12		.10		.15	
		.11		.08		.06		.06		.14
MEAN/TRANS	7.3			7.3			7.2		6.9	
STD ERR	.06			.04			.05		.10	
MEAN/DATE					7.2					
STD ERR					.03					
RANGE(MIN)	6.9	6.3	6.7	6.6	6.8	6.4	5.9	6.5	6.2	5.7
(MAX)	7.9	8.0	8.0	8.1	7.9	8.0	7.9	7.4	7.6	7.6
NO.LENGTH	21	17	47	19	11	35	27	18	12	18

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
20.1- 21.0					1													1		
21.1- 22.0								1												
22.1- 23.0																				1
23.1- 24.0																				1
24.1- 25.0																				3
25.1- 26.0																				1
26.1- 27.0																				
27.1- 28.0																				
28.1- 29.0																				1
29.1- 30.0																				
30.1- 31.0																				
31.1- 32.0																				
32.1- 33.0																				1
MEAN/DEPTH					21.0			21.5										20.5		26.1
STD ERR																				1.12
MEAN/TRANS				21.0			21.5										20.5			26.1
STD ERR																				1.12
MEAN/DATE					21.3										25.4					
STD ERR					.25										1.17					
RANGE(MIN)					21.0			21.5										20.5		23.0
(MAX)					21.0			21.5										20.5		32.5
NO.LENGTH	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	8

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
20.1- 21.0					1			1		
21.1- 22.0								1		
22.1- 23.0										1
23.1- 24.0										1
24.1- 25.0										3
25.1- 26.0										1
26.1- 27.0										
27.1- 28.0										
28.1- 29.0										1
29.1- 30.0										
30.1- 31.0										
31.1- 32.0										
32.1- 33.0										1
MEAN/DEPTH					21.0			21.0		26.1
STD ERR								.50		1.12
MEAN/TRANS				21.0			21.0			26.1
STD ERR							.50			1.12
MEAN/DATE					24.7					
STD ERR					1.38					
RANGE(MIN)					21.0			20.5		23.0
(MAX)					21.0			21.5		32.5
NO.LENGTHS	0	0	0	0	1	0	0	2	0	8

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
22.1- 23.0																				1
23.1- 24.0																				
24.1- 25.0																				
25.1- 26.0																				
26.1- 27.0																				
27.1- 28.0																				
28.1- 29.0																				
29.1- 30.0																				
30.1- 31.0																				
31.1- 32.0																				1
32.1- 33.0																				
33.1- 34.0																				
34.1- 35.0																				
35.1- 36.0																				
36.1- 37.0																				1
37.1- 38.0																				
38.1- 39.0																				
39.1- 40.0																				
40.1- 41.0																				
41.1- 42.0																				
42.1- 43.0																				
43.1- 44.0																				1
MEAN/DEPTH																				33.8
STD ERR																				4.34
MEAN/TRANS																			33.8	
STD ERR																			4.34	
MEAN/DATE															33.8					
STD ERR															4.34					
RANGE(MIN)																				23.0
(MAX)																				43.5
NO.LENGTHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
22.1- 23.0										1
23.1- 24.0										
24.1- 25.0										
25.1- 26.0										
26.1- 27.0										
27.1- 28.0										
28.1- 29.0										
29.1- 30.0										
30.1- 31.0										
31.1- 32.0										1
32.1- 33.0										
33.1- 34.0										
34.1- 35.0										
35.1- 36.0										
36.1- 37.0										1
37.1- 38.0										
38.1- 39.0										
39.1- 40.0										
40.1- 41.0										
41.1- 42.0										
42.1- 43.0										
43.1- 44.0										1
MEAN/DEPTH									33.8	
STD ERR									4.34	
MEAN/TRANS									33.8	
STD ERR									4.34	
MEAN/DATE				33.8						
STD ERR				4.34						
RANGE(MIN)									23.0	
(MAX)									43.5	
NO.LENG'D	0	0	0	0	0	0	0	0	0	4

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/08/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
6.1- 7.0																1				
MEAN/DEPTH																6.4				
STD ERR																				
MEAN/TRANS																	6.4			
STD ERR																				
MEAN/DATE															6.4					
STD ERR																				
RANGE(MIN)																6.4				
(MAX)																6.4				
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/08/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
6.1- 7.0						1				
MEAN/DEPTH						6.4				
STD ERR										
MEAN/TRANS							6.4			
STD ERR										
MEAN/DATE					6.4					
STD ERR										
RANGE(MIN)						6.4				
(MAX)						6.4				
NO.LENG'D	0	0	0	0	0	1	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B
3.1- 4.0		5						4		
4.1- 5.0	2	7		2	14			7		
5.1- 6.0		4		8	22	1	2	4	2	
6.1- 7.0			1	1	2					
MEAN/DEPTH	4.6	4.5	6.8	5.6	5.2	5.5	5.5	4.6	5.4	
STD ERR	.05				.10		.15		.30	
		.15		.12				.17		
MEAN/TRANS	4.5			5.3			4.8		5.4	
STD ERR	.13			.09			.16		.30	
MEAN/DATE					5.0					
STD ERR					.08					
RANGE(MIN)	4.5	3.9	6.8	4.8	4.1	5.5	5.3	3.5	5.1	
(MAX)	4.6	5.9	6.8	6.1	6.3	5.5	5.6	5.7	5.7	
NO.LENG'D	2	16	1	11	38	1	2	15	2	0

LENGTH(MM) INTERVAL	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0		6								
4.1- 5.0	1		5			2	2	4		
5.1- 6.0	2	1	27			43	3	8		
6.1- 7.0			4		1	11				
MEAN/DEPTH	5.2	3.9	5.6		6.4	5.7	5.3	5.2		
STD ERR	.48		.07				.31			
		.23				.06		.17		
MEAN/TRANS	4.3			5.6			5.6			
STD ERR	.28			.07			.06			
MEAN/DATE					5.5					
STD ERR					.06					
RANGE(MIN)	4.2	3.4	4.5		6.4	4.4	4.5	4.2		
(MAX)	5.7	5.2	6.7		6.4	6.7	6.0	6.0		
NO.LENG'D	3	7	36	0	1	56	5	12	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0		11						4		
4.1- 5.0	3	7	5	2	14	2	2	11		
5.1- 6.0	2	5	27	8	22	44	5	12	2	
6.1- 7.0			5	1	3	11				
MEAN/DEPTH	4.9	4.3	5.6	5.6	5.2	5.7	5.3	4.9	5.4	
STD ERR	.31		.08		.10		.22		.30	
		.13		.12		.05		.13		
MEAN/TRANS	4.4			5.4			5.4			5.4
STD ERR	.13			.06			.07			.30
MEAN/DATE					5.3					
STD ERR					.05					
RANGE(MIN)	4.2	3.4	4.5	4.8	4.1	4.4	4.5	3.5	5.1	
(MAX)	5.7	5.9	6.8	6.1	6.4	6.7	6.0	6.0	5.7	
NO.LENG'D	5	23	37	11	39	57	7	27	2	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0																			3	
4.1- 5.0	2	6			1			3	1		1	2	3				3	1	5	3
5.1- 6.0		17		3	8		2	24			2	2	6	4	3	8	14	7	8	24
6.1- 7.0	3	35		19	18		7	26		1	28	9	29	20	11	48	22	21	21	22
7.1- 8.0		2		2			1	7				1	3	1		4	1	13	1	3
8.1- 9.0					1								1							
MEAN/DEPTH	5.8	6.1		6.6	6.2		6.6	6.2	5.0	7.0	6.4	6.1	6.4	6.5	6.5	6.5	6.2	6.6	5.9	6.1
STD ERR	.35				.11		.20				.07		.11		.11		.11		.17	
		.09		.09				.09				.19		.07		.06		.09		.09
MEAN/TRANS	6.1			6.4			6.2		6.0		6.3			6.4			6.5		6.0	
STD ERR	.09			.08			.09		1.00		.08			.07			.05		.09	
MEAN/DATE					6.2										6.3					
STD ERR					.05										.04					
RANGE(MIN)	4.9	4.1		5.5	5.0		5.1	4.1	5.0	7.0	5.0	4.5	4.1	5.8	5.7	5.1	4.2	4.8	3.2	4.8
(MAX)	6.6	7.3		7.2	8.2		7.2	7.5	5.0	7.0	7.0	7.1	8.6	7.2	7.0	7.1	7.1	7.6	7.2	7.9
NO.LENG'D	5	60	0	24	28	0	10	60	1	1	31	14	42	25	14	60	40	42	38	52

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0									3	
4.1- 5.0	3	8	3		1		3	4	6	3
5.1- 6.0	2	19	6	7	11	8	16	31	8	24
6.1- 7.0	31	44	29	39	29	48	29	47	21	23
7.1- 8.0		3	3	3		4	2	20	1	3
8.1- 9.0			1		1					
MEAN/DEPTH	6.3	6.1	6.4	6.5	6.3	6.5	6.2	6.4	5.9	6.1
STD ERR	.09	.08	.11	.06	.08	.06	.10	.07	.16	.09
MEAN/TRANS	6.2		6.4			6.4			6.0	
STD ERR	.06		.05			.04			.09	
MEAN/DATE					6.3					
STD ERR					.03					
RANGE(MIN)	4.9	4.1	4.1	5.5	5.0	5.1	4.2	4.1	3.2	4.8
(MAX)	7.0	7.3	8.6	7.2	8.2	7.1	7.2	7.6	7.2	7.9
NO.LENG'D	36	74	42	49	42	60	50	102	39	53

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
2.1- 3.0										1										1
3.1- 4.0	2	1		2			5			1	1				1			2		
4.1- 5.0	10	5		9		2	18	1			5	1	1		6		4	4		
5.1- 6.0	16	10	2	16	17		21	29			24	2	23		36	5	27	45	1	
6.1- 7.0	6	3		23	43		11	25			14	10	31	1	17	8	17	9	1	1
7.1- 8.0		1		3			5	5				2	4			6	10		2	
8.1- 9.0													1				1			
MEAN/DEPTH	5.4	5.4	5.8	5.8	6.2	4.4	5.4	6.1		4.0	5.8	6.4	6.3	6.6	5.7	6.6	6.2	5.7	7.0	4.9
STD ERR	.14	.16	.25	.13	.04	.10	.13	.08			.09	.19	.08		.09	.18	.11	.08	.55	1.95
MEAN/TRANS	5.4		6.0			5.7			4.0		6.0		6.0			6.0			6.3	
STD ERR	.10		.07			.08					.09		.06			.07			.75	
MEAN/DATE				5.8										6.0						
STD ERR				.05										.04						
RANGE(MIN)	3.5	4.0	5.5	3.5	5.3	4.3	3.5	5.0		4.0	3.9	4.1	4.9	6.6	3.1	5.1	4.9	3.6	5.4	3.0
(MAX)	6.5	7.4	6.0	7.4	6.8	4.5	7.7	7.8		4.0	6.9	7.2	8.1	6.6	7.0	7.7	8.2	7.0	7.8	6.9
NO.LENG'D	34	20	2	53	60	2	60	60	0	1	44	15	60	1	60	19	59	60	4	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
2.1- 3.0										1
3.1- 4.0	3	1		2	1		5	2		1
4.1- 5.0	15	6	1	9	6	2	22	5		
5.1- 6.0	40	12	25	16	53	5	48	74	1	
6.1- 7.0	20	13	31	24	60	8	28	34	1	1
7.1- 8.0		3	4	3		6	15	5	2	
8.1- 9.0			1				1			
MEAN/DEPTH	5.6	5.9	6.2	5.9	5.9	6.4	5.8	5.9	7.0	4.6
STD ERR	.08		.08		.05		.09		.55	
		.15		.13		.22		.06		1.17
MEAN/TRANS	5.7		6.0			5.9			6.0	
STD ERR	.07		.05			.05			.71	
MEAN/DATE				5.9						
STD ERR				.03						
RANGE(MIN)	3.5	4.0	4.9	3.5	3.1	4.3	3.5	3.6	5.4	3.0
(MAX)	6.9	7.4	8.1	7.4	7.0	7.7	8.2	7.8	7.8	6.9
NO.LENG'D	78	35	62	54	120	21	119	120	4	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
2.1- 3.0					2			1												
3.1- 4.0	6			8	14		6	31	4	8	2	6	2					12		1
4.1- 5.0				2		3	8	11	1	1		2	5		1	3	3	40		
5.1- 6.0				7	6	1	8	15			4	2	15	7	9	3	2	7	1	
6.1- 7.0				4	1		3	2		1	1		5	3	2	2	4	1		
7.1- 8.0					1		1										1			
8.1- 9.0				1									1							
9.1- 10.0																				
10.1- 11.0														1						
MEAN/DEPTH	3.9			5.1	4.3	4.5	5.0	4.3	3.7	3.9	5.2	4.2	5.5	6.2	5.6	5.5	5.8	4.5	5.9	4.0
STD ERR	.06				.27		.21		.19		.36		.18		.14		.33			
				.30		.26		.12		.29		.31		.43		.30		.07		
MEAN/TRANS	3.9			4.7			4.5		3.9		4.6			5.7			4.7		4.9	
STD ERR	.06			.21			.11		.20		.25			.14			.09		.95	
MEAN/DATE					4.5										5.1					
STD ERR					.09										.08					
RANGE(MIN)	3.7			3.2	2.9	4.2	3.5	3.0	3.1	3.1	3.7	3.4	3.6	5.2	4.5	4.2	4.3	3.5	5.9	4.0
(MAX)	4.0			9.0	8.0	5.3	7.7	6.4	4.2	6.5	6.2	6.0	8.3	10.2	6.6	6.5	7.2	6.8	5.9	4.0
NO.LENGTHD	6	0	0	22	24	4	26	60	5	10	7	10	28	11	12	8	10	60	1	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
2.1- 3.0					2			1		
3.1- 4.0	8	6	2	8	14		6	43	4	9
4.1- 5.0		2	5	2	1	6	11	51	1	1
5.1- 6.0	4	2	15	14	15	4	10	22	1	
6.1- 7.0	1		5	7	3	2	7	3		1
7.1- 8.0					1		2			
8.1- 9.0			1	1						
9.1- 10.0										
10.1- 11.0				1						
MEAN/DEPTH	4.6	4.2	5.5	5.5	4.7	5.2	5.2	4.4	4.1	4.0
STD ERR	.27	.31	.18	.26	.21	.26	.19	.07	.39	.27
MEAN/TRANS	4.4		5.2			4.6			4.0	
STD ERR	.20		.13			.07			.21	
MEAN/DATE					4.8					
STD ERR					.06					
RANGE(MIN)	3.7	3.4	3.6	3.2	2.9	4.2	3.5	3.0	3.1	3.1
(MAX)	6.2	6.0	8.3	10.2	8.0	6.5	7.7	6.8	5.9	6.5
NO.LENG'D	13	10	28	33	36	12	36	120	6	11

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
2.1- 3.0				1																
3.1- 4.0		4		1	7			2		5		5	4					1	1	
4.1- 5.0		7		4	10		4	8		6		5	26	2	1	16	5		11	
5.1- 6.0		1	1	23	8		2	6				1	27	2	1	35	2	1	29	1
6.1- 7.0		1		2									3		2	8			1	
7.1- 8.0																				
8.1- 9.0		1												1					2	
9.1- 10.0																1			1	1
MEAN/DEPTH		4.7	5.9	5.3	4.6		5.0	4.8		4.1		4.2	5.0	5.7	5.6	5.5	5.0	4.2	5.5	7.1
STD ERR		.39		.12	.15		.20	.16		.17		.14	.08	.71	.42	.10	.19	.90	.16	2.00
MEAN/TRANS	4.7			5.0			4.9		4.1		4.2			5.1			5.4			5.6	
STD ERR	.39			.10			.13		.17		.14			.09			.10			.17	
MEAN/DATE					4.8										5.3					
STD ERR					.09										.07					
RANGE(MIN)		3.1	5.9	3.0	3.4		4.5	3.9		3.2		3.8	3.7	4.1	4.5	4.2	4.5	3.3	3.5	5.1
(MAX)		8.9	5.9	6.6	6.0		5.7	5.9		4.9		5.5	6.6	8.3	6.4	9.6	5.9	5.1	10.0	9.1
NO.LENG'D	0	14	1	31	25	0	6	16	0	11	0	11	60	5	4	60	7	2	45	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
2.1- 3.0				1						
3.1- 4.0		9	4	1	7			3	1	5
4.1- 5.0		12	26	6	11	16	9	8	11	6
5.1- 6.0		2	28	25	9	35	4	7	29	1
6.1- 7.0		1	3	2	2	8			1	
7.1- 8.0										
8.1- 9.0		1		1					2	
9.1- 10.0						1			1	1
MEAN/DEPTH		4.5	5.0	5.3	4.7	5.5	5.0	4.8	5.5	4.6
STD ERR			.08		.15		.13		.16	
		.23		.14		.10		.17		.41
MEAN/TRANS	4.5			5.0			5.3			5.3
STD ERR	.23			.07			.08			.16
MEAN/DATE					5.1					
STD ERR					.05					
RANGE(MIN)		3.1	3.7	3.0	3.4	4.2	4.5	3.3	3.5	3.2
(MAX)		8.9	6.6	8.3	6.4	9.6	5.9	5.9	10.0	9.1
NO.LENG'D	0	25	61	36	29	60	13	18	45	13

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0	1	2			1			1		1								1		
4.1- 5.0	1	1		1	1			1						2			3			4
5.1- 6.0	5	2		2	10		1	6	1	14	4			26	16		15	5		1	43
6.1- 7.0					1			2		5		2		2	1		4				11
7.1- 8.0										1											
8.1- 9.0					1																2
MEAN/DEPTH	5.2	4.7		5.4	5.6		5.7	5.5	5.4	5.9	5.7	6.5		5.5	5.8		5.6	5.6	3.4	5.7	5.8
STD ERR	.29				.30						.13			.07				.14			
		.43		.25				.23		.16		.10			.06		.10				.09
MEAN/TRANS	5.3			5.6			5.5		5.9		6.0			5.6				5.5		5.8	
STD ERR	.24			.25			.21		.15		.19			.05				.12		.08	
MEAN/DATE					5.6											5.7					
STD ERR					.11											.05					
RANGE(MIN)	3.6	3.6		4.9	4.0		5.7	3.7	5.4	3.8	5.4	6.4		4.1	5.2		4.3	5.2	3.4	5.7	4.5
(MAX)	5.8	5.7		5.7	9.0		5.7	6.4	5.4	8.0	6.0	6.6		6.1	6.1		6.3	5.9	3.4	5.7	9.0
NO.LENG'D	7	5	0	3	14	0	1	10	1	21	4	2		30	17	0	22	5	1	1	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0	1	2			1			2		1
4.1- 5.0	1	1	2	1	1	3		1		4
5.1- 6.0	9	2	26	18	10	15	6	6	2	57
6.1- 7.0		2	2	1	1	4		2		16
7.1- 8.0										1
8.1- 9.0					1					2
MEAN/DEPTH	5.4	5.2	5.5	5.7	5.6	5.6	5.6	5.3	5.6	5.8
STD ERR	.20		.07		.30		.12		.15	
		.44		.07		.10		.28		.08
MEAN/TRANS	5.3			5.6			5.5		5.8	
STD ERR	.20			.08			.10		.07	
MEAN/DATE					5.7					
STD ERR					.05					
RANGE(MIN)	3.6	3.6	4.1	4.9	4.0	4.3	5.2	3.4	5.4	3.8
(MAX)	6.0	6.6	6.1	6.1	9.0	6.3	5.9	6.4	5.7	9.0
NO.LENG'D	11	7	30	20	14	22	6	11	2	81

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
3.1- 4.0	1									4								1		
4.1- 5.0	2	8	1	1			1							1	2		1	3		1
5.1- 6.0	14	25	4	12	11		4	14		31	2	3	25	32	25	7	8	5	5	7
6.1- 7.0	3	2	1	2	5	1		1		22			6	3	6	2	2	3	1	2
7.1- 8.0										1										
8.1- 9.0										2										
9.1- 10.0																				
10.1- 11.0																			1	
MEAN/DEPTH	5.5	5.4	5.6	5.6	5.8	6.1	5.3	5.8		5.9	5.4	5.3	5.8	5.6	5.6	5.8	5.7	5.6	6.6	5.7
STD ERR	.14	.08	.16	.10	.07		.32	.07		.09	.15	.19	.06	.05	.08	.09	.17	.25	.72	.15
MEAN/TRANS	5.4		5.7			5.7			5.9		5.3		5.7			5.6			6.0	
STD ERR	.07		.06			.10			.09		.11		.04			.11			.32	
MEAN/DATE				5.7										5.7						
STD ERR				.05										.05						
RANGE(MIN)	3.6	4.3	5.0	5.0	5.3	6.1	4.1	5.2		4.4	5.2	5.1	5.2	4.7	4.2	5.4	5.0	4.0	5.5	4.6
(MAX)	6.4	6.7	6.1	6.3	6.3	6.1	5.9	6.1		8.6	5.5	5.7	6.6	6.2	6.2	6.2	6.8	6.7	10.9	6.2
NO.LENG'D	20	35	6	15	16	1	5	15	0	60	2	3	31	36	33	9	11	12	7	10

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
3.1- 4.0	1							1		
4.1- 5.0	2	8	1	2	2		2	3		5
5.1- 6.0	16	28	29	44	36	7	12	19	5	38
6.1- 7.0	3	2	7	5	11	3	2	4	1	24
7.1- 8.0										1
8.1- 9.0										2
9.1- 10.0										
10.1- 11.0									1	
MEAN/DEPTH	5.5	5.4	5.8	5.6	5.7	5.8	5.5	5.7	6.6	5.9
STD ERR	.13	.07	.05	.05	.06	.09	.15	.12	.72	.08
MEAN/TRANS	5.4		5.7			5.7			6.0	
STD ERR	.07		.03			.08			.10	
MEAN/DATE					5.7					
STD ERR					.03					
RANGE(MIN)	3.6	4.3	5.0	4.7	4.2	5.4	4.1	4.0	5.5	4.4
(MAX)	6.4	6.7	6.6	6.3	6.3	6.2	6.8	6.7	10.9	8.6
NO.LENG'D	22	38	37	51	49	10	16	27	7	70

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0	1	1			1						4				2		2			
4.1- 5.0	8	13		2	2						2	2	2	3	4		1			
5.1- 6.0	13	44		6	20		2				5	4	7	7	10	2	5	1		
6.1- 7.0	3	2			4						1	2	3	2	1			1		
7.1- 8.0																				
8.1- 9.0					1															
9.1- 10.0																				
10.1- 11.0																				
11.1- 12.0																				
12.1- 13.0																				
13.1- 14.0																				
14.1- 15.0																				1
																				1
MEAN/DEPTH	5.2	5.3		5.4	5.6		5.6				4.8	5.5	5.5	5.5	5.1	5.8	4.9	6.2		14.1
STD ERR	.16				.15		.10				.25		.21		.20		.40			
		.07		.15								.24		.22		.10		.55		.65
MEAN/TRANS	5.3			5.5			5.6				5.1			5.3			5.3			14.1
STD ERR	.07			.12			.10				.19			.12			.31			.65
MEAN/DATE					5.3										5.5					
STD ERR					.06										.19					
RANGE(MIN)	3.1	3.9		4.6	3.8		5.5				3.5	4.7	4.1	4.6	3.5	5.7	3.1	5.6		13.5
(MAX)	6.6	6.1		5.8	8.1		5.7				6.2	6.7	6.6	6.8	6.5	5.9	6.0	6.7		14.8
NO.LENG'D	25	60	0	8	28	0	2	0	0	0	12	8	12	12	17	2	8	2	0	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0	5	1			3		2			
4.1- 5.0	10	15	2	5	6		1			
5.1- 6.0	18	48	7	13	30	2	7	1		
6.1- 7.0	4	4	3	2	5			1		
7.1- 8.0										
8.1- 9.0					1					
9.1- 10.0										
10.1- 11.0										
11.1- 12.0										
12.1- 13.0										
13.1- 14.0										1
14.1- 15.0										1
MEAN/DEPTH	5.0	5.3	5.5	5.5	5.4	5.8	5.1	6.2		14.1
STD ERR	.14		.21		.12		.32			
		.07		.14		.10		.55		.65
MEAN/TRANS	5.2			5.4			5.3		14.1	
STD ERR	.07			.09			.26		.65	
MEAN/DATE					5.4					
STD ERR					.08					
RANGE(MIN)	3.1	3.9	4.1	4.6	3.5	5.7	3.1	5.6		13.5
(MAX)	6.6	6.7	6.6	6.8	8.1	5.9	6.0	6.7		14.8
NO.LENG'D	37	68	12	20	45	2	10	2	0	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0		1				1	1	1			1	1		1				3		
4.1- 5.0				2				5			1	3	8	4			2	7		
5.1- 6.0	5	1		18	13		4	16			6	7	27	30	5	6	6	5	1	
6.1- 7.0	2			1	1		2				1	1		9	1	3	8		1	
7.1- 8.0				2								1			1	1	2	1	1	
8.1- 9.0																		1		
MEAN/DEPTH	6.0	5.0		5.7	5.6	3.6	5.5	5.2			5.3	5.5	5.2	5.6	5.8	5.9	6.0	5.1	6.7	
STD ERR	.11				.10		.35				.20		.05		.25		.19		.49	
		1.00		.14				.11				.28		.09		.24		.30		
MEAN/TRANS	5.8			5.6			5.3				5.4			5.5			5.6		6.7	
STD ERR	.23			.10			.13				.18			.06			.16		.49	
MEAN/DATE					5.5										5.5					
STD ERR					.08										.06					
RANGE(MIN)	5.7	4.0		4.4	5.1	3.6	3.6	4.0			4.0	3.9	4.4	3.9	5.2	5.1	4.3	3.9	5.8	
(MAX)	6.5	6.0		7.5	6.6	3.6	6.5	5.9			6.2	7.8	5.7	6.7	7.1	7.6	7.5	8.1	7.5	
NO.LENG'D	7	2	0	23	14	1	7	22	0	0	9	13	35	44	7	10	18	17	3	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0	1	2		1		1	1	4		
4.1- 5.0	1	3	8	6			2	12		
5.1- 6.0	11	8	27	48	18	6	10	21	1	
6.1- 7.0	3	1		10	2	3	10		1	
7.1- 8.0		1		2	1	1	2	1	1	
8.1- 9.0								1		
MEAN/DEPTH	5.6	5.4	5.2	5.6	5.6	5.7	5.9	5.2	6.7	
STD ERR	.15		.05		.11		.17		.49	
		.26		.08		.31		.14		
MEAN/TRANS	5.5			5.5			5.5		6.7	
STD ERR	.15			.05			.11		.49	
MEAN/DATE					5.5					
STD ERR					.05					
RANGE(MIN)	4.0	3.9	4.4	3.9	5.1	3.6	3.6	3.9	5.8	
(MAX)	6.5	7.8	5.7	7.5	7.1	7.6	7.5	8.1	7.5	
NO.LENG'D	16	15	35	67	21	11	25	39	3	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/19/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
4.1- 5.0		4														3	1	1		1
5.1- 6.0		29		5	1		1	2			5	1	27	8	3	14	11	2	9	1
6.1- 7.0	2	5										1	11	5	9	5	9	4	2	2
7.1- 8.0		1										1	1		1	1	1	1		2
8.1- 9.0																1	1			
9.1- 10.0																				
10.1- 11.0																				
11.1- 12.0																				
12.1- 13.0																				
13.1- 14.0					1															
14.1- 15.0					1															
15.1- 16.0																				
16.1- 17.0																				
17.1- 18.0																				
18.1- 19.0					1															
MEAN/DEPTH	6.3	5.6		5.5	13.1		5.4	5.8			5.8	6.4	5.9	5.9	6.4	5.9	6.2	6.1	5.8	6.4
STD ERR	.20	.07		.12	2.68			.15			.11	.38	.07	.12	.15	.16	.17	.23	.15	.48
MEAN/TRANS	5.7			8.9			5.6				6.0			6.0			6.0			6.0	
STD ERR	.07			1.73			.15				.19			.06			.11			.20	
MEAN/DATE					6.2										6.0					
STD ERR					.33										.05					
RANGE(MIN)	6.1	4.6		5.1	5.8		5.4	5.6			5.5	6.0	5.1	5.1	5.5	4.4	4.3	5.0	5.2	4.3
(MAX)	6.5	7.1		5.8	18.6		5.4	5.9			6.0	7.2	7.5	6.6	7.2	8.1	8.4	7.1	7.0	7.4
NO.LENG'D	2	39	0	5	4	0	1	2	0	0	5	3	39	13	13	24	23	8	11	6

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/19/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
4.1- 5.0		4				3	1	1		1
5.1- 6.0	5	30	27	13	4	14	12	4	9	1
6.1- 7.0	2	6	11	5	9	5	9	4	2	2
7.1- 8.0		2	1		1	1	1	1		2
8.1- 9.0						1	1			
9.1- 10.0										
10.1- 11.0										
11.1- 12.0										
12.1- 13.0										
13.1- 14.0					1					
14.1- 15.0					1					
15.1- 16.0										
16.1- 17.0										
17.1- 18.0										
18.1- 19.0					1					
MEAN/DEPTH	5.9	5.7	5.9	5.8	8.0	5.9	6.2	6.0	5.8	6.4
STD ERR	.13	.08	.07	.10	.91	.16	.16	.19	.15	.48
MEAN/TRANS	5.7		6.4			6.0			6.0	
STD ERR	.07		.23			.10			.20	
MEAN/DATE					6.1					
STD ERR					.10					
RANGE(MIN)	5.5	4.6	5.1	5.1	5.5	4.4	4.3	5.0	5.2	4.3
(MAX)	6.5	7.2	7.5	6.6	18.6	8.1	8.4	7.1	7.0	7.4
NO.LENG'D	7	42	39	18	17	24	24	10	11	6

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0	1																			
4.1- 5.0		1						2		1				1	1					
5.1- 6.0	1	2		2	7			15		2	1	1		5	13		1	2		
6.1- 7.0					2			6		1			2	4	12	1	2	3		
7.1- 8.0		1			1			6			1		2	1	2	1	3			
8.1- 9.0								6								1	1			
9.1- 10.0								1												
10.1- 11.0																				
11.1- 12.0																	1			
12.1- 13.0								2												
13.1- 14.0																				
14.1- 15.0																	1			
15.1- 16.0																				
16.1- 17.0																				
17.1- 18.0																				
18.1- 19.0																				
19.1- 20.0																				1
MEAN/DEPTH	4.8	5.8		5.7	6.0			6.9		5.6	6.7	5.4	7.2	6.0	6.1	7.2	8.4	6.2		19.1
STD ERR	.85				.19						1.00		.20		.12		.89			
		.50		.05				.31		.36				.30		.52		.17		
MEAN/TRANS	5.4			5.9			6.9			5.6	6.3			6.2			7.6			19.1
STD ERR	.44			.16			.31			.36	.72			.12			.53			
MEAN/DATE					6.5										6.8					
STD ERR					.22										.26					
RANGE(MIN)	3.9	4.9		5.6	5.2			4.9		5.0	5.7	5.4	6.7	4.1	5.0	6.3	5.9	5.8		19.1
(MAX)	5.6	7.2		5.7	7.1			12.6		6.6	7.7	5.4	7.5	7.8	7.5	8.1	14.1	6.6		19.1
NO.LENG'D	2	4	0	2	10	0	0	38	0	4	2	1	4	11	28	3	9	5	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
3.1- 4.0	1									
4.1- 5.0		1		1	1			2		1
5.1- 6.0	2	3		7	20		1	17		2
6.1- 7.0			2	4	14	1	2	9		1
7.1- 8.0	1	1	2	1	3	1	3	6		
8.1- 9.0						1	1	6		
9.1- 10.0								1		
10.1- 11.0										
11.1- 12.0							1			
12.1- 13.0								2		
13.1- 14.0										
14.1- 15.0							1			
15.1- 16.0										
16.1- 17.0										
17.1- 18.0										
18.1- 19.0										
19.1- 20.0										1
MEAN/DEPTH	5.7	5.7	7.2	5.9	6.1	7.2	8.4	6.8		8.3
STD ERR	.78		.20		.10		.89			
		.39		.25		.52		.28		2.71
MEAN/TRANS	5.7			6.1			7.1			8.3
STD ERR	.38			.10			.27			2.71
MEAN/DATE					6.6					
STD ERR					.17					
RANGE(MIN)	3.9	4.9	6.7	4.1	5.0	6.3	5.9	4.9		5.0
(MAX)	7.7	7.2	7.5	7.8	7.5	8.1	14.1	12.6		19.1
NO.LENG'D	4	5	4	13	38	3	9	43	0	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0	1																			
4.1- 5.0		1			2								1			1	1			
5.1- 6.0		1		2	3		1	5						2	1	1	22	2	1	2
6.1- 7.0		1			1												1	1	5	3
7.1- 8.0					1								1	1	1	2	4		1	1
8.1- 9.0								1									1	2		2
9.1- 10.0																	1	2		
10.1- 11.0		1							1									1		1
11.1- 12.0												1	1						1	
12.1- 13.0																	2		3	
13.1- 14.0																				1
14.1- 15.0											1							1		
15.1- 16.0																				
16.1- 17.0																			1	2
17.1- 18.0																				
18.1- 19.0																				
19.1- 20.0											1	1								
20.1- 21.0												1								1
21.1- 22.0												1								
MEAN/DEPTH	3.9	6.8		5.4	5.7		5.2	6.1	10.8		16.9	18.4	8.0	6.1	6.8	6.5	6.5	8.7	9.3	10.1
STD ERR		1.34		.10	.38			.49			2.80	2.35	2.04	.50	.95	.75	.35	.95	1.02	1.36
MEAN/TRANS	6.2			5.6			5.9		10.8		17.9			7.0			6.9		9.7	
STD ERR	1.18			.29			.43				1.68			.78			.34		.85	
MEAN/DATE					6.1										8.5					
STD ERR					.38										.46					
RANGE(MIN)	3.9	5.0		5.3	4.1		5.2	5.5	10.8		14.1	11.5	5.0	5.6	5.8	4.8	4.9	5.4	6.0	5.5
(MAX)	3.9	10.7		5.5	7.2		5.2	8.5	10.8		19.7	21.7	11.9	7.1	7.7	8.0	12.9	14.3	16.5	20.2
NO.LENG'D	1	4	0	2	7	0	1	6	1	0	2	4	3	3	2	4	32	9	12	13

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
3.1- 4.0	1									
4.1- 5.0		1	1		2	1	1			
5.1- 6.0		1		4	4	1	23	7	1	2
6.1- 7.0		1			1		1	1	5	3
7.1- 8.0			1	1	2	2	4		1	1
8.1- 9.0							1	3		2
9.1- 10.0							1	2		
10.1- 11.0		1						1	1	1
11.1- 12.0		1	1						1	
12.1- 13.0							2		3	
13.1- 14.0										1
14.1- 15.0	1							1		
15.1- 16.0										
16.1- 17.0									1	2
17.1- 18.0										
18.1- 19.0										
19.1- 20.0	1	1								
20.1- 21.0		1								1
21.1- 22.0		1								
MEAN/DEPTH	12.6	12.6	8.0	5.8	5.9	6.5	6.4	7.6	9.4	10.1
STD ERR	4.63	2.54	2.04	.32	.36	.75	.34	.68	.95	1.36
MEAN/TRANS	12.6		6.3			6.8			9.8	
STD ERR	2.11		.42			.30			.81	
MEAN/DATE					8.0					
STD ERR					.38					
RANGE(MIN)	3.9	5.0	5.0	5.3	4.1	4.8	4.9	5.4	6.0	5.5
(MAX)	19.7	21.7	11.9	7.1	7.7	8.0	12.9	14.3	16.5	20.2
NO.LENG'D	3	8	3	5	9	4	33	15	13	13

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
5.1- 6.0														1	1	1		2		
6.1- 7.0					3									1	1	1				
7.1- 8.0														1		2	1			2
8.1- 9.0														1		1		1		
9.1- 10.0																			1	
10.1- 11.0																				
11.1- 12.0		1																		
12.1- 13.0								1												
13.1- 14.0																				
14.1- 15.0																				
15.1- 16.0												1								
16.1- 17.0																		1		
17.1- 18.0																				
18.1- 19.0																				
19.1- 20.0																				
20.1- 21.0																				1
MEAN/DEPTH		11.6			6.2			12.6				15.7		6.9	6.3	7.3	7.5	9.1	9.8	11.8
STD ERR					.06										.55					
														.60		.50		2.43		4.17
MEAN/TRANS		11.6			6.2			12.6				15.7			6.7			8.0		11.3
STD ERR					.06										.43			.96		2.99
MEAN/DATE					8.6										8.6					
STD ERR					1.45										.85					
RANGE(MIN)		11.6			6.1			12.6				15.7		5.7	5.7	5.7	7.5	5.7	9.8	7.3
(MAX)		11.6			6.3			12.6				15.7		8.1	6.8	8.3	7.5	16.1	9.8	20.1
NO.LENG'D	0	1	0	0	3	0	0	1	0	0	0	1	0	4	2	5	1	4	1	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
5.1- 6.0				1	1	1		2		
6.1- 7.0				1	4	1				
7.1- 8.0				1		2	1			2
8.1- 9.0				1		1		1		
9.1- 10.0									1	
10.1- 11.0										
11.1- 12.0		1								
12.1- 13.0								1		
13.1- 14.0										
14.1- 15.0										
15.1- 16.0		1								
16.1- 17.0								1		
17.1- 18.0										
18.1- 19.0										
19.1- 20.0										
20.1- 21.0										1
MEAN/DEPTH	13.7		6.9	6.2		7.3	7.5	9.8	9.8	11.8
STD ERR	2.05		.60	.18		.50		2.01		4.17
MEAN/TRANS	13.7		6.5			8.4			11.3	
STD ERR	2.05		.29			.97			2.99	
MEAN/DATE				8.6						
STD ERR				.73						
RANGE(MIN)	11.6		5.7	5.7		5.7	7.5	5.7	9.8	7.3
(MAX)	15.7		8.1	6.8		8.3	7.5	16.1	9.8	20.1
NO.LENG'D	0	2	0	4	5	5	1	5	1	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
7.1- 8.0										1										
8.1- 9.0																				
9.1- 10.0							1										1			
10.1- 11.0							1											1		
11.1- 12.0							4										1			2
12.1- 13.0							6													2
13.1- 14.0							4													2
14.1- 15.0							1													3
15.1- 16.0							2													2
16.1- 17.0							1													
17.1- 18.0					1															
18.1- 19.0																				2
19.1- 20.0																				1
20.1- 21.0							1													1
21.1- 22.0										1										1
22.1- 23.0																				
23.1- 24.0																				
24.1- 25.0												1								
25.1- 26.0																				1
26.1- 27.0																				1
27.1- 28.0																				1
28.1- 29.0																				
29.1- 30.0																				
30.1- 31.0																				
31.1- 32.0																				
32.1- 33.0																				
33.1- 34.0																				1
MEAN/DEPTH				17.5			13.3		14.7		25.0						10.6	10.8		18.3
STD ERR							.52		7.30								1.15			1.39
MEAN/TRANS			17.5				13.3		14.7		25.0						10.6			18.3
STD ERR							.52		7.30								.67			1.39
MEAN/DATE				13.6										17.6						
STD ERR				.66										1.31						
RANGE(MIN)				17.5			9.2		7.4		25.0						9.4	10.8		11.2
(MAX)				17.5			20.5		22.0		25.0						11.7	10.8		34.0
NO.LENGTH	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NO.LENGTH 0 0 0 0 1 0 0 21 0 2 0 1 0 0 0 0 2 1 0 20

L12A 03/06/80 180

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
7.1- 8.0										1
8.1- 9.0										
9.1- 10.0							1	1		
10.1- 11.0								2		
11.1- 12.0							1	4		2
12.1- 13.0								6		2
13.1- 14.0								4		2
14.1- 15.0								1		3
15.1- 16.0								2		2
16.1- 17.0								1		
17.1- 18.0					1					
18.1- 19.0										2
19.1- 20.0										1
20.1- 21.0								1		1
21.1- 22.0										2
22.1- 23.0										
23.1- 24.0										
24.1- 25.0		1								
25.1- 26.0										1
26.1- 27.0										1
27.1- 28.0										1
28.1- 29.0										
29.1- 30.0										
30.1- 31.0										
31.1- 32.0										
32.1- 33.0										
33.1- 34.0										1
MEAN/DEPTH	25.0		17.5			10.6	13.2		17.9	
STD ERR						1.15				
								.51	1.37	
MEAN/TRANS	25.0		17.5			12.9			17.9	
STD ERR						.50			1.37	
MEAN/DATE				15.6						
STD ERR				.78						
RANGE(MIN	25.0		17.5			9.4	9.2		7.4	
(MAX)	25.0		17.5			11.7	20.5		34.0	

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
5.1- 6.0							1													
6.1- 7.0																				
7.1- 8.0																				
8.1- 9.0																				
9.1- 10.0															1					
10.1- 11.0															1					
11.1- 12.0																				
12.1- 13.0																				
13.1- 14.0					1										3					1
14.1- 15.0															1			2		
15.1- 16.0														1	5					1
16.1- 17.0															2					
17.1- 18.0																	2			
18.1- 19.0																	1			
19.1- 20.0																				
20.1- 21.0					1													1		
21.1- 22.0								1												
22.1- 23.0																				
23.1- 24.0																				1
24.1- 25.0																				1
25.1- 26.0																				3
26.1- 27.0																				1
27.1- 28.0																				
28.1- 29.0																				
29.1- 30.0																				1
30.1- 31.0																				
31.1- 32.0																				
32.1- 33.0																				1
MEAN/DEPTH				17.3			13.5						15.9	14.4		17.6	16.3			23.8
STD ERR				3.75										.58		.26				
							8.05										2.08			1.77
MEAN/TRANS				17.3			13.5							14.5			17.0			23.8
STD ERR				3.75			8.05							.55			.98			1.77
MEAN/DATE				15.4										18.1						
STD ERR				3.79										1.01						
RANGE(MIN)				13.5			5.4						15.9	10.0		17.2	14.2			13.5
(MAX)				21.0			21.5						15.9	16.6		18.1	20.5			32.5

NO.LENG'D 0 0 0 0 2 0 0 2 0 0 0 0 0 1 13 0 3 3 0 10

L12A 03/06/80 182

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
5.1- 6.0								1		
6.1- 7.0										
7.1- 8.0										
8.1- 9.0										
9.1- 10.0					1					
10.1- 11.0					1					
11.1- 12.0										
12.1- 13.0										
13.1- 14.0					4					1
14.1- 15.0					1			2		
15.1- 16.0				1	5					1
16.1- 17.0					2					
17.1- 18.0							2			
18.1- 19.0							1			
19.1- 20.0										
20.1- 21.0					1			1		
21.1- 22.0								1		
22.1- 23.0										1
23.1- 24.0										1
24.1- 25.0										3
25.1- 26.0										1
26.1- 27.0										
27.1- 28.0										
28.1- 29.0										1
29.1- 30.0										
30.1- 31.0										
31.1- 32.0										
32.1- 33.0										1
MEAN/DEPTH			15.9		14.8	17.6		15.2	23.8	
STD ERR					.67	.26				
								2.88	1.77	
MEAN/TRANS			14.8			16.1			23.8	
STD ERR			.63			1.78			1.77	
MEAN/DATE					17.8					
STD ERR					.98					
RANGE(MIN)			15.9		10.0	17.2		5.4	13.5	
(MAX)			15.9		21.0	18.1		21.5	32.5	

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
13.1- 14.0												1								
14.1- 15.0																				
15.1- 16.0																				
16.1- 17.0														1						
17.1- 18.0																				
18.1- 19.0		1																		
19.1- 20.0																				
20.1- 21.0																				
21.1- 22.0																				
22.1- 23.0																				1
23.1- 24.0																				
24.1- 25.0																				
25.1- 26.0																				
26.1- 27.0																				
27.1- 28.0																				
28.1- 29.0																				
29.1- 30.0																				
30.1- 31.0																				
31.1- 32.0																				1
32.1- 33.0																				
33.1- 34.0																				
34.1- 35.0																				
35.1- 36.0																				
36.1- 37.0																				1
37.1- 38.0																				
38.1- 39.0																				
39.1- 40.0																				
40.1- 41.0																				
41.1- 42.0																				
42.1- 43.0																				
43.1- 44.0																				1
MEAN/DEPTH		18.6										13.4		16.9						33.8
STD ERR																				4.34
MEAN/TRANS		18.6										13.4		16.9						33.8
STD ERR																				4.34
MEAN/DATE					18.6										27.6					
STD ERR															4.81					

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
RANGE(MIN)		18.6										13.4	16.9							23.0
(MAX)		18.6										13.4	16.9							43.5
NO.LENG'D	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	4

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
13.1- 14.0		1								
14.1- 15.0										
15.1- 16.0										
16.1- 17.0			1							
17.1- 18.0										
18.1- 19.0		1								
19.1- 20.0										
20.1- 21.0										
21.1- 22.0										
22.1- 23.0										1
23.1- 24.0										
24.1- 25.0										
25.1- 26.0										
26.1- 27.0										
27.1- 28.0										
28.1- 29.0										
29.1- 30.0										
30.1- 31.0										
31.1- 32.0										1
32.1- 33.0										
33.1- 34.0										
34.1- 35.0										
35.1- 36.0										
36.1- 37.0										1
37.1- 38.0										
38.1- 39.0										
39.1- 40.0										
40.1- 41.0										
41.1- 42.0										
42.1- 43.0										
43.1- 44.0										1
MEAN/DEPTH		16.0	16.9							33.8
STD ERR		2.60								4.34
MEAN/TRANS		16.0		16.9						33.8
STD ERR		2.60								4.34
MEAN/DATE					26.3					
STD ERR					4.26					

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
RANGE(MIN)		13.4	16.9							23.0
(MAX)		18.6	16.9							43.5
NO.LENG'D	0	2	1	0	0	0	0	0	0	4

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0	2	1									1		1					1		
4.1- 5.0	1	2		1	2		2			1								1		
MEAN/DEPTH	4.0	4.1		4.5	4.4		4.3			4.3	3.7		3.8					4.2		
STD ERR	.03	.07			.05		.05											.15		
MEAN/TRANS	4.1			4.5			4.3			4.3	3.7		3.8				4.2			
STD ERR	.04			.03			.05										.15			
MEAN/DATE					4.2										4.0					
STD ERR					.05										.13					
RANGE(MIN)	4.0	4.0		4.5	4.4		4.2			4.3	3.7		3.9					4.0		
(MAX)	4.1	4.2		4.5	4.5		4.3			4.3	3.7		3.8					4.3		
NO.LENGTHD	3	3	0	1	2	0	2	0	0	1	1	0	1	0	0	0	0	2	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
3.1- 4.0	3	1	1					1		
4.1- 5.0	1	2		1	2		2	1		1
MEAN/DEPTH	4.0	4.1	3.8	4.5	4.4		4.3	4.2		4.3
STD ERR	.09	.07			.05		.05	.15		
MEAN/TRANS	4.0			4.3			4.2		4.3	
STD ERR	.06			.17			.07			
MEAN/DATE					4.2					
STD ERR					.06					
RANGE(MIN)	3.7	4.0	3.8	4.5	4.4		4.2	4.0		4.3
(MAX)	4.1	4.2	3.8	4.5	4.5		4.3	4.3		4.3
NO.LENGTHS	4	3	1	1	2	0	2	2	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0																	1			
MEAN/DEPTH STD ERR																	3.5			
MEAN/TRANS STD ERR																	3.5			
MEAN/DATE STD ERR															3.5					
RANGE(MIN)																	3.5			
(MAX)																	3.5			
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
3.1- 4.0							1			
MEAN/DEPTH							3.5			
STD ERR										
MEAN/TRANS							3.5			
STD ERR										
MEAN/DATE					3.5					
STD ERR										
RANGE(MIN)							3.5			
(MAX)							3.5			
NO.LENGTHD	0	0	0	0	0	0	1	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

	DAY										NIGHT									
LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
3.1- 4.0								1									2			
MEAN/DEPTH								3.8									3.4			
STD ERR																	.10			
MEAN/TRANS							3.8										3.4			
STD ERR																	.10			
MEAN/DATE					3.8										3.4					
STD ERR															.10					
RANGE(MIN)								3.8									3.3			
(MAX)								3.8									3.5			
NO.LENGTHD	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			NEAR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0							2	1		
MEAN/DEPTH							3.4	3.8		
STD ERR							.10			
MEAN/TRANS							3.5			
STD ERR							.15			
MEAN/DATE					3.5					
STD ERR					.15					
RANGE(MIN)							3.3	3.8		
(MAX)							3.5	3.8		
NO.LENG'D	0	0	0	0	0	0	2	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0	1					1														
4.1- 5.0																				
5.1- 6.0																				
6.1- 7.0													4							
7.1- 8.0													4							
MEAN/DEPTH	3.5					3.8							7.1							
STD ERR													.15							
MEAN/TRANS	3.5					3.8								7.1						
STD ERR														.15						
MEAN/DATE					3.7										7.1					
STD ERR					.15										.15					
RANGE(MIN)	3.5					3.8							6.6							
(MAX)	3.5					3.8							7.7							
NO.LENS*0	1	0	0	0	0	1	0	0	0	0	0	0	8	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
3.1- 4.0	1					1				
4.1- 5.0										
5.1- 6.0										
6.1- 7.0			4							
7.1- 8.0			4							
MEAN/DEPTH	3.5		7.1			3.8				
STD ERR			.15							
MEAN/TRANS	3.5			7.1			3.8			
STD ERR				.15						
MEAN/DATE					6.4					
STD ERR					.48					
RANGE(MIN)	3.5		6.6			3.8				
(MAX)	3.5		7.7			3.8				
NO.LENGTHD	1	0	8	0	0	1	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
2.1- 3.0		1										2								
3.1- 4.0	1	2	1				2					1	4		3					
MEAN/DEPTH	4.0	3.1	4.0				3.3					3.1	3.5		3.9					
STD ERR		.06					.15					.12	.19		.06					
MEAN/TRANS		3.3		4.0			3.3					3.1		3.7						
STD ERR		.23					.15					.12		.13						
MEAN/DATE					3.4										3.5					
STD ERR					.16										.13					
RANGE(MIN)	4.0	3.0	4.0				3.1					2.9	3.1		3.8					
(MAX)	4.0	3.2	4.0				3.4					3.3	3.8		4.0					
NO.LENGTHD	1	3	1	0	0	0	2	0	0	0	0	3	4	0	3	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
2.1- 3.0		3								
3.1- 4.0	1	3	5		3		2			
MEAN/DEPTH	4.0	3.1	3.5		3.9		3.3			
STD ERR		.06	.18		.06		.15			
MEAN/TRANS	3.2		3.7			3.3				
STD ERR	.14		.12			.15				
MEAN/DATE					3.4					
STD ERR					.10					
RANGE(MIN)	4.0	2.9	3.1		3.8		3.1			
(MAX)	4.0	3.3	4.0		4.0		3.4			
NO.LENGTHD	1	6	5	0	3	0	2	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
2.1- 3.0							1				1									
3.1- 4.0	1								1					1						
MEAN/DEPTH	3.7						3.0		3.2		2.9			3.8						
STD ERR																				
MEAN/TRANS	3.7						3.0		3.2		2.9			3.8						
STD ERR																				
MEAN/DATE					3.3										3.4					
STD ERR					.21										.45					
RANGE(MIN)	3.7						3.0		3.2		2.9			3.8						
(MAX)	3.7						3.0		3.2		2.9			3.8						
NO.LESS*0	1	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RCR S	RCR M	RCR B	EAST S	EAST B
2.1- 3.0		1					1			
3.1- 4.0	1			1					1	
MEAN/DEPTH	3.7	2.9		3.8			3.0		3.2	
STD ERR										
MEAN/TRANS	3.3			3.8			3.0		3.2	
STD ERR	.45									
MEAN/DATE					3.3					
STD ERR					.18					
RANGE(MIN)	3.7	2.9		3.8			3.0		3.2	
(MAX)	3.7	2.9		3.8			3.0		3.2	
NO.LENGTHD	1	1	0	1	0	0	1	0	1	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0	1	1									1									
4.1- 5.0			2																	
5.1- 6.0			1																	1
6.1- 7.0																				
7.1- 8.0																				2
8.1- 9.0																				1
MEAN/DEPTH	3.6	3.9	5.0								3.2									7.1
STD ERR			.33																	.63
MEAN/TRANS	3.8			5.0							3.2									7.1
STD ERR	.15			.33																.63
MEAN/DATE					4.5										6.4					
STD ERR					.35										.93					
RANGE(MIN)	3.6	3.9	4.5								3.2									5.4
(MAX)	3.6	3.9	5.6								3.2									8.3
NO.LENG'D	1	1	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
3.1- 4.0	2	1								
4.1- 5.0			2							
5.1- 6.0			1							1
6.1- 7.0										
7.1- 8.0										2
8.1- 9.0										1
MEAN/DEPTH	3.4	3.9	5.3							7.1
STD ERR	.20		.35							.63
MEAN/TRANS	3.6			5.0					7.1	
STD ERR	.20			.33					.63	
MEAN/DATE					5.4					
STD ERR					.56					
RANGE(MIN)	3.2	3.9	4.5							5.4
(MAX)	3.6	3.9	5.6							8.3
NO.LENGTHS	2	1	3	0	0	0	0	0	0	4

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0					2															
MEAN/DEPTH					3.6															
STD ERR					.15															
MEAN/TRANS				3.6																
STD ERR				.15																
MEAN/DATE					3.6															
STD ERR					.15															
RANGE(MIN)					3.4															
(MAX)					3.7															
NO.LENGTH'D	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSCTON/DANSKAMMER VICINITY

DATE: 06/12/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
3.1- 4.0					2					
MEAN/DEPTH					3.6					
STD ERR					.15					
MEAN/TRANS				3.6						
STD ERR				.15						
MEAN/DATE					3.6					
STD ERR					.15					
RANGE(MIN)					3.4					
(MAX)					3.7					
NO.LENGTHS	0	0	0	0	2	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0							1													
MEAN/DEPTH							3.5													
STD ERR																				
MEAN/TRANS							3.5													
STD ERR																				
MEAN/DATE				3.5																
STD ERR																				
RANGE(MIN)							3.5													
(MAX)							3.5													
NO.LENGTHD	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
3.1- 4.0							1			
MEAN/DEPTH							3.5			
STD ERR										
MEAN/TRANS							3.5			
STD ERR										
MEAN/DATE					3.5					
STD ERR										
RANGE(MIN)							3.5			
(MAX)							3.5			
NO.LENG'D	0	0	0	0	0	0	1	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/19/79

	DAY										NIGHT									
LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
3.1- 4.0																		1		
MEAN/DEPTH																		3.1		
STD ERR																				
MEAN/TRANS																	3.1			
STD ERR																				
MEAN/DATE															3.1					
STD ERR																				
RANGE(MIN)																		3.1		
(MAX)																		3.1		
NO.LENGTH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/19/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			ROR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
3.1- 4.0								1		
MEAN/DEPTH								3.1		
STD ERR										
MEAN/TRANS							3.1			
STD ERR										
MEAN/DATE					3.1					
STD ERR										
RANGE(MIN)								3.1		
(MAX)								3.1		
NO.LENGTHD	0	0	0	0	0	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0								2				1								1
4.1- 5.0	1						3	1	1	2				1			2	3	1	7	
MEAN/DEPTH	4.2						4.5	4.0	4.5	4.4		4.0		4.5			4.6	4.5	4.5	4.4	4.0
STD ERR							.07											.09		.06	
								.15		.15							.25				
MEAN/TRANS	4.2						4.2		4.4		4.0			4.5				4.5		4.3	
STD ERR							.13		.10									.08		.07	
MEAN/DATE					4.3										4.4						
STD ERR					.08										.05						
RANGE(MIN)	4.2						4.4	3.8	4.5	4.2		4.0	4.5				4.3	4.3	4.5	4.1	4.0
(MAX)	4.2						4.6	4.3	4.5	4.5		4.0	4.5				4.8	4.6	4.5	4.5	4.0
NO.LENGTHD	1	0	0	0	0	0	3	3	1	2	0	1	1	0	0	2	3	1	7	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/11/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR P	ROR B	EAST S	EAST B
3.1- 4.0		1						2		1
4.1- 5.0	1		1			2	6	2	8	2
MEAN/DEPTH	4.2	4.0	4.5			4.6	4.5	4.1	4.4	4.2
STD ERR							.05		.05	
						.25		.17		.15
MEAN/TRANS	4.1		4.5				4.4		4.3	
STD ERR	.10						.08		.05	
MEAN/DATE					4.3					
STD ERR					.05					
RANGE(MIN)	4.2	4.0	4.5			4.3	4.3	3.8	4.1	4.0
(MAX)	4.2	4.0	4.5			4.8	4.6	4.5	4.5	4.5
NO.LENGTHS	1	1	1	0	0	2	6	4	8	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0								1	3	1		2			1	1		1	3	3
4.1- 5.0	11	6	2	17	5	1	32	23	20	7	16	5	18	25	33	22	29	33	10	14
5.1- 6.0	1		2	17	5	1	28	33	5	2	8	2	20	33	24	29	26	23	11	19
6.1- 7.0								3			3			2	2	8	3	3	2	3
7.1- 8.0																	1			
MEAN/DEPTH	4.6	4.4	5.1	5.0	4.9	4.9	5.0	5.2	4.6	4.8	5.0	4.5	5.0	5.1	5.1	5.3	5.1	5.0	5.0	5.1
STD ERR	.09		.26		.15		.06		.09		.12		.07		.07		.08		.13	
		.07		.07		.30		.08		.16		.19		.07		.09		.07		.12
MEAN/TRANS	4.6		5.0			5.1			4.7		4.9		5.1			5.1			5.1	
STD ERR	.07		.06			.05			.08		.11		.04			.05			.09	
MEAN/DATE					5.0										5.1					
STD ERR					.03										.03					
RANGE(MIN)	4.3	4.1	4.4	4.2	4.3	4.6	4.1	4.0	4.0	4.0	4.2	3.9	4.1	4.1	4.0	3.9	4.2	3.9	3.9	3.7
(MAX)	5.3	4.6	5.6	6.0	5.7	5.2	5.9	6.7	6.0	5.6	6.7	5.5	5.6	6.4	6.6	6.6	7.1	6.3	6.5	6.5
NO.LENGTHD	12	6	4	34	10	2	60	60	28	10	27	9	38	60	60	60	59	60	26	39

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0		2			1	1		2	6	4
4.1- 5.0	27	11	20	42	38	23	61	56	30	21
5.1- 6.0	9	2	22	50	29	30	54	56	16	21
6.1- 7.0	3			2	2	8	3	6	2	3
7.1- 8.0							1			
MEAN/DEPTH	4.9	4.5	5.0	5.1	5.1	5.3	5.1	5.1	4.8	5.1
STD ERR	.09		.07		.07		.05		.08	
		.12		.05		.09		.05		.10
MEAN/TRANS	4.8			5.1			5.1		4.9	
STD ERR	.08			.04			.03		.07	
MEAN/DATE					5.1					
STD ERR					.02					
RANGE(MIN)	4.2	3.9	4.1	4.1	4.0	3.9	4.1	3.9	3.9	3.7
(MAX)	6.7	5.5	5.6	6.4	6.6	6.6	7.1	6.7	6.5	6.5
NO.LENGTHD	39	15	42	94	70	62	119	120	54	49

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0		3	1	1	2			3	1		1				4		1	2		2
4.1- 5.0	1	6	22	29	18	3	18	21	6	8	18	2	8	4	24	4	12	8	8	4
5.1- 6.0	2	7	31	27	32	5	31	30	8	11	29	4	25	15	30	30	31	9	8	2
6.1- 7.0	1	11	6	3	8		11	5		4	8	1	25	5	2	24	14	2	3	
7.1- 8.0										1		1	2			2				
8.1- 9.0																				
9.1- 10.0																				
10.1- 11.0																				
11.1- 12.0																				
12.1- 13.0																				
13.1- 14.0																				
14.1- 15.0																				1
MEAN/DEPTH	5.8	5.4	5.3	5.1	5.3	5.0	5.5	5.2	5.0	5.5	5.3	5.8	5.9	5.5	5.1	6.0	5.5	5.1	5.3	5.8
STD ERR	.37	.19	.08	.08	.08	.13	.08	.08	.18	.15	.09	.29	.08	.12	.08	.08	.09	.15	.17	1.17
MEAN/TRANS	5.5		5.2			5.3			5.3		5.3		5.5			5.7			5.4	
STD ERR	.17		.04			.06			.12		.09		.06			.06			.38	
MEAN/DATE					5.3										5.5					
STD ERR					.03										.05					
RANGE(MIN)	4.8	3.7	4.1	4.0	4.3	4.9	4.5	3.9	4.3	4.3	4.0	4.7	4.5	4.3	3.8	4.7	3.9	3.6	4.1	4.0
(MAX)	6.5	6.7	6.6	6.7	6.3	5.3	7.0	6.6	5.9	7.2	6.5	7.4	7.1	6.5	6.7	7.5	7.0	6.3	6.9	15.0
NO.LENGTHD	4	27	60	60	60	8	60	59	15	24	56	8	60	24	60	60	58	21	19	9

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
3.1- 4.0	1	3	1	1	6		1	5	1	2
4.1- 5.0	19	8	30	33	42	7	30	29	14	12
5.1- 6.0	31	11	56	42	62	35	62	39	16	13
6.1- 7.0	9	12	31	8	10	24	25	7	3	4
7.1- 8.0		1	2			2				1
8.1- 9.0										
9.1- 10.0										
10.1- 11.0										
11.1- 12.0										
12.1- 13.0										
13.1- 14.0										
14.1- 15.0										1
MEAN/DEPTH	5.3	5.5	5.6	5.2	5.2	5.9	5.5	5.2	5.2	5.6
STD ERR	.09	.16	.06	.07	.06	.08	.06	.07	.13	.33
MEAN/TRANS	5.4		5.4			5.5			5.4	
STD ERR	.08		.04			.04			.17	
MEAN/DATE					5.4					
STD ERR					.03					
RANGE(MIN)	4.1	3.8	4.1	4.0	3.9	4.4	3.9	3.6	4.0	4.0
(MAX)	8.6	7.4	7.1	6.7	6.7	7.5	7.0	6.6	6.9	15.0
NO.LENGTH	60	35	120	84	120	68	118	80	34	33

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

LENGTH(MM)	DAY										NIGHT									
INTERVAL	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
3.1- 4.0				4		2	2	1	2	1						1	1	2		5
4.1- 5.0	2			30	1	23	13	8	9	12	2	1	2	3	6	16	8	13	14	12
5.1- 6.0				7	3	3	9	11	6	9	2	3	3		5	11	9	10	10	14
6.1- 7.0		1	1	15	2	2	19	16		23	6	6	18	13	18	19	23	19	22	24
7.1- 8.0				4	1	2	14	20		14	11	8	23	36	28	12	14	14	14	5
8.1- 9.0							3	4		1		1	6	8	3	1	5	2		
9.1- 10.0																				
10.1- 11.0																				
11.1- 12.0																				
12.1- 13.0					1															
MEAN/DEPTH	4.4	6.8	7.0	5.4	6.7	4.8	6.1	6.5	4.8	6.2	6.7	6.7	7.1	7.3	6.8	6.1	6.4	6.2	6.1	5.7
STD ERR	.20				.85		.17		.16		.20		.12		.13		.15		.13	
				.15		.16		.15		.15		.22		.10		.15		.16		.14
MEAN/TRANS	5.2			5.6			6.0			5.9	6.7			7.1			6.2			5.9
STD ERR	.81			.17			.11			.14	.15			.07			.09			.10
MEAN/DATE					5.8										6.5					
STD ERR					.08										.05					
RANGE(MIN)	4.2	6.8	7.0	3.5	4.1	3.7	3.5	3.8	3.8	3.7	4.2	4.5	4.5	4.8	4.4	3.9	3.6	3.8	4.2	3.5
(MAX)	4.5	6.8	7.0	8.0	12.1	7.1	8.4	9.0	6.3	8.1	8.0	8.1	8.7	8.4	8.3	8.3	8.4	8.2	7.6	7.7
NO.LENGTH	2	1	1	50	8	32	60	60	17	60	21	19	52	60	60	60	60	60	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0				4		3	3	3	2	6
4.1- 5.0	4	1	2	33	7	39	21	21	23	24
5.1- 6.0	2	3	3	7	8	14	18	21	16	23
6.1- 7.0	6	7	19	28	20	21	42	35	22	47
7.1- 8.0	11	8	23	40	29	14	28	34	14	19
8.1- 9.0		1	6	8	3	1	8	6		1
9.1- 10.0										
10.1- 11.0										
11.1- 12.0										
12.1- 13.0					1					
MEAN/DEPTH	6.5	6.7	7.1	6.3	6.8	5.6	6.3	6.3	5.8	5.9
STD ERR	.23	.21	.12	.13	.15	.13	.11	.11	.12	.10
MEAN/TRANS	6.6			6.6			6.1		5.9	
STD ERR	.16			.08			.07		.08	
MEAN/DATE					6.2					
STD ERR					.04					
RANGE(MIN)	4.2	4.5	4.5	3.5	4.1	3.7	3.5	3.8	3.8	3.5
(MAX)	8.0	8.1	8.7	8.4	12.1	8.3	8.4	9.0	7.6	8.1
NO.LENG'D	25	20	53	120	68	92	120	120	77	120

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/21/79

	DAY										NIGHT									
LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
3.1- 4.0	4		6	2	1	6	2	4	15	2		4	10	4	2	1	5	6	2	1
4.1- 5.0	9	2	17	10	1	13	8	7	10	2		10	16	19	17	9	12	14	7	13
5.1- 6.0	9		18	18	4		10	8		5		4	7	17	12	13	13	11	7	8
6.1- 7.0	3	5	5	15	21		26	15		28		1	9	13	18	8	8	8	8	16
7.1- 8.0	3	4	2	13	31		11	15		20		3	9	7	7	23	8	6	24	17
8.1- 9.0	1	1		1	2		1	11		3			2		1	6	1		12	5
9.1- 10.0				1																
MEAN/DEPTH	5.4	6.6	5.2	6.2	7.0	4.3	6.2	6.6	4.0	6.7		5.0	5.5	5.5	5.8	6.6	5.7	5.4	6.9	6.4
STD ERR	.23		.14		.11		.14		.08				.20		.14		.18		.18	
		.37		.16		.09		.18		.12		.25		.14		.17		.18		.17
MEAN/TRANS	5.8		6.2			6.1			5.9		5.0		5.6			5.9			6.6	
STD ERR	.21		.10			.12			.16		.25		.09			.11			.12	
MEAN/DATE					6.1										6.0					
STD ERR					.07										.06					
RANGE(MIN)	3.8	4.1	3.4	3.5	3.4	3.6	3.8	3.7	3.2	3.7		3.6	3.5	3.6	4.0	3.6	3.9	3.5	3.9	3.7
(MAX)	8.8	8.1	8.9	9.7	8.2	5.0	8.1	8.7	4.6	8.5		7.5	8.1	7.7	8.2	8.9	8.7	7.7	8.8	8.6
NO.LEN'D	29	12	48	60	66	19	58	60	25	60	0	22	53	60	57	60	47	45	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0	4	4	16	6	3	7	7	10	17	3
4.1- 5.0	9	12	33	29	18	22	20	21	17	15
5.1- 6.0	9	4	25	35	16	13	23	13	7	13
6.1- 7.0	3	6	14	28	39	8	34	23	8	44
7.1- 8.0	5	7	11	20	38	23	19	21	24	37
8.1- 9.0	1	1	2	1	3	6	2	11	12	8
9.1- 10.0				1						
MEAN/DEPTH	5.4	5.5	5.3	5.9	6.4	6.0	6.0	6.1	6.1	6.6
STD ERR	.23		.12		.11		.11		.19	
		.24		.11		.17		.14		.11
MEAN/TRANS	5.5			5.9			6.0		6.3	
STD ERR	.17			.07			.08		.10	
MEAN/DATE					6.0					
STD ERR					.05					
RANGE(MIN)	3.8	3.6	3.4	3.5	3.4	3.6	3.8	3.5	3.2	3.7
(MAX)	8.8	8.1	8.1	9.7	8.2	8.9	8.7	8.7	8.8	8.6
NO.LENGTHD	29	34	101	120	117	79	105	105	85	120

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
3.1- 4.0		9	13	2	2	10	18	1	21	4		20	9	20	3	11	14	23		12
4.1- 5.0		4	3	9	2	7	26	4	27	27	3	5	11	24	4	6	6	10		29
5.1- 6.0	1	2	1	5	3	1	12	18	7	17	6	3	5	3	1	6	7	2	4	12
6.1- 7.0		1			1		2	16	3	6		2	1	2	1	6	1	1	6	2
7.1- 8.0	1	2		1	3		1	19		6			1	1		3			10	5
8.1- 9.0	1	2		1	3			2	1				1						6	
9.1- 10.0											1								1	
MEAN/DEPTH	7.1	5.1	4.1	5.1	6.2	4.0	4.6	6.5	4.5	5.2	5.5	4.2	4.7	4.4	4.6	5.1	4.4	4.1	7.3	4.9
STD ERR	.84	.38	.12	.28	.50	.10	.11	.14	.11	.14	.46	.16	.24	.11	.31	.23	.14	.12	.22	.13
MEAN/TRANS	5.9		5.1			5.3			4.9		4.5		4.5			4.5			5.6	
STD ERR	.37		.21			.12			.09		.19		.11			.11			.17	
MEAN/DATE					5.1										4.8					
STD ERR					.07										.07					
RANGE(MIN)	5.6	3.8	3.7	3.7	3.2	3.4	3.4	3.6	3.6	3.4	4.1	3.2	3.2	3.5	3.8	3.3	3.1	3.1	5.2	3.7
(MAX)	8.5	9.4	5.6	8.2	8.6	5.1	7.9	8.4	8.2	8.0	9.2	6.7	8.7	7.2	6.2	7.8	6.1	6.7	9.2	7.7
NO.LENGTHS	3	20	17	18	14	18	59	60	59	60	10	30	28	50	9	32	28	36	27	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0		29	22	22	5	21	32	24	21	16
4.1- 5.0	3	9	14	33	6	13	32	14	27	56
5.1- 6.0	7	5	6	8	4	7	19	20	11	29
6.1- 7.0		3	1	2	2	6	3	17	9	8
7.1- 8.0	1	2	1	2	3	3	1	13	10	11
8.1- 9.0	1	2	1	1	3			2	7	
9.1- 10.0	1								1	
MEAN/DEPTH	5.8	4.5	4.5	4.6	5.5	4.7	4.5	5.6	5.4	5.0
STD ERR	.43	.19	.16	.12	.36	.17	.09	.15	.17	.10
MEAN/TRANS	4.8		4.7			5.0			5.2	
STD ERR	.18		.10			.09			.09	
MEAN/DATE					5.0					
STD ERR					.05					
RANGE(MIN)	4.1	3.2	3.2	3.5	3.2	3.3	3.1	3.1	3.6	3.4
(MAX)	9.2	8.4	8.7	8.2	8.6	7.8	7.9	8.4	9.2	8.0
NO.LENGTHS	13	50	45	68	23	50	87	96	86	120

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
3.1- 4.0	7	1	1		1		6	3			3	1		1	2	1	2			
4.1- 5.0	5	6	28	18	16	3	48	12	4	1	3	3	42	44	15	31	36	28	8	2
5.1- 6.0		2	8	16	7		6	2	4	6	3	1	16	7	5	25	10	17	3	5
6.1- 7.0	1	2	2	13	4				2	10	1		2	4	4	3	3	2	1	6
7.1- 8.0	2	1	2	6	1	2		1		20				2	3		3	1	6	5
8.1- 9.0	3	2		5	9					18				2	2		6	1	3	7
9.1- 10.0				2						5									7	2
MEAN/DEPTH	5.3	5.7	4.9	6.1	6.0	5.7	4.6	4.6	5.4	7.6	4.8	4.6	4.9	5.0	5.4	5.1	5.3	5.1	7.0	7.2
STD ERR	.45		.12		.26		.05		.23		.32		.06		.23		.17		.36	
		.42		.18		.79		.17		.15		.36		.13		.07		.12		.29
MEAN/TRANS	5.5		5.7			4.7			7.3		4.7		5.1			5.2			7.1	
STD ERR	.31		.12			.07			.16		.24		.08			.07			.23	
MEAN/DATE					5.7										5.4					
STD ERR					.09										.06					
RANGE(MIN)	3.5	4.0	4.0	4.1	4.0	4.2	3.7	3.8	4.4	4.7	3.5	3.8	4.1	4.0	4.0	4.0	3.7	4.1	4.1	4.5
(MAX)	8.8	8.8	7.2	9.6	9.0	8.0	5.8	7.1	6.7	9.7	6.7	5.9	6.7	8.5	8.9	7.0	8.7	8.2	9.5	9.3
NO.LENGTH'D	18	14	41	60	38	5	60	18	10	60	10	5	60	60	31	60	60	49	28	27

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
3.1- 4.0	10	2	1	1	3	1	8	3		
4.1- 5.0	8	9	70	62	31	34	84	40	12	3
5.1- 6.0	3	3	24	23	12	25	16	19	7	11
6.1- 7.0	2	2	4	17	8	3	3	2	3	16
7.1- 8.0	2	1	2	8	4	2	3	2	6	25
8.1- 9.0	3	2		7	11		6	1	3	25
9.1- 10.0				2					7	7
MEAN/DEPTH	5.1	5.4	4.9	5.5	5.7	5.1	5.0	5.0	6.5	7.4
STD ERR	.31		.08		.18		.10		.30	
		.34		.12		.09		.10		.14
MEAN/TRANS	5.2			5.4			5.0		7.2	
STD ERR	.23			.07			.06		.14	
MEAN/DATE					5.5					
STD ERR					.05					
RANGE(MIN)	3.5	3.8	4.3	4.0	4.3	4.0	3.7	3.8	4.1	4.5
(MAX)	8.8	8.8	7.2	9.6	9.0	8.3	8.7	8.2	9.5	9.7
NO.LENGTH'D	28	19	101	120	69	65	120	67	38	87

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0				2		3	2	2	2	3	3		1	1	1	4	3	8		5
4.1- 5.0		1		17	1	5	6	10	1	1	7	4	6	14	3	28	13	15	3	9
5.1- 6.0	2	2		26	27		1	3			11	6	13	18	15	16	28	14	2	1
6.1- 7.0	2	6		15	27			1			7	2	18	21	20	7	11	15	1	1
7.1- 8.0		2			2						1		9	5	12	4	4			
8.1- 9.0	1	1									1	1	7		1					
9.1- 10.0	2	2			1						1		3	1	5					
10.1- 11.0		4						1					2		3	1	1	1		
11.1- 12.0		2									1		1							
MEAN/DEPTH	7.2	8.2		5.4	6.1	4.2	4.4	5.0	4.0	4.0	5.8	5.5	6.8	5.8	6.8	5.3	5.6	5.3	5.2	4.4
STD ERR	.69	.46		.09	.09	.15	.18	.37	.09	.06	.29	.32	.21	.13	.20	.16	.14	.17	.27	.16
MEAN/TRAWL	7.9			5.7			4.7		4.0		5.7			6.5			5.4		4.6	
STD ERR	.39			.07			.20		.05		.22			.11			.09		.15	
MEAN/DATE					5.8										5.9					
STD ERR					.11										.07					
RANGE(MIN)	5.4	4.9		3.6	4.5	3.7	3.7	3.7	3.9	3.8	3.9	4.1	3.9	3.9	4.0	3.6	3.5	3.4	4.4	3.7
(MAX)	9.7	11.1		5.6	9.5	4.9	5.6	10.4	4.2	4.1	11.5	8.7	11.2	9.2	10.2	10.6	10.1	10.1	6.1	6.2
NO.LENGTHD	7	23	0	60	58	8	9	17	3	4	32	13	60	60	60	60	60	53	6	16

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
3.1- 4.0	3		1	3	1	7	5	10	2	8
4.1- 5.0	7	5	6	31	4	33	19	25	4	10
5.1- 6.0	13	8	13	44	42	16	29	17	2	1
6.1- 7.0	9	8	18	36	47	7	11	16	1	1
7.1- 8.0	1	2	5	5	14	4	4			
8.1- 9.0	2	2	7		1					
9.1- 10.0	3	2	3	1	6					
10.1- 11.0		4	2		3	1	1	2		
11.1- 12.0	1	2	1							
MEAN/DEPTH	6.1	7.1	6.8	5.6	6.5	5.2	5.4	5.2	4.8	4.3
STD ERR	.28		.21		.11		.13		.26	
		.38		.08		.15		.16		.13
MEAN/TRANS	6.6			6.2			5.3		4.5	
STD ERR	.24			.08			.08		.13	
MEAN/DATE					5.8					
STD ERR					.05					
RANGE (MIN)	3.3	4.1	3.3	3.6	4.0	3.6	3.5	3.4	3.9	3.7
(MAX)	11.5	11.1	11.2	9.2	10.2	10.6	10.1	10.4	6.1	6.2
NO.LEN'D	39	33	60	120	118	68	69	70	9	23

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
3.1- 4.0	3			4			2		6	1	9	7	2	1	7	1		3	1	
4.1- 5.0	28	1	7	12	3	1	4	3	2	6	8	9	13	3	3	12	13	8	8	5
5.1- 6.0	11	2	8	15	9		19	6		5	11	9	21	17	13	20	17	15	13	3
6.1- 7.0	5	1	2	24	21	1	28	22		4	19	20	17	23	24	20	26	22	30	27
7.1- 8.0				5	17		6	18		1	9	9	1	13	8	6	4	6	8	14
8.1- 9.0		1			5			2			1	1	5	2	1	1		1		2
9.1- 10.0					3			4			1	1			2			2		
10.1- 11.0					2			2			2	1	1	1	1			1		
11.1- 12.0					2			2				2			1			1		1
12.1- 13.0								1												
13.1- 14.0												1						1		
MEAN/DEPTH	4.9	6.3	5.2	5.8	7.1	5.7	6.2	7.3	3.9	5.5	6.1	6.3	5.9	6.4	6.2	5.9	5.9	6.4	6.2	6.8
STD ERR	.10		.14		.19		.10		.14		.20		.18		.21		.10		.11	
		.69		.13		1.60		.22		.24		.26		.14		.12		.22		.17
MEAN/TRANS	5.0			6.3			6.7		5.0		6.2			6.2			6.0		6.5	
STD ERR	.12			.12			.13		.23		.16			.10			.09		.10	
MEAN/DATE					6.2										6.2					
STD ERR					.08										.06					
RANGE(MIN)	3.9	4.8	4.2	3.7	4.4	4.7	3.9	4.2	3.5	3.7	3.7	3.4	3.8	3.9	3.5	3.8	4.1	3.4	3.8	4.2
(MAX)	8.6	8.9	8.3	7.8	11.2	8.7	7.5	12.8	4.8	7.4	10.7	13.7	10.7	10.4	11.9	8.1	7.4	13.4	7.6	12.0
NO.LENGTHS	47	5	17	60	60	2	59	60	8	17	60	60	60	60	60	60	60	60	60	52

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0	12	7	2	5	7	1	2	3	7	1
4.1- 5.0	36	10	23	15	6	13	17	11	10	11
5.1- 6.0	22	11	29	32	22	20	36	21	13	8
6.1- 7.0	24	21	19	47	45	21	54	44	30	31
7.1- 8.0	9	9	1	18	25	6	10	24	8	15
8.1- 9.0	1	2	5	2	4	1		3		2
9.1- 10.0	1	1			5			6		
10.1- 11.0	2	1	1	1	3			3		
11.1- 12.0		2			3			3		1
12.1- 13.0								1		
13.1- 14.0		1						1		
MEAN/DEPTH	5.6	6.3	5.8	6.1	6.7	5.9	6.0	6.8	5.9	6.5
STD ERR	.13	.24	.15	.10	.15	.12	.07	.16	.13	.15
MEAN/TRANS	5.9		6.2			6.3			6.2	
STD ERR	.13		.08			.08			.10	
MEAN/DATE					6.2					
STD ERR					.05					
RANGE(MIN)	3.7	3.4	3.8	3.7	3.5	3.8	3.9	3.4	3.5	3.7
(MAX)	10.7	12.7	10.7	10.4	11.9	8.1	7.5	13.4	7.6	12.0
NO.LENGTHD	107	65	77	120	120	62	119	120	68	69

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/19/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0	2			3			2	2	2	3		1		2	2		1			
4.1- 5.0	3			23	2	1	21	20	1	1	4	6	6	16	6	15	21	8	9	8
5.1- 6.0	4	9		23	9		23	21			10	10	12	17	9	18	19	19	10	8
6.1- 7.0		11		6	15		10	10			25	17	17	11	12	11	14	11	11	10
7.1- 8.0		24		4	27		4	6			15	14	22	9	21	13	5	18	15	14
8.1- 9.0		12		1	6			1			1	1	3	2	7	3		3	8	11
9.1- 10.0		1			1									1	3				1	5
10.1- 11.0		3																	2	2
11.1- 12.0		2												1					2	1
12.1- 13.0		3										1		1					2	
13.1- 14.0																				1
MEAN/DEPTH	5.0	8.0		5.3	7.1	4.7	5.4	5.6	4.2	4.1	6.6	6.5	6.6	6.1	6.8	6.1	5.5	6.4	7.1	7.3
STD ERR	.29				.13		.12		.40		.13		.14		.18		.12		.25	
		.21		.13				.14		.17		.19		.22		.15		.14		.24
MEAN/TRANS	7.6			6.2			5.6		4.1		6.5			6.5			6.0		7.2	
STD ERR	.22			.12			.09		.18		.11			.11			.08		.17	
MEAN/DATE					6.2										6.5					
STD ERR					.09										.06					
RANGE(MIN)	3.7	5.1		4.0	4.2	4.7	3.6	3.9	3.8	3.9	4.3	3.8	4.6	3.6	3.9	4.1	3.8	4.1	4.1	4.5
(MAX)	6.3	12.5		8.4	9.4	4.7	7.5	8.4	5.0	4.6	8.5	12.7	8.6	12.2	10.0	8.7	7.6	8.7	12.5	13.4
NO.LENG'D	9	60	3	60	60	1	60	60	3	4	55	50	60	60	60	60	60	59	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/19/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
3.1- 4.0	2	1		5	2		3	2	2	3
4.1- 5.0	7	8	6	39	8	16	42	28	10	9
5.1- 6.0	14	14	12	40	18	18	42	40	10	8
6.1- 7.0	25	28	17	17	27	11	24	21	11	10
7.1- 8.0	15	38	22	13	48	13	9	24	15	14
8.1- 9.0	1	13	3	3	13	3		4	8	11
9.1- 10.0		1		1	4				1	5
10.1- 11.0		3							2	2
11.1- 12.0		2		1					2	1
12.1- 13.0		4		1					2	
13.1- 14.0										1
MEAN/DEPTH	6.3	7.3	6.6	5.7	6.9	6.1	5.5	6.0	7.0	7.1
STD ERR	.13	.16	.14	.13	.11	.15	.09	.11	.25	.24
MEAN/TRANS	6.9			6.4			5.8		7.0	
STD ERR	.12			.08			.06		.18	
MEAN/DATE					6.4					
STD ERR					.05					
RANGE(MIN)	3.7	3.9	4.6	3.6	3.9	4.1	3.8	3.9	3.8	3.9
(MAX)	8.5	12.7	8.8	12.2	13.4	8.7	7.6	8.7	12.3	15.4
NO.LENGTHD	64	110	61	120	120	61	120	119	63	64

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0	2	1	2	1		1	9		1	1		1		1	1	1				
4.1- 5.0	2	3	1	9	8		12	2		4	1	2	6	3	2	4	3			
5.1- 6.0	3	2	1	26	24	1	15	8		2	5	2	20	18	13	9	11	3		3
6.1- 7.0	3		1	9	18		4	11		10	1	1	15	17	23	23	14	17	5	1
7.1- 8.0	4	2		6	10			13		7	1		12	14	10	11	11	17	5	4
8.1- 9.0	3			1				16	1	8	1		6	5	6	9	9	11	3	6
9.1- 10.0	1	1		1				4		2			1	2	4	1	7	11	7	12
10.1- 11.0								5		2	1	1				2	4		4	1
11.1- 12.0		1									1				1		1	1		
12.1- 13.0		1						1			1	1							1	3
13.1- 14.0																				1
14.1- 15.0											1									
15.1- 16.0																				2
MEAN/DEPTH	6.7	7.1	4.8	5.8	6.1	4.9	4.9	7.7	6.3	7.2	8.0	6.7	6.5	6.7	6.9	6.9	7.4	7.8	8.7	9.4
STD ERR	.42	.92	.56	.15	.12	1.05	.14	.21	2.50	.28	.90	1.12	.16	.15	.18	.19	.22	.15	.32	.41
MEAN/TRANS	6.8		5.9			6.6			7.2		7.5		6.7			7.4			9.1	
STD ERR	.43		.09			.19			.28		.70		.09			.11			.27	
MEAN/DATE					6.4										7.3					
STD ERR					.10										.09					
RANGE(MIN)	3.5	3.6	3.6	3.8	4.1	3.8	3.5	4.5	3.8	3.4	4.4	3.7	4.3	4.0	3.7	3.8	4.6	5.5	6.1	5.7
(MAX)	9.5	12.7	6.1	9.4	7.9	5.9	6.7	12.1	8.8	10.6	14.1	12.7	9.2	9.7	11.2	10.7	11.1	11.1	12.7	15.3
NO.LENGTH	13	11	5	53	60	2	40	60	2	36	13	8	60	60	60	60	60	60	25	33

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
3.1- 4.0	2	2	2	2	1	2	9		1	1
4.1- 5.0	3	5	7	12	10	4	15	2		4
5.1- 6.0	8	4	21	44	37	10	26	11		5
6.1- 7.0	4	1	15	26	41	23	18	28	5	11
7.1- 8.0	5	2	12	20	20	11	11	30	5	11
8.1- 9.0	4		6	6	6	9	9	27	4	14
9.1- 10.0	1	1	1	3	4	1	7	15	7	14
10.1- 11.0	1	1				2	4	5	4	3
11.1- 12.0	1	1			1		1	1		
12.1- 13.0	1	2						1	1	3
13.1- 14.0										1
14.1- 15.0	1									
15.1- 16.0										2
MEAN/DEPTH	7.2	6.9	6.5	6.3	6.5	6.8	6.4	7.7	8.5	8.3
STD ERR	.46		.15		.11		.19		.35	
		.69		.11		.19		.13		.28
MEAN/TRANS	7.1			6.4			7.1		8.4	
STD ERR	.38			.07			.10		.22	
MEAN/DATE					7.0					
STD ERR					.07					
RANGE(MIN)	3.5	3.6	3.6	3.8	3.7	3.8	3.5	4.3	3.8	3.4
(MAX)	14.1	12.7	9.2	9.7	11.2	10.7	11.1	12.1	12.7	15.3
NO.LENG'D	31	19	83	113	123	62	100	120	27	69

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0			1				15			2			2	1	1				1	1
4.1- 5.0		1		4	4		15						2	1			3	4	9	9
5.1- 6.0	2	3		2	9			2		1				1	1	1	3	2	3	9
6.1- 7.0		2		1	8			8					3	3	8	6	9	5	9	13
7.1- 8.0					15			13					2	5	7	6	15	12	9	18
8.1- 9.0					10			12						6	4	15	4	11	8	6
9.1- 10.0					5			14				2	6	4	1	14	7	8	9	3
10.1- 11.0	2				7			7			2	6	4	7	1	12	8	6	6	
11.1- 12.0		1			5			3			6	5	3	3	2	6	9	2	4	
12.1- 13.0					1			1			2	3					1		2	
13.1- 14.0											1	3					1			
14.1- 15.0												3								
15.1- 16.0																				
16.1- 17.0												2								
MEAN/DEPTH	8.2	6.6	4.0	5.0	8.1		4.1	8.6		4.2	11.7	12.4	8.5	8.7	7.7	9.1	8.6	8.2	8.0	6.7
STD ERR	1.55	.83		.37	.26		.07	.20		.50	.21	.40	.57	.35	.35	.19	.27	.26	.30	.19
MEAN/TRANS	7.2			7.7			7.1			4.2	12.2			8.3			8.7		7.3	
STD ERR	.76			.27			.26			.50	.29			.24			.14		.19	
MEAN/DATE					7.3										8.5					
STD ERR					.18										.12					
RANGE(MIN)	5.3	4.5	4.0	4.1	4.1		3.6	5.1		3.6	10.7	9.2	3.7	3.9	3.7	5.4	4.1	4.2	3.7	3.7
(MAX)	10.9	11.2	4.0	6.4	12.3		5.0	12.3		5.2	13.2	16.5	12.0	11.6	11.2	12.0	13.1	11.9	12.7	9.5
NO.LENGTHS	4	7	1	7	60	0	30	60	0	3	11	24	22	31	25	60	60	50	60	59

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0			1	1	1		15		1	3
4.1- 5.0		1	2	5	4		18	4	9	9
5.1- 6.0	2	3		3	6	1	3	4	3	10
6.1- 7.0		2	3	4	16	6	9	13	9	13
7.1- 8.0			2	5	22	6	15	25	9	18
8.1- 9.0				6	14	15	4	23	8	6
9.1- 10.0		2	6	4	6	14	7	22	9	3
10.1- 11.0	4	6	4	7	8	12	8	13	6	
11.1- 12.0	6	6	3	3	7	6	9	5	4	
12.1- 13.0	2	3			1		1	1	2	
13.1- 14.0	1	3					1			
14.1- 15.0		3								
15.1- 16.0										
16.1- 17.0		2								
MEAN/DEPTH	10.8	11.1	8.3	8.0	8.0	9.1	7.1	8.4	8.0	6.6
STD ERR	.58	.57	.58	.38	.21	.19	.29	.16	.30	.19
MEAN/TRANS	11.0		8.1			8.1			7.3	
STD ERR	.42		.18			.14			.19	
MEAN/DATE					8.2					
STD ERR					.10					
RANGE(MIN)	5.3	4.5	3.7	3.9	3.7	5.4	3.6	4.2	3.7	3.6
(MAX)	13.2	16.5	12.0	11.6	12.3	12.0	13.1	12.3	12.7	9.5
NO.LENGTHS	15	31	23	38	85	60	90	110	60	62

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0							1													
4.1- 5.0					7			1								2	5	1		
5.1- 6.0					7			2				1	2	3			3	3	1	2
6.1- 7.0					12			1				1		2			3	2	1	4
7.1- 8.0					11			1						5			3	5	1	
8.1- 9.0					2			1			1	3	1	6	1		9	5	1	4
9.1- 10.0					5			6			1	1		5	4		5	5	2	2
10.1- 11.0		1			2			10		1	1	5		2			3	5		
11.1- 12.0		1			5			11		1		6					2			
12.1- 13.0		1			1			7				2			1	1	2			
13.1- 14.0		1			1			3				1						1		2
14.1- 15.0		1						1				1								
15.1- 16.0												1						1		
16.1- 17.0																				
17.1- 18.0												1								
18.1- 19.0												1								
19.1- 20.0												2								
20.1- 21.0												1								
21.1- 22.0												1								
MEAN/DEPTH	12.6		7.6			8.8	10.7		10.9		9.3	12.8	6.7	8.2	9.9	7.1	8.2	8.7	8.0	8.4
STD ERR	.71		.33				.32		.35		.64	.79	.72	.32	.57	2.67	.38	.46	.60	.67
MEAN/TRANS	12.6		7.6			10.5			10.9		12.4			8.4			8.3		8.3	
STD ERR	.71		.33			.35			.35		.74			.30			.30		.49	
MEAN/DATE					9.2										9.2					
STD ERR					.27										.26					
RANGE(MIN)	11.3		4.1			3.8	4.3		10.5		8.2	5.7	5.9	5.2	8.6	4.1	4.2	4.6	5.6	5.2
(MAX)	14.4		13.7			3.8	14.1		11.2		10.4	21.1	8.1	10.7	12.6	12.4	12.6	15.3	9.3	13.6
NO.LENGTHS	3	5	0	0	53	0	1	44	0	2	3	28	3	23	6	3	35	28	6	14

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0							1			
4.1- 5.0					7	2	5	2		
5.1- 6.0		1	2	3	7		3	5	1	2
6.1- 7.0		1		2	12		3	3	1	4
7.1- 8.0				5	11		3	6	1	
8.1- 9.0	1	3	1	6	3		9	5	1	4
9.1- 10.0	1	1		5	8		5	11	2	2
10.1- 11.0	1	6		2	2		3	15		1
11.1- 12.0		7			5		2	11		1
12.1- 13.0		3			2	1	2	7		
13.1- 14.0		2			1			4		2
14.1- 15.0		2						1		
15.1- 16.0		1						1		
16.1- 17.0										
17.1- 18.0		1								
18.1- 19.0		1								
19.1- 20.0		2								
20.1- 21.0		1								
21.1- 22.0		1								
MEAN/DEPTH	9.3	12.7	6.7	8.2	7.9	7.1	8.1	9.9	8.0	8.7
STD ERR	.64	.67	.72	.32	.31	2.67	.39	.29	.60	.62
MEAN/TRANS	12.4			7.9			9.2		8.5	
STD ERR	.64			.23			.25		.48	
MEAN/GATE					9.2					
STD ERR					.19					
RANGE(MIN)	8.2	5.7	5.1	5.2	4.1	4.1	3.8	4.3	5.6	5.2
(MAX)	10.4	21.1	8.1	10.7	13.7	12.4	12.6	15.3	9.3	13.6
NO.LENGTHD	3	33	3	23	59	3	36	72	6	16

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0														1						
4.1- 5.0									1	1	2			1		2		1		2
5.1- 6.0					1						1		2	3			1	1		
6.1- 7.0					2			2		2	1	1	1	2			1			
7.1- 8.0	1				3			1		1	1			2		1	3	1		
8.1- 9.0		1		1	1			2						1			1	1	1	4
9.1- 10.0		2			3			13		2							1	2		3
10.1- 11.0				1	8			7		2	2	2			1		6	1		8
11.1- 12.0	2	5			3			12		1		1		1			11	2	2	7
12.1- 13.0		2			4			10		2	1			1	1		4	2	2	9
13.1- 14.0		1			1			7			1							1		8
14.1- 15.0					1			3									2	1		1
15.1- 16.0		1						1			1			1						4
16.1- 17.0								2				1								2
17.1- 18.0												1								1
MEAN/DEPTH	10.2	11.6		9.8	10.3			11.5	4.2	9.3	9.0	12.2	5.6	7.8	11.6	5.5	10.7	10.2	11.4	11.9
STD ERR	1.39				.45						1.27		.26		.60		.37		.82	
		.55		.80				.28		.82		1.62		.95		.92		.83		.38
MEAN/TRANS	11.3			10.2			11.5		8.8		10.2			7.8			10.2		11.9	
STD ERR	.52			.42			.28		.86		1.05			.78			.38		.36	
MEAN/DATE					10.9										10.6					
STD ERR					.22										.28					
RANGE(MIN)	7.4	6.7		9.0	5.8			6.6	4.2	4.2	4.5	6.7	5.2	4.0	11.0	4.3	5.9	4.3	8.3	4.2
(MAX)	11.8	15.9		10.6	14.9			16.9	4.2	12.9	15.8	17.2	6.1	15.5	12.2	7.3	14.1	14.3	12.8	17.1
NO.LENG'D	3	12		2	27	0	0	60	1	11	10	6	3	13	2	3	30	13	5	49

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/13/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			ROR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
3.1- 4.0				1						
4.1- 5.0	2			1		2		1	1	3
5.1- 6.0	1		2	3	1		1	1		
6.1- 7.0	1	1	1	2	2		1	2		2
7.1- 8.0	2			2	3	1	3	2		1
8.1- 9.0		1		2	1		1	3	1	4
9.1- 10.0		2			3		1	15		5
10.1- 11.0	2	2		1	9		6	8		10
11.1- 12.0	2	6		1	3		11	14	2	8
12.1- 13.0	1	2		1	5		4	12	2	11
13.1- 14.0	1	1			1			8		8
14.1- 15.0					1		2	4		1
15.1- 16.0	1	1		1				1		4
16.1- 17.0		1						2		2
17.1- 18.0		1								1
MEAN/DEPTH	9.2	11.8	5.6	8.1	10.4	5.5	10.7	11.2	10.2	11.5
STD ERR	1.11	.63	.25	.84	.43	.92	.37	.27	1.37	.37
MEAN/TRANS	10.7			9.3			10.9		11.3	
STD ERR	.60			.43			.24		.56	
MEAN/DATE					10.7					
STD ERR					.18					
RANGE(MIN)	4.5	6.7	5.6	4.0	5.8	4.3	5.9	4.3	4.2	4.2
(MAX)	15.8	17.2	6.1	15.5	14.9	7.3	14.1	16.9	12.8	17.1
NO.LENGTHD	13	18	3	15	29	3	30	73	6	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			ROR			EAST		WEST		CHANNEL			ROR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
5.1- 6.0														1			2			
6.1- 7.0												1								
7.1- 8.0								1							1			1		
8.1- 9.0					1			1						1	1	1				
9.1- 10.0					3			2							1		1	3		
10.1- 11.0					6										1			1		
11.1- 12.0					3			3				1		1	3		1	2		
12.1- 13.0					4			5							2			7		
13.1- 14.0					4			4			2	2			3		1	1		1
14.1- 15.0					5							3			5			1		
15.1- 16.0					1			1				2		1						
16.1- 17.0					3						1				3					1
17.1- 18.0																		1		
MEAN/DEPTH				12.5			11.8				14.5	13.3		10.0	13.0	8.4	9.3	11.9		15.1
STD ERR				.40							1.25				.57		1.68			
							.49					.95		2.07				.57		1.20
MEAN/TRANS			12.5			11.8					13.6		12.5			11.2			15.1	
STD ERR			.40			.49					.77		.61			.59			1.20	
MEAN/DATE				12.5											12.3					
STD ERR				.31											.38					
RANGE(MIN)				8.3			7.5				13.1	6.3		5.4	7.9	8.4	5.5	7.7		13.9
(MAX)				16.6			15.2				17.0	15.9		15.1	16.8	8.4	14.0	18.0		16.3
NO.LEN'TH	0	0	0	0	36	0	0	17	0	0	3	9	0	4	20	1	5	17	0	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
5.1- 6.0				1			2			
6.1- 7.0		1								
7.1- 8.0					1			2		
8.1- 9.0				1	2	1		1		
9.1- 10.0					4		1	5		
10.1- 11.0					7			1		
11.1- 12.0		1		1	6		1	5		
12.1- 13.0					6			12		
13.1- 14.0	2	2			7		1	5		1
14.1- 15.0		3			10			1		
15.1- 16.0		2		1	1			1		
16.1- 17.0	1				6					1
17.1- 18.0								1		
MEAN/DEPTH	14.5	13.3		10.0	12.7	8.4	9.3	11.8		15.1
STD ERR	1.25				.33		1.68			
		.95		2.07				.37		1.20
MEAN/TRANS	13.6			12.5			11.4			15.1
STD ERR	.77			.35			.90			1.20
MEAN/DATE					12.3					
STD ERR					.25					
RANGE(MIN)	13.1	6.3		5.4	7.9	8.4	5.5	7.5		13.9
(MAX)	17.0	15.9		15.1	16.8	8.4	14.0	19.0		16.3
NO.LENGTH	3	9	0	4	50	1	5	34	0	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
11.1- 12.0		2																		
12.1- 13.0		1																		
13.1- 14.0		2										1								
14.1- 15.0										1										
15.1- 16.0																				
16.1- 17.0												1								1
MEAN/DEPTH		12.3								14.3		15.4								16.2
STD ERR		.43										1.40								
MEAN/TRANS		12.3								14.3		15.4								16.2
STD ERR		.43										1.40								
MEAN/DATE					12.6										15.7					
STD ERR					.48										.85					
RANGE(MIN)		11.3								14.3		14.0								16.2
(MAX)		13.4								14.3		16.8								16.2
NO.LSRS'D	0	5	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			ROR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
11.1- 12.0		2								
12.1- 13.0		1								
13.1- 14.0		3								
14.1- 15.0										1
15.1- 16.0										
16.1- 17.0		1								1
MEAN/DEPTH		13.2								15.3
STD ERR		.71								.95
MEAN/TRANS		13.2								15.3
STD ERR		.71								.95
MEAN/DATE					13.6					
STD ERR					.64					
RANGE(MIN)		11.3								14.3
(MAX)		16.8								16.2
NO.LENGTHD	0	7	0	0	0	0	0	0	0	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 7/31/79

	DAY										NIGHT									
LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
7.1- 8.0															1					
8.1- 9.0																				
9.1- 10.0																				
10.1- 11.0																				
11.1- 12.0																				
12.1- 13.0																				
13.1- 14.0																				
14.1- 15.0								1												
MEAN/DEPTH							14.3								7.2					
STD ERR																				
MEAN/TRANS						14.3								7.2						
STD ERR																				
MEAN/DATE				14.3											7.2					
STD ERR																				
RANGE(MIN)							14.3								7.2					
(MAX)							14.3								7.2					
NO.LENGTHS	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/31/79

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
DAY/NIGHT COMBINED										
7.1- 8.0					1					
8.1- 9.0										
9.1- 10.0										
10.1- 11.0										
11.1- 12.0										
12.1- 13.0										
13.1- 14.0										
14.1- 15.0								1		
MEAN/DEPTH					7.2			14.3		
STD ERR										
MEAN/TRANS				7.2			14.3			
STD ERR										
MEAN/DATE					10.8					
STD ERR					3.55					
RANGE(MIN)					7.2			14.3		
(MAX)					7.2			14.3		
NO.LENGTHD	0	0	0	0	1	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/27/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
16.1- 17.0																	1			
MEAN/DEPTH																	16.4			
STD ERR																				
MEAN/TRANS																	16.4			
STD ERR																				
MEAN/GATE															16.4					
STD ERR																				
RANGE(MIN)																	16.4			
(MAX)																	16.4			
NO.LENGTHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/07/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
16.1- 17.0							1			
MEAN/DEPTH							16.4			
STD ERR										
MEAN/TRANS							16.4			
STD ERR										
MEAN/DATE					16.4					
STD ERR										
RANGE(MIN)							16.4			
(MAX)							16.4			
NO.LENGTHD	0	0	0	0	0	0	1	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/25/79

	DAY										NIGHT									
LENGTH(MM) INTERVAL	WEST		CHANNEL			ROR			EAST		WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
14.1- 15.0											1							1		
15.1- 16.0											1			1						
16.1- 17.0														1						
17.1- 18.0											2	2		1						
18.1- 19.0																				1
19.1- 20.0												1								
MEAN/DEPTH											16.2	18.6		16.6				14.6		18.1
STD ERR											.72									
												.67		.38						
MEAN/TRANS											17.2			16.6			14.6		18.1	
STD ERR											.67			.38						
MEAN/DATE															16.9					
STD ERR															.45					
RANGE(MIN)											14.5	17.8		15.9				14.6		18.1
(MAX)											17.5	19.9		17.2				14.6		18.1
NO.LENGTHS	0	0	0	0	0	0	0	0	0	0	4	3	0	3	0	0	0	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
14.1- 15.0	1							1		
15.1- 16.0	1			1						
16.1- 17.0				1						
17.1- 18.0	2	2		1						
18.1- 19.0										1
19.1- 20.0		1								
MEAN/DEPTH	16.2	18.6		16.6				14.6		18.1
STD ERR	.72									
		.67		.38						
MEAN/TRANS	17.2			16.6			14.6			18.1
STD ERR	.67			.38						
MEAN/DATE					16.9					
STD ERR					.45					
RANGE(MIN)	14.5	17.8		15.9				14.6		18.1
(MAX)	17.5	19.9		17.2				14.6		18.1
NO. LENGTHS	4	3	0	3	0	0	0	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
19.1- 20.0																				1
20.1- 21.0																				1
21.1- 22.0																				
22.1- 23.0																				3
23.1- 24.0																				
24.1- 25.0																				2
MEAN/DEPTH																				22.5
STD ERR																				.62
MEAN/TRANS																			22.5	
STD ERR																			.62	
MEAN/DATE															22.5					
STD ERR															.62					
RANGE(MIN)																				19.8
(MAX)																				24.3
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
19.1- 20.0										1
20.1- 21.0										1
21.1- 22.0										
22.1- 23.0										3
23.1- 24.0										
24.1- 25.0										2
MEAN/DEPTH										22.5
STD ERR										.62
MEAN/TRANS									22.5	
STD ERR									.62	
MEAN/DATE					22.5					
STD ERR					.62					
RANGE(MIN)										19.8
(MAX)										24.3
NO.LENGTHD	0	0	0	0	3	0	0	0	0	7

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
17.1- 18.0												1								
18.1- 19.0																				
19.1- 20.0					1															1
20.1- 21.0																				3
21.1- 22.0																				
22.1- 23.0																				1
23.1- 24.0																				
24.1- 25.0												1								
25.1- 26.0																				
26.1- 27.0																				1
27.1- 28.0																				
28.1- 29.0																				
29.1- 30.0																				1
MEAN/DEPTH				19.1								21.4								23.1
STD ERR												3.60								1.48
MEAN/TRANS			19.1								21.4								23.1	
STD ERR											3.60								1.48	
MEAN/DATE				19.1										22.7						
STD ERR														1.31						
RANGE(MIN)				19.1								17.8								19.4
(MAX)				19.1								25.0								30.0
NO.LENGTHD	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	7

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
17.1- 18.0		1								
18.1- 19.0										
19.1- 20.0					1					1
20.1- 21.0										3
21.1- 22.0										
22.1- 23.0										1
23.1- 24.0										
24.1- 25.0		1								
25.1- 26.0										
26.1- 27.0										1
27.1- 28.0										
28.1- 29.0										
29.1- 30.0										1
MEAN/DEPTH		21.4			19.1					23.1
STD ERR		3.60								1.48
MEAN/TRANS		21.4		19.1						23.1
STD ERR		3.60								1.48
MEAN/DATE					22.4					
STD ERR					1.22					
RANGE(MIN)		17.8			19.1					19.4
(MAX)		25.0			19.1					30.0
NO.LENGTHD	0	2	0	0	1	0	0	0	0	7

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 7/11/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
17.1- 18.0															2					
18.1- 19.0					1										1			2		
19.1- 20.0		1			1							1						1		
20.1- 21.0					1							1			2					
21.1- 22.0					3			1										1		1
22.1- 23.0																		1		
23.1- 24.0		1													1					
24.1- 25.0															1					
25.1- 26.0																				
26.1- 27.0																				
27.1- 28.0												1								
28.1- 29.0																				
29.1- 30.0																				1
30.1- 31.0												1								1
31.1- 32.0																				1
32.1- 33.0												1								
33.1- 34.0																				2
34.1- 35.0																				
35.1- 36.0																				
36.1- 37.0																				1
MEAN/DEPTH	21.9			20.6			21.5				26.2			20.5			20.1			31.2
STD ERR	2.15			.52							2.59			1.11			.88			1.77
MEAN/TRANS	21.9			20.6			21.5				26.2			20.5			20.1			31.2
STD ERR	2.15			.52							2.59			1.11			.88			1.77
MEAN/DATE				21.0											24.7					
STD ERR				.33											1.26					
RANGE(MIN)	19.7			19.0			21.5				19.3			17.1			18.3			22.0
(MAX)	24.0			22.0			21.5				32.5			25.0			22.5			36.5
NO.LEAGED	0	2	0	6	0	0	1	0	0	0	5	0	0	7	0	0	5	0	7	

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 6/17/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	POR S	POR M	POR B	EAST S	EAST B
17.1- 18.0					2					
18.1- 19.0					2			2		
19.1- 20.0		2			1			1		
20.1- 21.0		1			3					
21.1- 22.0					3			2		1
22.1- 23.0								1		
23.1- 24.0		1			1					
24.1- 25.0					1					
25.1- 26.0										
26.1- 27.0										
27.1- 28.0		1								
28.1- 29.0										
29.1- 30.0										1
30.1- 31.0		1								1
31.1- 32.0										1
32.1- 33.0		1								
33.1- 34.0										2
34.1- 35.0										
35.1- 36.0										
36.1- 37.0										1
MEAN/DEPTH		24.9			20.5			20.4		31.2
STD ERR		2.01			.62			.75		1.77
MEAN/TRANS		24.9			20.5			20.4		31.2
STD ERR		2.01			.62			.75		1.77
MEAN/DATE					23.7					
STD ERR					.96					
RANGE(MIN)		19.3			17.1			18.3		22.0
(MAX)		32.5			29.0			22.5		36.5
NO.LENGTHD	0	7	0	0	13	0	0	6	0	7

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
17.1- 18.0		2									1									
18.1- 19.0		1									1									
19.1- 20.0		1			1							3								1
20.1- 21.0												1								
21.1- 22.0		3									1	1					1			2
22.1- 23.0																				1
23.1- 24.0		1																		
24.1- 25.0											1									1
25.1- 26.0																				
26.1- 27.0								1												1
27.1- 28.0																				
28.1- 29.0																				
29.1- 30.0											1									
30.1- 31.0																				1
31.1- 32.0												1								1
32.1- 33.0																				1
33.1- 34.0																				
34.1- 35.0																				
35.1- 36.0												1								
36.1- 37.0																				
37.1- 38.0																				
38.1- 39.0												1								
39.1- 40.0												1								
40.1- 41.0																				
41.1- 42.0																				
42.1- 43.0												1								
43.1- 44.0												1								
MEAN/DEPTH	20.4		19.1			27.0					22.5	30.4					21.5			25.9
STD ERR	.77										2.23	3.06								1.59
MEAN/TRANS	20.4		19.1			27.0					27.9						21.5			25.9
STD ERR	.77										2.36									1.59
MEAN/DATE				20.9										27.0						
STD ERR				.92										1.56						
RANGE(MIN)	17.7		19.1			27.0					18.0	19.4					21.5			20.0
(MAX)	23.5		19.1			27.0					30.0	44.0					21.5			33.0
TOTALS	5	11	0	0	1	0	0	1	0	0	5	11	0	0	0	0	1	0	0	9

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
17.1- 18.0	1	2								
18.1- 19.0	1	1								
19.1- 20.0		4			1					1
20.1- 21.0		1								
21.1- 22.0	1	4					1			2
22.1- 23.0										1
23.1- 24.0		1								
24.1- 25.0	1									1
25.1- 26.0										
26.1- 27.0								1		1
27.1- 28.0										
28.1- 29.0										
29.1- 30.0	1									
30.1- 31.0										1
31.1- 32.0		1								1
32.1- 33.0										1
33.1- 34.0										
34.1- 35.0										
35.1- 36.0		1								
36.1- 37.0										
37.1- 38.0										
38.1- 39.0		1								
39.1- 40.0		1								
40.1- 41.0										
41.1- 42.0										
42.1- 43.0		1								
43.1- 44.0		1								
MEAN/DEPTH	22.5	26.2		19.1		21.5	27.0			25.9
STD ERR	2.23	2.11								1.59
MEAN/TRANS	25.4			19.1			24.3			25.9
STD ERR	1.74						2.75			1.59
MEAN/DATE				25.3						
STD ERR				1.23						
RANGE(MIN)	18.0	17.7		19.1		21.5	27.0			20.0
(MAX)	30.0	44.0		19.1		21.5	27.0			33.0
NO.LENGTH	5	19	0	0	1	0	1	1	0	9

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/31/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
18.1- 19.0																				1
19.1- 20.0																				
20.1- 21.0					1			1												
21.1- 22.0																				
22.1- 23.0																				
23.1- 24.0																				
24.1- 25.0																				
25.1- 26.0																				
26.1- 27.0																				
27.1- 28.0																				
28.1- 29.0																		1		
29.1- 30.0																		1		1
30.1- 31.0																				
31.1- 32.0																				1
32.1- 33.0																				
33.1- 34.0																				1
34.1- 35.0																				
35.1- 36.0																				
36.1- 37.0																				
37.1- 38.0																		1		
38.1- 39.0																				
39.1- 40.0																				
40.1- 41.0																				
41.1- 42.0												1								
42.1- 43.0																				
43.1- 44.0																				
44.1- 45.0																				
45.1- 46.0																				1
MEAN/DEPTH				21.0			20.5					42.0						32.3		31.8
STD ERR																		2.85		4.45
MEAN/TRANS				21.0			20.5					42.0						32.3		31.8
STD ERR																		2.85		4.45
MEAN/DATE				20.8										33.1						
STD ERR				.25										2.72						
RANGE(MIN)				21.0			20.5					42.0						29.0		18.2
(MAX)				21.0			20.5					42.0						38.0		46.0
NO.LENGTHS	0	0	2	0	1	0	0	1	0	0	0	1	0	0	0	0	0	3	0	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/31/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
18.1- 19.0										1
19.1- 20.0										
20.1- 21.0					1			1		
21.1- 22.0										
22.1- 23.0										
23.1- 24.0										
24.1- 25.0										
25.1- 26.0										
26.1- 27.0										
27.1- 28.0										
28.1- 29.0								1		
29.1- 30.0								1		1
30.1- 31.0										
31.1- 32.0										1
32.1- 33.0										
33.1- 34.0										1
34.1- 35.0										
35.1- 36.0										
36.1- 37.0										
37.1- 38.0								1		
38.1- 39.0										
39.1- 40.0										
40.1- 41.0										
41.1- 42.0		1								
42.1- 43.0										
43.1- 44.0										
44.1- 45.0										
45.1- 46.0										1
MEAN/DEPTH	42.0		21.0			29.4			31.8	
STD ERR						3.58			4.45	
MEAN/TRANS	42.0		21.0			29.4			31.8	
STD ERR						3.58			4.45	
MEAN/DATE					30.9					
STD ERR					2.67					
RANGE(MIN)	42.0		21.0			20.5			18.2	
(MAX)	42.0		21.0			38.0			46.0	
NO.LENGTHS	0	1	0	0	1	0	0	4	0	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/07/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
18.1- 19.0															1					
19.1- 20.0																				
20.1- 21.0																				
21.1- 22.0																				
22.1- 23.0																				
23.1- 24.0																				
24.1- 25.0																				
25.1- 26.0																				
26.1- 27.0																				
27.1- 28.0																				
28.1- 29.0																				
29.1- 30.0																				
30.1- 31.0																				
31.1- 32.0																				
32.1- 33.0																				1
33.1- 34.0																				1
34.1- 35.0																				
35.1- 36.0																		1		
36.1- 37.0																				
37.1- 38.0																				1
38.1- 39.0																				
39.1- 40.0																				
40.1- 41.0					1							1								
41.1- 42.0												1								
42.1- 43.0																				
43.1- 44.0		1										1								
44.1- 45.0		1																		
45.1- 46.0												1								
46.1- 47.0												3								
47.1- 48.0																				1
48.1- 49.0												1								1
49.1- 50.0																				
50.1- 51.0												2								
51.1- 52.0												1								
52.1- 53.0																				
53.1- 54.0												3								
54.1- 55.0																				
55.1- 56.0																				
56.1- 57.0												1								
57.1- 58.0																				
58.1- 59.0																				

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/07/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
59.1- 60.0																				
60.1- 61.0								1												
61.1- 62.0		1																		
62.1- 63.0																				
63.1- 64.0																				
64.1- 65.0																				
65.1- 66.0												1								
MEAN/DEPTH	50.3		41.0			61.0					50.1		18.1			36.0			40.4	
STD ERR	5.84										1.56								3.41	
MEAN/TRANS	50.3		41.0			61.0					50.1		18.1			36.0			40.4	
STD ERR	5.84										1.56								3.41	
MEAN/DATE				50.6										46.0						
STD ERR				4.50										2.05						
RANGE(MIN)	44.0		41.0			61.0					41.0		18.1			36.0			33.0	
(MAX)	62.0		41.0			61.0					66.0		18.1			36.0			49.0	
NO.LENGTHD	0	3	0	1	0	0	1	0	0		0	16	0	0	1	0	0	1	0	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/07/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RCR			EAST	
	S	B	S	M	B	S	M	B	S	B
18.1- 19.0					1					
19.1- 20.0										
20.1- 21.0										
21.1- 22.0										
22.1- 23.0										
23.1- 24.0										
24.1- 25.0										
25.1- 26.0										
26.1- 27.0										
27.1- 28.0										
28.1- 29.0										
29.1- 30.0										
30.1- 31.0										
31.1- 32.0										
32.1- 33.0										1
33.1- 34.0										1
34.1- 35.0										
35.1- 36.0								1		
36.1- 37.0										
37.1- 38.0										1
38.1- 39.0										
39.1- 40.0										
40.1- 41.0		1			1					
41.1- 42.0		1								
42.1- 43.0										
43.1- 44.0		2								
44.1- 45.0		1								
45.1- 46.0		1								
46.1- 47.0		3								
47.1- 48.0										1
48.1- 49.0		1								1
49.1- 50.0										
50.1- 51.0		2								
51.1- 52.0		1								
52.1- 53.0										
53.1- 54.0		3								
54.1- 55.0										
55.1- 56.0										
56.1- 57.0		1								
57.1- 58.0										
58.1- 59.0										

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/07/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
59.1- 60.0										
60.1- 61.0								1		
61.1- 62.0		1								
62.1- 63.0										
63.1- 64.0										
64.1- 65.0										
65.1- 66.0		1								
MEAN/DEPTH		50.2		29.5			48.5			40.4
STD ERR				11.45						
		1.52					12.50			3.41
MEAN/TRANS		50.2		29.5			48.5			40.4
STD ERR		1.52		11.45			12.50			3.41
MEAN/DATE					46.8					
STD ERR					1.86					
RANGE(MIN)		41.0			18.1			36.0		33.0
(MAX)		66.0			41.0			61.0		49.0
NO.LENGTH	0	19	0	0	2	0	0	2	0	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/14/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
33.1- 34.0					1															
34.1- 35.0																				
35.1- 36.0																				
36.1- 37.0																				
37.1- 38.0																				
38.1- 39.0																				
39.1- 40.0																				
40.1- 41.0																				
41.1- 42.0																				
42.1- 43.0																				
43.1- 44.0																				
44.1- 45.0																				
45.1- 46.0															1					
46.1- 47.0																				
47.1- 48.0																				
48.1- 49.0																				
49.1- 50.0																				
50.1- 51.0					1										1					
51.1- 52.0												1								
52.1- 53.0																				
53.1- 54.0																				
54.1- 55.0																				
55.1- 56.0																				
56.1- 57.0												1								
57.1- 58.0																				
58.1- 59.0																				
59.1- 60.0																				
60.1- 61.0																				
61.1- 62.0																				
62.1- 63.0																				
63.1- 64.0																				
64.1- 65.0																				
65.1- 66.0																				
66.1- 67.0																				
67.1- 68.0																				
68.1- 69.0																		1		
69.1- 70.0												1								
MEAN/DEPTH				42.5							59.7		48.5			60.0				
STD DEV				8.50							5.36			2.50						

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/14/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
MEAN/TRANS			42.5								59.7		48.5				69.0			
STD ERR			8.50								5.36		2.50							
MEAN/DATE				42.5										57.5						
STD ERR				8.50										4.06						
RANGE(MIN)				34.0								52.0		46.0			69.0			
(MAX)				51.0								70.0		51.0			69.0			
NO.LENG'D	0	0	0	0	2	0	0	0	0	0	0	3	0	0	2	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/14/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
33.1- 34.0					1					
34.1- 35.0										
35.1- 36.0										
36.1- 37.0										
37.1- 38.0										
38.1- 39.0										
39.1- 40.0										
40.1- 41.0										
41.1- 42.0										
42.1- 43.0										
43.1- 44.0										
44.1- 45.0										
45.1- 46.0					1					
46.1- 47.0										
47.1- 48.0										
48.1- 49.0										
49.1- 50.0										
50.1- 51.0					2					
51.1- 52.0		1								
52.1- 53.0										
53.1- 54.0										
54.1- 55.0										
55.1- 56.0										
56.1- 57.0		1								
57.1- 58.0										
58.1- 59.0										
59.1- 60.0										
60.1- 61.0										
61.1- 62.0										
62.1- 63.0										
63.1- 64.0										
64.1- 65.0										
65.1- 66.0										
66.1- 67.0										
67.1- 68.0										
68.1- 69.0								1		
69.1- 70.0		1								
MEAN/DEPTH		59.7			45.5			69.0		
STD ERR		5.34			4.01					

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/14/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
MEAN/TRANS	59.7		45.5			69.0				
STD ERR	5.36		4.01							
MEAN/DATE				53.8						
STD ERR				4.17						
RANGE(MIN)	52.0			34.0			69.0			
(MAX)	70.0			51.0			69.0			
NO.LENGTH'D	3	3	0	0	4	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/28/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
35.1- 36.0												1								
36.1- 37.0																				
37.1- 38.0																				1
38.1- 39.0																				
39.1- 40.0																				
40.1- 41.0																				
41.1- 42.0																				
42.1- 43.0																				
43.1- 44.0																				
44.1- 45.0												1								
45.1- 46.0																				
46.1- 47.0																				
47.1- 48.0																				
48.1- 49.0																				
49.1- 50.0																				
50.1- 51.0																		1		
51.1- 52.0																				
52.1- 53.0																				
53.1- 54.0																				
54.1- 55.0																				
55.1- 56.0																				
56.1- 57.0														1						
57.1- 58.0																				
58.1- 59.0																				
59.1- 60.0																				
60.1- 61.0																				
61.1- 62.0																				
62.1- 63.0																				
63.1- 64.0																				
64.1- 65.0																				
65.1- 66.0																				
66.1- 67.0																				
67.1- 68.0																				
68.1- 69.0																				
69.1- 70.0																				
70.1- 71.0																				
71.1- 72.0																				
72.1- 73.0																				
73.1- 74.0																				
74.1- 75.0																				
												1								
MEAN/DEPTH												52.0		57.0			51.0		38.0	
STD ERR												11.79								

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/28/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
MEAN/TRANS											52.0			57.0			51.0		38.0	
STD ERR											11.79									
MEAN/DATE															50.3					
STD ERR															5.89					
RANGE(MIN)											36.0			57.0			51.0		38.0	
(MAX)											75.0			57.0			51.0		38.0	
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	3	0	0	1	0	0	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/28/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
35.1- 36.0		1								
36.1- 37.0										
37.1- 38.0										1
38.1- 39.0										
39.1- 40.0										
40.1- 41.0										
41.1- 42.0										
42.1- 43.0										
43.1- 44.0										
44.1- 45.0		1								
45.1- 46.0										
46.1- 47.0										
47.1- 48.0										
48.1- 49.0										
49.1- 50.0										
50.1- 51.0								1		
51.1- 52.0										
52.1- 53.0										
53.1- 54.0										
54.1- 55.0										
55.1- 56.0										
56.1- 57.0					1					
57.1- 58.0										
58.1- 59.0										
59.1- 60.0										
60.1- 61.0										
61.1- 62.0										
62.1- 63.0										
63.1- 64.0										
64.1- 65.0										
65.1- 66.0										
66.1- 67.0										
67.1- 68.0										
68.1- 69.0										
69.1- 70.0										
70.1- 71.0										
71.1- 72.0										
72.1- 73.0										
73.1- 74.0										
74.1- 75.0		1								
MEAN/DEPTH		52.0			57.0			51.0		38.0
STD ERR		11.79								

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/28/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
MEAN/TRANS	52.0		57.0			51.0			38.0	
STD ERR	11.79									
MEAN/DATE					50.3					
STD ERR					5.89					
RANGE(MIN)		36.0			57.0			51.0		38.0
(MAX)		75.0			57.0			51.0		38.0
NO.LENGTHS	0	3	0	0	1	0	0	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 09/11/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
63.1- 64.0																				1
64.1- 65.0																				
65.1- 66.0												1								
MEAN/DEPTH												66.0								64.0
STD ERR																				
MEAN/TRANS												66.0								64.0
STD ERR																				
MEAN/DATE															65.0					
STD ERR															1.00					
RANGE(MIN)												66.0								64.0
(MAX)												66.0								64.0
NO.LENGTHD	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 04/11/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
63.1- 64.0										1
64.1- 65.0										
65.1- 66.0		1								
MEAN/DEPTH		66.0								64.0
STD ERR										
MEAN/TRANS	66.0								64.0	
STD ERR										
MEAN/DATE					65.0					
STD ERR					1.00					
RANGE(MIN)		66.0								64.0
(MAX)		66.0								64.0
NO.LENGTHD	0	1	0	0	0	0	0	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0	2	1						2			1	1	1					1		1
4.1- 5.0	2	2		1	2		5	1	1	3			1			2	3	2	7	
MEAN/DEPTH	4.1	4.1		4.5	4.4		4.4	4.0	4.5	4.3	3.7	4.0	4.2			4.6	4.5	4.3	4.4	4.0
STD ERR	.05	.07			.05		.07	.15		.09			.35			.25	.09	.15	.06	
MEAN/TRANS	4.1			4.5			4.2		4.4		3.8			4.2			4.4		4.3	
STD ERR	.04			.03			.09		.08		.15			.35			.09		.07	
MEAN/DATE					4.3										4.3					
STD ERR					.05										.06					
RANGE(MIN)	4.0	4.0		4.5	4.4		4.2	3.8	4.5	4.2	3.7	4.0	3.8			4.3	4.3	4.0	4.1	4.0
(MAX)	4.2	4.2		4.5	4.5		4.6	4.3	4.5	4.5	3.7	4.0	4.5			4.8	4.6	4.5	4.5	4.0
NO.LENG'D	4	3	0	1	2	0	5	3	1	3	1	1	2	0	0	2	3	3	7	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/15/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0	3	2	1					3		1
4.1- 5.0	2	2	1	1	2	2	8	3	8	3
MEAN/DEPTH	4.0	4.1	4.2	4.5	4.4	4.6	4.4	4.1	4.4	4.3
STD ERR	.08	.06	.35		.05	.25	.05	.11	.05	.10
MEAN/TRANS	4.0		4.3			4.3			4.3	
STD ERR	.05		.14			.07			.05	
MEAN/DATE					4.3					
STD ERR					.04					
RANGE(MIN)	3.7	4.0	3.8	4.5	4.4	4.3	4.2	3.8	4.1	4.0
(MAX)	4.2	4.2	4.5	4.5	4.5	4.8	4.6	4.5	4.5	4.5
NO.LENG'D	5	4	2	1	2	2	8	6	8	4

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0								1	3	1		2			1	1	1	1	3	3
4.1- 5.0	11	6	2	17	5	1	32	23	20	7	16	5	18	25	33	22	29	33	10	14
5.1- 6.0	1		2	17	5	1	28	33	5	2	8	2	20	33	24	29	26	23	11	19
6.1- 7.0								3			3			2	2	8	3	3	2	3
7.1- 8.0																	1			
MEAN/DEPTH	4.6	4.4	5.1	5.0	4.9	4.9	5.0	5.2	4.6	4.8	5.0	4.5	5.0	5.1	5.1	5.3	5.1	5.0	5.0	5.1
STD ERR	.09		.26		.15		.06		.09		.12		.07		.07		.08		.13	
		.07		.07		.30		.08		.16		.19		.07		.09		.07		.12
MEAN/TRANS	4.6			5.0			5.1			4.7	4.9			5.1			5.1			5.1
STD ERR	.07			.06			.05			.08	.11			.04			.05			.09
MEAN/DATE					5.0										5.1					
STD ERR					.03										.03					
RANGE(MIN)	4.3	4.1	4.4	4.2	4.3	4.6	4.1	4.0	4.0	4.0	4.2	3.9	4.1	4.1	4.0	3.9	3.5	3.9	3.9	3.7
(MAX)	5.3	4.6	5.6	6.0	5.7	5.2	5.9	6.7	6.0	5.6	6.7	5.5	5.6	6.4	6.6	6.6	7.1	6.3	6.5	6.5
NO.LENG'D	12	6	4	34	10	2	60	60	28	10	27	9	38	60	60	60	60	60	26	39

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/22/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0		2			1	1	1	2	6	4
4.1- 5.0	27	11	20	42	38	23	61	56	30	21
5.1- 6.0	9	2	22	50	29	30	54	56	16	21
6.1- 7.0	3			2	2	8	3	6	2	3
7.1- 8.0							1			
MEAN/DEPTH	4.9	4.5	5.0	5.1	5.1	5.3	5.1	5.1	4.8	5.1
STD ERR	.09		.07		.07		.05		.08	
		.12		.05		.09		.05		.10
MEAN/TRANS	4.8			5.1			5.1		4.9	
STD ERR	.08			.04			.03		.07	
MEAN/DATE					5.1					
STD ERR					.02					
RANGE(MIN)	4.2	3.9	4.1	4.1	4.0	3.9	3.5	3.9	3.9	3.7
(MAX)	6.7	5.5	5.6	6.4	6.6	6.6	7.1	6.7	6.5	6.5
NO.LENG'D	39	15	42	94	70	62	120	120	54	49

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0		3	1	1	2			4	1		1				4		3	2		2
4.1- 5.0	1	6	22	29	18	3	18	21	6	8	18	2	8	4	24	4	12	8	8	4
5.1- 6.0	2	7	31	27	32	5	31	30	8	11	29	4	25	15	30	30	31	9	8	2
6.1- 7.0	1	11	6	3	8		11	5		4	8	1	25	5	2	24	14	2	3	
7.1- 8.0										1		1	2			2				
8.1- 9.0																				
9.1- 10.0																				
10.1- 11.0																				
11.1- 12.0																				
12.1- 13.0																				
13.1- 14.0																				
14.1- 15.0																				1
MEAN/DEPTH	5.8	5.4	5.3	5.1	5.3	5.0	5.5	5.2	5.0	5.5	5.3	5.8	5.9	5.5	5.1	6.0	5.5	5.1	5.3	5.8
STD ERR	.37	.19	.08	.08	.08	.13	.08	.08	.18	.15	.09	.29	.08	.12	.08	.08	.10	.15	.17	1.17
MEAN/TRANS	5.5		5.2			5.3			5.3		5.3		5.5			5.6			5.4	
STD ERR	.17		.04			.06			.12		.09		.06			.06			.38	
MEAN/DATE					5.3										5.5					
STD ERR					.03										.05					
RANGE(MIN)	4.8	3.8	4.0	4.0	4.0	4.4	4.5	3.8	4.0	4.3	4.0	4.7	4.5	4.3	3.8	4.7	3.3	3.6	4.1	4.0
(MAX)	6.6	6.7	6.6	6.7	6.3	5.3	7.0	6.6	5.9	7.2	6.5	7.4	7.1	6.5	6.7	7.5	7.0	6.3	6.9	15.0
NO.LENG'D	4	27	60	60	60	8	60	60	15	24	56	8	60	24	60	60	60	21	19	9

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/25/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
3.1- 4.0	1	3	1	1	6		3	6	1	2
4.1- 5.0	19	8	30	33	42	7	30	29	14	12
5.1- 6.0	31	11	56	42	62	35	62	39	16	13
6.1- 7.0	9	12	31	8	10	24	25	7	3	4
7.1- 8.0		1	2			2				1
8.1- 9.0										
9.1- 10.0										
10.1- 11.0										
11.1- 12.0										
12.1- 13.0										
13.1- 14.0										
14.1- 15.0										1
MEAN/DEPTH	5.3	5.5	5.6	5.2	5.2	5.9	5.5	5.2	5.2	5.6
STD ERR	.09	.16	.06	.07	.06	.08	.06	.07	.13	.33
MEAN/TRANS	5.4		5.4			5.5			5.4	
STD ERR	.08		.04			.04			.17	
MEAN/DATE					5.4					
STD ERR					.03					
RANGE(MIN)	4.0	3.8	4.0	4.0	3.8	4.4	3.3	3.6	4.0	4.0
(MAX)	6.6	7.4	7.1	6.7	6.7	7.5	7.0	6.6	6.9	15.0
NO.LENG'D	60	35	120	84	120	68	120	81	34	33

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0	1			4		3	2	1	2	1						1	1	2		5
4.1- 5.0	2			30	1	23	13	8	9	12	2	1	2	3	6	16	8	13	14	12
5.1- 6.0				7	3	3	9	11	6	9	2	3	3		5	11	9	10	10	14
6.1- 7.0		1	1	15	2	2	19	16		23	6	6	22	13	18	19	23	19	22	24
7.1- 8.0				4	1	2	14	20		14	11	8	27	36	28	12	14	14	14	5
8.1- 9.0							3	4		1		1	6	8	3	1	5	2		
9.1- 10.0																				
10.1- 11.0																				
11.1- 12.0																				
12.1- 13.0					1															
MEAN/DEPTH	4.1	6.8	7.0	5.4	6.7	4.8	6.1	6.5	4.8	6.2	6.7	6.7	7.1	7.3	6.8	6.1	6.4	6.2	6.1	5.7
STD ERR	.32			.15	.85	.16	.17	.15	.16	.15	.20	.22	.10	.10	.13	.15	.15	.16	.13	.14
MEAN/TRANS	4.8			5.6			6.0			5.9	6.7			7.1			6.2			5.9
STD ERR	.71			.17			.11			.14	.15			.07			.09			.10
MEAN/DATE					5.8										6.5					
STD ERR					.08										.05					
RANGE(MIN)	3.5	6.8	7.0	3.5	4.1	3.7	3.5	3.8	3.8	3.7	4.2	4.5	4.5	4.8	4.4	3.9	3.6	3.8	4.2	3.5
(MAX)	4.6	6.8	7.0	8.0	12.1	7.1	8.4	9.0	6.0	8.1	8.0	8.1	8.7	8.4	8.3	8.3	8.4	8.2	7.6	7.7
NO.LENG'D	3	1	1	60	8	33	60	60	17	60	21	19	60	60	60	60	60	60	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 05/29/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0	1			4		4	3	3	2	6
4.1- 5.0	4	1	2	33	7	39	21	21	23	24
5.1- 6.0	2	3	3	7	8	14	18	21	16	23
6.1- 7.0	6	7	23	28	20	21	42	35	22	47
7.1- 8.0	11	8	27	40	29	14	28	34	14	19
8.1- 9.0		1	6	8	3	1	8	6		1
9.1- 10.0										
10.1- 11.0										
11.1- 12.0										
12.1- 13.0					1					
MEAN/DEPTH	6.4	6.7	7.1	6.3	6.8	5.6	6.3	6.3	5.8	5.9
STD ERR	.25	.21	.10	.13	.15	.13	.11	.11	.12	.10
MEAN/TRANS	6.5			6.6			6.1		5.9	
STD ERR	.17			.08			.07		.08	
MEAN/DATE					6.2					
STD ERR					.04					
RANGE(MIN)	3.5	4.5	4.5	3.5	4.1	3.7	3.5	3.8	3.8	3.5
(MAX)	8.0	8.1	8.7	8.4	12.1	8.3	8.4	9.0	7.6	8.1
NO.LENG'D	24	20	61	120	68	93	120	120	77	120

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
2.1- 3.0		1										2								
3.1- 4.0	5	2	7	2	1	6	4	4	15	2		5	14	4	5	1	5	6	2	1
4.1- 5.0	9	2	17	10	1	13	8	7	10	2		10	16	19	17	9	12	14	7	13
5.1- 6.0	9		18	18	4		10	8		5		4	7	17	12	13	13	11	7	8
6.1- 7.0	3	5	5	15	21		26	15		28		1	9	13	18	8	8	8	8	16
7.1- 8.0	3	4	2	13	31		11	15		20		3	9	7	7	23	8	6	24	17
8.1- 9.0	1	1		1	2		1	11		3			2		1	6	1		12	5
9.1- 10.0				1																
MEAN/DEPTH	5.4	5.9	5.2	6.2	7.0	4.3	6.1	6.6	4.0	6.7		4.8	5.3	5.5	5.7	6.6	5.7	5.4	6.9	6.4
STD ERR	.23	.47	.14	.16	.11	.09	.15	.18	.08	.12		.25	.20	.14	.14	.17	.18	.18	.18	.17
MEAN/TRANS	5.6		6.2			6.1			5.9		4.8		5.5			5.9			6.6	
STD ERR	.22		.10			.12			.16		.25		.09			.11			.12	
MEAN/DATE					6.0										5.9					
STD ERR					.07										.06					
RANGE(MIN)	3.8	3.0	3.4	3.5	3.4	3.6	3.1	3.7	3.2	3.7		2.9	3.1	3.6	3.8	3.6	3.9	3.5	3.9	3.7
(MAX)	8.8	8.1	8.0	9.7	8.2	5.0	8.1	8.7	4.6	8.5		7.5	8.1	7.7	8.2	8.9	8.7	7.7	8.8	8.6
NO.LENG'D	30	15	49	60	60	19	60	60	25	60	0	25	57	60	60	60	47	45	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/01/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
2.1- 3.0		3								
3.1- 4.0	5	7	21	6	6	7	9	10	17	3
4.1- 5.0	9	12	33	29	18	22	20	21	17	15
5.1- 6.0	9	4	25	35	16	13	23	19	7	13
6.1- 7.0	3	6	14	28	39	8	34	23	8	44
7.1- 8.0	3	7	11	20	38	23	19	21	24	37
8.1- 9.0	1	1	2	1	3	6	2	11	12	8
9.1- 10.0				1						
MEAN/DEPTH	5.4	5.2	5.3	5.9	6.3	6.0	5.9	6.1	6.1	6.6
STD ERR	.23	.25	.12	.11	.11	.17	.12	.14	.19	.11
MEAN/TRANS	5.3		5.8			6.0			6.3	
STD ERR	.17		.07			.08			.10	
MEAN/DATE					6.0					
STD ERR					.05					
RANGE(MIN)	3.8	2.9	3.1	3.5	3.4	3.6	3.1	3.5	3.2	3.7
(MAX)	8.8	8.1	8.1	9.7	8.2	8.9	8.7	8.7	8.8	8.6
NO.LENG'D	30	40	106	120	120	79	107	105	85	120

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
2.1- 3.0							1					1								
3.1- 4.0	1	9	13	2	2	10	18	1	22	4		20	9	21	3	11	14	23		12
4.1- 5.0		4	3	9	2	7	26	4	27	27	3	5	11	24	4	6	6	10		29
5.1- 6.0	1	2	1	5	3	1	12	18	7	17	6	3	5	3	1	6	7	2	4	12
6.1- 7.0		1			1		2	16	3	6		2	1	2	1	6	1	1	6	2
7.1- 8.0	1	2		1	3		1	19		6			1	1		3			10	5
8.1- 9.0	1	2		1	3			2	1				1						6	
9.1- 10.0											1								1	
MEAN/DEPTH	6.2	5.1	4.1	5.1	6.2	4.0	4.5	6.5	4.5	5.2	5.5	4.1	4.7	4.4	4.6	5.1	4.4	4.1	7.3	4.9
STD ERR	1.03	.38	.12	.28	.50	.10	.11	.14	.11	.14	.46	.16	.24	.11	.31	.23	.14	.12	.22	.13
MEAN/TRANS	5.3		5.1			5.3			4.8		4.4		4.5			4.5			5.6	
STD ERR	.36		.21			.12			.09		.19		.10			.11			.17	
MEAN/DATE					5.1										4.8					
STD ERR					.07										.07					
RANGE(MIN)	3.7	3.8	3.7	3.7	3.2	3.4	3.0	3.6	3.2	3.4	4.1	2.9	3.2	3.5	3.8	3.3	3.1	3.1	5.2	3.7
(MAX)	8.5	8.4	5.6	8.2	8.6	5.1	7.9	8.4	8.2	8.0	9.2	6.7	8.7	7.2	6.2	7.8	6.1	6.7	9.2	7.7
NO.LENG'D	4	20	17	18	14	18	60	60	60	60	10	31	28	51	9	32	28	36	27	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/05/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
2.1- 3.0		1					1			
3.1- 4.0	1	29	22	23	5	21	32	24	22	16
4.1- 5.0	3	9	14	33	6	13	32	14	27	56
5.1- 6.0	7	5	6	8	4	7	19	20	11	29
6.1- 7.0		3	1	2	2	6	3	17	9	8
7.1- 8.0	1	2	1	2	3	3	1	19	10	11
8.1- 9.0	1	2	1	1	3			2	7	
9.1- 10.0	1								1	
MEAN/DEPTH	5.7	4.5	4.5	4.6	5.5	4.7	4.5	5.6	5.4	5.0
STD ERR	.43	.19	.16	.11	.36	.17	.09	.15	.17	.10
MEAN/TRANS	4.8		4.7			5.0			5.2	
STD ERR	.18		.10			.09			.09	
MEAN/DATE					5.0					
STD ERR					.05					
RANGE(MIN)	3.7	2.9	3.2	3.5	3.2	3.3	3.0	3.1	3.2	3.4
(MAX)	9.2	8.4	8.7	8.2	8.6	7.8	7.9	8.4	9.2	8.0
NO.LENG'D	14	51	45	69	23	50	88	96	87	120

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0	8	2	1		1		6	3			4	1		1	2	1	2			
4.1- 5.0	5	6	30	18	16	3	48	12	4	1	3	3	42	44	15	31	36	28	8	2
5.1- 6.0		2	9	16	7		6	2	4	6	3	1	16	7	5	25	10	17	3	6
6.1- 7.0	1	2	2	13	4				2	10	1		2	4	4	3	3	2	1	6
7.1- 8.0	2	1	2	6	1	2		1		20				2	3		3	1	6	7
8.1- 9.0	3	2		5	9					18				2	2		6	1	3	8
9.1- 10.0				2						5									7	2
MEAN/DEPTH	5.2	5.6	4.9	6.1	6.0	5.7	4.6	4.6	5.4	7.6	4.6	4.6	4.9	5.0	5.4	5.1	5.3	5.1	7.0	7.2
STD ERR	.43	.41	.11	.18	.26	.79	.05	.17	.23	.15	.32	.36	.06	.13	.23	.07	.17	.12	.36	.26
MEAN/TRANS	5.4		5.7			4.7			7.3		4.6		5.1			5.2			7.1	
STD ERR	.30		.12			.07			.16		.24		.08			.07			.22	
MEAN/DATE					5.7										5.4					
STD ERR					.09										.07					
RANGE(MIN)	3.5	3.9	4.0	4.1	4.0	4.2	3.7	3.8	4.4	4.7	3.2	3.8	4.1	4.0	4.0	4.0	3.7	4.1	4.1	4.5
(MAX)	8.8	8.8	7.2	9.6	9.0	8.0	5.8	7.1	6.7	9.7	6.7	5.9	6.7	8.5	8.9	7.0	8.7	8.2	9.5	9.3
NO.LENG'D	19	15	44	60	38	5	60	18	10	60	11	5	60	60	31	60	60	49	28	31

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/08/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0	12	3	1	1	3	1	8	3		
4.1- 5.0	8	9	72	62	31	34	84	40	12	3
5.1- 6.0	3	3	25	23	12	25	16	19	7	12
6.1- 7.0	2	2	4	17	8	3	3	2	3	16
7.1- 8.0	2	1	2	8	4	2	3	2	6	27
8.1- 9.0	3	2		7	11		6	1	3	26
9.1- 10.0				2					7	7
MEAN/DEPTH	5.0	5.3	4.9	5.5	5.7	5.1	5.0	5.0	6.5	7.4
STD ERR	.30		.06		.18		.10		.30	
		.33		.12		.09		.10		.13
MEAN/TRANS	5.1			5.4			5.0		7.2	
STD ERR	.22			.07			.06		.13	
MEAN/DATE					5.5					
STD ERR					.05					
RANGE(MIN)	3.2	3.8	4.0	4.0	4.0	4.0	3.7	3.8	4.1	4.5
(MAX)	8.8	8.8	7.2	9.6	9.0	8.0	8.7	8.2	9.5	9.7
NO.LENG'D	30	20	104	120	69	65	120	67	38	91

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0				2	2	3	2	2	2	3	3		1	1	1	4	3	8		5
4.1- 5.0		1		17	1	5	6	10	1	1	7	4	6	14	3	28	13	15	3	9
5.1- 6.0	2	2		26	27		1	3			11	6	13	18	15	16	28	14	2	1
6.1- 7.0	2	6		15	27			1			7	2	18	21	20	7	11	15	1	1
7.1- 8.0		2			2						1		9	5	12	4	4			
8.1- 9.0	1	1									1	1	7		1					
9.1- 10.0	2	2			1						1		3	1	5					
10.1- 11.0		4						1					2		3	1	1	1		
11.1- 12.0		2									1		1							
MEAN/DEPTH	7.2	8.2		5.4	6.0	4.2	4.4	5.0	4.0	4.0	5.8	5.5	6.8	5.8	6.8	5.3	5.6	5.3	5.2	4.4
STD ERR	.69	.46		.09	.11	.13	.18	.37	.09	.06	.29	.32	.21	.13	.20	.16	.14	.17	.27	.16
MEAN/TRANS	7.9			5.7			4.7			4.0	5.7			6.5			5.4			4.6
STD ERR	.39			.08			.20			.05	.22			.11			.09			.15
MEAN/DATE					5.8										5.9					
STD ERR					.11										.07					
RANGE(MIN)	5.4	4.9		3.6	3.4	3.7	3.7	3.7	3.9	3.8	3.9	4.1	3.9	3.9	4.0	3.6	3.5	3.4	4.4	3.7
(MAX)	9.7	11.1		6.6	9.5	4.9	5.6	10.4	4.2	4.1	11.5	8.7	11.2	9.2	10.2	10.6	10.1	10.1	6.1	6.2
NO.LENG'D	7	20	0	60	60	8	9	17	3	4	32	13	60	60	60	60	60	53	6	16

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/12/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0	3		1	3	3	7	5	10	2	8
4.1- 5.0	7	5	6	31	4	33	19	25	4	10
5.1- 6.0	13	8	13	44	42	16	29	17	2	1
6.1- 7.0	9	8	18	36	47	7	11	16	1	1
7.1- 8.0	1	2	9	5	14	4	4			
8.1- 9.0	2	2	7		1					
9.1- 10.0	3	2	3	1	6					
10.1- 11.0		4	2		3	1	1	2		
11.1- 12.0	1	2	1							
MEAN/DEPTH	6.1	7.1	6.8	5.6	6.4	5.2	5.4	5.2	4.8	4.3
STD ERR	.28		.21		.12		.13		.26	
		.38		.08		.15		.16		.13
MEAN/TRANS	6.6		6.2			5.3			4.5	
STD ERR	.24		.08			.08			.13	
MEAN/DATE					5.8					
STD ERR					.06					
RANGE(MIN)	3.9	4.1	3.9	3.6	3.4	3.6	3.5	3.4	3.9	3.7
(MAX)	11.5	11.1	11.2	9.2	10.2	10.6	10.1	10.4	6.1	6.2
NO.LENG'D	39	33	60	120	120	68	69	70	9	20

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0	3			4			3		6	1	9	7	2	1	7	1		3	1	
4.1- 5.0	28	1	7	12	3	1	4	3	2	6	8	9	13	3	3	12	13	8	8	5
5.1- 6.0	11	2	8	15	9		19	6		5	11	9	21	17	13	20	17	15	13	3
6.1- 7.0	5	1	2	24	21	1	28	22		4	19	20	17	23	24	20	26	22	30	27
7.1- 8.0				5	17		6	18		1	9	9	1	13	8	6	4	6	8	14
8.1- 9.0		1			3			2			1	1	5	2	1	1		1		2
9.1- 10.0					3			4			1	1			2			2		
10.1- 11.0					2			2			2	1	1	1	1			1		
11.1- 12.0					2			2				2			1			1		1
12.1- 13.0								1												
13.1- 14.0												1						1		
MEAN/DEPTH	4.9	6.3	5.2	5.8	7.1	5.7	6.1	7.3	3.9	5.5	6.1	6.3	5.9	6.4	6.2	5.9	5.9	6.4	6.2	6.8
STD ERR	.10		.14		.19		.11		.14		.20		.18		.21		.10		.11	
		.69		.13		1.00		.22		.24		.26		.14		.12		.22		.17
MEAN/TRANS	5.3			6.3			6.7		5.0		6.2			6.2			6.0		6.5	
STD ERR	.12			.12			.13		.23		.16			.10			.09		.10	
MEAN/DATE					6.1										6.2					
STD ERR					.08										.06					
RANGE(MIN)	3.9	4.8	4.2	3.7	4.4	4.7	3.5	4.2	3.5	3.7	3.7	3.4	3.8	3.9	3.5	3.8	4.1	3.4	3.8	4.2
(MAX)	6.6	8.9	6.5	7.8	11.2	6.7	7.5	12.8	4.8	7.4	10.7	13.7	10.7	10.4	11.9	8.1	7.4	13.4	7.6	12.0
NO.LENG'D	47	5	17	60	60	2	60	60	8	17	60	60	60	60	60	60	60	60	60	52

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/15/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0	12	7	2	5	7	1	3	3	7	1
4.1- 5.0	36	10	20	15	6	13	17	11	10	11
5.1- 6.0	22	11	29	32	22	20	36	21	13	8
6.1- 7.0	24	21	19	47	45	21	54	44	30	31
7.1- 8.0	9	9	1	18	25	6	10	24	8	15
8.1- 9.0	1	2	5	2	4	1		3		2
9.1- 10.0	1	1			5			6		
10.1- 11.0	2	1	1	1	3			3		
11.1- 12.0		2			3			3		1
12.1- 13.0								1		
13.1- 14.0		1						1		
MEAN/DEPTH	5.6	6.3	5.8	6.1	6.7	5.9	6.0	6.8	5.9	6.5
STD ERR	.13		.15		.15		.08		.13	
		.24		.10		.12		.16		.15
MEAN/TRANS	5.9			6.2			6.3		6.2	
STD ERR	.13			.08			.08		.10	
MEAN/DATE					6.2					
STD ERR					.05					
RANGE(MIN)	3.7	3.4	3.8	3.7	3.5	3.8	3.5	3.4	3.5	3.7
(MAX)	10.7	13.7	10.7	10.4	11.9	8.1	7.5	13.4	7.6	12.0
NO.LENG'D	107	65	77	120	120	62	120	120	68	69

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/19/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0	2			3			2	2	2	3		1		2	2		1	1		
4.1- 5.0	3			23	2	1	21	20	1	1	4	6	6	16	6	15	21	8	9	8
5.1- 6.0	4	4		23	9		23	21			10	10	12	17	9	18	19	19	10	8
6.1- 7.0		11		6	15		10	10			25	17	17	11	12	11	14	11	11	10
7.1- 8.0		24		4	27		4	6			15	14	22	9	21	13	5	18	15	14
8.1- 9.0		12		1	6			1			1	1	3	2	7	3		3	8	11
9.1- 10.0		1			1									1	3				1	5
10.1- 11.0		3																	2	2
11.1- 12.0		2												1					2	1
12.1- 13.0		3										1		1					2	
13.1- 14.0																				1
MEAN/DEPTH	5.0	8.0		5.3	7.1	4.7	5.4	5.6	4.2	4.1	6.6	6.5	6.6	6.1	6.8	6.1	5.5	6.3	7.1	7.3
STD ERR	.29				.13		.12		.40		.13		.14		.18		.12		.25	
		.21		.13				.14		.17		.19		.22		.15		.15		.24
MEAN/TRANS	7.6			6.2			5.5		4.1		6.5			6.5			6.0		7.2	
STD ERR	.22			.12			.09		.18		.11			.11			.09		.17	
MEAN/DATE					6.2										6.5					
STD ERR					.09										.06					
RANGE(MIN)	3.7	5.1		4.0	4.2	4.7	3.8	3.9	3.8	3.9	4.3	3.8	4.6	3.6	3.9	4.1	3.8	3.1	4.1	4.5
(MAX)	6.0	12.3		8.4	9.4	4.7	7.5	8.4	5.0	4.6	8.5	12.7	8.6	12.2	10.0	8.7	7.6	8.7	12.5	13.4
NO.LENG'D	9	60	0	60	60	1	60	60	3	4	55	50	60	60	60	60	60	60	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/19/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
3.1- 4.0	2	1		5	2		3	3	2	3
4.1- 5.0	7	6	6	39	8	16	42	28	10	9
5.1- 6.0	14	14	12	40	18	18	42	40	10	8
6.1- 7.0	25	28	17	17	27	11	24	21	11	10
7.1- 8.0	15	38	22	13	48	13	9	24	15	14
8.1- 9.0	1	13	3	3	13	3		4	8	11
9.1- 10.0		1		1	4				1	5
10.1- 11.0		3							2	2
11.1- 12.0		2		1					2	1
12.1- 13.0		4		1					2	
13.1- 14.0										1
MEAN/DEPTH	6.3	7.3	6.6	5.7	6.9	6.1	5.5	5.9	7.0	7.1
STD ERR	.13	.16	.14	.13	.11	.15	.09	.11	.25	.24
MEAN/TRANS	6.9			6.4			5.8		7.0	
STD ERR	.12			.08			.06		.18	
MEAN/DATE					6.4					
STD ERR					.05					
RANGE(MIN)	3.7	3.8	4.6	3.6	3.9	4.1	3.8	3.1	3.8	3.9
(MAX)	8.5	12.7	8.6	12.2	10.0	8.7	7.6	8.7	12.5	13.4
NO.LENG'D	64	110	60	120	120	61	120	120	63	64

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0	2	1	2	1		1	9		1	1		1		1	1	1				
4.1- 5.0	2	3	1	9	8		12	2		4	1	2	6	3	2	4	3			
5.1- 6.0	3	2	1	26	24	1	15	8		2	5	2	20	18	13	9	11	3		3
6.1- 7.0	3		1	9	18		4	11		10	1	1	15	17	23	23	14	17	5	1
7.1- 8.0	4	2		6	10			13		7	1		12	14	10	11	11	17	5	4
8.1- 9.0	3			1				16	1	8	1		6	5	6	9	9	11	3	6
9.1- 10.0	1	1		1				4		2			1	2	4	1	7	11	7	12
10.1- 11.0								5		2	1	1				2	4		4	1
11.1- 12.0		1									1				1		1	1		
12.1- 13.0		1						1			1	1							1	3
13.1- 14.0																				1
14.1- 15.0											1									
15.1- 16.0																				2
MEAN/DEPTH	6.7	7.1	4.8	5.8	6.1	4.9	4.9	7.7	6.3	7.2	8.0	6.7	6.5	6.7	6.9	6.9	7.4	7.8	8.7	9.4
STD ERR	.42	.92	.50	.15	.12	1.05	.14	.21	2.50	.28	.90	1.12	.16	.15	.18	.19	.22	.15	.32	.41
MEAN/TRANS	6.8		5.9			6.6			7.2		7.5		6.7			7.4			9.1	
STD ERR	.43		.09			.19			.28		.70		.09			.11			.27	
MEAN/DATE					6.4										7.3					
STD ERR					.10										.09					
RANGE(MIN)	3.5	3.6	3.6	3.8	4.1	3.8	3.5	4.5	3.8	3.4	4.4	3.7	4.3	4.0	3.7	3.8	4.6	5.5	6.1	5.7
(MAX)	9.5	12.7	6.1	9.4	7.9	5.9	6.7	12.1	8.8	10.6	14.1	12.7	9.2	9.7	11.2	10.7	11.1	11.1	12.7	15.3
NO.LENG'D	18	11	5	53	60	2	40	60	2	36	13	8	60	60	60	60	60	60	25	33

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/22/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0	2	2	2	2	1	2	9		1	1
4.1- 5.0	3	5	7	12	10	4	15	2		4
5.1- 6.0	8	4	21	44	37	10	26	11		5
6.1- 7.0	4	1	16	26	41	23	18	28	5	11
7.1- 8.0	5	2	12	20	20	11	11	30	5	11
8.1- 9.0	4		6	6	6	9	9	27	4	14
9.1- 10.0	1	1	1	3	4	1	7	15	7	14
10.1- 11.0	1	1				2	4	5	4	3
11.1- 12.0	1	1			1		1	1		
12.1- 13.0	1	2						1	1	3
13.1- 14.0										1
14.1- 15.0	1									
15.1- 16.0										2
MEAN/DEPTH	7.2	6.9	6.3	6.3	6.5	6.8	6.4	7.7	8.5	8.3
STD ERR	.46		.16		.11		.19		.35	
		.69		.11		.19		.13		.28
MEAN/TRANS	7.1			6.4			7.1		8.4	
STD ERR	.38			.07			.10		.22	
MEAN/DATE					7.0					
STD ERR					.07					
RANGE(MIN)	3.5	3.6	3.6	3.8	3.7	3.8	3.5	4.5	3.8	3.4
(MAX)	14.1	12.7	9.2	9.7	11.2	10.7	11.1	12.1	12.7	15.3
NO.LENGTD	31	19	65	113	120	62	100	120	27	69

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0			1				15			2			2	1	1				1	1
4.1- 5.0		1		4	4		15						2	1			3	4	9	9
5.1- 6.0	2	3		2	5			2		1				1	1	1	3	2	3	9
6.1- 7.0		2		1	8			8					3	3	8	6	9	5	9	13
7.1- 8.0					15			13					2	5	7	6	15	12	9	18
8.1- 9.0					10			12						6	4	15	4	11	8	6
9.1- 10.0					5			14				2	6	4	1	14	7	8	9	3
10.1- 11.0	2				7			7			2	6	4	7	1	12	8	6	6	
11.1- 12.0		1			5			3			6	5	3	3	2	6	9	2	4	
12.1- 13.0					1			1			2	3					1		2	
13.1- 14.0											1	3					1			
14.1- 15.0											1	3						1		
15.1- 16.0											1			1						
16.1- 17.0												2		1						
17.1- 18.0											2	2		1						
18.1- 19.0																				1
19.1- 20.0												1								
MEAN/DEPTH	8.2	6.6	4.0	5.0	8.1		4.1	8.6		4.2	12.9	13.1	8.5	9.4	7.7	9.1	8.6	8.3	8.0	6.9
STD ERR	1.55				.26		.07				.57		.57		.35		.27		.30	
		.83		.37				.20		.50		.53		.51		.19		.28		.26
MEAN/TRANS	7.2			7.7			7.1			4.2	13.0			8.6			8.7		7.4	
STD ERR	.76			.27			.26			.50	.39			.29			.15		.20	
MEAN/DATE					7.3										8.8					
STD ERR					.18										.13					
RANGE(MIN)	5.3	4.5	4.0	4.1	4.1		3.6	5.1		3.6	10.7	9.2	3.7	3.9	3.7	5.4	4.1	4.2	3.7	3.7
(MAX)	10.9	11.2	4.0	6.4	12.3		5.0	12.3		5.2	17.5	19.9	12.0	17.2	11.2	12.0	13.1	14.6	12.7	18.1
NO.LENGTH	4	7	1	7	60	0	30	60	0	3	15	27	22	34	25	60	60	51	60	60

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 06/26/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0			3	1	1		15		1	3
4.1- 5.0		1	2	5	4		18	4	9	9
5.1- 6.0	2	3		3	6	1	3	4	3	10
6.1- 7.0		2	3	4	16	6	9	13	9	13
7.1- 8.0			2	5	22	6	15	25	9	18
8.1- 9.0				6	14	15	4	23	8	6
9.1- 10.0		2	6	4	6	14	7	22	9	3
10.1- 11.0	4	6	4	7	8	12	8	13	6	
11.1- 12.0	6	6	3	3	7	6	9	5	4	
12.1- 13.0	2	3			1		1	1	2	
13.1- 14.0	1	3					1			
14.1- 15.0	1	3						1		
15.1- 16.0	1			1						
16.1- 17.0		2		1						
17.1- 18.0	2	2		1						
18.1- 19.0										1
19.1- 20.0		1								
MEAN/DEPTH	11.9	11.7	8.3	8.7	8.0	9.1	7.1	8.5	8.0	6.8
STD ERR	.70	.64	.58	.50	.21	.19	.29	.17	.30	.26
MEAN/TRANS	11.8		8.2			8.1			7.4	
STD ERR	.48		.20			.14			.20	
MEAN/DATE					8.3					
STD ERR					.11					
RANGE(MIN)	5.3	4.5	3.7	3.9	3.7	5.4	3.6	4.2	3.7	3.6
(MAX)	17.5	19.9	12.0	17.2	12.3	12.0	13.1	14.6	12.7	18.1
NO.LENG'D	19	34	23	41	85	60	90	111	60	63

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0							1													
4.1- 5.0					7			1								2	5	1		
5.1- 6.0					7			2				1	2	3			3	3	1	2
6.1- 7.0					12			1				1		2			3	2	1	4
7.1- 8.0					11			1						5			3	5	1	
8.1- 9.0					2			1			1	3	1	6	1		9	5	1	4
9.1- 10.0					5			6			1	1		5	4		5	5	2	2
10.1- 11.0		1			2			10		1	1	5		2			3	5		
11.1- 12.0		1			5			11		1		6					2			
12.1- 13.0		1			1			7				2			1	1	2			
13.1- 14.0		1			1			3				1						1		2
14.1- 15.0		1						1				1								
15.1- 16.0												1						1		
16.1- 17.0																				
17.1- 18.0												1								
18.1- 19.0												1								
19.1- 20.0												2								1
20.1- 21.0												1								1
21.1- 22.0												1								
22.1- 23.0																				3
23.1- 24.0																				
24.1- 25.0																				2
MEAN/DEPTH	12.6			7.6		3.8	10.7		10.9		9.3	12.8	6.7	8.2	9.9	7.1	8.2	8.7	8.0	13.1
STD ERR		.71		.33				.32		.35	.64	.79	.72	.32	.57	2.67	.38	.46	.60	1.56
MEAN/TRANS	12.6		7.6			10.5			10.9		12.4		8.4				8.3		12.0	
STD ERR	.71		.33			.35			.35		.74		.30				.30		1.28	
MEAN/DATE				9.2											9.8					
STD ERR				.27											.33					
RANGE(MIN)	11.0			4.1		3.8	4.3		10.5		8.2	5.7	5.9	5.2	8.6	4.1	4.2	4.6	5.6	5.2
(MAX)	14.4			13.7		3.8	14.1		11.2		10.4	21.1	8.1	10.7	12.6	12.4	12.6	15.3	9.3	24.3
NO.LENG'D	0	5	0	0	53	0	1	44	0	2	3	28	3	23	6	3	35	28	6	21

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/03/79

DAY/NIGHT COMBINED

LENGTH(MM) INTERVAL	WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
3.1- 4.0							1			
4.1- 5.0					7	2	5	2		
5.1- 6.0		1	2	3	7		3	5	1	2
6.1- 7.0		1		2	12		3	3	1	4
7.1- 8.0				5	11		3	6	1	
8.1- 9.0	1	3	1	6	3		9	6	1	4
9.1- 10.0	1	1		5	9		5	11	2	2
10.1- 11.0	1	6		2	2		3	15		1
11.1- 12.0		7			5		2	11		1
12.1- 13.0		3			2	1	2	7		
13.1- 14.0		2			1			4		2
14.1- 15.0		2						1		
15.1- 16.0		1						1		
16.1- 17.0										
17.1- 18.0		1								
18.1- 19.0		1								
19.1- 20.0		2								1
20.1- 21.0		1								1
21.1- 22.0		1								
22.1- 23.0										3
23.1- 24.0										
24.1- 25.0										2
MEAN/DEPTH	9.3	12.7	6.7	8.2	7.9	7.1	8.1	9.9	8.0	12.9
STD ERR	.64	.67	.72	.32	.31	2.67	.39	.29	.60	1.43
MEAN/TRANS	12.4		7.9				9.2		11.9	
STD ERR	.64		.23				.25		1.19	
MEAN/DATE					9.5					
STD ERR					.23					
RANGE(MIN)	8.2	5.7	5.9	5.2	4.1	4.1	3.8	4.3	5.6	5.2
(MAX)	10.4	21.1	8.1	10.7	13.7	12.4	12.6	15.3	9.3	24.3
NO.LEVS*D	3	33	3	23	59	3	36	72	6	23

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
3.1- 4.0														1						
4.1- 5.0									1	1	2			1		2		1		2
5.1- 6.0					1						1		2	3			1	1		
6.1- 7.0					2			2		2	1	1	1	2			1			
7.1- 8.0	1				3			1		1	1			2		1	3	1		
8.1- 9.0		1		1	1			2						1			1	1	1	4
9.1- 10.0		2			3			13		2							1	2		3
10.1- 11.0				1	8			7		2	2	2			1		6	1		8
11.1- 12.0	2	5			3			12		1		1		1			11	2	2	7
12.1- 13.0		2			4			10		2	1			1	1		4	2	2	9
13.1- 14.0		1			1			7			1							1		8
14.1- 15.0					1			3									2	1		1
15.1- 16.0		1						1			1			1						4
16.1- 17.0								2				1								2
17.1- 18.0												2								1
18.1- 19.0																				
19.1- 20.0					1															1
20.1- 21.0																				3
21.1- 22.0																				
22.1- 23.0																				1
23.1- 24.0																				
24.1- 25.0												1								
25.1- 26.0																				
26.1- 27.0																				1
27.1- 28.0																				
28.1- 29.0																				
29.1- 30.0																				1
MEAN/DEPTH	10.2	11.6		9.8	10.6			11.5	4.2	9.3	9.0	14.5	5.6	7.8	11.6	5.5	10.7	10.2	11.4	13.3
STD ERR	1.39	.55		.80	.54			.28		.82	1.27	2.04	.26	.95	.60	.92	.37	.83	.82	.63
MEAN/TRANS	11.3			10.5				11.5		8.8	11.4			7.8			10.2		13.2	
STD ERR	.52			.51				.28		.86	1.30			.78			.38		.58	
MEAN/DATE					10.9										11.3					
STD ERR					.23										.37					
RANGE(MIN)	7.4	8.7		9.0	5.8			6.6	4.2	4.2	4.5	6.7	5.2	4.0	11.0	4.3	5.9	4.3	8.3	4.2
(MAX)	11.8	15.9		10.6	19.1			16.9	4.2	12.9	15.8	25.0	6.1	15.5	12.2	7.3	14.1	14.3	12.8	30.0
NO.MEASRD	1	10	0	0	28	0	0	68	1	11	10	8	1	11	8	1	30	11	5	56

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/10/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
3.1- 4.0				1						
4.1- 5.0	2			1		2		1	1	3
5.1- 6.0	1		2	3	1		1	1		
6.1- 7.0	1	1	1	2	2		1	2		2
7.1- 8.0	2			2	3	1	3	2		1
8.1- 9.0		1		2	1		1	3	1	4
9.1- 10.0		2			3		1	15		5
10.1- 11.0	2	2		1	9		6	8		10
11.1- 12.0	2	6		1	3		11	14	2	8
12.1- 13.0	1	2		1	5		4	12	2	11
13.1- 14.0	1	1			1			8		8
14.1- 15.0					1		2	4		1
15.1- 16.0	1	1		1				1		4
16.1- 17.0		1						2		2
17.1- 18.0		2								1
18.1- 19.0										
19.1- 20.0					1					1
20.1- 21.0										3
21.1- 22.0										
22.1- 23.0										1
23.1- 24.0										
24.1- 25.0		1								
25.1- 26.0										
26.1- 27.0										1
27.1- 28.0										
28.1- 29.0										
29.1- 30.0										1
MEAN/DEPTH	9.2	12.8	5.6	8.1	10.6	5.5	10.7	11.2	10.2	12.7
STD ERR	1.01	.91	.26	.84	.51	.92	.37	.27	1.37	.57
MEAN/TRANS	11.4			9.5			10.9		12.5	
STD ERR	.74			.46			.24		.54	
MEAN/DATE					11.1					
STD ERR					.23					
RANGE(MI	4.5	6.7	5.2	4.0	5.8	4.3	5.9	4.3	4.2	4.2
(MA..	15.8	25.0	6.1	15.5	19.1	7.3	14.1	16.9	12.8	30.0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
5.1- 6.0														1			2			
6.1- 7.0												1								
7.1- 8.0							1								1			1		
8.1- 9.0				1			1						1		1	1				
9.1- 10.0				3			2								1		1	3		
10.1- 11.0				6											1			1		
11.1- 12.0				3			3					1		1	3		1	2		
12.1- 13.0				4			5								2			7		
13.1- 14.0				4			4				2	2			3		1	1		1
14.1- 15.0				5								3			5			1		
15.1- 16.0				1			1					2		1						
16.1- 17.0				3							1				3					1
17.1- 18.0															2			1		
18.1- 19.0				1											1			2		
19.1- 20.0		1		1								1						1		
20.1- 21.0				1								1			2					
21.1- 22.0				3			1											1		1
22.1- 23.0																		1		
23.1- 24.0		1													1					
24.1- 25.0															1					
25.1- 26.0																				
26.1- 27.0																				
27.1- 28.0												1								
28.1- 29.0																				
29.1- 30.0																				1
30.1- 31.0												1								1
31.1- 32.0																				1
32.1- 33.0												1								
33.1- 34.0																				2
34.1- 35.0																				
35.1- 36.0																				
36.1- 37.0																				1
MEAN/DEPTH	21.9		13.9			12.3					14.5	17.9	10.0		15.0	8.4	9.3	13.8		27.6
STD ERR	2.15		.62			.71					1.25	2.01	2.07		.81		1.68	.89		2.73
MEAN/TRANS	21.9		13.9			12.3					17.3		14.3				12.8			27.6
STD ERR	2.15		.62			.71					1.68		.80				.83			2.73
MEAN/DATE				13.7											15.8					
STD ERR				.51											.76					

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
RANGE(MIN)		19.7			8.3			7.5			13.1	6.3		5.4	7.9	8.4	5.5	7.7		13.9
(MAX)		24.0			22.0			21.5			17.0	32.5		15.1	25.0	8.4	14.0	22.5		36.5
NO.LENG'D	0	2	0	0	36	0	0	18	0	0	3	14	0	4	27	1	5	22	0	9

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
5.1- 6.0				1			2			
6.1- 7.0		1								
7.1- 8.0					1			2		
8.1- 9.0				1	2	1		1		
9.1- 10.0					4		1	5		
10.1- 11.0					7			1		
11.1- 12.0		1		1	6		1	5		
12.1- 13.0					6			12		
13.1- 14.0	2	2			7		1	5		1
14.1- 15.0		3			10			1		
15.1- 16.0		2		1	1			1		
16.1- 17.0	1				6					1
17.1- 18.0					2			1		
18.1- 19.0					2			2		
19.1- 20.0		2			1			1		
20.1- 21.0		1			3					
21.1- 22.0					3			2		1
22.1- 23.0								1		
23.1- 24.0		1			1					
24.1- 25.0					1					
25.1- 26.0										
26.1- 27.0										
27.1- 28.0		1								
28.1- 29.0										
29.1- 30.0										1
30.1- 31.0		1								1
31.1- 32.0										1
32.1- 33.0		1								
33.1- 34.0										2
34.1- 35.0										
35.1- 36.0										
36.1- 37.0										1
MEAN/DEPTH	14.5	18.4		10.0	14.3	8.4	9.3	13.1		27.6
STD ERR	1.25	1.79		2.07	.49		1.68	.59		2.73
MEAN/TRANS	17.8			14.1			12.6		27.6	
STD ERR	1.55			.49			.57		2.73	
MEAN/DATE					15.0					
STD ERR					.50					

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/17/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
RANGE(MIN)	13.1	6.3		5.4	7.9	8.4	5.5	7.5		13.9
(MAX)	17.0	32.5		15.1	25.0	8.4	14.0	22.5		36.5
NO.LENG'D	3	16	0	4	63	1	5	40	0	9

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
11.1- 12.0		2																		
12.1- 13.0		1																		
13.1- 14.0		2										1								
14.1- 15.0										1										
15.1- 16.0																				
16.1- 17.0												1								1
17.1- 18.0		2									1									
18.1- 19.0		1									1									
19.1- 20.0		1			1							3								1
20.1- 21.0												1								
21.1- 22.0		3									1	1					1			2
22.1- 23.0																				1
23.1- 24.0		1																		
24.1- 25.0											1									1
25.1- 26.0																				
26.1- 27.0								1												1
27.1- 28.0																				
28.1- 29.0																				
29.1- 30.0											1									
30.1- 31.0																				1
31.1- 32.0												1								1
32.1- 33.0																				1
33.1- 34.0																				
34.1- 35.0																				
35.1- 36.0												1								
36.1- 37.0																				
37.1- 38.0																				
38.1- 39.0												1								
39.1- 40.0												1								
40.1- 41.0																				
41.1- 42.0																				
42.1- 43.0												1								
43.1- 44.0												1								
MEAN/DEPTH		17.3		19.1			27.0		14.3		22.5	28.1					21.5			24.9
STD ERR		1.24									2.23	3.01								1.72
MEAN/TRANS		17.3		19.1			27.0		14.3		26.5						21.5			24.9
STD ERR		1.24									2.30									1.72

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
MEAN/DATE					17.8										25.8					
STD ERR					1.19										1.54					
RANGE(MIN)		11.3			19.1			27.0		14.3	18.0	14.0						21.5		16.2
(MAX)		23.5			19.1			27.0		14.3	30.0	44.0						21.5		33.0
NO.LENG'D	0	13	0	0	1	0	0	1	0	1	5	13	0	0	0	0	1	0	0	10

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
11.1- 12.0		2								
12.1- 13.0		1								
13.1- 14.0		3								
14.1- 15.0										1
15.1- 16.0										
16.1- 17.0		1								1
17.1- 18.0	1	2								
18.1- 19.0	1	1								
19.1- 20.0		4			1					1
20.1- 21.0		1								
21.1- 22.0	1	4					1			2
22.1- 23.0										1
23.1- 24.0		1								
24.1- 25.0	1									1
25.1- 26.0										
26.1- 27.0								1		1
27.1- 28.0										
28.1- 29.0										
29.1- 30.0	1									
30.1- 31.0										1
31.1- 32.0		1								1
32.1- 33.0										1
33.1- 34.0										
34.1- 35.0										
35.1- 36.0		1								
36.1- 37.0										
37.1- 38.0										
38.1- 39.0		1								
39.1- 40.0		1								
40.1- 41.0										
41.1- 42.0										
42.1- 43.0		1								
43.1- 44.0		1								
MEAN/DEPTH	22.5	22.7		19.1		21.5	27.0			24.0
STD ERR	2.23									
		1.92								1.83
MEAN/TRANS	22.7			19.1		24.3				24.0
STD ERR	1.64					2.75				1.83

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/24/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
MEAN/DATE					23.0					
STD ERR					1.21					
RANGE(MIN)	18.0	11.3			19.1		21.5	27.0		14.3
(MAX)	30.0	44.0			19.1		21.5	27.0		33.0
NO.LENG'D	5	26	0	0	1	0	1	1	0	11

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/31/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
7.1- 8.0															1					
8.1- 9.0																				
9.1- 10.0																				
10.1- 11.0																				
11.1- 12.0																				
12.1- 13.0																				
13.1- 14.0																				
14.1- 15.0								1												
15.1- 16.0																				
16.1- 17.0																				
17.1- 18.0																				
18.1- 19.0																				1
19.1- 20.0																				
20.1- 21.0					1			1												
21.1- 22.0																				
22.1- 23.0																				
23.1- 24.0																				
24.1- 25.0																				
25.1- 26.0																				
26.1- 27.0																				
27.1- 28.0																				
28.1- 29.0																		1		
29.1- 30.0																		1		1
30.1- 31.0																				
31.1- 32.0																				1
32.1- 33.0																				
33.1- 34.0																				1
34.1- 35.0																				
35.1- 36.0																				
36.1- 37.0																				
37.1- 38.0																		1		
38.1- 39.0																				
39.1- 40.0																				
40.1- 41.0																				
41.1- 42.0												1								
42.1- 43.0																				
43.1- 44.0																				
44.1- 45.0																				
45.1- 46.0																				1
MEAN/DEPTH				21.0			17.4				42.0			7.2			32.3			31.8
STD ERR							3.10										2.85			4.45

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/31/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
MEAN/TRANS				21.0			17.4					42.0			7.2			32.3		31.8
STD ERR							3.10											2.85		4.45
MEAN/DATE					18.6										30.5					
STD ERR					2.15										3.56					
RANGE(MIN)					21.0			14.3				42.0			7.2			29.0		18.2
(MAX)					21.0			20.5				42.0			7.2			38.0		46.0
NO.LENG'D	0	0	0	0	1	0	0	2	0	0	0	1	0	0	1	0	0	3	0	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/31/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
7.1- 8.0					1					
8.1- 9.0										
9.1- 10.0										
10.1- 11.0										
11.1- 12.0										
12.1- 13.0										
13.1- 14.0										
14.1- 15.0								1		
15.1- 16.0										
16.1- 17.0										
17.1- 18.0										
18.1- 19.0										1
19.1- 20.0										
20.1- 21.0					1			1		
21.1- 22.0										
22.1- 23.0										
23.1- 24.0										
24.1- 25.0										
25.1- 26.0										
26.1- 27.0										
27.1- 28.0										
28.1- 29.0								1		
29.1- 30.0								1		1
30.1- 31.0										
31.1- 32.0										1
32.1- 33.0										
33.1- 34.0										1
34.1- 35.0										
35.1- 36.0										
36.1- 37.0										
37.1- 38.0								1		
38.1- 39.0										
39.1- 40.0										
40.1- 41.0										
41.1- 42.0		1								
42.1- 43.0										
43.1- 44.0										
44.1- 45.0										
45.1- 46.0										1
MEAN/DEPTH	42.0			14.1			26.4			31.8
STD ERR				6.90						
							4.10			4.45

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 07/31/79

	DAY/NIGHT COMBINED									
LENGTH(MM) INTERVAL	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
MEAN/TRANS	42.0		14.1			26.4			31.8	
STD ERR			6.90			4.10			4.45	
MEAN/DATE					27.8					
STD ERR					3.10					
RANGE(MIN)	42.0		7.2			14.3			18.2	
(MAX)	42.0		21.0			38.0			46.0	
NO.LENG'D	0	1	0	0	2	0	0	5	0	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/07/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
16.1- 17.0																	1			
17.1- 18.0																				
18.1- 19.0															1					
19.1- 20.0																				
20.1- 21.0																				
21.1- 22.0																				
22.1- 23.0																				
23.1- 24.0																				
24.1- 25.0																				
25.1- 26.0																				
26.1- 27.0																				
27.1- 28.0																				
28.1- 29.0																				
29.1- 30.0																				
30.1- 31.0																				
31.1- 32.0																				
32.1- 33.0																				1
33.1- 34.0																				1
34.1- 35.0																				
35.1- 36.0																		1		
36.1- 37.0																				
37.1- 38.0																				1
38.1- 39.0																				
39.1- 40.0																				
40.1- 41.0					1							1								
41.1- 42.0												1								
42.1- 43.0																				
43.1- 44.0		1										1								
44.1- 45.0		1																		
45.1- 46.0												1								
46.1- 47.0												3								
47.1- 48.0																				1
48.1- 49.0												1								1
49.1- 50.0																				
50.1- 51.0												2								
51.1- 52.0												1								
52.1- 53.0																				
53.1- 54.0												3								
54.1- 55.0																				
55.1- 56.0																				
56.1- 57.0												1								

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/07/79

	DAY										NIGHT									
LENGTH(MM) INTERVAL	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
57.1- 58.0																				
58.1- 59.0																				
59.1- 60.0																				
60.1- 61.0								1												
61.1- 62.0		1																		
62.1- 63.0																				
63.1- 64.0																				
64.1- 65.0																				
65.1- 66.0												1								
MEAN/DEPTH		50.3			41.0			61.0				50.1			18.1			16.4	36.0	40.4
STD ERR		5.84										1.56								3.41
MEAN/TRANS	50.3			41.0			61.0				50.1			18.1			26.2			40.4
STD ERR	5.84										1.56						9.80			3.41
MEAN/DATE					50.6										44.8					
STD ERR					4.50										2.32					
RANGE(MIN)		44.0			41.0			61.0				41.0			18.1			16.4	36.0	33.0
(MAX)		62.0			41.0			61.0				66.0			18.1			16.4	36.0	49.0
NO.LENG'D	0	3	0	0	1	0	0	1	0	0	0	16	0	0	1	0	1	1	0	5

DATE: 08/14/79

LENGTH(MM) INTERVAL	WES S
33.1- 34.0	
34.1- 35.0	
35.1- 36.0	
36.1- 37.0	
37.1- 38.0	
38.1- 39.0	
39.1- 40.0	
40.1- 41.0	
41.1- 42.0	
42.1- 43.0	
43.1- 44.0	
44.1- 45.0	
45.1- 46.0	
46.1- 47.0	
47.1- 48.0	
48.1- 49.0	
49.1- 50.0	
50.1- 51.0	
51.1- 52.0	
52.1- 53.0	
53.1- 54.0	
54.1- 55.0	
55.1- 56.0	
56.1- 57.0	
57.1- 58.0	
58.1- 59.0	
59.1- 60.0	
60.1- 61.0	
61.1- 62.0	
62.1- 63.0	
63.1- 64.0	
64.1- 65.0	
65.1- 66.0	
66.1- 67.0	
67.1- 68.0	
68.1- 69.0	
69.1- 70.0	
MEAN/DEPTH	
STD ERR	

L12A

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/07/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST CHANNEL S	B	S	M	B	S	RDR M	B	EAST S	B
16.1- 17.0							1			
17.1- 18.0										
18.1- 19.0					1					
19.1- 20.0										
20.1- 21.0										
21.1- 22.0										
22.1- 23.0										
23.1- 24.0										
24.1- 25.0										
25.1- 26.0										
26.1- 27.0										
27.1- 28.0										
28.1- 29.0										
29.1- 30.0										
30.1- 31.0										
31.1- 32.0										
32.1- 33.0										1
33.1- 34.0										1
34.1- 35.0										
35.1- 36.0								1		
36.1- 37.0										
37.1- 38.0										1
38.1- 39.0										
39.1- 40.0										
40.1- 41.0		1			1					
41.1- 42.0		1								
42.1- 43.0										
43.1- 44.0		2								
44.1- 45.0		1								
45.1- 46.0		1								
46.1- 47.0		3								
47.1- 48.0										1
48.1- 49.0		1								1
49.1- 50.0										
50.1- 51.0		2								
51.1- 52.0		1								
52.1- 53.0										
53.1- 54.0		3								
54.1- 55.0										
55.1- 56.0										
56.1- 57.0		1								

L12A 03/06/80 142

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/14/79

	DAY										NIGHT									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST		WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B	S	B	S	M	B	S	M	B	S	B
MEAN/TRANS				42.5								59.7		48.5			69.0			
STD ERR				8.50								5.36		2.50						
MEAN/DATE					42.5										57.5					
STD ERR					8.50										4.06					
RANGE(MIN)					34.0							52.0			46.0			69.0		
(MAX)					51.0							70.0			51.0			69.0		
NO.LENG'D	0	0	0	0	2	0	0	0	0	0	0	3	0	0	2	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/14/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	RDR S	RDR M	RDR B	EAST S	EAST B
33.1- 34.0					1					
34.1- 35.0										
35.1- 36.0										
36.1- 37.0										
37.1- 38.0										
38.1- 39.0										
39.1- 40.0										
40.1- 41.0										
41.1- 42.0										
42.1- 43.0										
43.1- 44.0										
44.1- 45.0										
45.1- 46.0					1					
46.1- 47.0										
47.1- 48.0										
48.1- 49.0										
49.1- 50.0										
50.1- 51.0					2					
51.1- 52.0		1								
52.1- 53.0										
53.1- 54.0										
54.1- 55.0										
55.1- 56.0										
56.1- 57.0		1								
57.1- 58.0										
58.1- 59.0										
59.1- 60.0										
60.1- 61.0										
61.1- 62.0										
62.1- 63.0										
63.1- 64.0										
64.1- 65.0										
65.1- 66.0										
66.1- 67.0										
67.1- 68.0										
68.1- 69.0								1		
69.1- 70.0		1								
MEAN/DEPTH		59.7			45.5			69.0		
STD ERR		5.36			4.01					

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/14/79

	DAY/NIGHT COMBINED									
LENGTH(MM)	WEST		CHANNEL			RDR			EAST	
INTERVAL	S	B	S	M	B	S	M	B	S	B
MEAN/TRANS	59.7		45.5			69.0				
STD ERR	5.36		4.01							
MEAN/DATE					53.8					
STD ERR					4.17					
RANGE(MIN)	52.0		34.0			69.0				
(MAX)	70.0		51.0			69.0				
NO.LENG'D	0	3	0	0	4	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/28/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY RDR S	DAY RDR M	DAY RDR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT RDR S	NIGHT RDR M	NIGHT RDR B	NIGHT EAST S	NIGHT EAST B
35.1- 36.0												1								
36.1- 37.0																				
37.1- 38.0																				1
38.1- 39.0																				
39.1- 40.0																				
40.1- 41.0																				
41.1- 42.0																				
42.1- 43.0																				
43.1- 44.0																				
44.1- 45.0												1								
45.1- 46.0																				
46.1- 47.0																				
47.1- 48.0																				
48.1- 49.0																				
49.1- 50.0																				
50.1- 51.0																		1		
51.1- 52.0																				
52.1- 53.0																				
53.1- 54.0																				
54.1- 55.0																				
55.1- 56.0																				
56.1- 57.0															1					
57.1- 58.0																				
58.1- 59.0																				
59.1- 60.0																				
60.1- 61.0																				
61.1- 62.0																				
62.1- 63.0																				
63.1- 64.0																				
64.1- 65.0																				
65.1- 66.0																				
66.1- 67.0																				
67.1- 68.0																				
68.1- 69.0																				
69.1- 70.0																				
70.1- 71.0																				
71.1- 72.0																				
72.1- 73.0																				
73.1- 74.0																				
74.1- 75.0												1								
MEAN/DEPTH											52.0		57.0			51.0			38.0	
STD ERR											11.79									

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/28/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
MEAN/TRANS											52.0			57.0			51.0			38.0
STD ERR											11.79									
MEAN/DATE															50.3					
STD ERR															5.89					
RANGE(MIN)											36.0			57.0			51.0			38.0
(MAX)											75.0			57.0			51.0			38.0
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	3	0	0	1	0	0	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/28/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			ROR			EAST	
	S	B	S	M	B	S	M	B	S	B
35.1- 36.0		1								
36.1- 37.0										
37.1- 38.0										1
38.1- 39.0										
39.1- 40.0										
40.1- 41.0										
41.1- 42.0										
42.1- 43.0										
43.1- 44.0										
44.1- 45.0		1								
45.1- 46.0										
46.1- 47.0										
47.1- 48.0										
48.1- 49.0										
49.1- 50.0										
50.1- 51.0								1		
51.1- 52.0										
52.1- 53.0										
53.1- 54.0										
54.1- 55.0										
55.1- 56.0										
56.1- 57.0					1					
57.1- 58.0										
58.1- 59.0										
59.1- 60.0										
60.1- 61.0										
61.1- 62.0										
62.1- 63.0										
63.1- 64.0										
64.1- 65.0										
65.1- 66.0										
66.1- 67.0										
67.1- 68.0										
68.1- 69.0										
69.1- 70.0										
70.1- 71.0										
71.1- 72.0										
72.1- 73.0										
73.1- 74.0										
74.1- 75.0		1								
MEAN/DEPTH		52.0			57.0			51.0		38.0
STD ERR		11.79								

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 08/28/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED WEST S	WEST B	CHANNEL S	CHANNEL M	CHANNEL B	ROR S	ROR M	ROR B	EAST S	EAST B
MEAN/TRANS	52.0		57.0			51.0			38.0	
STD ERR	11.79									
MEAN/DATE					50.3					
STD ERR					5.89					
RANGE(MIN)	36.0		57.0			51.0			38.0	
(MAX)	75.0		57.0			51.0			38.0	
NO.LENG'D	0	3	0	0	1	0	0	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 09/11/79

LENGTH(MM) INTERVAL	DAY WEST S	DAY WEST B	DAY CHANNEL S	DAY CHANNEL M	DAY CHANNEL B	DAY ROR S	DAY ROR M	DAY ROR B	DAY EAST S	DAY EAST B	NIGHT WEST S	NIGHT WEST B	NIGHT CHANNEL S	NIGHT CHANNEL M	NIGHT CHANNEL B	NIGHT ROR S	NIGHT ROR M	NIGHT ROR B	NIGHT EAST S	NIGHT EAST B
63.1- 64.0																				1
64.1- 65.0																				
65.1- 66.0												1								
MEAN/DEPTH												66.0								64.0
STD ERR																				
MEAN/TRANS												66.0								64.0
STD ERR																				
MEAN/DATE															65.0					
STD ERR															1.00					
RANGE(MIN)												66.0								64.0
(MAX)												66.0								64.0
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

TRANSECT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY

DATE: 09/11/79

LENGTH(MM) INTERVAL	DAY/NIGHT COMBINED									
	WEST		CHANNEL			RDR			EAST	
	S	B	S	M	B	S	M	B	S	B
63.1- 64.0										1
64.1- 65.0										
65.1- 66.0		1								
MEAN/DEPTH		66.0								64.0
STD ERR										
MEAN/TRANS	66.0								64.0	
STD ERR										
MEAN/DATE					65.0					
STD ERR					1.00					
RANGE(MIN)		66.0								64.0
(MAX)		66.0								64.0
NO.LENG'D	0	1	0	0	0	0	0	0	0	1

APPENDIX-4 Ichthyoplankton: Length Frequency Data Collected at the Roseton and Danskammer Point Electric Generating Stations

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 04/24/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/01/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0												1						1
5.1- 6.0														1			1	
MEAN/DEPTH												4.8		5.2			5.2	4.8
STD ERR																		
MEAN/DATE												4.8		5.2			5.0	
STD ERR																	.20	
RANGE(MIN)												4.8		5.2			5.2	4.8
(MAX)												4.8		5.2			5.2	4.8
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 05/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
5.1- 6.0	1	1	1				1	1	1									
MEAN/DEPTH	5.1	5.4	5.4				5.1	5.4	5.4									
STD ERR																		
MEAN/DATE		5.3						5.3										
STD ERR		.10						.10										
RANGE(MIN)	5.1	5.4	5.4				5.1	5.4	5.4									
(MAX)	5.1	5.4	5.4				5.1	5.4	5.4									
NO.LENG'D	1	1	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 05/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/25/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0					1			1										
4.1- 5.0				1			1											
5.1- 6.0										1						1		
MEAN/DEPTH				4.3	3.9		4.3	3.9		6.0						6.0		
STD ERR																		
MEAN/DATE					4.1			4.1			6.0						6.0	
STD ERR					.20			.20										
RANGE(MIN)				4.3	3.9		4.3	3.9		6.0						6.0		
(MAX)				4.3	3.9		4.3	3.9		6.0						6.0		
NO.LENG'D	0	0	0	1	1	0	1	1	0	1	0	0	0	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 05/29/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/01/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
5.1- 5.0				1			1											
MEAN/DEPTH				5.3			5.3											
STD ERR																		
MEAN/DATE				5.3			5.3											
STD ERR																		
RANGE(MIN)				5.3			5.3											
(MAX)				5.3			5.3											
NO.LENG'D	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT RIN AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 05/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
6.1- 7.0											2						2	
7.1- 8.0										4		1	3			7		1
8.1- 9.0																		
9.1- 10.0																		
10.1- 11.0																		
11.1- 12.0													1			1		
12.1- 13.0													1			1		
MEAN/DEPTH										7.4	6.6	7.1	9.4			8.5	6.6	7.1
STD ERR											.20		1.01				.20	
										.11						.64		
MEAN/DATE											7.1			9.4			8.1	
STD ERR											.16			1.01			.53	
RANGE(MIN)										7.2	6.4	7.1	7.7			7.2	6.4	7.1
(MAX)										7.7	6.8	7.1	12.4			12.4	6.8	7.1
NO.LENG'D	0	0	0	0	0	0	0	0	0	4	2	1	5	0	0	9	2	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT RIN AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 05/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/25/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0		1						1				1		1			1	1
5.1- 6.0																		
6.1- 7.0	1				3		1	3		2	1	4		1		2	2	4
7.1- 8.0			2	1			1		2	2	2	9		2	3	2	4	12
8.1- 9.0			1						1	5	11	14	1	5	4	6	16	18
9.1- 10.0			1		1			1	1	3	8	14	1	4	5	4	12	19
10.1- 11.0										1		5			2	1		7
11.1- 12.0						1			1		1	1					1	1
12.1- 13.0																		
13.1- 14.0											1			1			2	
14.1- 15.0													1	1		1	1	
MEAN/DEPTH	7.0	5.0	8.1	7.1	7.4	11.1	7.1	6.9	8.7	8.4	9.0	8.6	10.9	9.0	9.1	8.8	9.0	8.7
STD ERR			.57		.89		.05		.74		.29		1.86		.24		.28	
								.83		.30		.18		.58		.46		.15
MEAN/DATE		7.4			7.9			7.7			8.7			9.2			8.8	
STD ERR		.63			.85			.51			.14			.33			.14	
RANGE(MIN)	7.0	5.0	7.1	7.1	6.2	11.1	7.0	5.0	7.1	6.5	6.2	5.0	8.8	5.0	7.8	6.5	5.0	5.0
(MAX)	7.0	5.0	9.5	7.1	10.0	11.1	7.1	10.0	11.1	10.1	13.6	11.8	14.6	14.2	10.1	14.6	14.2	11.8
NO.LENG'D	1	1	4	1	4	1	2	5	5	13	24	48	3	15	14	16	39	62

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT RIN AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 05/29/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/01/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0						1			1									
5.1- 6.0		4	2		3	2		7	4			1						1
6.1- 7.0	13	34	9	9	15	32	22	49	41		6	3		3			9	3
7.1- 8.0	8	29	8	6	46	41	14	75	49	3	6	18		8	8	3	14	26
8.1- 9.0	1	5	3	4	25	13	5	30	16	2	8	18	3	12	5	5	20	23
9.1- 10.0		4	1		7	3		11	4	2	7	6	1	5	3	3	12	9
10.1- 11.0	1	3	3	1	4	4	2	7	7		2	3	3	4	5	3	6	8
11.1- 12.0		2		2	7	3	2	9	3	5	6	4	10	15	8	15	21	12
12.1- 13.0	1			2	9	5	3	9	5	3	6	3	18	21	22	21	27	25
13.1- 14.0				1	1	2	1	1	2		2		12	9	9	12	11	9
14.1- 15.0					1			1			2		3		2	3	2	2
15.1- 16.0											1						1	
MEAN/DEPTH	7.4	7.4	7.6	8.4	8.6	8.0	7.9	8.1	7.9	10.3	9.9	8.7	12.3	10.8	11.3	11.8	10.5	10.1
STD ERR	.28	.13	.25	.44	.17	.17	.27	.12	.15	.52	.36	.21	.19	.24	.26	.22	.20	.21
MEAN/DATE		7.4			8.3			8.0			9.4			11.4			10.6	
STD ERR		.11			.12			.09			.19			.15			.13	
RANGE(MIN)	6.2	5.7	5.7	6.1	5.2	5.0	6.1	5.2	5.0	7.2	6.2	5.7	8.5	6.5	7.3	7.2	6.2	5.7
(MAX)	12.2	11.5	10.5	13.3	14.2	13.4	13.3	14.2	13.4	12.7	15.7	12.7	14.3	14.0	14.5	14.3	15.7	14.5
NO.LENG'D	24	81	26	25	118	106	49	199	132	15	46	56	50	77	62	65	123	118

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT RIN AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 06/05/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0					2			2										
5.1- 6.0					6			6					1	1	1	1	1	1
6.1- 7.0	1			6	1	2	7	1	2		1		4	3	5	4	4	5
7.1- 8.0		2		2	3		2	5		2	1		3	17	11	5	18	11
8.1- 9.0		1		3	2	3	3	3	3	1	3		3	19	10	4	22	10
9.1- 10.0				2	1		2	1			1		5	16	7	5	17	7
10.1- 11.0						1			1		3		5	12	3	5	15	3
11.1- 12.0				1		1	1		1				3	9	4	3	9	4
12.1- 13.0	1		1			1	1		2				3	2	1	3	2	1
13.1- 14.0				1			1				2		4	12	3	4	14	3
14.1- 15.0			1			2			3		7		1	7		1	14	
15.1- 16.0											3			1			4	
16.1- 17.0											2						2	
17.1- 18.0													1			1		
18.1- 19.0																		
19.1- 20.0											1						1	
MEAN/DEPTH	9.2	8.0	13.6	8.2	6.5	10.3	8.4	6.7	10.8	8.0	12.9		10.3	10.1	9.0	10.1	10.7	9.0
STD ERR	3.10	.19	.75	.54	.38	.91	.55	.34	.85	.49	.70		.48	.24	.30	.45	.26	.30
MEAN/DATE		10.0			8.1			8.4			12.4			9.9			10.2	
STD ERR		1.20			.40			.39			.69			.18			.19	
RANGE(MIN)	6.1	7.8	12.9	6.2	4.7	6.1	6.1	4.7	6.1	7.4	6.1		6.0	5.7	5.8	6.0	5.7	5.8
(MAX)	12.3	8.4	14.4	13.4	9.5	14.6	13.4	9.5	14.6	9.0	19.7		17.2	15.8	13.8	17.2	19.7	13.8
NO.LENG'D	2	3	2	15	15	10	17	18	12	3	24	0	33	99	45	36	123	45

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 05/29/79 DAY S	M	B	NIGHT S	M	B	DAY + NIGHT S	M	B	DATE 06/01/79 DAY S	M	B	NIGHT S	M	B	DAY + NIGHT S	M	B
5.1- 6.0	1						1			2		1			1	2		2
6.1- 7.0	7		12	2		2	9		14	6		3	3		2	9		5
7.1- 8.0	9		3	2		4	11		7	12		15	3		5	15		20
8.1- 9.0	1			1			2			26		20	8		18	34		38
9.1- 10.0	1			1			2			9		23	5		2	14		25
10.1- 11.0			2	1		2	1		4	4		2	2		3	6		5
11.1- 12.0	5		2	4		4	9		6	19		20	26		16	45		36
12.1- 13.0	6		1	3		2	9		3	28		24	40		41	68		65
13.1- 14.0				3		3	3		3	11		8	25		25	36		33
14.1- 15.0				1			1			1		3	8		6	9		9
15.1- 16.0										1		1				1		1
16.1- 17.0										1					1	1		1
MEAN/DEPTH	8.9		7.9	10.9		10.4	9.6		9.1	10.5		10.3	11.9		11.6	11.2		11.0
STD ERR	.45		.45	.64		.59	.39		.41	.22		.19	.16		.19	.14		.14
MEAN/DATE	8.5			10.7			9.4			10.4			11.7			11.1		
STD ERR	.33			.43			.29			.15			.13			.10		
RANGE(MIN)	5.5		6.2	6.1		6.8	5.5		6.2	5.1		6.0	6.8		5.7	5.1		5.7
(MAX)	12.6		12.1	14.8		13.4	14.8		13.4	16.7		15.3	14.8		16.3	16.7		16.3
NO.LENG'D	30	0	20	18	0	17	48	0	37	120	0	120	120	0	120	240	0	240

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 05/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/25/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0	1			1		2	2		2									
4.1- 5.0			1			2			3	1			1			2		
5.1- 6.0										1						1		
6.1- 7.0													1		3	1		3
7.1- 8.0	1						1											
8.1- 9.0			1						1	3			2		6	5		6
9.1- 10.0										1		2	6		15	7		17
10.1- 11.0													1			1		
11.1- 12.0															1			1
MEAN/DEPTH	5.7		6.6	3.8		3.9	5.0		4.8	7.7		9.6	8.9		9.0	8.5		9.0
STD ERR	1.95		2.15				1.28		.82				.48		.24			
						.15				.87		.10				.44		.22
MEAN/DATE		6.2			3.8			4.9			8.2			9.0			8.8	
STD ERR		1.22			.12			.65			.71			.22			.22	
RANGE(MIN)	3.7		4.5	3.8		3.5	3.7		3.5	4.7		9.5	5.0		6.3	4.7		6.3
(MAX)	7.6		8.8	3.8		4.1	7.6		8.8	9.3		9.7	10.5		11.9	10.5		11.9
NO.LENGTH	2	0	2	1	0	4	3	0	6	6	0	2	11	0	25	17	0	27

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 07/24/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/31/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
29.1- 30.0													1			1		
MEAN/DEPTH													30.0			30.0		
STD ERR																		
MEAN/DATE														30.0			30.0	
STD ERR																		
RANGE(MIN)													30.0			30.0		
(MAX)													30.0			30.0		
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 05/29/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/01/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
10.1- 11.0				1			1											
MEAN/DEPTH				10.2			10.2											
STD ERR																		
MEAN/DATE				10.2			10.2											
STD ERR																		
RANGE(MIN)				10.2			10.2											
(MAX)				10.2			10.2											
NO.LENG'D	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 05/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0	1						1			2		1				2		1
5.1- 6.0						3			3			1			1			2
6.1- 7.0						1			1									
7.1- 8.0				2			2			4						4		
MEAN/DEPTH	4.8			7.2		6.1	6.4		6.1	6.5		4.8			5.7	6.5		5.1
STD ERR				.05		.31	.78		.31	.74		.60				.74		.46
MEAN/DATE		4.8			6.5			6.2			6.1			5.7			6.0	
STD ERR					.30			.34			.62						.55	
RANGE(MIN)	4.8			7.1		5.6	4.8		5.6	4.1		4.2			5.7	4.1		4.2
(MAX)	4.8			7.2		7.0	7.2		7.0	7.9		5.4			5.7	7.9		5.7
NO.LENG'D	1	0	0	2	0	4	3	0	4	6	0	2	0	0	1	6	0	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 04/24/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/01/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0												1	1			1		1
5.1- 6.0																		
6.1- 7.0															1			1
MEAN/DEPTH												4.4	4.2		6.2	4.2		5.3
STD ERR																		.90
MEAN/DATE											4.4			5.2			4.9	
STD ERR														1.00			.64	
RANGE(MIN)												4.4	4.2		6.2	4.2		4.4
(MAX)												4.4	4.2		6.2	4.2		6.2
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 06/26/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/03/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
8.1- 9.0				1	1		1	1										
9.1- 10.0																		
10.1- 11.0						1			1									
11.1- 12.0						1			1									
12.1- 13.0						2			2									
13.1- 14.0																		
14.1- 15.0					1	2		1	2									
15.1- 16.0					2	2		2	2		1							
16.1- 17.0				1	1	4	1	1	4				1			1		
17.1- 18.0					2	3		2	3									
18.1- 19.0				1	1	5	1	1	5		1		1	1		1	2	
19.1- 20.0					3	5		3	5				3	1		3	1	
20.1- 21.0						1			1				9	1	1	9	1	1
21.1- 22.0						2			2				2		1	2		1
22.1- 23.0						1			1				1			1		
23.1- 24.0					2	1		2	1				1		2	1		2
MEAN/DEPTH				14.7	17.7	17.5	14.7	17.7	17.5		17.0		20.4	19.3	22.4	20.4	18.4	22.4
STD ERR					1.11		2.99		.58		1.65		.35		.74		.84	
				2.99		.58		1.11						.64		.35		.74
MEAN/DATE					17.4			17.4			17.0			20.6			20.3	
STD ERR					.52			.52			1.65			.33			.37	
RANGE(MIN)				8.8	8.4	10.6	8.8	8.4	10.6		15.4		16.5	18.3	20.8	16.5	15.4	20.8
(MAX)				18.6	24.0	23.3	18.6	24.0	23.3		18.7		23.4	20.5	23.8	23.4	20.5	23.8
NO.LENG'D	0	0	0	3	13	30	3	13	30	0	2	0	18	3	4	18	5	4

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 07/10/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/17/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
20.1- 21.0															1			1
21.1- 22.0					1			1										
22.1- 23.0		1						1										
23.1- 24.0					1			1										
24.1- 25.0											1						1	
25.1- 26.0					1			1										
26.1- 27.0																		
27.1- 28.0																		
28.1- 29.0																		
29.1- 30.0																		
30.1- 31.0																		
31.1- 32.0																		
32.1- 33.0																		
33.1- 34.0																		
34.1- 35.0					1			1										
MEAN/DEPTH		23.0			26.6			25.9			25.0			20.5			25.0	20.5
STD ERR					2.94			2.39										
MEAN/DATE		23.0			26.6			25.9			25.0			20.5			22.8	
STD ERR					2.94			2.39									2.25	
RANGE(MIN)		23.0			21.5			21.5			25.0			20.5			25.0	20.5
(MAX)		23.0			35.0			35.0			25.0			20.5			25.0	20.5
NO.LENG'D	0	1	0	0	4	0	0	5	0	0	1	0	0	0	1	0	1	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 07/24/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/31/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
25.1- 26.0						1			1									
26.1- 27.0						1			1									
27.1- 28.0						1			1									
28.1- 29.0																		
29.1- 30.0						1			1									
30.1- 31.0																		
31.1- 32.0						3			3									
32.1- 33.0						2			2									
33.1- 34.0						1			1									
34.1- 35.0						1			1									
MEAN/DEPTH						30.9			30.9									
STD ERR						.89			.89									
MEAN/DATE					30.9			30.9										
STD ERR					.89			.89										
RANGE(MIN)						26.0			26.0									
(MAX)						34.5			34.5									
NO.LENG'D	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 07/10/79 DAY S	M	B	NIGHT S	M	B	DAY + NIGHT S	M	B	DATE 07/17/79 DAY S	M	B	NIGHT S	M	B	DAY + NIGHT S	M	B
23.1- 24.0				5		2	5		2									
24.1- 25.0				2		4	2		4									
25.1- 26.0				4		4	4		4									
26.1- 27.0				5		1	5		1									
27.1- 28.0				4		1	4		1									
28.1- 29.0				5		3	5		3									
29.1- 30.0				3			3											
30.1- 31.0				2		1	2		1									
31.1- 32.0				1			1											
32.1- 33.0				2		1	2		1									
33.1- 34.0																		
34.1- 35.0																		
35.1- 36.0																		
36.1- 37.0						1			1									
MEAN/DEPTH				27.6		27.3	27.6		27.3									
STD ERR				.45		.81	.45		.81									
MEAN/DATE				27.5			27.5											
STD ERR				.40			.40											
RANGE(MIN)				23.5		24.0	23.5		24.0									
(MAX)				32.5		37.0	32.5		37.0									
NO.LENG'D	0	0	0	33	0	18	33	0	18	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM)	DATE 07/24/79									DATE 07/31/79								
	DAY			NIGHT			DAY + NIGHT			DAY			NIGHT			DAY + NIGHT		
INTERVAL	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B
17.1- 18.0										1						1		
18.1- 19.0																		
19.1- 20.0																		
20.1- 21.0												1						1
MEAN/DEPTH										17.7		20.5				17.7		20.5
STD ERR																		
MEAN/DATE											19.1						19.1	
STD ERR											1.40						1.40	
RANGE(MIN)										17.7		20.5				17.7		20.5
(MAX)										17.7		20.5				17.7		20.5
NO.LENGTHD	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 07/10/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/17/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
7.1- 8.0				1		1	1		1									
8.1- 9.0																		
9.1- 10.0				1			1											
10.1- 11.0																		
11.1- 12.0																		
12.1- 13.0			1						1									
13.1- 14.0																		
14.1- 15.0	1			1			2											
15.1- 16.0			1						1									
16.1- 17.0				1			1											
17.1- 18.0										1								
18.1- 19.0	1		1				1		1						1			
19.1- 20.0	1			1			2								1			1
20.1- 21.0				1		1	1		1									
MEAN/DEPTH	17.6		15.7	19.7		14.5	15.6		15.2	17.9					19.7	17.9		19.7
STD ERR	1.34		1.49	2.19		6.50	1.54		2.23									
MEAN/DATE		16.6			14.6			15.5			17.9			19.7			18.8	
STD ERR		.98			2.02			1.22									.90	
RANGE (MIN)	15.0		13.0	7.7		8.0	7.7		8.0	17.9					19.7	17.9		19.7
(MAX)	19.5		18.1	20.5		21.0	20.5		21.0	17.9					19.7	17.9		19.7
NO.LENGTHS	3	0	3	6	0	2	9	0	5	1	0	0	0	0	1	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION 01

LENGTH(MM) INTERVAL	DATE 06/26/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/03/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
7.1- 8.0				2			2											
8.1- 9.0			1	1			1		1									
9.1- 10.0				3			3											
10.1- 11.0				2		2	2		2									
11.1- 12.0				1			1											
12.1- 13.0				1			1			2					1	2		1
13.1- 14.0											1							1
14.1- 15.0				1			1											
15.1- 16.0										1	1					1		1
16.1- 17.0						1			1	2						2		
17.1- 18.0				2			2			1						1		
18.1- 19.0	1			1		2	2		2	2						2		
19.1- 20.0						3			3			2						2
20.1- 21.0	2			2		3	4		3	3					1	3		1
21.1- 22.0			1			1			2									
22.1- 23.0						1			1									
23.1- 24.0						4			4									
24.1- 25.0						1			1									
25.1- 26.0						1			1									
26.1- 27.0						1			1									
MEAN/DEPTH	19.6		14.8	13.1		20.6	14.1		20.1	17.3		17.1			16.5	17.3		16.9
STD ERR	.57		6.55				1.11		1.03						3.95			
				1.14		.95				.83		1.52				.83		1.41
MEAN/DATE		17.7			17.3			17.3			17.2			16.5			17.1	
STD ERR		2.41			.96			.88			.70			3.95			.71	
RANGE(MM)	18.5		8.2	7.7		10.7	7.7		8.2	12.7		13.5			12.5	12.7		12.5
(MAX)	20.3		21.3	21.0		27.0	21.0		27.0	20.4		19.9			20.4	20.4		20.4
NO.LIVE/TOT	3	0	2	16	0	20	19	0	22	11	0	4	0	0	2	11	0	6

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/19/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0			1	1			1		1									
5.1- 6.0																		
6.1- 7.0	1						1											
7.1- 8.0										1						1		
8.1- 9.0																		
9.1- 10.0													1			1		
10.1- 11.0			1			1			2									
11.1- 12.0			2			1			3				2		2	2		2
12.1- 13.0	4		5	1		2	5		7				3			3		
13.1- 14.0	5		7	2			7		7	1			3		4	4		4
14.1- 15.0	8		13	1		4	9		17			1	8		3	8		4
15.1- 16.0	9		11	1		4	10		15				10		1	10		1
16.1- 17.0	7		10	1			8		10	1			21		5	22		5
17.1- 18.0	6		9			1	6		10	3			11		9	14		9
18.1- 19.0	5		11			4	5		15				15		4	15		4
19.1- 20.0	2			1		1	3		1			2	7		10	7		12
20.1- 21.0	5		1			1	5		2				6		5	6		5
21.1- 22.0	1		2	1		1	2		3	1			3		2	4		2
22.1- 23.0															3			3
23.1- 24.0															2			2
MEAN/DEPTH	16.2		15.7	14.8		16.0	16.0		15.8	15.9		17.9	16.9		18.1	16.8		18.1
STD ERR	.38		.30	1.58		.67	.39		.28	1.71		1.63	.25		.41	.26		.39
MEAN/DATE	15.9			15.6			15.9			16.5			17.3			17.3		
STD ERR	.24			.67			.23			1.28			.22			.22		
RANGE(MIN)	6.8		5.0	4.7		10.5	4.7		5.0	7.2		14.6	9.6		11.7	7.2		11.7
(MAX)	21.9		21.9	21.4		21.1	21.9		21.9	21.3		19.6	21.5		23.2	21.5		23.2
NO.LENGTH	53	0	73	9	0	20	62	0	93	7	0	3	90	0	50	97	0	53

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION D1

LENGTH(MM) INTERVAL	DATE 06/12/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0						1			1				1			1		
5.1- 6.0												4			2			6
6.1- 7.0						1			1	1		2	3		4	4		6
7.1- 8.0			1	2		4	2		5	7		9	2			9		9
8.1- 9.0				7		4	7		4	6		13	8			14		13
9.1- 10.0			1	11		4	11		5	19		33	5		2	24		35
10.1- 11.0				13		7	13		7	25		26	23		11	48		37
11.1- 12.0				11		2	11		2	27		18	15		8	42		26
12.1- 13.0				10		2	10		2	18		6	13		7	31		13
13.1- 14.0				10		3	10		3	10		2	7		5	17		7
14.1- 15.0				9		1	9		1	2		1	5			7		1
15.1- 16.0	1			7		2	8		2	2		2	3		5	5		7
16.1- 17.0				3		5	3		5	1		4	1		4	2		8
17.1- 18.0						1			1				2		1	2		1
18.1- 19.0	1						1						1			1		
19.1- 20.0	1						1											
MEAN/DEPTH	14.0		8.7	11.9		11.5	12.1		11.3	11.0		10.2	11.4		11.8	11.2		10.7
STD ERR	1.19		1.30	.25		.55	.28		.53	.17		.20	.26		.42	.15		.19
MEAN/DATE	14.3			11.8			11.9			10.6			11.6			11.0		
STD ERR	2.41			.24			.25			.13			.23			.12		
RANGE(MIN)	15.7		7.4	7.6		4.8	7.6		4.8	6.6		5.2	4.4		5.4	4.4		5.2
(MAX)	19.7		10.0	16.9		17.2	19.7		17.2	16.6		16.7	18.2		17.6	18.2		17.6
NO.LENGTHD	3	0	2	83	0	37	86	0	39	118	0	120	89	0	49	207	0	169

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION 01

LENGTH(MM) INTERVAL	DATE 06/05/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
5.1- 6.0			1			1			2				1			1		
6.1- 7.0	2		2	4		6	6		8			1			2			3
7.1- 8.0	2		4	9		5	11		9	7		5	1		7	8		12
8.1- 9.0	1		4	5		6	6		10	6		23	8		16	14		39
9.1- 10.0	2			12		7	14		7	8		12	25		19	33		31
10.1- 11.0	5		1	12		4	17		5	4		13	26		16	30		29
11.1- 12.0	2		4	4		4	6		8	2		3	9		11	11		14
12.1- 13.0	2		1	2		3	4		4	3		2	14		8	17		10
13.1- 14.0	1		4	14		8	15		12	1		7	9		3	10		10
14.1- 15.0	2		2	17		8	19		10	3		5	8		3	11		8
15.1- 16.0	2		1	8		3	10		4			3	8		4	8		7
16.1- 17.0				2			2						1		1	1		1
17.1- 18.0										1		1				1		1
										1						1		
MEAN/DEPTH	9.9		9.6	10.6		9.8	10.5		9.7	9.4		9.4	10.4		9.4	10.1		9.4
STD ERR	.60		.61	.31		.39	.27		.33	.49		.28	.21		.23	.20		.18
MEAN/DATE		9.7			10.3			10.2			9.4			9.9			9.7	
STD ERR		.43			.24			.21			.25			.16			.14	
RANGE(MIN)	5.1		5.0	5.1		4.7	5.1		4.7	6.1		5.1	4.7		5.4	4.7		5.1
(MAX)	14.2		14.6	15.5		14.3	15.5		14.6	17.8		16.6	15.8		15.3	17.8		16.6
NO.LENGTHD	21	0	24	89	0	55	110	0	79	36	0	75	110	0	90	146	0	165

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM)	DATE 05/29/79									DATE 06/01/79								
	DAY			NIGHT			DAY + NIGHT			DAY			NIGHT			DAY + NIGHT		
INTERVAL	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B
5.1- 6.0	1						1			2	1				1	2		2
6.1- 7.0	7		12	2		2	9		14	5	3	3			2	9		5
7.1- 8.0	9		3	2		3	11		6	12	15	3			5	15		20
8.1- 9.0	1			1			2			26	20	8			18	34		38
9.1- 10.0	1			1			2			9	23	5			2	14		25
10.1- 11.0			2	1		1	1		3	4	2	2			3	6		5
11.1- 12.0	5		2	4		4	9		6	19	20	26			16	45		36
12.1- 13.0	6		1	3		1	9		2	28	24	40			41	68		65
13.1- 14.0				3		3	3		3	11	8	25			25	36		33
14.1- 15.0				1			1			1	3	8			6	9		9
15.1- 16.0										1	1					1		1
16.1- 17.0										1					1	1		1
MEAN/DEPTH	8.9		7.3	10.9		10.4	9.6		8.9	10.5		10.3	11.9		11.6	11.2		11.0
STD ERR	.45		.45	.64		.68	.39		.43	.22		.19	.16		.19	.14		.14
MEAN/DATE	8.5			10.7			9.4			10.4			11.7			11.1		
STD ERR	.33			.46			.29			.15			.13			.10		
RANGE(MIN)	5.5		6.2	6.1		6.8	5.5		6.2	5.1		6.0	6.8		5.7	5.1		5.7
(MAX)	12.6		12.1	14.8		13.4	14.8		13.4	16.7		15.3	14.8		16.3	16.7		16.3
NO.LENGTH	30	0	23	18	0	14	48	0	34	120	0	120	120	0	120	240	0	240

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 05/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/25/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
6.1- 7.0													1		3	1		3
7.1- 8.0	1						1											
8.1- 9.0			1						1	3			2		6	5		6
9.1- 10.0										1		2	6		15	7		17
10.1- 11.0													1			1		
11.1- 12.0															1			1
MEAN/DEPTH	7.6		8.8				7.6		8.8	9.1		9.6	9.3		9.0	9.2		9.0
STD ERR													.31		.24			
										.09		.10				.22		.22
MEAN/DATE		8.2						8.2			9.2			9.1			9.1	
STD ERR		.60						.60			.13			.19			.16	
RANGE(MIN)	7.6		8.8				7.6		8.8	8.9		9.5	7.0		6.3	7.0		6.3
(MAX)	7.6		8.8				7.6		8.8	9.3		9.7	10.5		11.9	10.5		11.9
NO.LARVAE	1	0	1	0	0	0	1	0	1	4	0	2	10	0	25	14	0	27

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION 01

LENGTH(MM) INTERVAL	DATE 05/28/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
5.1- 6.0						2			2									
6.1- 7.0						1			1									
7.1- 8.0				1			1			4						4		
MEAN/DEPTH				7.2		6.3	7.2		6.3	7.6						7.6		
STD ERR						.37			.37									
						.37				.18						.18		
MEAN/DATE					6.5			6.5			7.6						7.6	
STD ERR					.35			.35			.18						.18	
RANGE(MIN)				7.2		5.8	7.2		5.8	7.1						7.1		
(MAX)				7.2		7.0	7.2		7.0	7.9						7.9		
NO.LENGTHD	0	0	0	1	0	3	1	0	3	4	0	0	0	0	0	4	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/12/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0	1		4				1		4									
5.1- 6.0			1						1									
MEAN/DEPTH	4.5		4.6				4.5		4.6									
STD ERR			.15						.15									
MEAN/DATE		4.6						4.6										
STD ERR		.12						.12										
RANGE(MIN)	4.5		4.2				4.5		4.2									
(MAX)	4.5		5.1				4.5		5.1									
NO.LENGTHD	1	0	5	0	0	0	1	0	5	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION 01

LENGTH(MM) INTERVAL	DATE 06/05/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0			1						1									
5.1- 6.0	1						1											
MEAN/DEPTH	5.4		4.3				5.4		4.3									
STD ERR																		
MEAN/DATE		4.9						4.9										
STD ERR		.55						.55										
RANGE(MIN)	5.4		4.3				5.4		4.3									
(MAX)	5.4		4.3				5.4		4.3									
NO.LENGTHS	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION 01

LENGTH(MM) INTERVAL	DATE 05/29/79 DAY S	M	B	NIGHT S	M	B	DAY + NIGHT S	M	B	DATE 06/01/79 DAY S	M	B	NIGHT S	M	B	DAY + NIGHT S	M	B
7.1- 8.0						1			1									
8.1- 9.0																		
9.1- 10.0																		
10.1- 11.0						1			1									
11.1- 12.0																		
12.1- 13.0						1			1									
MEAN/DEPTH						10.3			10.3									
STD ERR						1.37			1.37									
MEAN/DATE					10.3			10.3										
STD ERR					1.37			1.37										
RANGE(MIN)						7.8			7.8									
(MAX)						12.5			12.5									
NO.LEN'D	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 05/22/79 DAY S	M	B	NIGHT S	M	B	DAY + NIGHT S	M	B	DATE 05/25/79 DAY S	M	B	NIGHT S	M	B	DAY + NIGHT S	M	B
3.1- 4.0	1			1		2	2		2									
4.1- 5.0			1			2			3	1			1			2		
5.1- 6.0										1						1		
MEAN/DEPTH	3.7		4.5	3.8		3.9	3.8		4.0	4.9			5.0			5.0		
STD ERR							.05		.17									
						.15				.25						.15		
MEAN/DATE		4.1			3.8			3.9			4.9			5.0			5.0	
STD ERR		.40			.12			.13			.25						.15	
RANGE(MIN)	3.7		4.5	3.8		3.5	3.7		3.5	4.7			5.0			4.7		
(MAX)	3.7		4.5	3.8		4.1	3.8		4.5	5.2			5.0			5.2		
NO.LENGTH	1	0	1	1	0	4	2	0	5	2	0	0	1	0	0	3	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION 01

LENGTH(MM) INTERVAL	DATE 05/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0	1						1			2		1				2		1
5.1- 6.0						1			1			1			1			2
6.1- 7.0																		
7.1- 8.0				1			1											
MEAN/DEPTH	4.8			7.1		5.6	6.0		5.6	4.2		4.8			5.7	4.2		5.1
STD ERR							1.15			.05		.60				.05		.46
MEAN/DATE		4.8			6.4			5.8			4.5			5.7			4.7	
STD ERR					.75			.67			.31						.34	
RANGE(MIN)	4.8			7.1		5.6	4.8		5.6	4.1		4.2			5.7	4.1		4.2
(MAX)	4.8			7.1		5.6	7.1		5.6	4.2		5.4			5.7	4.2		5.7
NO.LEVGO	1	0	0	1	0	1	2	0	1	2	0	2	0	0	1	2	0	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 04/24/79 DAY S	M	B	NIGHT S	M	B	DAY + NIGHT S	M	B	DATE 05/01/79 DAY S	M	B	NIGHT S	M	B	DAY + NIGHT S	M	B
4.1- 5.0												1	1			1		1
5.1- 6.0															1			1
6.1- 7.0																		
MEAN/DEPTH												4.4	4.2		6.2	4.2		5.3
STD ERR																		.90
MEAN/DATE											4.4			5.2			4.9	
STD ERR														1.00			.64	
RANGE(MIN)												4.4	4.2		6.2	4.2		4.4
(MAX)												4.4	4.2		6.2	4.2		6.2
NO.LENGTHD	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 08/07/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
43.1- 44.0					1			1										
44.1- 45.0																		
45.1- 46.0																		
46.1- 47.0																		
47.1- 48.0																		
48.1- 49.0																		
49.1- 50.0																		
50.1- 51.0																		
51.1- 52.0																		
52.1- 53.0																		
53.1- 54.0																		
54.1- 55.0																		
55.1- 56.0																		
56.1- 57.0																		
57.1- 58.0																		
58.1- 59.0																		
59.1- 60.0																		
60.1- 61.0																		
61.1- 62.0																		
62.1- 63.0																		
63.1- 64.0																		
64.1- 65.0																		
65.1- 66.0																		
66.1- 67.0					1			1										
MEAN/DEPTH					55.5			55.5										
STD ERR					11.50			11.50										
MEAN/DATE					55.5			55.5										
STD ERR					11.50			11.50										
RANGE(MIN)					44.0			44.0										
(MAX)					67.0			67.0										
NO.LENGTHD	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 07/24/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/31/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0					1			1										
5.1- 6.0																		
6.1- 7.0																		
7.1- 8.0																		
8.1- 9.0																		
9.1- 10.0																		
10.1- 11.0																		
11.1- 12.0																		
12.1- 13.0																		
13.1- 14.0																		
14.1- 15.0																		
15.1- 16.0				1			1											
16.1- 17.0																		
17.1- 18.0																		
18.1- 19.0																		
19.1- 20.0																		
20.1- 21.0																		
21.1- 22.0																		
22.1- 23.0																		
23.1- 24.0																		
24.1- 25.0																		
25.1- 26.0																		
26.1- 27.0					1			1										
27.1- 28.0																		
28.1- 29.0																		
29.1- 30.0																		
30.1- 31.0																		
31.1- 32.0					1			1										
MEAN/DEPTH				15.1	29.5	5.0	15.1	29.5	5.0									
STD ERR					2.50													
								2.50										
MEAN/DATE					19.8			19.8										
STD ERR					6.07			6.07										
RANGE(MIN)				15.1	27.0	5.0	15.1	27.0	5.0									
(MAX)				15.1	32.0	5.0	15.1	32.0	5.0									
NO. LNG'D	0	0	0	1	2	1	1	2	1	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 07/10/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/17/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
9.1- 10.0		1						1										
10.1- 11.0			3			1			4									
11.1- 12.0		1						1										
12.1- 13.0		1	1	1		2	1	1	3									
13.1- 14.0					1			1					1	1			1	1
14.1- 15.0														2				2
15.1- 16.0						1			1					2				2
16.1- 17.0													1				1	
17.1- 18.0													1				1	
18.1- 19.0														1				1
19.1- 20.0				1			1							1				1
20.1- 21.0																		
21.1- 22.0																		
22.1- 23.0													1				1	
23.1- 24.0																		
24.1- 25.0																		
25.1- 26.0																		
26.1- 27.0																		
27.1- 28.0						1			1									
MEAN/DEPTH		11.3	11.0		15.8	13.8 15.7		15.8	11.9 13.6					22.5	15.9 15.9		22.5	15.9 15.9
STD ERR			.63					3.50	1.88						.81			1.21
		.66			3.50	3.17		.78						1.21				.81
MEAN/DATE		11.2			15.5			13.5						16.5			16.5	
STD ERR		.42			2.02			1.21						.83			.83	
RANGE(MIN)		10.0	10.2		12.3	13.8 10.3		12.3	10.0 10.2					22.5	13.6 13.1		22.5	13.6 13.1
(MAX)		12.1	12.9		19.3	13.8 28.0		19.3	13.8 28.0					22.5	17.7 19.3		22.5	17.7 19.3
NO.LENG'D	0	3	4	2	1	5	2	4	9	0	0	0	1	3	7		1 3	7

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 06/26/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/03/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
7.1- 8.0													1			1		
8.1- 9.0						1			1									
9.1- 10.0				1	2	6	1	2	6					1			1	
10.1- 11.0				5	7	9	5	7	9			1	3			3		1
11.1- 12.0				7	7	15	7	7	15			1						1
12.1- 13.0			1	1	11	10	1	11	11				1			1		
13.1- 14.0				1	1	4	1	1	4				3			3		
14.1- 15.0					1	5		1	5									
15.1- 16.0			1	1		2	1		3									
16.1- 17.0						1			1									
17.1- 18.0						1			1									
18.1- 19.0						1			1									
MEAN/DEPTH			13.6	11.6	11.7	12.2	11.6	11.7	12.2			11.3	11.5	9.2		11.5	9.2	11.3
STD ERR			1.50		.21		.38		.28				.74					
				.38		.28		.21				.60				.74		.60
MEAN/DATE		13.6			11.9			12.0			11.3			11.2			11.3	
STD ERR		1.50			.18			.18			.60			.70			.57	
RANGE(MIN)			12.1	9.1	9.3	9.0	9.1	9.3	9.0			10.7	7.4	9.2		7.4	9.2	10.7
(MAX)			15.1	15.6	14.1	18.6	15.6	14.1	18.6			11.9	13.9	9.2		13.9	9.2	11.9
NO.LENG'D	0	0	2	16	29	55	16	29	57	0	0	2	8	1	0	8	1	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 06/19/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0				1		1	1		1									
5.1- 6.0		2	1			1		2	2						1			1
6.1- 7.0	1	2	1		1		1	3	1		1						1	
7.1- 8.0	1	3			2		1	5						2			2	
8.1- 9.0				1		1	1		1					2			2	
9.1- 10.0				1			1							1			1	
10.1- 11.0				1		1	1		1									
11.1- 12.0		1			1			2										
12.1- 13.0			1	1			1		1									
13.1- 14.0				1	1		1	1										
14.1- 15.0					1	1		1	1						1			1
15.1- 16.0					1			1										
MEAN/DEPTH	7.1	7.2	8.2	10.1	11.0	8.8	9.3	9.0	8.6		6.1			8.3	9.9		8.0	9.9
STD ERR	.80		2.07		1.50		1.08		1.19						4.45		.52	
		.71		1.29		1.62		.91						.44				4.45
MEAN/DATE		7.4			10.1			9.0			6.1			8.8			8.4	
STD ERR		.61			.83			.59						1.05			.97	
RANGE(MIN)	6.3	5.2	5.6	4.9	6.7	5.0	4.9	5.2	5.0		6.1			7.2	5.4		6.1	5.4
(MAX)	7.9	11.7	12.3	13.9	15.9	14.1	13.9	15.9	14.1		6.1			9.8	14.3		9.8	14.3
NO.LENG'D	2	8	3	6	7	5	8	15	8	0	1	0	0	5	2	0	6	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 06/12/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0				1	3		1	3			1	1	1	5		1	6	1
5.1- 6.0			1						1		1		1			1	1	
6.1- 7.0														6			6	
7.1- 8.0												1	1	1		1	1	1
8.1- 9.0						1			1									
9.1- 10.0														1	1		1	1
10.1- 11.0				1			1							1	1		1	1
MEAN/DEPTH			5.2	7.6	4.4	8.8	7.6	4.4	7.0		5.1	6.1	5.8	6.4	10.3	5.8	6.2	8.1
STD ERR					.12		3.10		1.80		.10		.90		.35		.45	
				3.10				.12				1.05		.50		.90		1.29
MEAN/DATE		5.2			6.2			6.1			5.6			6.7			6.5	
STD ERR					1.15			.98			.51			.48			.42	
RANGE(MIN)			5.2	4.5	4.2	8.8	4.5	4.2	5.2		5.0	5.0	4.5	4.3	9.9	4.5	4.3	5.0
(MAX)			5.2	10.7	4.6	8.8	10.7	4.6	8.8		5.2	7.1	7.5	10.5	10.6	7.5	10.5	10.6
NO.LENG'D	0	0	1	2	3	1	2	3	2	0	2	2	3	14	2	3	16	4

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 06/05/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0					2			2					1	3		1	3	
4.1- 5.0													1	5	2	1	5	2
5.1- 6.0		3						3						1			1	
6.1- 7.0														1			1	
7.1- 8.0		1	1					1	1									
8.1- 9.0		1	1		1			2	1					1			1	
9.1- 10.0																		
10.1- 11.0					1			1										
MEAN/DEPTH		6.5	8.1		6.7			6.6	8.1					4.1	5.0	4.3	4.1	5.0	4.3
STD ERR			.45		1.77				.45					.10		.05		.41	
		.56						.78							.41		.10		.05
MEAN/DATE		7.0			6.7			6.9							4.8			4.8	
STD ERR		.49			1.77			.66							.31			.31	
RANGE(MIN)		5.4	7.6		3.4			3.4	7.6					4.0	3.7	4.2	4.0	3.7	4.2
(MAX)		8.2	8.5		10.6			10.6	8.5					4.2	8.4	4.3	4.2	8.4	4.3
NO.LENGTH	0	5	2	0	4	0	0	9	2	0	0	0	2	11	2	2	11	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 05/29/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/01/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0		2			1	1		3	1		1			1			2	
4.1- 5.0	2	1		1	9	8	3	10	8									
5.1- 6.0		2	4	2	2	1	2	4	5	1	1	1	2		2	3	1	3
6.1- 7.0		1	6	1	9	4	1	10	10		1	4		2			3	4
7.1- 8.0				4	18	4	4	18	4		3	4	2	4		2	7	4
8.1- 9.0			2	3	5		3	5	2				3	2		3	2	
MEAN/DEPTH	4.9	5.1	6.7	7.0	6.7	5.6	6.7	6.5	6.1	5.5	6.3	6.8	7.3	7.1	5.6	7.1	6.8	6.5
STD ERR	.15	.51	.26	.36	.21	.33	.37	.21	.24		.69	.24	.47	.51	.30	.47	.41	.24
MEAN/DATE		6.0			6.5			6.4			6.5			7.0			6.8	
STD ERR		.28			.17			.15			.29			.33			.22	
RANGE(MIN)	4.7	3.7	5.7	5.0	3.8	3.6	4.7	3.7	3.6	5.5	3.1	5.5	5.2	3.5	5.3	5.2	3.1	5.3
(MAX)	5.0	6.9	8.6	8.2	8.6	7.9	8.2	8.6	8.6	5.5	7.5	7.6	8.5	8.6	5.9	8.5	8.6	7.6
NO.LENG'D	2	6	12	11	44	18	13	50	30	1	6	9	7	9	2	8	15	11

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 05/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/25/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0	1			1	1	1	2	1	1		1	2					1	2
4.1- 5.0	2	1	2	2	1	3	4	2	5	2	3		3			5	3	
5.1- 6.0						1			1	2	9	2	1	2	2	3	11	4
6.1- 7.0						1			1		1						1	
MEAN/DEPTH	4.2	4.4	4.5	4.4	4.3	4.9	4.3	4.3	4.8	5.1	5.2	4.6	4.9	5.9	5.4	5.0	5.3	4.9
STD ERR	.15		.30		.40		.13		.23		.18		.13		.25		.17	
				.23		.30		.23		.31		.50		.05		.15		.37
MEAN/DATE		4.3			4.7			4.5			5.1			5.3			5.1	
STD ERR		.12			.19			.14			.16			.17			.12	
RANGE(MIN)	3.9	4.4	4.2	4.0	3.9	3.9	3.9	3.9	3.9	4.5	3.6	3.8	4.6	5.9	5.2	4.5	3.6	3.8
(MAX)	4.4	4.4	4.8	4.8	4.7	6.1	4.8	4.7	6.1	5.8	6.3	5.8	5.2	6.0	5.7	5.8	6.3	5.8
NO.LENG'D	3	1	2	3	2	6	6	3	8	4	14	4	4	2	2	8	16	6

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 05/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0												1						1
4.1- 5.0															3			3
MEAN/DEPTH												3.9			4.4			4.3
STD ERR															.06			.13
MEAN/DATE											3.9			4.4			4.3	
STD ERR														.06			.13	
RANGE(MIN)												3.9			4.3			3.9
(MAX)												3.9			4.5			4.5
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	0	0	4

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 08/07/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 08/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
43.1- 44.0					1			1										
44.1- 45.0																		
45.1- 46.0																		
46.1- 47.0																		
47.1- 48.0																		
48.1- 49.0																		
49.1- 50.0																		
50.1- 51.0																		
51.1- 52.0																		
52.1- 53.0																		
53.1- 54.0																		
54.1- 55.0																		
55.1- 56.0																		
56.1- 57.0																		
57.1- 58.0																		
58.1- 59.0																		
59.1- 60.0																		
60.1- 61.0																		
61.1- 62.0																		
62.1- 63.0																		
63.1- 64.0																		
64.1- 65.0																		
65.1- 66.0																		
66.1- 67.0					1			1										
MEAN/DEPTH					55.5			55.5										
STD ERR					11.50			11.50										
MEAN/DATE					55.5			55.5										
STD ERR					11.50			11.50										
RANGE(MIN)					44.0			44.0										
(MAX)					67.0			67.0										
NO.LENGTHS	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 07/24/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/31/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
26.1- 27.0					1			1										
27.1- 28.0																		
28.1- 29.0																		
29.1- 30.0																		
30.1- 31.0																		
31.1- 32.0					1			1										
MEAN/DEPTH					29.5			29.5										
STD ERR					2.50			2.50										
MEAN/DATE					29.5			29.5										
STD ERR					2.50			2.50										
RANGE(MIN)					27.0			27.0										
(MAX)					32.0			32.0										
NO.LEN'D	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 07/10/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/17/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
17.1- 18.0														1			1	
18.1- 19.0															1			1
19.1- 20.0				1			1								1			1
20.1- 21.0															1			1
21.1- 22.0																		
22.1- 23.0																		
23.1- 24.0													1			1		
24.1- 25.0																		
25.1- 26.0																		
26.1- 27.0																		
27.1- 28.0						1			1									
MEAN/DEPTH				19.3		28.0	19.3		28.0				22.5	17.7	18.8	22.5	17.7	18.8
STD ERR															.55			.55
MEAN/DATE					23.7			23.7						19.4			19.4	
STD ERR					4.35			4.35						1.08			1.08	
RANGE(MIN)				19.3		28.0	19.3		28.0				22.5	17.7	18.2	22.5	17.7	18.2
(MAX)				19.3		28.0	19.3		28.0				22.5	17.7	19.3	22.5	17.7	19.3
NO.LENG'D	0	0	0	1	0	1	1	0	1	0	0	0	1	1	2	1	1	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH JUVENILE LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 06/26/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/03/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
15.1- 16.0				1			1											
16.1- 17.0						1			1									
17.1- 18.0						1			1									
18.1- 19.0						1			1									
MEAN/DEPTH				15.6		17.6	15.6		17.6									
STD ERR						.61			.61									
MEAN/DATE					17.1			17.1										
STD ERR					.66			.66										
RANGE(MIN)				15.6		16.5	15.6		16.5									
(MAX)				15.6		18.6	15.6		18.6									
NO.LENG'D	0	0	0	1	0	3	1	0	3	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 07/24/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/31/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0						1			1									
5.1- 6.0																		
6.1- 7.0																		
7.1- 8.0																		
8.1- 9.0																		
9.1- 10.0																		
10.1- 11.0																		
11.1- 12.0																		
12.1- 13.0																		
13.1- 14.0																		
14.1- 15.0																		
15.1- 16.0				1			1											
MEAN/DEPTH				15.1		5.0	15.1		5.0									
STD ERR																		
MEAN/DATE				10.1			10.1											
STD ERR				5.05			5.05											
RANGE(MIN)				15.1		5.0	15.1		5.0									
(MAX)				15.1		5.0	15.1		5.0									
NO.LENG'D	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 07/10/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/17/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
9.1- 10.0		1						1										
10.1- 11.0			3			1			4									
11.1- 12.0		1						1										
12.1- 13.0		1	1	1		2	1	1	3									
13.1- 14.0					1			1					1	1			1	1
14.1- 15.0														2				2
15.1- 16.0						1			1					2				2
16.1- 17.0													1				1	
MEAN/DEPTH		11.3	11.0	12.3	13.8	12.6	12.3	11.9	11.8				15.0	14.8		15.0	14.8	
STD ERR			.63						.61					.49		1.40		
		.66				.98		.78					1.40				.49	
MEAN/DATE		11.2			12.8			11.9						14.8			14.8	
STD ERR		.42			.66			.43						.46			.46	
RANGE(MIN)		10.3	10.2	12.3	13.8	10.3	12.3	10.0	10.2				13.6	13.1		13.6	13.1	
(MAX)		12.1	12.9	12.3	13.8	15.1	12.3	13.8	15.1				16.4	16.0		16.4	16.0	
NO.LENGTHD	0	3	4	1	1	4	1	4	8	0	0	0	0	2	5	0	2	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 06/26/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/03/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
7.1- 8.0													1			1		
8.1- 9.0						1			1									
9.1- 10.0				1	2	6	1	2	6					1			1	
10.1- 11.0				5	7	9	5	7	9			1	3			3		1
11.1- 12.0				7	7	15	7	7	15			1						1
12.1- 13.0			1	1	11	10	1	11	11				1			1		
13.1- 14.0				1	1	4	1	1	4				3			3		
14.1- 15.0					1	5		1	5									
15.1- 16.0			1			2			3									
MEAN/DEPTH			13.6	11.3	11.7	11.8	11.3	11.7	11.9			11.3	11.5	9.2		11.5	9.2	11.3
STD ERR			1.50		.21		.29		.23				.74					
				.29		.23		.21				.60				.74		.60
MEAN/DATE		13.6			11.7			11.8			11.3			11.2			11.3	
STD ERR		1.50			.15			.15			.60			.70			.57	
RANGE(MIN)			12.1	9.1	9.3	9.0	9.1	9.3	9.0			10.7	7.4	9.2		7.4	9.2	10.7
(MAX)			15.1	13.7	14.1	16.0	13.7	14.1	16.0			11.9	13.9	9.2		13.9	9.2	11.9
NO.LENGTHD	0	0	2	15	29	52	15	29	54	0	0	2	8	1	0	8	1	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM)	DATE 06/19/79									DATE 06/22/79								
	DAY			NIGHT			DAY + NIGHT			DAY			NIGHT			DAY + NIGHT		
INTERVAL	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B
4.1- 5.0				1		1	1		1									
5.1- 6.0		2	1			1		2	2						1			1
6.1- 7.0	1	2	1		1		1	3	1		1						1	
7.1- 8.0	1	3			2		1	5						2			2	
8.1- 9.0				1		1	1		1					2			2	
9.1- 10.0				1			1							1			1	
10.1- 11.0				1		1	1		1									
11.1- 12.0		1			1			2										
12.1- 13.0			1	1			1		1									
13.1- 14.0				1	1		1	1										
14.1- 15.0					1	1		1	1						1			1
15.1- 16.0					1			1										
MEAN/DEPTH	7.1	7.2	8.2	10.1	11.0	8.8	9.3	9.0	8.6		6.1			8.3	9.9		8.0	9.9
STD ERR	.80		2.07		1.50		1.08		1.19						4.45		.52	
		.71		1.29		1.62		.91						.44				4.45
MEAN/DATE		7.4			10.1			9.0			6.1			8.8			8.4	
STD ERR		.61			.83			.59						1.05			.97	
RANGE(MIN)	6.3	5.2	5.6	4.9	6.7	5.0	4.9	5.2	5.0		6.1			7.2	5.4		6.1	5.4
(MAX)	7.9	11.7	12.3	13.9	15.9	14.1	13.9	15.9	14.1		6.1			9.8	14.3		9.8	14.3
NO.LENGTH	2	8	3	6	7	5	8	15	8	0	1	0	0	5	2	0	6	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 06/12/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0				1	3		1	3			1	1	1	5		1	6	1
5.1- 6.0			1						1		1		1			1	1	
6.1- 7.0														6			6	
7.1- 8.0												1	1	1		1	1	1
8.1- 9.0						1			1									
9.1- 10.0														1	1		1	1
10.1- 11.0				1			1							1	1		1	1
MEAN/DEPTH			5.2	7.6	4.4	8.8	7.6	4.4	7.0		5.1	6.1	5.8	6.4	10.3	5.8	6.2	8.1
STD ERR					.12		3.10		1.80		.10		.90		.35		.45	
				3.10				.12				1.05		.50		.90		1.29
MEAN/DATE		5.2			6.2			6.1			5.6			6.7			6.5	
STD ERR					1.15			.98			.51			.48			.42	
RANGE(MIN)			5.2	4.5	4.2	8.8	4.5	4.2	5.2		5.0	5.0	4.5	4.3	9.9	4.5	4.3	5.0
(MAX)			5.2	10.7	4.6	8.8	10.7	4.6	8.8		5.2	7.1	7.5	10.5	10.6	7.5	10.5	10.6
NO.LENGTHD	0	0	1	2	3	1	2	3	2	0	2	2	3	14	2	3	16	4

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 06/05/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0					2			2					1	3		1	3	
4.1- 5.0													1	5	2	1	5	2
5.1- 6.0		3						3						1			1	
6.1- 7.0														1			1	
7.1- 8.0		1	1					1	1									
8.1- 9.0		1	1		1			2	1					1			1	
9.1- 10.0																		
10.1- 11.0					1			1										
MEAN/DEPTH		6.5	8.1		6.7			6.6	8.1				4.1	5.0	4.3	4.1	5.0	4.3
STD ERR			.45		1.77				.45				.10		.05		.41	
		.56						.78						.41		.10		.05
MEAN/DATE		7.0			6.7			6.9						4.8			4.8	
STD ERR		.49			1.77			.66						.31			.31	
RANGE(MIN)		5.4	7.6		3.4			3.4	7.6				4.0	3.7	4.2	4.0	3.7	4.2
(MAX)		8.2	8.5		10.6			10.6	8.5				4.2	8.4	4.3	4.2	8.4	4.3
NO.LENGTH	0	5	2	0	4	0	0	9	2	0	0	0	2	11	2	2	11	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 05/29/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/01/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0		1				1		1	1					1			1	
4.1- 5.0	2	1		1	9	8	3	10	8									
5.1- 6.0		2	4	2	2	1	2	4	5	1	1	1	2		2	3	1	3
6.1- 7.0		1	6	1	9	4	1	10	10		1	4		2			3	4
7.1- 8.0				4	18	4	4	18	4		3	4	2	4		2	7	4
8.1- 9.0			2	3	5		3	5	2				3	2		3	2	
MEAN/DEPTH	4.9	5.4	6.7	7.0	6.7	5.6	6.7	6.6	6.1	5.5	6.9	6.8	7.3	7.1	5.6	7.1	7.0	6.5
STD ERR	.15		.26		.20		.37		.24		.31		.47		.30		.34	
		.53		.36		.33		.20				.24		.51		.47		.24
MEAN/DATE		6.1			6.5			6.4			6.7			7.0			6.9	
STD ERR		.27			.17			.14			.19			.33			.20	
RANGE(MIN)	4.7	4.3	5.7	5.0	4.1	3.6	4.7	4.0	3.6	5.5	5.8	5.5	5.2	3.5	5.3	5.2	3.5	5.3
(MAX)	5.3	6.9	8.6	8.2	8.6	7.9	8.2	8.6	8.6	5.5	7.5	7.6	8.5	8.6	5.9	8.5	8.6	7.6
NO.LENG'D	2	5	12	11	43	18	13	48	30	1	5	9	7	9	2	8	14	11

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 05/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/25/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0	1				1	1	1	1	1		1	2					1	2
4.1- 5.0	2	1	2	2	1	3	4	2	5	2	3		3			5	3	
5.1- 6.0						1			1	2	9	2	1	2	2	3	11	4
6.1- 7.0						1			1		1						1	
MEAN/DEPTH	4.2	4.4	4.5	4.6	4.3	4.9	4.3	4.3	4.8	5.1	5.2	4.6	4.9	5.9	5.4	5.0	5.3	4.9
STD ERR	.15		.30		.40		.15		.23		.18		.13		.25		.17	
				.20		.30		.23		.31		.50		.05		.15		.37
MEAN/DATE		4.3			4.7			4.6			5.1			5.3			5.1	
STD ERR		.12			.20			.14			.16			.17			.12	
RANGE(MIN)	3.9	4.4	4.2	4.4	3.9	3.9	3.9	3.9	3.9	4.5	3.6	3.8	4.6	5.9	5.2	4.5	3.6	3.8
(MAX)	4.4	4.4	4.8	4.8	4.7	6.1	4.8	4.7	6.1	5.8	6.3	5.8	5.2	6.0	5.7	5.8	6.3	5.8
NO.LENGTH	3	1	2	2	2	6	5	3	8	4	14	4	4	2	2	8	16	6

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH POST YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 05/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0												1						1
4.1- 5.0															3			3
MEAN/DEPTH												3.9			4.4			4.3
STD ERR															.06			.13
MEAN/DATE											3.9			4.4			4.3	
STD ERR														.06			.13	
RANGE(MIN)												3.9			4.3			3.9
(MAX)												3.9			4.5			4.5
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	0	0	4

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 05/29/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/01/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0		1			1			2			1						1	
MEAN/DEPTH		3.7			3.8			3.8			3.1						3.1	
STD ERR								.05										
MEAN/DATE		3.7			3.8			3.8			3.1						3.1	
STD ERR								.05										
RANGE(MIN)		3.7			3.8			3.7			3.1						3.1	
(MAX)		3.7			3.8			3.8			3.1						3.1	
NO.LENG'D	0	1	0	0	1	0	0	2	0	0	1	0	0	0	0	0	1	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES WHITE PERCH YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 05/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/25/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0				1			1											
MEAN/DEPTH				4.0			4.0											
STD ERR																		
MEAN/DATE					4.0			4.0										
STD ERR																		
RANGE(MIN)				4.0			4.0											
(MAX)				4.0			4.0											
NO.LENG'D	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 07/24/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/31/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
16.1- 17.0				1			1											
MEAN/DEPTH				16.1			16.1											
STD ERR																		
MEAN/DATE				16.1			16.1											
STD ERR																		
RANGE(MIN)				16.1			16.1											
(MAX)				16.1			16.1											
NO.LENG'D	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 07/10/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/17/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
13.1- 14.0													1			1		
14.1- 15.0																		
15.1- 16.0																		
16.1- 17.0																		
17.1- 18.0																		
18.1- 19.0															1			1
19.1- 20.0					1			1										
MEAN/DEPTH					19.4			19.4					13.8		18.5	13.8		18.5
STD ERR																		
MEAN/DATE					19.4			19.4						16.2			16.2	
STD ERR														2.35			2.35	
RANGE(MIN)					19.4			19.4					13.8		18.5	13.8		18.5
(MAX)					19.4			19.4					13.8		18.5	13.8		18.5
NO.LENG'D	0	0	0	0	1	0	0	1	0	0	0	0	1	0	1	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 06/26/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/03/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
5.1- 6.0					1			1										
6.1- 7.0																		
7.1- 8.0																		
8.1- 9.0																		
9.1- 10.0																		
10.1- 11.0						1			1									
11.1- 12.0				1			1											
12.1- 13.0				1	1		1	1										
13.1- 14.0																		
14.1- 15.0																		
15.1- 16.0				1			1						1			1		
16.1- 17.0				1			1											
MEAN/DEPTH				14.1	9.0	10.9	14.1	9.0	10.9				15.5			15.5		
STD ERR					3.75		1.13											
				1.13				3.75										
MEAN/DATE					12.2			12.2						15.5			15.5	
STD ERR					1.38			1.38										
RANGE(MIN)				11.8	5.3	10.9	11.8	5.3	10.9				15.5			15.5		
(MAX)				16.8	12.8	10.9	16.8	12.8	10.9				15.5			15.5		
NO.LENG'D	0	0	0	4	2	1	4	2	1	0	0	0	1	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 06/19/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0	1	1					1	1										
5.1- 6.0																		
6.1- 7.0																		
7.1- 8.0																		
8.1- 9.0																		
9.1- 10.0																		
10.1- 11.0																		
11.1- 12.0																		
12.1- 13.0																		
13.1- 14.0																		
14.1- 15.0																		
15.1- 16.0																		
16.1- 17.0																		
17.1- 18.0													1			1		
MEAN/DEPTH	4.9	4.8					4.9	4.8					17.2			17.2		
STD ERR																		
MEAN/DATE		4.9						4.9						17.2			17.2	
STD ERR		.05						.05										
RANGE(MIN)	4.9	4.8					4.9	4.8					17.2			17.2		
(MAX)	4.9	4.8					4.9	4.8					17.2			17.2		
NO.LENG'D	1	1	0	0	0	0	1	1	0	0	0	0	0	1	0	0	1	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 06/12/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0		1	1	1		2	1	1	3	1						1		
5.1- 6.0				2	2	1	2	2	1		2						2	
MEAN/DEPTH		4.7	5.0	5.2	5.7	5.0	5.2	5.4	5.0	4.9	5.4					4.9	5.4	
STD ERR				.15	.30	.12	.15	.38	.08		.25						.25	
MEAN/DATE		4.9			5.2			5.2			5.3						5.3	
STD ERR		.15			.13			.12			.23						.23	
RANGE(MIN)		4.7	5.0	4.9	5.4	4.8	4.9	4.7	4.8	4.9	5.2					4.9	5.2	
(MAX)		4.7	5.0	5.4	6.0	5.2	5.4	6.0	5.2	4.9	5.7					4.9	5.7	
NO.LENG'D	0	1	1	3	2	3	3	3	4	1	2	0	0	0	0	1	2	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 06/05/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0	1	1					1	1										
4.1- 5.0	1	2	2				1	2	2		1			1	1		2	1
5.1- 6.0	7	10	8				7	10	8				2	4		2	4	
6.1- 7.0	1	1	3				1	1	3				1			1		
7.1- 8.0		1	6					1	6									
8.1- 9.0	1	5	2				1	5	2									
9.1- 10.0	1		1				1		1									
MEAN/DEPTH	5.9	6.3	6.7				5.9	6.3	6.7		4.2		5.9	5.3	4.9	5.9	5.1	4.9
STD ERR	.45	.35	.28				.45	.35	.28				.12	.18		.12	.23	
MEAN/DATE		6.4						6.4			4.2			5.5			5.3	
STD ERR		.20						.20						.15			.19	
RANGE(MIN)	3.5	4.0	4.8				3.5	4.0	4.8		4.2		5.7	4.7	4.9	5.7	4.2	4.9
(MAX)	9.3	8.9	9.2				9.3	8.9	9.2		4.2		6.1	5.7	4.9	6.1	5.7	4.9
NO.LENG'D	12	20	22	0	0	0	12	20	22	0	1	0	3	5	1	3	6	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES. STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 05/29/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/01/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0			2		1			1	2									
4.1- 5.0		1	1	1	9		1	10	1						1			1
5.1- 6.0		1		3	5	2	3	6	2				4	1		4	1	
6.1- 7.0			1	3	1		3	1	1				2			2		
7.1- 8.0			1	3	6	1	3	6	2									
8.1- 9.0				1	4	1	1	4	1									
MEAN/DEPTH		4.7	5.2	6.6	6.1	6.7	6.6	6.0	5.8				5.9	5.9	4.5	5.9	5.9	4.5
STD ERR			.77		.33		.39		.57				.21					
		.45		.39		.75		.32								.21		
MEAN/DATE		5.0			6.3			6.1						5.7			5.7	
STD ERR		.55			.24			.23						.23			.23	
RANGE(MIN)		4.2	3.5	4.8	4.0	5.2	4.8	4.0	3.5				5.3	5.9	4.5	5.3	5.9	4.5
(MAX)		5.1	7.7	8.9	8.7	8.4	8.9	8.7	8.4				6.5	5.9	4.5	6.5	5.9	4.5
NO.LENG'D	0	2	5	11	26	4	11	28	9	0	0	0	6	1	1	6	1	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 05/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/25/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0		1			1	1		2	1									
5.1- 6.0		1	4	1			1	1	4				2	1	3	2	1	3
6.1- 7.0		9	9			2		9	11		1	1	2	1	1	2	2	2
7.1- 8.0		1						1										
8.1- 9.0															1			1
MEAN/DEPTH		6.3	6.3	5.7	4.7	5.8	5.7	6.2	6.2		6.2	6.7	6.2	5.8	6.6	6.2	5.9	6.6
STD ERR			.16						.19				.31		.63		.37	
		.18				.78		.21						.60		.31		.51
MEAN/DATE		6.3			5.5			6.2			6.4			6.3			6.3	
STD ERR		.12			.48			.13			.25			.31			.27	
RANGE(MIN)		4.7	5.2	5.7	4.7	4.2	5.7	4.7	4.2		6.2	6.7	5.5	5.2	5.6	5.5	5.2	5.6
(MAX)		7.3	7.0	5.7	4.7	6.6	5.7	7.3	7.0		6.2	6.7	7.0	6.4	9.0	7.0	6.4	9.0
NO.LENGTH	0	12	13	1	1	3	1	13	16	0	1	1	4	2	5	4	3	6

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS JUVENILE LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 07/10/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/17/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
19.1- 20.0					1			1										
MEAN/DEPTH					19.4			19.4										
STD ERR																		
MEAN/DATE					19.4			19.4										
STD ERR																		
RANGE(MIN)					19.4			19.4										
(MAX)					19.4			19.4										
NO.LENGTHD	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 07/24/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/31/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
16.1- 17.0				1			1											
MEAN/DEPTH				16.1			16.1											
STD ERR																		
MEAN/DATE				16.1			16.1											
STD ERR																		
RANGE(MIN)				16.1			16.1											
(MAX)				16.1			16.1											
NO.LENG'D	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 07/16/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/17/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
13.1- 14.0													1			1		
14.1- 15.0																		
15.1- 16.0																		
16.1- 17.0																		
17.1- 18.0																		
18.1- 19.0															1			1
MEAN/DEPTH													13.8		18.5	13.8		18.5
STD ERR																		
MEAN/DATE														16.2			16.2	
STD ERR														2.35			2.35	
RANGE(MIN)													13.8		18.5	13.8		18.5
(MAX)													13.8		18.5	13.8		18.5
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 06/26/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/03/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
10.1- 11.0						1			1									
11.1- 12.0				1			1											
12.1- 13.0				1	1		1	1										
13.1- 14.0																		
14.1- 15.0																		
15.1- 16.0				1			1						1			1		
16.1- 17.0				1			1											
MEAN/DEPTH				14.1	12.8	10.9	14.1	12.8	10.9				15.5			15.5		
STD ERR				1.13			1.13											
MEAN/DATE				13.4			13.4						15.5			15.5		
STD ERR				.89			.89											
RANGE(MIN)				11.8	12.8	10.9	11.8	12.8	10.9				15.5			15.5		
(MAX)				16.8	12.8	10.9	16.8	12.8	10.9				15.5			15.5		
NO.LENGTHD	0	0	0	4	1	1	4	1	1	0	0	0	1	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 06/19/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0	1	1					1	1										
5.1- 6.0																		
6.1- 7.0																		
7.1- 8.0																		
8.1- 9.0																		
9.1- 10.0																		
10.1- 11.0																		
11.1- 12.0																		
12.1- 13.0																		
13.1- 14.0																		
14.1- 15.0																		
15.1- 16.0																		
16.1- 17.0																		
17.1- 18.0													1			1		
MEAN/DEPTH	4.9	4.8					4.9	4.8					17.2			17.2		
STD ERR																		
MEAN/DATE		4.9						4.9						17.2			17.2	
STD ERR		.05						.05										
RANGE(MIN)	4.9	4.8					4.9	4.8						17.2			17.2	
(MAX)	4.9	4.8					4.9	4.8						17.2			17.2	
NO.LENG'D	1	1	0	0	0	0	1	1	0	0	0	0	0	1	0	0	1	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM)	DATE 06/12/79									DATE 06/15/79								
	DAY			NIGHT			DAY + NIGHT			DAY			NIGHT			DAY + NIGHT		
INTERVAL	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B
4.1- 5.0		1						1		1						1		
5.1- 6.0				1	1	1	1	1	1		2						2	
MEAN/DEPTH		4.7		5.4	6.0	5.2	5.4	5.4	5.2	4.9	5.4					4.9	5.4	
STD ERR								.65			.25						.25	
MEAN/DATE		4.7			5.5			5.3			5.3						5.3	
STD ERR					.24			.27			.23						.23	
RANGE(MIN)		4.7		5.4	6.0	5.2	5.4	4.7	5.2	4.9	5.2					4.9	5.2	
(MAX)		4.7		5.4	6.0	5.2	5.4	6.0	5.2	4.9	5.7					4.9	5.7	
NO.LENGTH	0	1	0	1	1	1	1	2	1	1	2	0	0	0	0	1	2	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 06/05/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0											1				1		1	1
5.1- 6.0	5	7	1				5	7	1				2	3		2	3	
6.1- 7.0	1	1	3				1	1	3				1			1		
7.1- 8.0		1	6					1	6									
8.1- 9.0	1	5	2				1	5	2									
9.1- 10.0	1		1				1		1									
MEAN/DEPTH	6.5	6.9	7.5				6.5	6.9	7.5		4.2		5.9	5.4	4.9	5.9	5.1	4.9
STD ERR	.52		.29				.52		.29				.12				.30	
		.38						.38						.12		.12		
MEAN/DATE		7.0						7.0			4.2			5.5			5.4	
STD ERR		.23						.23						.16			.22	
RANGE(MIN)	5.2	5.3	5.8				5.2	5.3	5.8		4.2		5.7	5.2	4.9	5.7	4.2	4.9
(MAX)	9.3	8.9	9.2				9.3	8.9	9.2		4.2		6.1	5.6	4.9	6.1	5.6	4.9
NO.LENGTHD	8	14	13	0	0	0	8	14	13	0	1	0	3	3	1	3	4	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 05/29/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/01/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
5.1- 6.0				2	2	1	2	2	1									
6.1- 7.0			1	3			3		1				1			1		
7.1- 8.0			1	3	6	1	3	6	2									
8.1- 9.0				1	4	1	1	4	1									
MEAN/DEPTH			6.9	7.0	7.6	7.1	7.0	7.6	7.0				6.5			6.5		
STD ERR			.80		.31		.37		.52									
				.37		.82		.31										
MEAN/DATE		6.9			7.3			7.3						6.5			6.5	
STD ERR		.80			.23			.22										
RANGE(MIN)			6.1	5.6	5.1	5.6	5.6	5.1	5.6				6.5			6.5		
(MAX)			7.7	8.9	8.7	8.4	8.9	8.7	8.4				6.5			6.5		
NO.LENGTHD	0	0	2	9	12	3	9	12	5	0	0	0	1	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 05/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/25/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0		1						1										
5.1- 6.0		1	2					1	2				1			1		
6.1- 7.0		8	7			1		8	8		1	1	2	1		2	2	1
7.1- 8.0		1						1							1			1
8.1- 9.0																		
MEAN/DEPTH		6.3	6.4			6.5		6.3	6.4		6.2	6.7	6.4	6.4	9.0	6.4	6.3	7.9
STD ERR		.20	.16					.20	.14				.30			.30	.10	1.15
MEAN/DATE		6.3			6.5			6.3			6.4			6.9			6.8	
STD ERR		.13						.12			.25			.54			.39	
RANGE(MIN)		4.7	5.6			6.5		4.7	5.6		6.2	6.7	6.0	6.4	9.0	6.0	6.2	6.7
(MAX)		7.3	7.0			6.5		7.3	7.0		6.2	6.7	7.0	6.4	9.0	7.0	6.4	9.0
NO.LEAG'D	0	11	9	0	0	1	0	11	10	0	1	1	3	1	1	3	2	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 06/26/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/03/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
5.1- 6.0				1			1											
MEAN/DEPTH				5.3			5.3											
STD ERR																		
MEAN/DATE				5.3			5.3											
STD ERR																		
RANGE(MIN)				5.3			5.3											
(MAX)				5.3			5.3											
NO.LENG'D	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 06/12/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0			1	1		2	1		3									
5.1- 6.0				1	1		1	1										
MEAN/DEPTH			5.0	5.1	5.4	4.9	5.1	5.4	4.9									
STD ERR				.15		.10	.15		.07									
MEAN/DATE		5.0			5.1			5.1										
STD ERR					.11			.09										
RANGE(MIN)			5.0	4.9	5.4	4.8	4.9	5.4	4.8									
(MAX)			5.0	5.2	5.4	5.0	5.2	5.4	5.0									
NO.LEN'D	0	0	1	2	1	2	2	1	3	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 06/05/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0	1	1					1	1										
4.1- 5.0	1	2	2				1	2	2					1			1	
5.1- 6.0	2	3	7				2	3	7					1			1	
MEAN/DEPTH	4.7	5.0	5.5				4.7	5.0	5.5					5.2			5.2	
STD ERR	.53		.16				.53		.16								.50	
		.32						.32						.50				
MEAN/DATE		5.2						5.2						5.2			5.2	
STD ERR		.18						.18						.50			.50	
RANGE(MIN)	3.5	4.0	4.8				3.5	4.0	4.8					4.7			4.7	
(MAX)	5.8	5.9	6.0				5.8	5.9	6.0					5.7			5.7	
NO.LENG'D	4	6	9	0	0	0	4	6	9	0	0	0	0	2	0	0	2	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 05/29/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/01/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0			2		1			1	2									
4.1- 5.0		1	1	1	9		1	10	1						1			1
5.1- 6.0		1		1	3	1	1	4	1				4	1		4	1	
6.1- 7.0					1			1					1			1		
MEAN/DEPTH		4.7	4.1	5.0	4.8	5.2	5.0	4.8	4.4				5.7	5.9	4.5	5.7	5.9	4.5
STD ERR			.43		.20		.20		.41				.21					
		.45		.20				.18								.21		
MEAN/DATE		4.3			4.9			4.8						5.6			5.6	
STD ERR		.31			.17			.15						.23			.23	
RANGE(MIN)		4.2	3.5	4.8	4.0	5.2	4.8	4.0	3.5				5.3	5.9	4.5	5.3	5.9	4.5
(MAX)		5.1	4.9	5.2	6.1	5.2	5.2	6.1	5.2				6.5	5.9	4.5	6.5	5.9	4.5
NO.LEVGTH	0	2	3	2	14	1	2	16	4	0	0	0	5	1	1	5	1	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 05/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/25/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0					1	1		1	1									
5.1- 6.0			2	1			1		2				1	1	3	1	1	3
6.1- 7.0		1	2			1		1	3						1			1
MEAN/DEPTH		6.6	6.1	5.7	4.7	5.4	5.7	5.7	5.8				5.5	5.2	6.0	5.5	5.2	6.0
STD ERR			.38			1.20		.95	.41						.25			.25
MEAN/DATE		6.2			5.3			5.8						5.8			5.8	
STD ERR		.31			.53			.31						.21			.21	
RANGE(MIN)		6.6	5.2	5.7	4.7	4.2	5.7	4.7	4.2				5.5	5.2	5.6	5.5	5.2	5.6
(MAX)		6.6	6.9	5.7	4.7	6.6	5.7	6.6	6.9				5.5	5.2	6.7	5.5	5.2	6.7
NO.LENG'D	0	1	4	1	1	2	1	2	6	0	0	0	1	1	4	1	1	4

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 05/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0											1	1					1	1
5.1- 6.0												4			1			5
MEAN/DEPTH											5.0	5.2			6.0		5.0	5.4
STD ERR												.29						.27
MEAN/DATE											5.2			6.0			5.3	
STD ERR											.24						.23	
RANGE(MIN)											5.0	4.1			6.0		5.0	4.1
(MAX)											5.0	5.7			6.0		5.0	6.0
NO.LENGTHD	0	0	0	0	0	0	0	0	0	0	1	5	0	0	1	0	1	6

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 03/20/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 03/27/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
5.1- 6.0															1			1
6.1- 7.0		1			3			4			2	1		1	1		3	2
7.1- 8.0	1			5	9	4	6	9	4	2	2	2		3	1	2	5	3
8.1- 9.0			1		1			1	1									
MEAN/DEPTH	7.5	6.9	8.1	7.4	7.4	7.3	7.4	7.3	7.4	7.3	6.9	7.3		7.2	6.5	7.3	7.1	6.9
STD ERR					.14		.07		.17		.24				.61		.13	
				.08		.03		.13		.00		.39		.09		.00		.37
MEAN/DATE		7.5			7.4			7.4			7.1			6.9			7.0	
STD ERR		.35			.08			.08			.17			.28			.15	
RANGE(MIN)	7.5	6.9	8.1	7.2	6.6	7.2	7.2	6.6	7.2	7.3	6.5	6.5		7.0	5.4	7.3	6.5	5.4
(MAX)	7.5	6.9	8.1	7.6	8.2	7.3	7.6	8.2	8.1	7.3	7.5	7.8		7.4	7.5	7.3	7.5	7.8
NO.LENG'D	1	1	1	5	13	4	6	14	5	2	4	3	0	4	3	2	8	6

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 03/06/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 03/13/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
6.1- 7.0	1	1		2			3	1		2	1	1	4	5	3	6	6	4
7.1- 8.0					3	1		3	1	2	1	3	3	4		5	5	3
8.1- 9.0													1			1		
MEAN/DEPTH	6.6	6.9		6.9	7.5	7.4	6.8	7.3	7.4	6.9	7.3	7.3	7.3	7.0	6.6	7.2	7.0	7.0
STD ERR					.07		.12				.55		.22		.12		.16	
				.05				.15		.15		.17		.17		.16		.16
MEAN/DATE		6.8			7.3			7.2			7.1			7.1			7.1	
STD ERR		.15			.11			.12			.13			.13			.09	
RANGE(MIN)	6.6	6.9		6.9	7.4	7.4	6.6	6.9	7.4	6.6	6.7	6.8	6.5	6.3	6.4	6.5	6.3	6.4
(MAX)	6.6	6.9		7.0	7.6	7.4	7.0	7.6	7.4	7.2	7.8	7.5	8.2	7.9	6.8	8.2	7.9	7.5
NO.LENG'D	1	1	0	2	3	1	3	4	1	4	2	4	8	9	3	12	11	7

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 02/20/79 DAY S	M	B	NIGHT S	M	B	DAY + NIGHT S	M	B	DATE 02/27/79 DAY S	M	B	NIGHT S	M	B	DAY + NIGHT S	M	B
6.1- 7.0				1			1											
7.1- 8.0											1			2			3	
MEAN/DEPTH				6.9			6.9				7.3			7.2			7.2	
STD ERR														.05			.06	
MEAN/DATE					6.9			6.9			7.3			7.2			7.2	
STD ERR														.05			.06	
RANGE(MIN)				6.9			6.9				7.3			7.1			7.1	
(MAX)				6.9			6.9				7.3			7.2			7.3	
NO.LENG'D	0	0	0	1	0	0	1	0	0	0	1	0	0	2	0	0	3	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD POST YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 03/20/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 03/27/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
5.1- 6.0															1			1
6.1- 7.0		1			1			2			1	1		1	1		2	2
7.1- 8.0	1			5	9	3	6	9	3	2	2	2		2	1	2	4	3
8.1- 9.0			1		1			1	1									
MEAN/DEPTH	7.5	6.9	8.1	7.4	7.5	7.3	7.4	7.5	7.5	7.3	7.0	7.3		7.2	6.5	7.3	7.1	6.9
STD ERR					.12		.07		.21		.29				.61		.14	
				.08		.03		.12		.00		.39		.12		.00		.37
MEAN/DATE		7.5			7.4			7.4			7.2			6.8			7.0	
STD ERR		.35			.07			.08			.17			.32			.17	
RANGE(MIN)	7.5	6.9	8.1	7.2	6.8	7.2	7.2	6.8	7.2	7.3	6.5	6.5		7.0	5.4	7.3	6.5	5.4
(MAX)	7.5	6.9	8.1	7.6	8.2	7.3	7.6	8.2	8.1	7.3	7.5	7.8		7.4	7.5	7.3	7.5	7.8
NO.LENGTHD	1	1	1	5	11	3	6	12	4	2	3	3	0	3	3	2	6	6

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD POST YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 03/06/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 03/13/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
6.1- 7.0	1						1			2	1	1	2	4	1	4	5	2
7.1- 8.0										2	1	3	3	3		5	4	3
8.1- 9.0													1			1		
MEAN/DEPTH	6.6						6.6			6.9	7.3	7.3	7.5	7.0	6.8	7.2	7.0	7.2
STD ERR											.55		.26				.20	
										.15		.17		.22		.18		.16
MEAN/DATE		6.6						6.6			7.1			7.2			7.2	
STD ERR											.13			.17			.11	
RANGE(MIN)	6.6						6.6			6.6	6.7	6.8	6.5	6.3	6.8	6.5	6.3	6.8
(MAX)	6.6						6.6			7.2	7.8	7.5	8.2	7.9	6.8	8.2	7.9	7.5
NO.LENGTHD	1	0	0	0	0	0	1	0	0	4	2	4	6	7	1	10	9	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD POST YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 02/20/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 02/27/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
7.1- 8.0											1			2			3	
MEAN/DEPTH											7.3			7.2			7.2	
STD ERR														.05			.06	
MEAN/DATE											7.3			7.2			7.2	
STD ERR														.05			.06	
RANGE(MIN)											7.3			7.1			7.1	
(MAX)											7.3			7.2			7.3	
NO.LENGTH	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	3	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 03/20/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 03/27/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
6.1- 7.0					2			2			1						1	
7.1- 8.0						1			1					1			1	
MEAN/DEPTH					6.6	7.3		6.6	7.3		6.5			7.3			6.9	
STD ERR					.00			.00									.40	
MEAN/DATE					6.8			6.8			6.5			7.3			6.9	
STD ERR					.23			.23									.40	
RANGE(MIN)					6.6	7.3		6.6	7.3		6.5			7.3			6.5	
(MAX)					6.6	7.3		6.6	7.3		6.5			7.3			7.3	
NO.LENG'D	0	0	0	0	2	1	0	2	1	0	1	0	0	1	0	0	2	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 03/06/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 03/13/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
6.1- 7.0		1		2			2	1					2	1	2	2	1	2
7.1- 8.0					3	1		3	1					1			1	
MEAN/DEPTH		6.9		6.9	7.5	7.4	6.9	7.3	7.4				6.8	7.1	6.5	6.8	7.1	6.5
STD ERR				.05	.07		.05	.15					.10	.05	.10	.10	.05	.10
MEAN/DATE		6.9			7.3			7.2						6.8			6.8	
STD ERR					.11			.11						.11			.11	
RANGE(MIN)		6.9		6.9	7.4	7.4	6.9	6.9	7.4				6.7	7.0	6.4	6.7	7.0	6.4
(MAX)		6.9		7.0	7.6	7.4	7.0	7.6	7.4				6.9	7.1	6.6	6.9	7.1	6.6
NO.LENGTH	0	1	0	2	3	1	2	4	1	0	0	0	2	2	2	2	2	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD YOLK SAC LARVAE

AT RI AND RIN COMBINED

LENGTH(MM) INTERVAL	DATE 02/20/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 02/27/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
6.1- 7.0				1			1											
MEAN/DEPTH				6.9			6.9											
STD ERR																		
MEAN/DATE					6.9			6.9										
STD ERR																		
RANGE(MIN)				6.9			6.9											
(MAX)				6.9			6.9											
NO.LENG'D	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 06/19/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
24.1- 25.0				1			1						1			1		
25.1- 26.0																		
26.1- 27.0				1			1											
MEAN/DEPTH				25.8			25.8						24.4			24.4		
STD ERR				1.25			1.25											
MEAN/DATE				25.8			25.8						24.4			24.4		
STD ERR				1.25			1.25											
RANGE(MIN)				24.5			24.5						24.4			24.4		
(MAX)				27.0			27.0						24.4			24.4		
NO.LENG'D	0	0	0	2	0	0	2	0	0	0	0	0	1	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 06/12/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
19.1- 20.0														2			2	
20.1- 21.0																		
21.1- 22.0																		
22.1- 23.0														1			1	
23.1- 24.0																		
24.1- 25.0																		
25.1- 26.0			1						1									
MEAN/DEPTH			26.0						26.0					20.7			20.7	
STD ERR														.85			.85	
MEAN/DATE		26.0						26.0						20.7			20.7	
STD ERR														.85			.85	
RANGE(MIN)			26.0						26.0					19.7			19.7	
(MAX)			26.0						26.0					22.4			22.4	
NO.LENG'D	0	0	1	0	0	0	0	0	1	0	0	0	0	3	0	0	3	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 06/05/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
15.1- 16.0				1	1		1	1										
16.1- 17.0				1			1											
17.1- 18.0				1	2		1	2						1			1	
18.1- 19.0		1		3	2		3	3					1			1		
19.1- 20.0	1		1		4		1	4	1					1			1	
20.1- 21.0				3	4		3	4						1			1	
21.1- 22.0				3			3						1	1		1	1	
22.1- 23.0												1						1
23.1- 24.0														1			1	
MEAN/DEPTH	19.4	18.5	19.9	19.3	19.3		19.3	19.2	19.9			22.1	20.3	20.9		20.3	20.9	22.1
STD ERR					.42		.55						1.30				1.01	
				.60				.39						1.01		1.30		
MEAN/DATE		19.3			19.3			19.3			22.1			20.7			20.9	
STD ERR		.41			.35			.32						.76			.68	
RANGE(MIN)	19.4	18.5	19.9	15.6	16.0		15.6	16.0	19.9			22.1	19.0	17.9		19.0	17.9	22.1
(MAX)	19.4	18.5	19.9	22.0	21.0		22.0	21.0	19.9			22.1	21.6	23.9		21.6	23.9	22.1
NO.LENG'D	1	1	1	12	13	0	13	14	1	0	0	1	2	5	0	2	5	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 05/29/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/01/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
10.1- 11.0				1			1											
11.1- 12.0																		
12.1- 13.0																		
13.1- 14.0																		
14.1- 15.0		1			1			2						1	1		1	1
15.1- 16.0					1			1			1			4			5	
16.1- 17.0		2						2						2			2	
17.1- 18.0		1		1	3		1	4				1	2	3		2	3	1
18.1- 19.0				2	3		2	3					3	2	3	3	2	3
19.1- 20.0											3		4	1		4	4	
20.1- 21.0													2	1		2	1	
21.1- 22.0													1		1	1		1
MEAN/DEPTH		16.4		16.2	17.4		16.2	17.1			18.6	17.2	19.2	17.2	18.2	19.2	17.5	18.1
STD ERR					.57		2.01				.90		.39		1.14		.41	
		.58		2.01				.43						.44		.39		.95
MEAN/DATE		16.4			17.0			16.8			18.3			18.1			18.1	
STD ERR		.58			.73			.56			.75			.34			.31	
RANGE(MIN)		14.9		10.2	14.6		10.2	14.6			15.9	17.2	17.2	14.7	14.1	17.2	14.7	14.1
(MAX)		17.7		18.8	19.0		18.8	19.0			19.8	17.2	21.9	20.2	21.1	21.9	20.2	21.1
NO.LENG'D	0	4	0	4	8	0	4	12	0	0	4	1	12	14	5	12	18	6

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 05/22/79									DATE 05/25/79								
	DAY			NIGHT			DAY + NIGHT			DAY			NIGHT			DAY + NIGHT		
	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B
12.1- 13.0											1						1	
13.1- 14.0																		
14.1- 15.0						1			1									
15.1- 16.0														1			1	
MEAN/DEPTH						14.1			14.1		12.3			15.8			14.0	
STD ERR																	1.75	
MEAN/DATE					14.1			14.1			12.3			15.8			14.0	
STD ERR																	1.75	
RANGE(MIN)						14.1			14.1		12.3			15.8			12.3	
(MAX)						14.1			14.1		12.3			15.8			15.8	
NO.LENG'D	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	2	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 06/19/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
24.1- 25.0				1			1						1			1		
25.1- 26.0																		
26.1- 27.0				1			1											
MEAN/DEPTH				25.8			25.8						24.4			24.4		
STD ERR				1.25			1.25											
MEAN/DATE				25.8			25.8						24.4			24.4		
STD ERR				1.25			1.25											
RANGE(MIN)				24.5			24.5						24.4			24.4		
(MAX)				27.0			27.0						24.4			24.4		
NO.LENG'D	0	0	0	2	0	0	2	0	0	0	0	0	1	0	0	1	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 06/12/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
19.1- 20.0														2			2	
20.1- 21.0																		
21.1- 22.0																		
22.1- 23.0														1			1	
23.1- 24.0																		
24.1- 25.0																		
25.1- 26.0			1						1									
MEAN/DEPTH			26.0						26.0					20.7			20.7	
STD ERR														.85			.85	
MEAN/DATE		26.0						26.0						20.7			20.7	
STD ERR														.85			.85	
RANGE(MIN)			26.0						26.0					19.7			19.7	
(MAX)			26.0						26.0					22.4			22.4	
NO.LENG'D	0	0	1	0	0	0	0	0	1	0	0	0	0	3	0	0	3	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 06/05/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
15.1- 16.0				1	1		1	1										
16.1- 17.0				1			1											
17.1- 18.0				1	2		1	2						1			1	
18.1- 19.0		1		3	2		3	3					1			1		
19.1- 20.0	1		1		4		1	4	1					1			1	
20.1- 21.0				3	4		3	4						1			1	
21.1- 22.0				3			3						1	1		1	1	
22.1- 23.0												1						1
23.1- 24.0														1			1	
MEAN/DEPTH	19.4	18.5	19.9	19.3	19.3		19.3	19.2	19.9			22.1	20.3	20.9		20.3	20.9	22.1
STD ERR					.42		.55						1.30				1.01	
				.60				.39						1.01		1.30		
MEAN/DATE		19.3			19.3			19.3			22.1			20.7			20.9	
STD ERR		.41			.35			.32						.76			.68	
RANGE(MIN)	19.4	18.5	19.9	15.6	16.0		15.6	16.0	19.9			22.1	19.0	17.9		19.0	17.9	22.1
(MAX)	19.4	18.5	19.9	22.0	21.0		22.0	21.0	19.9			22.1	21.6	23.9		21.6	23.9	22.1
NO.LENG'D	1	1	1	12	13	0	13	14	1	0	0	1	2	5	0	2	5	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 05/29/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/01/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
14.1- 15.0		1			1			2						1	1		1	1
15.1- 16.0					1			1			1			4			5	
16.1- 17.0		2						2						2			2	
17.1- 18.0		1		1	3		1	4				1	2	3		2	3	1
18.1- 19.0				2	3		2	3					3	2	3	3	2	3
19.1- 20.0											3		4	1		4	4	
20.1- 21.0													2	1		2	1	
21.1- 22.0													1		1	1		1
MEAN/DEPTH		16.4		18.2	17.4		18.2	17.1			18.6	17.2	19.2	17.2	18.2	19.2	17.5	18.1
STD ERR		.58		.41	.57		.41	.43			.90		.39	.44	1.14	.39	.41	.95
MEAN/DATE		16.4			17.6			17.3			18.3			18.1			18.1	
STD ERR		.58			.43			.37			.75			.34			.31	
RANGE(MIN)		14.9		17.4	14.6		17.4	14.6			15.9	17.2	17.2	14.7	14.1	17.2	14.7	14.1
(MAX)		17.7		18.8	19.0		18.8	19.0			19.8	17.2	21.9	20.2	21.1	21.9	20.2	21.1
NO.LENG'D	0	4	0	3	8	0	3	12	0	0	4	1	12	14	5	12	18	6

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION RI+RIN

LENGTH(MM) INTERVAL	DATE 05/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/25/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
12.1- 13.0											1						1	
13.1- 14.0																		
14.1- 15.0						1			1									
15.1- 16.0														1			1	
MEAN/DEPTH						14.1			14.1		12.3			15.8			14.0	
STD ERR																	1.75	
MEAN/DATE					14.1			14.1			12.3			15.8			14.0	
STD ERR																	1.75	
RANGE(MIN)						14.1			14.1		12.3			15.8			12.3	
(MAX)						14.1			14.1		12.3			15.8			15.8	
NO.LENG'D	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	2	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/05/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0			2			1			3				1			1		
5.1- 6.0	3		2	4		6	7		8			1			2			3
6.1- 7.0	2		4	9		5	11		9	7		5	1		7	8		12
7.1- 8.0	1		4	5		6	6		10	6		23	8		16	14		39
8.1- 9.0	2			12		7	14		7	8		12	25		19	33		31
9.1- 10.0	5		1	12		4	17		5	4		13	26		16	30		29
10.1- 11.0	2		4	4		4	6		8	2		3	9		11	11		14
11.1- 12.0	2		1	2		3	4		4	3		2	14		8	17		10
12.1- 13.0	1		4	14		8	15		12	1		7	9		3	10		10
13.1- 14.0	2		2	17		8	19		10	3		5	8		3	11		8
14.1- 15.0	2		1	8		3	10		4			3	8		4	8		7
15.1- 16.0				2			2						1		1	1		1
16.1- 17.0										1		1				1		1
17.1- 18.0										1						1		
MEAN/DEPTH	9.7		9.3	10.6		9.8	10.5		9.7	9.4		9.4	10.4		9.4	10.1		9.4
STD ERR	.61		.63	.31		.39	.28		.33	.49		.28	.21		.23	.20		.18
MEAN/DATE	9.5			10.3			10.1			9.4			9.9			9.7		
STD ERR	.43			.24			.21			.25			.16			.14		
RANGE(MIN)	5.1		4.3	5.1		4.7	5.1		4.3	6.1		5.1	4.7		5.4	4.7		5.1
(MAX)	14.2		14.6	15.5		14.3	15.5		14.6	17.8		16.6	15.8		15.3	17.8		16.6
NO.LENG'D	22	0	25	89	0	55	111	0	80	36	0	75	110	0	90	146	0	165

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/12/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0	1		4			1	1		5				1			1		
5.1- 6.0			1						1			4			2			6
6.1- 7.0						1			1	1		2	3		4	4		6
7.1- 8.0			1	2		4	2		5	7		9	2			9		9
8.1- 9.0				7		4	7		4	6		13	8			14		13
9.1- 10.0			1	11		4	11		5	19		33	5		2	24		35
10.1- 11.0				13		7	13		7	25		26	23		11	48		37
11.1- 12.0				11		2	11		2	27		18	15		8	42		26
12.1- 13.0				10		2	10		2	18		6	13		7	31		13
13.1- 14.0				10		3	10		3	10		2	7		5	17		7
14.1- 15.0				9		1	9		1	2		1	5			7		1
15.1- 16.0	1			7		2	8		2	2		2	3		5	5		7
16.1- 17.0				3		5	3		5	1		4	1		4	2		8
17.1- 18.0						1			1				2		1	2		1
18.1- 19.0	1						1						1			1		
19.1- 20.0	1						1											
MEAN/DEPTH	14.6		5.8	11.9		11.5	12.1		10.6	11.0		10.2	11.4		11.8	11.2		10.7
STD ERR	3.48		.81				.29		.57				.26		.42			
				.26		.55				.17		.20				.15		.19
MEAN/DATE		9.0			11.8			11.6			10.6			11.6			11.0	
STD ERR		1.84			.24			.28			.13			.23			.12	
RANGE(MIN)	4.5		4.2	7.6		4.8	4.5		4.2	6.6		5.2	4.4		5.4	4.4		5.2
(MAX)	19.7		10.0	16.9		17.2	19.7		17.2	16.6		16.7	18.2		17.6	18.2		17.6
NO.LENG'D	4	0	7	83	0	37	87	0	44	118	0	120	89	0	49	207	0	169

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/19/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0			1	1			1		1									
5.1- 6.0																		
6.1- 7.0	1						1											
7.1- 8.0										1					1			
8.1- 9.0																		
9.1- 10.0													1		1			
10.1- 11.0			1			1			2									
11.1- 12.0			2			1			3				2		2	2		2
12.1- 13.0	4		5	1		2	5		7				3		3			
13.1- 14.0	5		7	2			7		7	1			3		4	4		4
14.1- 15.0	8		13	1		4	9		17			1	8		3	8		4
15.1- 16.0	9		11	1		4	10		15				10		1	10		1
16.1- 17.0	7		10	1			8		10	1			21		5	22		5
17.1- 18.0	6		9			1	6		10	3			11		9	14		9
18.1- 19.0	5		11			4	5		15				15		4	15		4
19.1- 20.0	2			1		1	3		1			2	7		10	7		12
20.1- 21.0	5		1			1	5		2				6		5	6		5
21.1- 22.0	1		2	1		1	2		3	1			3		2	4		2
22.1- 23.0															3			3
23.1- 24.0															2			2
MEAN/DEPTH	16.2		15.7	14.8		16.0	16.0		15.8	15.9		17.9	16.9		18.1	16.8		18.1
STD ERR	.38		.30				.39		.28				.25		.41			
				1.58		.67				1.71		1.63				.26		.39
MEAN/DATE	15.9			15.6			15.9			16.5			17.3			17.3		
STD ERR	.24			.67			.23			1.28			.22			.22		
RANGE(MIN)	6.8		5.0	4.7		10.5	4.7		5.0	7.2		14.6	9.6		11.7	7.2		11.7
(MAX)	21.9		21.9	21.4		21.1	21.9		21.9	21.3		19.6	21.5		23.2	21.5		23.2
NO.LENGTH	53	0	73	9	0	20	62	0	93	7	0	3	90	0	50	97	0	53

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/26/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/03/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
7.1- 8.0				2			2											
8.1- 9.0			1	1			1		1									
9.1- 10.0				3			3											
10.1- 11.0				2		2	2		2									
11.1- 12.0				1			1											
12.1- 13.0				1			1			2					1	2		1
13.1- 14.0												1						1
14.1- 15.0				1			1											
15.1- 16.0										1		1				1		1
16.1- 17.0						1			1	2						2		
17.1- 18.0				2			2			1						1		
18.1- 19.0	1			1		2	2		2	2						2		
19.1- 20.0						3			3			2						2
20.1- 21.0	2			2		3	4		3	3					1	3		1
21.1- 22.0			1			1			2									
22.1- 23.0						1			1									
23.1- 24.0						4			4									
24.1- 25.0						1			1									
25.1- 26.0						1			1									
26.1- 27.0						1			1									
MEAN/DEPTH	19.6		14.8	13.1		20.6	14.1		20.1	17.3		17.1			16.5	17.3		16.9
STD ERR	.57		6.55				1.11		1.03						3.95			
				1.14		.95				.83		1.52				.83		1.41
MEAN/DATE	17.7			17.3			17.3			17.2			16.5			17.1		
STD ERR	2.41			.96			.88			.70			3.95			.71		
RANGE(MIN)	18.5		8.2	7.7		10.7	7.7		8.2	12.7		13.5			12.5	12.7		12.5
(MAX)	20.3		21.3	21.0		27.0	21.0		27.0	20.4		19.8			20.4	20.4		20.4
NO.LENGTH	3	0	2	16	0	20	19	0	22	11	0	4	0	0	2	11	0	6

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 07/10/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/17/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
7.1- 8.0				1		1	1		1									
8.1- 9.0																		
9.1- 10.0				1			1											
10.1- 11.0																		
11.1- 12.0																		
12.1- 13.0			1						1									
13.1- 14.0																		
14.1- 15.0	1			1			2											
15.1- 16.0			1						1									
16.1- 17.0				1			1											
17.1- 18.0										1					1			
18.1- 19.0	1		1				1		1									
19.1- 20.0	1			1			2						1					1
20.1- 21.0				1		1	1		1									
21.1- 22.0																		
22.1- 23.0																		
23.1- 24.0				5		2	5		2									
24.1- 25.0				2		4	2		4									
25.1- 26.0				4		4	4		4									
26.1- 27.0				5		1	5		1									
27.1- 28.0				4		1	4		1									
28.1- 29.0				5		3	5		3									
29.1- 30.0				3			3											
30.1- 31.0				2		1	2		1									
31.1- 32.0				1			1											
32.1- 33.0				2		1	2		1									
33.1- 34.0																		
34.1- 35.0																		
35.1- 36.0																		
36.1- 37.0						1			1									
MEAN/DEPTH	17.6		15.7	25.6		26.0	25.0		24.7	17.9			19.7			17.9		19.7
STD ERR	1.34		1.48	.90		1.23	.90		1.31									
MEAN/DATE	16.6			25.7			24.9			17.9			19.7			18.8		
STD ERR	.98			.72			.74									.90		
RANGE(MIN)	15.0		13.0	7.7		8.0	7.7		8.0	17.9			19.7			17.9		19.7
(MAX)	19.5		18.1	32.5		37.0	32.5		37.0	17.9			19.7			17.9		19.7

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ALOSA SP ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 07/24/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/31/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
17.1- 18.0										1						1		
18.1- 19.0																		
19.1- 20.0																		
20.1- 21.0												1						1
21.1- 22.0																		
22.1- 23.0																		
23.1- 24.0																		
24.1- 25.0																		
25.1- 26.0						1			1									
26.1- 27.0						1			1									
27.1- 28.0						1			1									
28.1- 29.0																		
29.1- 30.0						1			1									
30.1- 31.0																		
31.1- 32.0						3			3									
32.1- 33.0						2			2									
33.1- 34.0						1			1									
34.1- 35.0						1			1									
MEAN/DEPTH						30.9			30.9	17.7		20.5				17.7		20.5
STD ERR						.89			.89									
MEAN/DATE					30.9			30.9			19.1						19.1	
STD ERR					.89			.89			1.40						1.40	
RANGE(MIN)						26.0			26.0	17.7		20.5				17.7		20.5
(MAX)						34.5			34.5	17.7		20.5				17.7		20.5
NO.LENG'D	0	0	0	0	0	11	0	0	11	1	0	1	0	0	0	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 05/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/25/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
10.1- 11.0	1						1											
11.1- 12.0	1						1											
MEAN/DEPTH	10.9						10.9											
STD ERR	.20						.20											
MEAN/DATE		10.9						10.9										
STD ERR		.20						.20										
RANGE(MIN)	10.7						10.7											
(MAX)	11.1						11.1											
NO.LENG'D	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM)	DATE 05/29/79									DATE 06/01/79								
	DAY			NIGHT			DAY + NIGHT			DAY			NIGHT			DAY + NIGHT		
INTERVAL	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B
12.1- 13.0	1						1					1	3			3		1
13.1- 14.0										3					1	3		1
14.1- 15.0						1			1	3		2	2		2	5		4
15.1- 16.0										9		3	1		4	10		7
16.1- 17.0	3					1	3		1	4		1	2		3	6		4
17.1- 18.0						1			1	9		1			2	9		3
18.1- 19.0										3		1			4	3		5
19.1- 20.0										5		1			1	5		2
20.1- 21.0										1					2	1		2
21.1- 22.0										1						1		
MEAN/DEPTH	15.5					16.2	15.5		16.2	17.0		15.8	14.4		17.1	16.6		16.6
STD ERR	.91						.91		.95				.62		.45			
						.95				.32		.66				.32		.38
MEAN/DATE	15.5			16.2			15.8			16.8			16.3			16.6		
STD ERR	.91			.95			.62			.30			.43			.25		
RANGE(MIN)	12.8					14.4	12.8		14.4	13.2		12.2	12.3		13.5	12.3		12.2
(MAX)	16.7					17.6	16.7		17.6	21.1		19.4	16.8		20.2	21.1		20.2
NO.LENG'D	4	0	0	0	0	3	4	0	3	38	0	10	8	0	19	46	0	29

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/05/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
14.1- 15.0			1						1									
15.1- 16.0			2						2									
16.1- 17.0	1			1		1	2		1									
17.1- 18.0												1	2		1	2		2
18.1- 19.0	1		1			1	1		2	1					2	1		2
19.1- 20.0	5		1	1		2	6		3			1						1
20.1- 21.0	1						1			1					1	1		1
21.1- 22.0			3						3	1			1			2		
22.1- 23.0																		
23.1- 24.0															1			1
MEAN/DEPTH	19.1		18.5	18.0		18.4	18.8		18.5	20.2		18.8	19.0		19.8	19.6		19.5
STD ERR	.44		1.06				.43		.71				1.43		1.05			
				1.35		.62				.80		1.05				.78		.78
MEAN/DATE		18.8			18.3			18.7			19.6			19.5			19.5	
STD ERR		.56			.53			.43			.66			.79			.53	
RANGE(MIN)	16.3		15.0	16.6		16.8	16.3		15.0	18.7		17.7	17.5		17.8	17.5		17.7
(MAX)	20.1		21.7	19.3		19.6	20.1		21.7	21.4		19.8	21.9		23.4	21.9		23.4
NO.LENG'D	8	0	8	2	0	4	10	0	12	3	0	2	3	0	5	6	0	7

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/12/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
15.1- 16.0			1						1									
16.1- 17.0													1			1		
17.1- 18.0																		
18.1- 19.0	1			1			2								1			1
19.1- 20.0												1						1
20.1- 21.0															1			1
21.1- 22.0															1			1
22.1- 23.0	1						1								1			1
23.1- 24.0																		
24.1- 25.0	1						1											
MEAN/DEPTH	22.2		15.9	18.9			21.4		15.9			19.9	17.0		20.8	17.0		20.6
STD ERR	1.77						1.50								.84			.67
MEAN/DATE		20.6			18.9			20.3			19.9			20.0			20.0	
STD ERR		2.01						1.59						.99			.81	
RANGE(MIN)	18.9		15.9	18.9			18.9		15.9			19.9	17.0		18.6	17.0		18.6
(MAX)	25.0		15.9	18.9			25.0		15.9			19.9	17.0		22.4	17.0		22.4
NO.LENG'D	3	0	1	1	0	0	4	0	1	0	0	1	1	0	4	1	0	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/19/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
21.1- 22.0						1			1									
22.1- 23.0	1						1											
23.1- 24.0			1						1	1					4	1		4
24.1- 25.0															2			2
25.1- 26.0															3			3
MEAN/DEPTH	22.1		23.5			21.5	22.1		22.5	23.1					24.3	23.1		24.3
STD ERR									1.00						.27			.27
MEAN/DATE		22.8			21.5			22.4			23.1			24.3			24.2	
STD ERR		.70						.59						.27			.27	
RANGE(MIN)	22.1		23.5			21.5	22.1		21.5	23.1					23.1	23.1		23.1
(MAX)	22.1		23.5			21.5	22.1		23.5	23.1					25.4	23.1		25.4
NO.LENG'D	1	0	1	0	0	1	1	0	2	1	0	0	0	0	9	1	0	9

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/26/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/03/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
21.1- 22.0						1			1									
22.1- 23.0																		
23.1- 24.0																		
24.1- 25.0						1			1									
25.1- 26.0						1			1									
26.1- 27.0						2			2									
27.1- 28.0						1			1									
MEAN/DEPTH						25.6			25.6									
STD ERR						.91			.91									
MEAN/DATE					25.6			25.6										
STD ERR					.91			.91										
RANGE(MIN)						21.5			21.5									
(MAX)						27.5			27.5									
NO.LENG'D	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/19/79 DAY S	M	B	NIGHT S	M	B	DAY + NIGHT S	M	B	DATE 06/22/79 DAY S	M	B	NIGHT S	M	B	DAY + NIGHT S	M	B
28.1- 29.0															1			1
MEAN/DEPTH															28.2			28.2
STD ERR																		
MEAN/DATE													28.2			28.2		
STD ERR																		
RANGE(MIN)															28.2			28.2
(MAX)															28.2			28.2
NO.LENG'D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/26/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/03/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
25.1- 26.0				1			1											
26.1- 27.0																		
27.1- 28.0																		
28.1- 29.0																		
29.1- 30.0																		
30.1- 31.0																		
31.1- 32.0																		
32.1- 33.0						1			1									
MEAN/DEPTH				26.0		33.0	26.0		33.0									
STD ERR																		
MEAN/DATE					29.5			29.5										
STD ERR					3.50			3.50										
RANGE(MIN)				26.0		33.0	26.0		33.0									
(MAX)				26.0		33.0	26.0		33.0									
NO.LENG'D	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 05/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/25/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
10.1- 11.0	1						1											
11.1- 12.0	1						1											
MEAN/DEPTH	10.9						10.9											
STD ERR	.20						.20											
MEAN/DATE	10.9						10.9											
STD ERR	.20						.20											
RANGE(MIN)	10.7						10.7											
(MAX)	11.1						11.1											
NO.LENGTH	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 05/29/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/01/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
12.1- 13.0	1						1					1	3			3		1
13.1- 14.0										3					1	3		1
14.1- 15.0						1			1	3		2	2		2	5		4
15.1- 16.0										9		3	1		4	10		7
16.1- 17.0	3					1	3		1	4		1	2		3	6		4
17.1- 18.0						1			1	9		1			2	9		3
18.1- 19.0										3		1			4	3		5
19.1- 20.0										5		1			1	5		2
20.1- 21.0										1					2	1		2
21.1- 22.0										1						1		
MEAN/DEPTH	15.5					16.2	15.5		16.2	17.0		15.8	14.4		17.1	16.6		16.6
STD ERR	.91						.91		.95				.62		.45			
						.95				.32		.66				.32		.38
MEAN/DATE	15.5			16.2			15.8			16.8			16.3			16.6		
STD ERR	.91			.95			.62			.30			.43			.25		
RANGE(MIN)	12.8					14.4	12.8		14.4	13.2		12.2	12.3		13.5	12.3		12.2
(MAX)	16.7					17.6	16.7		17.6	21.1		19.4	16.8		20.2	21.1		20.2
NO.LENG'D	4	0	0	0	0	3	4	0	3	38	0	10	8	0	19	46	0	29

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM)	DATE 06/05/79									DATE 06/08/79								
	DAY			NIGHT			DAY + NIGHT			DAY			NIGHT			DAY + NIGHT		
INTERVAL	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B
14.1- 15.0			1						1									
15.1- 16.0			2						2									
16.1- 17.0	1			1		1	2		1									
17.1- 18.0												1	2		1	2		2
18.1- 19.0	1		1			1	1		2	1					2	1		2
19.1- 20.0	5		1	1		2	6		3			1						1
20.1- 21.0	1						1			1					1	1		1
21.1- 22.0			3						3	1			1			2		
22.1- 23.0																		
23.1- 24.0															1			1
MEAN/DEPTH	19.1		18.5	18.0		18.4	18.8		18.5	20.2		18.8	19.0		19.8	19.6		19.5
STD ERR	.44		1.06				.43		.71				1.43		1.05			
				1.35		.62				.80		1.05				.78		.78
MEAN/DATE		18.8			18.3			18.7			19.6			19.5			19.5	
STD ERR		.56			.53			.43			.66			.79			.53	
RANGE(MIN)	16.3		15.0	16.6		16.8	16.3		15.0	18.7		17.7	17.5		17.8	17.5		17.7
(MAX)	20.1		21.7	19.3		19.6	20.1		21.7	21.4		19.8	21.9		23.4	21.9		23.4
NO.LENG'D	8	0	8	2	0	4	10	0	12	3	0	2	3	0	5	6	0	7

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/12/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
15.1- 16.0			1						1									
16.1- 17.0													1			1		
17.1- 18.0																		
18.1- 19.0	1			1			2								1			1
19.1- 20.0												1						1
20.1- 21.0															1			1
21.1- 22.0															1			1
22.1- 23.0	1						1								1			1
23.1- 24.0																		
24.1- 25.0	1						1											
MEAN/DEPTH	22.2		15.9	18.9			21.4		15.9			19.9	17.0		20.8	17.0		20.6
STD ERR	1.77						1.50								.84			.67
MEAN/DATE		20.6			18.9			20.3			19.9			20.0			20.0	
STD ERR		2.01						1.59						.99			.81	
RANGE(MIN)	18.9		15.9	18.9			18.9		15.9			19.9	17.0		18.6	17.0		18.6
(MAX)	25.0		15.9	18.9			25.0		15.9			19.9	17.0		22.4	17.0		22.4
NO.LENG'D	3	0	1	1	0	0	4	0	1	0	0	1	1	0	4	1	0	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/19/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
21.1- 22.0						1			1									
22.1- 23.0	1						1											
23.1- 24.0			1						1	1					4	1		4
24.1- 25.0															2			2
25.1- 26.0															3			3
26.1- 27.0																		
27.1- 28.0																		
28.1- 29.0															1			1
MEAN/DEPTH	22.1		23.5			21.5	22.1		22.5	23.1					24.7	23.1		24.7
STD ERR									1.00						.45			.45
MEAN/DATE		22.8			21.5			22.4			23.1			24.7			24.6	
STD ERR		.70						.59						.45			.44	
RANGE(MIN)	22.1		23.5			21.5	22.1		21.5	23.1					23.1	23.1		23.1
(MAX)	22.1		23.5			21.5	22.1		23.5	23.1					28.2	23.1		28.2
NO.LENG'D	1	0	1	0	0	1	1	0	2	1	0	0	0	0	10	1	0	10

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES AMERICAN SHAD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/26/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/03/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
21.1- 22.0						1			1									
22.1- 23.0																		
23.1- 24.0																		
24.1- 25.0						1			1									
25.1- 26.0				1		1	1		1									
26.1- 27.0						2			2									
27.1- 28.0						1			1									
28.1- 29.0																		
29.1- 30.0																		
30.1- 31.0																		
31.1- 32.0																		
32.1- 33.0						1			1									
MEAN/DEPTH				26.0		26.6	26.0		26.6									
STD ERR						1.31			1.31									
MEAN/DATE					26.6			26.6										
STD ERR					1.14			1.14										
RANGE(MIN)				26.0		21.5	26.0		21.5									
(MAX)				26.0		33.0	26.0		33.0									
NO.LENG'D	0	0	0	1	0	7	1	0	7	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 02/20/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 03/06/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
5.1- 6.0						1			1									
6.1- 7.0				1			1			1		1	1		1	2		2
MEAN/DEPTH				6.6		5.9	6.6		5.9	6.9		6.8	6.8		7.0	6.9		6.9
STD ERR																.05		.10
MEAN/DATE				6.3			6.3			6.9			6.9			6.9		
STD ERR				.35			.35			.05			.10			.05		
RANGE(MIN)				6.6		5.9	6.6		5.9	6.9		6.8	6.8		7.0	6.8		6.8
(MAX)				6.6		5.9	6.6		5.9	6.9		6.8	6.8		7.0	6.9		7.0
NO.LENG'D	0	0	0	1	0	1	1	0	1	1	0	1	1	0	1	2	0	2

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 03/13/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 03/20/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
6.1- 7.0	3		2	2		3	5		5			2			1			3
7.1- 8.0												1						1
MEAN/DEPTH	6.7		6.5	6.6		6.7	6.7		6.6			6.7			6.6			6.7
STD ERR	.15		.10	.20		.24	.11		.14			.19						.14
MEAN/DATE		6.6			6.6			6.6			6.7			6.6			6.7	
STD ERR		.10			.15			.08			.19						.14	
RANGE(MIN)	6.5		6.4	6.4		6.2	6.4		6.2			6.5			6.6			6.5
(MAX)	7.0		6.6	6.8		7.0	7.0		7.0			7.1			6.6			7.1
NO.LENG'D	3	0	2	2	0	3	5	0	5	0	0	3	0	0	1	0	0	4

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DT

LENGTH(MM) INTERVAL	DATE 03/27/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 04/17/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
6.1- 7.0	1						1											
7.1- 8.0	1						1											
MEAN/DEPTH	7.3						7.3											
STD ERR	.35						.35											
MEAN/DATE		7.3						7.3										
STD ERR		.35						.35										
RANGE(MIN)	6.9						6.9											
(MAX)	7.6						7.6											
NO.LENGTHS	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 02/20/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 03/06/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
5.1- 7.0			1						1	1		1	2		2	3		3
7.1- 8.0										1						1		
MEAN/DEPTH			6.1						6.1	6.9		6.5	6.4		6.9	6.6		6.7
STD ERR										.65			.25		.15	.31		.15
MEAN/DATE		6.1						6.1			6.7			6.7			6.7	
STD ERR											.39			.17			.17	
RANGE(MIN)			6.1						6.1	6.2		6.5	6.2		6.7	6.2		6.5
(MAX)			6.1						6.1	7.5		6.5	6.7		7.0	7.5		7.0
NO.LENGTHD	0	0	1	0	0	0	0	0	1	2	0	1	2	0	2	4	0	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 03/13/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 03/20/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
6.1- 7.0	2		2	1			3		2	1		1	3		1	4		2
7.1- 8.0	5		1	3		3	8		4	8		2	1		2	9		4
8.1- 9.0										1					1	1		1
MEAN/DEPTH	7.3		7.0	7.3		7.5	7.3		7.2	7.3		7.3	6.9		7.5	7.1		7.4
STD ERR	.09		.32				.11		.19				.23		.32			
				.27		.15				.10		.18				.10		.19
MEAN/DATE		7.2			7.3			7.2			7.3			7.2			7.2	
STD ERR		.11			.16			.09			.08			.22			.10	
RANGE(MIN)	7.0		6.4	6.6		7.2	6.6		6.4	7.0		7.0	6.3		6.9	6.3		6.9
(MAX)	7.6		7.5	7.9		7.6	7.9		7.6	8.1		7.6	7.4		8.4	8.1		8.4
NO.LENGTH	7	0	3	4	0	3	11	0	6	10	0	3	4	0	4	14	0	7

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 03/27/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 04/17/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
6.1- 7.0			1						1									
7.1- 8.0	2		1			1	2		2									
MEAN/DEPTH	7.6		7.3			7.3	7.6		7.3									
STD ERR	.10		.25				.10		.15									
MEAN/DATE		7.4			7.3			7.4										
STD ERR		.15						.12										
RANGE(MIN)	7.5		7.0			7.3	7.5		7.0									
(MAX)	7.7		7.5			7.3	7.7		7.5									
NO.LEN'D	2	0	2	0	0	1	2	0	3	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/12/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
11.1- 12.0				1			1											
MEAN/DEPTH				11.8			11.8											
STD ERR																		
MEAN/DATE				11.8			11.8											
STD ERR																		
RANGE(MIN)				11.8			11.8											
(MAX)				11.8			11.8											
NO.LENG'D	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION 01

LENGTH(MM) INTERVAL	DATE 02/20/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
5.1- 6.0						1			1									
6.1- 7.0			1	1			1		1									
MEAN/DEPTH			6.1	6.6		5.9	6.6		6.0									
STD ERR									.10									
MEAN/DATE		6.1			6.3			6.2										
STD ERR					.35			.21										
RANGE(MIN)			6.1	6.6		5.9	6.6		5.9									
(MAX)			6.1	6.6		5.9	6.6		6.1									
NO.LENG'D	0	0	1	1	0	1	1	0	2	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION 01

LENGTH(MM) INTERVAL	DATE 03/06/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 03/13/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
6.1- 7.0	2		2	3		3	5		5	5		4	3		3	8		7
7.1- 8.0	1						1			5		1	3		3	8		4
MEAN/DEPTH	6.9		6.7	6.6		6.9	6.7		6.8	7.1		6.8	7.0		7.1	7.1		6.9
STD ERR	.38		.15	.19		.10	.20		.09	.11		.21	.23		.22	.10		.15
MEAN/DATE	6.8			6.7			6.8			7.0			7.1			7.0		
STD ERR	.22			.12			.11			.11			.15			.09		
RANGE(MIN)	6.2		6.5	6.2		6.7	6.2		6.5	6.5		6.4	6.4		6.2	6.4		6.2
(MAX)	7.5		6.8	6.8		7.0	7.5		7.0	7.6		7.5	7.9		7.6	7.9		7.6
NO.LENG'D	3	0	2	3	0	3	6	0	5	10	0	5	6	0	6	16	0	11

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION 01

LENGTH(MM) INTERVAL	DATE 03/20/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 03/27/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
6.1- 7.0	1		3	3		2	4		5	1		1				1		1
7.1- 8.0	8		3	1		2	9		5	3		1			1	3		2
8.1- 9.0	1					1	1		1									
MEAN/DEPTH	7.3		7.0	6.9		7.3	7.1		7.2	7.4		7.3			7.3	7.4		7.3
STD ERR	.10		.18	.23		.31	.10		.17	.18		.25				.18		.15
MEAN/DATE		7.2			7.1			7.2			7.4			7.3			7.4	
STD ERR		.09			.21			.09			.14						.12	
RANGE(MIN)	7.0		6.5	6.3		6.6	6.3		6.5	6.9		7.0			7.3	6.9		7.0
(MAX)	8.1		7.6	7.4		8.4	8.1		8.4	7.7		7.5			7.3	7.7		7.5
NO.LENG'D	10	0	6	4	0	5	14	0	11	4	0	2	0	0	1	4	0	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES ATLANTIC TOMCOD ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION 01

LENGTH(MM) INTERVAL	DATE 06/12/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
11.1- 12.0				1			1											
MEAN/DEPTH				11.8			11.8											
STD ERR																		
MEAN/DATE				11.8			11.8											
STD ERR																		
RANGE(MIN)				11.8			11.8											
(MAX)				11.8			11.8											
NO.LENG'D	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 05/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0			1						1				3		3	3		3
4.1- 5.0										4		4				4		4
5.1- 6.0												2						2
MEAN/DEPTH			3.9						3.9	4.3		4.7	3.6		3.6	4.0		4.3
STD ERR										.09		.26	.15		.07	.17		.25
MEAN/DATE		3.9						3.9			4.5			3.6			4.2	
STD ERR											.16			.07			.16	
RANGE(MIN)			3.9						3.9	4.1		4.1	3.3		3.5	3.3		3.5
(MAX)			3.9						3.9	4.5		5.7	3.8		3.7	4.5		5.7
NO.LENGTHD	0	0	1	0	0	0	0	0	1	4	0	6	3	0	3	7	0	9

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 05/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/25/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
2.1- 3.0												1						1
3.1- 4.0				1		1	1		1	1		3				1		3
4.1- 5.0				1		1	1		1	2		2	1			3		2
5.1- 6.0			2						2	8		30			4	8		34
6.1- 7.0			1						1	1		9			1	1		10
MEAN/DEPTH			6.0	3.8		3.9	3.8		5.1	5.3		5.6	4.6		5.5	5.3		5.6
STD ERR			.12	.30		.25	.30		.54	.22		.11			.16	.21		.10
MEAN/DATE		6.0			3.8			4.8			5.5			5.4			5.5	
STD ERR		.12			.16			.45			.10			.20			.09	
RANGE(MIN)			5.8	3.5		3.6	3.5		3.6	3.7		3.0	4.6		5.2	3.7		3.0
(MAX)			6.2	4.1		4.1	4.1		6.2	6.2		6.5	4.6		6.1	6.2		6.5
NO.LENGTH	0	0	3	2	0	2	2	0	5	12	0	45	1	0	5	13	0	50

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 05/29/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/01/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0	5		9	2			7		9				1			1		
4.1- 5.0			1	1			1		1						1			1
5.1- 6.0	1			1		2	2		2									
MEAN/DEPTH	3.9		3.8	4.4		5.8	4.1		4.2				4.0		4.5	4.0		4.5
STD ERR	.41		.14	.45		.10	.30		.25									
MEAN/DATE		3.9			4.9			4.1						4.3			4.3	
STD ERR		.17			.41			.19						.25			.25	
RANGE(MIN)	3.3		3.4	3.6		5.7	3.3		3.4				4.0		4.5	4.0		4.5
(MAX)	5.9		4.9	5.5		5.9	5.9		5.9				4.0		4.5	4.0		4.5
NO.LENG'D	6	0	10	4	0	2	10	0	12	0	0	0	1	0	1	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/05/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0	1						1											
4.1- 5.0	2						2			2		3				2		3
5.1- 6.0	1		2	1		2	2		4			5						5
6.1- 7.0												1						1
MEAN/DEPTH	4.9		5.9	5.2		5.4	4.9		5.7	4.8		5.4				4.8		5.4
STD ERR	.48		.05				.37		.18									
						.25				.20		.23				.20		.23
MEAN/DATE		5.2			5.4			5.3			5.3						5.3	
STD ERR		.38			.17			.25			.20						.20	
RANGE(MIN)	3.6		5.9	5.2		5.2	3.6		5.2	4.6		4.3				4.6		4.3
(MAX)	5.9		6.0	5.2		5.7	5.9		6.0	5.0		6.8				5.0		6.8
NO.LENGTH	4	0	2	1	0	2	5	0	4	2	0	9	0	0	0	2	0	9

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/12/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0	9		7	2		1	11		8									
4.1- 5.0	26		36	1		1	27		37	1					1	1		1
5.1- 6.0	23		36				23		36									
MEAN/DEPTH	4.8		5.0	4.1		4.0	4.7		4.9	4.9					4.7	4.9		4.7
STD ERR	.09		.06				.09		.06									
				.27		.40												
MEAN/DATE		4.9			4.0			4.9			4.9			4.7			4.8	
STD ERR		.05			.20			.05									.10	
RANGE(MIN)	3.1		3.2	3.7		3.6	3.1		3.2	4.9					4.7	4.9		4.7
(MAX)	6.0		5.8	4.6		4.4	6.0		5.8	4.9					4.7	4.9		4.7
NO.LENG'D	58	0	79	3	0	2	61	0	81	1	0	0	0	0	1	1	0	1

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/19/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
5.1- 6.0				1			1											
MEAN/DEPTH				5.7			5.7											
STD ERR																		
MEAN/DATE					5.7			5.7										
STD ERR																		
RANGE(MIN)				5.7			5.7											
(MAX)				5.7			5.7											
NO.LENG'D	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/26/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/03/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0	2		2				2		2									
4.1- 5.0																		
5.1- 6.0			1						1									
6.1- 7.0	1						1											
MEAN/DEPTH	4.5		4.2				4.5		4.2									
STD ERR	1.06		.49				1.06		.49									
MEAN/DATE		4.4						4.4										
STD ERR		.53						.53										
RANGE(MIN)	3.2		3.6				3.2		3.6									
(MAX)	6.6		5.2				6.6		5.2									
NO.LENGTHD	3	0	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION 01

LENGTH(MM) INTERVAL	DATE 05/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/25/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
5.1- 6.0										9		5			1	9		6
6.1- 7.0						1			1	6		2			1	6		3
7.1- 8.0										1						1		
MEAN/DEPTH						6.3			6.3	6.0		5.8			6.0	6.0		5.8
STD ERR										.13		.13			.35	.13		.12
MEAN/DATE					6.3			6.3			6.0			6.0			6.0	
STD ERR											.10			.35			.09	
RANGE(MIN)						6.3			6.3	5.3		5.3			5.6	5.3		5.3
(MAX)						6.3			6.3	7.2		6.3			6.3	7.2		6.3
NO.LENG'D	0	0	0	0	0	1	0	0	1	16	0	7	0	0	2	16	0	9

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION 01

LENGTH(MM) INTERVAL	DATE 05/29/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/01/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0			1						1									
4.1- 5.0																		
5.1- 6.0			1	1			1		1									
6.1- 7.0	1						1											
MEAN/DEPTH	6.2		4.2	5.3			5.8		4.2									
STD ERR			1.00				.45		1.00									
MEAN/DATE		4.9			5.3			5.0										
STD ERR		.88						.63										
RANGE(MIN)	6.2		3.2	5.3			5.3		3.2									
(MAX)	6.2		5.2	5.3			6.2		5.2									
NO.LENGTHD	1	0	2	1	0	0	2	0	2	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/05/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0				1			1			2						2		
5.1- 6.0						1			1	10		4				10		4
6.1- 7.0						1			1	1		1				1		1
MEAN/DEPTH				5.0		6.1	5.0		6.1	5.4		5.7				5.4		5.7
STD ERR						.05			.05			.25				.12		.25
MEAN/DATE					5.7			5.7			5.5						5.5	
STD ERR					.35			.35			.11						.11	
RANGE(MIN)				5.0		6.0	5.0		6.0	4.7		5.1				4.7		5.1
(MAX)				5.0		6.1	5.0		6.1	6.3		6.6				6.3		6.6
NO.LENGTHD	0	0	0	1	0	2	1	0	2	13	0	5	0	0	0	13	0	5

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/12/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
4.1- 5.0	1		1				1		1			1						1
5.1- 6.0	5		2	2			7		2			2						2
MEAN/DEPTH	5.4		5.1	5.3			5.4		5.1			5.1						5.1
STD ERR	.14		.12	.15			.11		.12			.09						.09
MEAN/DATE		5.3			5.3			5.3			5.1						5.1	
STD ERR		.11			.15			.09			.09						.09	
RANGE(MIN)	4.8		4.9	5.1			4.8		4.9			5.0						5.0
(MAX)	5.8		5.3	5.4			5.8		5.3			5.3						5.3
NO.LENGTH	6	0	3	2	0	0	8	0	3	0	0	3	0	0	0	0	0	3

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/19/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 06/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
5.1- 6.0				5			5			7						7		
6.1- 7.0				2			2			2						2		
7.1- 8.0																		
8.1- 9.0																		
9.1- 10.0																		
10.1- 11.0																		
11.1- 12.0																		
12.1- 13.0																		
13.1- 14.0													1			1		
MEAN/DEPTH				5.8			5.8			5.7			13.7			6.5		
STD ERR				.26			.26			.16						.81		
MEAN/DATE				5.8			5.8			5.7			13.7			6.5		
STD ERR				.26			.26			.16						.81		
RANGE(MIN)				5.1			5.1			5.1			13.7			5.1		
(MAX)				7.0			7.0			6.5			13.7			13.7		
NO.LENGTH	0	0	0	7	0	0	7	0	0	9	0	0	1	0	0	10	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 06/26/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/03/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
5.1- 6.0	2		3				2		3									
6.1- 7.0	3		1				3		1									
7.1- 8.0																		
8.1- 9.0																		
9.1- 10.0																		
10.1- 11.0																		
11.1- 12.0																		
12.1- 13.0																		
13.1- 14.0																		
14.1- 15.0																		
15.1- 16.0						1			1									
MEAN/DEPTH	6.2		5.8			15.4	6.2		7.7									
STD ERR	.20		.26				.20		1.93									
MEAN/DATE		6.0			15.4			7.0										
STD ERR		.16						.95										
RANGE(MIN)	5.7		5.2			15.4	5.7		5.2									
(MAX)	6.7		6.4			15.4	6.7		15.4									
NO.LENGTH	5	0	4	0	0	1	5	0	5	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 07/16/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/17/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
11.1- 12.0				1			1											
12.1- 13.0																		
13.1- 14.0																		
14.1- 15.0																		
15.1- 16.0																		
16.1- 17.0			1						1									
MEAN/DEPTH			16.6	11.2			11.2		16.6									
STD ERR																		
MEAN/DATE		16.6			11.2			13.9										
STD ERR								2.70										
RANGE(MIN)			16.6	11.2			11.2		16.6									
(MAX)			16.6	11.2			11.2		16.6									
NO.LENG'D	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS POST YOLK SAC LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION D1

LENGTH(MM) INTERVAL	DATE 07/24/79 DAY S	M	B	NIGHT S	M	B	DAY + NIGHT S	M	B	DATE 07/31/79 DAY S	M	B	NIGHT S	M	B	DAY + NIGHT S	M	B
13.1- 14.0	1						1											
MEAN/DEPTH	13.6						13.6											
STD ERR																		
MEAN/DATE	13.6						13.6											
STD ERR																		
RANGE(MIN)	13.6						13.6											
(MAX)	13.6						13.6											
NO.LENG'D	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM)	DATE 06/26/79									DATE 07/03/79								
	DAY			NIGHT			DAY + NIGHT			DAY			NIGHT			DAY + NIGHT		
INTERVAL	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B
28.1- 29.0						1			1									
MEAN/DEPTH						28.3			28.3									
STD ERR																		
MEAN/DATE				28.3			28.3											
STD ERR																		
RANGE(MIN)						28.3			28.3									
(MAX)						28.3			28.3									
NO.LENGTHD	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 07/10/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/17/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
22.1- 23.0				1			1											
MEAN/DEPTH				22.5			22.5											
STD ERR																		
MEAN/DATE				22.5			22.5											
STD ERR																		
RANGE(MIN)				22.5			22.5											
(MAX)				22.5			22.5											
NO.LENG'D	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS JUVENILE LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 07/24/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 07/31/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
19.1- 20.0						1			1									
20.1- 21.0																		
21.1- 22.0																		
22.1- 23.0						1			1									
23.1- 24.0																		
24.1- 25.0						1			1									
MEAN/DEPTH						22.0			22.0									
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STD ERR					1.58			1.58										
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(MAX)						24.5			24.5									
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CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 05/08/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/15/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
3.1- 4.0			1						1				3		3	3		3
4.1- 5.0										4		4				4		4
5.1- 6.0												2						2
MEAN/DEPTH			3.9						3.9	4.3		4.7	3.6		3.6	4.0		4.3
STD ERR										.09		.26	.15		.07	.17		.25
MEAN/DATE		3.9						3.9			4.5			3.6			4.2	
STD ERR											.16			.07			.16	
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(MAX)			3.9						3.9	4.5		5.7	3.8		3.7	4.5		5.7
NO.LENG'D	0	0	1	0	0	0	0	0	1	4	0	6	3	0	3	7	0	9

CENTRAL HUDSON GAS & ELECTRIC, INC.
1979 AQUATIC ECOLOGY STUDIES

ENTRAINMENT ANALYSIS - LENGTH FREQUENCY

SPECIES STRIPED BASS ALL LIFE STAGES LARVAE

AT ROSETON/DANSKAMMER VICINITY
STATION DI

LENGTH(MM) INTERVAL	DATE 05/22/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B	DATE 05/25/79 DAY S	DAY M	DAY B	NIGHT S	NIGHT M	NIGHT B	DAY + NIGHT S	DAY + NIGHT M	DAY + NIGHT B
2.1- 3.0												1						1
3.1- 4.0				1		1	1		1	1		3				1		3
4.1- 5.0				1		1	1		1	2		2	1			3		2
5.1- 6.0			2						2	17		35			5	17		40
6.1- 7.0			1			1			2	7		11			2	7		13
7.1- 8.0										1						1		
MEAN/DEPTH			6.0	3.8		4.7	3.8		5.3	5.7		5.6	4.6		5.7	5.7		5.6
STD ERR			.12				.30		.48						.15			
				.30		.83				.13		.10				.13		.09
MEAN/DATE		6.0			4.3			5.0			5.6			5.5			5.6	
STD ERR		.12			.51			.43			.08			.19			.07	
RANGE(MIN)			5.8	3.5		3.6	3.5		3.6	3.7		3.0	4.6		5.2	3.7		3.0
(MAX)			6.2	4.1		6.3	4.1		6.3	7.2		6.5	4.6		6.3	7.2		6.5
NO.LENG'D	0	0	3	2	0	3	2	0	6	28	0	52	1	0	7	29	0	59

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1979
ANNUAL PROGRESS REPORT

NOVEMBER 1980

One Blue Hill Plaza
Pearl River, New York 10965

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Environmental Science & Engineering Consultants

Lawler, Matusky & Skelly Engineers

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November 17, 1980
Job No. 176-159

Dr. Thomas G. Huggins
Manager, Ecological Studies
CENTRAL HUDSON GAS & ELECTRIC CORPORATION
284 South AVenue
Poughkeepsie, New York 12602

Dear Dr. Huggins:

In accordance with authorization from Central Hudson Gas & Electric Corporation, we submit herein the results of the 1979 Aquatic Ecology Studies conducted at the Roseton and Danskammer Point Electric Generating Stations and at Hudson River locations in the vicinity of the two plants.

The report summarizes investigations of chemical and physical characteristics of the Lower Hudson River estuary and the distribution and abundance of ichthyoplankton and fish. Detailed results of entrainment and impingement studies conducted at the intakes of the two plants are presented and comparisons between plant and Hudson River programs are discussed. In addition, the results of the two special studies, one to evaluate trawl collection efficiencies and another to determine the effectiveness of an air bubble curtain as a means of reducing impingement, are included. Supportive data are presented in the Appendix to the report.

We appreciate the opportunity to have worked with Central Hudson Gas & Electric Corporation in conducting these studies.

Very truly yours,

John P. Lawler

JPL/bm
enclosure

CENTRAL HUDSON GAS & ELECTIC CORPORATION

ANNUAL PROGRESS REPORT

1979

NOVEMBER 1980

LMSE-80/0211&176/159

LAWLER, MATUSKY & SKELLY ENGINEERS
ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS
One Blue Hill Plaza
Pearl River, New York 10965

TABLE OF CONTENTS

	PAGE No.
LIST OF FIGURES	iv
LIST OF TABLES	vii
1.0 REPORT SUMMARY	1.0- 1
1.1 Hudson River Physics and Chemistry	1.0- 1
1.2 Biological Studies	1.0- 2
1.2.1 Hudson River Ichthyoplankton	1.0- 2
1.2.2 Hudson River Fishery Program	1.0- 2
1.2.3 Plant Entrainment	1.0- 3
1.2.4 Impingement	1.0- 4
2.0 INTRODUCTION	2.0- 1
3.0 STATION AND SITE DESCRIPTION	3.0- 3
3.1 Geographic Location	3.0- 1
3.2 Description of Study Area	3.0- 1
3.3 Description of the Generating Stations	3.0- 4
3.3.1 Roseton Electric Generating Station	3.0- 4
3.3.2 Danskammer Point Electric Generating Station	3.0- 4
4.0 MATERIALS AND METHODS	4.0- 1
4.1 Hudson River Ichthyoplankton Program	4.0- 1
4.1.1 Sampling Location and Frequency	4.0- 1
4.1.2 Collection Procedures	4.0- 1
4.1.3 Laboratory Analysis	4.0- 4
4.2 Hudson River Fish Program	4.0- 4
4.2.1 Sampling Location and Frequency	4.0- 4
4.2.2 Collection Procedures	4.0- 7
4.2.3 Field Sample Processing	4.0- 9
4.2.4 Laboratory Analysis	4.0-10
4.3 Plant Entrainment	4.0-10
4.3.1 Sample Locations and Frequency	4.0-10
4.3.2 Collection Procedures	4.0-13
4.3.3 Laboratory Analysis	4.0-13

TABLE OF CONTENTS
(Continued)

		PAGE No.
4.4	Plant Impingement	4.0-15
4.4.1	Sampling Location and Frequency	4.0-15
4.4.2	Collection Procedures	4.0-15
4.4.3	Laboratory Analysis	4.0-18
4.5	Water Quality	4.0-19
4.5.1	Field Program Description	4.0-19
4.5.2	Collection Procedures	4.0-23
4.5.3	Laboratory Procedures	4.0-23
5.0	HUDSON RIVER PHYSICS AND CHEMISTRY	5.0- 1
5.1	Hudson River Hydrodynamics	5.0- 1
5.1.1	Freshwater Flow	5.0- 1
5.1.2	Salinity	5.0- 1
5.1.3	Thermal Characteristics	5.0- 6
5.2	Climatology	5.0- 6
5.3	Water Quality Parameters	5.0- 9
5.3.1	Weekly Water Quality Program	5.0- 9
5.3.2	Monthly Water Quality Program	5.0-14
6.0	BIOLOGICAL STUDIES	6.0- 1
6.1	Hudson River Ichthyoplankton	6.0- 1
6.1.1	Species Inventory	6.0- 1
6.1.2	Abundance Patterns of Total and Selected Populations	6.0- 3
6.2	Hudson River Fishery Program	6.0-30
6.2.1	Species Inventory	6.0-30
6.2.2	Abundance, Biomass, and Percent Composition	6.0-33
6.2.3	Length Frequency	6.0-50
6.2.4	Diel Catch Comparisons	6.0-66
6.2.5	Comparison to Previous Years	6.0-74

TABLE OF CONTENTS
(Continued)

		PAGE No.
6.3	Plant Entrainment	6.0- 78
6.3.1	Species Inventory	6.0- 78
6.3.2	Abundance Patterns of Total and Selected Populations	6.0- 78
6.3.3	Comparison Between Plants and River	6.0-104
6.3.4	Comparison to Previous Years	6.0-106
6.4	Impingement	6.0-108
6.4.1	Species Inventory	6.0-109
6.4.2	Sample Parameters	6.0-109
6.4.3	Abundance, Biomass, and Percent Composition	6.0-112
6.4.4	Seasonal and Annual Impingement Estimates	6.0-112
6.4.5	Seasonal Impingement Patterns and Length Frequency of Selected Species	6.0-120
6.4.6	Comparison Between Plants	6.0-147
6.4.7	Plant Impingement Compared to River Collections	6.0-147
6.4.8	Comparison to Previous Years	6.0-149
7.0	SPECIAL STUDIES	7.0- 1
7.1	Trawl Comparison: Yankee Trawl vs Otter Trawl	7.0- 1
7.1.1	Introduction	7.0- 1
7.1.2	Objectives	7.0- 2
7.1.3	Materials and Methods	7.0- 3
7.1.4	Results and Discussion	7.0- 8
7.1.5	Conclusions	7.0- 32
7.2	Air-Bubble Curtain	7.0- 33
7.2.1	Introduction	7.0- 33
7.2.2	Objectives	7.0- 37
7.2.3	Materials and Methods	7.0- 37
7.2.4	Results and Discussion	7.0- 41
7.2.5	Conclusions	7.0- 54
REFERENCES CITED		R-1
APPENDIX		

LIST OF FIGURES

FIGURE No.	TITLE	PAGE No.
3.0- 1	Location of the Roseton and Danskammer Point Electric Generating Stations and Other Generating Stations of the Lower Hudson River	3.0- 2
3.0- 2	Location of Roseton and Danskammer Point Generating Stations	3.0- 3
4.0- 1	Approximate Sampling Locations	4.0- 2
4.0- 2	Trawl Sampling Locations	4.0- 5
4.0- 3	Seine Sampling Locations	4.0- 8
4.0- 4	Roseton Intake Sampling Locations	4.0-11
4.0- 5	Danskammer Intake Sampling Locations	4.0-12
4.0- 6	Danskammer Point Sampling Locations	4.0-17
4.0- 7	Water Quality Sampling Locations	4.0-20
5.0- 1	Hudson River Flow at Green Island	5.0- 2
5.0- 2	Lower Hudson River Long-Term Monthly Average Freshwater Flow	5.0- 3
5.0- 3	Daily Chloride Concentrations	5.0- 5
5.0- 4	Minimum Daily Intake Temperatures	5.0- 8
5.0- 5	Mean 24-Hour Air Temperature	5.0-10
5.0- 6	Weekly Water Temperature Values Recorded at Station CH-1	5.0-11
5.0- 7	Weekly Water Temperature Values Recorded at Station CH-4	5.0-12
5.0- 8	Weekly Water Temperatures Values Recorded at Station CH-6	5.0-13
5.0- 9	Weekly Specific Conductance Values Recorded at Station CH-1	5.0-15
5.0-10	Weekly Specific Conductance Values Recorded at Station CH-4	5.0-16

LIST OF FIGURES
(Continued)

FIGURE No.	TITLE	PAGE No.
5.0-11	Weekly Specific Conductance Values Recorded at Station CH-6	5.0- 17
5.0-12	Weekly Turbidity Values Recorded at Station CH-1	5.0- 18
5.0-13	Weekly Turbidity Values Recorded at Station CH-4	5.0- 19
5.0-14	Weekly Turbidity Values Recorded at Station CH-6	5.0- 20
5.0-15	Weekly Dissolved Oxygen Values Recorded at Station CH-1	5.0- 21
5.0-16	Weekly Dissolved Oxygen Values Recorded at Station CH-4	5.0- 22
5.0-17	Weekly Dissolved Oxygen Values Recorded at Station CH-6	5.0- 23
5.0-18	Weekly pH Values Recorded at Station CH-1	5.0- 24
5.0-19	Weekly pH Values Recorded at Station CH-4	5.0- 25
5.0-20	Weekly pH Values Recorded at Station CH-6	5.0- 26
6.0- 1	Diel Migration for White Perch Larvae	6.0- 8
6.0- 2	Diel Migration for Striped Bass Larvae	6.0- 15
6.0- 3	Diel Migration for Alosa Spp. Larvae	6.0- 22
6.0- 4	Monthly Mean Catch-Per-Effort for Total and Selected Species in Trawl Collections	6.0- 35
6.0- 5	Monthly Mean Biomass-Per-Effort for Total and Selected Species in Trawl Collections	6.0- 38
6.0- 6	Monthly Mean Catch-Per-Effort for Total and Selected Species in Seine Collections	6.0- 44
6.0- 7	Monthly Mean Biomass-Per-Effort for Total and Selected Species in Seine Collections	6.0- 47
6.0- 8	Mean Monthly Impingement Rate for All Species	6.0-121
6.0- 9	Mean Monthly Impingement Rate for Alewife	6.0-122

LIST OF FIGURES
(Continued)

FIGURE No.	TITLE	PAGE No.
6.0-10	Mean Monthly Impingement Rate for Atlantic Tomcod	6.0-126
6.0-11	Mean Monthly Impingement Rate for American Shad	6.0-132
6.0-12	Mean Monthly Impingement Rate for Bay Anchovy	6.0-133
6.0-13	Mean Monthly Impingment Rate for Blueback Herring	6.0-136
6.0-14	Mean Monthly Impingement Rate for White Perch	6.0-140
6.0-15	Mean Monthly Impingement Rate for Striped Bass	6.0-143
6.0-16	Mean Monthly Impingement Rate for Spottail Shiner	6.0-146
7.0- 1	Schematic Illustration of the Fishing Mouth for the Yankee and Otter Trawls - Top View	7.0- 4
7.0- 2	Schematic Illustration of the Fishing Mouth for Yankee and Otter Trawls - Front View	7.0- 5
7.0- 3	Mean Lengths of Selected Species for Otter and Yankee Trawls	7.0- 23
7.0- 4	Correlation Between the Number of Fish Per 1500 m^3 and Trawl Duration	7.0- 25
7.0- 5	Diel Migration of White Perch for Yankee and Otter Trawls Combined	7.0- 27
7.0- 6	Diel Migration of Blueback Herring for Yankee and Otter Trawls Combined	7.0- 29
7.0- 7	Diel Migration of American Shad for Yankee and Otter Trawls Combined	7.0- 30
7.0- 8	Diel Migration of Alewife for Yankee and Otter Trawls Combined	7.0- 31
7.0- 9	Schematic Diagram of the Bubbler	7.0- 38
7.0-10	End and Side Views of the Bio-Weve Diffuser	7.0- 39

LIST OF TABLES

TABLE No.	TITLE	PAGE No.
3.0-1	Hydrodynamic and Physiographic Characteristics of Northern Newburgh Bay	3.0- 5
3.0-2	Plant Description: Circulating Water Pump Flow Characteristics	3.0- 6
4.0-1	Hudson River Ichthyoplankton Sampling Dates and Number of Samples Collected	4.0- 3
4.0-2	Sample Frequency and Number of Samples for River Fish Collections	4.0- 6
4.0-3	Ichthyoplankton Entrainment Sampling Dates and Number of Samples Collected	4.0-14
4.0-4	Impingement Sampling Dates and Number of Samples Collected	4.0-16
4.0-5	Water Quality Sampling Dates	4.0-21
5.0-1	Freshwater Flows at Green Island	5.0- 4
5.0-2	Monthly Air Temperatures and Precipitation Recorded at West Point	5.0- 7
5.0-3	Average Monthly Water Quality Values	5.0-28
6.0-1	Ichthyoplankton Species Inventory and Total Abundance	6.0- 2
6.0-2	Mean Total Abundance of Eggs and Larvae for White Perch	6.0- 4
6.0-3	Statistical Analysis of White Perch Larval Abundance	6.0- 6
6.0-4	Mean Abundance of White Perch Larvae by Sample Depth	6.0- 7
6.0-5	Summary of White Perch Larval Length Frequency	6.0-10
6.0-6	Mean Total Abundance of Eggs and Larvae for Striped Bass	6.0-11
6.0-7	Statistical Analysis of Striped Bass Larval Abundance	6.0-13

LIST OF TABLES
(Continued)

TABLE No.	TITLE	PAGE No.
6.0- 8	Mean Abundance of Striped Bass Larvae by Sample Depth	6.0-14
6.0- 9	Summary of Striped Bass Larval Length Frequency	6.0-17
6.0-10	Mean Total Abundance of Eggs and Larvae for Alosa Spp.	6.0-18
6.0-11	Statistical Analysis of Alosa Spp. Larval Abundance	6.0-20
6.0-12	Mean Abundance of Alosa Spp. Larvae by Sample Depth	6.0-21
6.0-13	Summary of Alosa Spp. Larval Length Frequency	6.0-23
6.0-14	Mean Total Abundance of Eggs and Larvae for American shad	6.0-25
6.0-15	Mean Abundance of American Shad Larvae by Sample Depth	6.0-26
6.0-16	Summary of American Shad Larvae Length Frequency	6.0-27
6.0-17	Mean Total Abundance of Eggs and Larvae for Atlantic Tomcod	6.0-29
6.0-18	Mean Total Abundance of Eggs and Larvae for Bay Anchovy	6.0-31
6.0-19	Fish Species Inventory	6.0-32
6.0-20	Monthly Mean Catch-Per-Effort for Total Species in Trawl Collections	6.0-34
6.0-21	Annual Mean Catch-Per-Effort for Total and Selected Species in Trawl Collections	6.0-36
6.0-22	Annual Mean Biomass-Per-Effort for Total and Selected Species in Trawl Collections	6.0-39
6.0-23	Monthly Mean Catch-Per-Effort for Total and Selected Species in Surface Trawls and Bottom Trawls	6.0-42

LIST OF TABLES
(Continued)

TABLE No.	TITLE	PAGE No.
6.0-24	Monthly Mean Catch-Per-Effort for Total and Selected Species in Seine Collections	6.0-43
6.0-25	Monthly Mean Biomass-Per-Effort for Total and Selected Species in Seine Collections	6.0-46
6.0-26	Annual Mean Catch-Per-Effort and Biomass Per Effort for Total and Selected Species in Seine Collections	6.0-48
6.0-27	Water Temperatures at Seine Sites	6.0-49
6.0-28	Length Frequency of Blueback Herring in Bottom Trawl Collections	6.0-52
6.0-29	Length Frequency of Blueback Herring in Seine Collections	6.0-53
6.0-30	Length Frequency of Blueback Herring in Surface Trawl Collections	6.0-54
6.0-31	Length Frequency of White Perch in Bottom Trawl Collections	6.0-55
6.0-32	Length Frequency of White Perch in Seine Collections	6.0-56
6.0-33	Length Frequency of White Perch in Surface Trawl Collections	6.0-57
6.0-34	Length Frequency of American Shad in Surface Trawl Collections	6.0-58
6.0-35	Length Frequency of American Shad in Bottom Trawl Collections	6.0-59
6.0-36	Length Frequency of American Shad in Seine Collections	6.0-60
6.0-37	Length Frequency of Alewife in Surface Trawl Collections	6.0-62
6.0-38	Length Frequency of Alewife in Bottom Trawl Collections	6.0-63
6.0-39	Length Frequency of Alewife in Seine Collections	6.0-64

LIST OF TABLES
(Continued)

TABLE No.	TITLE	PAGE No.
6.0-40	Length Frequency of Atlantic Tomcod in Bottom Trawl Collections	6.0-45
6.0-41	Length Frequency of Striped Bass in Surface Trawl Collections	6.0-67
6.0-42	Length Frequency of Striped Bass in Bottom Trawl Collections	6.0-68
6.0-43	Length Frequency of Striped Bass in Seine Collections	6.0-69
6.0-44	Length Frequency of Bay Anchovy in Seine Collections	6.0-70
6.0-45	Length Frequency of Bay anchovy in Surface Trawl Collections	6.0-71
6.0-46	Length Frequency of Bay Anchovy in Bottom Trawl Collections	6.0-72
6.0-47	Annual Mean Catch-Per-Effort for Total and Selected Species by Gear Type and Day/Night Definition	6.0-73
6.0-48	Summary of Abundance and Percent Composition of River Fish Collections for All Gears and Stations	6.0-75
6.0-49	Annual Mean Catch-Per-Effort By Year, Gear Type and Selected Species at Common Stations	6.0-76
6.0-50	Ichthyoplankton Species Inventory and Total Abundance in Entrainment Collections	6.0-79
6.0-51	Mean Total Abundance of Eggs and Larvae for White Perch	6.0-81
6.0-52	Mean Abundance of White Perch Larvae by Sample Depth at Roseton Genertng Station	6.0-82
6.0-53	Mean Abundance of White Perch Larvae by Sample Depth at Danskammer Point Generating Station	6.0-83

LIST OF TABLES
(Continued)

TABLE No.	TITLE	PAGE No.
6.0-54	Summary of White Perch Larval Length Frequency in Entrainment Collections	6.0- 85
6.0-55	Mean Total Abundance of Eggs and Larvae for Striped Bass	6.0- 86
6.0-56	Mean Abundance of Striped Bass Larvae by Sample Depth at Roseton Generating Station	6.0- 87
6.0-57	Mean Abundance of Striped Bass Larvae by Sample Depth at Danskammer Point Generating Station	6.0- 88
6.0-58	Summary of Striped Bass Larval Length Frequency in Entrainment Collections	6.0- 90
6.0-59	Mean Total Abundance of Eggs and Larvae for Alosa Spp.	6.0- 91
6.0-60	Mean Abundance of Alosa Spp. Larvae by Sample Depth at Danskammer Point Generating Station	6.0- 92
6.0-61	Mean Abundance of Alosa Spp. Larvae by Sample Depth at Roseton Generating Station	6.0- 94
6.0-62	Summary of Alosa Spp. Larval Length Frequency in Entrainment Collections	6.0- 95
6.0-63	Mean Total Abundance of Eggs and Larvae for American Shad	6.0- 96
6.0-64	Mean Abundance of American Shad Larvae by Sample Depth at Danskammer Point Generating Station	6.0- 97
6.0-65	Mean Abundance of American Shad Larvae by Sample Depth at Roseton Generating Station	6.0- 98
6.0-66	Summary of American Shad Larval Length Frequency in Entrainment Collections	6.0-100

LIST OF TABLES
(Continued)

TABLE No.	TITLE	PAGE No.
6.0-67	Mean Total Abundance of Eggs and Larvae for Atlantic Tomcod	6.0-101
6.0-68	Summary of Atlantic Tomcod Larval Length Frequency in Entrainment Collections	6.0-102
6.0-69	Mean Total Abundance of Eggs and Larvae for Bay Anchovy	6.0-103
6.0-70	Species Inventory and Species Occurrence in Impingement Collections	6.0-110
6.0-71	Monthly Flow Data Related to Impingement Sampling	6.0-111
6.0-72	Abundance and Percent Composition of Impingement Collections at Roseton Generating Station	6.0-113
6.0-73	Abundance and Percent Composition of Impingement Collections at Danskammer Point Generating Station	6.0-114
6.0-74	Monthly Estimated Number and Percent Composition of the Seven Most Abundant Species Collected in Impingement Samples - Roseton	6.0-116
6.0-75	Monthly Estimated Number and Percent Composition of the Seven Most Abundant Species Collected in Impingement Samples - Danskammer Point	6.0-117
6.0-76	Monthly Estimated Biomass and Percent Composition of the Six Most Abundant Species Collected in Impingement Samples - Danskammer Point	6.0-118
6.0-77	Monthly Estimated Biomass and Percent Composition of the Eight Most Abundant Species Collected in Impingement Samples - Roseton	6.0-119
6.0-78	Length Frequency of Alewife in Impingement Collections at Roseton Generating Station	6.0-123

LIST OF TABLES
(Continued)

TABLE No.	TITLE	PAGE No.
6.0-79	Length Frequency of Alewife in Impingement Collections at Danskammer Point Generating Station	6.0-124
6.0-80	Length Frequency of Atlantic Tomcod in Impingement Collections at Danskammer Point Generating Station	6.0-127
6.0-81	Length Frequency of Atlantic Tomcod in Impingement Collections at Roseton Generating Station	6.0-128
6.0-82	Length Frequency of American Shad in Impingement Collections at Danskammer Point Generating Station	6.0-130
6.0-83	Length Frequency of American Shad in Impingement Collections at Roseton Generating Station	6.0-131
6.0-84	Length Frequency of Bay Anchovy in Impingement Collections at Roseton Generating Station	6.0-134
6.0-85	Length Frequency of Bay Anchovy in Impingement Collections at Danskammer Point Generating Station	6.0-135
6.0-86	Length Frequency of Blueback Herring in Impingement Collections at Roseton Generating Station	6.0-137
6.0-87	Length Frequency of Blueback Herring in Impingement Collections at Danskammer Point Generating Station	6.0-138
6.0-88	Length Frequency of White Perch in Impingement Collections at Danskammer Point Generating Station	6.0-141
6.0-89	Length Frequency of White Perch in Impingement Collections at Roseton Generating Station	6.0-142

LIST OF TABLES
(Continued)

TABLE No.	TITLE	PAGE No.
6.0-90	Length Frequency of Striped Bass in Impingement Collections at Danskammer Point Generating Station	6.0-144
6.0-91	Length Frequency of Striped Bass in Impingement Collections at Roseton Generating Station	6.0-145
6.0-92	Comparison of the Percent Contribution to the Mean Annual Catch-Per-Effort for River Fish vs the Percent Contribution of Impingement Totals for Selected Species	6.0-148
6.0-93	Anual Mean Impingement Rate, Estimated Total Number and Percentage of the Total Estimated Number Impinged for Selected Species Danskammer Point Generating Station	6.0-150
6.0-94	Annual Mean Impingement Rate, Estimated Total Number and Percentage of the Total Estimated Number Impinged for Selected Species Roseton Generating Station	6.0-151
7.0- 1	Station Length and Comparative Volumes	7.0- 7
7.0- 2	Concentration of Total Fish from Otter and Yankee Trawl Collections	7.0- 9
7.0- 3	Shapiro-Wilk Test for Normality	7.0- 10
7.0- 4	Paired t-Test for Catch-Per-Volume	7.0- 12
7.0- 5	Statistical Analysis for Total Fish in Trawl Comparison Study Collections	7.0- 13
7.0- 6	Concentration of Total and Selected Species from Otter and Yankee Trawls Collected on 11-12 October	7.0- 14
7.0- 7	Concentration of Total and Selected Species from Otter and Yankee Trawls Collected on 18-19 October	7.0- 15

LIST OF TABLES
(Continued)

TABLE No.	TITLE	PAGE No.
7.0- 8	Concentration of Total and Selected Species from Otter and Yankee Trawls Collected on 25-26 October	7.0-16
7.0- 9	Statistical Analysis for White Perch in Trawl Comparison Study Collections	7.0-17
7.0-10	Statistical Analysis for Blueback Herring in Trawl Comparison Study Collections	7.0-18
7.0-11	Statistical Analysis for Alewife in Trawl Comparison Study Collections	7.0-19
7.0-12	Statistical Analysis for American Shad in Trawl Comparison Study Collections	7.0-20
7.0-13	Kolmogoiov-Smirnov Test for Length-Frequency Differences	7.0-22
7.0-14	Actual Number of Fish Impinged with the Bubbler-On	7.0-42
7.0-15	Actual Number of Fish Impinged with the Bubbler-Off	7.0-43
7.0-16	Number of Fish Impinged with the Bubbler-On	7.0-45
7.0-17	Number of Fish Impinged with the Bubbler-Off	7.0-46
7.0-18	Student's t-Test for Bubbler-Off Using Estimated Rates for Select Species and Total Fish	7.0-47
7.0-19	Student's t-Test for Bubbler-On vs Bubbler-Off Using Estimated Rates by Photoperiod for Total Fish	7.0-49
7.0-20	Student's t-Test for Bubbler-On vs Bubbler-Off Using Estimated Rates by Photoperiod for Blueback Herring	7.0-50
7.0-21	Student's t-Test for Bubbler-On vs Bubbler-Off Using Estimated Rates by Photoperiod for White Perch	7.0-51

LIST OF TABLES
(Continued)

TABLE No.	TITLE	PAGE No.
7.0-22	Student's t-Test for Bubbler-On vs Bubbler-Off Using Estimated Rates by Photoperiod for Alewife	7.0-52
7.0-23	Student's t-Test for Bubbler-On vs Bubbler-Off Using Estimated Rates by Photoperiod for American Shad	7.0-53

CHAPTER 1.0

REPORT SUMMARY

During 1979, aquatic ecology studies were conducted by Lawler, Matusky & Skelly Engineers (LMS) at the Roseton and Danskammer Point Electric Generating Stations and at Hudson River locations in the vicinity of the two plants. A summary of the 1979 study and the relationship between 1979 and previous years is presented below.

1.1 HUDSON RIVER PHYSICS AND CHEMISTRY

Monthly Lower Hudson River flows were average in comparison with recent high-flow years. Flows during March, however, were the highest over the last nine years. The salt front was sporadically located in the Roseton/Danskammer Point vicinity, with the most consistent period occurring in June. The water temperature pattern is consistent with the pattern from previous years, ranging from 0.6 to 27.2°C.

Climatological information indicates monthly air temperatures similar to the long-term average and precipitation above average during nine of the 12 months.

Weekly water temperature, specific conductance, turbidity, and dissolved oxygen values were consistent with those characteristic of a temperate zone tidal estuary. Chemical data on monthly water quality samples were consistent with previously recorded data.

1.2 BIOLOGICAL STUDIES

1.2.1 Hudson River Ichthyoplankton

Ichthyoplankton identified from 1979 river collections consisted of 17 species and/or genera. White perch eggs and larvae were more abundant at the deeper channel stations. Yolk-sac white perch larvae were more common at the mid-depth, while post-yolk-sac larvae were more concentrated at the bottom during the day and tended to be more evenly distributed throughout the water column at night. Striped bass eggs were most concentrated along the west side of the river with decreased abundance to the east. Striped bass larvae were most abundant at the channel stations and were found in larger concentrations in bottom samples during the day and more evenly dispersed among depths at night. No pattern of egg distribution for Alosa spp. (blueback herring and alewife) could be discerned. Larvae were found in greatest abundances along the east side of the river and least abundant at station RDCH. Alosa spp. larvae appeared to undergo vertical diel migrations. No American shad or bay anchovy eggs were collected. Atlantic tomcod eggs and larvae and bay anchovy larvae were too sparse to adequately assess temporal and spatial distribution.

1.2.2 Hudson River Fishery Program

A total of 57,560 fish were collected by using beach seines and trawls during 10 months of sampling in 1979. Trawls accounted for approximately 65% of the total, with the greatest abundance collected during the late summer and early fall when large numbers of young-of-the-year were recruited to the gear. White perch was the dominant species collected by trawling and combined with three other species - blueback herring, spottail shiner, and Atlantic tomcod - comprised 89% of the total annual catch. The Danskammer Cove trawl

station had the highest annual mean catch-per-effort of all bottom trawl stations, and is representative of a transition zone between the shallow area sampled by seines and the deeper water habitat. Surface trawls exhibited a characteristic low annual mean catch-per-effort. Two peaks were observed, one in August due to increased bay anchovy abundance and the other in October due to blueback herring. Beach seines exhibited a uni-modal pattern, with the highest monthly mean catch-per-effort observed during August. Highest seine abundances were found at the Danskammer Discharge (DD) station. Diel population dynamics were of two types; utilization of the shore zone during one photoperiod and movement to open water during the other (white perch, blueback herring, and American shad), and vertical movement within the water column (blueback herring). Blueback herring, white perch, alewife, Atlantic tomcod, spottail shiner, and American shad were the dominent species in river collections from 1975 to 1979.

1.2.3 Plant Entrainment

White perch, striped bass, and Alosa spp. egg concentrations were higher at Danskammer Point when compared to Roseton with peak abundances at both plants occurring from mid-May to early June. White perch and Alosa spp. larvae were collected in greater numbers at night than during the day. Distributional differences by photoperiod and depth were detected for white perch, striped bass, and Alosa spp. larvae. American shad, Atlantic tomcod, and bay anchovy larvae were collected in low abundances, and concentrations were relatively similar at the two plants. Egg concentrations of major species were highest in Danskammer Point entrainment samples when compared to Roseton and river stations. Larval concentrations were generally highest at river stations. An overall consistency in ichthyoplankton abundance and time of appearance was evidenced for the period 1975-1979 in plant entrainment samples. Variations among years appear to be due to natural fluctuations within the estuary.

1.2.4 Impingement

White perch was the dominant species in impingement samples collected at Roseton and Danskammer Point during 1979, with blueback herring the second most abundant species collected. The estimated annual impingement at Roseton was 205,320 fish and at Danskammer Point, 194,879 fish. Impingement estimates were lowest in June at Roseton and in July at Danskammer Point. They were highest in August at Roseton and in October at Danskammer. Estimated annual total biomass was 3.2 times higher at Danskammer than at Roseton. Length-frequency data indicate that the majority of the fish impinged were yearlings and young-of-the-year. Seasonal catch patterns for the selected species differed between river sampling and impingement collections. The 1979 Roseton and Danskammer Point mean annual impingement rates for total species were similar to those of 1976 and 1978, and were near the middle of the range recorded from 1973 to 1979. During the seven-year study period, white perch was consistently the most abundant fish impinged at both plants.

CHAPTER 2.0

INTRODUCTION

The ecological studies described in this report were conducted during 1979 by Lawler, Matusky & Skelly Engineers (LMS) at Hudson River locations in the vicinity of the Roseton and Danskammer Point Electric Generating Stations for Central Hudson Gas & Electric Corporation (CHGE). The Hudson River program was accompanied by entrainment and impingement programs at the cooling water intakes to both plants. The 1979 studies were a continuation of biological sampling programs initiated in 1971, and were designed to permit evaluation of the environmental impact on the Hudson River's aquatic community and water quality resulting from once-through cooling systems at the two electrical generating facilities.

This report presents the materials and methods employed and the results of the aquatic ecology studies performed during 1979. Long-term trends in the data base are also presented and discussed Supportive data related to the 1979 study presented in the report can be found in the Report Appendix.

CHAPTER 3.0

STATION AND SITE DESCRIPTION

3.1 GEOGRAPHIC LOCATION

The Roseton Electric Generating Station is located on the west bank of the Hudson River approximately 106 km north of the New York Battery and six kilometers north of the Newburgh-Beacon Bridge. The Danskammer Point Electric Generating Station is also located on the west bank of the Hudson River, approximately 915 m north of the Roseton plant on the shoreline, at a point of land protruding into the river. Plant locations are illustrated in Figure 3.0-1.

3.2 DESCRIPTION OF STUDY AREA

The northern Newburgh Bay area of the Hudson River is bounded on the south by the Newburgh-Beacon Bridge (km 100.4) and on the north by New Hamburg (km 109.5) (Figure 3.0-2). Newburgh Bay to the south of the Newburgh-Beacon Bridge is a wide, shallow bay with extensive shallow zones, especially along the eastern shore. The City of Newburgh dominates the western shore of Newburgh Bay. North of the study area, the Hudson River flows through a comparatively deep, narrow channel extending to Esopus Meadows (km 140).

Northern Newburgh Bay is characterized by a narrow deep channel between New Hamburg and Danskammer Point widening to its maximum, approximately 2.5 km south of Roseton and narrowing slightly in the area of the Newburgh-Beacon Bridge. The southern part of the study area has extensive shallows along the eastern shore. Wappinger Creek is the only major tributary in the study area, entering on the eastern side of the Hudson River just south of New Hamburg; the area near the confluence is a wide shallow shelf.

FIGURE 3.0-1

LOCATION OF THE ROSETON AND DANSKAMMER POINT ELECTRIC
GENERATING STATIONS AND OTHER GENERATING STATIONS ON THE LOWER HUDSON RIVER

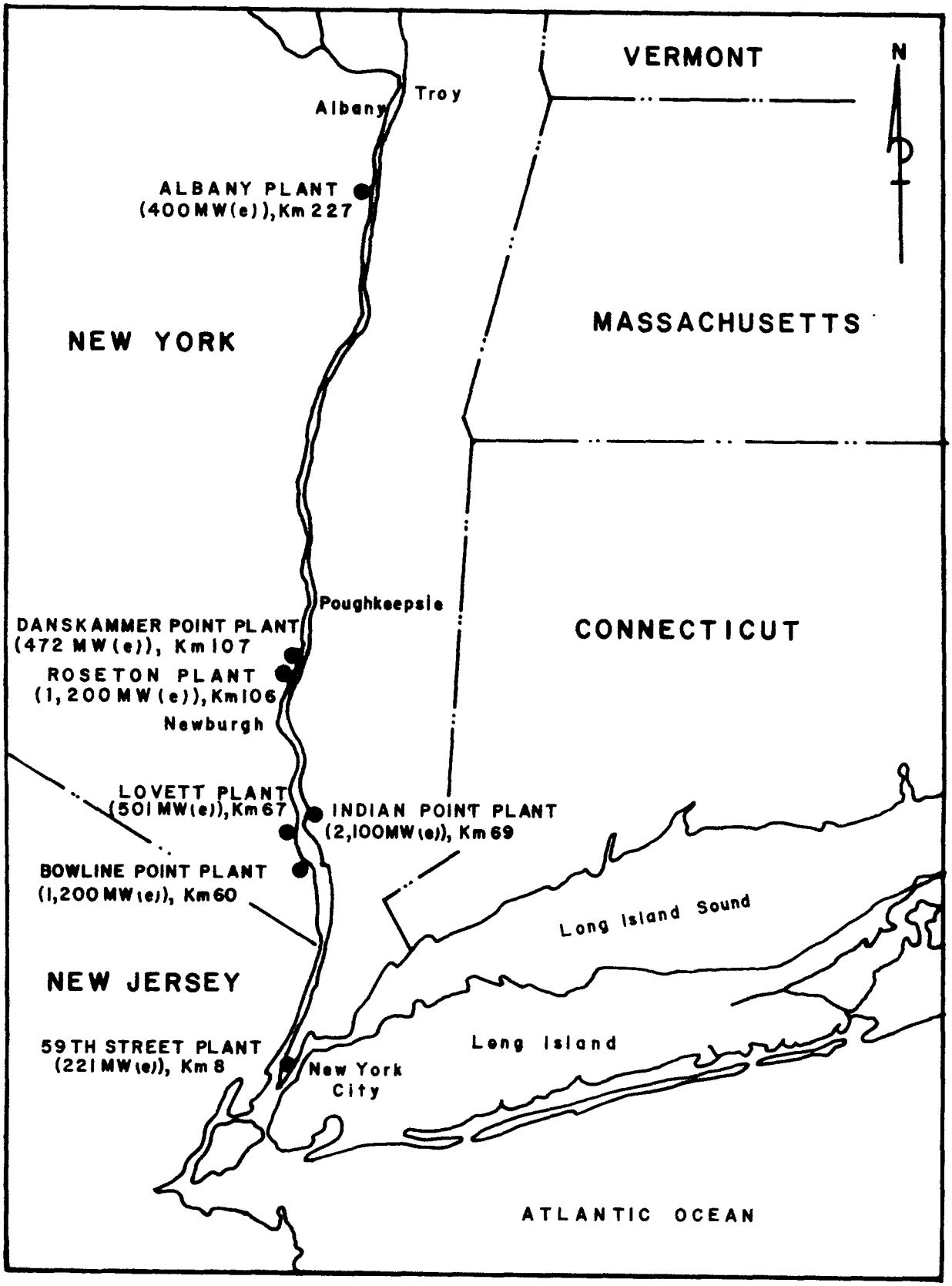
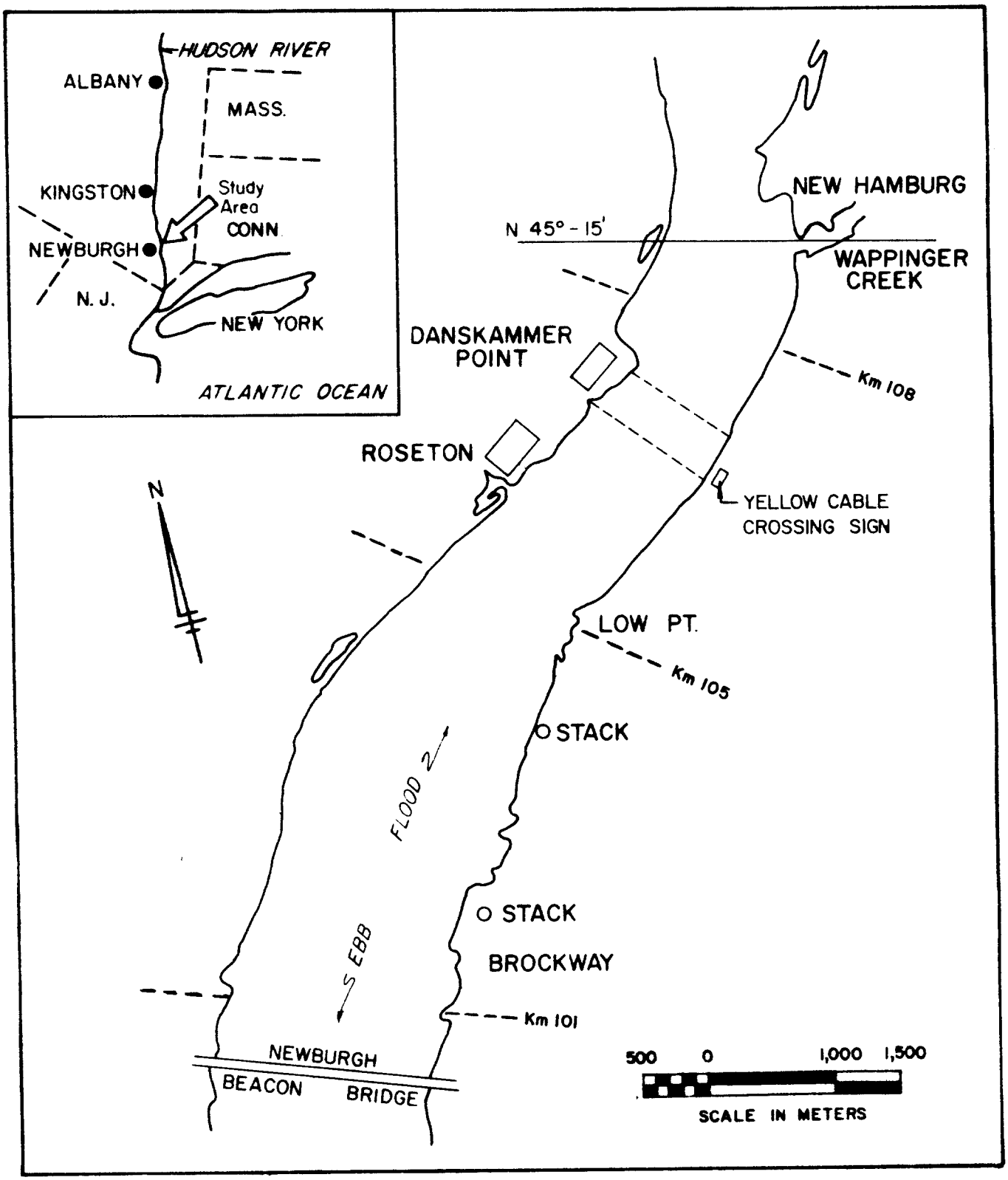


FIGURE 3.0-2

LOCATION OF ROSETON AND DANSKAMMER POINT GENERATING STATIONS

Northern Newburgh Bay of the Hudson River



Hydrodynamic and physiographic characteristics of northern Newburgh Bay are presented in Table 3.0-1.

3.3 DESCRIPTIONS OF THE GENERATING STATIONS

3.3.1 Roseton Electric Generating Station

The Roseton plant is a fossil-fueled steam electric generating station whose two independent units have a total maximum net generating capacity of 1200 MW. Steam is condensed by means of a once-through cooling system which uses Hudson River water circulated with a maximum of four pumps having a combined rated capacity of 40.44 m^3/sec. Heated effluent is discharged to the river through a single submerged discharge pipe with a multiport diffuser.

Units 1 and 2 of the Roseton Station were placed in commercial service on 31 December and 14 September 1974, respectively. Plant operation is described in detail in Chapter 2 of CHGE (1977). Table 3.0-2 presents plant specific information related to plant flow and pump operation.

3.3.2 Danskammer Point Electric Generating Station

The Danskammer Point plant is a fossil-fueled steam electric generating station. The total dependable maximum net generating capability of its four steam turbine generators is about 472 MW. The plant is equipped with a once-through cooling system that withdraws cooling water from the river north of the plant via a canal and discharges it into a cove area south of Danskammer Point via three separate subsurface discharge structures. Circulating water pump capacities at Danskammer Point are presented in Table 3.0-2.

TABLE 3.0-1

HYDRODYNAMIC AND PHYSIOGRAPHIC CHARACTERISTICS OF NORTHERN NEWBURGH BAY

Roseton and Danskammer Point Vicinity - 1979

PARAMETER	UNITS	VALUE
Average Ebb Current Velocity	cm/sec	40.23[a]
Average Flood Current Velocity	cm/sec	36.27[a]
Mean High Water	m above mean sea level	0.91[b]
Mean Low Water	m above mean sea level	0.06[b]
Mean Tidal Level	m above mean sea level	0.46[b]
Mean Tidal Range	m	0.88[b]
Spring Tidal Range	m	1.01[b]
Maximum Depth	m	25.0[c]
Mean Depth	m	14.8[c]
Maximum Width	m	1555[c]
Mean Width	m	1335[c]
River Width at Danskammer Point Discharge	m	1045[c]
River Width at Roseton Discharge	m	1198[c]

[a]United States Department of Commerce, National Oceanic and Atmospheric Administration. 1978. Tidal current tables, 1979. Atlantic Coast of North America.

[b]United States Department of Commerce, National Oceanic and Atmospheric Administration. 1978. Tide tables, 1979. East Coast of North and South America.

[c]Lawler, Matusky & Skelly Engineers. 1975. Hudson River Study: aquatic factors governing the siting of power plants. Prepared for Empire State Electric Energy Research Corporation.

TABLE 3.0-2

PLANT DESCRIPTION
CIRCULATING WATER PUMP FLOW CHARACTERISTICS

1979

I. ROSETON

No. OF PUMPS	No. OF UNITS	COOLING WATER FLOW (m^3/min)
1	1	825.1
2	1	1423.2
2	2	1582.1
3	2	2123.4
4	2	2426.2

II. DANSKAMMER POINT

UNIT	DESIGNATION	COOLING WATER FLOW (m^3/min)
1	1A	79.5
	1B	79.5
2	2A	79.5
	2B	79.5
3	3A	155.2
	3B	155.2
4	4A	189.2
	4B	189.2
	4C	189.2
TOTAL		1196.0

Source:

Central Hudson Gas & Electric Corp. 1978. Roseton and Danskammer Point Generating Stations, 316(a) demonstration. March 1978. Prepared by Ecological Analysts, Inc.

CHAPTER 4.0

MATERIALS AND METHODS

4.1 HUDSON RIVER ICHTHYOPLANKTON PROGRAM

4.1.1 Sampling Locations and Frequency

Ichthyoplankton samples were collected at four locations (listed below) across the Hudson River (km 107) in the vicinity of the Danskammer Point and Roseton plants (Figure 4.0-1):

STATION	SAMPLE DEPTH	
	ft	m
RDE	0,25	0,7.6
RDR	0,25,50	0,7.6,15.2
RDCH	0,25,50	0,7.6,15.2
RDW	0,25	0,7.6

River sampling was conducted at midday and midnight hours in conjunction with plant entrainment sampling. Sampling efforts were more frequent during May and June, the peak spawning months in the Roseton/Danskammer Point vicinity. Table 4.0-1 presents the sampling dates for 1979 river ichthyoplankton collections.

4.1.2 Collection Procedures

Surface and mid-depth samples were collected with a 1 m, 571 μm mesh Henson style plankton net; for bottom samples, the same net was rigged on an epibenthic sled. All tows were of five-minute duration against the tidal current at 90 cm/sec (3 fps), as measured at the surface by a General Oceanics flowmeter equipped with an on-deck readout. The volume of each tow was quantified with a calibrated TSK flowmeter mounted in the center of the net mouth.

FIGURE 4.0-1

APPROXIMATE SAMPLING LOCATIONS

Roseton and Danskammer Point Vicinity - 1979

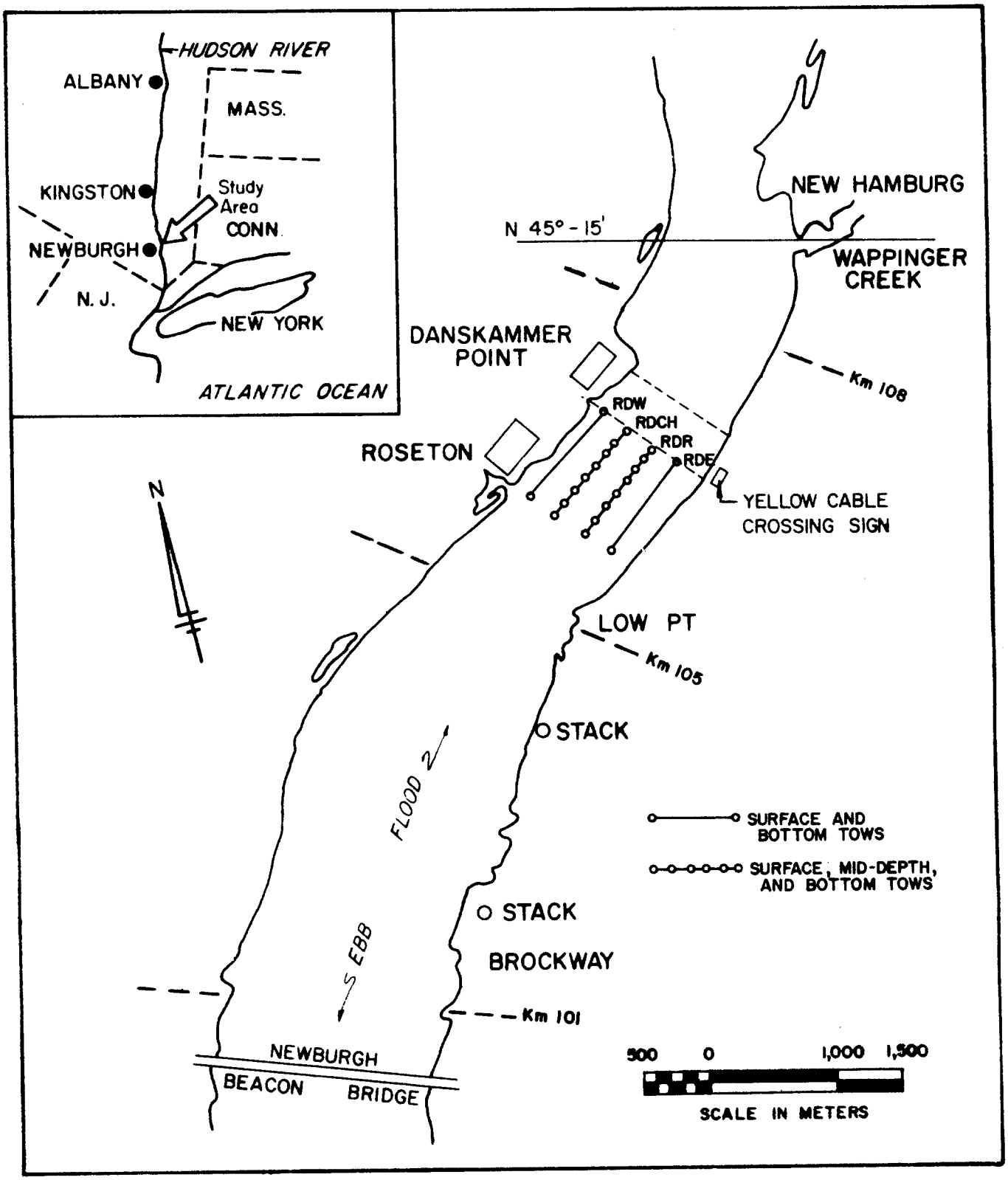


TABLE 4.0-1

HUDSON RIVER ICHTHYOPLANKTON SAMPLING DATES
AND NUMBER OF SAMPLES COLLECTED

Roseton and Danskammer Point Vicinity - 1979

SAMPLE DATE	NUMBER OF SAMPLES COLLECTED	SAMPLE DATE	NUMBER OF SAMPLES COLLECTED
20-21 Mar	20	12-13 Jun	20
27-28 Mar	20	15-16 Jun	20
11-12 Apr	20	19-20 Jun	20
17-18 Apr	20	22-23 Jun	20
24-25 Apr	20	26-27 Jun	20
1- 2 May	20	3- 4 Jul	20
8- 9 May	20	10-11 Jul	20
15-16 May	20	17-18 Jul	20
22-23 May	20	24-25 Jul	20
25-26 May	20	31 Jul-1 Aug	20
29-30 May	20	7- 9 Aug	20
1- 2 Jun	20	14-15 Aug	20
5- 6 Jun	20	28-29 Aug	20
8- 9 Jun	20	11-12 Sep	20

4.1.3 Laboratory Analysis

Fish larvae of striped bass, white perch, Atlantic tomcod, American shad, and Alosa spp. (alewife and blueback herring) were measured for total length (to a maximum at 60 per sample per species), categorized as to life stage, and identified to species. All other larvae and eggs were counted and identified to the lowest possible taxonomic level, but not measured for length or categorized as to life stage.

From number of organisms in each sample the concentration of larvae (eggs) per 1000 m^3 of water was estimated by the following formula:

$$\text{Larvae/1000 } m^3 = \left(\frac{\text{number of larvae}}{\alpha \times A \times \text{revs}} \right) \times 1000$$

where: A = the area of the net mouth (m^2)

revs = the number of TSK meter revolutions recorded per tow

α = the flowmeter calibration coefficient (m/TSK meter revolution)

4.2 HUDSON RIVER FISH PROGRAM

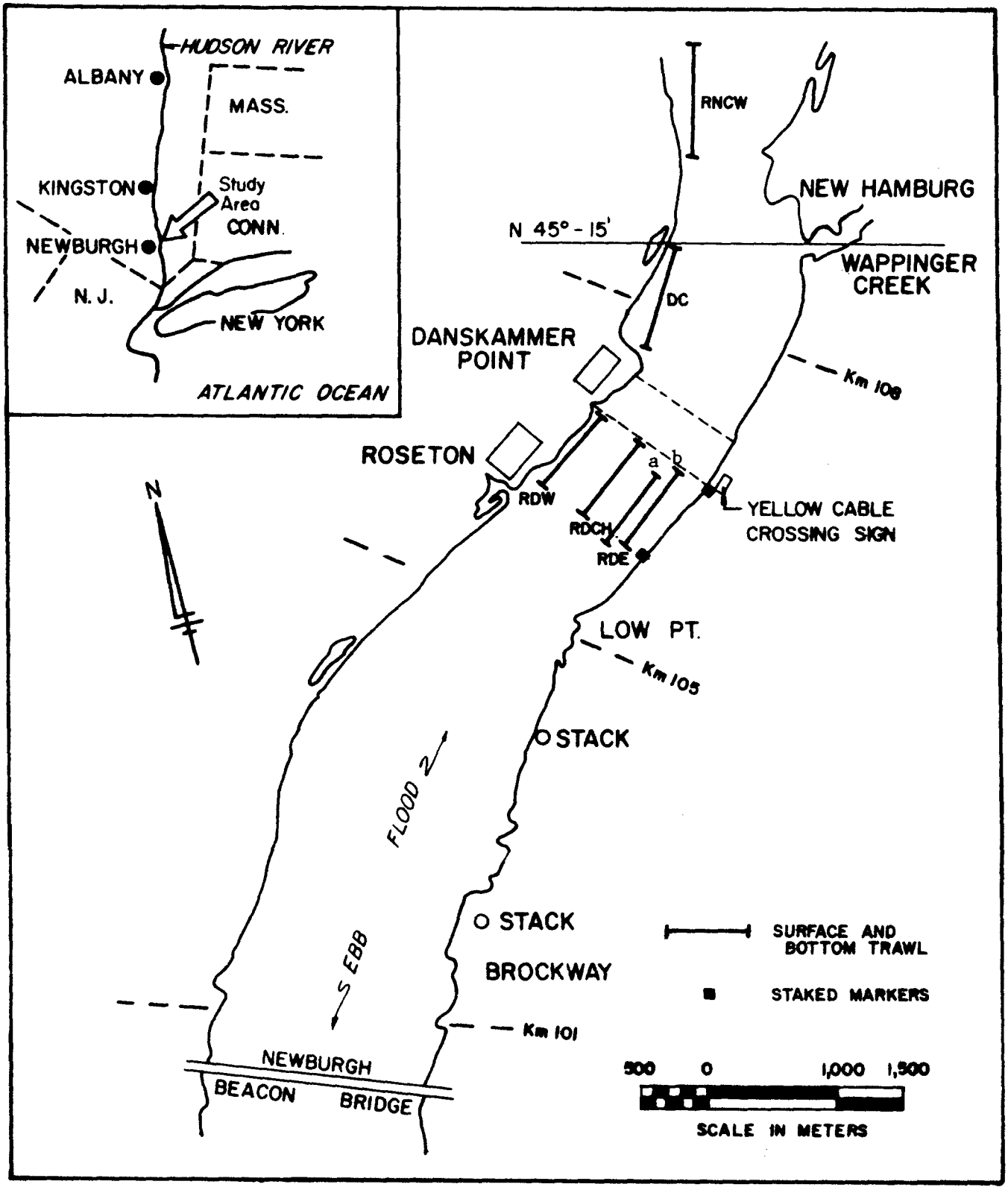
4.2.1 Sampling Locations and Frequency

4.2.1.1 Trawls. Surface and bottom trawls were conducted each week during midday and midnight hours, in conjunction with regularly scheduled plant impingement sampling, at Stations RDW, RDCH, RDE (Figure 4.0-2). Trawling at the north control station (RNCW) and Danskammer Cove (DC, bottom only) was conducted every other week, day and night, on the same day as the regularly scheduled weekly trawls. Table 4.0-2 summarizes the sampling schedule for trawls. Description of trawl sites are given in the following table.

FIGURE 4.0-2

TRAWL SAMPLING LOCATIONS

Roseton and Danskammer Point Vicinity - 1979



[a]Bottom tow at RDE.
[b]Surface tow at RDE.

TABLE 4.0-2

SAMPLE FREQUENCY AND NUMBER OF SAMPLES FOR RIVER FISH COLLECTIONS

Roseton and Danskammer Point Vicinity - 1979

SAMPLING METHODS	FREQUENCY	NUMBER OF STATIONS	DEPTHS	PROPOSED NUMBER OF SAMPLES PER SURVEY	TOTAL NUMBER OF SAMPLES COLLECTED DURING 1979
Trawls					
Monthly[a]	a) Every other week	2(RNCW, DC) (day & night)	Surface & Bottom (DC - Bottom only)	6	126
Weekly	b) Once per week	3 (RDW, RDCH, RDE) (day & night)	Surface & Bottom	12	493
Seines					
Weekly[b]	once/week	4 day/4 night	Does not apply	8	306

[a]Trawls performed in conjunction with impingement abundance.
[b]Seines performed within two (2) days of impingement abundance.

STATION	DESCRIPTION	DEPTH CONTOUR[a](m)	STATION LENGTH(m)
RNCW	Approx. 2.4 km north of the Danskammer Point plant at river kilometer 110.0	9.1	795.5
DC	In the Danskammer Cove region following the 4.6 m depth contour at river kilometer 108.3	4.6	914.4
RDW	West side of the river between the two power plants at river kilometer 107.5	10.6	823.9
RDCH	Same as RDW in middle of river	15.2 - 16.7	823.9
RDE-Surface	Same as RDW on east side of river	10.6	928.1
Bottom[b]	Start points are approx. 229 m south of the RDE surface start point	13.7	928.1

[a]Station depth at mean low water.
[b]RDE bottom conducted along 13.7 m contour due to obstacles along the 10.6 m contour.

4.2.1.2 Seines. Seining was conducted once per week at four stations (DCN, DCS, DD, RD) (Figure 4.0-3) in the vicinity of Roseton and Danskammer Point. On each sampling date (Table 4.0-2), a single day and night sample was obtained at each station. Seining was conducted within two days of regularly scheduled impingement sampling.

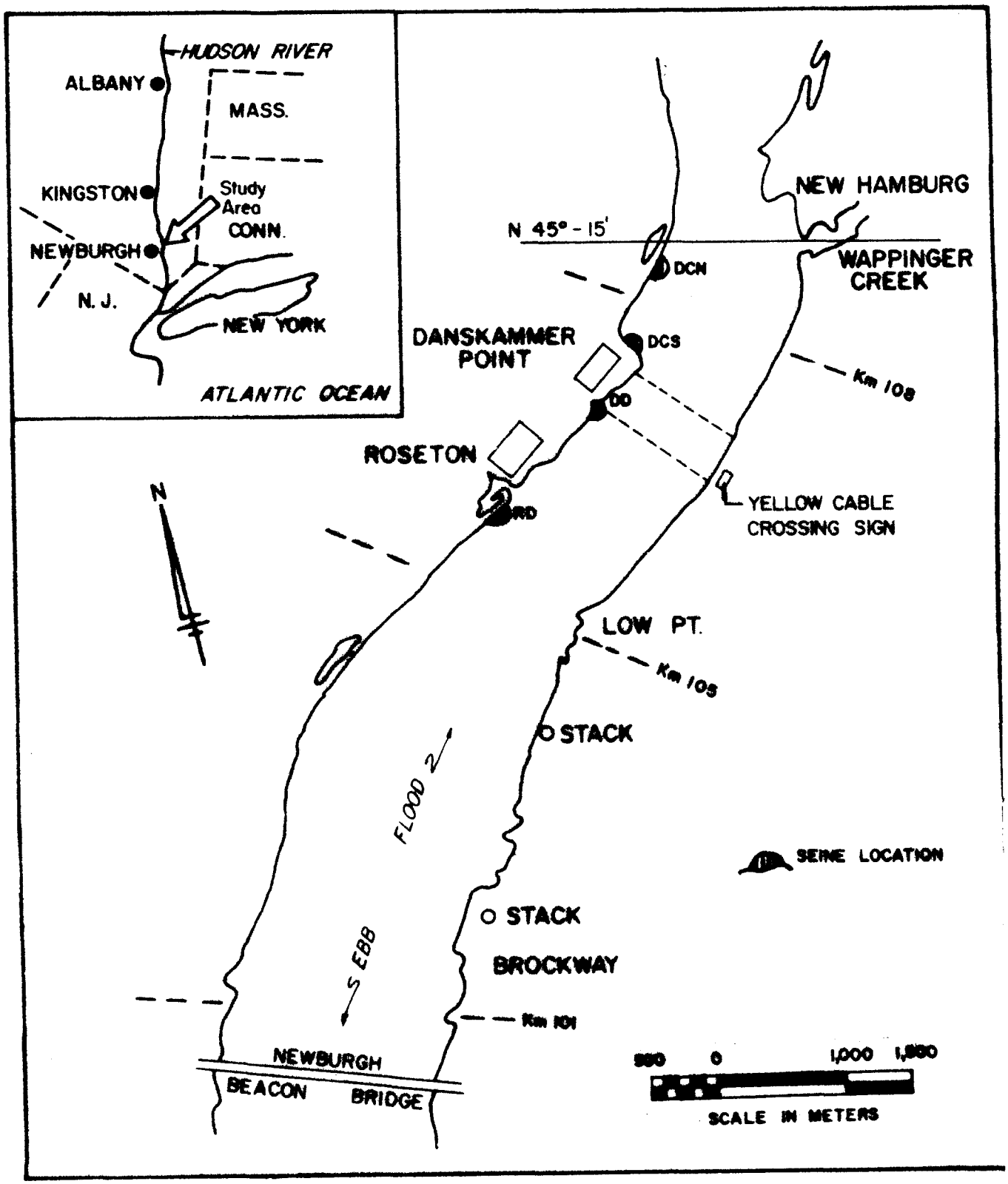
4.2.2 Collection Procedures

4.2.2.1 Trawls. The trawl was an otter type net with a 9.1 m headrope and 1.5 m vertical height. The mesh of the otter trawl was 5.1 cm stretch in the wings and body, 3.8 cm stretch in the bag, and the net was equipped with a 1.3 cm stretch mesh cod end liner. This net was rigged with floats on the otter doors for surface trawling.

FIGURE 4.0-3

SEINE SAMPLING LOCATIONS

Roseton and Danskammer Point Vicinity - 1979



All trawl collections were made against the prevailing tidal current. When slack water conditions existed trawling was delayed until a perceptible current was present. Trawling was conducted at boat speeds between 1.2 and 1.5 m/sec as measured at the surface with a General Oceanics flowmeter over a set distance indicated by shoreline markers.

4.2.2.2 Seines. The seine was 30.5 m long by 1.5 m high and was made of 1.3 cm stretch mesh. There was a collection bag 2.4 m wide and 2.4 m deep in the center of the net. The seine was set by planting the pole at one end of the net on the shore; the boat containing the seine was then backed away from the shore in a straight line perpendicular to the shore.

When the seine was fully extended, the boat moved in an arc parallel to shore and gradually moved toward it at a point somewhat less than 30.5 m from the first pole set. The arcing of the boat to set the seine was always done into the prevailing tidal current (into the discharge current at Station DD). The seine was then dragged ashore slowly with special care taken to keep the lead line on the bottom.

4.2.3 Field Sample Processing

For samples of fewer than 100 fish, the specimens were counted by species and preserved in 10% buffered formalin. For samples over 100, the number per species was estimated before preservation. Large specimens were slit on the right side to enhance preservation of internal organs. Sturgeon were measured and weighed at the time of collection and released. All pertinent field information was recorded on prepared data forms. With each fishery sample water temperature and conductivity were measured at the sampled depth. At Stations RDW and RDCH surface temperature was measured at the beginning and end of each surface trawl. Dissolved oxygen was measured at each seine site on the first and third week of each sampling month prior to setting the net.

4.2.4 Laboratory Analysis

Each sample was sorted and counted by species, and a total weight for each species was obtained. White perch, striped bass, and Atlantic tomcod were examined for marks or tags. For samples containing fewer than 100 individuals per species, all specimens were measured to the nearest millimeter total length and weighed to the nearest 0.1 g. When a collection contained more than 100 individuals of a species, the obviously large or small individuals were removed and each was measured and weighed. The remaining fish in the sample were then subsampled (according to a random numbers table) to obtain specimens for length measurement and weight determination. White perch selected for age determination were sexed, and scales were taken from the left side of each specimen midway between the lateral line and the point where the spiny and soft dorsal fins meet. Scales were catalogued for possible future analyses.

4.3 PLANT ENTRAINMENT

4.3.1 Sample Locations and Frequency

Ichthyoplankton entrainment samples were collected from 9 January through 12 September 1979 at the intakes of the Roseton and Danskammer Point plants.

Sampling at Roseton was conducted at Roseton Intake North (RIN), located in front of traveling screen 1B and Roseton Intake (RI), located in front of traveling screen 2C (Figure 4.0-4). Samples were collected from the surface, mid-depth, and bottom water strata.

Sampling at Danskammer was conducted in the intake canal at the sampling intake house located 45.7 m north of Units 3-4 intake screens (Figure 4.0-5). Samples were collected from the surface and bottom depths.

FIGURE 4.0-4

ROSETON INTAKE SAMPLING LOCATIONS

Roseton Generating Station

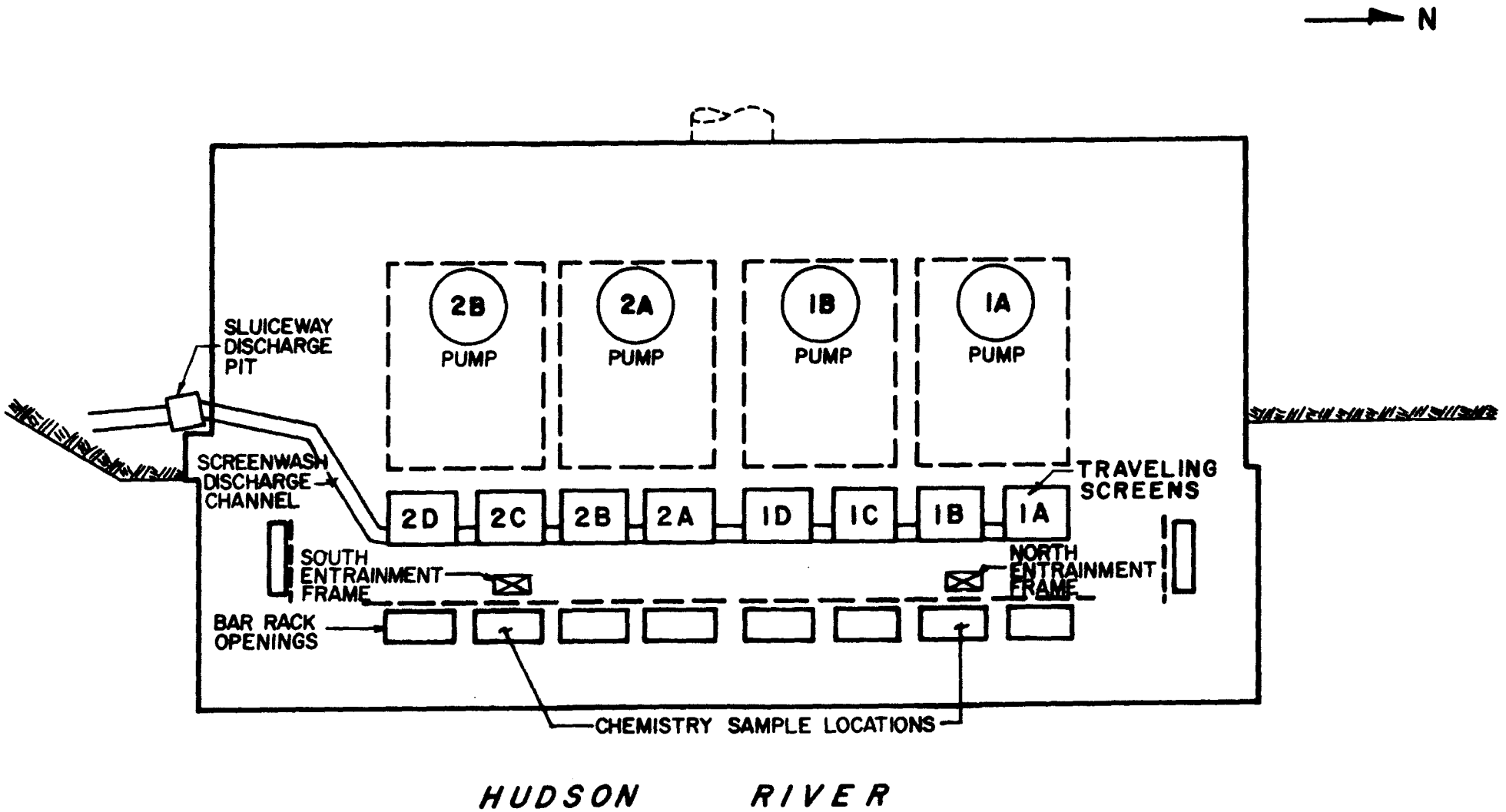


FIGURE 4.0-5

DANSKAMMER INTAKE SAMPLING LOCATIONS

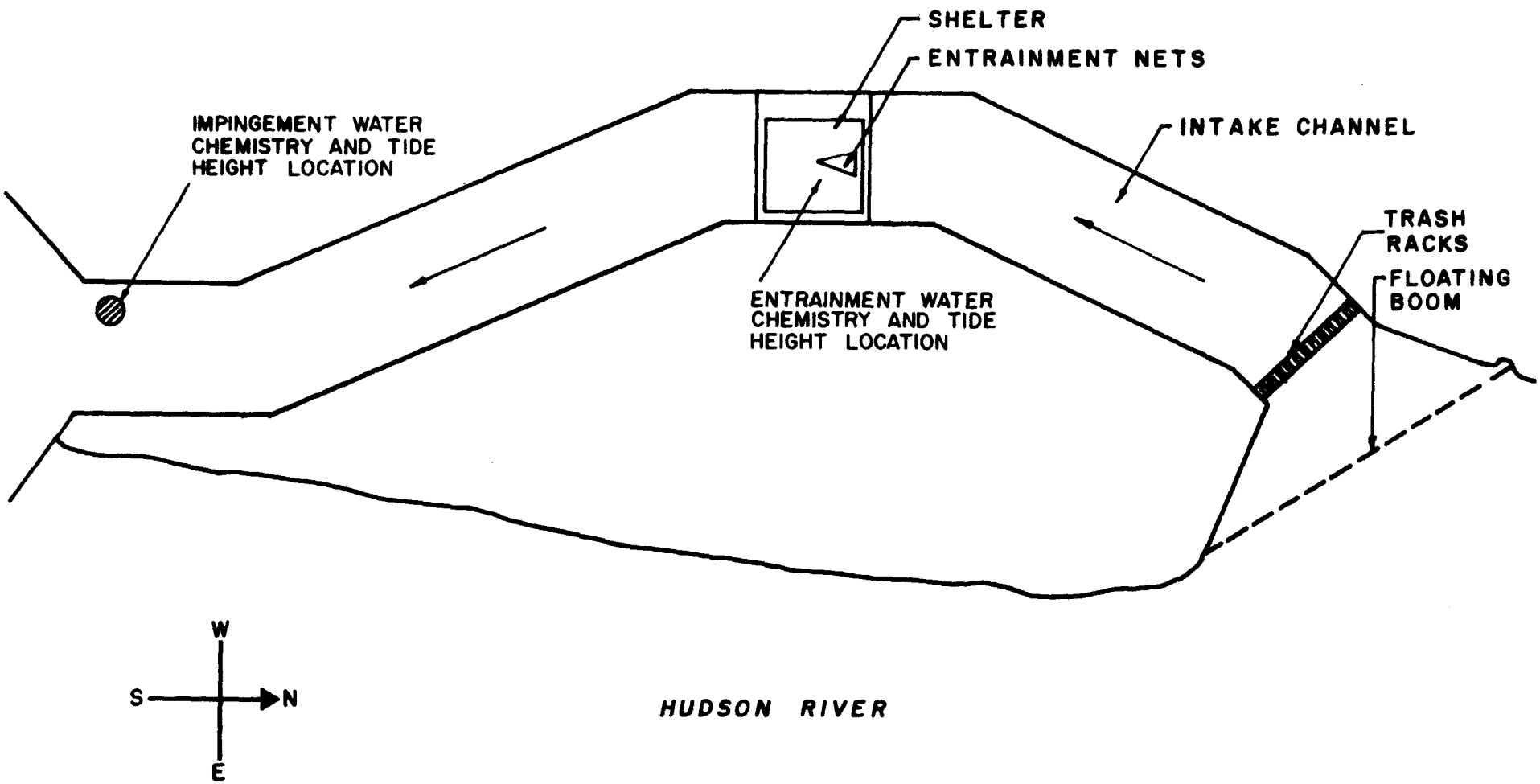


Table 4.0-3 presents the ichthyoplankton entrainment sampling dates at the Roseton and Danskammer Point plants.

4.3.2 Collection Procedures

A replicate sampling program was conducted at the two plant intakes. At Danskammer Point two sets (surface, bottom) of samples were collected sequentially at mid-day and at mid-night, resulting in the collection of eight samples per date. When circulating pump operation permitted the north and south entrainment frames at Roseton were sampled simultaneously. Nets were rigged to collect from the surface, mid-depth and bottom water strata at each frame. If circulating pump operation was such that both frames could not be sampled simultaneously then the sequential scheme outlined for Danskammer Point was followed at the frame in front of the operating circulating water pump. A total of twelve samples were scheduled to be collected at Roseton on each sampling date. Temperature, conductivity, and tide height were recorded with each sample.

Gear used for entrainment sampling were 0.5 m, 571 μ m mesh plankton nets, with TSK flowmeters mounted both inside and outside the net mouth. The nets, attached to movable frames, were left in place in the intake at Danskammer Point for 10.0 min and for 15.0 min at Roseton. If net clogging was observed, the sample time was adjusted to facilitate collection of a good sample. Samples were concentrated and preserved with a 5% buffered formalin solution.

4.3.3 Laboratory Analysis

Analyses of fish eggs and larvae were done as for the river samples (see Section 4.1.3). During periods when sampling was scheduled for alternate weeks only one of the replicate samples was analyzed.

TABLE 4.0-3

ICHTHYOPLANKTON ENTRAINMENT SAMPLING DATES
AND NUMBER OF SAMPLES COLLECTED

Roseton and Danskammer Point Generating Stations - 1979

SAMPLE DATE	NUMBER OF SAMPLES COLLECTED ROSETON	DANSKAMMER POINT	SAMPLE DATE	NUMBER OF SAMPLES COLLECTED ROSETON	DANSKAMMER POINT
9-10 Jan[a]	12	8	29-30 May	12	8
23-24 Jan[a]	12	8	1- 2 Jun	12	8
6- 7 Feb[a]	12	8	5- 6 Jun	12	8
13-14 Feb	12	8	8- 9 Jun	12	8
20-21 Feb	12	8	12-13 Jun	12	8
27-28 Feb	12	8	15-16 Jun	12	8
6- 7 Mar	12	8	19-20 Jun	12	8
13-14 Mar	12	8	22-23 Jun	12	8
20-21 Mar	12	8	26-27 Jun	12	8
27-28 Mar	12	8	3- 4 Jul	12	8
10-12 Apr[a]	12	8	10-11 Jul	12	8
17-18 Apr	12	8	17-18 Jul	11	8
24-25 Apr	12	8	24-25 Jul	12	8
1- 2 May	12	8	31 Jul-1 Aug	12	8
8- 9 May	12	8	7- 9 Aug	8	8
15-16 May	12	8	14-15 Aug[a]	9	8
22-23 May	11	8	28-29 Aug[a]	10	8
25-26 May	12	8	11-12 Sep[a]	10	8

[a]Replicate sample not scheduled for analysis.

4.4 PLANT IMPINGEMENT

4.4.1 Sampling Locations and Frequency

Impinged fish were collected over a 24-hr period weekly from the traveling screenwash discharges at Danskammer Point and Roseton. Sampling was conducted simultaneously at both plants.

Sampling dates are listed in Table 4.0-4. If 1,000 fish or more were collected in one regularly scheduled 24-hr period, an additional collection was made within four days of this collection at the plant having the high count.

Temperature and conductivity were measured at the plant intakes at approximately 0630, 1230, 1830, and 0030 hours during each 24-hr impingement sampling interval. Temperature and conductivity were measured with calibrated instruments at the surface and bottom. Tidal height was measured and recorded when temperature and conductivity were measured.

4.4.2 Collection Procedures

4.4.2.1 Danskammer Point. Fish were collected from the Units 1 and 2 and Units 3 and 4 sluiceway discharges (Figure 4.0-6) with a steel basket 0.9 x 0.9 x 0.9 m equipped with 0.95 cm wire mesh. Attached to the bottom of each basket was a 1.91 cm mesh net 0.9 x 0.9 x 3.0 m, which was lined with a 0.64 cm square mesh net. These baskets were suspended below the respective sluiceway discharges to intercept the entire screenwash discharge.

A prewash was conducted before each 24 hr sampling period to remove any fish accumulated on the intake screens. All marked and tagged fish found in the prewash sample were preserved for identification and returned to the organization conducting the fish tagging work.

TABLE 4.0-4

IMPINGEMENT SAMPLING DATES AND NUMBER OF SAMPLES COLLECTED

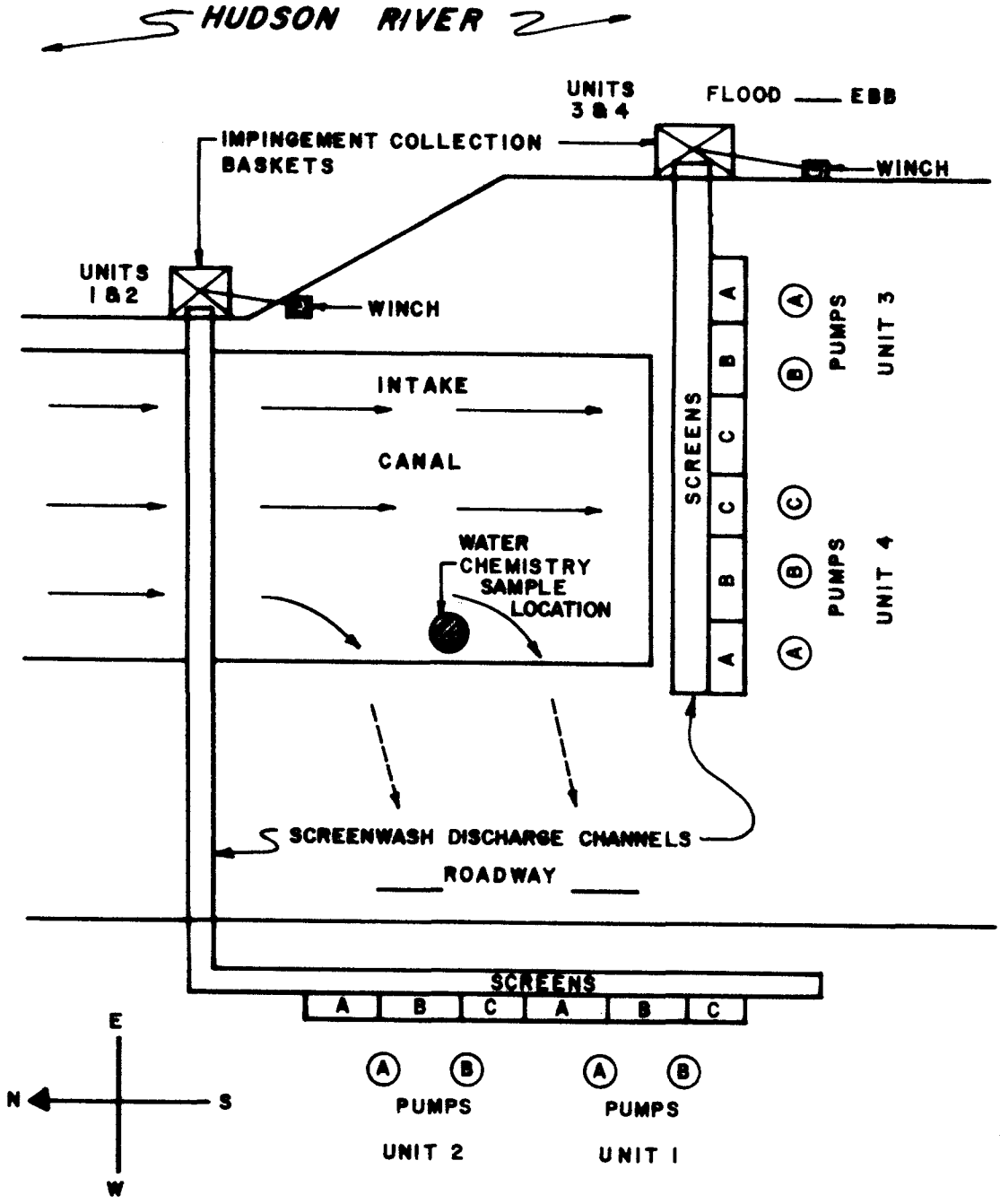
Roseton and Danskammer Point Generating Stations - 1979

SAMPLE DATE	NUMBER OF SAMPLES COLLECTED ROSETON	DANSKAMMER	SAMPLE DATE	NUMBER OF SAMPLES COLLECTED ROSETON	DANSKAMMER
4- 5 Jan[a]	4	8	9-10 Aug[b]	4	8
8- 9 Jan[a]	-	8	13-14 Aug	4	-
11-12 Jan[a]	4	7	16-17 Aug	4	8
15-16 Jan[a]	-	6	20-21 Aug	4	-
18-19 Jan[a]	4	4	23-24 Aug	4	8
22-23 Jan[a]	-	4	30-31 Aug	4	8
25-26 Jan	4	8	6- 7 Sep[b]	4	8
1- 2 Feb	4	8	10-11 Sep	4	-
8- 9 Feb	4	8	13-14 Sep	4	8
15-16 Feb	4	8	20-21 Sep[b]	4	8
22-23 Feb	4	8	24-25 Sep	4	-
1- 2 Mar	4	7	27-28 Sep	4	8
8- 9 Mar	4	4	4- 5 Oct	5	10
15-16 Mar[a]	4	6	11-12 Oct	5	10
19-20 Mar[a]	-	8	15-16 Oct[a]	-	8
22-23 Mar	4	8	18-19 Oct[a,b,c]	4	8
29-30 Mar	4	8	22-23 Oct[c]	12	8
5- 6 Apr	4	8	23-24 Oct[c]	8	-
12-13 Apr	4	8	25-26 Oct[c]	12	8
19-20 Apr	4	4	26-27 Oct[c]	12	-
26-27 Apr	4	8	29-30 Oct[a,c]	12	8
30 Apr-1 May[a,b]	4	8	30-31 Oct[c]	12	-
3- 4 May	4	8	1- 2 Nov[c]	12	8
10-11 May	4	8	2- 3 Nov[c]	12	-
17-18 May	4	8	5- 6 Nov[a,b,c]	12	8
24-25 May	4	8	6- 7 Nov[c]	12	-
31-May-1 Jun	4	8	8- 9 Nov[c]	12	8
7- 8 Jun	4	8	9-10 Nov[c]	12	-
14-15 Jun	4	8	12-13 Nov[b]	4	8
21-22 Jun	4	8	15-16 Nov	4	8
28-29 Jun	4	8	21-22 Nov	4	8
5- 6 Jul	4	8	29-30 Nov	4	8
12-13 Jul	4	8	6- 7 Dec	4	7
19-20 Jul	4	8	13-14 Dec	4	8
26-27 Jul	4	8	20-21 Dec	4	4
2- 3 Aug	4	8	27-28 Dec	4	8

[a]Additional impingement at Danskammer Point.
[b]Additional impingement at Roseton.
[c]Air curtain impingement collections at Roseton.

FIGURE 4.0-6

DANSKAMMER POINT SAMPLING LOCATIONS



The fish collected during the prewash were not included in the analysis of impingement data.

Normally, the intake screens were washed for 30 min at the end of each 6 hr interval. When the debris load was heavy, the screens may have been operated continuously or cleaned more frequently than normal washes. When this occurred, the timing of collections was such that samples were still separated into discrete 6 hr intervals. The collected fish were sorted and counted by species and preserved in 10% buffered formalin. Any collected sturgeon were returned to the river immediately after being weighed and measured. At 3 hr intervals during the 24 hr sampling period, the plant control room was contacted to confirm the number of circulating pumps in operation. The intake screens were visually inspected during each collection interval to establish that they were in operation. The screenwash pressure was recorded for each screen during each wash period.

4.4.2.2 Roseton. Two collection devices were used at Roseton (Figure 4.0-4), depending on the quantity of debris. A collection basket 0.9 x 0.9 x 0.9 m equipped with 0.95 cm wire mesh was used when the debris load was light, and a conveyor belt system equipped with a 0.64 cm woven mesh belt was used when debris was heavy. The collection device was placed in the sluiceway discharge pit to intercept the entire screenwash discharge.

The procedures described for sampling at Danskammer Point were also used at Roseton: prewash; handling of tagged fish; procedures during heavy debris loads; field processing of samples; and plant data recording.

4.4.3 Laboratory Analysis

The laboratory procedures for analyzing samples were the same as that described for river fish (Section 4.2.4) with the following

exception. White perch collected in impingement sampling were sexed and used in age and growth studies if insufficient numbers were obtained from river collections. Scales were catalogued for possible future analyses.

4.5 WATER QUALITY

4.5.1 Field Program Description

A program monitoring the water quality of the Hudson River in the Roseton/Danskammer Point vicinity during 1979 was conducted in three phases. Sampling dates are listed in Table 4.0-5.

4.5.1.1 Weekly Program. On a weekly schedule, five water quality parameters were measured at three locations (Figure 4.0-7) in the northern Newburgh Bay area of the Hudson River. Sampling was conducted within one day of impingement sampling. The stations sampled are:

- North Control (CH-1) - located at river kilometer 110.0, approximately 2.4 km north of the Danskammer Point plant in mid-channel, at a depth of about 15 m.
- Roseton/Danskammer Reference (CH-4) - located at river kilometer 106.5, at a depth of 18.3 m in mid-channel, aligned with the Roseton oil loading dock catwalk.
- South Control (CH-6) - located at river kilometer 101 in mid-channel, at a depth of approximately 12.2 m.

At each location, a depth profile of the water quality parameters was conducted. Water quality parameters and depth profile sequence are given below:

FIGURE 4.0-7

WATER QUALITY SAMPLING LOCATIONS

Roseton and Danskammer Point Vicinity - 1979

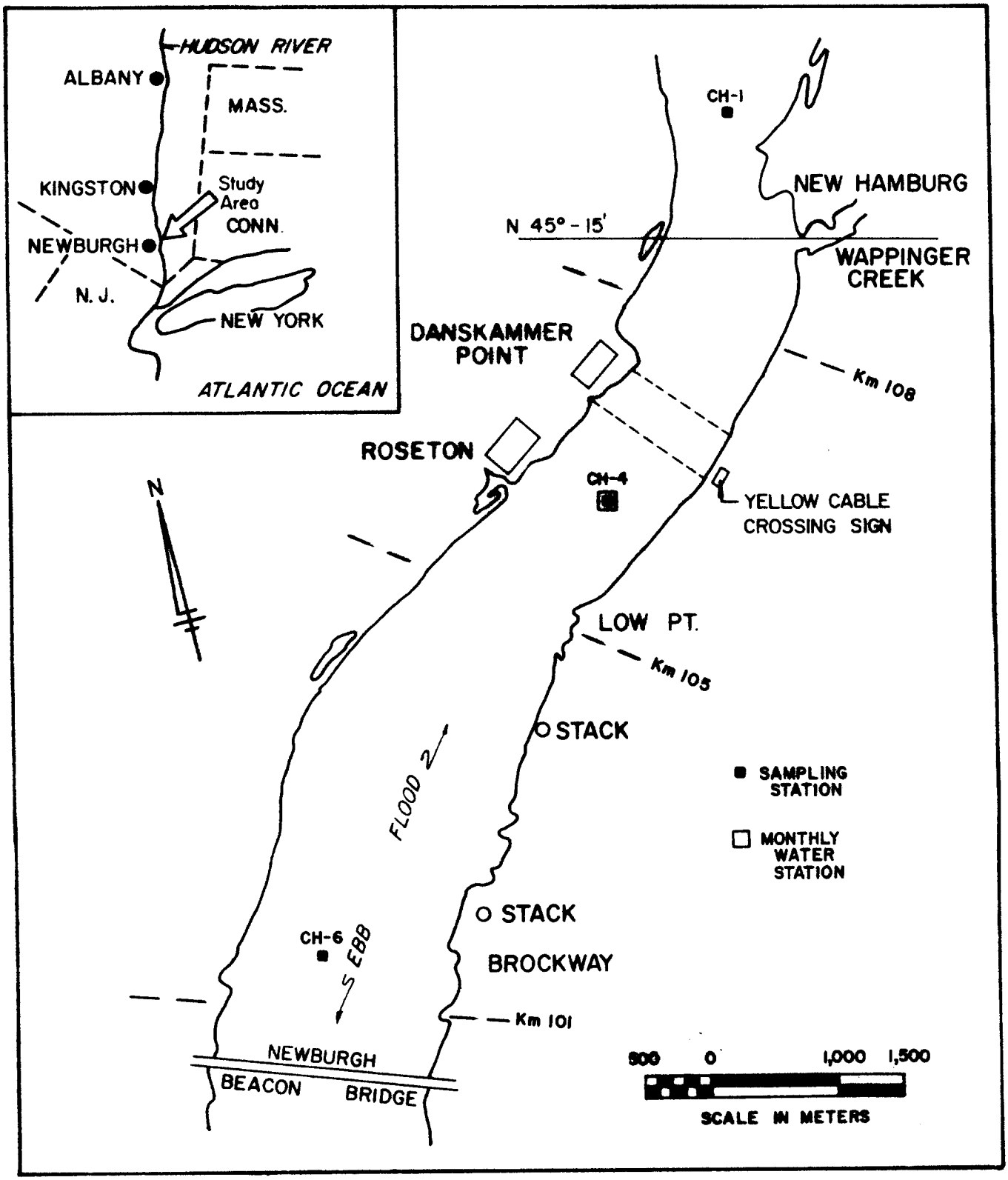


TABLE 4.0-5

WEEKLY WATER QUALITY SAMPLING DATES

Roseton and Danskammer Point Vicinity - 1979

14 Mar	20 Jun	26 Sep
21 Mar[a]	27 Jun	3 Oct
28 Mar	6 Jul[a]	10 Oct
4 Apr	11 Jul	17 Oct[a]
11 Apr	18 Jul[a]	24 Oct
18 Apr	25 Jul	31 Oct
25 Apr[a]	1 Aug[a]	7 Nov
2 May	9 Aug	14 Nov[a]
9 May	15 Aug	20 Nov
16 May[a]	22 Aug	28 Nov
24 May	29 Aug	5 Dec
30 May	5 Sep	12 Dec[a]
6 Jun[a]	12 Sep[a]	19 Dec
13 Jun	19 Sep	27 Dec

[a]Monthly water quality.

- Water temperature - Surface to bottom at 2 m intervals
- Conductivity - Surface to bottom at 2 m intervals
- Turbidity - Surface, mid-depth, and bottom
- Dissolved oxygen - Surface, mid-depth, and bottom
- pH - Surface, mid-depth, and bottom

Metered chemistry was the primary method of temperature and conductivity measurement; however, wet chemistry samples were the primary method for dissolved oxygen measurement, quality control, and when meters were not available.

4.5.1.2 Monthly Program. Monthly river monitoring of surface and bottom water quality consisted of sampling at Station CH-4 for the following parameters:

Biochemical Oxygen Demand (BOD)	Turbidity (TUR)
Chemical Oxygen Demand (COD)	Ammonia Nitrogen (NH_3-N)
Dissolved Oxygen (DO)	Nitrate Nitrogen (NO_3-N)
pH	Total Kjeldahl Nitrogen (TKN)
Conductivity (SPC)	Total Phosphorus (TP)
Water Temperature (T)	Phenols (Ph)

4.5.1.3 Biological Sampling Program. Several water quality parameters were monitored along with biological sampling efforts. Water temperature at the sample depth was measured during all biological collections; measurements of specific conductance and turbidity, in addition to temperature, were made at mid-depth at each plant intake structure. During shallow water seining efforts, dissolved oxygen concentrations (alternate weeks) and temperature were measured.

In addition, temperature and chloride measurements were recorded on an daily basis by CHGE at the Danskammer Point plant intake.

4.5.2 Collection Procedures

Collection of monthly samples was scheduled for low water slack periods. A 5-liter nonmetallic Niskin or Van Dorn water sampler was used for all water collections.

Additional samples were collected for laboratory analysis of dissolved oxygen, turbidity, pH, and conductivity. Water temperature was measured for each sample with a calibrated electronic instrument with submersible sensors or with a calibrated field thermometer.

The samples were kept in coolers at approximately 4.0°C, and transported to the laboratory for analysis. Transportation time was approximately 2 hrs or less. Additional samples were collected each time for standardization checks on laboratory analyses.

4.5.3 Laboratory Procedures

The U.S. Environmental Protection Agency has promulgated guidelines establishing test procedures for the analysis of pollutants. These methods of analysis are outlined in the Federal Register, 38 (199), 28758, dated 16 October 1973. They are also included under Title 40 of the Code of Federal Regulations, Part 136.

All analyses conducted conform to these guidelines. Analyses for parameters not covered in the U.S. EPA documents generally conform to accepted procedures published in one of these documents:

Standard Methods for the Examination of Water and Waste Water 14th Edition, 1976. Available from the American Public Health Association.

Annual Book of Standards. Part 23, "Water, Atmospheric Analysis," 1972. Available from the American Society for Testing and Materials.

Methods for Chemical Analysis of Water and Wastes. 1971. U.S. Environmental Protection Agency.

CHAPTER 5.0

HUDSON RIVER PHYSICS AND CHEMISTRY

5.1 HUDSON RIVER HYDRODYNAMICS

5.1.1 Freshwater Flow

Daily freshwater flow in the Hudson River during 1979, as measured at Green Island (River km 247), is illustrated in Figure 5.0-1. The calculated monthly average Lower Hudson River flow is graphically presented in Figure 5.0-2. As Figure 5.0-2 indicates, the 1979 Lower Hudson River flow was slightly less than the long-term average during February and May-July, average or slightly above the average during the late summer and fall months, and far above average during January, March, and April.

Table 5.0-1 presents the monthly flows measured at Green Island for 1979 and recent study years, as well as the long-term monthly averages. Monthly 1979 flows, with the exception of March, were average in relation to the recent high flow period in the Hudson River as described in CHGE 1977. The mean monthly flow recorded during March was the highest over the last nine years, and is approximately twice the long-term average.

5.1.2 Salinity

Chloride data recorded daily at the Danskammer Point intake and presented as sodium chloride (NaCl) is graphically shown in Figure 5.0-3. Figure 5.0-3 also presents the plant data converted to chloride ions (Cl^-) and as parts per million salinity. Conversion formulas are presented below:

FIGURE 5.0-1

HUDSON RIVER FLOW AT GREEN ISLAND

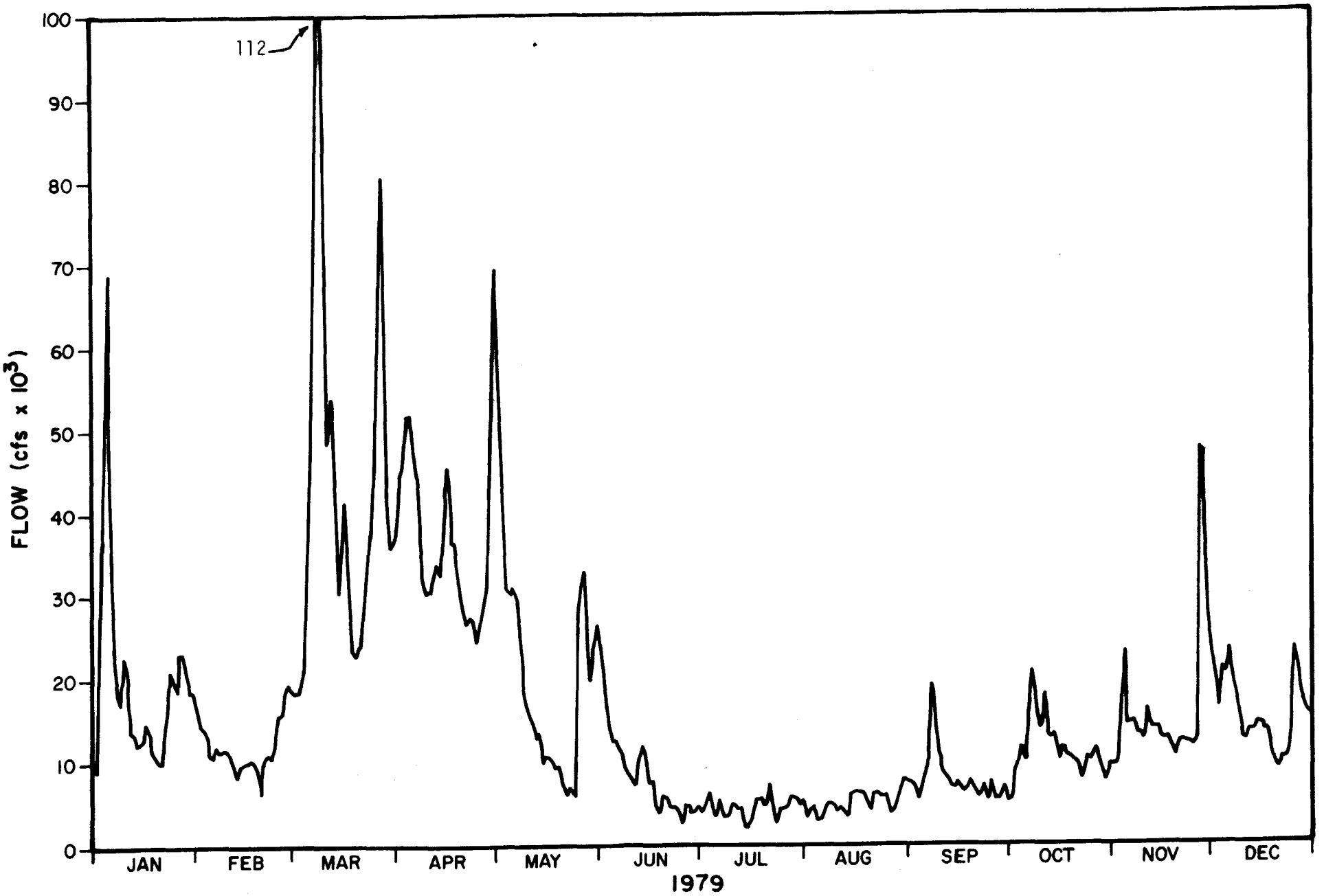


FIGURE 5.0-2

LOWER HUDSON RIVER LONG-TERM MONTHLY AVERAGE FRESHWATER FLOW

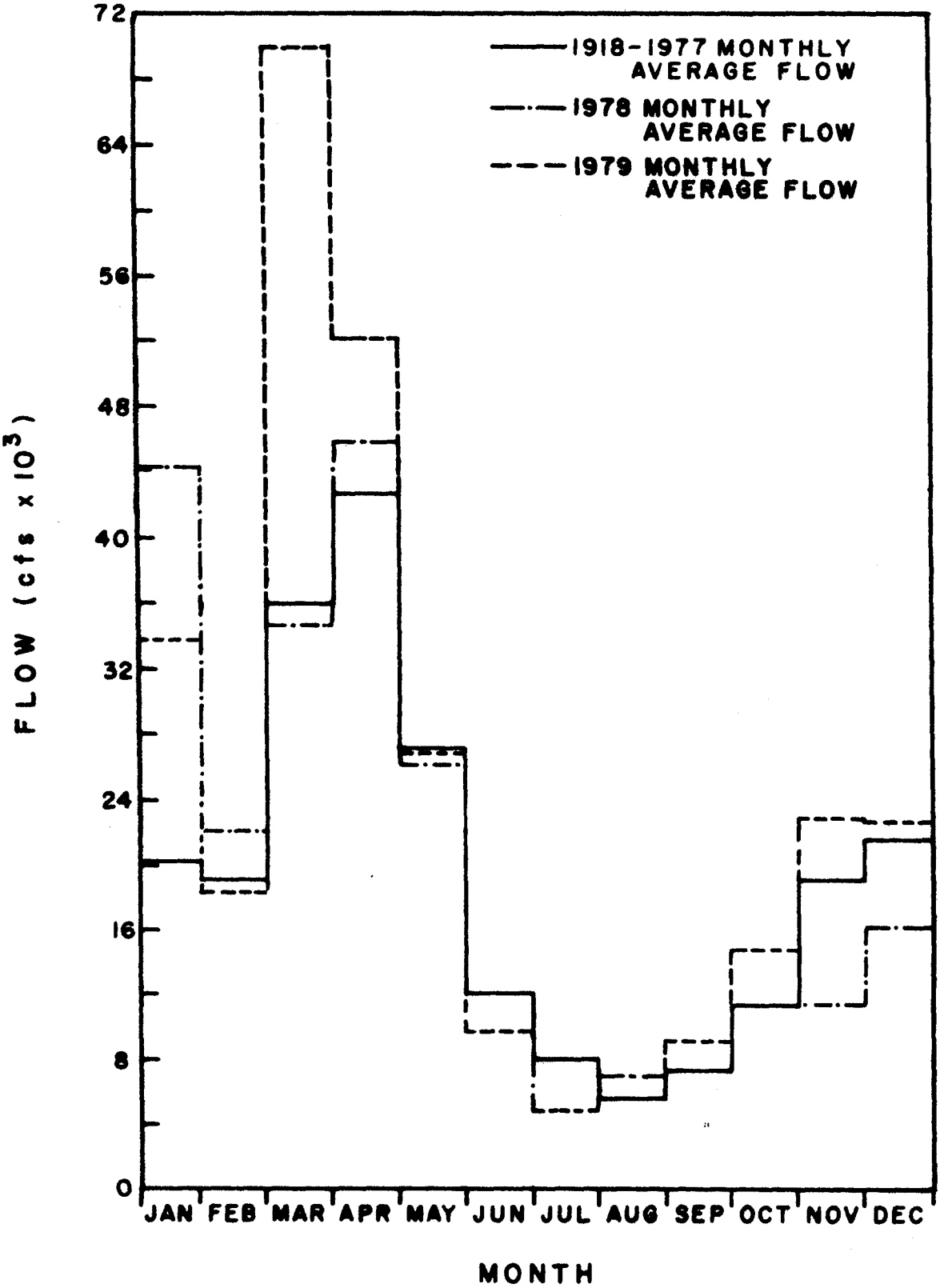


TABLE 5.0-1

FRESHWATER FLOWS AT GREEN ISLAND

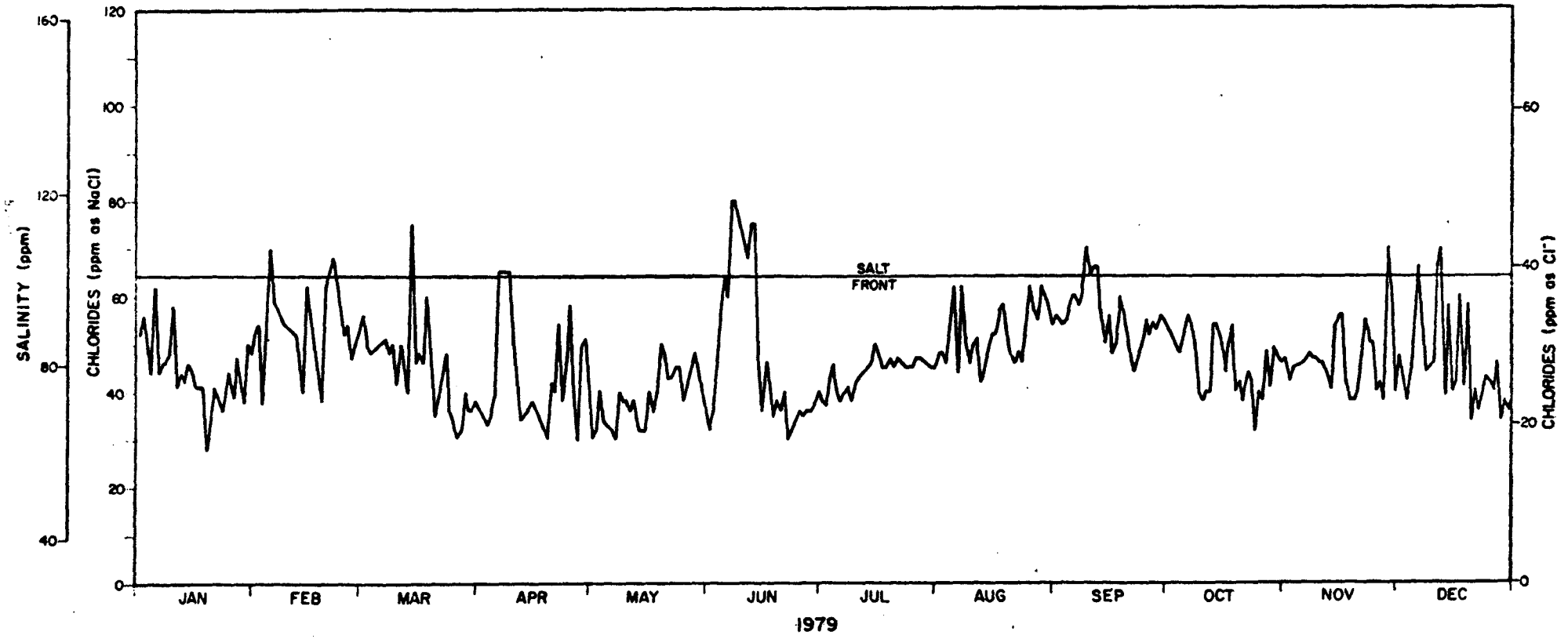
MONTH	1918-1976 LONG TERM AVERAGE FLOWS (cfs)	1971	1972	1973	1974	1975	1976	1977	1978	1979[a]
Jan	12879	9002	13410	26210	22010	19070	14740	7956	26310	20162
Feb	12475	12110	10930	20460	18640	19370	31260	8032	14120	11848
Mar	22344	20220	26260	29410	20730	23680	31690	43540	21870	44274
Apr	31155	37270	37960	30960	30170	25580	36760	40560	33560	38123
May	19480	35240	40520	27600	22960	20000	31800	16020	18730	19571
Jun	9792	7334	29630	13050	8791	12970	15220	7325	9954	8318
Jul	7040	6233	18380	10390	11780	7464	15280	5735	4643	4644
Aug	5608	8929	7616	5591	6359	8966	14630	5439	5976	5228
Sep	6289	9315	6309	4791	10390	17030	9573	14410	6195	7801
Oct	8125	7811	7291	5650	9049	23360	23230	30141	8450	11340
Nov	12485	7291	26150	8280	17180	22420	17930	23443	8020	16594
Dec	13979	17000	27010	26420	19380	18647	14080	26550	10720	15328
Mean	13462	14830	20956	19278	16433	18116	21311	19161	14041	16936

[a]Preliminary data.

FIGURE 5.0-3

DAILY CHLORIDE CONCENTRATIONS

Danskammer Point Generating Station - 1979



$$\text{Chloride as } Cl^- = 0.606627335\ NaCl \quad (1)$$

$$\text{Salinity} = 1.805(0.606627335\ NaCl)+30 \quad (2)$$

During 1979, the salt front (defined as a salinity of 100 ppm) was located in the Roseton/Danskammer Point area for short sporadic periods over the entire year. Periods of greater chloride concentrations were noted during mid-winter, early June, late summer, and early December. The most consistent period of salt water intrusion in the northern Newburgh Bay area during 1979 occurred during the first half of June which corresponds to a low freshwater flow (Figure 5.0-2) and low precipitation period (Table 5.0-2).

5.1.3 Thermal Characteristics

The 1979 water temperature profile on Figure 5.0-4 indicates the minimum daily temperature recorded at the Danskammer Point intake and the mean daily water temperature taken as part of the weekly impingement collection.

The highest minimum daily temperature recorded during 1979 was 27.2°C which occurred during the period 2-10 August; the lowest value was 0.6°C recorded during the period 2 January-8 March. The 1979 temperature pattern depicted in Figure 5.0-4 is consistent with the pattern from previous years and is characteristic of temperate zone water bodies.

5.2 CLIMATOLOGY

The climatological information, consisting of records of air temperature and precipitation presented in this section, was obtained from two sources. Air temperature was recorded from the 15 m (50 ft)

TABLE 5.0-2

MONTHLY AIR TEMPERATURE AND
PRECIPITATION RECORDED AT WEST POINT[a]

1979

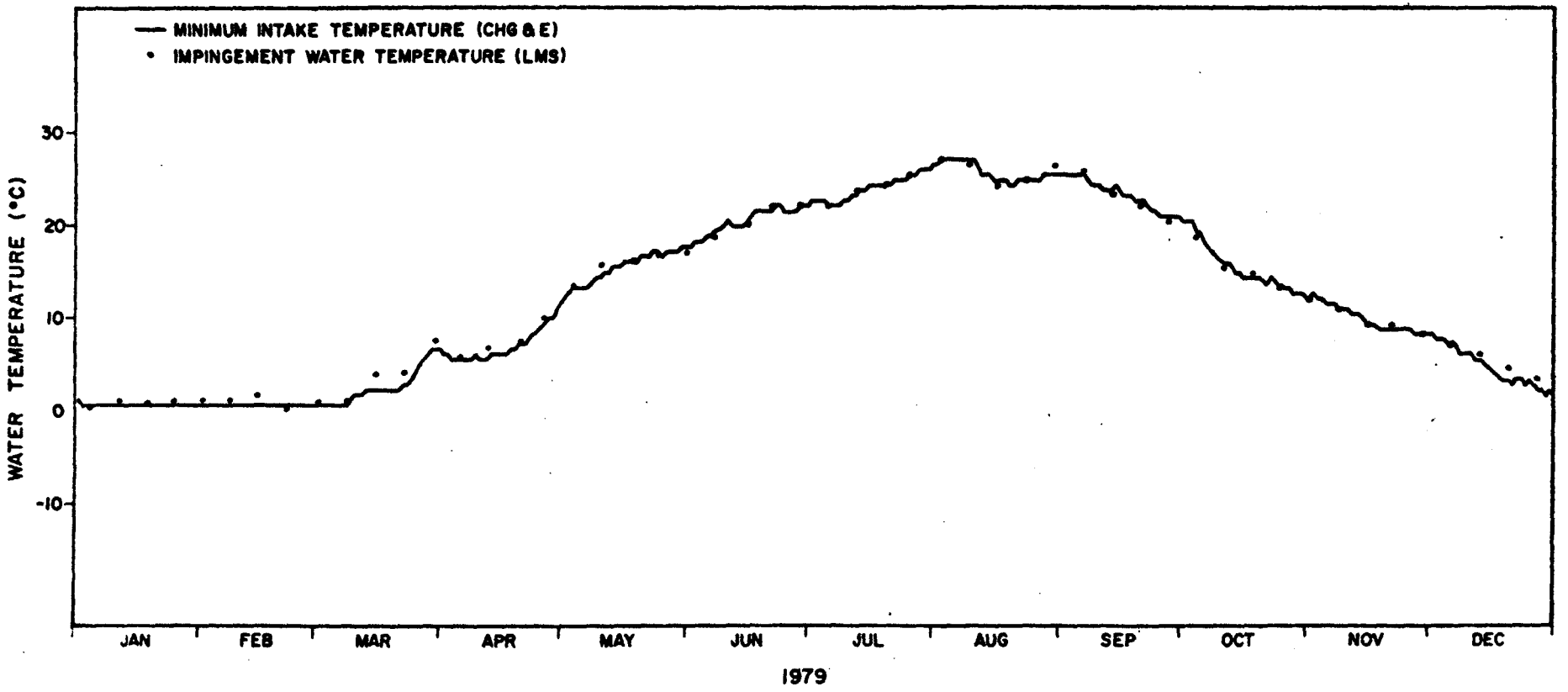
MONTH	AIR TEMPERATURE (°C) AVERAGE MIN	AVERAGE MAX	AVERAGE DAILY	DEV FROM NORM[c]	PRECIPITATION[b] TOTAL INCHES	TOTAL CM	DEV FROM NORM[c] INCHES	DEV FROM NORM[c] (CM)
Jan	-5.8	2.6	-1.6	1.2	11.07	28.12	7.93	20.14
Feb	-11.0	1.8	-6.4	-4.7	3.56	9.04	0.45	1.14
Mar	0.6	11.8	6.2	3.0	4.16	10.57	0.23	0.58
Apr	4.1	16.2	10.1	0.1	5.20	13.21	1.35	3.43
May	11.5	22.9	17.2	1.4	6.10	15.49	2.01	5.11
Jun	13.8	27.1	20.5	-0.6	1.78	4.52	-1.87	-4.75
Jul	17.7	30.3	24.0	0.3	1.67	4.24	-2.62	-6.65
Aug	17.3	28.3	22.8	0.2	6.10	15.49	2.27	5.77
Sep	12.4	24.6	18.5	-0.2	5.83	14.81	2.00	5.08
Oct	7.6	16.3	11.9	-1.0	6.78	17.22	3.11	7.90
Nov	4.7	13.1	8.9	2.6	7.42	18.85	2.88	7.32
Dec	-1.9	6.9	2.5	3.3	2.77	7.04	-1.41	-3.58
ANNUAL TOTAL					62.44	158.60	16.33	41.49

[a]Data Source: NOAA, Environmental Data Service, Monthly Climatology data.
[b]Includes snow and sleet.
[c]Dev from NORM = Deviation from Normal.

FIGURE 5.0-4

MINIMUM DAILY INTAKE TEMPERATURES

Danskammer Point Generating Station - 1979



level at the Roseton meterological tower; hourly readings were averaged to provide daily mean air temperature values which are plotted on Figure 5.0-5. Data on air temperature and precipitation compiled by the NOAA Environmental Data Service was tabulated for West Point, the closest station to the Roseton/Danskammer Point study area. The NOAA data in terms of monthly averages and deviation from the norm (1941-1975) have been tabulated in Table 5.0-2.

Monthly air temperatures were similar to the long-term average during the greatest part of the year. However, a trend toward warmer than normal temperatures was evident during November and December. The coldest daily temperature at Roseton was recorded on 12 February (-16.1°C) and the warmest daily temperature of 26.7°C occurred on 1 August.

Precipitation was above the long-term average during nine of the twelve months with the annual total of 158.6 cm approximately 41.5 cm in excess of the long-term average. The greatest precipitation was recorded during the month of January (28.1 cm) and the lowest monthly total occurred during July (4.2 cm).

5.3 WATER QUALITY PARAMETERS

5.3.1 Weekly Water Quality Program

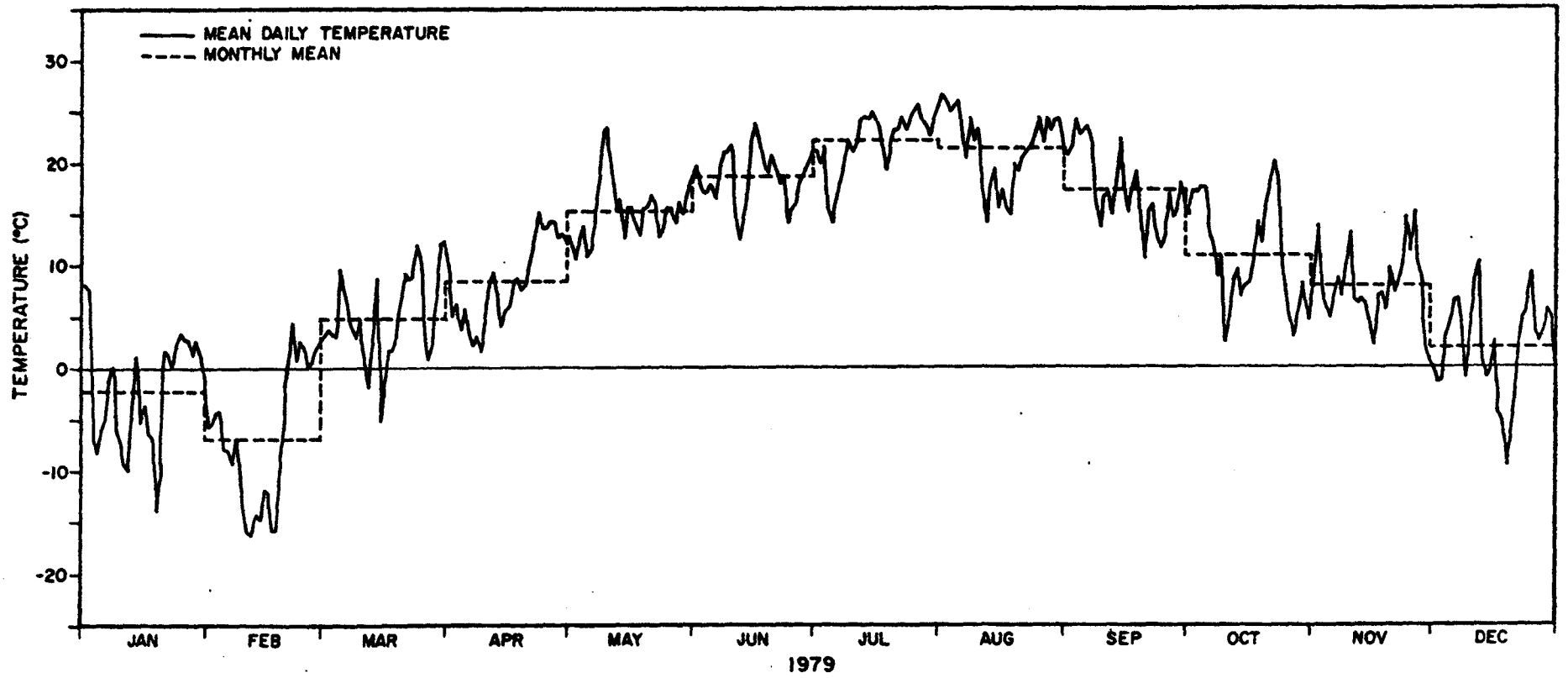
On a weekly schedule, water temperature, specific conductance, turbidity, pH, and dissolved oxygen were monitored at three locations in northern Newburgh Bay.

Water temperature from surface, mid-depth, and bottom water strata at the three northern Newburgh stations is presented in Figures 5.0-6 through 5.0-8. Similar trends and annual peaks were observed

Figure 5.0-5

MEAN 24-HOUR AIR TEMPERATURE

Roseton and Danskammer Point Vicinity - 1979

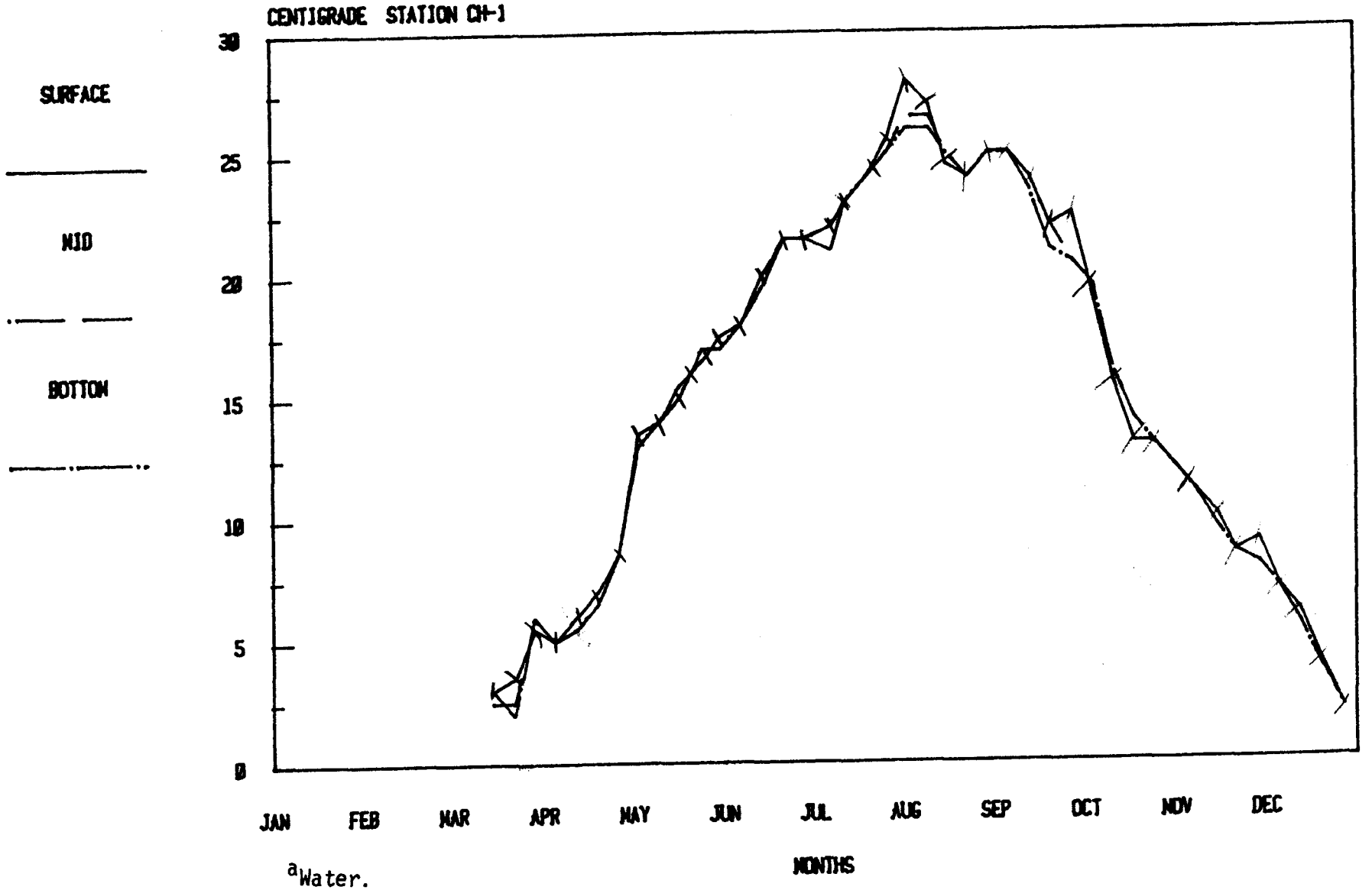


[a]Recorded at the 15 m level of the Roseton Meteorological Tower.

FIGURE 5.0-6

WEEKLY TEMPERATURE[a] VALUES

Roseton/Danskammer Point Vicinity - 1979

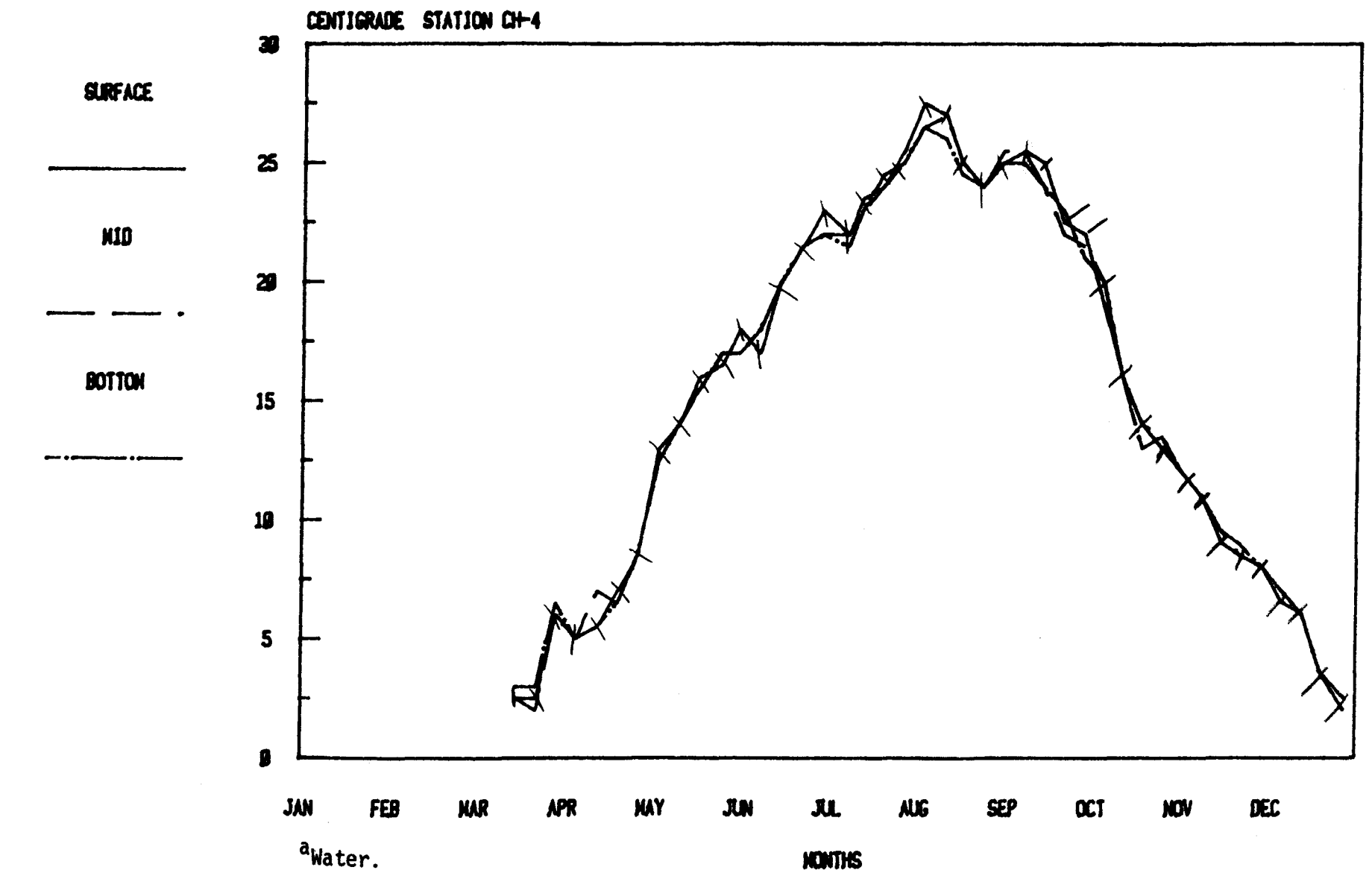


[a]Water.

FIGURE 5.0-7

WEEKLY TEMPERATURE[a] VALUES

Roseton/Danskammer Point Vicinity - 1979

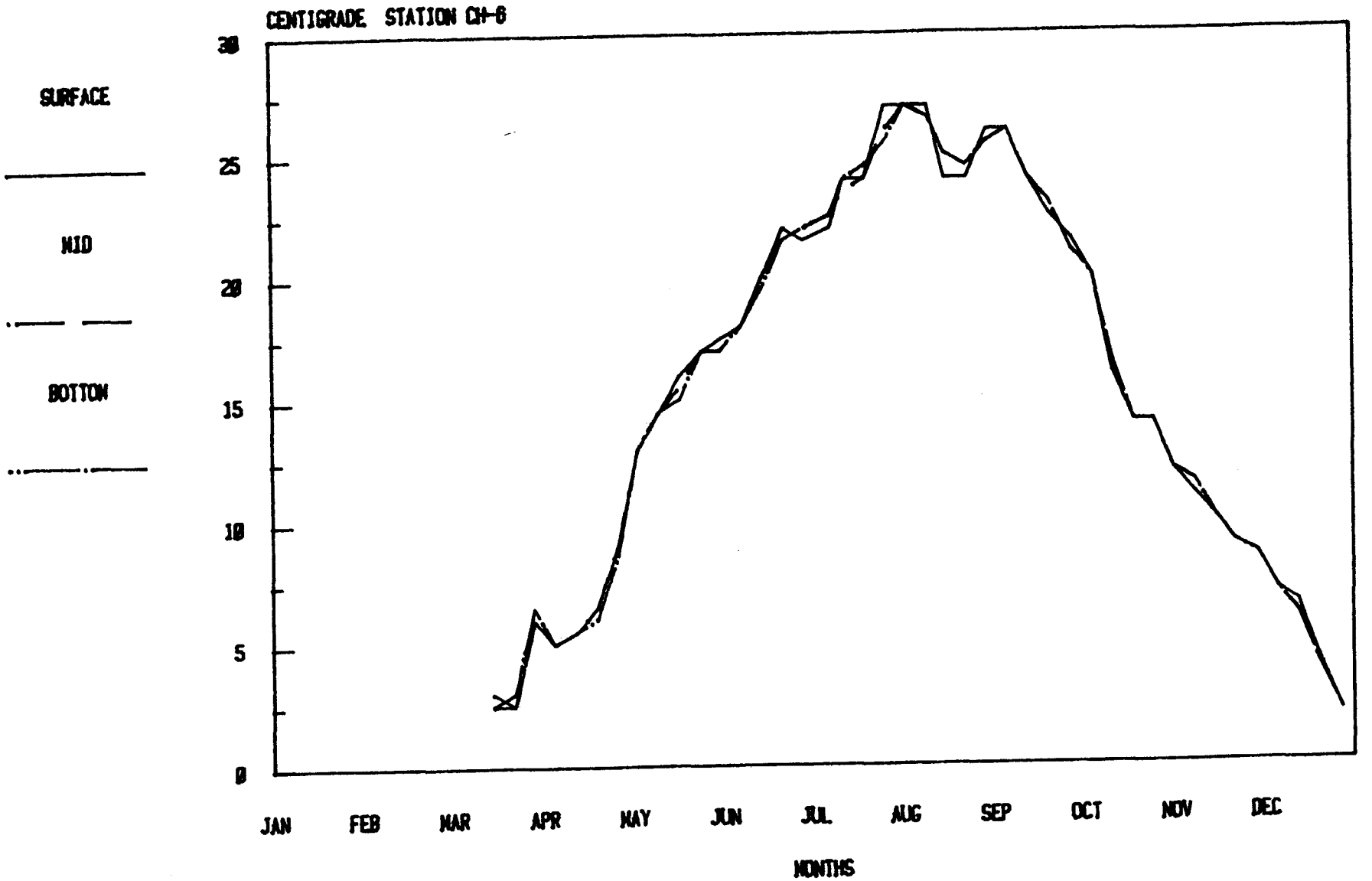


[a]Water.

FIGURE 5.0-8

WEEKLY TEMPERATURE[a] VALUES

Roseton/Danskammer Point Vicinity - 1979



[a]Water.

at the three stations; in addition, there were minimal differences noted between the different water strata. Weekly water temperature data reflected the minimum water temperature recorded at the Danskammer Point plant.

Specific conductance, except for short duration peaks noted at Stations CH-4 and CH-6 during March, exhibited an annual cycle with low values during the spring and late fall, and summer/early fall highs (Figures 5.0-9 through 5.0-11). Summer spikes associated with saltwater intrusion into the study area were not pronounced during 1979.

Turbidity (Figures 5.0-12 through 5.0-14) was generally low in the study area throughout the year, being highest during the spring, as a result of the spring thaw and runoff. Bottom values were consistently higher than surface and mid-depth samples consistent with the settling nature of the particulate matter. The more northern station, CH-1, exhibited the highest values among the three stations coupled with numerous small peaks especially prevalent during the fall.

Dissolved oxygen (Figures 5.0-15 through 5.0-17) was in excess of 5.0 mg/l during the entire year, reaching the lowest values during August. The annual trend of high spring and fall dissolved oxygen concentrations and a summer low is consistent with the inverse relationship between oxygen and water temperature. Hydrogen ion activity, pH, (Figures 5.0-18 through 5.0-20) was consistent at or near 7.0 throughout the year. A slight fall increase was noted at all three stations.

5.3.2 Monthly Water Quality Program

Surface and bottom water samples were collected monthly at the Roseton/Danskammer Reference Station (CH-4) and were analyzed

FIGURE 5.0-9

WEEKLY SPECIFIC CONDUCTANCE VALUES

Roseton/Danskammer Point Vicinity - 1979

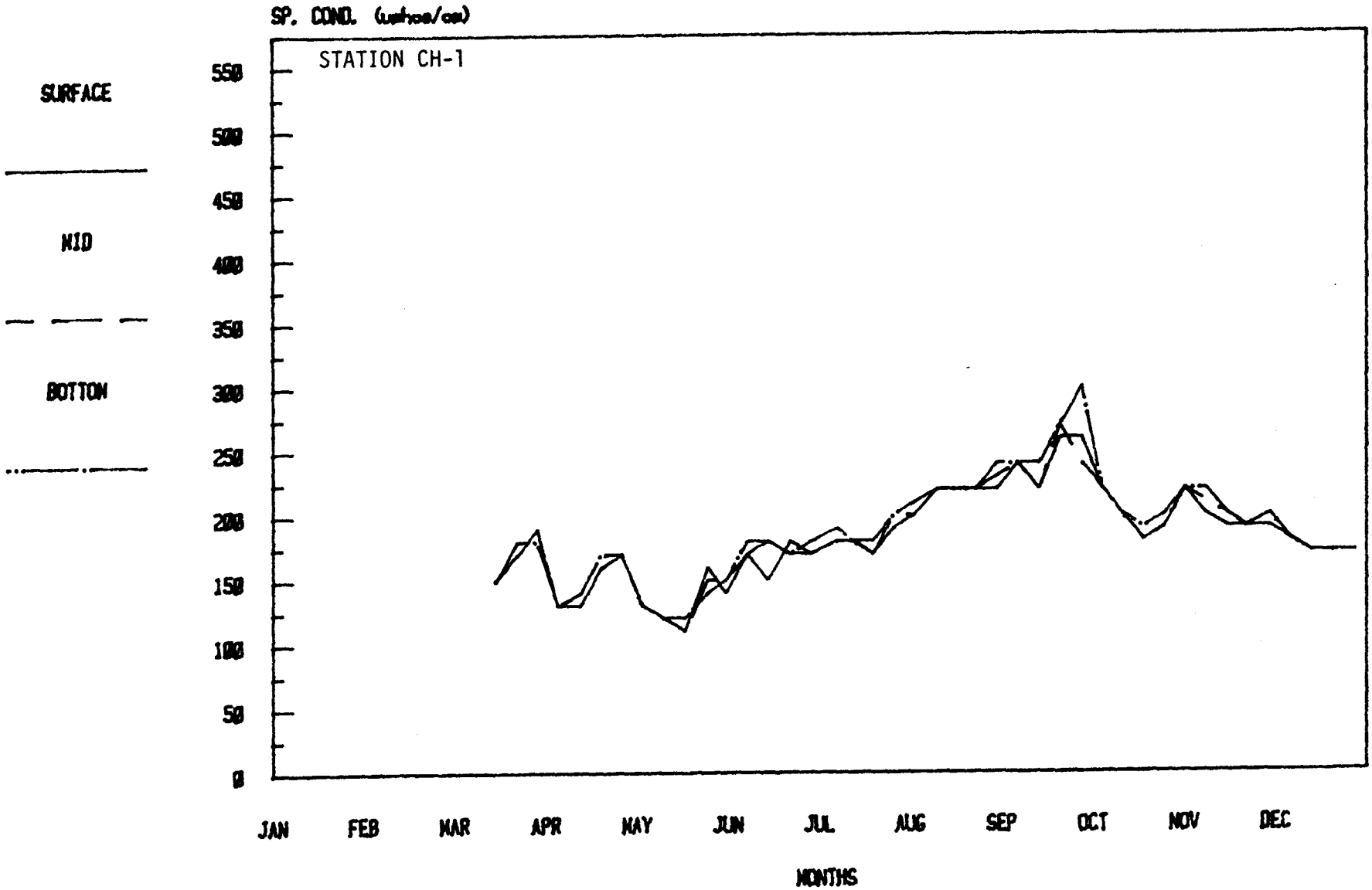


FIGURE 5.0-10

WEEKLY SPECIFIC CONDUCTANCE VALUES

Roseton/Danskammer Point Vicinity - 1979

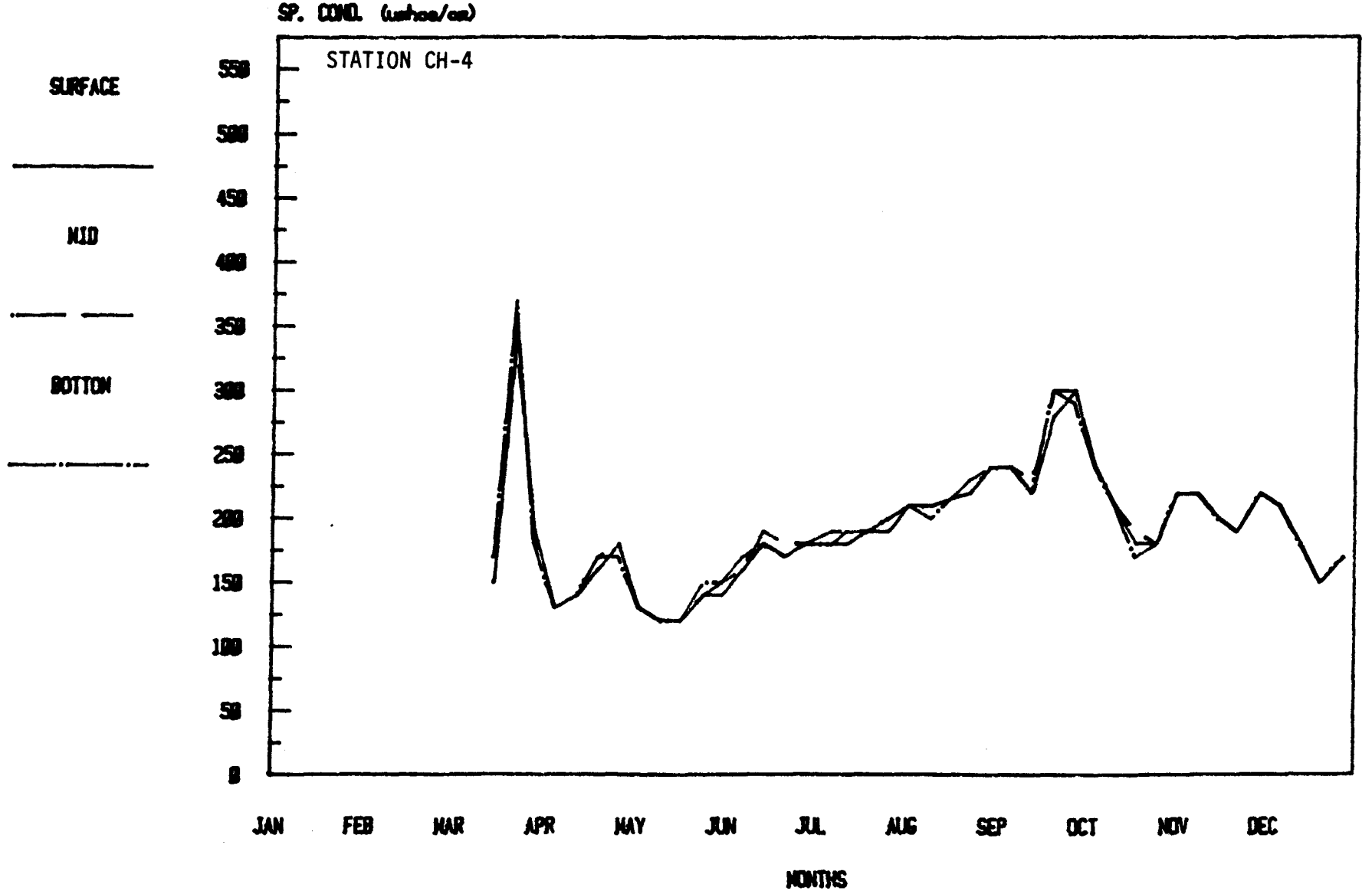


FIGURE 5.0-11

WEEKLY SPECIFIC CONDUCTANCE VALUES

Roseton/Danskammer Point Vicinity - 1979

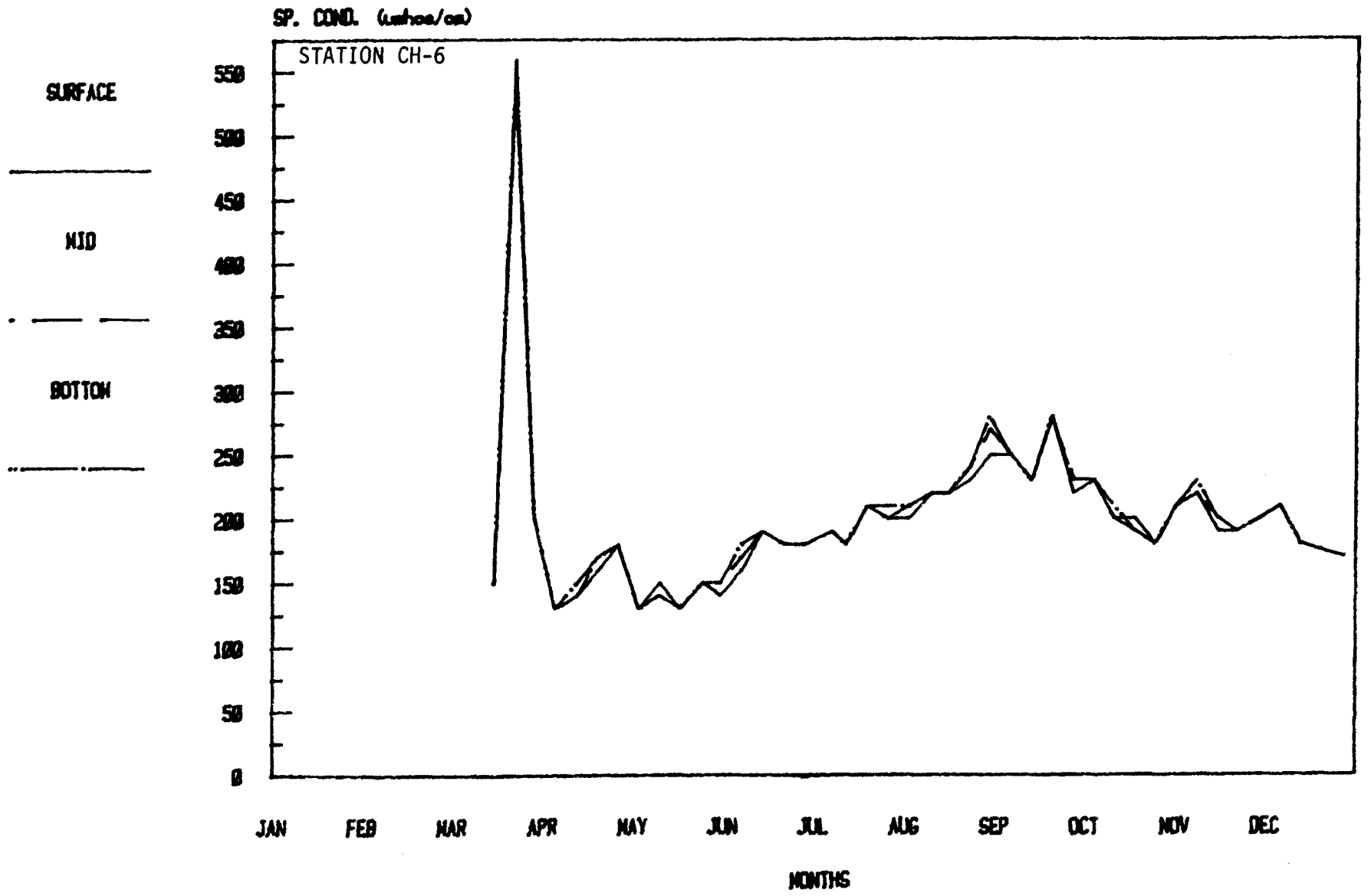


FIGURE 5.0-12

WEEKLY TURBIDITY VALUES

Rossetar/Dunkammer Point Vicinity - 1979

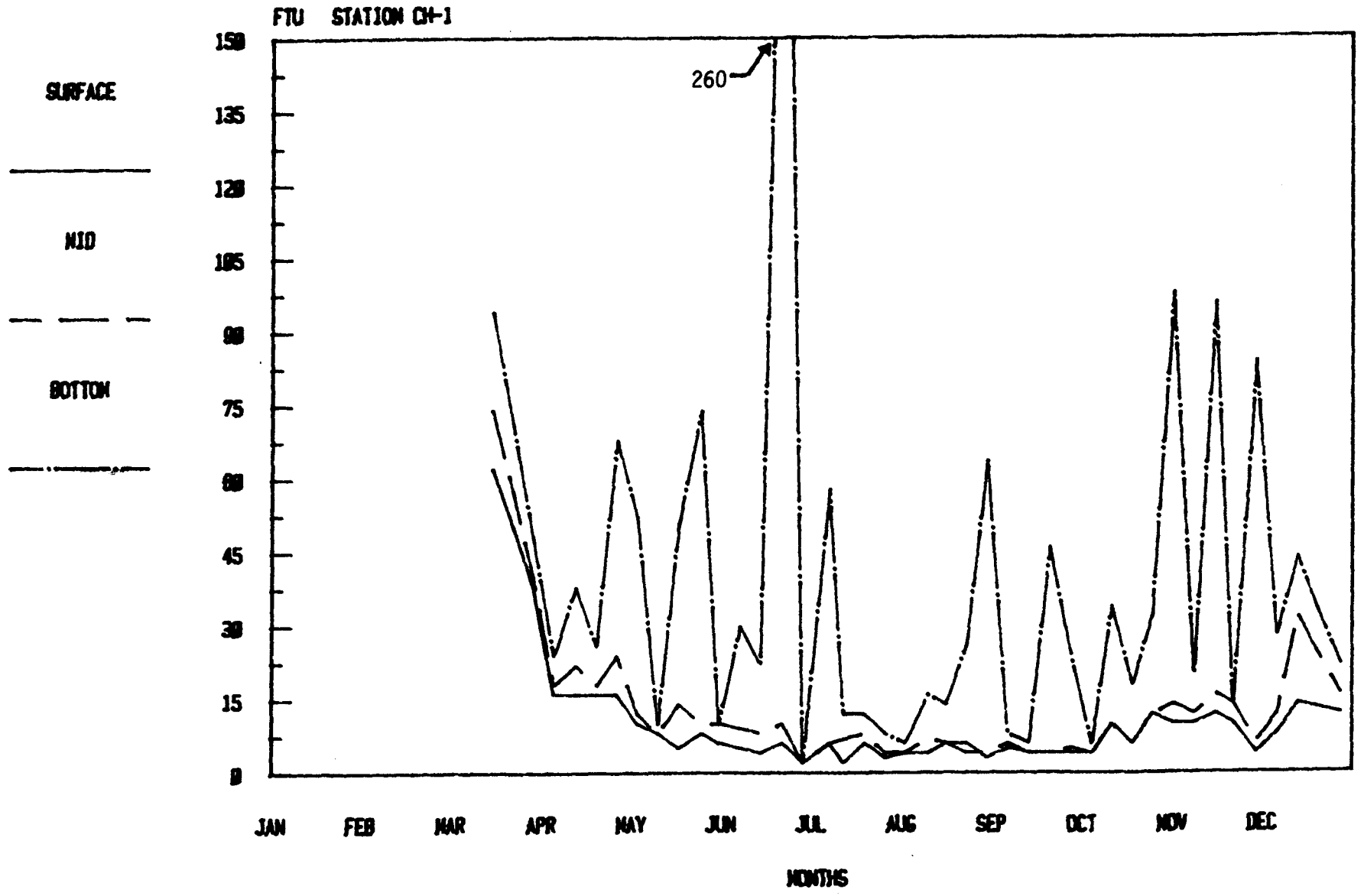


FIGURE 5.0-13

WEEKLY TURBIDITY VALUES

Roseton/Danskammer Point Vicinity - 1979

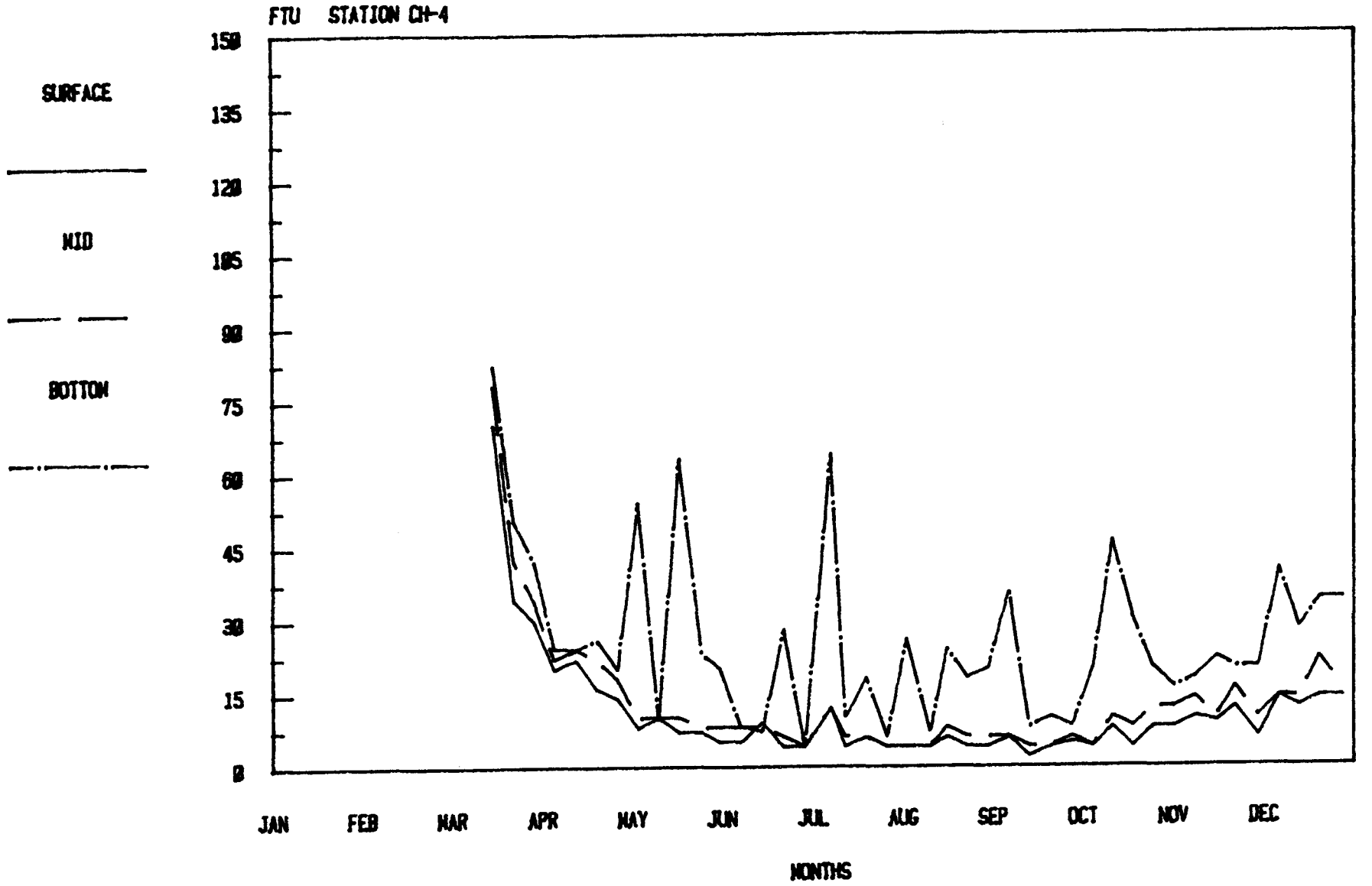


FIGURE 5.0-14

WEEKLY TURBIDITY VALUES

Roseton/Danskammer Point Vicinity - 1979

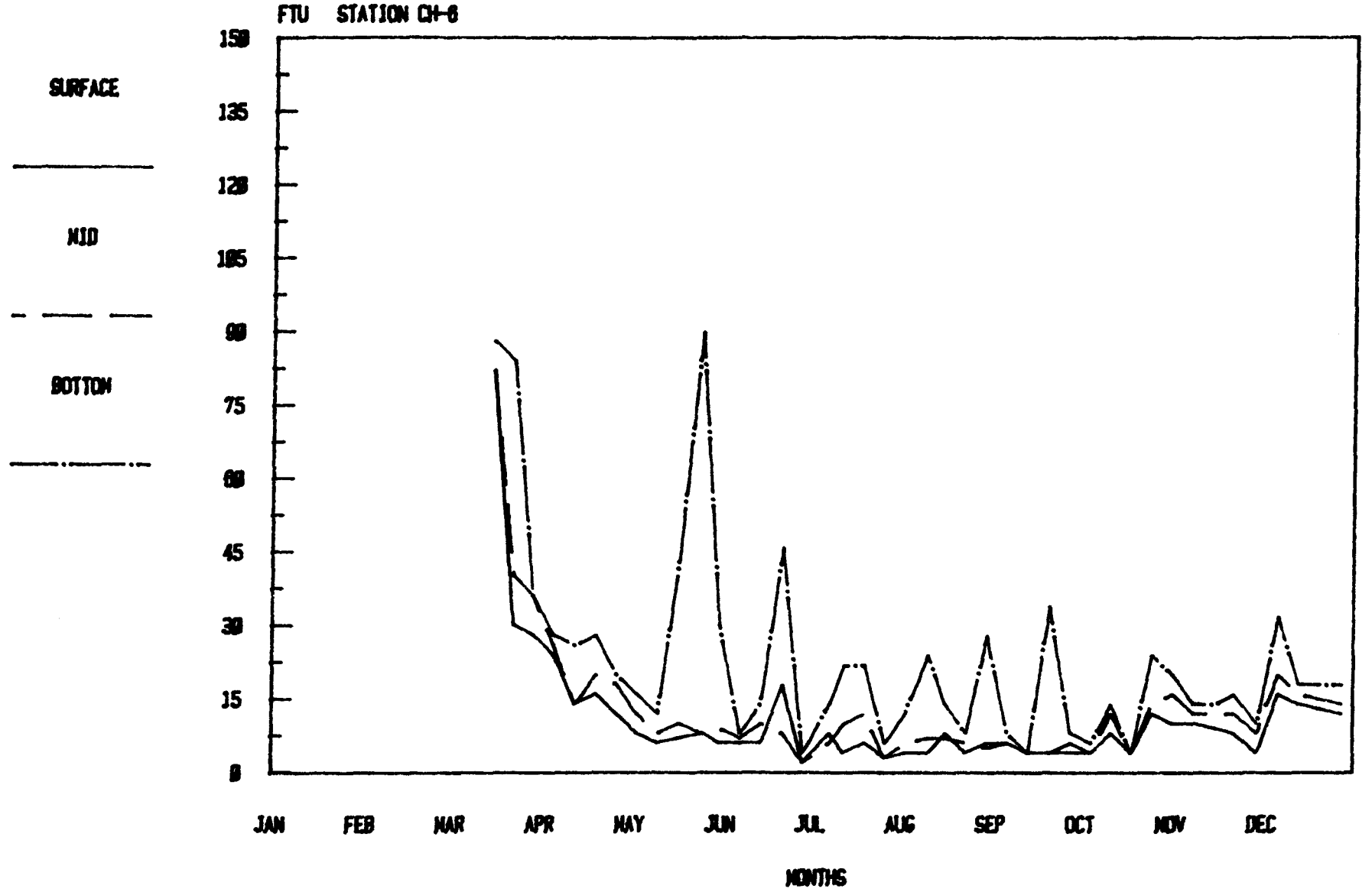


FIGURE 5.0-15

WEEKLY DISSOLVED OXYGEN VALUES

Roseton/Danskammer Point Vicinity - 1979

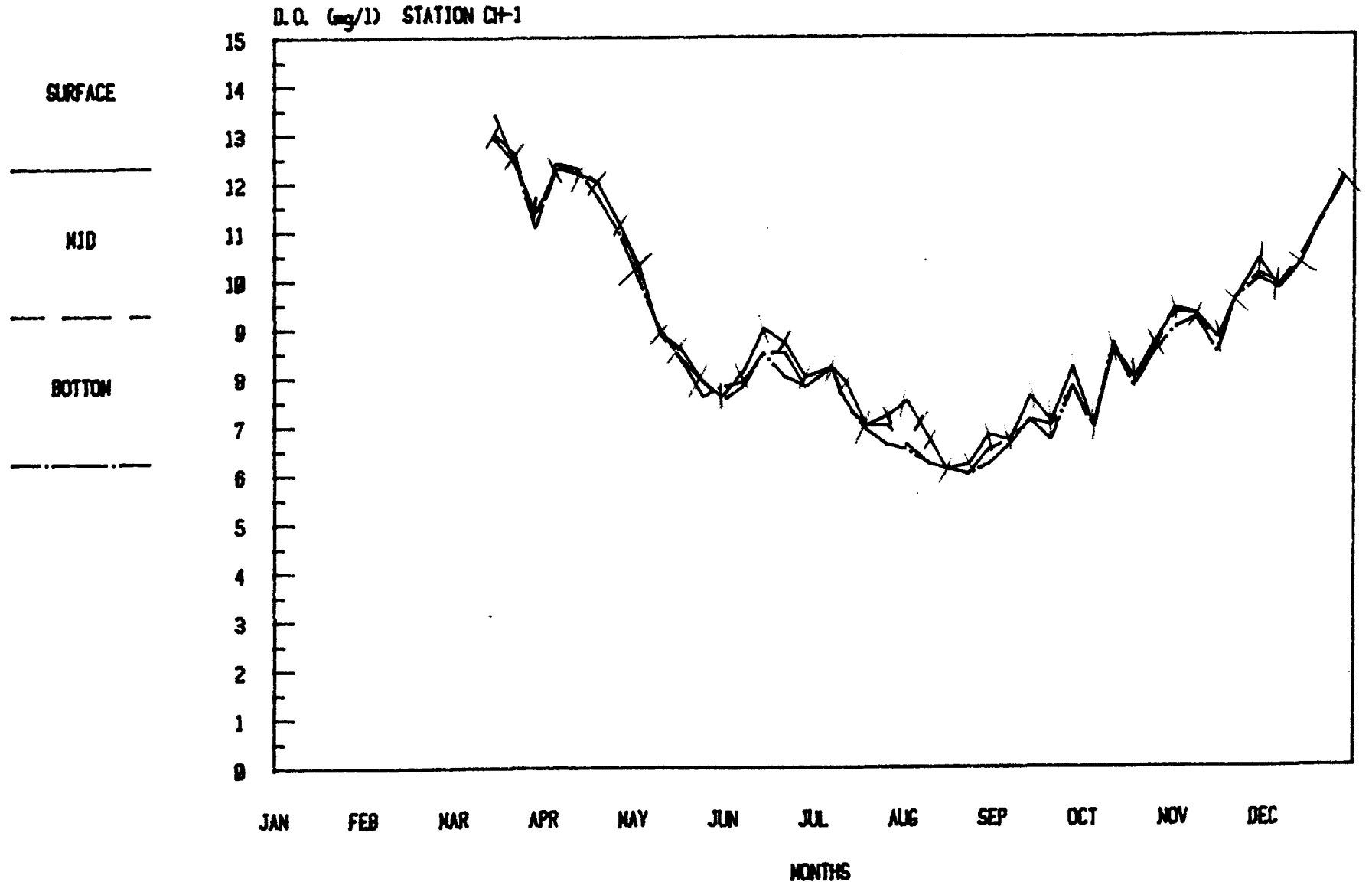


FIGURE 5.0-16

WEEKLY DISSOLVED OXYGEN VALUES

Roseton/Danskammer Point Vicinity - 1979

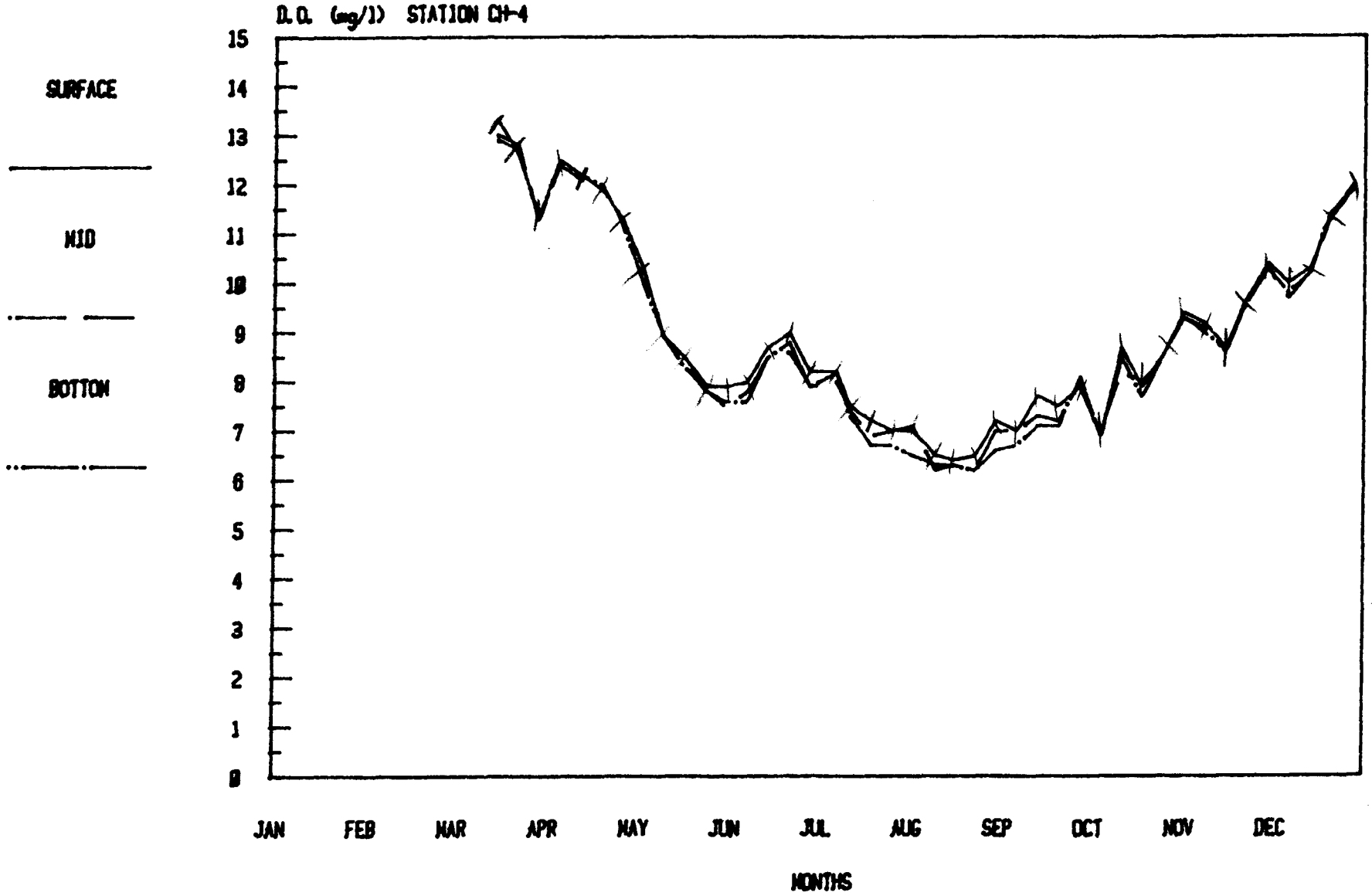


FIGURE 5.0-17

WEEKLY DISSOLVED OXYGEN VALUES

Roseton/Danskammer Point Vicinity - 1979

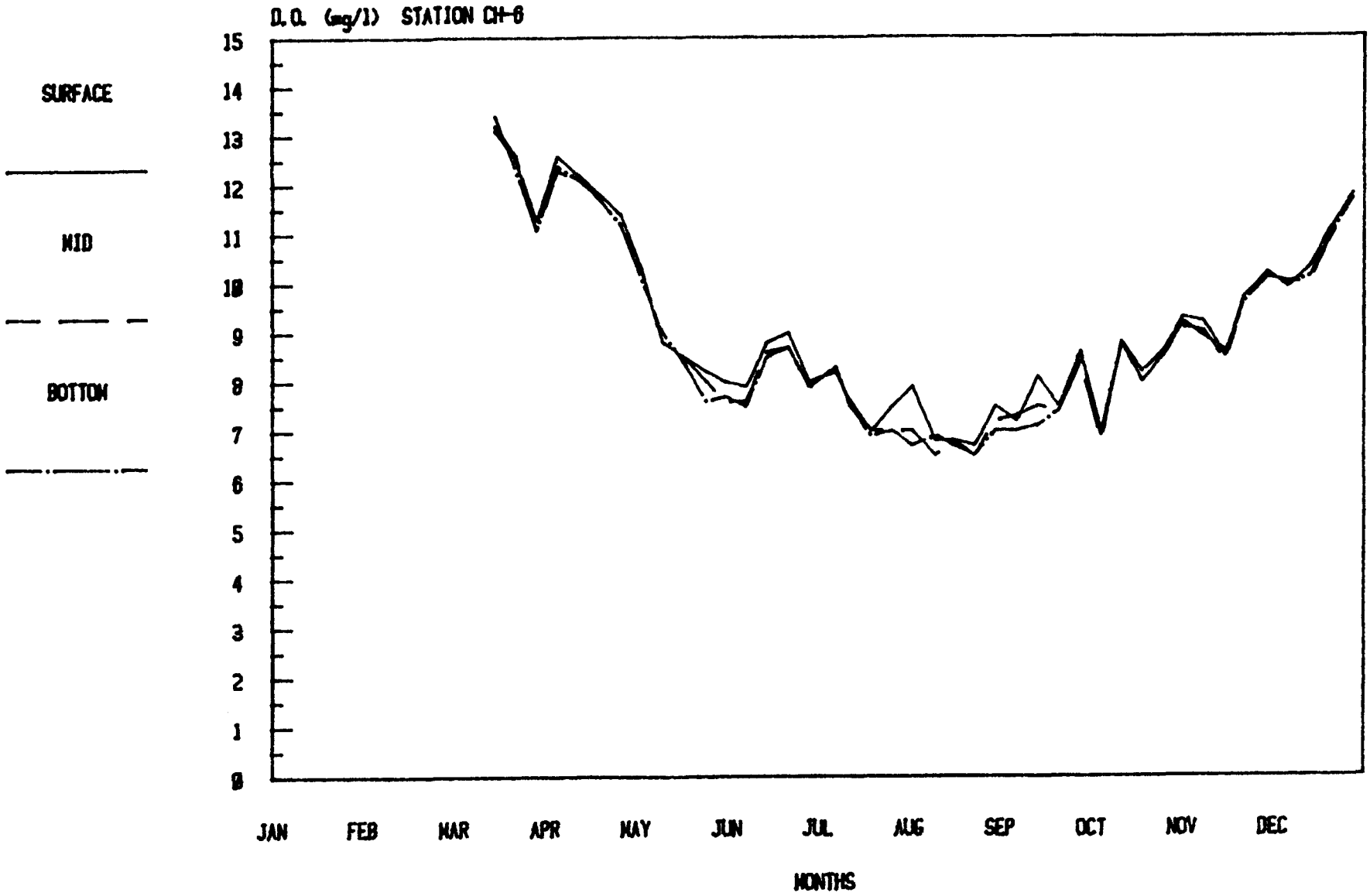


FIGURE 5.0-18

WEEKLY pH VALUES

Roseton/Danskammer Point Vicinity - 1979

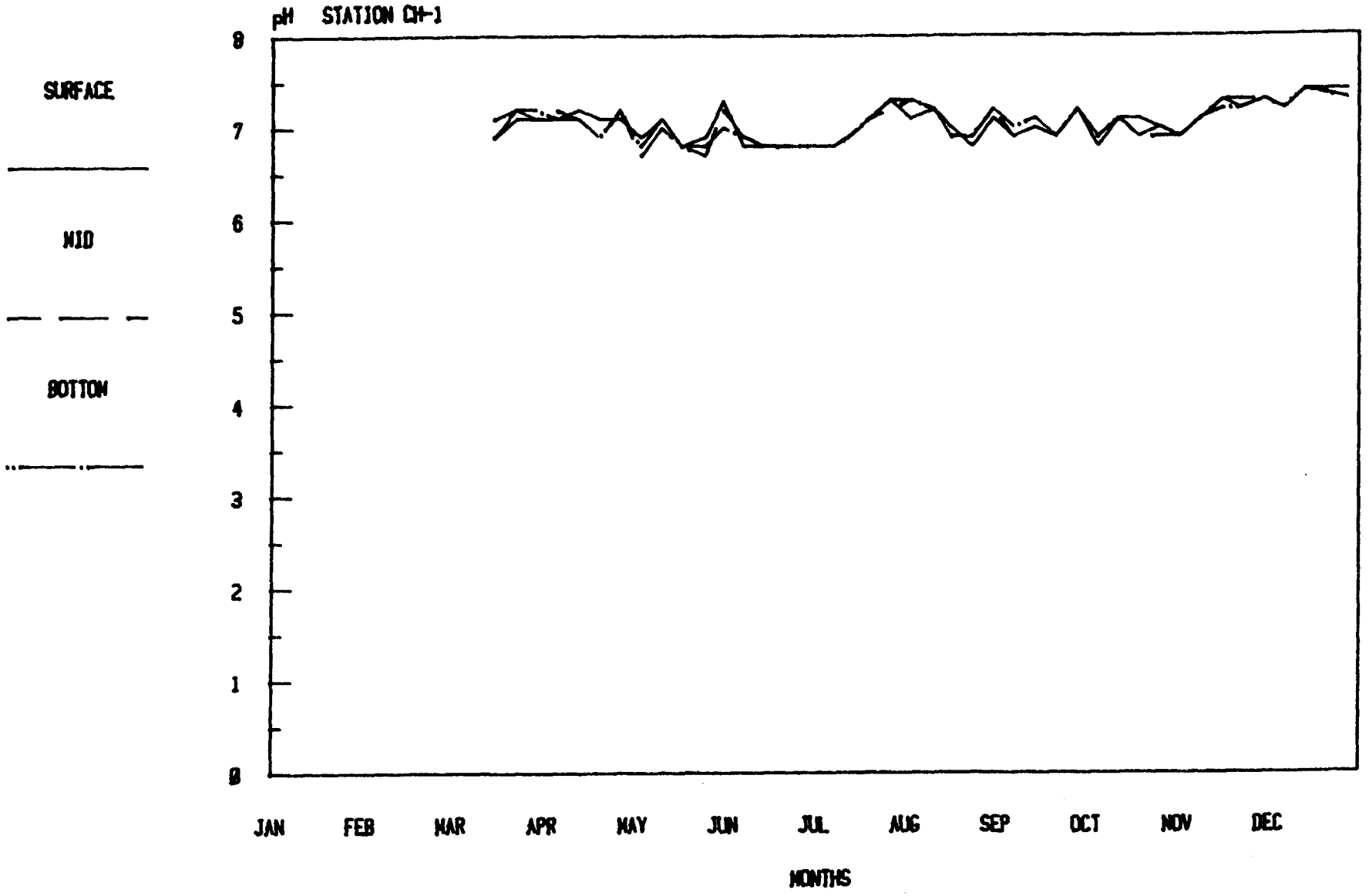


FIGURE 5.0-19

WEEKLY pH VALUES

Roseton/Danskammer Point Vicinity - 1979

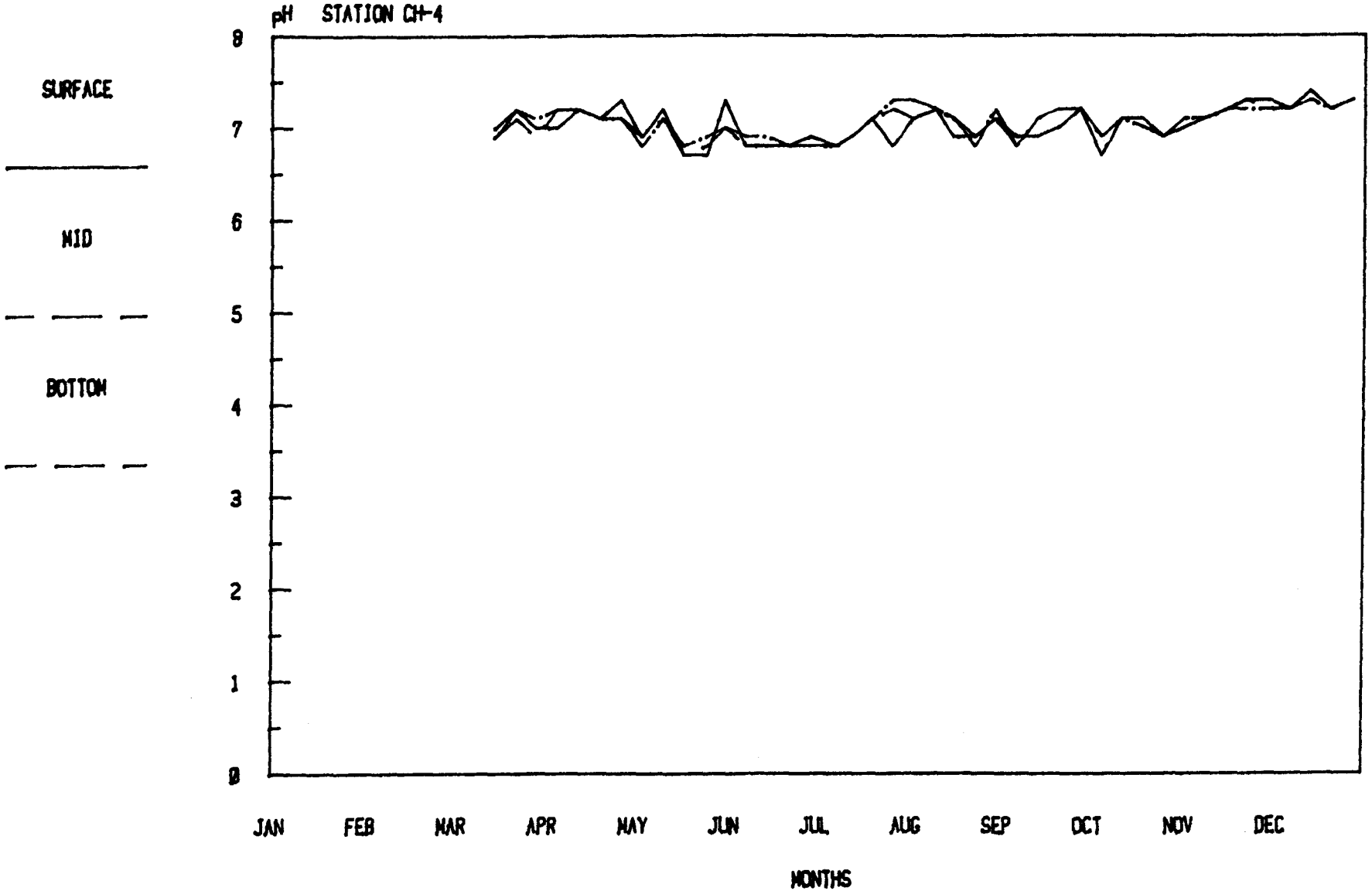
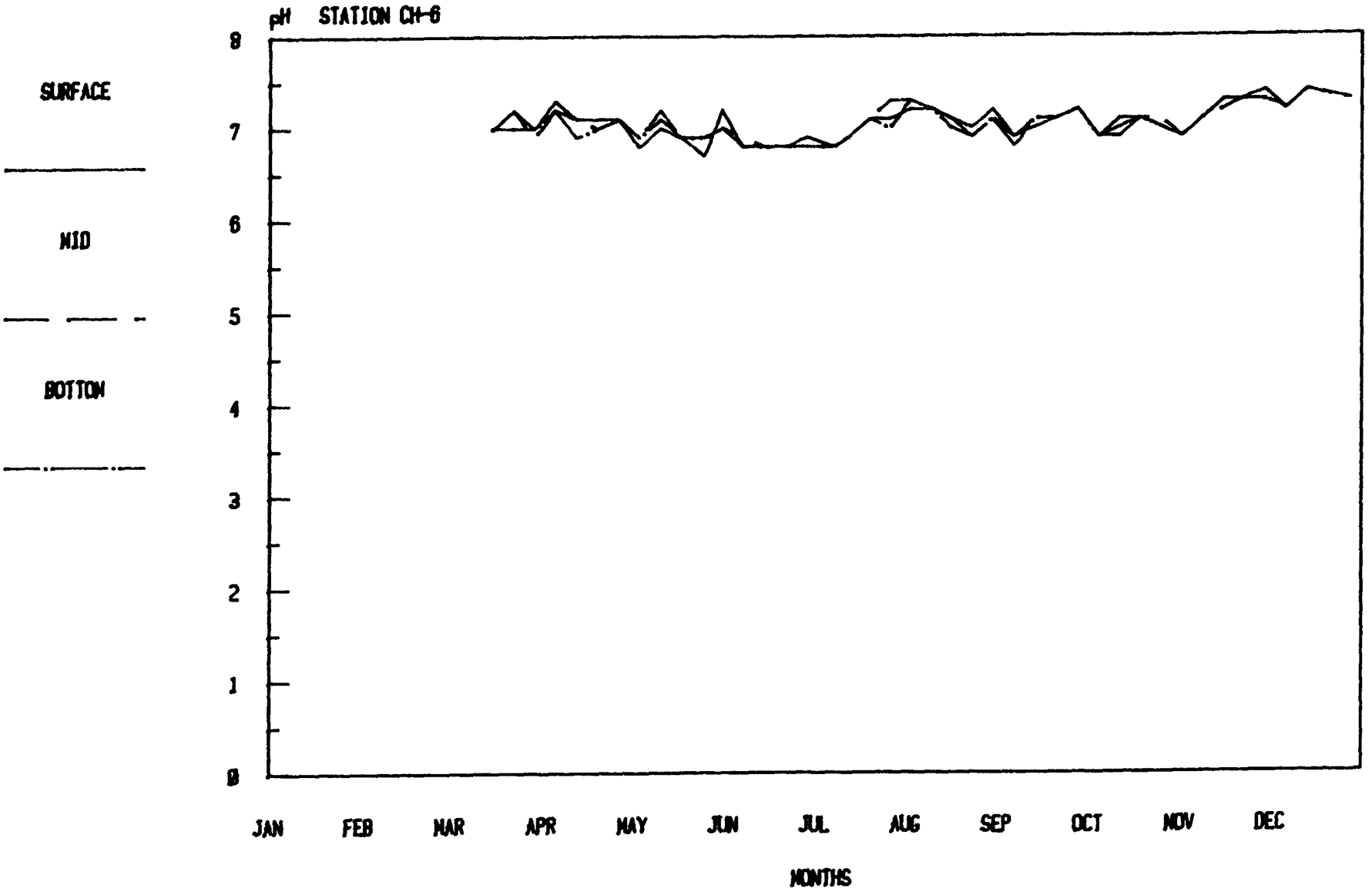


FIGURE 5.0-20

WEEKLY pH VALUES

Roseton/Danskammer Point Vicinity - 1979



according to standard procedures to determine the concentrations of various water quality parameters. These water quality concentrations are presented in Table 5.0-3 as the range of values and monthly averages. Individual sample data are presented in the Report Appendix.

With the exception of phenol, none of the water quality parameters exceeded the recommended limits. Phenol concentrations have occasionally exceeded the recommended 0.001 mg/l upper limit over the past several years; the 1979 average monthly values were the lowest recorded over the past several years.

TABLE 5.0-3

AVERAGE MONTHLY WATER QUALITY VALUES[a]

Roseton and Danskammer Point Vicinity - 1979

PARAMETER	UNIT	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	RANGE
Temperature (T)	°C	6.2	8.5	16.8	20.0	23.2	26.5	22.8	13.5	8.8	3.5	3.5 - 26.5
Dissolved Oxygen (DO)	mg/l	11.4	11.2	7.8	8.6	7.4	6.4	7.3	7.8	9.6	11.4	6.4 - 11.4
pH	units	7.0	7.2	6.8	6.8	6.9	7.2	7.1	7.0	7.2	7.2	6.8 - 7.2
Biochemical Oxygen Demand (BOD)	mg/l	2.5	2.5	1.5	1.5	<1.0	<1.0	1.0	1.5	1.5	2.0	<1.0 - 2.5
Chemical Oxygen Demand (COD	mg/l	4.6	12.2	22.0	7.5	15.0	6.0	19.0	16.6	17.2	19.2	4.6 - 22.0
Organic Nitrogen	mg/l	0.37	0.29	0.44	0.72	0.30	0.32	3.32	1.91	0.08	0.48	0.08 - 3.32
Ammonia Nitrogen (NH_3-N)	mg/l	0.26	0.18	0.42	0.23	0.17	0.36	0.42	0.22	0.26	0.24	0.17 - 0.42
Nitrate Nitrogen (NO_3-N)	mg/l	0.65	0.40	0.75	0.60	0.50	0.40	0.35	0.65	0.75	0.75	0.35 - 0.75
Total Kjeldahl Nitrogen (TKN)	mg/l	0.63	0.47	0.86	0.94	0.48	0.68	3.74	2.12	0.35	0.72	0.35 - 3.74
Total Phosphorus (TP)	mg/l	0.10	0.13	0.18	0.06	0.06	0.16	0.11	0.02	0.10	0.10	0.02 - 0.18
Phenol	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-
Specific Conductance	µmhos/cm @25°C	185.0	175.0	145.0	180.0	185.0	205.0	290.0	175.0	190.0	150.0	145.0 -290.0
Turbidity	FTU	36.0	17.0	15.0	8.0	7.0	5.5	7.0	17.0	16.0	24.0	5.5 - 36.0

[a]Average of surface and bottom samples at the East Reference Station (CH-4); Jan and Feb not sampled.

CHAPTER 6.0

BIOLOGICAL STUDIES

6.1 HUDSON RIVER ICHTHYOPLANKTON

The 1979 river ichthyoplankton program was designed to determine the species composition, abundance, growth, and temporal and spatial distribution of fish eggs and larvae in the Roseton/Danskammer Point vicinity of the Hudson River. These studies are part of a continuing effort to document the dynamics of fish populations in the Hudson River and to investigate the possible effects of the operation of the Roseton and Danskammer Point power plants on the aquatic environment of the northern Newburgh Bay region.

6.1.1 Species Inventory

The 1979 ichthyoplankton species inventory and total number collected of each species is presented in Table 6.0-1. Species of particular interest in this area of the Hudson River are striped bass, white perch, bay anchovy, Atlantic tomcod, American shad, alewife, and blueback herring. (Alewife and blueback herring are grouped together as Alosa spp. due to the difficulty in distinguishing between them in their early life stages).

Eggs of the selected species were identified from 1979 river samples; of these, eggs of Alosa spp., Atlantic tomcod, striped bass, and white perch were found in samples. Cyprinid and rainbow smelt eggs were observed in 1979 samples.

The fish larvae identified during 1979 consisted of 17 species and/or genera, 6 of which are anadromous (alewife, American shad, Atlantic tomcod, blueback herring, rainbow smelt, and striped bass), and 9 freshwater and estuarine species (hogchoker, cyprinids,

TABLE 6.0-1

ICHTHYOPLANKTON SPECIES INVENTORY AND TOTAL ABUNDANCE[a]

Roseton and Danskammer Point Vicinity - 1979

COMMON NAME	SCIENTIFIC NAME	TOTAL NUMBER COLLECTED	PERCENT OF TOTAL
Herring	*Alosa* spp.[b]	40096	52.6
White perch	*Morone americana*[b]	22285	29.2
Striped bass	*Morone saxatilis*[b]	4988	6.5
Rainbow smelt	*Osmerus mordax*[b]	3007	3.9
Darter	*Etheostoma* spp.	1576	2.1
Temperate bass	*Morone* spp.	776	1.0
Minnows and Carps	Cyprinidae[b]	671	0.9
Atlantic tomcod	*Microgadus tomcod*[b]	569	0.7
Bay anchovy	*Anchoa mitchilli*	553	0.7
American shad	*Alosa sapidissima*	392	0.5
American eel	*Anguilla rostrata*	183	0.2
Blueback herring	*Alosa aestivalis*	135	0.2
Sunfish	*Lepomis* spp.	43	0.1
Yellow perch	*Perca flavescens*	39	0.1
Killifish	*Fundulus* spp.	7	<0.1
Alewife	*Alosa pseudoharengus*	5	<0.1
Hogchoker	*Trinectes maculatus*	3	<0.1
Catfish	*Ictalurus* spp.	2	<0.1
Spottail shiner	*Notropis hudsonius*	2	<0.1
Sturgeon	*Acipenser* spp.	1	<0.1
White sucker	*Catastomus commersoni*	1	<0.1
Sunfish	Centrarchidae	1	<0.1
Darter	Gasterosteidae	1	<0.1
Crappie	*Pomoxis* spp.	1	<0.1
Walleye	*Stizostedion v. vitreum*	1	<0.1
Unidentified		945	1.2

[a]All life stages.
[b]Eggs identified.

spottail shiner, sticklebacks, sunfish, walleye, white perch, white sucker, and yellow perch). Bay anchovy utilize the lower estuary to spawn but are primarily considered a marine species. American eels are a catadromous species, and occur in the Hudson River as juveniles and adults only.

6.1.2 Abundance Patterns of Total and Selected Populations

The abundance and distributional patterns of selected ichthyoplankton species are discussed in this section in terms of seasonal abundance, interstation and vertical distribution, and diel vertical migrations. A length-frequency discussion is included for each species of interest. Only seasonal abundance and interstation distribution will be discussed with regard to eggs.

6.1.2.1 White Perch (Morone americana). In the Hudson River, the white perch is one of the numerically dominant species, with the major concentration below the Troy Dam (km 245). Estuarine populations of white perch spawn during spring and early summer in shallow water following upstream migrations to areas of fresh or slightly brackish water. In the Hudson River estuary, spawning occurs during May-July, primarily north of Croton Bay (km 61).

6.1.2.1.1 Eggs. White perch eggs were collected from 1 May through 26 June with the peak abundance occurring on 1 June (Table 6.0-2). The relatively protracted spawning season is due in part to the multiple spawning capabilities of white perch (Mansuetti 1961). Mean river temperatures at the ichthyoplankton sampling locations ranged from 12.8 to 22.7°C which is broader than the temperature range for spawning described by Thoits 1958 (14.4 to 15.6°C). There is a trend toward a decreasing density of eggs from west to east, with the highest abundance at RDW and the lowest at RDR. Peak egg concentration was found at RDCH during 1 June.

TABLE 6.0-2

MEAN[a] TOTAL ABUNDANCE[b] OF EGGS AND LARVAE[c] FOR WHITE PERCH

Roseton and Danskammer Point Vicinity - 1979

	EGGS					LARVAE				
	STATIONS					STATIONS				
START DATE[d]	RDW	RDCH	RDR	RDE	MEAN[e]	RDW	RDCH	RDR	RDE	MEAN[e]
24 Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 May	9.14	0.00	0.00	0.00	2.28	0.00	0.00	0.00	0.00	0.00
8 May	6.52	0.66	0.00	0.90	2.02	0.00	0.00	0.00	0.00	0.00
15 May	12.39	0.00	1.43	2.35	4.04	9.73	3.42	12.81	13.38	9.84
22 May	2.20	0.65	0.00	2.25	1.28	65.06	268.35	675.38	118.61	281.85
25 May	66.10	4.43	0.00	4.09	18.66	105.89	986.35	1641.81	67.76	700.56
29 May	48.81	4.04	3.84	0.00	14.17	49.84	693.61	857.49	325.05	481.50
1 Jun	84.41	322.15	17.07	0.00	105.91	67.44	350.52	346.11	471.79	308.96
5 Jun	38.86	0.00	0.00	3.40	10.56	65.59	91.40	273.35	604.54	258.72
8 Jun	185.86	3.95	2.80	1.18	48.45	54.51	263.21	597.26	1210.73	531.43
12 Jun	37.45	1.39	0.73	20.27	14.96	81.72	357.92	219.92	31.71	172.82
15 Jun	33.11	6.26	3.61	0.00	10.74	265.07	486.99	769.88	163.08	421.26
19 Jun	1.08	0.00	1.22	2.10	1.10	236.59	689.77	552.27	152.73	407.84
22 Jun	4.05	0.00	0.00	1.11	1.29	51.49	527.61	1368.67	113.99	515.44
26 Jun	2.19	1.86	0.00	2.53	1.64	51.64	130.56	312.79	246.46	185.36
3 Jul	0.00	0.00	0.00	0.00	0.00	36.73	58.85	79.24	25.56	49.84
10 Jul	0.00	0.00	0.00	0.00	0.00	34.26	36.98	171.06	73.63	78.98
17 Jul	0.00	0.00	0.00	0.00	0.00	12.20	44.88	30.77	2.14	22.50
24 Jul	0.00	0.00	0.00	0.00	0.00	7.10	0.00	0.00	2.32	2.36
31 Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.84	0.91	0.00	0.44
7 Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.00	0.17
14 Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[a]Mean of sample depths; mean of all day and all night collections at each station.
[b]Number of organisms/1000 m^3; includes *Morone* spp. allocated to either striped bass or white perch.
[c]Larvae include yolk-sac, post-yolk-sac and UID; juveniles excluded.
[d]All other sampling dates have concentrations of zero.
[e]Station mean.

6.1.2.1.2 Larvae. White perch larvae appeared at all stations on 15 May, two weeks after the appearance of eggs (Table 6.0-2). Peak abundance occurred on 25 May, primarily due to the large number of larvae collected at station RDR. No white perch larvae were collected in river samples after 7 August.

Cross river distributional patterns were statistically examined for white perch larvae of all life stages combined (Table 6.0-3). The analysis of the results demonstrates a trend of lower abundances at the more shallow nearshore stations (RDW and RDE) and higher abundances at the deeper channel stations (RDCH and RDR). This distributional pattern appears to be due to an active preference for these locations as opposed to a passive distribution due to currents.

The vertical distribution of white perch larvae (Table 6.0-4) appears to be divided into two patterns. During the period from 15 May through 15 June there are generally higher abundances at mid-depth. This is also the period of yolk-sac larvae presence in river samples. From 19 June through 10 July there appears to be a different pattern of high abundances in bottom day collections and a more even distribution in night collections. Only post-yolk-sac white perch larvae were found during this latter period. Figure 6.0-1 presents the diel migration patterns for white perch larvae. This graph demonstrates a diel movement of white perch larvae from the bottom during the day then up toward the surface at night. On all but two dates concentrations of white perch larvae in bottom samples were greater during the day than at night, and on all but one date concentrations in surface samples were greater at night than during the day. A large proportion of white perch larvae were found at the mid-depth during both day and night in the May and

TABLE 6.0-3

STATISTICAL ANALYSIS OF WHITE PERCH LARVAL ABUNDANCE[a]

Roseton and Danskammer Point Generating Stations - 1979

ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F
Date[b]	15	24.7495	1.6500	12.04*
Station	3	3.2988	1.0996	8.02*
Error	45	6.1689	0.1371	
Total	63	34.2172		

TUKEY COMPARISON (α = .05)

STATION: Smallest: RDW RDE RDCH RDR :Largest

[a]No./1000 m^3; mean over depth and station.
[b]Dates used were from 15 May through 24 July.
*Significant at the 95% level.

TABLE 6.0-4 (Page 1 of 2)

MEAN ABUNDANCE[a] OF WHITE PERCH LARVAE[b] BY SAMPLE DEPTH

Roseton and Danskammer Point Vicinity - 1979

START DATE[c]	DEPTH	DAY STATIONS RDW	RDCH	RDR	RDE	NIGHT STATIONS RDW	RDCH	RDR	RDE
8 May	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	M	NR	0.00	0.00	NR	NR	0.00	0.00	NR
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Mean[d]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 May	S	17.15	0.00	0.00	4.05	4.41	8.40	8.37	30.43
	M	NR	3.72	21.83	NR	NR	0.00	18.87	NR
	B	12.93	8.37	15.24	14.08	4.41	0.00	12.50	4.93
	Mean[d]	15.04	4.03	12.36	9.06	4.41	2.80	13.25	17.68
22 May	S	48.78	16.74	7.75	117.65	145.71	451.85	836.73	109.24
	M	NR	140.72	1091.30	NR	NR	545.77	813.84	NR
	B	29.27	90.65	1014.49	47.85	36.44	364.34	288.14	199.70
	Mean[d]	39.02	82.70	704.51	82.75	91.08	453.99	646.24	154.47
25 May	S	16.29	571.43	31.87	60.24	232.11	535.43	643.41	62.50
	M	NR	3703.70	2131.69	NR	NR	117.73	6354.09	NR
	B	129.57	547.49	600.80	107.30	45.56	444.92	88.98	40.99
	Mean[d]	72.93	1607.54	921.45	83.77	138.84	366.03	2362.16	51.74
29 May	S	12.66	4.05	126.92	63.20	92.00	1547.33	1061.32	477.55
	M	NR	724.01	992.28	NR	NR	1390.44	1610.03	NR
	B	18.35	38.17	429.60	318.52	76.31	457.63	924.78	440.91
	Mean[d]	15.50	255.41	516.27	190.86	84.16	1131.80	1198.71	459.23
1 Jun	S	110.70	212.12	70.63	104.17	0.00	229.25	643.78	930.41
	M	NR	401.49	580.29	NR	NR	297.57	218.99	NR
	B	56.18	597.56	357.51	584.62	102.88	365.15	205.48	267.95
	Mean[d]	83.44	403.72	336.14	344.40	51.44	297.32	356.08	599.18
5 Jun	S	16.88	72.03	80.36	893.33	38.46	108.11	131.15	164.00
	M	NR	81.20	451.36	NR	NR	187.66	109.45	NR
	B	86.26	61.67	711.93	742.08	120.75	37.74	155.84	618.71
	Mean[d]	51.57	71.63	414.55	817.71	79.60	111.17	132.15	391.36
8 Jun	S	81.12	185.19	27.82	43.29	66.54	538.79	1467.64	135.11
	M	NR	226.38	1052.63	NR	NR	318.90	678.57	NR
	B	51.55	150.20	77.59	4517.70	18.80	159.79	279.33	146.79
	Mean[d]	66.34	187.26	386.01	2280.50	42.67	339.16	808.51	140.95
12 Jun	S	26.42	0.00	35.71	13.39	160.04	397.06	326.26	25.97
	M	NR	258.47	40.65	NR	NR	433.96	589.35	NR
	B	75.10	481.91	78.60	16.67	65.29	576.13	248.83	70.80
	Mean[d]	50.76	246.79	51.65	15.03	112.66	469.05	388.15	48.38
15 Jun	S	203.07	62.04	7.38	32.65	456.07	338.33	879.39	343.38
	M	NR	918.29	887.60	NR	NR	668.12	951.22	NR
	B	19.01	426.68	404.50	64.89	382.11	508.47	1489.18	211.28
	Mean[d]	111.04	469.00	433.16	48.77	419.09	504.97	1106.60	277.33

[a] Number of organisms/1000 m^3; includes *Morone* spp. allocated to either striped bass or white perch.
[b] Larvae include yolk-sac, post-yolk-sac and UID; juveniles excluded.
[c] All other sampling dates have concentrations of zero.
[d] Mean of sample depths.
S - Surface.
M - Mid.
B - Bottom.
NR - Not required in sampling program.

TABLE 6.0-4 (Page 2 of 2)

MEAN ABUNDANCE[a] OF WHITE PERCH LARVAE[b] BY SAMPLE DEPTH

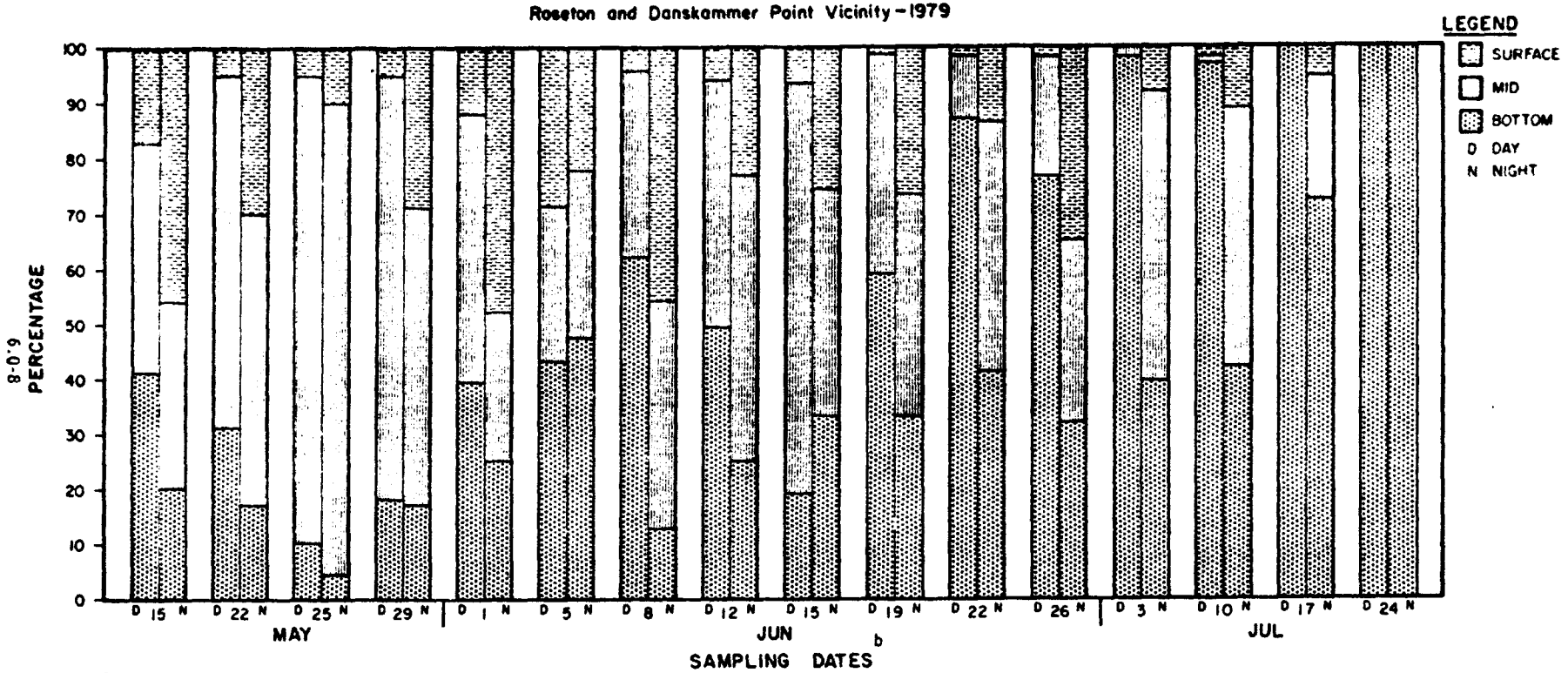
START DATE[c]	DEPTH	DAY STATIONS RDW	RDCH	RDR	RDE	NIGHT STATIONS RDW	RDCH	RDR	RDE
19 Jun	S	33.33	0.00	5.43	12.05	219.12	1257.48	267.49	257.25
	M	NR	464.73	279.35	NR	NR	426.78	1102.68	NR
	B	478.10	1161.85	538.46	19.42	215.86	827.75	1120.22	322.18
	Mean[d]	255.72	542.19	274.41	15.74	217.40	837.34	830.13	289.72
22 Jun	S	77.59	22.73	8.20	8.20	53.50	345.53	390.95	122.55
	M	NR	220.83	177.78	NR	NR	368.76	1179.04	NR
	B	44.65	352.94	5718.23	158.59	30.19	1854.84	737.82	166.58
	Mean[d]	61.12	198.83	1968.07	83.40	41.84	856.38	769.27	144.56
26 Jun	S	15.87	3.89	0.00	0.00	44.90	89.43	607.76	410.57
	M	NR	26.92	107.53	NR	NR	127.65	426.99	NR
	B	27.34	395.83	502.30	20.20	118.45	139.66	232.15	555.06
	Mean[d]	21.60	142.21	203.28	10.10	81.68	118.91	422.30	482.82
3 Jul	S	0 00	0.00	0.00	0.00	12.15	13.70	12.20	28.57
	M	NR	0.00	3.97	NR	NR	84.87	135.66	NR
	B	20.00	219.92	203.30	8.85	114.75	34.59	114.29	64.81
	Mean[d]	10.00	73.31	69.09	4.42	63.45	44.39	87.38	46.69
10 Jul	S	12.82	0.00	0.00	3.86	39.53	11.41	11.54	18.80
	M	NR	7.52	0.00	NR	NR	52.85	120.48	NR
	B	62.76	140.62	837.82	52.13	21.90	9.48	56.52	219.73
	Mean[d]	37.79	49.38	279.27	28.00	30.72	24.58	62.85	119.26
17 Jul	S	0.00	0.00	0.00	0.00	12.05	0.00	3.72	0.00
	M	NR	0.00	0.00	NR	NR	17.86	16.52	NR
	B	0.00	154.74	83.34	0.00	36.73	96.68	81.07	8.55
	Mean[d]	0.00	51.58	27.78	0.00	24.39	38.18	33.76	4.28
24 Jul	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	M	NR	0.00	0.00	NR	NR	0.00	0.00	NR
	B	20.00	0.00	0.00	4.52	8.37	0.00	0.00	4.76
	Mean[d]	10.00	0.00	0.00	2.26	4.18	0.00	0.00	2.38
31 Jul	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	M	NR	0.00	0.00	NR	NR	0.00	0.00	NR
	B	0.00	0.00	5.46	0.00	0.00	5.05	0.00	0.00
	Mean[d]	0.00	0.00	1.82	0.00	0.00	1.68	0.00	0.00
7 Aug	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	M	NR	0.00	0.00	NR	NR	0.00	4.05	NR
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Mean[d]	0.00	0.00	0.00	0.00	0.00	0.00	1.35	0.00
14 Aug	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	M	NR	0.00	0.00	NR	NR	0.00	0.00	NR
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Mean[d]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[a] Number of organisms/1000 m^3; includes *Morone* spp. allocated to either striped bass or white perch.
[b] Larvae include yolk-sac, post-yolk-sac and UID; juveniles excluded.
[c] All other sampling dates have concentrations of zero.
[d] Mean of sample depths.
S - Surface
M - Mid
B - Bottom
NR - Not required in sampling program.

FIGURE 6.0-1

DIEL MIGRATION FOR WHITE PERCH LARVAE[a]

Roseton and Danskammer Point Vicinity - 1979



[a] No. of organisms/1000 m^3; Larvae include yolk-sac post-yolk-sac and UID, Juveniles excluded;
[b] Larvae also included Morone Spp. allocated to either striped bass or white perch.
Abundance dates only; all stations combined.

early June samples. As the larvae grew, however, an increasing proportion were found at the bottom for both day and night.

White perch length-frequency data are summarized in Table 6.0-5. Lengths of white perch yolk-sac larvae ranged from 2.1 to 9.0 mm, with the majority in the 3.1 to 5.0 mm range. Post-yolk-sac larvae ranged from lengths of 3.1 to 22.0 mm. Several decreases in mean length are evidenced and are probably due to the multiple spawning behavior of white perch as well as the protracted spawning season. A comparison among stations does not reveal any distributional trends by size of larvae.

6.1.2.2 Striped Bass (Morone saxatilis). The striped bass is an anadromous species with a reproductive cycle typical of these freshwater spawners. The adults migrate from the ocean and ascend rivers to spawn, usually from April to June, then emigrate back to the ocean. Spawning occurs in freshwater areas where there are moderate to swift currents, narrow channels, and greater than average depths.

6.1.2.2.1 Eggs. Striped bass eggs were first collected on 15 May and were present on each date in at least one sample through 19 June (Table 6.0-6). No true abundance peak was reached during this period and a scattered distribution over time was evidenced. Station RDW consistently had the highest abundances of eggs with a decrease across the river to the east where the fewest striped bass eggs were collected. The mean river water temperatures during the presence of striped bass eggs ranged from 15.7 to 22.6°C. Raney (1952) reports striped bass spawning to occur at temperatures of 14.4°C and higher with a peak between 15.6 and 19.4°C, which is consistent with the observed values.

TABLE 6.0-5

SUMMARY OF WHITE PERCH LARVAL LENGTH FREQUENCY[a]

Roseton and Danskammer Point Vicinity - 1979

I YOLK-SAC

START DATE	RDW			RDCH			RDR			RDE		
	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN
15 May	7	3.1-5.0	4.0	4	3.1-5.0	4.3	4	3.1-5.0	4.2	1	4.1-5.0	4.3
22 May	0	NC	-	0	NC	-	1	3.1-4.0	3.5	0	NC	-
25 May	0	NC	-	0	NC	-	3	3.1-4.0	3.5	0	NC	-
29 May	1	3.1-4.0	3.5	8	6.1-8.0	7.1	1	3.1-4.0	3.8	0	NC	-
1 Jun	7	2.1-4.0	3.2	8	3.1-4.0	3.7	2	3.1-4.0	3.3	0	NC	-
5 Jun	2	2.1-4.0	3.3	1	3.1-4.0	3.8	1	2.1-3.0	3.0	1	3.1-4.0	3.2
8 Jun	3	3.1-4.0	3.6	3	4.1-6.0	5.0	0	NC	-	4	5.1-9.0	7.1
12 Jun	0	NC	-	2	3.1-4.0	3.6	0	NC	-	0	NC	-
15 Jun	0	NC	-	0	NC	-	1	3.1-4.0	3.5	0	NC	-
19 Jun	0	NC	-	0	NC	-	1	3.1-4.0	3.1	0	NC	-

II POST-YOLK-SAC

START DATE	RDW			RDCH			RDR			RDE		
	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN
15 May	2	3.1-5.0	4.1	1	4.1-5.0	4.5	12	3.1-5.0	4.4	11	3.1-5.0	4.3
22 May	54	3.1-7.0	4.8	206	3.1-7.0	5.1	301	3.1-8.0	5.1	103	3.1-7.0	4.9
25 May	95	3.1-8.0	5.4	324	3.1-8.0	5.4	266	3.1-8.0	5.5	67	3.1-15.0	5.4
29 May	43	4.1-9.0	6.6	241	3.1-13.0	6.6	332	3.1-9.0	6.1	197	3.1-9.0	5.9
1 Jun	63	3.1-9.0	5.5	338	3.1-10.0	5.9	289	3.1-9.0	6.0	205	3.1-9.0	6.3
5 Jun	63	3.1-10.0	4.8	136	3.1-9.0	4.7	233	3.1-9.0	5.0	206	3.1-10.0	5.2
8 Jun	47	3.1-9.0	5.2	290	3.1-10.0	5.4	252	3.1-9.0	5.0	125	4.1-10.0	7.2
12 Jun	72	3.1-12.0	6.6	298	3.1-12.0	6.2	207	3.1-11.0	5.3	29	3.1-7.0	4.5
15 Jun	172	3.1-14.0	5.9	317	3.1-12.0	6.2	301	3.1-14.0	6.3	137	3.1-12.0	6.2
19 Jun	174	3.1-13.0	6.9	300	3.1-13.0	6.4	300	3.1-9.0	5.8	127	3.1-14.0	7.0
22 Jun	50	3.1-15.0	7.1	298	3.1-12.0	6.4	282	3.1-13.0	7.1	96	3.1-16.0	8.4
26 Jun	46	4.1-17.0	11.0	146	3.1-13.0	8.1	260	3.1-14.0	8.1	122	3.1-13.0	7.3
3 Jul	36	5.1-22.0	12.4	85	4.1-14.0	7.9	111	3.1-16.0	9.2	22	5.1-14.0	8.5
10 Jul	31	4.1-18.0	10.7	47	3.1-16.0	9.3	106	4.1-17.0	10.9	66	4.1-18.0	11.3
17 Jul	12	6.1-17.0	13.6	54	5.1-17.0	12.5	40	5.1-18.0	11.4	2	13.1-17.0	15.1
24 Jul	7	11.1-17.0	13.2	0	NC	-	0	NC	-	2	14.1-17.0	15.3
31 Jul	0	NC	-	1	7.1-8.0	7.2	1	14.1-15.0	14.3	0	NC	-
7 Aug	0	NC	-	0	NC	-	1	16.1-17.0	16.4	0	NC	-

[a]Lengths measured in millimeters; depth and photoperiod combined.
Number - Number measured.
NC - None collected.

TABLE 6.0-6

MEAN[a] TOTAL ABUNDANCE[b] OF EGGS AND LARVAE[c] FOR STRIPED BASS

Roseton and Danskammer Point Vicinity - 1979

	EGGS					LARVAE				
	STATIONS					STATIONS				
START DATE[d]	RDW	RDCH	RDR	RDE	MEAN[e]	RDW	RDCH	RDR	RDE	MEAN[e]
1 May	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8 May	0.00	0.00	0.00	0.00	0.00	1.94	0.00	0.66	0.00	0.65
15 May	24.32	16.28	14.72	10.57	16.47	31.28	99.18	78.45	2.03	52.74
22 May	70.10	4.52	20.03	6.93	25.40	134.74	113.39	196.91	120.02	141.26
25 May	17.99	9.57	24.60	0.00	13.04	138.43	343.64	579.02	6.62	266.93
29 May	9.39	0.64	0.00	0.00	2.51	30.53	65.30	177.67	17.92	72.86
1 Jun	74.63	33.54	10.20	0.00	29.59	25.46	109.13	68.14	61.47	66.05
5 Jun	0.95	0.00	0.00	1.13	1.04	19.45	42.70	26.62	97.01	46.45
8 Jun	5.72	0.00	9.10	3.32	4.54	60.42	99.51	41.38	208.00	102.33
12 Jun	123.67	18.75	0.00	0.00	35.60	499.22	51.89	9.39	3.30	140.95
15 Jun	1.90	8.43	5.27	0.00	3.90	32.00	92.53	53.28	3.29	45.28
19 Jun	3.22	0.00	0.00	0.00	0.80	63.31	54.77	43.40	16.24	44.43
22 Jun	0.00	0.00	0.00	0.00	0.00	9.09	47.83	46.93	5.65	27.38
26 Jun	0.00	0.00	0.00	0.00	0.00	7.26	13.32	37.29	26.59	21.11
3 Jul	0.00	0.00	0.00	0.00	0.00	2.03	5.79	7.51	1.67	4.25
10 Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.16	13.54	6.92
17 Jul	0.00	0.00	0.00	0.00	0.00	0.00	11.86	4.11	2.14	4.53
24 Jul	0.00	0.00	0.00	0.00	0.00	2.05	0.82	0.00	0.00	0.73
31 Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[a]Mean of sample depths; mean of all day and all night collections at each station.
[b]Number of organisms/1000 m^3; includes *Morone* spp. allocated to either striped bass or white perch.
[c]Larvae include yolk-sac, post-yolk-sac and UID; juveniles excluded.
[d]All other sampling dates have concentrations of zero.
[e]Station mean.

6.1.2.2.2 Larvae. Striped bass larvae were first collected on 8 May and last observed in river samples on 24 July (Table 6.0-6). The peak abundance occurred on 25 May.

There was a more even distribution of larvae among stations for striped bass than was observed for white perch. The analysis (Table 6.0-7) demonstrates that although the ANOVA detects a significant difference among stations, the Tukey comparison is not powerful enough to detect where the difference lies. The order of abundance among stations is similar to white perch in that the two nearshore stations, RDE and RDW, have the lower abundances and the deeper channel stations, RDCH and RDR, have the higher numbers of striped bass larvae. It is not surprising that white perch and striped bass larvae, cogeneric species, have a similar habitat preference based on their similar life histories during early development stages.

Striped bass larvae were most abundant in day bottom samples throughout their entire presence in the study area (Table 6.0-8). However, night sampling suggests a diel vertical migration because the larvae are more evenly distributed throughout the water column (Figure 6.0-2). For each sample date, there is a higher concentration of striped bass larvae in bottom samples during the day than at night and higher concentrations in surface samples at night than during the day. This indicates a movement from the bottom during the day toward the surface at night. The mid-water zone appears to be an important habitat both during the day and at night. This migration by striped bass larvae appears to be similar to the diel migrations exhibited by white perch. It is evident that these organisms, even at the yolk-sac life stage, have the mobility to move vertically in the water column.

TABLE 6.0-7

STATISTICAL ANALYSIS OF STRIPED BASS LARVAL ABUNDANCE[a]

Roseton and Danskammer Point Vicinity - 1979

ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F
Date[b]	15	19.8804	1.3254	6.14*
Station	3	1.9922	0.6641	3.08*
Error	45	9.7165	0.2159	
Total	63	31.5891		

TUKEY COMPARISON (α= .05)

STATION: Smallest: RDE RDW RDCH RDR :Largest

[a]No./1000 m^3; mean over depth and photoperiod.
[b]Dates used were from 8 May through 17 July.
*Significant at the 95% level.

TABLE 6.0-8 (Page 1 of 2)

MEAN ABUNDANCE[a] OF STRIPED BASS LARVAE[b] BY SAMPLE DEPTH

Roseton and Danskammer Point Vicinity - 1979

START DATE[c]	DEPTH	DAY STATIONS				NIGHT STATIONS			
		RDW	RDCH	RDR	RDE	RDW	RDCH	RDR	RDE
1 May	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	M	NR	0.00	0.00	NR	NR	0.00	0.00	NR
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Mean[d]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8 May	S	0.00	0.00	0.00	0.00	0.00	0.00	3.97	0.00
	M	NR	0.00	0.00	NR	NR	0.00	0.00	NR
	B	7.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Mean[d]	3.88	0.00	0.00	0.00	0.00	0.00	1.32	0.00
15 May	S	10.96	4.29	4.57	8.10	13.22	319.33	276.15	0.00
	M	NR	44.61	13.10	NR	NR	0.00	22.64	NR
	B	70.07	217.57	87.56	0.00	30.84	9.26	66.67	0.00
	Mean[d]	40.52	88.82	35.08	4.05	22.03	109.53	121.82	0.00
22 May	S	20.33	0.00	0.00	4.20	147.17	221.62	322.45	159.66
	M	NR	100.10	43.48	NR	NR	123.24	236.50	NR
	B	314.76	173.31	367.15	4.78	56.68	62.02	211.86	311.41
	Mean[d]	167.54	91.14	136.88	4.49	101.92	135.63	256.94	235.54
25 May	S	141.02	7.94	7.97	0.00	196.46	259.84	73.64	13.16
	M	NR	222.22	411.52	NR	NR	16.16	1370.19	NR
	B	130.82	1072.63	1335.37	4.29	85.40	483.05	275.42	9.00
	Mean[d]	135.92	434.26	584.95	2.14	140.93	253.02	573.08	11.08
29 May	S	25.32	0.00	15.38	18.59	36.00	115.23	37.74	4.08
	M	NR	78.85	100.39	NR	NR	43.82	42.45	NR
	B	20.61	103.05	595.67	44.44	40.16	50.85	274.34	4.55
	Mean[d]	22.96	60.63	237.15	31.52	38.08	69.97	118.18	4.32
1 Jun	S	0.00	4.33	0.00	0.00	0.00	320.16	261.80	179.84
	M	NR	115.24	21.90	NR	NR	28.78	33.13	NR
	B	52.43	164.63	82.90	57.69	49.38	21.64	9.13	8.31
	Mean[d]	26.22	94.73	34.93	28.84	24.69	123.53	101.35	94.08
5 Jun	S	29.54	0.00	0.00	4.44	15.38	115.83	90.16	28.03
	M	NR	12.82	3.89	NR	NR	65.86	20.18	NR
	B	25.29	61.67	41.15	95.02	7.55	0.00	4.33	260.53
	Mean[d]	27.42	24.83	15.01	49.73	11.46	60.56	38.22	144.28
8 Jun	S	86.24	24.69	4.32	0.00	20.42	133.62	38.58	33.90
	M	NR	55.76	20.24	NR	NR	149.61	49.11	NR
	B	123.71	63.24	68.97	752.21	11.28	170.10	67.04	45.87
	Mean[d]	104.98	47.90	31.18	376.10	15.85	151.11	51.58	39.88
12 Jun	S	94.34	0.00	0.00	0.00	61.16	44.12	8.37	4.33
	M	NR	33.90	8.13	NR	NR	45.28	30.42	NR
	B	1797.01	118.09	0.00	0.00	43.80	69.96	9.39	8.85
	Mean[d]	945.68	50.66	2.71	0.00	52.48	53.12	16.06	6.59

[a]Number of organisms/1000 m^3; includes Morone spp. allocated to either striped bass or white perch.
[b]Larvae include yolk-sac, post-yolk-sac and UID; juveniles excluded.
[c]All other sampling dates have concentrations of zero.
[d]Mean of sample depths.
S - Surface.
M - Mid.
B - Bottom.
NR - Not required in sampling program.

TABLE 6.0-8 (Page 2 of 2)

MEAN ABUNDANCE[a] OF STRIPED BASS LARVAE[b] BY SAMPLE DEPTH

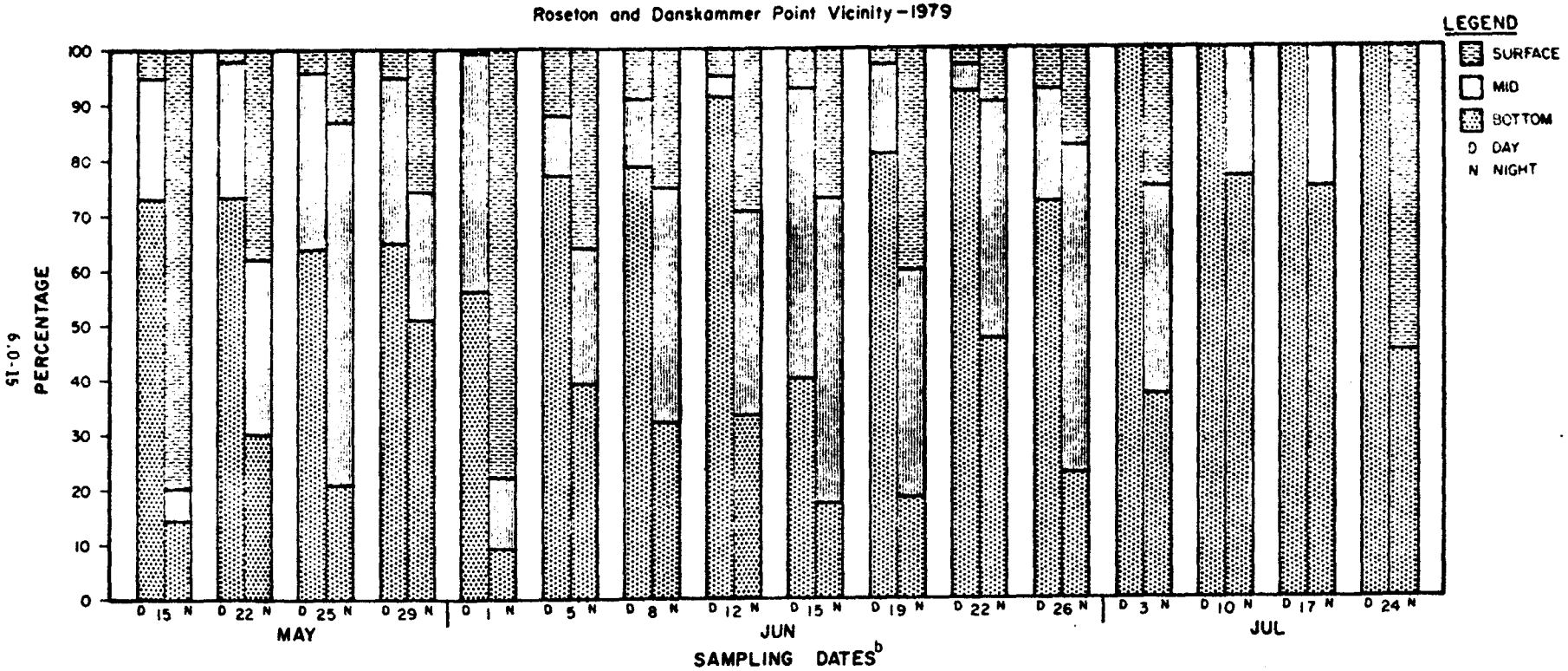
START DATE[c]	DEPTH	DAY STATIONS				NIGHT STATIONS			
		RDW	RDCH	RDR	RDE	RDW	RDCH	RDR	RDE
15 Jun	S	29.86	0.00	3.69	0.00	37.66	155.07	44.91	13.14
	M	NR	89.49	34.88	NR	NR	192.14	73.17	NR
	B	7.60	88.79	89.43	0.00	52.85	29.66	73.59	0.00
	Mean[d]	18.73	59.43	42.67	0.00	45.26	125.62	63.89	6.57
19 Jun	S	7.41	0.00	0.00	0.00	19.92	163.35	98.77	39.86
	M	NR	20.75	4.05	NR	NR	54.39	111.61	NR
	B	212.88	23.12	7.33	0.00	13.01	66.99	38.66	25.10
	Mean[d]	110.14	14.62	3.79	0.00	16.46	94.91	83.01	32.48
22 Jun	S	8.62	0.00	0.00	0.00	8.23	16.68	12.35	0.00
	M	NR	8.33	0.00	NR	NR	47.21	39.30	NR
	B	15.72	58.82	209.94	17.62	3.77	155.91	20.00	4.98
	Mean[d]	12.17	22.38	69.98	8.81	6.00	73.27	23.88	2.49
26 Jun	S	3.97	0.00	0.00	3.95	4.08	12.20	19.00	48.78
	M	NR	7.69	3.58	NR	NR	12.35	133.32	NR
	B	15.63	36.46	27.65	0.00	5.35	11.17	40.18	53.64
	Mean[d]	9.80	14.72	10.41	1.98	4.72	11.91	64.17	51.21
3 Jul	S	0.00	0.00	0.00	0.00	0.00	0.00	20.33	4.08
	M	NR	0.00	0.00	NR	NR	14.76	3.88	NR
	B	4.00	12.45	4.50	0.00	4.10	7.52	16.33	9.26
	Mean[d]	2.00	4.15	1.50	0.00	2.05	7.43	13.51	6.67
10 Jul	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	M	NR	0.00	0.00	NR	NR	0.00	8.03	NR
	B	0.00	0.00	72.58	4.74	0.00	0.00	4.35	49.33
	Mean[d]	0.00	0.00	24.19	2.37	0.00	0.00	4.13	24.66
17 Jul	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	M	NR	0.00	0.00	NR	NR	3.57	9.90	NR
	B	0.00	5.26	4.90	0.00	0.00	62.20	9.84	8.55
	Mean[d]	0.00	1.75	1.63	0.00	0.00	21.92	6.58	4.28
24 Jul	S	0.00	0.00	0.00	0.00	0.00	5.18	0.00	0.00
	M	NR	0.00	0.00	NR	NR	0.00	0.00	NR
	B	4.00	0.00	0.00	0.00	4.18	0.00	0.00	0.00
	Mean[d]	2.00	0.00	0.00	0.00	2.09	1.73	0.00	0.00
31 Jul	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	M	NR	0.00	0.00	NR	NR	0.00	0.00	NR
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Mean[d]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[a]Number of organisms/1000 m^3; includes Morone spp. allocated to either striped bass or white perch.
[b]Larvae include yolk-sac, post-yolk-sac and UID; juveniles excluded.
[c]All other sampling dates were concentrations of zero.
[d]Mean of sample depths.
S - Surface
M - Mid
B - Bottom
NR - Not required in sampling program.

FIGURE 6.0-2

DIEL MIGRATION FOR STRIPED BASS LARVAE[a]

Roseton and Danskammer Point Vicinity – 1979



[a] No. of organisms/1000 m^3; Larvae include yolk-sac, post-yolk-sac and UID, Juveniles excluded; Larvae also include Morone Spp. allocated to either striped bass or white perch.

[b] Abundance dates only; all stations combined.

Length-frequency data for striped bass larvae are presented in Table 6.0-9. Yolk-sac larvae ranged from 2.1 to 9.0 mm and post-yolk-sac larvae from 3.1 to 20.0 mm. There appears to be a general decrease in lengths of both yolk-sac and post-yolk-sac larvae on 29 May which could indicate a secondary spawn. There does not appear to be a difference for length-frequency values among stations. Juvenile data are not included due to their sparsity in samples.

6.1.2.3 Alosa spp. Blueback herring (Alosa aestivales) and alewife (A. pseudoharengus) are primarily marine forage species who utilize the estuary to spawn in fresh and brackish water areas. Blueback herring do not ascend the river as far as the alewife to spawn. Both species leave the region as young-of-the-year juveniles in the fall. Little is known of the life history of either species at sea.

6.1.2.3.1 Eggs. Alosa spp. eggs were first observed in samples on 11 April, reached a moderate peak on 15 May, and were last collected on 8 June (Table 6.0-10). Alosa spp. egg abundance was sparse in 1979 river samples. No eggs were collected at RDE. As was demonstrated for Morone spp. eggs, there is a decrease in egg abundance going across the river from the west to the east. Mean river temperatures ranged from 6.0 to 20.9°C.

6.1.2.3.2 Larvae. Alosa spp. larvae were first collected on 1 May, four weeks after the appearance of eggs (Table 6.0-10). These larvae were found at every station until 24 July, after which they were not found in any samples. Peak Alosa spp. abundance was recorded on 29 May.

TABLE 6.0-9

SUMMARY OF STRIPED BASS LARVAL LENGTH FREQUENCY[a]

Roseton and Danskammer Point Vicinity - 1979

I YOLK-SAC

START DATE	RDW			RDCH			RDR			RDE		
	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN
8 May	0	NC	-	0	NC	-	1	6.1-7.0	6.4	0	NC	-
15 May	28	3.1-6.0	4.4	87	4.1-7.0	5.4	91	3.1-7.0	5.4	2	5.1-6.0	5.4
22 May	83	4.1-8.0	6.1	70	4.1-9.0	6.2	108	4.1-8.0	6.1	43	3.1-7.0	5.4
25 May	111	3.1-8.0	5.7	197	3.1-7.0	5.9	184	3.1-8.0	5.5	3	2.1-6.0	4.1
29 May	19	3.1-7.0	4.2	70	2.1-7.0	4.8	136	2.1-6.0	4.3	16	3.1-6.0	3.9
1 Jun	24	3.1-7.0	4.3	99	2.1-7.0	5.1	89	3.1-7.0	5.2	54	3.1-7.0	5.0
5 Jun	12	3.1-6.0	5.0	25	3.1-7.0	5.4	12	3.1-7.0	5.1	27	3.1-7.0	5.5
8 Jun	52	3.1-7.0	5.4	119	4.1-7.0	5.6	37	3.1-7.0	5.5	50	4.1-7.0	5.6
12 Jun	95	3.1-7.0	5.1	46	3.1-6.0	5.1	7	3.1-6.0	5.1	0	NC	-
15 Jun	20	3.1-6.0	5.1	58	3.1-8.0	5.4	43	3.1-6.0	4.9	0	NC	-
19 Jun	30	4.1-7.0	5.5	9	5.1-7.0	5.6	10	4.1-6.0	5.1	1	4.1-5.0	4.3
22 Jun	3	3.1-6.0	4.8	3	4.1-6.0	4.9	16	4.1-6.0	5.4	0	NC	-
26 Jun	1	3.1-4.0	3.9	4	4.1-6.0	5.1	4	4.1-6.0	5.4	0	NC	-
3 Jul	0	NC	-	0	NC	-	1	5.1-6.0	5.7	0	NC	-
11 Jul	0	NC	-	0	NC	-	1	5.1-6.0	5.4	0	NC	-

II POST-YOLK-SAC

START DATE	RDW			RDCH			RDR			RDE		
	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN
22 May	27	5.1-8.0	6.6	63	5.1-9.0	6.6	104	5.1-8.0	6.7	49	5.1-8.0	6.6
25 May	2	6.1-8.0	6.9	39	5.1-9.0	6.7	76	5.1-9.0	6.7	4	6.1-8.0	7.4
29 May	4	5.1-6.0	5.6	27	4.1-11.0	6.3	32	4.1-8.0	6.0	1	6.1-7.0	6.5
1 Jun	1	8.1-9.0	8.9	27	3.1-9.0	4.8	2	5.1-10.0	7.7	4	8.1-10.0	9.0
5 Jun	6	5.1-7.0	6.0	39	4.1-9.0	5.7	27	4.1-7.0	5.7	56	4.1-9.0	5.9
8 Jun	8	5.1-7.0	5.9	18	5.1-7.0	5.9	16	4.1-7.0	5.9	27	5.1-11.0	6.5
12 Jun	10	5.1-7.0	6.0	31	5.1-9.0	6.0	7	4.1-7.0	5.6	2	13.1-15.0	14.1
15 Jun	11	5.1-8.0	6.2	65	4.1-8.0	5.6	32	5.1-8.0	6.3	3	5.1-8.0	6.7
19 Jun	19	5.1-8.0	6.1	65	5.1-19.0	6.5	48	5.1-9.0	6.2	16	5.1-8.0	6.1
22 Jun	6	5.1-8.0	6.2	52	5.1-8.0	6.2	39	5.1-15.0	7.8	5	4.1-20.0	8.3
26 Jun	6	4.1-15.0	8.8	13	4.1-12.0	6.6	48	4.1-15.0	6.9	24	5.1-17.0	9.1
3 Jul	2	11.1-16.0	13.7	9	5.1-9.0	6.5	10	5.1-17.0	8.7	3	7.1-10.0	8.3
10 Jul	0	NC	-	0	NC	-	23	9.1-17.0	12.6	12	7.1-16.0	13.2
17 Jul	0	NC	-	15	9.1-17.0	14.4	5	14.1-19.0	16.3	2	13.1-16.0	14.6
24 Jul	2	13.1-19.0	16.0	1	16.1-17.0	16.9	0	NC	-	0	NC	-

[a]Lengths measured in millimeters; depth and photoperiod combined.
Number - Number lengthened.
NC - None collected.

TABLE 6.0-10

MEAN[a] TOTAL ABUNDANCE[b] OF EGGS AND LARVAE[c] FOR ALOSA SPP.

Roseton and Danskammer Point Vicinity - 1979

START DATE[d]	EGGS STATIONS RDW	RDCH	RDR	RDE	MEAN[e]	LARVAE STATIONS RDW	RDCH	RDR	RDE	MEAN[e]
27 Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11 Apr	6.57	0.00	0.00	0.00	1.64	0.00	0.00	0.00	0.00	0.00
17 Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24 Apr	18.13	0.77	4.05	0.00	5.74	0.00	0.00	0.00	0.00	0.00
1 May	1.97	3.19	0.00	0.00	1.29	9.98	3.67	3.49	1.06	4.55
8 May	19.34	0.58	0.00	0.00	4.98	18.28	5.31	3.29	48.87	18.94
15 May	28.49	1.32	3.08	0.00	8.22	33.82	15.54	45.17	64.89	39.86
22 May	0.00	0.00	0.00	0.00	0.00	29.51	31.01	88.90	191.21	85.16
25 May	27.03	0.93	0.00	0.00	6.99	264.23	709.78	439.25	259.39	418.16
29 May	3.02	0.00	0.60	0.00	0.90	1042.48	810.17	2910.43	3647.18	2102.56
1 Jun	3.84	2.04	0.00	0.00	1.47	1751.98	1136.11	1266.46	2463.03	1654.40
5 Jun	0.00	0.00	0.00	0.00	0.00	537.65	539.37	1060.33	1444.44	895.45
8 Jun	0.94	0.00	0.00	0.00	0.24	615.04	720.09	1375.99	834.61	886.43
12 Jun	0.00	0.00	0.00	0.00	0.00	580.06	176.21	708.78	2824.80	1072.46
15 Jun	0.00	0.00	0.00	0.00	0.00	483.75	345.55	526.61	1150.29	626.55
19 Jun	0.00	0.00	0.00	0.00	0.00	87.39	203.83	192.88	364.29	212.10
22 Jun	0.00	0.00	0.00	0.00	0.00	359.35	264.24	225.51	339.56	297.16
26 Jun	0.00	0.00	0.00	0.00	0.00	157.06	155.54	184.74	102.41	149.94
3 Jul	0.00	0.00	0.00	0.00	0.00	26.56	10.57	35.98	54.96	32.02
10 Jul	0.00	0.00	0.00	0.00	0.00	27.43	8.73	8.65	14.84	14.91
17 Jul	0.00	0.00	0.00	0.00	0.00	3.06	3.22	4.13	6.31	4.18
24 Jul	0.00	0.00	0.00	0.00	0.00	2.10	1.54	2.05	6.85	3.14
31 Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[a] Mean of sample depths; mean of all day and all night collections at each station.
[b] Number of organisms/1000 m^3.
[c] Larvae include yolk-sac, post-yolk-sac and UID; juveniles excluded.
[d] All other sampling dates have concentrations of zero.
[e] Station mean.

Station RDE had the highest abundance and was not significantly different from Station RDR (Table 6.0-11). These two stations are the most easterly stations sampled. Station RDCH generally had the lowest concentrations of Alosa spp. and was not significantly different from either RDW or RDR. This distributional pattern differs from that found for white perch and striped bass larvae collected concurrently. The Alosa spp. larvae appear to be selecting the east side of the river as a preferred habitat whereas Morone spp. larvae appear to prefer the deeper channel habitat.

The vertical distribution of Alosa spp. larvae (Table 6.0-12) is different between day and night, and a diel vertical migration appears to be occurring opposite to that found for white perch and striped bass (Figure 6.0-3). Concentrations of Alosa spp. larvae in bottom samples are higher at night than during the day and concentrations in surface and mid-samples combined are higher during the day than at night. There appears to be high concentrations of these larvae in the upper water layers during the day and a downward movement at night. This could be due to feeding mechanisms, a physiochemical or phototaxis reaction, or an escape mechanism from predators. It does seem apparent, however, that Alosa and Morone spp. larvae are sharing the same water body and are moving in opposite vertical directions during day and night and are distributed horizontally with the greatest concentrations at different locations.

A summary of Alosa spp. length-frequency data are presented in Table 6.0-13. Concentrations of yolk-sac larvae were relatively light whereas post-yolk-sac larvae were more frequent in samples. Yolk-sac larvae ranged from 3.1 to 8.0 mm and post-yolk-sac from 4.1 to 26.0 mm. Increases in mean length are fairly steady, and a sharper increase is witnessed on 3 July for post-yolk-sac larvae. No

TABLE 6.0-11

STATISTICAL ANALYSIS OF ALOSA SPP. LARVAL ABUNDANCE[a]

Roseton and Danskammer Point Vicinity - 1979

ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F
Date[b]	17	56.4689	3.3217	59.80*
Station	3	1.2058	0.4019	7.24*
Error	51	2.8328	0.0556	
Total	71	60.5075		

TUKEY COMPARISON (α = .05)

STATION: Smallest: RDCH RDW RDR RDE :Largest

[a]No./1000 m^3; mean over depth and photoperiod.
[b]Dates used were from 1 May through 24 July.
*Significant at the 95% level.

TABLE 6.0-12 (Page 1 of 2)

MEAN ABUNDANCE[a] OF ALOSA SPP. LARVAE[b] BY SAMPLE DEPTH

Roseton and Danskammer Point Vicinity - 1979

START DATE[c]	DEPTH	DAY STATIONS				NIGHT STATIONS			
		RDW	RDCH	RDR	RDE	RDW	RDCH	RDR	RDE
24 Apr	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	M	NR	0.00	0.00	NR	NR	0.00	0.00	NR
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Mean[d]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 May	S	4.07	0.00	0.00	0.00	0.00	7.72	0.00	4.22
	M	NR	0.00	4.12	NR	NR	0.00	0.00	NR
	B	20.75	5.75	4.48	0.00	15.09	8.55	12.30	0.00
	Mean[d]	12.41	1.92	2.87	0.00	7.54	5.42	4.10	2.11
8 May	S	0.00	12.35	3.85	94.74	20.33	6.92	15.87	0.00
	M	NR	0.00	0.00	NR	NR	0.00	0.00	NR
	B	31.01	0.00	0.00	100.72	21.74	12.55	0.00	0.00
	Mean[d]	15.50	4.12	1.28	97.73	21.04	6.49	5.29	0.00
15 May	S	48.19	47.21	54.79	170.04	26.43	4.20	37.66	60.87
	M	NR	33.46	113.54	NR	NR	0.00	0.00	NR
	B	47.43	8.37	23.36	18.78	13.22	0.00	41.67	9.85
	Mean[d]	47.81	29.68	63.90	94.41	19.82	1.40	26.44	35.36
22 May	S	48.78	29.29	15.50	79.83	12.55	4.08	24.49	168.07
	M	NR	16.33	239.13	NR	NR	70.42	6.71	NR
	B	0.00	0.00	14.49	81.34	56.68	65.89	233.50	435.36
	Mean[d]	24.39	15.21	89.71	80.58	34.62	46.80	88.23	301.72
25 May	S	48.69	1039.68	382.47	265.06	365.08	188.98	662.79	223.68
	M	NR	1897.12	374.49	NR	NR	0.00	810.70	NR
	B	71.70	743.02	95.74	163.09	571.43	389.83	309.32	385.71
	Mean[d]	60.20	1226.61	284.23	214.07	468.26	192.94	594.27	304.70
29 May	S	1679.32	2591.09	5711.54	4706.32	796.00	288.07	3122.64	1706.12
	M	NR	1326.16	1467.18	NR	NR	179.28	2921.99	NR
	B	108.23	175.57	469.31	2944.44	1586.35	300.85	3769.91	5231.82
	Mean[d]	893.78	1364.27	2549.34	3825.38	1191.18	256.07	3271.51	3468.97
1 Jun	S	1221.40	1571.43	4197.03	3029.17	0.00	1407.11	493.56	748.03
	M	NR	457.25	456.20	NR	NR	368.20	247.90	NR
	B	1411.99	1097.56	834.20	250.00	4374.49	1915.09	1369.86	5824.90
	Mean[d]	1316.70	1042.08	1829.14	1639.58	2187.24	1230.13	703.77	3286.46
5 Jun	S	88.61	76.27	2227.68	3400.00	450.00	1571.43	668.03	239.13
	M	NR	42.74	1361.87	NR	NR	580.99	462.96	NR
	B	83.67	17.62	403.29	357.47	1528.30	947.17	1238.10	1781.13
	Mean[d]	86.14	45.54	1330.95	1878.74	989.15	1033.20	789.70	1010.13
8 Jun	S	200.00	395.06	1795.18	480.52	1233.20	2107.76	2319.50	1746.48
	M	NR	132.14	2016.19	NR	NR	685.04	1348.21	NR
	B	82.47	83.00	112.07	88.50	943.61	917.53	664.80	1022.94
	Mean[d]	141.24	203.40	1307.81	284.51	1088.40	1236.78	1444.17	1384.71

[a] Number of organisms/1000 m^3.
[b] Larvae include yolk-sac, post-yolk-sac and UID; juveniles excluded.
[c] All other sampling dates have concentrations of zero.
[d] Mean of sample depths.
S - Surface.
M - Mid.
B - Bottom.
NR - Not required in sampling program.

TABLE 6.0-12 (Page 2 of 2)

MEAN ABUNDANCE[a] OF ALOSA SPP. LARVAE[b] BY SAMPLE DEPTH

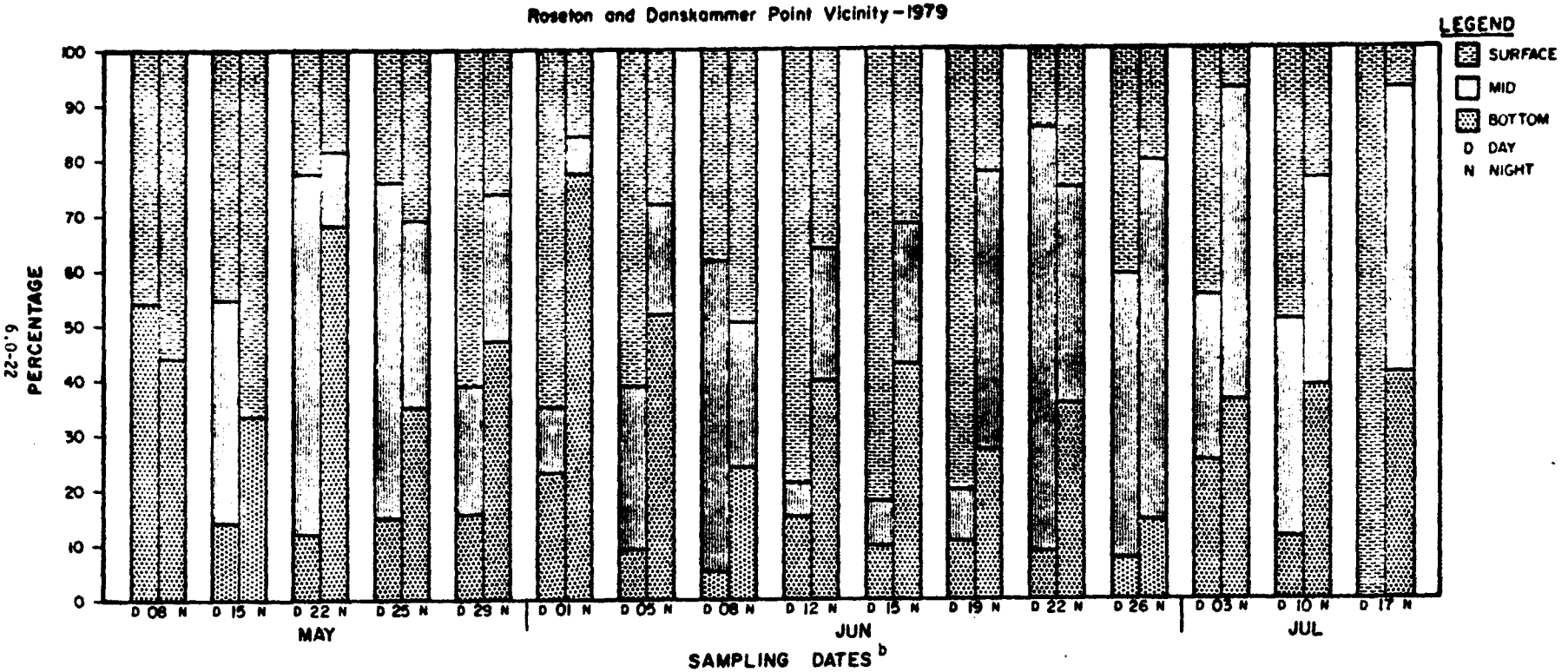
START DATE[c]	DEPTH	DAY STATIONS				NIGHT STATIONS			
		RDW	RDCH	RDR	RDE	RDW	RDCH	RDR	RDE
12 Jun	S	26.42	28.46	223.21	5089.29	1055.30	238.97	1669.46	2086.58
	M	NR	80.51	130.08	NR	NR	256.60	1437.26	NR
	B	11.24	4.17	135.37	866.67	1227.27	448.56	657.28	3256.64
	Mean[d]	18.83	37.71	162.89	2977.98	1141.28	314.71	1254.67	2671.61
15 Jun	S	140.56	251.82	173.43	2497.96	619.25	259.91	737.05	1343.48
	M	NR	54.47	96.90	NR	NR	663.76	540.65	NR
	B	53.23	72.16	44.53	194.66	1121.95	771.19	1567.10	565.04
	Mean[d]	96.90	126.15	104.95	1346.31	870.60	564.95	948.27	954.26
19 Jun	S	0.00	0.00	21.74	594.38	167.33	316.67	193.42	340.58
	M	NR	4.15	32.39	NR	NR	569.04	616.07	NR
	B	0.00	17.34	36.63	24.27	182.20	315.79	257.01	497.91
	Mean[d]	0.00	7.16	30.25	309.32	174.76	400.50	355.50	419.24
22 Jun	S	34.48	40.91	24.59	90.16	580.25	149.61	201.65	593.14
	M	NR	316.67	217.78	NR	NR	373.95	838.43	NR
	B	30.19	0.00	7.62	57.27	792.45	704.30	42.97	617.65
	Mean[d]	32.34	119.19	90.00	73.72	686.35	409.29	361.02	605.40
26 Jun	S	11.90	3.89	38.14	63.24	395.92	199.19	84.51	186.99
	M	NR	3.85	71.68	NR	NR	676.00	735.41	NR
	B	15.63	0.00	4.61	0.00	204.76	50.28	174.11	159.42
	Mean[d]	13.76	2.58	38.14	31.62	300.34	308.49	331.34	173.20
3 Jul	S	12.00	0.00	0.00	12.00	4.05	0.00	16.26	36.73
	M	NR	8.23	0.00	NR	NR	51.66	170.54	NR
	B	0.00	0.00	8.66	4.42	90.16	3.51	20.41	166.67
	Mean[d]	6.00	2.74	2.89	8.21	47.10	18.39	69.07	120.06
10 Jul	S	0.00	10.99	0.00	7.72	43.48	0.00	15.38	11.28
	M	NR	7.52	0.00	NR	NR	24.39	32.13	NR
	B	4.18	0.00	0.00	0.00	62.04	9.48	4.35	40.36
	Mean[d]	2.09	6.17	0.00	3.86	52.76	11.29	17.29	25.82
17 Jul	S	0.00	0.00	0.00	3.88	0.00	3.91	3.72	0.00
	M	NR	0.00	0.00	NR	NR	10.71	16.50	NR
	B	0.00	0.00	0.00	0.00	12.24	4.67	4.55	21.37
	Mean[d]	0.00	0.00	0.00	1.94	6.12	6.43	8.26	10.68
24 Jul	S	0.00	0.00	0.00	0.00	0.00	5.18	0.00	27.40
	M	NR	0.00	0.00	NR	NR	4.02	12.30	NR
	B	0.00	0.00	0.00	0.00	8.37	0.00	0.00	0.00
	Mean[d]	0.00	0.00	0.00	0.00	4.18	3.07	4.10	13.70
31 Jul	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	M	NR	0.00	0.00	NR	NR	0.00	0.00	NR
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Mean[d]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[a] Number of organisms/1000 m^3.
[b] Larvae include yolk-sac, post-yolk-sac and UID; juveniles excluded.
[c] All other sampling dates have concentrations of zero.
[d] Mean of sample depths.
S - Surface.
M - Mid.
B - Bottom.
NR - Not required in sampling program.

FIGURE 6.0-3

DIEL MIGRATION FOR ALOSA SPP. LARVAE[a]

Roseton and Danskammer Point Vicinity – 1979



[a]No. of organisms/1000 m^3; Larvae include yolk-sac, post-yolk-sac and UID; Juveniles excluded.
[b]Abundance dates only. all stations combined.

TABLE 6.0-13

SUMMARY OF ALOSA SPP. LARVAL LENGTH FREQUENCY[a]

Roseton and Danskammer Point Vicinity - 1979

I. YOLK-SAC

	RDW			RDCH			RDR			RDE		
START DATE	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN
1 May	8	4.1-7.0	5.3	4	5.1-7.0	5.9	2	4.1-7.0	5.3	1	5.1-6.0	5.6
8 May	4	5.1-7.0	6.3	1	5.1-6.0	5.7	0	-	-	0	-	-
15 May	8	3.1-7.0	5.6	2	5.1-8.0	6.4	0	-	-	1	6.1-7.0	6.3
22 May	0	-	-	1	4.1-5.0	4.9	0	-	-	0	-	-
25 May	29	5.1-8.0	5.7	16	4.1-7.0	5.6	18	4.1-7.0	5.6	0	-	-
1 Jun	1	3.1-4.0	4.0	3	4.1-7.0	5.6	1	5.1-6.0	5.4	0	-	-
5 Jun	3	4.1-6.0	5.6	0	-	-	0	-	-	0	-	-
12 Jun	2	4.1-6.0	5.0	0	-	-	1	5.1-6.0	5.5	0	-	-

II. POST-YOLK-SAC

	RDW			RDCH			RDR			RDE		
START DATE	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN
1 May	0	-	-	0	-	-	3	4.1- 7.0	5.7	0	-	-
8 May	7	6.1- 8.0	7.0	7	5.1- 8.0	6.6	5	6.1- 9.0	7.4	54	5.1- 9.0	7.1
15 May	24	5.1-11.0	7.0	21	6.1- 9.0	7.5	61	4.1-10.0	7.4	60	5.1-11.0	7.8
22 May	28	5.1-11.0	7.9	32	5.1-12.0	8.1	110	5.1-13.0	8.9	136	5.1-14.0	9.5
25 May	114	5.1-15.0	9.5	272	4.1-14.0	9.2	300	4.1-17.0	9.8	216	4.1-16.0	9.6
29 May	205	4.1-14.0	8.4	323	5.1-16.0	9.6	360	5.1-17.0	9.0	240	5.1-17.0	9.4
1 Jun	179	5.1-14.0	9.1	357	4.1-16.0	10.1	354	5.1-16.0	9.6	240	5.1-17.0	9.2
5 Jun	158	4.1-15.0	8.9	209	5.1-17.0	9.1	360	5.1-16.0	9.1	195	5.1-15.0	9.4
8 Jun	192	5.1-21.0	9.8	297	5.1-19.0	10.4	325	5.1-16.0	9.9	200	5.1-22.0	11.2
12 Jun	128	5.1-19.0	10.9	206	5.1-19.0	11.1	290	5.1-17.0	10.3	240	6.1-17.0	10.2
15 Jun	166	5.1-24.0	11.6	267	5.1-23.0	11.3	263	5.1-20.0	11.2	231	6.1-16.0	10.1
19 Jun	81	9.1-25.0	14.4	184	7.1-21.0	13.3	180	6.1-22.0	12.9	185	5.1-21.0	12.3
22 Jun	136	7.1-19.0	14.8	227	7.1-24.0	14.6	180	5.1-23.0	14.0	155	5.1-25.0	15.7
26 Jun	107	8.1-24.0	15.6	115	8.1-23.0	15.5	152	6.1-23.0	14.1	88	6.1-24.0	15.6
3 Jul	26	11.1-26.0	21.3	17	10.1-26.0	18.4	52	9.1-30.0	19.8	47	8.1-24.0	18.2
10 Jul	25	10.1-26.0	21.8	13	9.1-22.0	14.9	13	8.1-25.0	15.0	13	9.1-24.0	19.9
17 Jul	3	10.1-21.0	15.8	5	10.1-23.0	17.5	7	12.1-18.0	15.5	6	10.1-20.0	14.0
24 Jul	2	22.1-24.0	23.3	2	10.1-14.0	12.0	2	14.1-17.0	15.8	6	14.1-22.0	18.0

[a]Lengths measured in millimeters; depth and photoperiod combined.
Number - Number lengthed.

apparent differences exist among stations for length-frequency distribution. Once again, juveniles are not included in the length-frequency analysis due to low abundance.

6.1.2.4 American shad (Alosa sapidissima). The anadromous American shad ascends rivers and streams in the spring to spawn. Spawning has been found to be related to water temperature (Leim 1924). After spawning, adults return to the sea until the next spawning season. Like blueback herring and alewife, young shad enter the sea by autumn. In the Hudson River, there is a fishery for American shad during their annual spawning runs.

6.1.2.4.1 Eggs. No American shad eggs were collected in 1979 river ichthyoplankton samples.

6.1.2.4.2 Larvae. American shad larvae were first collected on 15 May and were present in samples through 26 June (Table 6.0-14). Peak abundance occurred in the period from 29 May-8 June. Concentrations of shad larvae were less than the concentrations for white perch, striped bass, and Alosa spp. found during the same time.

Concentrations of shad larvae in night samples were generally greater than day samples. American shad larvae appear to be most abundant in the upper water layers at night (Table 6.0-15), however, the limited amount of shad collected makes any conclusions about their distribution quite difficult.

Table 6.0-16 presents the length-frequency summary for American shad larvae. Yolk-sac larvae ranged from 7.1 to 13.0 mm, but were collected on only five dates and were relatively scarce. The yolk-sac larvae of American shad are generally larger than

TABLE 6.0-14

MEAN[a] TOTAL ABUNDANCE[b] OF EGGS[c] AND LARVAE[d] FOR AMERICAN SHAD

Roseton and Danskammer Point Vicinity - 1979

	LARVAE				
	STATIONS				
START DATE[e]	RDW	RDCH	RDR	RDE	MEAN[f]
8 May	0.00	0.00	0.00	0.00	0.00
15 May	1.11	1.40	2.87	0.00	1.34
22 May	1.05	1.38	2.70	1.05	1.54
25 May	6.90	1.37	1.94	0.00	2.55
29 May	16.21	21.54	16.37	6.80	15.23
1 Jun	13.27	35.38	15.42	14.83	19.72
5 Jun	6.81	4.32	7.06	3.74	5.48
8 Jun	25.48	15.85	2.08	32.35	18.94
12 Jun	7.82	4.47	1.38	3.25	4.23
15 Jun	1.02	7.29	2.05	0.00	2.59
19 Jun	0.00	2.79	0.00	1.82	1.15
22 Jun	3.95	4.86	0.00	2.45	2.82
26 Jun	0.00	0.00	0.65	0.00	0.16
3 Jul	0.00	0.00	0.00	0.00	0.00

[a]Mean of sample depths; mean of all day and all night collections at each station.
[b]Number of organisms/1000 m^3.
[c]No eggs were collected.
[d]Larvae include yolk-sac, post-yolk-sac and UID; juveniles excluded.
[e]All other sampling dates have concentrations of zero.
[f]Station mean.

TABLE 6.0-15 (Page 1 of 2)

MEAN ABUNDANCE[a] OF AMERICAN SHAD LARVAE[b] BY SAMPLE DEPTH

Roseton and Danskammer Point Vicinity - 1979

START DATE[c]	DEPTH	DAY STATIONS				NIGHT STATIONS			
		RDW	RDCH	RDR	RDE	RDW	RDCH	RDR	RDE
8 May	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	M	NR	0.00	0.00	NR	NR	0.00	0.00	NR
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Mean[d]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 May	S	0.00	0.00	0.00	0.00	0.00	4.20	8.37	0.00
	M	NR	0.00	0.00	NR	NR	0.00	0.00	NR
	B	0.00	4.18	4.67	0.00	4.41	0.00	4.17	0.00
	Mean[d]	0.00	1.39	1.56	0.00	2.20	1.40	4.18	0.00
22 May	S	0.00	4.18	7.75	4.20	4.18	0.00	4.08	0.00
	M	NR	4.08	4.35	NR	NR	0.00	0.00	NR
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Mean[d]	0.00	2.75	4.03	2.10	2.09	0.00	1.36	0.00
25 May	S	0.00	0.00	0.00	0.00	11.90	0.00	11.63	0.00
	M	NR	8.23	0.00	NR	NR	0.00	0.00	NR
	B	3.77	0.00	0.00	0.00	11.90	0.00	0.00	0.00
	Mean[d]	1.88	2.74	0.00	0.00	11.90	0.00	3.88	0.00
29 May	S	8.44	4.05	0.00	7.43	36.00	90.53	75.47	4.08
	M	NR	10.75	3.86	NR	NR	23.90	0.00	NR
	B	4.33	0.00	14.44	11.11	16.06	0.00	4.42	4.55
	Mean[d]	6.38	4.93	6.10	6.18	26.03	38.14	26.63	4.32
1 Jun	S	3.69	21.65	14.87	8.33	0.00	130.43	42.92	31.50
	M	NR	7.43	14.60	NR	NR	4.18	0.00	NR
	B	0.00	6.10	15.54	0.00	49.38	42.45	4.57	19.46
	Mean[d]	1.84	11.73	15.00	4.16	24.69	59.02	15.83	25.48
5 Jun	S	4.22	0.00	0.00	0.00	19.23	11.58	16.39	3.62
	M	NR	0.00	0.00	NR	NR	10.56	25.93	NR
	B	0.00	0.00	0.00	0.00	3.77	3.77	0.00	11.32
	Mean[d]	2.11	0.00	0.00	0.00	11.50	8.64	14.11	7.47

[a]Number of organisms/1000 m^3.
[b]Larvae include yolk-sac, post-yolk-sac and UID; juveniles excluded.
[c]All other sampling dates have concentrations of zero.
[d]Mean of sample depths.
S - Surface.
M - Mid.
B - Bottom.
NR - Not required in sampling program.

TABLE 6.0-15 (Page 2 of 2)

MEAN ABUNDANCE[a] OF AMERICAN SHAD LARVAE[b] BY SAMPLE DEPTH

START DATE	DEPTH	DAY STATIONS RDW	RDCH	RDR	RDE	NIGHT STATIONS RDW	RDCH	RDR	RDE
8 Jun	S	8.37	0.00	0.00	21.65	67.19	56.03	12.45	103.29
	M	NR	0.00	0.00	NR	NR	23.62	0.00	NR
	B	0.00	0.00	0.00	4.42	26.32	15.46	0.00	0.00
	Mean[d]	4.18	0.00	0.00	13.04	46.76	31.70	4.15	51.64
12 Jun	S	0.00	0.00	4.46	0.00	18.43	3.68	0.00	12.99
	M	NR	4.24	0.00	NR	NR	18.87	3.80	NR
	B	3.75	0.00	0.00	0.00	9.09	0.00	0.00	0.00
	Mean[d]	1.88	1.41	1.49	0.00	13.76	7.52	1.27	6.50
15 Jun	S	0.00	0.00	0.00	0.00	0.00	8.81	0.00	0.00
	M	NR	0.00	3.88	NR	NR	34.93	4.07	NR
	B	0.00	0.00	0.00	0.00	4.07	0.00	4.33	0.00
	Mean[d]	0.00	0.00	1.29	0.00	2.04	14.58	2.80	0.00
19 Jun	S	0.00	0.00	0.00	0.00	0.00	4.17	0.00	7.25
	M	NR	0.00	0.00	NR	NR	12.55	0.00	NR
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Mean[d]	0.00	0.00	0.00	0.00	0.00	5.57	0.00	3.62
22 Jun	S	0.00	0.00	0.00	0.00	8.23	3.94	0.00	4.90
	M	NR	0.00	0.00	NR	NR	25.21	0.00	NR
	B	3.77	0.00	0.00	0.00	3.77	0.00	0.00	4.90
	Mean[d]	1.88	0.00	0.00	0.00	6.00	9.72	0.00	4.90
26 Jun	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	M	NR	0.00	0.00	NR	NR	0.00	3.89	NR
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Mean[d]	0.00	0.00	0.00	0.00	0.00	0.00	1.30	0.00
3 Jul	S	0 00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	M	NR	0.00	0.00	NR	NR	0.00	0.00	NR
	B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Mean[d]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[a]Number of organisms/1000 m^3.
[b]Larvae include yolk-sac, post-yolk-sac and UID; juveniles excluded.
[c]All other sampling dates have concentrations of zero.
[d]Mean of sample depths.
S - Surface.
M - Mid.
B - Bottom.
NR - Not required in sampling program.

TABLE 6.0-16

SUMMARY OF AMERICAN SHAD LARVAL LENGTH FREQUENCY[a]

Roseton and Danskammer Point Vicinity - 1979

I. YOLK-SAC

	RDW			RDCH			RDR			RDE		
START DATE	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN
15 May	0	-	-	1	10.1-11.0	10.7	2	8.1-11.0	9.4	0	-	-
22 May	0	-	-	1	11.1-12.0	11.4	0	-	-	0	-	-
25 May	0	-	-	2	9.1-13.0	11.1	2	10.1-11.0	10.3	0	-	-
29 May	1	9.1-10.0	10.0	0	-	-	5	7.1-12.0	9.2	0	-	-
1 Jun	0	-	-	1	10.1-11.0	10.2	0	-	-	0	-	-

II. POST-YOLK-SAC

	RDW			RDCH			RDR			RDE		
START DATE	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN	NUMBER	RANGE	MEAN
15 May	1	11.1-12.0	11.0	0	-	-	2	10.1-12.0	10.9	0	-	-
22 May	1	12.1-13.0	12.5	1	11.1-12.0	11.5	4	11.1-16.0	12.6	1	12.1-13.0	12.5
25 May	7	11.1-19.0	14.9	0	-	-	1	13.1-14.0	13.4	0	-	-
29 May	15	12.1-18.0	16.2	32	10.1-19.0	15.2	17	11.1-20.0	15.8	7	14.1-19.0	15.7
1 Jun	13	14.1-19.0	16.6	48	10.1-21.0	17.6	21	9.1-22.0	16.4	15	12.1-20.0	16.2
5 Jun	7	14.1-20.0	16.2	7	14.1-20.0	17.4	11	15.1-22.0	17.9	4	16.1-20.0	17.6
8 Jun	26	15.1-24.0	20.3	22	13.1-23.0	17.5	3	13.1-16.0	14.8	27	17.1-23.0	20.3
12 Jun	7	17.1-22.0	20.3	7	15.1-24.0	18.6	2	15.1-18.0	16.4	3	17.1-19.0	17.8
15 Jun	1	19.1-20.0	19.2	10	16.1-28.0	21.8	3	20.1-27.0	22.9	0	-	-
19 Jun	0	-	-	4	23.1-26.0	24.2	0	-	-	2	20.1-22.0	21.3
22 Jun	4	22.1-26.0	24.0	7	22.1-34.0	30.4	0	-	-	2	22.1-29.0	25.7
26 Jun	0	-	-	0	-	-	1	24.1-25.0	24.2	0	-	-

[a]Lengths measured in millimeters; depth and photoperiod combined.
Number - Number lengthed.

those of blueback herring and alewife due to the larger egg size and length after hatching. Post-yolk-sac larvae ranged from 9.1 to 34.0 mm and demonstrated a slight decrease during the period from 5-12 June. No difference among stations is evidenced by length-frequency data.

6.1.2.5 Atlantic Tomcod (Microgadus tomcod). The Hudson River represents the southern extreme of the Atlantic coast tomcod population. Adults, primarily yearlings, spawn from November to February, with the resulting young maturing in the lower estuary prior to the upriver fall-winter spawning migration.

6.1.2.5.1 Eggs. Atlantic tomcod eggs were collected on the first two sampling dates at Station RDW (Table 6.0-17). Because of the winter spawning season for Atlantic tomcod which precludes river sampling, peak egg abundance occurred before river sampling was initiated on 20 March. Mean river temperature for these dates ranged from 2.2 to 6.6°C.

6.1.2.5.2 Larvae. Atlantic tomcod larvae were only collected on the first three sampling dates (Table 6.0-17). No Atlantic tomcod larvae were found in river samples after 27 March. Peak abundance for tomcod larvae most likely occurred before 20 March and due to these limited data, no horizontal or vertical distributional patterns can be detected. No length-frequency analysis was performed due to the sparsity of Atlantic tomcod in collections.

6.1.2.6 Bay Anchovy (Anchoa mitchilli). Anchovies are a more southern family of fishes with bay anchovy as the most northern member of the family. Bay anchovies are a marine species utilizing brackish water to spawn in the summer. Occurrence of this species in the freshwater region of the Hudson River is rare, but has been increasing in recent years.

TABLE 6.0-17

MEAN[a] TOTAL ABUNDANCE[b] OF EGGS AND LARVAE[c] FOR ATLANTIC TOMCOD

Roseton and Danskammer Point Vicinity - 1979

	EGGS					LARVAE				
	STATIONS					STATIONS				
START DATE[d]	RDW	RDCH	RDR	RDE	MEAN[e]	RDW	RDCH	RDR	RDE	MEAN[e]
20 Mar	1.08	0.00	0.00	0.00	0.27	89.08	104.94	112.21	88.9	98.68
27 Mar	2.00	0.00	0.00	0.00	0.50	55.09	30.39	6.97	10.65	25.78
11 Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[a]Mean of sample depths; mean of all day and all night collections at each station.
[b]Number of organisms/1000 m^3.
[c]Larvae include yolk-sac, post-yolk-sac and UID; juveniles excluded.
[d]All other sampling dates have concentrations of zero.
[e]Station mean.

6.1.2.6.1 Eggs. No bay anchovy eggs were collected in river ichthyoplankton samples in 1979.

6.1.2.6.2 Larvae. Bay anchovy larvae were collected from 10 July-11 September, with the highest concentrations recorded on 7 and 14 August (Table 6.0-18). Conductivity values recorded during this period ranged from 170 to 280 μmhos/cm. These values are relatively low when the bay anchovy's preference for more saline water is considered. Their presence in this area may be due to the low freshwater flow during this period.

Concentrations of bay anchovy larvae in river ichthyoplankton samples were too low to assess horizontal and vertical distribution. No length-frequency analysis of bay anchovy was performed due to their sparsity in samples.

6.2 HUDSON RIVER FISHERY PROGRAM

The 1979 ecological program consisted of trawl and beach seine collections made in the vicinity of the Roseton and Danskammer Point power plants, Hudson River kilometers 106.2 through 109.4. This program is a continuation of work initiated in 1971 with the primary objective of characterizing the spatial and temporal composition of the local fish community. Data presented in the following sections are a subset of the entire 1979 nekton data base presented in the Report Appendix.

6.2.1 Species Inventory

A total of 38 species representing 17 families were collected in 1979 (Table 6.0-19). The family Cyprinidae with eight species was the most common, followed by Centrarchidae with six species, and Clupeidae with four species. Nine families were represented by a single species.

TABLE 6.0-18

MEAN[a] TOTAL ABUNDANCE[b] OF EGGS[c] AND LARVAE[d]
FOR BAY ANCHOVY

Roseton and Danskammer Point Vicinity - 1979

	LARVAE				
	STATIONS				
START DATE[e]	RDW	RDCH	RDR	RDE	MEAN[f]
3 Jul	0.00	0.00	0.00	0.00	0.00
10 Jul	7.83	1.36	1.34	14.79	6.33
17 Jul	0.00	2.62	21.11	23.04	11.69
24 Jul	0.00	18.23	6.13	13.90	9.56
31 Jul	15.15	10.01	20.05	5.59	12.70
7 Aug	18.30	18.59	27.22	41.68	26.45
14 Aug	29.39	31.51	56.64	10.21	31.94
28 Aug	11.64	15.51	21.18	14.99	15.83
11 Sep	0.00	4.93	1.91	0.00	1.71

[a]Mean of sample depths; mean of all day and all night collections at each station.
[b]Number of organisms/1000 m^3.
[c]No eggs were collected.
[d]Larvae include yolk-sac, post-yolk-sac and UID; juveniles excluded.
[e]All other sampling dates have concentrations of zero.
[f]Station mean.

TABLE 6.0-19

FISH SPECIES INVENTORY

Roseton and Danskammer Point Vicinity - 1979

FAMILY	COMMON NAME	SCIENTIFIC NAME	OCCURRENCE SEINES	OCCURRENCE TRAWLS
Acipenseridae	Atlantic sturgeon	Acipenser oxyrhynchus		x
Anguillidae	American eel	Anguilla rostrata	x	x
Belonidae	Atlantic needlefish	Strongylura marina	x	
Catostomidae	White sucker	Catostomus commersoni	x	x
Centrarchidae	Black crappie	Pomoxis nigromaculatus	x	
	Bluegill	Lepomis macrochirus	x	
	Largemouth bass	Micropterus salmoides	x	
	Pumpkinseed	Lepomis gibbosus	x	x
	Redbreast sunfish	Lepomis auritus	x	
	Rock bass	Ambloplites rupestris	x	
Clupeidae	Alewife	Alosa pseudoharengus	x	x
	American shad	Alosa sapidissima	x	x
	Blueback herring	Alosa aestivalis	x	x
	Gizzard shad	Dorosoma cepedianum	x	
Cyprinidae	Carp	Cyprinus carpio	x	x
	Common shiner[a]	Notropis cornutus	x	
	Emerald shiner	Notropis atherinoides	x	
	Fathead minnow	Pimephales promelas	x	
	Golden shiner	Notemigonus crysoleucas	x	x
	Goldfish	Carassius auratus	x	x
	Silvery minnow	Hybognathus nuchalis	x	
	Spottail shiner	Notropis hudsonius	x	x
Cyprinodontidae	Banded killifish	Fundulus diaphanus	x	x
	Mummichog	Fundulus heteroclitus	x	
Engraulidae	Bay anchovy	Anchoa mitchilli	x	x
Gadidae	Atlantic tomcod	Microgadus tomcod		x
Gasterosteidae	Fourspine stickleback	Apeltes quadracus	x	
	Threespine stickleback	Gasterosteus aculeatus		x
Ictaluridae	Brown bullhead	Ictalurus nebulosus	x	x
	Channel catfish	Ictalurus punctatus	x	
	White catfish	Ictalurus catus	x	x
Mugilidae	White mullet	Mugil curema	x	
Osmeridae	Rainbow smelt	Osmerus mordax	x	x
Percichthyidae	Striped bass	Morone saxatilis	x	x
	White perch	Morone americana	x	x
Percidae	Tessellated darter	Etheostoma olmstedi	x	x
	Yellow perch	Perca flavescens	x	x
Soleidae	Hogchoker	Trinectes maculatus	x	x

[a]Collected for the first time in 1979.

Of the 57,560 fish collected, 33.8% were taken by beach seines and 66.2% by trawls. The shallow water shoreline areas represented by the seine collections showed a greater number of species (35) than did the deeper water trawl sites (23). Atlantic sturgeon, Atlantic tomcod, and threespine stickleback occurred only in the trawl collections and a deep water preference for Atlantic sturgeon and Atlantic tomcod is indicated. The threespine stickleback was represented by a single specimen collected at the Danskammer Cove site, and the data is not considered sufficient to indicate a depth preference. There were 15 species collected exclusively by seines, these occurring sporadically and in low numbers. Except for Atlantic tomcod, the principal species inhabiting this section of the river were taken with both gear types.

6.2.2 Abundance, Biomass, and Percent Composition

6.2.2.1 Trawls. Surface and bottom trawl collections were made during 10 months of 1979, from March through December. For comparative purposes data have been reduced to catch per 10 minutes of trawling effort (Table 6.0-20). Catch-per-effort varied seasonally and was highest during the late summer and early fall when large numbers of young-of-the-year fish were recruited to the gear. Figure 6.0-4 illustrates monthly catch-per-effort of selected and total species for all trawls.

On an annual basis, the catch was dominated by white perch, which accounted for 62.3% of the mean annual catch-per-effort and were found in relatively high numbers during each of the 10 months sampled (Table 6.0-21). An additional 26.7% was composed of three species, blueback herring (18.1%), spottail shiner (4.9%), and Atlantic tomcod (3.7%). The remaining 11.0% was a combination of 19 species (see Report Appendix).

TABLE 6.0-20

MONTHLY MEAN[a] CATCH-PER-EFFORT[b] FOR TOTAL SPECIES IN TRAWL COLLECTIONS

Roseton and Danskammer Point Vicinity - 1979

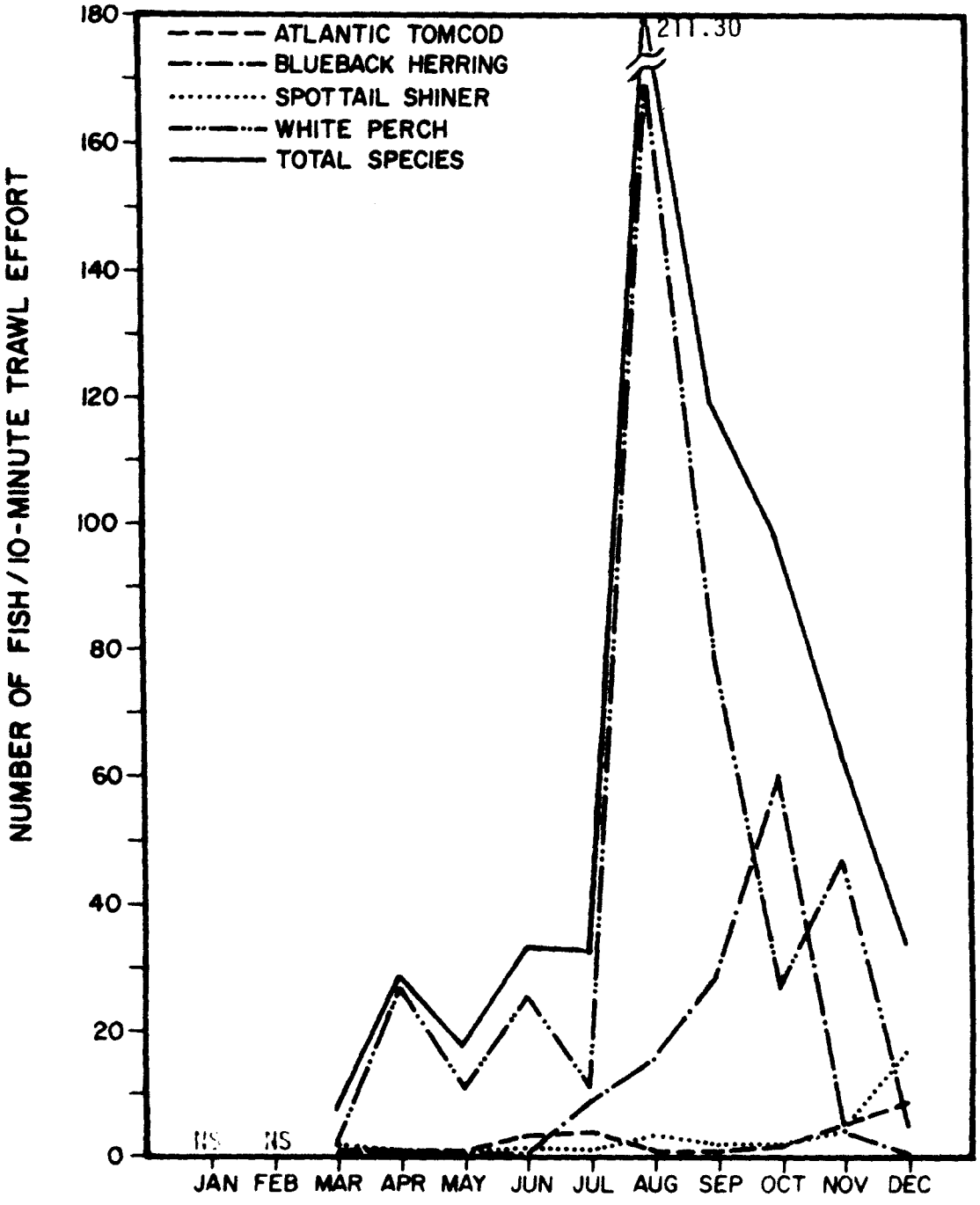
GEAR	STATION	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL MEAN
Surface Trawls	RDE	0.27	0.28	0.69	1.33	9.84	45.09	0.68	348.31	1.29	0.21	40.80
	RNCW	0.00	0.31	0.00	0.23	10.00	0.54	0.00	4.83	1.22	0.56	1.77
	RDW	0.24	0.10	0.22	1.57	2.42	1.64	0.80	6.28	1.11	0.34	1.47
	RDCH	0.00	0.08	0.13	0.94	5.51	4.65	0.28	6.48	0.42	0.07	1.85
Bottom Trawls	DC	15.91	114.03	26.81	58.22	45.02	773.81	382.74	158.32	234.29	133.91	194.31
	RDE	8.00	7.85	13.66	12.00	93.46	67.29	103.19	68.92	20.25	9.33	40.39
	RNCW	20.09	28.71	62.21	152.01	19.36	236.35	78.44	104.46	83.17	33.21	81.80
	RDW	5.44	14.50	27.61	32.79	57.04	98.62	95.30	39.64	61.61	23.66	45.62
	RDCH	3.66	5.25	12.88	7.64	35.72	111.15	152.93	94.14	16.83	12.27	45.25
All Surface and Bottom Trawls	RDE	4.13	4.07	7.18	6.66	51.65	56.19	51.94	208.61	9.72	4.77	40.49
	RNCW	10.05	14.51	31.11	76.12	14.68	118.45	39.22	54.64	42.19	16.88	41.78
	RDW	2.84	7.30	13.92	17.18	29.73	50.13	48.05	22.96	29.77	11.22	23.31
	RDCH	1.83	2.66	6.50	4.29	20.62	57.90	76.61	50.31	8.19	6.17	23.51
All Surface Trawls		0.13	0.19	0.26	1.02	6.94	12.98	0.44	91.48	1.01	0.30	11.47
All Bottom Trawls		10.62	34.07	28.63	52.53	50.12	257.44	162.52	93.10	83.23	42.48	81.47
All Trawls		6.95	28.51	17.10	32.50	32.34	211.30	119.71	98.97	64.83	34.59	64.68

[a]Mean is based on 10 months of sampling; Jan and Feb not sampled.
[b]A unit of effort is defined as 10 minutes of trawling.

FIGURE 6.0-4

MONTHLY MEAN CATCH-PER-EFFORT FOR TOTAL AND SELECTED SPECIES IN TRAWL[a] COLLECTIONS

Roseton and Danskammer Point Vicinity - 1979



[a]Surface and bottom trawls combined; all sites and times combined.
NS - Not sampled.

TABLE 6.0-21

ANNUAL MEAN[a] CATCH-PER-EFFORT[b] FOR TOTAL AND SELECTED SPECIES IN TRAWL COLLECTIONS

Roseton and Danskammer Point Vicinity - 1979

GEAR	STATION	ALEWIFE	AMERICAN SHAD	ATLANTIC TOMCOD	BAY ANCHOVY	BLUEBACK HERRING	BROWN BULLHEAD	HOGCHOKER	SPOTTAIL SHINER	STRIPED BASS	TESSELLATED DARTER	WHITE CATFISH	WHITE PERCH	TOTAL SPECIES
Surface Trawls	RDE	0.61	0.21	0.02	4.44	35.70	0.00	0.01	0.01	0.01	0.00	0.01	0.11	40.80
	RNCW	0.04	0.15	0.00	0.00	1.00	0.00	0.03	0.00	0.00	0.00	0.00	0.15	1.77
	RDW	0.17	0.46	0.01	0.06	0.56	0.00	0.00	0.01	0.00	0.00	0.00	0.08	1.47
	RDCH	0.13	0.18	0.01	0.36	1.02	0.00	0.00	0.00	0.00	0.00	0.01	0.02	1.85
Bottom Trawls	DC	3.04	4.58	3.52	0.40	7.38	0.88	0.57	14.64	0.79	1.08	1.57	153.82	194.31
	RDE	1.11	1.97	2.47	0.24	19.80	0.04	0.89	0.23	0.12	0.65	0.91	10.45	40.39
	RNCW	0.68	0.52	2.47	0.03	6.21	0.38	5.47	1.40	0.35	2.79	0.96	59.46	81.80
	RDW	0.66	1.22	8.69	0.46	10.23	0.07	2.44	0.79	0.04	0.28	0.65	19.23	45.62
	RDCH	1.26	2.26	3.42	0.37	27.79	0.01	2.97	0.06	0.06	0.02	0.20	6.23	45.25
All Surface and Bottom Trawls	RDE	0.64	1.09	1.22	2.34	27.76	0.02	0.45	0.12	0.07	0.32	0.46	5.21	40.49
	RNCW	0.36	0.34	1.23	0.02	3.60	0.19	2.75	0.70	0.17	1.39	0.48	29.81	41.78
	RDW	0.41	0.84	4.22	0.26	5.39	0.03	1.22	0.40	0.02	0.13	0.32	9.56	23.31
	RDCH	0.69	1.22	1.71	0.36	14.40	0.00	1.47	0.03	0.03	0.01	0.11	3.10	23.51
All Surface Trawls		0.12	0.25	0.01	1.21	9.57	0.00	0.01	0.00	0.00	0.00	0.01	0.09	11.47
All Bottom Trawls		1.35	2.11	4.12	0.30	14.28	0.28	2.47	3.42	0.27	0.96	0.86	49.84	81.47
All Trawls		1.03	1.61	2.38	0.68	11.70	0.23	1.29	3.18	0.22	0.59	0.59	40.30	64.68

[a]Mean is based on 10 months of sampling; Jan and Feb not sampled.
[b]A unit of effort is defined as 10 minutes of trawling.

Seasonal variation in biomass-per-effort (b/f) showed two major peaks. The first occurred in April and is attributed to catches of yearling and older white perch. The second peak occurred in August and was due to the abundance of young-of-the-year white perch. Total monthly mean biomass closely paralleled fluctuations in white perch biomass, particularly for the period March through October. In November and December, increased contribution to total biomass by Atlantic tomcod offset decreased white perch biomass. Monthly biomass-per-effort for selected and total species is presented in Figure 6.0-5. On an annual basis white perch accounted for 58.3% of the mean annual biomass-per-effort. White catfish (9.3%), Atlantic tomcod (7.0%), and brown bullhead (3.8%) were second, third, and fourth, respectively. The remaining 19 species found in trawl catches contributed 21.6% (Report Appendix).

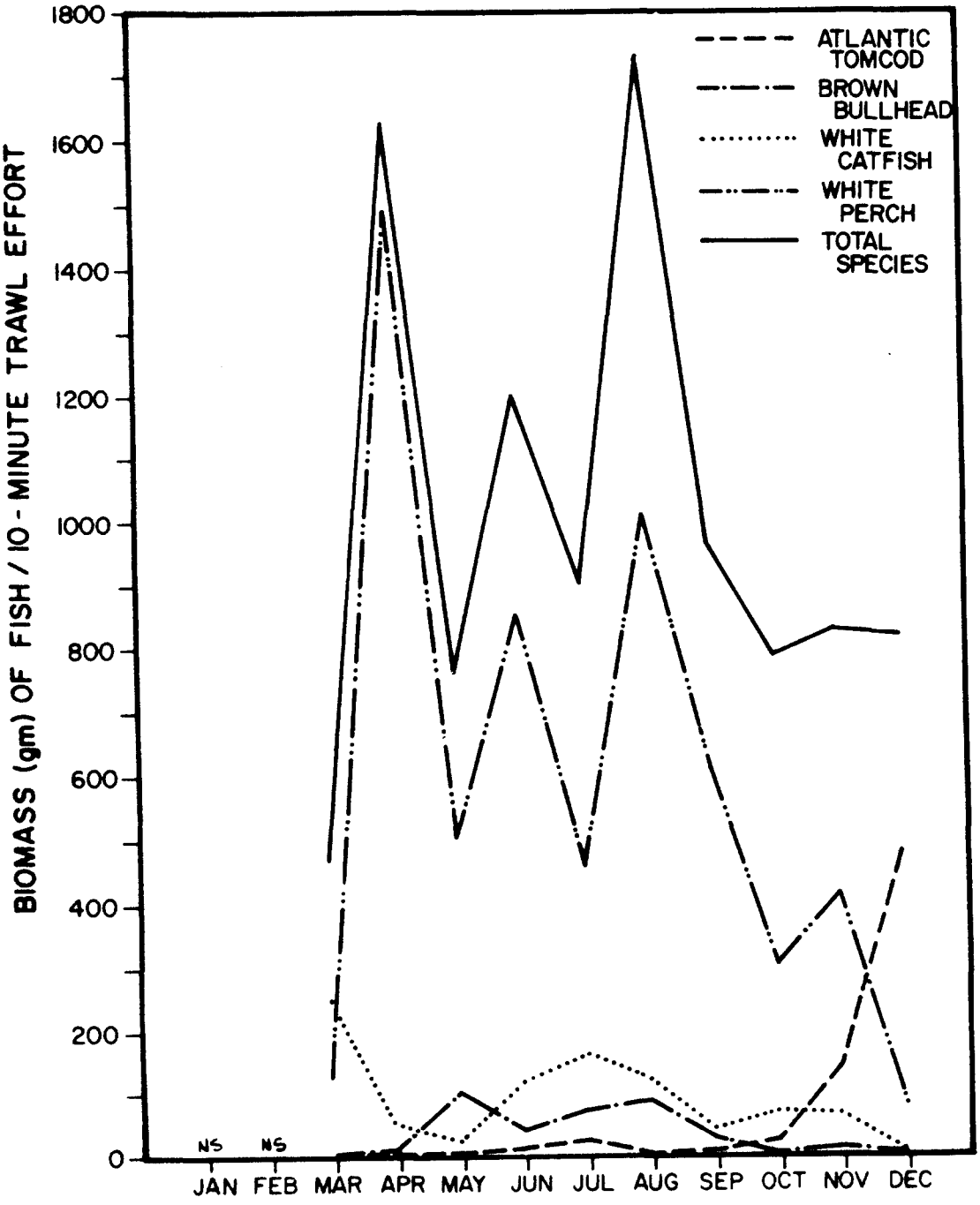
6.2.2.1.1 Bottom trawls. Because the catch-per-effort for bottom trawls was approximately seven times greater than that of surface trawls (81.5 and 11.5, respectively), data analysis of bottom catches alone provided results similar to those obtained in analysis of all trawl data. Bay anchovy was the only species for which surface mean annual catch-per-effort was higher than bottom (Table 6.0-21).

White perch were the numerically dominant species in bottom trawls, contributing 61.2% of the mean annual catch-per-effort (Table 6.0-21). This was followed by blueback herring (17.5%) and Atlantic tomcod (5.1%). On the basis of percent mean annual biomass-per-effort, white perch ranked first at 61.0%, followed by white catfish at 9.0%, and Atlantic tomcod at 7.4% (Table 6.0-22).

FIGURE 6.0-5

MONTHLY MEAN BIOMASS-PER-EFFORT FOR TOTAL AND SELECTED SPECIES IN TRAWL[a] COLLECTIONS

Roseton and Danskammer Point Vicinity - 1979



[a]Surface and bottom trawls combined, all sites and times combined.
NS - Not Sampled.

TABLE 6.0-22

ANNUAL MEAN[a] BIOMASS[b]-PER-EFFORT[c] FOR TOTAL AND SELECTED SPECIES IN TRAWL COLLECTIONS

Roseton and Danskammer Point Vicinity - 1979

GEAR	STATION	ALEWIFE	AMERICAN SHAD	ATLANTIC TOMCOD	BAY ANCHOVY	BLUEBACK HERRING	BROWN BULLHEAD	HOGCHOKER	SPOTTAIL SHINER	STRIPED BASS	TESSELLATED DARTER	WHITE CATFISH	WHITE PERCH	TOTAL SPECIES
Surface Trawls	RDE	2.14	0.49	0.86	0.40	62.04	0.00	0.01	0.04	0.29	0.00	0.07	6.16	74.52
	RNCW	0.32	0.56	0.00	0.00	0.77	0.00	0.02	0.00	0.00	0.00	0.00	4.74	6.42
	RDW	1.85	1.58	0.63	0.07	1.14	0.00	0.00	0.04	0.00	0.00	0.00	3.13	8.61
	RDCH	1.53	0.75	0.04	0.19	1.43	0.00	0.00	0.00	0.00	0.00	0.88	0.26	6.30
Bottom Trawls	DC	43.35	22.05	197.14	1.29	24.25	151.71	1.61	101.98	52.35	2.79	318.59	1720.30	2881.64
	RDE	6.97	6.27	31.92	0.53	38.09	6.84	11.81	2.73	12.83	1.88	96.22	450.82	689.60
	RNCW	12 72	1.76	50.81	0.08	13.34	66.69	60.71	12.16	26.55	7.34	141.76	1295.17	1984.81
	RDW	9.96	4.02	191.11	1.14	24.87	7.72	30.06	7.48	1.45	0.68	50.81	511.09	877.07
	RDCH	16.53	10.32	47.64	0.50	74.40	0.14	40.28	0.65	8.07	0.05	15.12	207.23	451.33
All Surface and Bottom Trawls	RDE	4.60	3.38	15.67	0.47	50.07	3.42	5.84	1.37	6.56	0.94	47.23	225.52	377.30
	RNCW	6.52	1.16	25.41	0.04	7.05	33.34	30.37	6.08	13.27	3.67	70.88	649.96	995.62
	RDW	5.90	2.81	91.34	0.61	12.99	3.86	15.00	3.72	0.72	0.33	25.39	255.78	436.78
	RDCH	9.03	5.52	23.62	0.34	37.91	0.07	19.91	0.32	4.04	0.02	8.00	103.32	228.02
All Surface Trawls		1.46	0.85	0.38	0.17	16.34	0.00	0.01	0.02	0.07	0.00	0.24	3.57	23.46
All Bottom Trawls		18.12	8.76	102.05	0.71	34.97	46.62	29.11	24.75	20.25	2.55	123.91	837.95	1373.57
All Trawls		14.29	7.05	70.75	0.55	26.65	38.48	14.65	22.70	15.39	1.55	94.62	591.50	1014.45

[a]Mean is based on 10 months of sampling; Jan and Feb not sampled.
[b]Biomass is measured in grams.
[c]A unit of effort is defined as 10 minutes of trawling.

Differences in station abundances for fish populations collected by bottom trawls in northern Newburgh Bay were pronounced. The mean annual catch-per-effort was highest at the Danskammer Cove station, with a value of 194.3. This station was located offshore of the DCN and DCS seine stations at a depth of 4.6 m, as opposed to depths of 10.7 to 16.8 m for the other bottom trawls. As such, the DC trawl station can be considered to represent a transition zone between shallow and deep water habitats. Alewife, American shad, brown bullhead, spottail shiner, white catfish, white perch, and striped bass showed their highest mean annual catch-per-effort at this site. Conversely, Atlantic sturgeon, with a deep water preference, was not taken here at all. Station RNCW ranked second in mean annual catch-per-effort with a value of 81.8. Mean annual catch-per-effort for hogchoker and tessellated darter were at their highest at this station, and bay anchovy at its lowest. White perch catch-per-effort, while lower at RNCW than the Danskammer Cove site, was higher than at the three plant transect stations. Mean annual catch-per-effort at the plant transect sites was 45.62, 45.25, and 40.39 for RDW, RDCH, and RDE, respectively. Little east-west stratification in total fish abundance is indicated for this section of the river (Table 6.0-21).

6.2.2.1.2 Surface trawls. Annual surface trawl data was greatly influenced by two unusually large collections from the RDE station. The first occurred in August when a single haul collected 693 bay anchovies, and the second in October with the collection of 7,172 blueback herring. These two chance occurrences accounted for the high mean annual catch-per-effort of 40.80 for RDE surface trawls (Table 6.0-21) in relation to RNCW, RDW, and RDCH (1.77, 1.47, and 1.85, respectively). RDE

mean annual catch-per-effort, computed with the exclusion of the two unusual trawls mentioned, was 2.04 and little difference in fish abundance among surface trawl sites is indicated (Report Appendix).

Seasonal abundance of surface trawl catch-per-effort was bimodal with a peak in August due to bay anchovy and an October peak due to blueback herring (Table 6.0-23), although values were consistently much lower than those of bottom trawls. Blueback herring accounted for 83.4% of the mean annual catch-per-effort, and bay anchovy contributed 10.5%. The remaining 13 species collected by, surface trawls comprised 6.0% of the total. Of the mean annual biomass-per-effort, blueback herring contributed 68.2%, white perch 14.9%, alewife 6.1%, and American shad 3.5%. Mean catch and biomass data by station, depth, selected species, and month are presented in Tables 6.0-20 through 6.0-22.

6.2.2.2 Beach Seines. Beach seine collections were conducted each month except February during 1979. Data is presented on a per effort basis, one unit of effort equal to one beach seine haul. Monthly catch-per-effort indicated a single peak during August, concurrent with a peak in young-of-the-year blueback herring catch-per-effort. Four species accounted for 75.1% of the total mean annual catch-per-effort. These were: white perch (26.7%), blueback herring (22.4%), American shad (13.1%), and spottail shiner (12.9%). banded killifish (6.0%), pumpkinseed (4.8%), and alewife (3.6%) ranked fifth, sixth, and seventh, respectively, and 28 additional species composed 10.6% (Table 6.0-24). Monthly catch-per-effort is illustrated for total and selected species in Figure 6.0-6.

Monthly biomass-per-seine-effort was bimodal, with a major peak from April to June attributed to alewife, carp, and white perch of relatively large size inhabiting the shallow water areas. Although

TABLE 6.0-23

MONTHLY MEAN CATCH-PER-EFFORT FOR TOTAL AND SELECTED SPECIES
IN SURFACE TRAWLS AND BOTTOM TRAWLS

Roseton and Danskammer Point Vicinity - 1979

I. SURFACE TRAWL

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL[b] MEAN
Alewife	NS	NS	0.00	0.00	0.08	0.04	0.11	0.38	0.04	0.35	0.25	0.00	0.12
Ameican shad	NS	NS	0.00	0.00	0.00	0.27	0.62	0.49	0.09	0.88	0.15	0.02	0.25
Bay anchovy	NS	NS	0.00	0.00	0.00	0.00	0.12	11.93	0.10	0.00	0.00	0.00	1.21
Blueback herring	NS	NS	0.00	0.02	0.12	0.00	4.84	0.08	0.12	90.11	0.39	0.03	9.57
Total Species Mean	NS	NS	0.13	0.19	0.26	1.02	6.94	12.98	0.44	91.48	1.01	0.30	11.47
Units of Effort	0.00	0.00	27.10	35.80	44.60	38.70	34.50	46.50	38.80	50.50	44.90	33.70	395.10

II. BOTTOM TRAWL

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL[b] MEAN
Alewife	NS	NS	0.00	0.08	0.32	0.05	1.82	5.93	3.94	0.94	0.41	0.00	1.35
Ameican shad	NS	NS	0.00	0.00	0.00	0.03	4.49	8.55	3.89	3.32	0.80	0.00	2.11
Atlantic tomcod	NS	NS	0.00	0.04	1.69	5.86	7.62	0.87	1.47	2.91	9.77	10.91	4.12
Blueback herring	NS	NS	0.00	0.04	0.44	0.24	13.48	30.89	53.68	39.60	4.43	0.00	14.28
Hogchoker	NS	NS	0.05	0.37	5.84	1.09	1.01	1.97	3.52	6.63	3.49	0.73	2.47
Spottail shiner	NS	NS	1.57	0.32	0.72	1.74	1.10	3.77	1.96	2.01	4.48	16.56	3.42
Striped bass	NS	NS	0.00	0.07	0.07	0.05	0.23	1.23	0.11	0.09	0.38	0.51	0.27
Tessellated darter	NS	NS	3.95	1.11	0.30	0.52	0.06	0.65	0.40	0.40	0.60	1.62	0.96
White catfish	NS	NS	0.62	0.23	0.92	1.04	1.27	1.78	0.70	0.97	0.81	0.22	0.86
White perch	NS	NS	3.69	31.20	16.82	40.05	14.97	197.99	91.33	35.82	57.19	9.33	49.84
Total Species Mean	NS	NS	10.62	34.07	28.63	52.53	50.12	257.44	162.52	93.10	83.23	42.48	81.47
Units of Effort	0.00	0.00	26.00	44.70	54.20	37.40	38.70	51.40	43.80	43.40	40.00	35.10	414.70

[a]Unit of effort equals 10 min.
[b]Based on ten months.
NS - No sample.

TABLE 6.0-24

MONTHLY MEAN[a] CATCH-PER-EFFORT[b] FOR TOTAL AND SELECTED SPECIES IN SEINE COLLECTIONS[c]

Roseton and Danskammer Point Vicinity - 1979

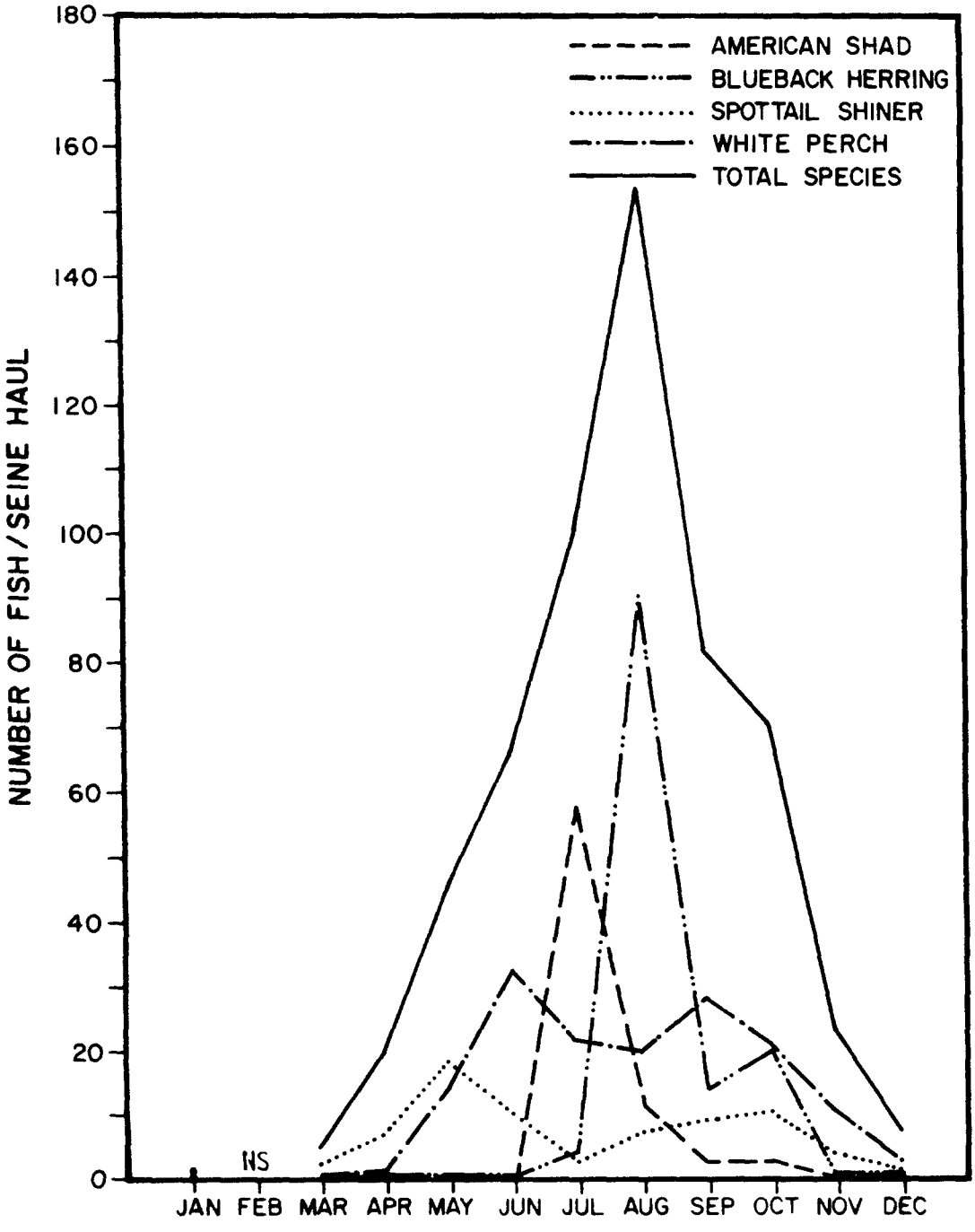
SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL MEAN
Alewife	0.00	NS	0.00	3.53	3.40	0.09	1.71	4.31	3.34	2.20	2.00	0.00	1.87
American shad	0.00	NS	0.00	0.00	0.00	0.25	57.58	12.03	2.81	2.78	0.19	0.00	6.88
Banded killifish	0.00	NS	0.80	1.00	2.00	8.19	3.92	4.67	7.47	3.97	1.84	0.67	3.14
Blueback herring	0.00	NS	0.00	0.00	0.40	0.09	4.38	90.07	14.41	20.41	0.19	0.00	11.81
Carp	0.00	NS	0.25	0.22	0.38	0.44	0.08	0.24	0.16	0.25	0.16	0.17	0.21
Goldfish	0.25	NS	0.80	0.56	0.13	0.41	1.46	2.13	0.59	0.16	0.03	0.17	0.61
Pumpkinseed	0.00	NS	0.00	0.34	1.50	2.16	1.63	6.99	8.88	4.37	1.44	0.40	2.52
Spottail shiner	0.00	NS	2.35	7.31	18.15	10.25	2.92	7.30	9.38	10.89	4.41	1.96	6.81
Striped bass	0.00	NS	0.00	0.00	0.13	1.34	0.54	1.79	2.06	0.74	0.34	0.00	0.63
White catfish	0.00	NS	0.05	0.31	0.15	0.94	0.17	0.03	0.16	0.08	0.00	0.00	0.17
White perch	0.00	NS	0.05	1.09	14.23	32.97	22.04	20.46	28.28	21.97	10.59	3.06	14.07
Total Species	0.50	NS	4.85	19.88	46.55	66.38	100.84	154.09	82.85	71.15	23.97	8.21	52.66

[a]Mean is based on 11 months of sampling; Feb not sampled.
[b]A unit effort is defined as one seine haul.
[c]All stations combined.
NS - Not sampled.

FIGURE 6.0-6

MONTHLY MEAN CATCH-PER-EFFORT FOR TOTAL AND SELECTED SPECIES IN SEINE[a] COLLECTIONS

Roseton and Danskammer Point Vicinity - 1979



[a]All sites and times combined.
NS - Not sampled.

August was the peak month for catch-per-effort (Table 6.0-24), it was a low point on the basis of biomass as the catch consisted mainly of young-of-the-year fish. A second lesser peak in biomass-per-effort occurred in October due to a combination of several species, principally carp, and white perch. Seasonal fluctuations in total biomass-per-effort are best mirrored by the carp species, which were represented by relatively few individuals. When carp biomass is excluded, the seasonal trends of the remaining biomass-per-effort retain a bimodal structure with spring and fall peaks. Carp followed the pattern of adult fish of several species in using shallow water areas in spring and fall, and their large individual size served to accentuate the seasonal biomass pattern (Table 6.0-25). A graph of biomass-per-effort for selected and total species is presented in Figure 6.0-7.

On an annual basis, biomass-per-effort was dominated by three species which accounted for 65.6% of the mean annual biomass-per-effort. These species were carp (35.4%), white perch (16.4%), and alewife (13.9%). Four species contributed an additional 19.9%: goldfish (7.6%), white catfish (4.9%), pumpkinseed (3.9 percent), and spottail shiner (3.5%). Twenty-eight remaining species accounted for 14.6% of the total mean annual biomass-per-effort.

The Danskammer Discharge station (DD) yielded the largest mean annual catch-per-effort at 101.3 as opposed to 41.7, 37.0, and 23.7 for DCS, RD, and DCN, respectively, and was highest during each of the months sampled except January (Table 6.0-26). This station is located adjacent to the thermal discharge from the Danskammer Point power plant. Mean monthly water temperature ranged from 1.0 to 5.2°C higher than the mean monthly water temperatures of the other three seine stations (Table 6.0-27).

The 1978 Annual Progress Report (LMS 1980) considered temperature effects on fish distribution in relation to this site. Since

TABLE 6.0-25

MONTHLY MEAN[a] BIOMASS[b]-PER-EFFORT[c] FOR TOTAL AND SELECTED SPECIES IN SEINE COLLECTIONS[d]

Roseton and Danskammer Point Vicinity - 1979

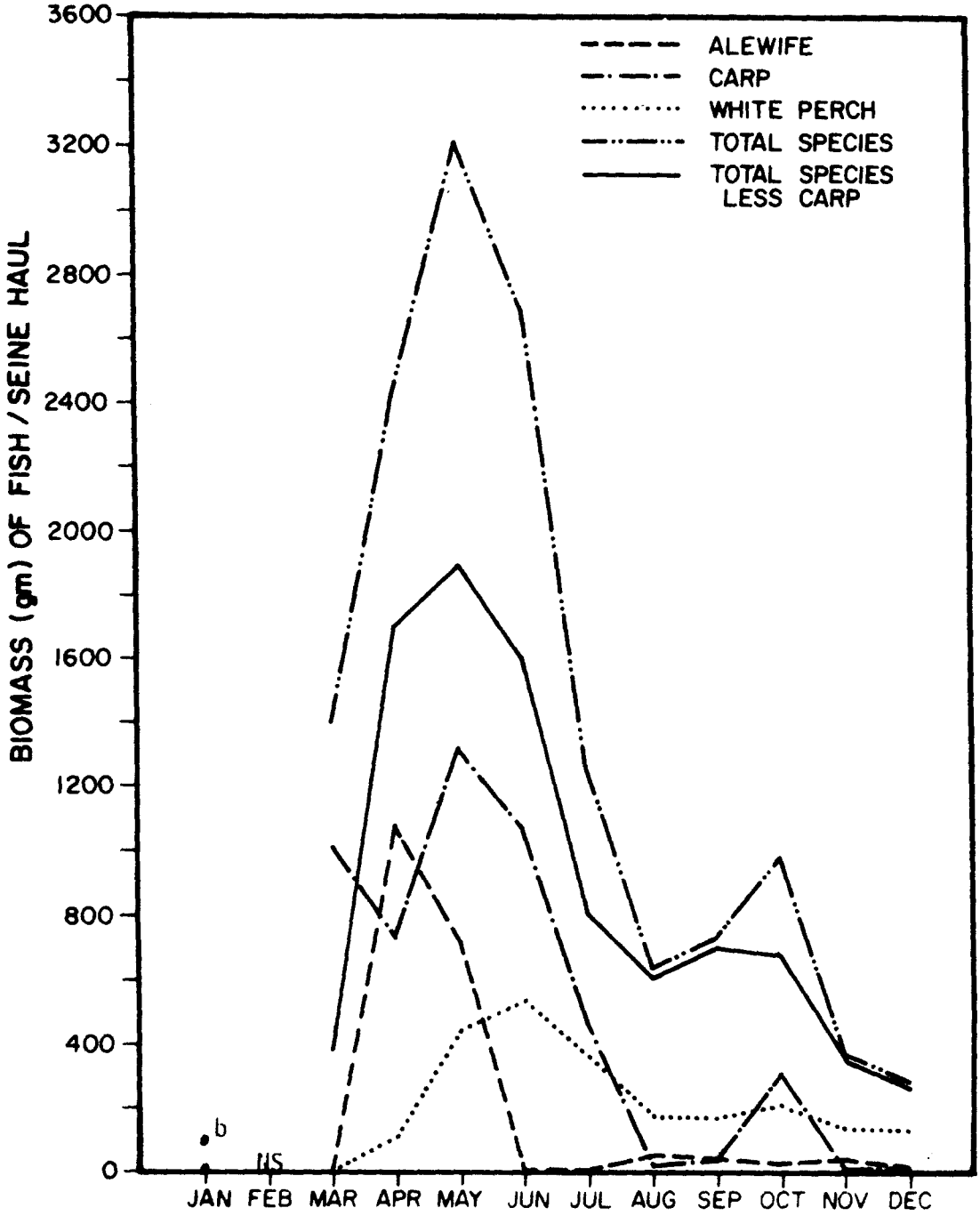
SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL MEAN
Alewife	0.00	NS	0.00	1070.28	726.05	1.96	4.96	58.22	37.22	20.39	38.81	0.00	177.99
American shad	0.00	NS	0.00	0.00	0.00	0.03	85.32	29.82	9.34	11.80	0.92	0.00	12.48
Banded killifish	0.00	NS	1.89	3.93	9.83	34.03	14.83	13.02	23.68	15.04	7.96	2.61	11.53
Blueback herring	0.00	NS	0.00	0.00	3.92	6.02	2.43	104.36	21.21	37.97	0.42	0.00	16.03
Carp	0.00	NS	1010.90	734.65	1319.91	1079.49	460.33	22.87	30.74	302.63	17.75	16.93	454.20
Goldfish	102.90	NS	304.69	203.29	58.75	159.43	58.18	5.43	44.43	63.40	15.14	57.84	97.59
Pumpkinseed	0.00	NS	0.00	3.39	91.27	92.66	84.48	83.97	100.11	70.28	18.29	2.13	49.69
Spottail shiner	0.00	NS	14.58	66.50	151.55	69.72	21.03	23.07	41.01	69.73	28.78	12.64	45.33
Striped bass	0.00	NS	0.00	0.00	10.80	35.27	8.98	12.60	18.43	27.21	7.89	0.00	11.01
White catfish	0.00	NS	17.09	152.99	128.48	234.23	35.69	0.13	76.36	39.96	0.00	0.00	62.27
White perch	0.00	NS	7.15	108.81	439.98	529.36	376.88	180.94	177.33	214.18	141.62	135.66	210.17
Total Species	103.05	NS	1391.69	2434.92	3215.54	2692.28	1274.13	640.19	737.44	984.94	369.75	285.32	1284.48

[a]Mean is based on 11 months of sampling; February not sampled.
[b]Biomass is measured in grams.
[c]A unit effort is defined as one seine haul.
[d]All stations combined.
NS - Not sampled.

FIGURE 6.0-7

MONTHLY MEAN BIOMASS-PER-EFFORT FOR TOTAL AND SELECTED SPECIES IN SEINE[a] COLLECTIONS

Roseton and Danskammer Point Vicinity - 1979



[a]All sites and times combined.
[b]Represents the biomass of one goldfish collected.
NS - Not sampled.

TABLE 6.0-26

ANNUAL MEAN[a] CATCH-PER-EFFORT[b] AND BIOMASS PER EFFORT[b]
FOR TOTAL AND SELECTED SPECIES IN SEINE COLLECTIONS

Roseton and Danskammer Point Vicinity - 1979

SPECIES	ABUNDANCE STATION				BIOMASS[c] STATION			
	DCN	DCS	DD	RD	DCN	DCS	DD	RD
Alewife	0.55	1.20	3.16	2.47	40.95	57.74	518.62	97.91
American shad	0.47	2.06	16.83	2.96	1.37	2.72	31.80	6.39
Banded killifish	3.25	4.57	1.45	3.21	15.78	15.39	3.47	11.56
Blueback herring	1.29	10.01	30.36	5.31	1.89	14.12	37.84	10.22
Carp	0.05	0.08	0.65	0.06	2.15	4.62	1656.12	112.26
Goldfish	0.31	0.92	0.61	0.49	14.80	37.45	218.99	115.16
Pumpkinseed	4.19	2.80	2.16	1.15	76.10	46.04	37.71	38.15
Spottail shiner	6.58	8.45	5.12	7.43	41.66	58.17	39.56	43.79
Striped bass	0.17	0.18	1.56	0.58	1.39	4.84	31.80	5.34
White catfish	0.01	0.03	0.61	0.01	6.05	13.94	220.54	5.85
White perch	3.49	8.33	33.00	9.76	57.86	143.19	459.88	150.76
Total Species	23.70	41.70	101.26	36.96	375.39	484.46	3513.70	682.65

[a]Mean is based on 11 months of sampling; Feb not sampled.
[b]A unit effort is defined as one seine haul.
[c]Biomass is measured in grams.

TABLE 6.0-27

WATER TEMPERATURES[a] AT SEINE SITES

Roseton and Danskammer Point Vicinity - 1979

DATE	DCN			DCS			DD			RD		
	DAY	NIGHT	MONTHLY MEAN	DAY	NIGHT	MONTHLY MEAN	DAY	NIGHT	MONTHLY MEAN	DAY	NIGHT	MONTHLY MEAN
3 Jan	0.0	NS	0.0	0.0	NS	0.0	2.0	0.0	2.0	1.0	NS	1.0
14 Mar	4.0	NS	6.1	3.5	NS	6.7	4.0	NS	8.7	3.5	NS	5.9
21 Mar	6.5	4.5		7.0	4.0		12.5	10.0		7.5	4.0	
28 Mar	8.5	7.0		9.0	7.0		9.5	7.5		8.0	6.5	
4 Apr	6.0	7.0	7.8	6.0	7.0	8.1	17.0	14.0	12.9	6.5	6.5	7.7
11 Apr	8.0	6.5		8.5	6.0		10.0	9.5		7.5	6.5	
18 Apr	9.0	6.0		10.0	6.5		14.0	10.5		8.0	6.5	
25 Apr	10.0	10.0		10.5	10.0		17.5	11.0		10.0	10.0	
2 May	16.0	13.0	16.7	15.0	12.0	16.2	18.5	16.0	19.5	15.0	12.0	16.6
9 May	16.0	16.0		16.5	15.5		18.5	17.0		17.0	16.5	
16 May	19.0	15.0		17.0	15.5		21.0	21.0		17.5	16.0	
23 May	17.0	17.0		17.0	17.0		21.0	20.0		17.0	17.0	
30 May	20.0	18.0		18.0	18.0		22.0	20.0		20.0	18.0	
6 Jun	20.5	19.5	21.1	20.5	19.5	21.4	27.5	25.5	26.1	20.0	19.5	21.1
13 Jun	20.0	18.5		20.5	19.5		25.5	22.0		20.0	18.5	
20 Jun	24.5	21.5		24.5	22.0		27.0	26.0		24.0	22.0	
27 Jun	22.5	22.0		22.0	22.5		30.0	25.5		23.0	22.0	
6 Jul	NS	NS	-	23.5	22.0	24.6	31.0	27.0	29.4	23.5	21.5	24.2
11 Jul	NS	NS		24.0	23.0		27.0	27.0		24.0	23.0	
18 Jul	NS	NS		27.0	25.0		31.5	30.0		25.0	25.0	
25 Jul	NS	NS		27.5	25.0		32.5	29.5		27.0	25.0	
1 Aug	NS	NS	25.5	29.5	27.0	26.5	34.0	33.5	31.2	29.0	27.5	26.6
8 Aug	27.5	NS		28.0	26.5		32.0	28.0		29.0	26.0	
15 Aug	26.0	24.0		25.0	25.0		30.0	29.0		25.5	24.0	
22 Aug	25.0	24.5		26.5	24.5		29.5	28.0		27.0	24.5	
29 Aug	26.5	26.0		27.0	26.0		33.0	35.0		28.0	26.0	
5 Sep	26.0	25.5	23.2	27.0	25.0	23.2	32.0	29.0	27.1	28.0	25.0	23.4
12 Sep	25.0	24.0		25.0	24.0		30.0	28.0		26.0	23.5	
19 Sep	22.5	20.5		21.5	21.5		26.0	26.0		22.5	21.0	
26 Sep	21.0	21.0		21.0	20.5		23.5	22.0		21.5	20.0	
3 Oct	21.0	20.0	15.4	22.5	21.0	15.8	25.0	24.0	20.4	22.0	20.0	15.8
10 Oct	16.0	16.0		15.0	15.0		26.0	20.0		16.0	16.0	
17 Oct	15.0	14.0		17.0	15.0		19.5	19.0		15.0	15.0	
24 Oct	15.0	13.5		14.5	13.5		17.0	20.0		14.0	NS	
31 Oct	12.0	12.0		12.0	12.0		17.5	16.0		12.5	12.0	
7 Nov	12.0	12.0	10.2	12.0	11.5	10.3	13.0	17.0	14.6	12.0	12.0	10.4
14 Nov	10.5	10.0		11.0	10.0		17.5	14.5		11.0	11.0	
20 Nov	10.0	9.5		10.5	9.0		10.5	10.0		10.0	9.5	
28 Nov	9.0	8.5		9.5	9.0		18.5	15.5		9.5	8.5	
5 Dec	5.5	6.5	4.4	8.0	8.5	5.0	8.5	9.5	8.4	8.0	8.5	6.9
19 Dec	4.5	1.0		2.5	1.0		6.0	NS		2.5	NS	

[a]Degrees centigrade.
NS - No sample

1974 the catch-per-effort at DD has generally been reduced during the summer, particularly August, which may be due to fish avoidance of the discharge area's elevated temperatures. The year 1976 was an exception, with peak catch-per-effort in July and August, presumably because that year was cooler than normal. Threshold temperature for avoidance on the part of most species appeared to be approximately 30°C (LMS 1980).

Catch-per-effort at DD for 1979 was most similar to that of 1976, with a midsummer peak in August, even though mean August temperature at DD was 31.2°C. However, the August catch-per-effort peak is derived from a single large seine haul of 3199 fish on 22 August 1979, during which time the water temperature was 29.5°C, below that considered necessary to elicit an avoidance response. The remaining August hauls at DD did indicate a reduction in catch-per-effort for the midsummer consistent with observations of previous years.

Among the species for which data indicated a preference for thermally enriched water were alewife, blueback herring, striped bass, white catfish, white perch, carp, and American shad.

6.2.3 Length Frequency

The length data obtained from the analysis of fishery samples were used to prepare tabulations showing length-frequency distributions for selected species. Length frequencies for seines, bottom trawls, and surface trawls were prepared separately by grouping the fish measured from each month from each gear type into 1.0 cm size intervals. Data for day and night samples and for all stations for each gear type were combined in developing the monthly distributions. The data are presented below to characterize the size distribution of the important species.

6.2.3.1 Blueback Herring. Adult blueback herring were collected in bottom trawls from April through June, and a single specimen was taken in a beach seine in June (Tables 6.0-28 through 6.0-30). These were mature fish which had entered the river to spawn. Yearling bluebacks (7.0 to 16.0 cm) were only collected in May by seines and surface trawls, but a small number were collected each month from May through November by bottom trawls. Young-of-the-year became recruited to the various gear at approximately 2.0 cm. They first appeared in seine catches in June and in trawl catches during July. The frequency distributions showed a growth period for young-of-the-year extending through October, by which time most were 5.0 to 8.0 cm in total length. The reduction in catches starting in November indicated that the young-of-the-year were leaving this portion of the estuary.

6.2.3.2 White Perch. White perch in a variety of size groups occurred in bottom trawls from March through December and in seines from April through December (Tables 6.0-31 and 6.0-32). Surface trawls yielded few white perch in each of the months sampled (Table 6.0-33). Young-of-the-year entered the bottom trawl catches in June and the seine catches in July. Recruitment to both gear types occurred at about 2.0 cm. Growth appeared to cease in November when the young had reached 5.0 to 9.0 cm total length.

6.2.3.3 American Shad. American shad were collected almost exclusively as young-of-the-year. A single yearling was collected in a June surface trawl and two others were taken in August bottom trawls (Tables 6.0-34 and 6.0-35). Young-of-the-year became recruited to the gears at 2.1 to 3.0 cm, first appearing in the samples of both trawls and seines in June (Tables 6.0-34 through 6.0-36). Growth continued through October or November, by which time most young-of-the-year measured 8.0 to 10.0 cm.

TABLE 6.0- 28

1973 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF BLUEBACK HERRING
ALL SITES COMBINED BOTTOM TRAWL

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2.1- 3.0	NS	NS	0	0	0	0	5	0	0	0	0	0
3.1- 4.0	NS	NS	0	0	0	0	121	5	1	0	0	0
4.1- 5.0	NS	NS	0	0	0	0	128	131	2	1	0	0
5.1- 6.0	NS	NS	0	0	0	0	75	315	267	107	13	0
6.1- 7.0	NS	NS	0	0	0	0	30	271	488	536	90	0
7.1- 8.0	NS	NS	0	0	2	0	1	76	236	208	47	0
8.1- 9.0	NS	NS	0	0	1	0	0	0	16	32	6	0
9.1- 10.0	NS	NS	0	0	3	0	0	0	0	0	0	0
10.1- 11.0	NS	NS	0	0	7	2	0	0	0	0	0	0
11.1- 12.0	NS	NS	0	0	0	3	0	1	1	0	0	0
12.1- 13.0	NS	NS	0	0	1	2	0	0	0	0	0	0
13.1- 14.0	NS	NS	0	0	0	0	3	0	1	0	0	0
14.1- 15.0	NS	NS	0	0	0	0	1	1	6	1	0	0
15.1- 16.0	NS	NS	0	0	0	0	1	0	0	1	1	0
16.1- 17.0	NS	NS	0	0	0	0	0	0	0	0	0	0
17.1- 18.0	NS	NS	0	0	0	0	0	0	0	0	0	0
18.1- 19.0	NS	NS	0	0	0	0	0	0	0	0	0	0
19.1- 20.0	NS	NS	0	0	0	0	0	0	0	0	0	0
20.1- 21.0	NS	NS	0	0	0	0	0	0	0	0	0	0
21.1- 22.0	NS	NS	0	0	0	0	0	0	0	0	0	0
22.1- 23.0	NS	NS	0	0	0	0	0	0	0	0	0	0
23.1- 24.0	NS	NS	0	0	0	0	0	0	0	0	0	0
24.1- 25.0	NS	NS	0	0	0	0	0	0	0	0	0	0
25.1- 26.0	NS	NS	0	0	1	0	0	0	0	0	0	0
26.1- 27.0	NS	NS	0	1	1	1	0	0	0	0	0	0
27.1- 28.0	NS	NS	0	0	3	1	0	0	0	0	0	0
28.1- 29.0	NS	NS	0	1	2	1	0	0	0	0	0	0
29.1- 30.0	NS	NS	0	0	0	2	0	0	0	0	0	0
30.1- 31.0	NS	NS	0	1	1	0	0	0	0	0	0	0
TOTAL ANALYZED	0	0	0	3	22	12	365	800	1018	886	157	0
MEAN LENGTH				28.9	16.4	18.5	4.7	5.9	6.6	6.8	6.9	
LEN RANGE(MIN)	.0	.0	.0	27.0	7.6	10.5	2.9	3.2	3.4	5.0	5.5	.0
(MAX)	.0	.0	.0	31.0	30.6	29.6	15.4	14.6	14.9	16.0	15.8	.0

NOTE. NS - NO SAMPLE.

TABLE 6.0-29

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF BLUEBACK HERRING
ALL SITES COMBINED SEINE

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2.1- 3.0	0	NS	0	0	0	0	5	0	0	0	0	0
3.1- 4.0	0	NS	0	0	0	2	52	4	0	0	0	0
4.1- 5.0	0	NS	0	0	0	0	45	293	4	3	0	0
5.1- 6.0	0	NS	0	0	0	0	1	282	219	133	2	0
6.1- 7.0	0	NS	0	0	0	0	1	40	48	242	2	0
7.1- 8.0	0	NS	0	0	0	0	0	2	1	41	2	0
8.1- 9.0	0	NS	0	0	0	0	0	0	0	3	0	0
9.1- 10.0	0	NS	0	0	6	0	0	0	0	1	0	0
10.1- 11.0	0	NS	0	0	5	0	0	0	0	0	0	0
11.1- 12.0	0	NS	0	0	3	0	0	0	0	0	0	0
12.1- 13.0	0	NS	0	0	1	0	0	0	0	0	0	0
13.1- 14.0	0	NS	0	0	0	0	0	0	0	0	0	0
14.1- 15.0	0	NS	0	0	0	0	0	0	0	0	0	0
15.1- 16.0	0	NS	0	0	0	0	0	0	0	0	0	0
16.1- 17.0	0	NS	0	0	0	0	0	0	0	0	0	0
17.1- 18.0	0	NS	0	0	0	0	0	0	0	0	0	0
18.1- 19.0	0	NS	0	0	0	0	0	0	0	0	0	0
19.1- 20.0	0	NS	0	0	0	0	0	0	0	0	0	0
20.1- 21.0	0	NS	0	0	0	0	0	0	0	0	0	0
21.1- 22.0	0	NS	0	0	0	0	0	0	0	0	0	0
22.1- 23.0	0	NS	0	0	0	0	0	0	0	0	0	0
23.1- 24.0	0	NS	0	0	0	0	0	0	0	0	0	0
24.1- 25.0	0	NS	0	0	0	0	0	0	0	0	0	0
25.1- 26.0	0	NS	0	0	0	0	0	0	0	0	0	0
26.1- 27.0	0	NS	0	0	0	0	0	0	0	0	0	0
27.1- 28.0	0	NS	0	0	0	1	0	0	0	0	0	0
TOTAL ANALYZED	0	0	0	0	15	3	104	621	272	423	6	0
MEAN LENGTH					10.5	11.4	4.0	5.1	5.8	6.3	6.6	
LEN RANGE(MIN)	.0	.0	.0	.0	9.3	3.3	2.6	3.5	4.3	4.7	5.4	.0
(MAX)	.0	.0	.0	.0	12.5	27.3	6.2	7.8	7.1	9.6	7.8	.0

NOTE. NS - NO SAMPLE.

TABLE 6.0-30

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF BLUEBACK HERRING
ALL SITES COMBINED — SURFACE TRAWL

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2.1- 3.0	NS	NS	0	0	0	0	62	0	0	0	0	0
3.1- 4.0	NS	NS	0	0	0	0	24	0	0	0	0	0
4.1- 5.0	NS	NS	0	0	0	0	59	0	0	0	0	0
5.1- 6.0	NS	NS	0	0	0	0	0	4	0	65	2	1
6.1- 7.0	NS	NS	0	0	0	0	0	0	3	235	10	0
7.1- 8.0	NS	NS	0	1	0	0	0	0	1	79	7	0
8.1- 9.0	NS	NS	0	0	1	0	0	0	0	11	0	0
9.1- 10.0	NS	NS	0	0	4	0	0	0	0	0	0	0
10.1- 11.0	NS	NS	0	0	1	0	0	0	0	0	0	0
TOTAL ANALYZED	0	0	0	1	6	0	145	4	4	390	19	1
MEAN LENGTH				7.5	9.4		3.6	5.5	6.8	6.6	6.8	6.0
LEN RANGE(MIN)	.0	.0	.0	7.5	8.5	.0	2.5	5.4	6.5	5.2	5.7	6.0
(MAX)	.0	.0	.0	7.5	10.1	.0	4.9	5.6	7.1	8.6	7.5	6.0

NOTE. NS - NO SAMPLE.

TABLE 6.0-31

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF WHITE PERCH
ALL SITES COMBINED BOTTOM TRAWL

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1.1- 2.0	NS	NS	0	0	0	1	2	1	0	0	0	0
2.1- 3.0	NS	NS	0	0	0	0	23	16	0	1	0	0
3.1- 4.0	NS	NS	0	0	0	0	23	76	1	0	1	0
4.1- 5.0	NS	NS	0	0	0	0	14	280	42	3	9	2
5.1- 6.0	NS	NS	0	0	0	0	0	406	191	67	98	29
6.1- 7.0	NS	NS	0	1	19	1	0	176	292	224	286	74
7.1- 8.0	NS	NS	1	27	112	19	1	13	132	193	321	46
8.1- 9.0	NS	NS	1	36	89	71	3	0	9	32	98	18
9.1- 10.0	NS	NS	2	13	11	55	23	9	2	2	15	2
10.1- 11.0	NS	NS	1	4	3	7	20	65	14	5	5	1
11.1- 12.0	NS	NS	0	27	11	5	6	52	53	36	32	15
12.1- 13.0	NS	NS	13	95	46	29	6	26	46	34	79	29
13.1- 14.0	NS	NS	14	68	21	35	39	42	18	30	56	25
14.1- 15.0	NS	NS	14	84	35	70	67	74	57	35	43	10
15.1- 16.0	NS	NS	17	113	56	64	113	92	85	31	27	7
16.1- 17.0	NS	NS	17	62	55	61	92	69	56	18	19	5
17.1- 18.0	NS	NS	7	53	66	41	59	47	41	11	9	1
18.1- 19.0	NS	NS	3	30	35	20	23	14	20	7	2	0
19.1- 20.0	NS	NS	2	6	16	11	9	3	6	2	1	1
20.1- 21.0	NS	NS	0	3	3	2	0	3	3	3	0	0
21.1- 22.0	NS	NS	0	1	0	0	0	1	1	1	0	0
22.1- 23.0	NS	NS	0	0	0	0	0	0	0	0	0	0
23.1- 24.0	NS	NS	0	1	0	0	0	0	0	0	0	0
24.1- 25.0	NS	NS	0	0	0	0	0	0	0	1	0	0
25.1- 26.0	NS	NS	0	0	1	0	0	0	0	0	0	0
26.1- 27.0	NS	NS	0	0	0	0	0	0	0	0	1	0
TOTAL ANALYZED	0	0	92	624	579	492	523	1465	1069	756	1102	265
MEAN LENGTH			14.8	14.1	12.7	13.5	13.8	8.3	9.5	9.2	8.7	9.2
LEN RANGE(MIN)	.0	.0	8.0	6.5	6.5	2.0	1.8	2.0	3.8	2.2	4.0	4.7
(MAX)	.0	.0	19.8	23.5	25.6	20.7	19.9	21.1	21.5	24.2	27.0	19.2

NOTE. NS - NO SAMPLE.

TABLE 6.0-32

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF WHITE PERCH
ALL SITES COMBINED SEINE

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1.1- 2.0	0	NS	0	0	0	0	3	0	0	0	0	0
2.1- 3.0	0	NS	0	0	0	0	25	3	0	0	0	0
3.1- 4.0	0	NS	0	0	0	0	37	66	3	0	0	0
4.1- 5.0	0	NS	0	0	0	0	10	176	38	4	2	0
5.1- 6.0	0	NS	0	0	0	0	2	151	204	67	18	0
6.1- 7.0	0	NS	0	0	12	15	0	52	230	269	81	0
7.1- 8.0	0	NS	0	0	52	76	1	12	99	198	113	6
8.1- 9.0	0	NS	0	0	144	211	25	1	5	62	49	4
9.1- 10.0	0	NS	0	0	47	207	109	3	0	4	4	0
10.1- 11.0	0	NS	0	0	6	76	153	32	3	4	0	0
11.1- 12.0	0	NS	0	0	25	16	65	57	27	27	9	3
12.1- 13.0	0	NS	0	1	62	21	22	24	24	69	20	9
13.1- 14.0	0	NS	0	1	69	33	6	12	13	28	23	7
14.1- 15.0	0	NS	0	1	47	12	10	7	7	5	7	0
15.1- 16.0	0	NS	0	1	32	19	5	9	4	5	8	1
16.1- 17.0	0	NS	0	6	34	14	4	6	3	7	1	1
17.1- 18.0	0	NS	0	8	21	12	4	1	0	1	1	3
18.1- 19.0	0	NS	0	8	10	4	0	0	1	0	2	0
19.1- 20.0	0	NS	0	5	7	1	0	0	0	1	1	0
20.1- 21.0	0	NS	0	3	1	0	1	0	0	0	0	1
21.1- 22.0	0	NS	1	0	0	0	0	0	0	0	0	1
22.1- 23.0	0	NS	0	1	0	0	0	0	0	1	0	1
TOTAL ANALYZED	0	0	1	35	569	717	482	612	661	752	339	37
MEAN LENGTH			21.2	17.9	11.7	10.0	9.6	6.8	7.1	8.2	8.7	12.8
LEN RANGE(MIN)	.0	.0	21.2	12.6	6.5	6.4	1.9	3.0	3.6	4.8	4.8	7.2
(MAX)	.0	.0	21.2	23.0	20.7	19.4	20.2	17.2	18.2	22.6	19.7	23.0

NOTE. NS - NO SAMPLE.

TABLE 6.0-33

1973 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF WHITE PERCH
ALL SITES COMBINED SURFACE TRAWL

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
4.1- 5.0	NS	NS	0	0	0	0	0	2	0	0	0	0
5.1- 6.0	NS	NS	0	0	0	0	0	0	0	0	1	0
6.1- 7.0	NS	NS	0	0	0	0	0	0	0	1	0	0
7.1- 8.0	NS	NS	0	0	0	0	0	0	0	2	1	0
8.1- 9.0	NS	NS	0	0	0	0	0	0	0	0	1	0
9.1- 10.0	NS	NS	0	0	0	0	0	0	0	0	0	0
10.1- 11.0	NS	NS	0	0	0	0	0	0	0	0	0	0
11.1- 12.0	NS	NS	0	0	0	0	0	0	1	0	0	0
12.1- 13.0	NS	NS	0	1	0	1	1	0	0	0	0	1
13.1- 14.0	NS	NS	1	1	0	0	0	0	0	0	0	2
14.1- 15.0	NS	NS	0	0	1	0	0	0	0	0	0	0
15.1- 16.0	NS	NS	0	0	0	1	0	1	0	0	1	0
16.1- 17.0	NS	NS	0	0	0	2	1	0	1	0	0	0
17.1- 18.0	NS	NS	0	0	0	2	0	0	0	0	0	0
18.1- 19.0	NS	NS	0	0	0	1	0	0	0	0	0	0
19.1- 20.0	NS	NS	0	0	0	0	0	0	0	0	0	0
20.1- 21.0	NS	NS	0	0	0	0	0	0	0	1	0	0
TOTAL ANALYZED	0	0	1	2	1	7	2	3	2	4	4	3
MEAN LENGTH			13.3	13.0	14.8	16.5	14.7	8.2	13.8	10.5	9.4	14.2
LEN RANGE(MIN)	.0	.0	13.3	12.4	14.8	13.0	12.8	4.4	11.5	7.0	5.9	13.3
(MAX)	.0	.0	13.3	13.6	14.8	18.5	16.5	15.4	16.1	20.1	15.6	14.7

NOTE. NS - NO SAMPLE.

TABLE 6.0-34

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF AMERICAN SHAD
ALL SITES COMBINED SURFACE TRAWL

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2.1- 3.0	NS	NS	0	0	0	7	0	0	0	0	0	0
3.1- 4.0	NS	NS	0	0	0	4	0	0	0	0	0	0
4.1- 5.0	NS	NS	0	0	0	1	3	0	0	0	0	0
5.1- 6.0	NS	NS	0	0	0	0	10	0	0	0	0	0
6.1- 7.0	NS	NS	0	0	0	0	8	16	1	0	0	0
7.1- 8.0	NS	NS	0	0	0	0	0	4	2	2	1	0
8.1- 9.0	NS	NS	0	0	0	0	0	0	0	39	4	0
9.1- 10.0	NS	NS	0	0	0	0	0	0	0	7	4	1
10.1- 11.0	NS	NS	0	0	0	0	0	0	0	3	0	0
11.1- 12.0	NS	NS	0	0	0	0	0	0	0	0	0	0
12.1- 13.0	NS	NS	0	0	0	0	0	0	0	0	0	0
13.1- 14.0	NS	NS	0	0	0	0	0	0	0	0	0	0
14.1- 15.0	NS	NS	0	0	0	1	0	0	0	0	0	0
TOTAL ANALYZED	0	0	0	0	0	13	21	20	3	51	9	1
MEAN LENGTH						3.9	5.8	6.6	7.6	8.7	8.9	9.3
LEN RANGE (MIN)	.0	.0	.0	.0	.0	2.1	4.8	6.1	7.0	7.6	7.6	9.3
(MAX)	.0	.0	.0	.0	.0	14.2	6.7	7.5	8.0	10.7	10.0	9.3

NOTE. NS - NO SAMPLE.

TABLE 6.0-35

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF AMERICAN SHAD
ALL SITES COMBINED BOTTOM TRAWL

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3.1- 4.0	NS	NS	0	0	0	1	4	0	0	0	0	0
4.1- 5.0	NS	NS	0	0	0	0	15	0	0	0	0	0
5.1- 6.0	NS	NS	0	0	0	0	90	4	0	0	0	0
6.1- 7.0	NS	NS	0	0	0	0	70	75	6	0	0	0
7.1- 8.0	NS	NS	0	0	0	0	14	94	52	7	0	0
8.1- 9.0	NS	NS	0	0	0	0	1	68	56	62	10	0
9.1- 10.0	NS	NS	0	0	0	0	0	13	31	63	15	0
10.1- 11.0	NS	NS	0	0	0	0	0	4	12	16	3	0
11.1- 12.0	NS	NS	0	0	0	0	0	0	1	1	1	0
12.1- 13.0	NS	NS	0	0	0	0	0	0	0	0	0	0
13.1- 14.0	NS	NS	0	0	0	0	0	0	0	0	0	0
14.1- 15.0	NS	NS	0	0	0	0	0	0	0	0	0	0
15.1- 16.0	NS	NS	0	0	0	0	0	0	0	0	0	0
16.1- 17.0	NS	NS	0	0	0	0	0	0	0	0	0	0
17.1- 18.0	NS	NS	0	0	0	0	0	0	0	0	0	0
18.1- 19.0	NS	NS	0	0	0	0	0	0	0	0	0	0
19.1- 20.0	NS	NS	0	0	0	0	0	1	0	0	0	0
20.1- 21.0	NS	NS	0	0	0	0	0	1	0	0	0	0
TOTAL ANALYZED	0	0	0	0	0	1	194	260	158	149	29	0
MEAN LENGTH						4.0	5.9	7.8	8.5	9.2	9.3	
LEN RANGE(MIN)	.0	.0	.0	.0	.0	4.0	3.2	5.8	6.2	7.7	8.2	.0
(MAX)	.0	.0	.0	.0	.0	4.0	8.5	20.6	11.9	11.2	12.0	.0

NOTE. NS - NO SAMPLE.

TABLE 6.0-36

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF AMERICAN SHAD
ALL SITES COMBINED SEINE

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2.1- 3.0	0	NS	0	0	0	6	0	0	0	0	0	0
3.1- 4.0	0	NS	0	0	0	2	74	0	0	0	0	0
4.1- 5.0	0	NS	0	0	0	0	174	0	0	0	0	0
5.1- 6.0	0	NS	0	0	0	0	122	35	1	0	0	0
6.1- 7.0	0	NS	0	0	0	0	77	265	23	1	0	0
7.1- 8.0	0	NS	0	0	0	0	0	65	64	45	0	0
8.1- 9.0	0	NS	0	0	0	0	0	0	2	62	6	0
9.1- 10.0	0	NS	0	0	0	0	0	0	0	1	0	0
TOTAL ANALYZED	0	0	0	0	0	8	447	365	90	109	6	0
MEAN LENGTH						2.8	5.0	6.6	7.3	8.1	8.5	
LEN RANGE(MIN)	.0	.0	.0	.0	.0	2.5	3.4	5.1	6.0	6.9	8.2	.0
(MAX)	.0	.0	.0	.0	.0	3.5	6.8	7.7	8.2	9.3	8.9	.0

NOTE. NS - NO SAMPLE.

6.2.3.4 Alewife. Three distinct size groups of alewife were collected in trawls and seines (Tables 6.0-37 through 6.0-39). Adults (23.1 to 34.0 cm) were collected in April and May principally by seines, although a few were taken by bottom trawls. These fish had entered the Hudson for spawning and evidently preferred a nearshore shallow water habitat. Other than during these two months, only a single adult was captured, that occurring in a September bottom trawl. Yearlings (9.0 to 19.0 cm) were collected by trawls from May through November and by seines from April through November. These generally occurred in low numbers, although a slight peak is indicated for the August-September period. Young-of-the-year were first collected in July in the 3.0 to 4.0 cm range. Length increased through November, to approximately 8.0 to 14.0 cm, by which time most of the young had left the study area.

6.2.3.5 Atlantic Tomcod. Atlantic tomcod are rarely collected in seines or surface trawls. Therefore the following data are for bottom trawls only (Table 6.0-40). Post spawning adults were taken in small numbers from April through July. Young-of-the-year entered the catches in May at approximately 4.0 to 6.0 cm total length. Growth was rapid through July, by which time most fish had attained a length of 6.0 to 10.0 cm. There was a period of almost no growth and low catches from July through September, followed by renewed growth and increased catches from October through December. The length range in December for most young-of-the-year was 12.0 to 18.0 cm. In addition, several fish larger than 22.0 cm were captured in December.

6.2.3.6 Striped Bass. Striped bass were not taken in sufficient number to be accorded a role in the dominance structure of the catches. However, because of the economic importance of this species, striped bass catches will be discussed here.

TABLE 6.0-37

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF ALEWIFE
ALL SITES COMBINED SURFACE TRAWL

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
4.1- 5.0	NS	NS	0	0	0	0	1	1	0	0	0	0
5.1- 6.0	NS	NS	0	0	0	0	1	0	0	0	0	0
6.1- 7.0	NS	NS	0	0	0	0	1	0	0	0	0	0
7.1- 8.0	NS	NS	0	0	0	0	0	9	1	3	0	0
8.1- 9.0	NS	NS	0	0	0	0	0	4	0	8	0	0
9.1- 10.0	NS	NS	0	0	1	0	0	0	0	4	6	0
10.1- 11.0	NS	NS	0	0	0	0	0	0	0	3	2	0
11.1- 12.0	NS	NS	0	0	0	1	0	0	0	1	0	0
12.1- 13.0	NS	NS	0	0	0	1	1	0	0	0	1	0
13.1- 14.0	NS	NS	0	0	1	0	0	0	0	0	0	0
14.1- 15.0	NS	NS	0	0	1	0	0	1	0	0	0	0
15.1- 16.0	NS	NS	0	0	0	0	1	1	0	0	0	0
16.1- 17.0	NS	NS	0	0	0	0	0	2	0	1	0	0
17.1- 18.0	NS	NS	0	0	0	0	0	0	1	0	1	0
18.1- 19.0	NS	NS	0	0	0	0	0	0	0	0	1	0
TOTAL ANALYZED	0	0	0	0	3	2	5	18	2	20	11	0
MEAN LENGTH					12.5	12.2	9.1	9.2	12.8	9.4	11.5	
LEN RANGE(MIN)	.0	.0	.0	.0	10.0	11.9	4.7	4.8	7.7	7.4	9.1	.0
(MAX)	.0	.0	.0	.0	14.4	12.5	15.9	16.9	17.8	16.2	18.6	.0

NOTE. NS - NO SAMPLE.

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF ALEWIFE
ALL SITES COMBINED BOTTOM TRAWL

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2.1- 3.0	NS	NS	0	0	0	0	1	0	0	0	0	0
3.1- 4.0	NS	NS	0	0	0	0	13	1	0	0	0	0
4.1- 5.0	NS	NS	0	0	0	0	6	6	0	0	0	0
5.1- 6.0	NS	NS	0	0	0	0	20	16	1	0	0	0
6.1- 7.0	NS	NS	0	0	0	0	22	31	4	2	0	0
7.1- 8.0	NS	NS	0	0	0	0	11	72	21	6	2	0
8.1- 9.0	NS	NS	0	0	0	0	0	47	58	34	5	0
9.1- 10.0	NS	NS	0	0	0	0	0	4	24	4	5	0
10.1- 11.0	NS	NS	0	0	10	0	0	1	6	0	0	0
11.1- 12.0	NS	NS	0	0	4	0	3	0	1	1	0	0
12.1- 13.0	NS	NS	0	0	0	1	0	1	0	0	3	0
13.1- 14.0	NS	NS	0	0	2	0	0	1	0	0	0	0
14.1- 15.0	NS	NS	0	0	0	0	1	3	2	0	0	0
15.1- 16.0	NS	NS	0	0	0	1	0	13	12	0	0	0
16.1- 17.0	NS	NS	0	0	0	0	2	9	26	0	0	0
17.1- 18.0	NS	NS	0	0	0	0	1	2	10	0	0	0
18.1- 19.0	NS	NS	0	0	0	0	0	1	5	0	0	0
19.1- 20.0	NS	NS	0	0	0	0	0	0	0	0	0	0
20.1- 21.0	NS	NS	0	0	0	0	0	0	0	0	0	0
21.1- 22.0	NS	NS	0	0	0	0	0	0	0	0	0	0
22.1- 23.0	NS	NS	0	0	0	0	0	0	0	0	0	0
23.1- 24.0	NS	NS	0	0	0	0	0	0	0	0	0	0
24.1- 25.0	NS	NS	0	0	0	0	0	0	0	0	0	0
25.1- 26.0	NS	NS	0	0	1	0	0	0	0	0	0	0
26.1- 27.0	NS	NS	0	0	0	0	0	0	0	0	0	0
27.1- 28.0	NS	NS	0	1	0	0	0	0	0	0	0	0
28.1- 29.0	NS	NS	0	0	0	0	0	0	1	0	0	0
29.1- 30.0	NS	NS	0	1	0	0	0	0	0	0	0	0
30.1- 31.0	NS	NS	0	0	0	0	0	0	0	0	0	0
31.1- 32.0	NS	NS	0	2	0	0	0	0	0	0	0	0
TOTAL ANALYZED	0	0	0	4	17	2	77	208	171	47	15	0
MEAN LENGTH				30.1	12.1	13.8	6.2	8.6	11.2	8.6	9.5	
LEN RANGE(MIN)	.0	.0	.0	27.1	10.5	12.2	3.0	3.7	5.8	6.5	7.6	.0
(MAX)	.0	.0	.0	31.9	26.0	15.4	17.2	18.2	28.1	11.8	12.6	.0

NOTE. NS - NO SAMPLE.

TABLE 6.0- 39

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF ALEWIFE
ALL SITES COMBINED SEINE

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3.1- 4.0	0	NS	0	0	0	0	9	0	0	0	0	0
4.1- 5.0	0	NS	0	0	0	0	21	0	0	0	0	0
5.1- 6.0	0	NS	0	0	0	0	4	4	0	0	0	0
6.1- 7.0	0	NS	0	0	0	0	4	34	9	0	0	0
7.1- 8.0	0	NS	0	0	0	0	0	27	32	10	0	0
8.1- 9.0	0	NS	0	0	0	0	0	28	25	22	0	0
9.1- 10.0	0	NS	0	0	2	0	1	9	10	25	0	0
10.1- 11.0	0	NS	0	0	2	0	0	13	9	17	2	0
11.1- 12.0	0	NS	0	0	5	0	0	0	3	5	25	0
12.1- 13.0	0	NS	0	1	2	1	0	0	0	2	20	0
13.1- 14.0	0	NS	0	0	2	2	0	1	1	0	10	0
14.1- 15.0	0	NS	0	1	4	0	0	11	3	1	4	0
15.1- 16.0	0	NS	0	1	1	0	1	22	7	3	0	0
16.1- 17.0	0	NS	0	0	1	0	1	12	6	1	1	0
17.1- 18.0	0	NS	0	0	0	0	0	3	0	0	1	0
18.1- 19.0	0	NS	0	0	0	0	0	2	1	0	0	0
19.1- 20.0	0	NS	0	0	0	0	0	0	0	0	1	0
20.1- 21.0	0	NS	0	0	0	0	0	0	1	0	0	0
21.1- 22.0	0	NS	0	0	1	0	0	0	0	0	0	0
22.1- 23.0	0	NS	0	0	0	0	0	0	0	0	0	0
23.1- 24.0	0	NS	0	1	3	0	0	0	0	0	0	0
24.1- 25.0	0	NS	0	0	3	0	0	0	0	0	0	0
25.1- 26.0	0	NS	0	1	6	0	0	0	0	0	0	0
26.1- 27.0	0	NS	0	2	11	0	0	0	0	0	0	0
27.1- 28.0	0	NS	0	7	14	0	0	0	0	0	0	0
28.1- 29.0	0	NS	0	14	22	0	0	0	0	0	0	0
29.1- 30.0	0	NS	0	35	24	0	0	0	0	0	0	0
30.1- 31.0	0	NS	0	27	17	0	0	0	0	0	0	0
31.1- 32.0	0	NS	0	13	12	0	0	0	0	0	0	0
32.1- 33.0	0	NS	0	8	3	0	0	0	0	0	0	0
33.1- 34.0	0	NS	0	2	1	0	0	0	0	0	0	0
TOTAL ANALYZED	0	0	0	113	136	3	41	166	107	86	64	0
MEAN LENGTH				29.5	26.5	13.2	5.3	10.3	9.8	9.8	12.6	
LEN RANGE (MIN)	.0	.0	.0	12.5	9.7	12.6	3.6	5.7	6.2	7.1	10.9	.0
(MAX)	.0	.0	.0	33.5	33.1	13.7	16.5	18.7	20.3	17.0	20.0	.0

NOTE. NS - NO SAMPLE.

TABLE 6.0-40

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF ATLANTIC TOMCOD
ALL SITES COMBINED BOTTOM TRAWL

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3.1- 4.0	NS	NS	0	0	2	0	0	0	0	0	0	0
4.1- 5.0	NS	NS	0	0	36	0	0	0	0	0	0	0
5.1- 6.0	NS	NS	0	0	45	11	3	0	0	0	0	0
6.1- 7.0	NS	NS	0	0	9	97	24	4	0	0	0	0
7.1- 8.0	NS	NS	0	0	0	81	135	17	4	2	0	0
8.1- 9.0	NS	NS	0	0	0	25	158	19	22	4	0	0
9.1- 10.0	NS	NS	0	0	0	8	63	9	28	14	1	0
10.1- 11.0	NS	NS	0	0	0	0	12	0	22	44	20	0
11.1- 12.0	NS	NS	0	0	0	0	0	1	7	41	57	3
12.1- 13.0	NS	NS	0	0	0	0	0	1	1	22	117	14
13.1- 14.0	NS	NS	0	1	0	0	0	0	0	10	95	46
14.1- 15.0	NS	NS	0	0	1	0	0	0	0	3	74	74
15.1- 16.0	NS	NS	0	0	7	0	0	0	0	1	24	54
16.1- 17.0	NS	NS	0	1	2	2	1	0	0	0	5	48
17.1- 18.0	NS	NS	0	0	0	1	2	0	0	0	2	31
18.1- 19.0	NS	NS	0	0	0	1	0	0	0	0	1	12
19.1- 20.0	NS	NS	0	0	1	0	0	0	0	0	0	9
20.1- 21.0	NS	NS	0	0	1	0	0	0	0	0	0	7
21.1- 22.0	NS	NS	0	0	0	0	0	0	0	0	0	4
22.1- 23.0	NS	NS	0	0	0	0	0	0	0	0	0	2
23.1- 24.0	NS	NS	0	0	0	0	0	0	0	0	0	2
24.1- 25.0	NS	NS	0	0	0	0	0	0	0	0	0	2
25.1- 26.0	NS	NS	0	0	0	0	0	0	0	0	0	1
26.1- 27.0	NS	NS	0	0	0	0	0	0	0	0	0	4
27.1- 28.0	NS	NS	0	0	0	0	0	0	0	0	0	1
TOTAL ANALYZED	0	0	0	2	104	226	398	51	84	141	396	314
MEAN LENGTH				14.7	6.5	7.4	8.4	8.5	9.6	11.3	13.2	16.0
LEN RANGE(MIN)	.0	.0	.0	13.2	3.8	5.2	5.7	6.6	7.5	7.4	9.6	11.3
(MAX)	.0	.0	.0	16.1	20.5	18.9	17.8	12.6	12.7	15.3	18.3	27.5

NOTE. NS - NO SAMPLE.

Surface trawl catches accounted for just one striped bass, which fell in the 15.1 to 16.0 cm length range. Bottom trawls caught 82 striped bass from April through December. Young-of-the-year entered the catches in July (three fish) in the 2.1 to 3.0 cm range. August was the peak month of trawl catches due to the complete recruitment of the young-of-the-year stock, after which catches declined. Young-of-the-year were taken by bottom trawls through December, when they were 7.0 to 9.0 cm in length. Yearling and older fish up to 47.0 cm were taken in low numbers during each month sampled except March (Tables 6.0-41 and 6.0-42).

Seines captured 236 striped bass from May through November. August and September were peak months due to the stock of young-of-the-year which became recruited to the gear in July at 4.1 to 5.0 cm. Yearling and older fish were taken in low numbers in each month from May through November (Table 6.0-43).

6.2.3.7 Bay Anchovy. Except for a single specimen in a seine collection, bay anchovy were collected only by trawls from June through September. Adult anchovies 6.0 to 10.0 cm were taken in each month, and young-of-the-year appeared in July in the 1.0 to 2.0 cm range (Tables 6.0-44 through 6.0-46).

6.2.4 Diel Catch Comparisons

Day versus night catch-per-effort comparisons were made for selected and total species for the gear types used (Table 6.0-47). Comparison of trawl and seine catch-per-effort day/night values can be used to discern diel migrations between shallow and deep water areas. No pattern was evident for Atlantic tomcod or spottail shiner. Beach seine data for alewife indicated an onshore movement at night and an offshore movement during the day, although trawl data failed to show a similar pattern. Data for American shad are stronger, with

TABLE 6.0-47

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF STRIPED BASS
ALL SITES COMBINED SURFACE TRAWL

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
15.1- 16.0	NS	NS	0	0	0	1	0	0	0	0	0	0
TOTAL ANALYZED	0	0	0	0	0	1	0	0	0	0	0	0
MEAN LENGTH						16.0						
LEN RANGE(MIN)	.0	.0	.0	.0	.0	16.0	.0	.0	.0	.0	.0	.0
(MAX)	.0	.0	.0	.0	.0	16.0	.0	.0	.0	.0	.0	.0

NOTE. NS - NO SAMPLE.

TABLE 6.0-42 (Page 1 of 2)

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF STRIPED BASS
ALL SITES COMBINED BOTTOM TRAWL

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2.1- 3.0	NS	NS	0	0	0	0	3	0	0	0	0	0
3.1- 4.0	NS	NS	0	0	0	0	0	5	0	0	0	0
4.1- 5.0	NS	NS	0	0	0	0	0	5	0	0	0	0
5.1- 6.0	NS	NS	0	0	0	0	0	5	1	0	0	0
6.1- 7.0	NS	NS	0	0	0	0	0	3	0	0	2	0
7.1- 8.0	NS	NS	0	0	0	0	0	9	2	0	2	4
8.1- 9.0	NS	NS	0	0	1	0	0	3	0	0	2	2
9.1- 10.0	NS	NS	0	0	0	1	0	1	1	1	0	0
10.1- 11.0	NS	NS	0	0	0	0	0	1	0	0	0	0
11.1- 12.0	NS	NS	0	0	0	0	0	0	0	0	0	1
12.1- 13.0	NS	NS	0	1	1	0	0	2	0	0	1	0
13.1- 14.0	NS	NS	0	0	0	0	0	0	0	0	0	2
14.1- 15.0	NS	NS	0	0	0	0	0	1	0	0	0	0
15.1- 16.0	NS	NS	0	0	0	0	0	1	0	0	0	0
16.1- 17.0	NS	NS	0	0	0	0	0	3	0	0	1	0
17.1- 18.0	NS	NS	0	0	0	0	0	1	0	0	0	0
18.1- 19.0	NS	NS	0	0	0	0	0	0	0	1	0	0
19.1- 20.0	NS	NS	0	0	0	0	0	0	0	0	1	0
20.1- 21.0	NS	NS	0	0	0	0	1	0	0	0	1	0
21.1- 22.0	NS	NS	0	0	0	0	0	0	0	0	0	1
22.1- 23.0	NS	NS	0	0	0	0	1	0	0	0	0	0
23.1- 24.0	NS	NS	0	0	0	0	0	1	0	0	0	0
24.1- 25.0	NS	NS	0	0	0	0	0	0	0	0	0	0
25.1- 26.0	NS	NS	0	0	0	0	0	0	0	0	0	0
26.1- 27.0	NS	NS	0	0	0	0	0	0	0	0	0	0
27.1- 28.0	NS	NS	0	0	0	0	0	0	0	0	0	0
28.1- 29.0	NS	NS	0	0	0	0	0	0	0	0	0	0
29.1- 30.0	NS	NS	0	0	0	0	0	0	0	0	1	0
30.1- 31.0	NS	NS	0	0	0	0	0	0	0	0	0	0
31.1- 32.0	NS	NS	0	0	0	0	0	0	0	0	0	0
32.1- 33.0	NS	NS	0	0	0	0	0	0	0	0	0	0
33.1- 34.0	NS	NS	0	0	0	0	0	0	0	0	0	0
34.1- 35.0	NS	NS	0	0	0	0	0	0	0	0	0	0
35.1- 36.0	NS	NS	0	0	0	0	0	0	0	0	0	0
36.1- 37.0	NS	NS	0	0	0	0	0	0	1	0	0	0
37.1- 38.0	NS	NS	0	0	0	0	0	0	0	0	0	0
38.1- 39.0	NS	NS	0	0	0	0	0	0	0	0	0	0
39.1- 40.0	NS	NS	0	0	0	0	0	0	1	0	0	1
40.1- 41.0	NS	NS	0	0	0	0	0	0	0	0	0	0
41.1- 42.0	NS	NS	0	0	0	0	0	0	0	0	0	0
42.1- 43.0	NS	NS	0	0	0	0	0	0	0	0	0	0
43.1- 44.0	NS	NS	0	0	0	0	0	0	0	0	0	0
44.1- 45.0	NS	NS	0	0	0	0	0	0	0	0	0	0

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF STRIPED BASS
ALL SITES COMBINED BOTTOM TRAWL

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
(CONT'D)												
45.1- 46.0	NS	NS	0	1	0	0	0	0	0	0	0	0
46.1- 47.0	NS	NS	0	0	0	0	1	0	0	0	0	0
TOTAL ANALYZED	0	0	0	2	2	1	6	41	6	2	11	11
MEAN LENGTH				29.0	10.6	9.5	16.1	8.5	17.6	14.0	13.1	13.4
LEN RANGE(MIN)	.0	.0	.0	12.1	8.7	9.5	2.4	3.4	5.3	9.8	6.1	7.4
(MAX)	.0	.0	.0	45.9	12.5	9.5	46.2	23.6	40.0	18.1	29.7	40.0

NOTE. NS - NO SAMPLE.

TABLE 6.0-43

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF STRIPED BASS
ALL SITES COMBINED SEINE

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
4.1- 5.0	0	NS	0	0	0	0	2	0	0	0	0	0
5.1- 6.0	0	NS	0	0	0	0	1	4	0	0	0	0
6.1- 7.0	0	NS	0	0	0	0	3	9	9	1	0	0
7.1- 8.0	0	NS	0	0	0	0	0	25	30	5	2	0
8.1- 9.0	0	NS	0	0	0	0	0	20	15	5	4	0
9.1- 10.0	0	NS	0	0	0	3	0	7	5	1	0	0
10.1- 11.0	0	NS	0	0	1	7	1	2	3	3	1	0
11.1- 12.0	0	NS	0	0	1	11	2	0	0	2	2	0
12.1- 13.0	0	NS	0	0	0	6	0	0	0	2	0	0
13.1- 14.0	0	NS	0	0	1	4	1	0	0	1	0	0
14.1- 15.0	0	NS	0	0	0	4	0	1	0	1	0	0
15.1- 16.0	0	NS	0	0	0	1	2	0	0	0	0	0
16.1- 17.0	0	NS	0	0	0	3	1	1	2	1	0	0
17.1- 18.0	0	NS	0	0	1	1	0	0	0	0	0	0
18.1- 19.0	0	NS	0	0	0	2	0	0	2	1	1	0
19.1- 20.0	0	NS	0	0	0	1	0	0	0	1	1	0
20.1- 21.0	0	NS	0	0	0	0	0	0	0	0	0	0
21.1- 22.0	0	NS	0	0	0	0	0	0	0	4	0	0
22.1- 23.0	0	NS	0	0	0	0	0	0	0	0	0	0
23.1- 24.0	0	NS	0	0	0	0	0	0	0	0	0	0
24.1- 25.0	0	NS	0	0	0	0	0	0	0	1	0	0
25.1- 26.0	0	NS	0	0	0	0	0	0	0	0	0	0
26.1- 27.0	0	NS	0	0	0	0	0	0	0	0	0	0
27.1- 28.0	0	NS	0	0	0	0	0	0	0	0	0	0
28.1- 29.0	0	NS	0	0	0	0	0	0	0	0	0	0
29.1- 30.0	0	NS	0	0	1	0	0	0	0	0	0	0
TOTAL ANALYZED	0	0	0	0	5	43	13	69	66	29	11	0
MEAN LENGTH					16.5	12.9	9.7	8.1	8.6	12.8	10.9	
LEN RANGE(MIN)	.0	.0	.0	.0	10.6	9.4	4.2	5.5	6.5	7.0	7.5	.0
(MAX)	.0	.0	.0	.0	29.6	19.8	16.2	16.5	18.9	25.0	19.3	.0

NOTE. NS - NO SAMPLE.

TABLE 6.0-44

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF BAY ANCHOVY
ALL SITES COMBINED SEINE

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
4.1- 5.0	0	NS	0	0	0	0	0	0	1	0	0	0
TOTAL ANALYZED	0	0	0	0	0	0	0	0	1	0	0	0
MEAN LENGTH									4.8			
LEN RANGE(MIN)	.0	.0	.0	.0	.0	.0	.0	.0	4.8	.0	.0	.0
(MAX)	.0	.0	.0	.0	.0	.0	.0	.0	4.8	.0	.0	.0

NOTE. NS - NO SAMPLE.

TABLE 6.0- 45

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF BAY ANCHOVY
ALL SITES COMBINED SURFACE TRAWL

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1.1- 2.0	NS	NS	0	0	0	0	0	128	0	0	0	0
2.1- 3.0	NS	NS	0	0	0	0	1	46	0	0	0	0
3.1- 4.0	NS	NS	0	0	0	0	0	6	0	0	0	0
4.1- 5.0	NS	NS	0	0	0	0	0	1	3	0	0	0
5.1- 6.0	NS	NS	0	0	0	0	0	2	1	0	0	0
6.1- 7.0	NS	NS	0	0	0	0	4	6	0	0	0	0
7.1- 8.0	NS	NS	0	0	0	0	2	6	0	0	0	0
8.1- 9.0	NS	NS	0	0	0	0	0	2	0	0	0	0
TOTAL ANALYZED	0	0	0	0	0	0	7	197	4	0	0	0
MEAN LENGTH							6.3	2.4	4.7			
LEN RANGE (MIN)	.0	.0	.0	.0	.0	.0	2.3	1.4	4.1	.0	.0	.0
(MAX)	.0	.0	.0	.0	.0	.0	7.8	8.3	5.3	.0	.0	.0

NOTE. NS - NO SAMPLE.

TABLE 6.0-46

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF BAY ANCHOVY
ALL SITES COMBINED BOTTOM TRAWL

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2.1- 3.0	NS	NS	0	0	0	0	0	14	3	0	0	0
3.1- 4.0	NS	NS	0	0	0	0	0	8	4	0	0	0
4.1- 5.0	NS	NS	0	0	0	0	0	9	9	0	0	0
5.1- 6.0	NS	NS	0	0	0	0	0	2	10	0	0	0
6.1- 7.0	NS	NS	0	0	0	0	4	25	3	0	0	0
7.1- 8.0	NS	NS	0	0	0	1	4	56	2	0	0	0
8.1- 9.0	NS	NS	0	0	0	0	1	16	2	0	0	0
9.1- 10.0	NS	NS	0	0	0	0	1	2	1	0	0	0
TOTAL ANALYZED	0	0	0	0	0	1	10	132	34	0	0	0
MEAN LENGTH						7.3	7.5	6.5	5.3			
LEN RANGE(MIN)	.0	.0	.0	.0	.0	7.3	6.5	2.4	2.1	.0	.0	.0
(MAX)	.0	.0	.0	.0	.0	7.3	9.1	9.2	9.6	.0	.0	.0

NOTE. NS - NO SAMPLE.

TABLE 6.0-47

ANNUAL MEAN CATCH-PER-EFFORT[a] FOR TOTAL AND SELECTED SPECIES BY GEAR TYPE AND DAY/NIGHT DEFINITION

Roseton and Danskammer Point Vicinity - 1979

GEAR	STATION	ALEWIFE		AMERICAN SHAD		Atlantic Tomcod		BLUEBACK HERRING		SPOTTAIL SHINER		WHITE PERCH		TOTAL SPECIES	
		DAY	NIGHT	DAY	NIGHT	DAY	NIGHT	DAY	NIGHT	DAY	NIGHT	DAY	NIGHT	DAY	NIGHT
Beach Seines	DCN	0.23	1.04	0.89	NC	NC	NC	2.50	0.04	6.01	8.12	1.81	5.85	22.95	26.89
	DCS	1.55	0.94	4.13	NC	NC	NC	19.83	0.21	14.06	3.13	7.70	9.86	62.31	23.19
	DD	0.90	5.96	33.59	0.07	NC	NC	60.64	0.09	5.48	5.22	19.45	52.42	133.81	76.84
	RD	0.30	5.11	4.66	1.35	NC	NC	9.76	0.43	6.33	9.71	5.10	15.74	35.78	41.46
	MEAN[b]	0.79	3.27	13.39	0.38	-	-	23.32	0.20	7.93	6.38	8.75	21.62	66.81	42.49
Bottom Trawl	RNCW	0.50	0.86	0.17	0.88	1.82	3.12	0.03	12.38	1.74	1.05	87.93	30.99	101.55	62.05
	DC	5.77	0.32	8.57	0.58	2.18	4.86	2.49	12.26	27.21	2.07	263.41	44.23	318.36	70.25
	RDW	0.12	1.18	0.10	2.33	11.18	6.37	0.03	20.38	0.63	0.92	21.80	17.00	39.45	52.20
	RDCH	0.07	2.45	0.25	4.29	4.27	2.57	0.03	55.57	0.03	0.08	7.57	4.74	16.62	73.78
	RDE	0.02	2.21	0.34	3.60	3.33	1.61	0.23	39.37	0.28	0.19	11.11	9.76	19.10	61.54
	MEAN[b]	1.29	1.40	1.89	2.33	4.56	3.71	0.56	27.99	5.98	0.86	78.37	21.34	99.02	63.96
Surface Trawl	RNCW	NC	0.08	0.27	0.04	NC	NC	1.99	NC	NC	NC	0.06	0.25	3.13	0.41
	RDW	0.02	0.31	0.86	0.05	NC	0.03	0.65	0.47	NC	0.02	0.09	0.07	1.81	1.14
	RDCH	NC	0.26	0.31	0.06	NC	0.01	1.99	0.05	NC	NC	0.02	0.02	3.09	0.62
	RDE	0.03	0.29	0.26	0.17	NC	0.04	71.34	0.07	NC	0.03	0.09	0.12	80.52	1.07
	MEAN[b]	0.01	0.24	0.42	0.08	-	0.02	18.99	0.15	-	0.01	0.07	0.11	22.14	0.81

[a]A unit of effort is defined as one seine haul or 10 minutes of trawling.
[b]Station mean.
NC - None collected.

both seine and trawl catch-per-effort indicating a shallow water preference during the day and a deep water preference at night. White perch and blueback herring both showed relatively strong though opposing movement patterns. The data from both seines and trawls indicate a preference by white perch for shallow areas at night and deeper areas during the day. Blueback herring exhibited the most pronounced diel movements of the species considered, concentrating in the shallow zones in the day and in deeper water at night. Because the two dominant species, blueback herring and white perch, exhibited opposite patterns, catch differences between day and night for total species failed to indicate a discernible trend. Mean annual catches for both trawls and beach seines were higher during the day than the night, although some individual stations showed the reverse.

6.2.5 Comparison to Previous Years

A summary of the abundance and percent composition of river fish collections for all gears and stations from 1971 to 1979 is presented in Table 6.0-48. Although gear type, amount of effort expended, and station location has varied from year to year, this data is indicative of the consistency with which six species (blueback herring, white perch, alewife, Atlantic tomcod, spottail shiner, and American shad) have dominated the river collections during the study period.

To examine trends in annual abundance in a more quantitative manner, mean annual catch-per-effort at selected stations was computed for these six species and for total species for the years 1975 to 1979 (Table 6.0-49). For surface and bottom trawls the selected stations were RNCW, RDW, RDCH, and RDE; and for seines they were DCN, DCS, DD, and RD. The LMS Annual Report of 1978 analyzed abundance

SUMMARY OF ABUNDANCE AND PERCENT COMPOSITION OF RIVER FISH COLLECTIONS FOR ALL GEARS[a] AND STATIONS

Roseton and Danskammer Point Vicinity - 1971-1979

SPECIES	1979		1978		1977		1976		1975		1974		1973		1972		1971	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Blueback herring	20148	35.0	33626	57.2	38174	47.4	12067	37.4	17831	43.5	4341	22.2	7259	31.1	1001	10.4	562	40.1
White perch	20502	35.6	6387	10.9	4954	6.2	4547	14.1	4543	11.1	5172	26.5	6388	27.4	2386	24.9	456	32.5
UID Alosa spp.	154	0.3	689	1.0	11475	14.2	3822	11.8	3539	8.6	396	2.0	966	4.1	-	-	-	-
Spottail shiner	3514	6.1	1847	3.1	1760	2.2	2708	8.4	3877	9.5	1277	6.5	2061	8.8	664	6.9	48	3.4
Alewife	1323	2.3	4371	7.4	2596	3.2	2682	8.3	4260	10.4	3102	15.9	1498	6.4	466	4.9	157	11.2
American shad	3065	5.3	5102	8.7	12800	15.9	1740	5.4	1380	3.4	1482	7.6	427	1.8	109	1.1	8	0.6
Atlantic tomcod	1742	3.0	1704	2.9	3288	4.1	1386	4.3	724	1.8	1502	7.7	699	3.0	3325	34.5	39	2.8
Banded killifish	1122	1.9	984	1.7	339	0.4	623	1.9	578	1.4	52	0.3	127	0.5	56	0.6	-	-
Pumpkinseed	929	1.6	513	0.9	209	0.3	613	1.9	532	1.3	303	1.6	345	1.5	198	2.1	-	-
Striped bass	319	0.6	553	0.9	461	0.6	290	0.9	409	1.0	184	0.9	1082	4.6	184	1.9	59	4.2
Hogchoker	1105	1.9	334	0.6	510	0.6	243	0.8	155	0.4	175	0.9	196	0.8	136	1.4	16	1.1
Atlantic menhaden	-	-	4	<0.1	30	<0.1	240	0.7	13	<0.1	1	<0.1	2	<0.1	3	<0.1	-	-
Golden shiner	370	0.6	243	0.4	222	0.3	213	0.7	289	0.7	495	2.5	327	1.4	46	0.5	-	-
Tessellated darter	702	1.2	536	0.9	237	0.3	209	0.6	385	0.9	48	0.2	143	0.6	63	0.7	3	0.2
American eel	245	0.4	203	0.3	240	0.3	163	0.5	196	0.5	62	0.3	256	1.1	26	0.3	4	0.3
White catfish	368	0.6	248	0.4	332	0.4	151	0.5	157	0.4	124	0.6	113	0.5	99	1.0	6	0.4
Bay anchovy	959	1.7	561	1.0	1714	2.1	110	0.3	1345	3.3	132	0.7	165	0.7	631	6.6	3	0.2
Gizzard shad	8	<0.1	41	0.1	193	0.2	102	0.3	76	0.2	2	<0.1	47	0.2	20	0.2	-	-
Brown bullhead	144	0.3	50	0.1	94	0.1	92	0.3	125	0.3	370	1.9	574	2.5	46	0.5	7	0.5
Goldfish	240	0.4	135	0.2	194	0.2	74	0.2	106	0.3	60	0.3	194	0.8	58	0.6	2	0.1
Emerald shiner	5	<0.1	4	<0.1	4	<0.1	38	0.1	10	<0.1	20	0.1	1	<0.1	-	-	-	-
Redbreast sunfish	89	0.2	45	0.1	16	<0.1	38	0.1	28	0.1	7	<0.1	13	0.1	7	0.1	-	-
Carp	77	0.1	54	0.1	16	<0.1	24	<0.1	33	0.1	32	0.2	46	0.2	8	0.1	-	-
Bluegill	115	0.2	80	0.1	25	<0.1	22	<0.1	106	0.3	51	0.3	173	0.7	12	0.1	1	0.1
Atlantic sturgeon	40	0.1	30	0.1	28	<0.1	19	<0.1	9	<0.1	22	0.1	40	0.2	10	0.1	5	0.4
Rainbow smelt	70	0.1	305	0.5	228	0.3	19	<0.1	26	0.1	12	0.1	18	0.1	5	0.1	25	1.8
Largemouth bass	20	<0.1	13	<0.1	8	<0.1	17	<0.1	15	<0.1	10	0.1	22	0.1	2	<0.1	-	-
Spot	-	-	-	-	292	0.4	8	<0.1	-	-	-	-	-	-	-	-	-	-
Yellow perch	35	0.1	12	<0.1	3	<0.1	6	<0.1	19	0.1	23	0.1	7	<0.1	14	0.1	-	-
Fourspine stickleback	54	0.1	25	<0.1	7	<0.1	4	<0.1	54	0.1	-	-	1	<0.1	2	<0.1	-	-
White sucker	55	0.1	32	0.1	6	<0.1	4	<0.1	8	<0.1	27	0.1	16	0.1	2	<0.1	-	-
White crappie	-	-	-	-	2	<0.1	3	<0.1	-	-	-	-	5	<0.1	-	-	-	-
Atlantic needlefish	16	<0.1	13	<0.1	13	<0.1	2	<0.1	2	<0.1	8	<0.1	-	-	1	<0.1	-	-
Black bullhead	-	-	2	<0.1	1	<0.1	2	<0.1	-	-	-	-	-	-	-	-	-	-
Black crappie	11	<0.1	3	<0.1	4	<0.1	2	<0.1	1	<0.1	3	<0.1	15	0.1	5	0.1	1	0.1
Brook stickleback	-	-	-	-	-	-	2	<0.1	-	-	-	-	-	-	-	-	-	-

- None collected.
UID - Unidentified to species level; not included in species total.

[a]1971-1977: Trawls, gill nets, trap nets, and seines.
1978-1979: Trawls and seines.

TABLE 6.0-48 (Page 2 of 2)

SUMMARY OF ABUNDANCE AND PERCENT COMPOSITION
OF RIVER FISH COLLECTIONS FOR ALL GEARS[a] AND STATIONS

SPECIES	1979		1978		1977		1976		1975		1974		1973		1972		1971	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Hickory shad	-	-	-	-	1	<0.1	2	<0.1	-	-	-	-	-	-	-	-	-	-
Longear sunfish	-	-	-	-	2	<0.1	2	<0.1	-	-	-	-	-	-	-	-	-	-
Mummichog	1	<0.1	2	<0.1	-	-	2	<0.1	-	-	-	-	-	-	-	-	-	-
UID Acipenser spp.	-	-	-	-	-	-	1	<0.1	-	-	-	-	-	-	-	-	-	-
UID Lepomis spp.	4	<0.1	-	-	-	-	1	<0.1	88	0.2	9	<0.1	-	-	-	-	-	-
Northern hogsucker	-	-	-	-	1	<0.1	1	<0.1	-	-	-	-	-	-	-	-	-	-
Rock bass	2	<0.1	-	-	1	<0.1	1	<0.1	2	<0.1	1	<0.1	-	-	-	-	-	-
Silvery minnow	1	<0.1	1	<0.1	1	<0.1	1	<0.1	2	<0.1	6	<0.1	17	0.1	-	-	-	-
Threespine stickleback	1	<0.1	-	-	-	-	1	<0.1	-	-	-	-	-	-	-	-	-	-
Warmouth	-	-	-	-	1	<0.1	1	<0.1	-	-	-	-	-	-	-	-	-	-
Spotfin shiner	-	-	-	-	-	-	-	-	17	<0.1	16	0.1	-	-	-	-	-	-
Shortnose sturgeon	-	-	1	<0.1	-	-	-	-	-	-	3	<0.1	4	<0.1	-	-	-	-
UID Notropis spp.	-	-	-	-	-	-	-	-	1	<0.1	3	<0.1	39	0.2	17	0.2	-	-
Bluefish	-	-	1	<0.1	10	<0.1	-	-	8	<0.1	2	<0.1	-	-	1	<0.1	-	-
Chain pickerel	-	-	-	-	-	-	-	-	-	-	2	<0.1	-	-	-	-	-	-
UID Cyprinidae	-	-	-	-	-	-	-	-	2	<0.1	-	-	1	<0.1	-	-	-	-
Rainbow trout	-	-	-	-	-	-	-	-	-	-	1	<0.1	-	-	-	-	-	-
Sea lamprey	-	-	-	-	1	<0.1	-	-	-	-	1	<0.1	-	-	-	-	-	-
Yellow bullhead	-	-	-	-	-	-	-	-	1	<0.1	1	<0.1	1	<0.1	-	-	-	-
UID Morone spp.	-	-	6	<0.1	1	<0.1	-	-	-	-	-	-	38	0.2	-	-	-	-
Smallmouth bass	-	-	-	-	1	<0.1	-	-	3	<0.1	-	-	2	<0.1	-	-	-	-
Crevalle jack	-	-	-	-	-	-	-	-	-	-	-	-	6	<0.1	-	-	-	-
White mullet	2	<0.1	23	<0.1	-	-	-	-	-	-	-	-	6	<0.1	-	-	-	-
UID	-	-	-	-	-	-	-	-	-	-	-	-	3	<0.1	-	-	-	-
UID Centrarchid	-	-	-	-	-	-	-	-	-	-	2	<0.1	-	-	-	-	-	-
Brown trout	-	-	-	-	-	-	-	-	1	<0.1	-	-	-	-	-	-	-	-
Creek chub	-	-	-	-	1	<0.1	-	-	1	<0.1	-	-	-	-	-	-	-	-
UID Ictalurus spp.	-	-	-	-	-	-	-	-	1	<0.1	-	-	-	-	-	-	-	-
White bass	-	-	2	<0.1	5	<0.1	-	-	2	<0.1	-	-	-	-	-	-	-	-
Fathead minnow	1	<0.1	-	-	1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Longnose dace	-	-	-	-	1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Weakfish	-	-	-	-	1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Channel catfish	1	<0.1	1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common shiner	1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Number of Fish	57560		58786		80504		32298		40961		19946		23344		9603		1402	
Total Number of Identified Species	40		39		48		43		40		39		37		31		18	

- None collected.
UID - Unidentified to species level; not included in species total.

[a]1971-1977: Trawls, gill nets, trap nets, and seines.
1978-1979: Trawls and seines.

TABLE 6.0-49

ANNUAL MEAN CATCH-PER-EFFORT[a] BY YEAR,
GEAR TYPE AND SELECTED SPECIES AT COMMON STATIONS[b]

Roseton and Danskammer Point Vicinity - 1979

I SURFACE TRAWLS

	1975[c]	1976[c]	1977[c]	1978[d]	1979[d]	MEAN
Alewife	0.30	0.13	1.50	0.27	0.12	0.46
American shad	0.54	0.18	3.06	0.72	0.25	0.95
Atlantic tomcod	NC	0.02	0.02	0.01	0.01	0.01
Blueback herring	22.80	0.84	17.26	2.71	9.57	10.64
Spottail shiner	0.04	0.01	NC	<0.01	<0.01	0.02
White perch	0.04	0.24	0.12	0.06	0.09	0.11
Total Species	31.73	1.52	22.76	4.82	11.47	14.46

II BOTTOM TRAWLS

	1975[c]	1976[c]	1977[c]	1978[d]	1979[d]	MEAN
Alewife	1.28	0.67	0.51	2.36	1.35	1.23
American shad	0.81	0.84	0.29	2.52	2.11	1.31
Atlantic tomcod	2.71	7.25	18.13	4.17	4.12	7.28
Blueback herring	24.87	7.39	7.76	30.22	14.28	16.90
Spottail shiner	0.20	0.68	0.45	0.25	3.42	1.00
White perch	9.08	12.25	10.24	8.50	49.84	17.98
Total Species	40.81	31.94	42.55	53.51	81.47	50.06

III SEINES

	1975	1976	1977	1978	1979	MEAN
Alewife	4.97	4.65	4.37	8.99	1.87	4.97
American shad	2.87	9.61	92.44	10.55	6.88	24.47
Atlantic tomcod	0.01	<0.01	NC	NC	NC	<0.01
Blueback herring	10.80	80.92	213.44	49.39	11.81	73.27
Spottail shiner	19.46	15.90	8.35	4.71	6.81	11.05
White perch	10.53	9.44	7.85	10.63	14.07	10.50
Total Species	83.75	165.20	432.90	93.90	52.66	225.68

[a]A unit of effort is defined as 10 minutes of trawling or one seine haul.
[b]Common stations: Trawls (RNCW, RDW, RDCH, and RDE).
Seines (DCN, DCS, DD, RD).
[c]No bottom sample taken at RDE.
[d]Initiated bottom sampling at RDE.
NC - None collected.

trends for the period 1971 to 1978. In the 1978 Annual Report, to provide a common seasonal basis for comparison, data were restricted to the months of August through November for surface trawls and May through October for bottom trawls. The data presented here are representative of a larger portion of the year, from approximately March through December for most years.

Of the five years considered, 1979 was the year of lowest total species catch-per-effort for both beach seines and surface trawls. In contrast, total species catch-per-effort for bottom trawls was at its second highest in 1979, ranking slightly behind 1978.

For most selected species, 1979 catch-per-effort values were at intermediate levels in comparison to previous years. An exception was white perch, which had a higher than usual catch-per-effort in bottom trawls and also the highest catch-per-effort in beach seines for the years considered. Except for the 1979 peak in bottom trawl data, annual catch data for white perch has shown relatively little year-to-year fluctuation.

Blueback herring, American shad, and alewife all had lower catch rates in 1979 than in 1978 for each of the three gear types. For each gear the largest annual fluctuation in catch rate has been shown by the blueback herring. American shad catch in bottom and surface trawls has been relatively consistent at low levels while the catch rate in beach seines has varied more widely. Alewife catch rates showed no major peaks for any of the five years.

Spottail shiner catch rate in bottom trawls was at a five-year high in 1979, although fluctuations have been moderate in a generally low catch rate. The 1979 beach seine catch rate for spottails was increased slightly from the 1978 low point, although the value remained considerably lower than the 1975 peak.

Atlantic tomcod have been taken in substantial numbers by bottom trawls only. There was a peak in 1977 followed by successive declines in 1978 and 1979.

6.3 PLANT ENTRAINMENT

6.3.1 Species Inventory

The ichthyoplankton species collected at the Roseton and Danskammer Point intakes and their total abundance are presented in Table 6.0-50. Alosa spp., Etheostoma spp., cyprinid, striped bass, and white perch eggs were collected at both Roseton and Danskammer Point. Atlantic tomcod eggs were found only in Danskammer Point samples. The larval species collected are consistent with those found in earlier years with the exception of brown bullhead larvae, which were collected in 1979 entrainment samples only. Alewife and brown bullhead larvae were collected at Danskammer Point only and all other species were found in samples from both plants.

6.3.2 Abundance Patterns of Total and Selected Populations

All abundance estimates at Roseton and Danskammer Point are presented as means of RI and RIN at Roseton and DI replicates at Danskammer. Although comparisons can be made based on the collection results of one net (i.e., one sample), data presented as the mean of "replicate" samples will always be more precise and will be equal to or greater than one sample in accuracy.

ANOVA calculations were performed for each of the five major species (white perch, striped bass, Alosa spp., American shad and Atlantic tomcod) to test for a difference in abundance between replicates at each plant. No difference (α = .05) was found for any case tested (Report Appendix).

TABLE 6.0-50 (Page 1 of 2)

ICHTHYOPLANKTON SPECIES INVENTORY AND TOTAL ABUNDANCE[a]
IN ENTRAINMENT COLLECTIONS - 1979

I. DANSKAMMER POINT

COMMON NAME	SCIENTIFIC NAME	TOTAL NUMBER COLLECTED	PERCENT OF TOTAL
Herring	Alosa spp.[b]	4910	67.0
White perch	Morone americana[b]	591	8.1
Striped bass	Morone saxatilis[b]	521	7.1
Darter	Etheostoma spp.[b]	506	6.9
Minnows and Carps	Cyprinidae[b]	234	3.2
American shad	Alosa sapidissima	153	2.1
Atlantic tomcod	Microgadus tomcod[b]	86	1.2
Rainbow smelt	Osmerus mordax	81	1.1
Bay anchovy	Anchoa mitchilli	59	0.8
Temperate bass	Morone spp.	50	0.7
American eel	Anguilla rostrata	40	0.5
Yellow perch	Perca flavescens	12	0.2
Blueback herring	Alosa aestivalis	10	0.1
Sunfish	Lepomis spp.	8	0.1
Killifish	Fundulus spp.	4	0.1
Spottail shiner	Notropis hudsonius	4	0.1
Alewife	Alosa pseudoharengus	2	<0.1
Brown Bullhead	Ictalurus nebulosus	1	<0.1
Unidentified		51	0.7

[a]Includes all life stages.
[b]Eggs identified.

TABLE 6.0-50 (Page 2 of 2)

ICHTHYOPLANKTON SPECIES INVENTORY AND TOTAL ABUNDANCE[a]
IN ENTRAINMENT COLLECTIONS - 1979

II. ROSETON

COMMON NAME	SCIENTIFIC NAME	TOTAL NUMBER COLLECTED	PERCENT OF TOTAL
Herring	Alosa spp.[b]	1597	47.1
White perch	Morone americana[b]	425	12.5
Darter	Etheostoma spp.[b]	382	11.3
Striped bass	Morone saxatilis[b]	230	6.8
Minnows and Carps	Cyprinidae[b]	153	4.5
Temperate bass	Morone spp.	120	3.5
American shad	Alosa sapidissima	103	3.0
Bay anchovy	Anchoa mitchilli	103	3.0
Atlantic tomcod	Microgadus tomcod	97	2.9
Rainbow smelt	Osmerus mordax	34	1.0
American eel	Anguilla rostrata	19	0.6
Sunfish	Centrarchidae	6	0.2
Blueback herring	Alosa aestivalis	4	0.1
Sunfish	Lepomis spp.	4	0.1
Yellow perch	Perca flavescens	4	0.1
Killifish	Fundulus spp.	2	0.1
Spottail shiner	Notropis hudsonius	1	<0.1
Unidentified		108	3.2

[a]Includes all life stages.
[b]Eggs identified.

6.3.2.1 White Perch. White perch eggs were collected in entrainment samples from 1 May-22 June at both the Roseton and Danskammer Point plants and again on 10 July at Danskammer Point (Table 6.0-51). Mean intake water temperature ranged from 12.0 to 24.0°C at Roseton and 12.3 to 24.0°C at Danskammer. Peak egg abundances occurred from mid May to early June at both plants. Significantly greater white perch egg concentrations were found in Danskammer Point collections, probably due to the intake's close proximity to Danskammer Cove, a suitable habitat for white perch spawning (see Report Appendix). Eggs were collected from all depth strata (surface, mid-depth, and bottom at Roseton and surface and bottom at Danskammer) with no depth having significantly different concentrations (Report Appendix). This relatively even depth distribution of white perch eggs is interesting in that these eggs are usually considered demersal and adhesive and one would expect higher concentrations in bottom samples.

White perch larvae were collected from 15 May-24 July at Roseton, and from 8 May-24 July at Danskammer Point (Table 6.0-51). White perch larvae were found in at least one sample on every collection date in this period at Roseton, and on every date except 17 July at Danskammer Point. Significantly more white perch larvae were collected at night than during the day at both plants (Tables 6.0-52, 6.0-53, Report Appendix). A difference was detected among the three depths at Roseton with mid- and bottom depths having the largest and similar concentrations and the surface depth having significantly lower concentrations. At Danskammer Point no detectable difference among depths was evidenced. White perch larval abundances at the two plants were relatively even, with no plant having significantly greater concentrations (Report Appendix).

TABLE 6.0- 51

MEAN[a] TOTAL ABUNDANCE[b] OF EGGS AND LARVAE[c] FOR WHITE PERCH

Roseton and Danskammer Point Generating Stations - 1979

START DATE[d]	ROSETON[e]		DANSKAMMER POINT	
	EGGS	LARVAE	EGGS	LARVAE
24 Apr	0.00	0.00	0.00	0.00
1 May	2.38	0.00	31.81	0.00
8 May	15.30	0.00	115.36	6.34
15 May	12.57	12.85	183.64	27.29
22 May	52.85	55.98	83.30	15.63
25 May	48.85	110.99	97.54	74.30
29 May	116.35	232.01	145.49	383.33
1 Jun	48.95	69.90	26.40	72.16
5 Jun	179.34	33.68	165.10	54.60
8 Jun	20.77	40.33	330.76	38.50
12 Jun	14.64	25.22	135.87	184.93
15 Jun	0.00	74.33	56.46	153.28
19 Jun	19.19	128.63	16.64	123.86
22 Jun	1.89	12.92	7.72	66.05
26 Jun	0.00	243.31	0.00	129.03
3 Jul	0.00	49.38	0.00	23.22
10 Jul	0.00	32.28	2.12	114.12
17 Jul	0.00	16.34	0.00	0.00
24 Jul	0.00	3.24	0.00	15.97
31 Jul	0.00	0.00	0.00	0.00

[a] Mean of sample depths; mean of all day and all night collections.
[b] Number of organisms/1000 m^3; allocated to either striped bass or white perch.
[c] Larvae include yolk-sac, post-yolk-sac and UID; juveniles excluded.
[d] All other sampling dates have concentrations of zero.
[e] RI and RIN combined.

TABLE 6.0-52

MEAN ABUNDANCE[a] OF WHITE PERCH LARVAE[b] BY SAMPLE DEPTH

Roseton Generating Station - 1979

START DATE[c]	DAY SAMPLE DEPTH SURFACE	MID	BOTTOM	MEAN	NIGHT SAMPLE DEPTH SURFACE	MID	BOTTOM	MEAN
8 May	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 May	0.00	0.00	11.63	3.88	23.81	0.00	41.67	21.83
22 May	120.79	13.16	30.41	54.79	79.66	27.03	78.52	61.74
25 May	90.91	147.36	46.30	94.86	178.69	153.08	51.28	127.68
29 May	77.78	102.56	137.92	106.09	361.04	476.04	236.70	357.93
1 Jun	17.24	94.56	88.35	66.72	107.21	93.00	19.06	73.09
5 Jun	3.87	72.21	35.21	37.10	22.73	68.05	0.00	30.26
8 Jun	0.00	0.00	0.00	0.00	74.98	135.97	31.02	80.66
12 Jun	0.00	0.00	16.13	5.38	59.00	55.95	20.21	45.05
15 Jun	13.96	32.26	47.62	31.28	65.22	238.34	48.57	117.38
19 Jun	134.18	184.58	39.36	119.37	149.29	127.52	136.88	137.90
22 Jun	0.00	11.37	0.00	3.79	0.00	49.77	16.40	22.06
26 Jun	0.00	0.00	21.28	7.09	453.95	439.49	599.57	497.67
3 Jul	0.00	0.00	23.83	7.94	244.65	12.20	15.58	90.81
10 Jul	0.00	58.26	60.37	39.54	19.23	11.91	43.96	25.03
17 Jul	0.00	0.00	0.00	0.00	0.00	46.89	51.18	32.69
24 Jul	0.00	0.00	0.00	0.00	8.07	0.00	11.37	6.48
31 Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[a]Number of organisms/1000 m^3; RI and RIN combined; allocated to either striped bass or white perch.
[b]Larvae include yolk-sac, post-yolk-sac, and UID; juveniles excluded.
[c]All other sampling dates have concentrations of zero.

TABLE 6.0-53

MEAN[a] ABUNDANCE[b] OF WHITE PERCH LARVAE[c] BY SAMPLE DEPTH

Danskammer Point Generating Station - 1979

START DATE[d]	DAY SAMPLE DEPTH SURFACE	DAY SAMPLE DEPTH BOTTOM	DAY MEAN	NIGHT SAMPLE DEPTH SURFACE	NIGHT SAMPLE DEPTH BOTTOM	NIGHT MEAN
1 May	0.00	0.00	0.00	0.00	0.00	0.00
8 May	13.16	12.20	12.68	0.00	0.00	0.00
15 May	37.25	44.12	40.69	0.00	27.78	13.89
22 May	0.00	0.00	0.00	31.25	31.25	31.25
25 May	107.15	78.95	93.05	111.11	0.00	55.56
29 May	62.00	40.77	51.39	912.70	517.86	715.28
1 Jun	84.50	87.74	86.12	26.64	89.75	58.20
5 Jun	55.31	26.85	41.08	80.18	56.04	68.11
8 Jun	41.72	42.81	42.27	21.74	47.72	34.73
12 Jun	290.48	339.49	314.99	55.87	53.87	54.87
15 Jun	155.51	30.78	93.15	229.51	197.30	213.41
19 Jun	13.34	48.67	31.01	172.54	260.88	216.71
22 Jun	122.87	72.08	97.48	0.00	69.24	34.62
26 Jun	50.87	159.02	104.95	188.85	117.40	128.89
3 Jul	0.00	0.00	0.00	37.75	55.13	46.44
10 Jul	84.70	73.68	79.19	143.99	154.12	149.06
17 Jul	0.00	0.00	0.00	0.00	0.00	0.00
24 Jul	5.50	36.92	21.21	12.20	9.26	10.73
31 Jul	0.00	0.00	0.00	0.00	0.00	0.00

[a]Mean of replicate samples.
[b]Number of organisms/1000 m^3; allocated to either striped bass or white perch.
[c]Larvae include yolk-sac, post-yolk-sac, and UID; juveniles excluded.
[d]All other sampling dates have concentrations of zero.

Table 6.0-54 presents a summary of white perch larval length-frequency data. Yolk-sac larvae ranged in length from 2.1 to 5.0 mm, and persisted longer in Danskammer Point entrainment samples. The mean length of yolk-sac larvae did not increase due to the recruitment of yolk-sac larvae throughout May and June. Post-yolk-sac larvae ranged from 2.1 to 18.0 mm with progressively increasing mean lengths. Collections from the two plants provided similar length-frequency distributions.

6.3.2.2 Striped Bass. Striped bass eggs were found in both Roseton and Danskammer Point samples from 15 May-12 June (Table 6.0-55). Mean intake water temperatures ranged from 15.3 to 20.8°C at Roseton, and 16.0 to 21.0°C at Danskammer. Eggs were collected at both plants on each sampling date except 8 June when no eggs were collected at either plant. Concentrations of eggs were significantly (α = .05) higher at Danskammer Point (Report Appendix).

A detectable difference was evidenced for striped bass eggs at Roseton among the depth strata sampled, with bottom and mid-depths having similar and significantly greater concentrations than surface strata. No difference in depth distribution was detectable at Danskammer Point due primarily to the turbulent mixing of water in the intake canal, or in day-night concentrations at either plant.

Striped bass larvae were collected at Roseton from 15 May-24 July and at Danskammer Point from 8 May-24 July (Table 6.0-55). No significant difference (α = .05) was detected for striped bass larval concentrations between the two plants. Mean abundance of striped bass larvae by sample depth and photoperiod is presented in Tables 6.0-56 and 6.0-57. At Roseton, night samples had significantly greater concentrations than day samples, and at Danskammer day samples had greater concentrations than night samples. No difference in overall depth distribution was evidenced at either

TABLE 6.0-54

SUMMARY OF WHITE PERCH LARVAL LENGTH FREQUENCY[a] IN ENTRAINMENT COLLECTIONS

Roseton and Danskammer Point Generating Stations - 1979

	YOLK-SAC						POST-YOLK-SAC					
	ROSETON[b]			DANSKAMMER POINT			ROSETON[b]			DANSKAMMER POINT		
START DATE	NUMBER	LENGTH INTERVAL RANGE	MEAN[c]	NUMBER	LENGTH INTERVAL RANGE	MEAN[c]	NUMBER	LENGTH INTERVAL RANGE	MEAN[c]	NUMBER	LENGTH INTERVAL RANGE	MEAN[c]
8 May	0	-	-	2	3.1-4.0	3.8[e]	0	-	-	0	-	-
15 May	0	-	-	5	3.1-5.0	4.0	4	3.1-5.0	4.3	0	-	-[e]
22 May	1	3.1-4.0	4.0[e]	0	-	-	16	3.1-7.0	4.6	2	4.1-5.0	4.7
25 May	0	-	-	0	-	-	30	3.1-7.0	5.1	8	4.1-6.0	5.5
29 May	2	3.1-4.0	3.8[d]	1	3.1-4.0	3.6[e]	91	3.1-9.0	6.4	74	3.1-10.0	7.2
1 Jun	1	3.1-4.0	3.1[d]	2	2.1-4.0	3.2[d]	33	3.1-9.0	6.9	29	3.1-10.0	6.6
5 Jun	0	-	-	1	3.1-4.0	3.9[d]	11	3.1-11.0	6.9[e]	27	3.1-10.0	7.3
8 Jun	0	-	-	1	3.1-4.0	3.4[e]	15	3.1-9.0	4.8[e]	17	3.1-11.0	6.0
12 Jun	0	-	-	10	2.1-4.0	3.2[d]	7	4.1-11.0	6.1	69	2.1-12.0	7.7
15 Jun	0	-	-	0	-	-	23	4.1-11.0	6.5	76	3.1-12.0	5.8
19 Jun	0	-	-	1	3.1-4.0	3.4[d]	31	4.1-16.0	9.0	66	3.1-15.0	8.5
22 Jun	0	-	-	0	-	-	8	5.1-15.0	8.4	27	5.1-16.0	9.0
26 Jun	0	-	-	1	3.1-4.0	3.1[d]	98	8.1-16.0	11.8	42	5.1-18.0	10.2
3 Jul	0	-	-	0	-	-	11	7.1-14.0	11.3	10	8.1-14.0	10.3[e]
10 Jul	0	-	-	0	-	-	13	9.1-16.0	11.9[e]	34	5.1-16.0	12.0
17 Jul	0	-	-	0	-	-	7	13.1-17.0	14.8[e]	0	-	-
24 Jul	0	-	-	0	-	-	1	4.1-16.0	10.1[e]	8	9.1-16.0	13.2

[a]Lengths measured in millimeters.
[b]RI and RIN combined.
[c]Mean of day and night samples.
[d]Collected in day samples only.
[e]Collected in night samples only.
Number - Number collected.

TABLE 6.0-55

MEAN[a] TOTAL ABUNDANCE[b] OF EGGS AND LARVAE[c] FOR STRIPED BASS

Roseton and Danskammer Point Generating Stations - 1979

	ROSETON[e]		DANSKAMMER POINT	
START DATE[d]	EGGS	LARVAE	EGGS	LARVAE
1 May	0.00	0.00	0.00	0.00
8 May	0.00	0.00	0.00	3.05
15 May	9.04	17.88	205.37	106.53
22 May	40.31	94.95	54.05	56.51
25 May	2.06	86.01	37.86	687.29
29 May	26.80	135.73	26.37	140.38
1 Jun	1.41	18.64	4.28	7.45
5 Jun	37.61	156.80	3.82	26.06
8 Jun	0.00	46.93	0.00	68.67
12 Jun	2.69	32.91	128.02	646.10
15 Jun	0.00	10.99	0.00	9.99
19 Jun	0.00	9.94	0.00	15.77
22 Jun	0.00	1.49	0.00	24.06
26 Jun	0.00	24.42	0.00	41.27
3 Jul	0.00	4.85	0.00	0.00
10 Jul	0.00	0.00	0.00	6.67
17 Jul	0.00	3.66	0.00	0.00
24 Jul	0.00	1.06	0.00	2.47
31 Jul	0.00	0.00	0.00	0.00

[a]Mean of sample depths; mean of all day and all night collections.
[b]Number of organisms/1000 m^3; allocated to either striped bass or white perch.
[c]Larvae include yolk-sac, post-yolk-sac and UID; juveniles excluded.
[d]All other sampling dates have concentrations of zero.
[e]RI and RIN combined.

TABLE 6.0-56

MEAN ABUNDANCE[a] OF STRIPED BASS LARVAE[b] BY SAMPLE DEPTH

Roseton Generating Station - 1979

START DATE[c]	DAY				NIGHT			
	SAMPLE DEPTH				SAMPLE DEPTH			
	SURFACE	MID	BOTTOM	MEAN	SURFACE	MID	BOTTOM	MEAN
8 May	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 May	0.00	10.87	58.70	23.19	23.81	0.00	13.89	12.57
22 May	79.21	160.99	233.00	157.73	58.83	14.71	29.74	34.43
25 May	0.00	14.71	12.50	9.07	165.32	233.92	128.21	175.82
29 May	8.54	47.44	60.52	38.83	332.15	284.52	81.23	232.63
1 Jun	0.00	0.00	0.00	0.00	92.80	11.37	7.69	37.29
5 Jun	210.65	373.06	357.09	313.60	0.00	0.00	0.00	0.00
8 Jun	34.49	67.31	0.00	33.93	102.11	64.54	13.16	59.94
12 Jun	0.00	19.23	16.13	11.79	82.03	28.57	51.49	54.03
15 Jun	33.67	32.26	0.00	21.98	0.00	0.00	0.00	0.00
19 Jun	34.06	25.58	0.00	19.88	0.00	0.00	0.00	0.00
22 Jun	0.00	0.00	0.00	0.00	0.00	8.93	0.00	2.98
26 Jun	0.00	0.00	0.00	0.00	102.45	32.01	12.03	48.83
3 Jul	0.00	0.00	0.00	0.00	27.42	0.00	1.67	9.70
10 Jul	0.00	0.00	0.00	0.00	0.00	11.91	0.00	3.97
17 Jul	0.00	0.00	0.00	0.00	17.24	1.51	8.93	9.23
24 Jul	0.00	0.00	0.00	0.00	0.00	6.33	0.00	2.11
31 Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[a] Number of organisms/1000 m^3; RI and RIN combined; allocated to either striped bass or white perch.
[b] Larvae include yolk-sac, post-yolk-sac, and UID; juveniles excluded.
[c] All other sampling dates have concentrations of zero.

TABLE 6.0-57

MEAN[a] ABUNDANCE[b] OF STRIPED BASS LARVAE[c] BY SAMPLE DEPTH

Danskammer Point Generating Station - 1979

START DATE[d]	DAY SAMPLE DEPTH SURFACE	DAY SAMPLE DEPTH BOTTOM	DAY MEAN	NIGHT SAMPLE DEPTH SURFACE	NIGHT SAMPLE DEPTH BOTTOM	NIGHT MEAN
1 May	0.00	0.00	0.00	0.00	0.00	0.0
8 May	0.00	12.20	6.10	0.00	0.00	0.00
15 May	82.75	128.31	105.44	88.24	126.99	107.62
22 May	0.00	73.24	36.62	62.50	90.28	76.39
25 May	1032.97	1490.60	1261.79	22.73	202.86	122.80
29 May	136.08	270.68	203.38	119.05	35.72	77.39
1 Jun	0.00	0.00	0.00	17.86	11.95	14.91
5 Jun	37.57	13.70	25.64	21.47	31.47	26.47
8 Jun	127.80	146.86	137.33	0.00	0.00	0.00
12 Jun	608.44	1899.74	1254.09	54.35	21.84	38.10
15 Jun	8.81	23.20	16.01	0.00	7.94	3.97
19 Jun	0.00	0.00	0.00	63.05	0.00	31.53
22 Jun	84.05	0.00	42.03	12.20	0.00	6.10
26 Jun	81.74	69.41	75.58	1.99	10.87	5.44
3 Jul	0.00	0.00	0.00	0.00	0.00	0.00
10 Jul	0.00	9.44	4.72	17.24	0.00	8.62
17 Jul	0.00	0.00	0.00	0.00	0.00	0.00
24 Jul	9.88	0.00	4.94	0.00	0.00	0.00
31 Jul	0.00	0.00	0.00	0.00	0.00	0.00

[a]Mean of replicate samples.
[b]Number of organisms/1000 m^3; allocated to either striped bass or white perch.
[c]Larvae include yolk-sac, post-yolk-sac and UID; juveniles excluded.
[d]All other sampling dates have concentrations of zero.

plant. However, at Roseton a photoperiod x depth interaction was demonstrated; during the day, mid-depth and bottom samples showed greatest concentrations, and at night, surface samples had the highest concentrations. This depth distributional pattern was not evidenced at Danskammer Point due to the intake canal's shallow (3 m) depth and the mixing of water in the canal caused by turbulence and eddy currents.

Striped bass yolk-sac larvae ranged from 2.1 to 7.0 mm (Table 6.0-58) and were found in Danskammer Point samples over a longer period of time than at Roseton. Post-yolk-sac lengths ranged from 3.1 to 19.0 mm. Mean lengths of larvae at Roseton were greater than those at Danskammer Point throughout late June and July.

6.3.2.3 Alosa spp. Eggs of Alosa spp. (blueback herring and alewife) were the most numerous of all eggs collected during 1979. They were collected from 11 April-5 June at Roseton, and from 17 April-15 June at Danskammer Point (Table 6.0-59). Mean intake water temperature ranged from 6.0 to 20.5°C at Roseton and from 6.0 to 21.3°C at Danskammer. The number of eggs collected at Danskammer Point was significantly greater than at Roseton. A sharp peak in abundance was observed on 1 May at Danskammer Point and 8 May at Roseton and a steady decline in Alosa spp. egg concentrations was seen after this period. Bottom samples at both plants generally had higher abundances of eggs than did surface samples; however, the substantial number of these demersal eggs in Danskammer Point surface samples could be due to the turbulence in the Danskammer intake canal (Report Appendix).

Alosa spp. larvae were collected from 1 May-17 July at both plants and again on 31 July at Danskammer Point (Table 6.0-60). Peak abundances occurred from late May to early June, and relatively high abundances were noted in the area for several weeks. Mean water

TABLE 6.0-58

SUMMARY OF STRIPED BASS LARVAL LENGTH FREQUENCY[a] IN ENTRAINMENT COLLECTIONS

Roseton and Danskammer Point Generating Stations - 1979

	YOLK-SAC						POST-YOLK-SAC					
	ROSETON[b]			DANSKAMMER POINT			ROSETON[b]			DANSKAMMER POINT		
START DATE	NUMBER	LENGTH INTERVAL RANGE	MEAN[c]	NUMBER	LENGTH INTERVAL RANGE	MEAN[c]	NUMBER	LENGTH INTERVAL RANGE	MEAN[c]	NUMBER	LENGTH INTERVAL RANGE	MEAN[c]
8 May	0		-	1	3.1-4.0	3.9[d]	0	-	-	0	-	-
15 May	7	4.1-6.0	5.3	16	3.1-6.0	4.2	0	-	-	0	-	-
22 May	9	4.1-7.0	5.8[e]	7	3.1-7.0	4.8	21	4.1-8.0	6.3	1	6.1-7.0	6.3[e]
25 May	6	5.1-7.0	5.8[e]	63	2.1-7.0	5.5	7	5.1-9.0	6.8	25	5.1-8.0	6.0
29 May	22	3.1-7.0	4.8[e]	22	3.1-6.0	4.1[e]	26	5.1-9.0	7.3[e]	4	3.1-7.0	5.0
1 Jun	7	4.1-7.0	5.6[d]	2	3.1-5.0	4.3[e]	1	6.1-7.0	6.5[d]	0	-	-
5 Jun	19	3.1-6.0	5.2[e]	9	3.1-6.0	5.3[d]	35	5.1-10.0	7.0[d]	3	4.1-7.0	5.7[e]
8 Jun	2	4.1-6.0	5.1	11	4.1-7.0	5.3[d]	8	4.1-7.0	5.4	18	4.1-7.0	5.5[d]
12 Jun	6	4.1-6.0	-	142	3.1-6.0	4.9	4	4.1-6.0	5.3[d]	11	4.1-6.0	5.3[d]
15 Jun	0	-	-	2	4.1-5.0	4.8[e]	3	4.1-6.0	5.3[d]	3	4.1-6.0	5.1[e]
19 Jun	0	-	-	1	5.1-6.0	5.7[e]	2	4.1-5.0	4.9[d]	7	5.1-7.0	5.8[e]
22 Jun	0	-	-	0	-	-	1	17.1-18.0	17.2[e]	10	5.1-14.0	6.5
26 Jun	1	5.1-6.0	5.3	6	3.1-7.0	4.4[d]	6	10.1-17.0	13.4[e]	10	5.1-16.0	7.0
3 Jul	0	-	-	0	-	-	1	15.1-16.0	15.5[e]	0	-	-
10 Jul	0	-	-	0	-	-	0	-	-	2	11.1-17.0	13.0
17 Jul	0	-	-	0	-	-	2	13.1-19.0	16.2[e]	0	-	-
24 Jul	0	-	-	0	-	-	1	16.1-17.0	16.1[e]	1	13.1-14.0	13.6[d]

[a] Lengths measured in millimeters.
[b] RI and RIN combined.
[c] Mean of day and night samples.
[d] Collected in day samples only.
[e] Collected in night samples only.
Number - Number collected.

TABLE 6.0-59

MEAN[a] TOTAL ABUNDANCE[b] OF EGGS AND LARVAE[c] FOR ALOSA SPP.

Roseton and Danskammer Point Generating Stations - 1979

	ROSETON[e]		DANSKAMMER POINT	
START DATE[d]	EGGS	LARVAE	EGGS	LARVAE
27 Mar	0.00	0.00	0.00	0.00
11 Apr	6.94	0.00	0.00	0.00
17 Apr	0.00	0.00	5.44	0.00
24 Apr	0.00	0.00	12.10	0.00
1 May	27.66	4.96	2815.93	16.05
8 May	38.06	7.04	914.39	30.98
15 May	0.00	41.04	881.24	40.19
22 May	14.67	42.05	108.23	63.03
25 May	8.15	335.57	260.48	377.34
29 May	0.00	1161.11	41.35	457.62
1 Jun	1.41	621.81	0.00	6669.82
5 Jun	3.40	180.14	237.40	417.10
8 Jun	0.00	559.06	1.39	673.31
12 Jun	0.00	129.28	0.00	355.81
15 Jun	0.00	184.71	9.62	1240.58
19 Jun	0.00	82.30	0.00	247.73
22 Jun	0.00	174.32	0.00	441.31
16 Jun	0.00	92.60	0.00	118.92
3 Jul	0.00	115.74	0.00	35.19
10 Jul	0.00	3.59	0.00	43.98
17 Jul	0.00	2.03	0.00	9.09
24 Jul	0.00	0.00	0.00	0.00
31 Jul	0.00	0.00	0.00	3.41
7 Aug	0.00	0.00	0.00	0.00

[a]Mean of sample depths; meag of all day and all night collections.
[b]Number of organisms/1000 m^3.
[c]Larvae include yolk-sac, post-yolk-sac and UID; juveniles excluded.
[d]All other sampling dates have concentrations of zero.
[e]RI and RIN combined.

TABLE 6.0-60

MEAN[a] ABUNDANCE[b] OF ALOSA SPP. LARVAE[c] BY SAMPLE DEPTH

Danskammer Point Generating Station - 1979

START DATE[d]	DAY			NIGHT		
	SAMPLE DEPTH			SAMPLE DEPTH		
	SURFACE	BOTTOM	MEAN	SURFACE	BOTTOM	MEAN
24 Apr	0.00	0.00	0.00	0.00	0.00	0.00
1 May	0.00	10.64	5.32	23.56	30.00	26.78
8 May	13.16	16.67	14.92	37.27	56.82	47.05
15 May	98.50	34.49	66.50	0.00	27.78	13.89
22 May	43.48	45.46	44.47	41.67	121.53	81.60
25 May	219.78	52.63	136.21	512.63	724.29	618.46
29 May	607.09	554.72	580.91	365.08	303.58	334.33
1 Jun	8253.27	7149.03	7701.15	6734.61	4542.37	5638.49
5 Jun	156.92	169.04	162.98	762.00	580.42	671.21
8 Jun	235.14	444.52	339.83	1159.57	853.99	1006.78
12 Jun	34.81	59.01	46.91	934.79	394.64	664.72
15 Jun	2177.85	1669.04	1923.45	729.51	385.92	557.72
19 Jun	341.25	436.98	389.12	69.65	143.04	106.35
22 Jun	65.53	27.11	46.32	1097.56	575.05	836.31
26 Jun	31.74	19.81	25.78	203.03	221.08	212.06
3 Jul	91.56	31.25	61.41	0.00	17.95	8.98
10 Jul	32.61	27.71	30.16	88.54	27.03	57.79
17 Jul	25.00	0.00	12.50	0.00	11.37	5.69
24 Jul	0.00	0.00	0.00	0.00	0.00	0.00
31 Jul	6.76	6.85	6.81	0.00	0.00	0.00
7 Aug	0.00	0.00	0.00	0.00	0.00	0.00

[a]Mean of replicate samples.
[b]Number of organisms/1000 m^3.
[c]Larvae include yolk-sac, post-yolk-sac, and UID; juveniles excluded.
[d]All other sampling dates have concentrations of zero.

temperature at Danskammer during the period of Alosa spp. presence was 12.3 to 28.0°C and at Roseton 12.0 to 27.3°C. Abundances at Danskammer Point were significantly greater than those at Roseton (Report Appendix), with concentrations at Danskammer Point rising to a daily mean of 6669.82/ 1000 m^3 and at Roseton to 1161.11/1000 m^3 (Table 6.0-59). Analysis of diel abundances revealed that night samples had significantly greater concentrations than day samples at both plants. Mid-depth samples had the greatest concentrations of Alosa spp. larvae at Roseton (Table 6.0-61); no depth distributional difference was detected at Danskammer Point.

Table 6.0-62 presents the Alosa spp. larval length-frequency data. Yolk-sac larvae ranged from 3.1 to 13.0 mm and post-yolk-sacs from 4.1 to 27.0 mm. Consistent incremental increases in post-yolk-sac mean lengths were evidenced by the data at both plants, and no length-frequency distributional differences between the plants were apparent.

6.3.2.4 American Shad. No American shad eggs were collected in entrainment samples at either plant in 1979.

American shad larvae were collected at Roseton from 22 May-22 June, and at Danskammer Point from 22 May-26 June (Table 6.0-63). Concentrations of shad were similar at both plants; however, day collections at Danskammer Point were generally higher in shad abundance than corresponding collections at Roseton (Tables 6.0-64 and 6.0-65). The peak abundance for shad coincided with the peak for Alosa spp. larvae from late May to early June. Mean water temperature at Danskammer during the period of shad presence was 17.0 to 23.0°C, and at Roseton 16.5 to 24.0°C. No diel vertical distribution pattern was evidenced from the data.

TABLE 6.0-61

MEAN ABUNDANCE[a] OF ALOSA SPP. LARVAE[b] BY SAMPLE DEPTH

Roseton Generating Station - 1979

START DATE[c]	DAY SAMPLE DEPTH SURFACE	MID	BOTTOM	MEAN	NIGHT SAMPLE DEPTH SURFACE	MID	BOTTOM	MEAN
24 Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 May	0.00	0.00	17.24	5.75	0.00	12.50	0.00	4.17
8 May	16.67	16.67	8.93	14.09	0.00	0.00	0.00	0.00
15 May	71.43	29.39	11.63	37.48	119.05	14.71	0.00	44.59
22 May	33.33	13.16	41.46	29.32	50.25	69.95	38.51	52.90
25 May	340.91	312.43	525.47	392.94	105.92	314.24	358.97	259.71
29 May	623.51	1575.00	350.70	849.74	875.00	1436.69	2105.74	1472.48
1 Jun	280.17	552.19	579.24	470.53	769.57	836.74	712.94	773.08
5 Jun	24.39	28.73	38.93	30.68	407.34	307.52	273.92	329.59
8 Jun	62.50	332.27	0.00	131.59	1000.00	1246.24	713.35	986.53
12 Jun	25.00	123.40	163.98	104.13	198.72	135.12	129.48	154.44
15 Jun	23.81	207.48	32.26	87.85	498.97	297.16	48.57	281.57
19 Jun	29.41	45.54	0.00	24.98	322.86	47.38	48.64	139.63
22 Jun	71.43	110.67	14.29	65.46	379.31	287.62	182.64	283.19
26 Jun	0.00	0.00	0.00	0.00	71.43	173.25	310.90	185.19
3 Jul	0.00	26.34	0.00	8.78	552.94	40.77	74.39	227.70
10 Jul	0.00	9.62	0.00	3.21	0.00	11.91	0.00	3.97
17 Jul	0.00	0.00	0.00	0.00	0.00	0.00	12.20	5.75
24 Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[a]Number of organisms/1000 m^3; RI and RIN combined.
[b]Larvae include yolk-sac, post-yolk-sac, and UID; juveniles excluded.
[c]All other sampling dates have concentrations of zero.

TABLE 6.0-62

SUMMARY OF ALOSA SPP. LARVAL LENGTH FREQUENCY[a] IN ENTRAINMENT COLLECTIONS

Roseton and Danskammer Point Generating Stations - 1979

	YOLK-SAC						POST-YOLK-SAC					
	ROSETON[b]			DANSKAMMER POINT			ROSETON[b]			DANSKAMMER POINT		
START DATE	NUMBER	LENGTH INTERVAL RANGE	MEAN[c]	NUMBER	LENGTH INTERVAL RANGE	MEAN[c]	NUMBER	LENGTH INTERVAL RANGE	MEAN[c]	NUMBER	LENGTH INTERVAL RANGE	MEAN[c]
1 May	2	4.1-6.0	5.0[d]	3	4.1-7.0	4.9	0	-	-	0	-	-
8 May	3	5.1-6.0	5.3[d]	3	4.1-8.0	5.8	0	-	-	4	5.1-8.0	6.5[e]
15 May	0	-	-	5	4.1-6.0	4.7	12	6.1-13.0	8.1	4	7.1-8.0	7.6[d]
22 May	2	3.1-5.0	4.1[e]	7	3.1-5.0	3.9	12	4.1-12.0	7.7	2	7.1-9.0	8.2[d]
25 May	1	5.1-6.0	6.0[d]	3	4.1-6.0	5.0[e]	117	4.1-15.0	8.8	41	6.1-12.0	9.1
29 May	1	5.1-6.0	5.3[e]	3	7.1-13.0	10.3[e]	380	4.1-15.0	8.0	82	5.1-15.0	9.4
1 Jun	0	-	-	0	-	-	306	5.1-16.0	10.6	480	5.1-17.0	11.1
5 Jun	0	-	-	2	4.1-6.0	4.9[d]	47	4.1-15.0	8.4	189	4.1-16.0	10.2
8 Jun	0	-	-	0	-	-	204	5.1-20.0	10.2	311	4.1-18.0	9.7
12 Jun	0	-	-	6	4.1-6.0	4.6[d]	45	5.1-17.0	11.2	125	4.1-20.0	11.9
15 Jun	0	-	-	0	-	-	54	6.1-19.0	12.0	376	4.1-19.0	11.0
19 Jun	0	-	-	0	-	-	16	7.1-23.0	16.7	155	4.1-22.0	15.9
22 Jun	0	-	-	0	-	-	79	8.1-23.0	16.5[e]	150	7.1-24.0	17.3
26 Jun	0	-	-	0	-	-	46	8.1-24.0	17.4[e]	41	7.1-27.0	17.3
3 Jul	0	-	-	0	-	-	25	15.1-24.0	20.1	17	12.1-21.0	17.1
10 Jul	0	-	-	0	-	-	2	21.1-23.0	22.3	14	7.1-21.0	15.5
17 Jul	0	-	-	0	-	-	1	20.1-21.0	20.5[e]	2	17.1-20.0	18.8[d]
24 Jul	0	-	-	0	-	-	0	-	-	0	-	-
31 Jul	0	-	-	0	-	-	0	-	-	2	17.1-21.0	19.1[d]

[a] Lengths measured in millimeters.
[b] RI and RIN combined.
[c] Mean of day and night samples.
[d] Collected in day samples only.
[e] Collected in night samples only.
Number - Number collected.

TABLE 6.0-63

MEAN[a] TOTAL ABUNDANCE[b] OF EGGS AND LARVAE[c] FOR AMERICAN SHAD

Roseton and Danskammer Point Generating Stations - 1979

START DATE[d]	ROSETON[e]		DANSKAMMER POINT	
	EGGS	LARVAE	EGGS	LARVAE
15 May	NC	0.00	NC	0.00
22 May	NC	2.03	NC	13.25
25 May	NC	4.15	NC	0.00
29 May	NC	39.65	NC	33.53
1 Jun	NC	66.83	NC	184.76
5 Jun	NC	85.97	NC	38.88
8 Jun	NC	23.06	NC	27.86
12 Jun	NC	2.32	NC	11.58
15 Jun	NC	7.35	NC	11.85
19 Jun	NC	6.31	NC	4.95
22 Jun	NC	2.87	NC	28.28
26 Jun	NC	0.00	NC	16.31
3 Jul	NC	0.00	NC	0.00

[a]Mean of sample depths; mean of all day and all night collections.
[b]Number of organisms/1000 m^3.
[c]Larvae include yolk-sac, post-yolk-sac and UID; juveniles excluded.
[d]All other sampling dates have concentrations of zero.
[e]RI and RIN combined.
NC - None collected.

TABLE 6.0-64

MEAN[a] ABUNDANCE[b] OF AMERICAN SHAD LARVAE[c] BY SAMPLE DEPTH

Danskammer Point Generating Station - 1979

START DATE[d]	DAY			NIGHT		
	SAMPLE DEPTH			SAMPLE DEPTH		
	SURFACE	BOTTOM	MEAN	SURFACE	BOTTOM	MEAN
15 May	0.00	0.00	0.00	0.00	0.00	0.00
22 May	52.99	0.00	26.50	0.00	0.00	0.00
25 May	0.00	0.00	0.00	0.00	0.00	0.00
29 May	80.52	0.00	40.26	0.00	53.57	26.79
1 Jun	427.49	70.27	248.88	71.77	169.49	120.63
5 Jun	58.15	53.89	56.02	13.89	29.57	21.73
8 Jun	19.66	12.66	16.16	31.74	47.37	39.56
12 Jun	25.88	8.77	17.33	11.63	0.00	5.82
15 Jun	0.00	7.82	3.91	8.20	31.38	19.79
19 Jun	6.67	6.18	6.43	0.00	6.95	3.48
22 Jun	9.26	0.00	4.63	0.00	103.86	51.93
26 Jun	0.00	0.00	0.00	0.00	65.22	32.61
3 Jul	0.00	0.00	0.00	0.00	0.00	0.00

[a]Mean of replicate samples.
[b]Number of organisms/1000 m^3.
[c]Larvae include yolk-sac, post-yolk-sac, and UID; juveniles excluded.
[d]All other sampling dates have concentrations of zero.

TABLE 6.0-65

MEAN ABUNDANCE[a] OF AMERICAN SHAD LARVAE[b] BY SAMPLE DEPTH

Roseton Generating Station - 1979

	DAY				NIGHT			
	SAMPLE DEPTH				SAMPLE DEPTH			
START DATE[c]	SURFACE	MID	BOTTOM	MEAN	SURFACE	MID	BOTTOM	MEAN
15 May	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22 May	0.00	0.00	0.00	0.00	0.00	0.00	12.20	4.07
25 May	0.00	10.21	0.00	3.40	0.00	14.71	0.00	4.90
29 May	0.00	50.00	0.00	16.67	116.48	71.43	0.00	62.64
1 Jun	0.00	39.22	8.48	15.90	154.59	145.18	53.50	117.76
5 Jun	12.20	17.86	10.21	13.42	290.21	185.34	0.00	158.52
8 Jun	0.00	0.00	18.52	6.17	59.03	60.78	0.00	39.94
12 Jun	0.00	0.00	13.89	4.63	0.00	0.00	0.00	0.00
15 Jun	0.00	0.00	0.00	0.00	0.00	44.12	0.00	14.71
19 Jun	0.00	0.00	0.00	0.00	37.86	0.00	0.00	12.62
22 Jun	0.00	0.00	0.00	0.00	17.24	0.00	0.00	5.75
26 Jun	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[a]Number of organisms/1000 m^3; RI and RIN combined.
[b]Larvae include yolk-sac, post-yolk-sac, and UID; juveniles excluded.
[c]All other sampling dates have concentrations of zero.

American shad yolk-sac larvae were not collected at Danskammer Point and were found in Roseton entrainment samples on only one date (Table 6.0-66). Post-yolk-sac larvae were collected at both plants and ranged from 10.1 to 28.0 mm in length. Mean lengths of shad larvae were similar at both plants.

6.3.2.5 Atlantic Tomcod. Atlantic tomcod eggs were collected only on 9 January at Danskammer Point (Table 6.0-67).

Atlantic tomcod larvae were collected from 20 February-27 March at both plants (Table 6.0-67). Mean water temperature ranged from 0.6 to 6.5°C at Danskammer and 1.6 to 6.8°C at Roseton. Concentrations of larvae were similar in samples from both plants. Yolk-sac larvae ranged in length from 5.1 to 8.0 mm and post-yolk-sac larvae from 5.1 to 9.0 mm (Table 6.0-68). The range and mean length values remained relatively consistent over the Atlantic tomcod sampling period.

6.3.2.6 Bay Anchovy. No bay anchovy eggs were collected in entrainment samples at either plant.

Bay anchovy larvae were collected at both plants from 10 July-28 August (Table 6.0-69). Mean water temperature ranged from 24.0 to 28.3°C at Danskammer and 24.0 to 28.3°C at Roseton. Conductivity values were not unusually high during this period (170 to 235 μmhos/cm) as compared to the rest of the year. This is the typical period of bay anchovy entrainment at Roseton and Danskammer Point, and does not appear to be correlated with an increase in conductivity. Concentrations of larvae were similar at both plants, and no apparent distributional trends were evidenced.

TABLE 6.0-66

SUMMARY OF AMERICAN SHAD LARVAL LENGTH FREQUENCY[a] IN ENTRAINMENT COLLECTIONS

Roseton and Danskammer Point Generating Stations - 1979

	YOLK-SAC						POST-YOLK-SAC					
	ROSETON[b]			DANSKAMMER POINT			ROSETON[b]			DANSKAMMER POINT		
START DATE	NUMBER	LENGTH INTERVAL RANGE	MEAN[c]	NUMBER	LENGTH INTERVAL RANGE	MEAN[c]	NUMBER	LENGTH INTERVAL RANGE	MEAN[c]	NUMBER	LENGTH INTERVAL RANGE	MEAN[c]
22 May	0	-	-	0	-	-	1	14.1-15.0	14.1[e]	2	10.1-12.0	10.9[d]
25 May	0	-	-	0	-	-	2	12.1-16.0	14.0	0	-	-
29 May	1	10.1-11.0	10.2[e]	0	-	-	15	14.1-19.0	17.3	7	12.1-18.0	15.8
1 Jun	0	-	-	0	-	-	36	14.1-22.0	18.1	75	12.1-22.0	16.6
5 Jun	0	-	-	0	-	-	28	15.1-22.0	19.3	22	14.1-22.0	18.7
8 Jun	0	-	-	0	-	-	8	17.1-24.0	20.9	13	17.1-24.0	19.5
12 Jun	0	-	-	0	-	-	1	25.1-26.0	26.0[d]	5	15.1-25.0	20.3
15 Jun	0	-	-	0	-	-	3	19.1-23.0	20.7[e]	6	16.1-23.0	20.0
19 Jun	0	-	-	0	-	-	2	24.1-27.0	25.8[e]	3	21.1-24.0	22.4
22 Jun	0	-	-	0	-	-	1	24.1-25.0	24.4[e]	10	23.1-26.0	24.2
26 Jun	0	-	-	0	-	-	0	-	-	6	21.1-28.0	25.6

[a] Lengths measured in millimeters.
[b] RI and RIN combined.
[c] Mean of day and night samples.
[d] Collected in day samples only.
[e] Collected in night samples only.
Number - Number collected.

TABLE 6.0-67

MEAN[a] TOTAL ABUNDANCE[b] OF EGGS AND LARVAE[c] FOR ATLANTIC TOMCOD

Roseton and Danskammer Point Generating Stations - 1979

START DATE[d]	ROSETON[e]		DANSKAMMER POINT	
	EGGS	LARVAE	EGGS	LARVAE
9 Jan	NC	0.00	76.67	0.00
23 Jan	NC	0.00	0.00	0.00
6 Feb	NC	0.00	0.00	0.00
13 Feb	NC	0.00	0.00	0.00
20 Feb	NC	5.75	0.00	7.63
27 Feb	NC	11.37	0.00	0.00
6 Mar	NC	24.90	0.00	48.09
13 Mar	NC	95.16	0.00	132.85
20 Mar	NC	90.02	0.00	91.99
27 Mar	NC	55.57	0.00	28.55
11 Apr	NC	0.00	0.00	0.00

[a]Mean of sample depths; meaq of all day and all night collections.
[b]Number of organisms/1000 m^3.
[c]Larvae include yolk-sac, post-yolk-sac, and UID; juveniles excluded.
[d]All other sampling dates have concentrations of zero.
[e]RI and RIN combined.
NC - None collected.

TABLE 6.0-68

SUMMARY OF ALTANLIC TOMCOD LARVAL LENGTH FREQUENCY[a] IN ENTRAINMENT COLLECTIONS

Roseton and Danskammer Point Vicinity - 1979

	YOLK-SAC						POST-YOLK-SAC					
	ROSETON[b]			DANSKAMMER POINT			ROSETON			DANSKAMMER POINT[c]		
START DATE	NUMBER	LENGTH INTERVAL RANGE	MEAN[d]	NUMBER	LENGTH INTERVAL RANGE	MEAN[d]	NUMBER	LENGTH INTERVAL RANGE	MEAN[d]	NUMBER	LENGTH INTERVAL RANGE	MEAN[d]
20 Feb	1	6.1 - 7.0	6.9[f]	2	5.1 - 7.0	6.3[f]	0	-	-	1	6.1 - 7.0	6.1[e]
27 Feb	0	-	-	0	-	-	3	7.1 - 8.0	7.2[e]	0	-	-
6 Mar	7	6.1 - 8.0	7.2[f]	4	6.1 - 7.0	6.9	1	6.1 - 7.0	6.6	7	6.1 - 8.0	6.7
13 Mar	6	6.1 - 8.0	6.8[f]	10	6.1 - 7.0	6.6	24	6.1 - 9.0	7.2	17	6.1 - 8.0	7.2
20 Mar	3	6.1 - 8.0	6.8[f]	4	6.1 - 8.0	6.7[e]	22	6.1 - 9.0	7.4	21	6.1 - 9.0	7.2
27 Mar	2	6.1 - 7.0	6.9	2	6.1 - 8.0	7.3[e]	14	5.1 - 8.0	7.0	5	6.1 - 8.0	7.4

[a] Lengths measured in millimeters.
[b] RI and RIN combined.
[c] One additional post-yolk-sac larvae with a length of 11.8 mm collected on 12 June.
[d] Mean of day and nights samples.
[e] Collected in day samples only.
[f] Collected in night samples only.
Number - Number collected.

TABLE 6.0 -69

MEAN[a] TOTAL ABUNDANCE[b] OF EGGS AND LARVAE[c] FOR BAY ANCHOVY

Roseton and Danskammer Point Generating Stations - 1979

START DATE[d]	ROSETON[e]		DANSKAMMER POINT	
	EGGS	LARVAE	EGGS	LARVAE
3 Jul	NC	0.00	NC	0.00
10 Jul	NC	5.40	NC	4.31
17 Jul	NC	3.50	NC	17.24
24 Jul	NC	5.03	NC	6.13
31 Jul	NC	46.08	NC	65.50
7 Aug	NC	4.46	NC	16.50
15 Aug	NC	81.26	NC	7.86
28 Aug	NC	17.86	NC	8.14
11 Sep	NC	0.00	NC	0.00

[a]Mean of sample depths; mean of all day and all night collections.
[b]Number of organisms/1000 m^3.
[c]Larvae include yolk-sac, post-yolk-sac and UID; juveniles excluded.
[d]All other sampling dates have concentrations of zero.
[e]RI and RIN combined.
NC - None collected.

6.3.3 Comparison Between Plants and River

6.3.3.1 Species Inventory. The species inventory from river ichthyoplankton collections is similar to the entrainment species inventory; however, hogchoker, stickleback, walleye, and white sucker larvae were collected in the river and not in the plant, and brown bullhead larvae were collected only at the Danskammer intake.

6.3.3.2 Distribution and Abundance Comparisons. White perch eggs and larvae were found in river and plant samples almost simultaneously in late spring. Comparisons between plant and river ichthyoplankton concentrations may be facilitated by assuming the Roseton intake to be a west shore station and comparing concentrations among these four stations, treating each as an individual station. Mean concentrations of white perch eggs were generally higher in plant samples, while mean larval concentrations were greater in river samples. The fairly low abundances of white perch larvae in Roseton entrainment samples correspond to the distribution of the larvae toward the river channel. Although there appeared to be no clear trend in vertical distribution in plant samples, as existed in the river, white perch larvae did show a tendency to be more abundant in mid-depth and bottom samples during the day and to disperse in the water column at night, as evidenced by the increased numbers in surface-night samples at Roseton.

The period of striped bass egg and larval presence was similar in both river and plant samples. Egg abundance was similar between the Roseton intake and river samples whereas abundances at Danskammer Point were slightly higher. Larval concentrations in Roseton samples were similar to concentrations found in the nearby RDW samples. Peak larval abundance at Danskammer Point on 25 May and 12 June coincided with the time of peak river abundances. The depth distributional pattern between the plant and river larvae generally

confirms that striped bass were more heavily concentrated at the mid-depth and bottom water strata during the day and moved up at night when highest abundances were found in surface samples.

Alosa spp. eggs appeared in river samples approximately one week before they occurred in plant samples, and persisted in plant samples for one week longer. Alosa spp. egg concentrations were lowest in river samples and highest in Danskammer intake collections. When compared to river stations, Alosa spp. larval concentrations were generally lowest at the Roseton intake. This corresponds to the low abundances of these larvae on the west side of the river and the progressive increase in concentrations toward the east. Abundances at Danskammer Point were generally higher than at Roseton, but not as high as the east side of the river (except for 1 June when the highest concentration of Alosa spp. larvae was recorded for the year at Danskammer Point).

Although a diel vertical migration pattern was evidenced in the river, the plant entrainment data does not demonstrate this phenomenon.

American shad eggs were not collected in either plant or river samples; shad larvae, however, were collected in entrainment and river samples simultaneously. Mean shad larval concentrations were generally highest in plant samples. No migratory or diel distributional trends were evidenced.

Atlantic tomcod eggs were collected only on 9 January at Danskammer Point and were not found in Roseton entrainment samples in 1979. River ichthyoplankton samples contained Atlantic tomcod eggs only on the first two collection dates, 20 and 27 March. Atlantic tomcod larvae were found concurrently at the two plants (20 February - 27 March) and on the first two river collection dates. Larval concentrations were relatively similar between the river and plants with no station having consistently higher abundances.

Bay anchovy eggs were not collected in river or plant samples during 1979. Bay anchovy larvae were found in Roseton and Danskammer Point entrainment samples from 10 July-28 August and in river samples from 10 July-11 September. Concentrations on 11 September were relatively low and bay anchovy larvae were only collected at the deeper (RDCH and RDR) stations. Mean river abundances were relatively consistent ranging from 1.71 to 31.94 larvae/1000 m^3. Plant abundances varied more with abundances ranging from 3.50 to 81.26 larvae/ 1000 m^3 at Roseton and 4.31 to 65.50 larvae/1000 m^3 at Danskammer Point.

6.3.4 Comparison with Previous Years

6.3.4.1 Species Inventory. Similar ichthyoplankton species were collected in Roseton and Danskammer Point entrainment samples from 1975-1979. White perch, striped bass, Alosa spp., and cyprinid eggs were collected every year, while American shad eggs were collected in every year except 1979, and Atlantic tomcod eggs in every year except 1975. Unusual occurrences of eggs were recorded in 1975 (bay anchovy and hogchoker), 1977 (Etheostoma spp. and rainbow smelt), 1978 (rainbow smelt), and 1979 (Etheostoma spp.). Larval collections were similar for this five-year period with white perch, striped bass, Alosa spp., American shad, Atlantic tomcod, rainbow smelt, American eel, Cyprinids, Lepomis spp., and Etheostoma spp. as the major genera and species. Infrequent collections of Atlantic sturgeon, log perch, brown bullhead, white sucker, hogchoker, Fundulus spp., and Gasterosteidae also occurred during this period.

6.3.4.2 Select Species

6.3.4.2.1 White perch. White perch eggs consistently appeared from early to mid-May and were found in samples through early

July. The typical peak abundance occurred from mid-May to mid-June at water temperatures between 10.4 and 25.9°C. Concentrations of white perch eggs were consistently higher in Danskammer Point samples than in Roseton samples. No consistent changes in white perch egg concentrations were observed for the period 1975-1979.

Peak white perch larval abundance typically occurred from mid-May to late June; no year deviated from this period by any unusual amount. Peak larval concentrations were similar between Roseton and Danskammer Point during the past five years. No consistent increase or decrease in abundance was observed.

6.3.4.2.2 Striped bass. Striped bass eggs were found in entrainment samples at approximately the same time as white perch eggs. Peak abundance typically occurred from mid-May to mid-June, with slight deviations occurring over the five-year period, most likely due to natural fluctuations in the striped bass spawning season. Egg concentrations were similar at both plants and were consistently the lowest of the selected species (white perch, striped bass, Alosa spp.).

Striped bass larvae exhibited a consistent peak from mid-May to late June over the five-year period; concentrations were generally higher at Danskammer Point. No consistent increasing or decreasing trends in larval concentrations were apparent from the abundance data.

6.3.4.2.3 Alosa spp. Alosa spp. eggs consistently appeared earlier than Morone spp. eggs. The peak abundance generally occurred from late April to early June. Egg concentrations at Danskammer Point were consistently higher than at Roseton and were the most numerous genera of eggs collected.

Peak Alosa spp. larval abundance generally occurred from late May to late June, with the exception of 1975, when the spawn occurred approximately two weeks earlier. Larval concentrations were slightly higher at Danskammer Point, and no consistent changes in Alosa spp. abundance were evidenced for this five-year period.

6.3.4.2.4 American shad. Entrainment of American shad eggs has typically occurred from mid April to late May during the period 1975-1979. American shad eggs were absent from entrainment samples for the first time in 1979.

American shad larvae were found in the yolk-sac, and post-yolk-sac life stages from early May through late June during the 1975-1979 study period. Greatest American shad concentrations in plant samples occurred in 1976 and 1979.

6.3.4.2.5 Atlantic Tomcod. Atlantic tomcod eggs were collected from December to March of the following year at Roseton and Danskammer Point. Eggs were absent from samples in 1976.

Atlantic tomcod larvae were collected from late January through mid April in both the yolk-sac and post-yolk-sac life stages. Post-yolk-sac larvae, however, were not collected in 1975.

6.3.4.2.6 Bay Anchovy. Bay anchovy egg entrainment only occurred in 1975 and 1977. Larvae of this species were only collected in 1975 in the post-yolk-sac life stage.

6.4 IMPINGEMENT

The 1979 impingement program was a continuation of work initiated at Danskammer Point in 1972 and Roseton in 1973. Primary objectives

were the estimation of the numbers of fish impinged by species for each week, month, and year, and the comparison of impinged fish populations with those observed in the river. Impingement sampling in 1979 was conducted over a 24-hr period at least once per week at each plant. Complete collection data related to impingement collections are presented in the Report Appendix.

6.4.1 Species Inventory

A total of 44 fish species representing 19 families were observed in impingement collections. The family Centrarchidae was represented by seven species, and the families Clupeidae, Cyprinidae, and Ictaluridae were each represented by six species. Roseton impingement yielded 36 species in 16 families, with the species Atlantic menhaden, hickory shad, fathead minnow, yellow bullhead, and bluefish unique to Roseton collections. A total of 39 species in 18 families were present in Danskammer Point collections; the species Atlantic sturgeon, white crappie, common shiner, brindled madtom, channel catfish, chain pickerel, northern pike, and sea lamprey were unique to Danskammer Point samples. The brindled madtom and the common shiner, each represented by a single specimen, have not been previously reported from either impingement or river collections conducted in the northern Newburgh Bay area. Species inventory and occurrence is presented in Table 6.0-70.

6.4.2 Sample Parameters

Table 6.0-71 lists each plant's monthly flow data related to impingement sampling. Roseton impingement sampling during 1979 was conducted on 67 days and represented an estimated flow of 47,040 x 10^6 gallons of circulating water. This was approximately 18.2% of the annual total flow of 258,124 x 10^6 gallons. Frequency of Roseton impingement sampling ranged from four to 10 days per month.

TABLE 6.0- 70

SPECIES INVENTORY AND SPECIES OCCURRENCE
IN IMPINGEMENT COLLECTIONS

Roseton and Danskammer Point Generating Stations - 1979

FAMILY	COMMON NAME	SCIENTIFIC NAME	OCCURRENCE ROSETON	OCCURRENCE DANSKAMMER POINT
Acipenseridae	Atlantic sturgeon	Acipenser oxyrhynchus		x
Anguillidae	American eel	Anguilla rostrata	x	x
Catostomidae	White sucker	Catostomus commersoni	x	x
Centrarchidae	Black crappie	Pomoxis nigromaculatus	x	x
	Bluegill sunfish	Lepomis macrochirus	x	x
	Largemouth bass	Micropterus salmoides	x	x
	Pumpkinseed sunfish	Lepomis gibbosus	x	x
	Redbreast sunfish	Lepomis auritus	x	x
	Rock bass	Ambloplites rupestris	x	x
	White crappie	Pomoxis annularis		x
Clupeidae	Alewife	Alosa pseudoharengus	x	x
	American shad	Alosa sapidissima	x	x
	Atlantic menhaden	Brevoortia tyrannus	x	
	Blueback herring	Alosa aestivalis	x	x
	Gizzard shad	Dorosoma cepedianum	x	x
	Hickory shad	Alosa mediocris	x	
Cyprinidae	Carp	Cyprinus carpio	x	x
	Common shiner	Notropis cornutus		x
	Fathead minnow	Pimephales promelas	x	
	Golden shiner	Notemigonus crysoleucas	x	x
	Goldfish	Carassius auratus	x	x
	Spottail shiner	Notropis hudsonius	x	x
Cyprinodontidae	Banded killifish	Fundulus diaphanus	x	x
Engraulidae	Bay anchovy	Anchoa mitchilli	x	x
Gadidae	Atlantic tomcod	Microgadus tomcod	x	x
Gasterosteidae	Fourspine stickleback	Apeltes quadracus	x	x
	Threespine stickleback	Gasterosteus aculeatus	x	x
Ictaluridae	Black bullhead	Ictalurus melas	x	x
	Brindled madtom	Noturus miurus		x
	Brown bullhead	Ictalurus nebulosus	x	x
	Channel catfish	Ictalurus functatus		x
	White catfish	Ictalurus catus	x	x
	Yellow bullhead	Ictalurus natalis	x	
Osmeridae	Rainbow smelt	Osmerus mordax	x	x
Percichthyidae	Striped bass	Morone saxitalis	x	x
	White perch	Morone americana	x	x
Percidae	Tessellated darter	Etheostoma olmstedi	x	x
	Yellow perch	Perca flavescens	x	x
Pomatomidae	Bluefish	Pomatomus saltatrix	x	
Salmonidae	Brown trout	Salmo trutta	x	x
Soleidae	Hogchoker	Trinectes maculatus	x	x
Esocidae	Chain pickeral	Esox niger		x
	Northern pike	Esox lucius		x
Petromyzontidae	Sea lamprey	Petromyzon marinus		x

TABLE 6.0-71

MONTHLY FLOW DATA RELATED TO IMPINGEMENT SAMPLING

Roseton and Danskammer Point Generating Stations - 1979

	ROSETON				DANSKAMMER POINT			
MONTH	TOTAL PLANT FLOW[a]	FLOW[a] SAMPLED	PERCENT OF FLOW SAMPLED	NUMBER OF DAYS SAMPLED	TOTAL PLANT FLOW[a]	FLOW[a] SAMPLED	PERCENT OF FLOW SAMPLED	NUMBER OF DAYS SAMPLED
Jan	18659.52	2385	12.8	4	7478.63	1530	20.5	7
Feb	16854.05	2406	14.3	4	6819.14	987	14.5	4
Mar	19161.32	2960	15.4	5	6871.51	1371	20.0	6
Apr	19721.69	3392	17.2	5	6856.82	1128	16.5	5
May	27221.63	4458	16.4	5	6459.63	1130	17.5	5
Jun	16996.64	2163	12.7	4	10761.36	1428	13.3	4
Jul	25220.15	3505	13.9	4	10506.29	1400	13.3	4
Aug	28543.76	6309	22.1	7	9112.59	1488	16.3	5
Sep	26509.90	4557	17.2	6	7855.80	1046	13.3	4
Oct	16885.42	4800	28.4	9	8149.05	2094	25.7	7
Nov	23280.37	7552	32.4	10	8474.68	1722	20.9	6
Dec	19069.06	2553	13.4	4	5722.61	748	13.1	4
Total	258123.51	47040	18.2	67	95068.11	16072	17.0	61

[a]Flow in million gallons.

Danskammer Point impingement sampling occurred on 61 days during which time approximately 16,072 x 10^6 gallons of water was sampled, about 17.0% of the annual total of 95,068 x 10^6 gallons. Frequency of Danskammer Point impingement sampling ranged from four to seven days per month.

6.4.3 Abundance, Biomass, and Percent Composition

The dominant species at both plants was the white perch, representing 49.1% of the 1979 Roseton impingement collection (Table 6.0-72) and 41.9% of the Danskammer Point collection (Table 6.0-73). Blueback herring ranked number two at both plants, comprising 18.6% of the Roseton annual total and 16.2% of the Danskammer Point total. The main difference in species representation between the two plants is in the number-three-ranked species, which was the bay anchovy at Roseton and Atlantic tomcod at Danskammer Point. The fourth- and fifth-ranked species, alewife and spottail shiner, were the same at both plants, though in reversed order.

Biomass patterns mirrored abundance patterns at both plants. However, goldfish replaced blueback herring and pumpkinseed replaced spottail shiner in the top five (Report Appendix).

Because these data are dependent on the number of days sampled monthly, comparative analysis has been made in the next section.

6.4.4 Seasonal and Annual Impingement Estimates

Estimation of monthly impingement for selected and total species was made by multiplying a calculated mean monthly rate of impingement (number of fish per million gallons sampled) by the total plant flow for the month. Annual values were then estimated by summing the monthly totals.

TABLE 6.0-72 (Page 1 of 6)

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
ROSETON GENERATING STATION - 1979

	JAN		FEB		MAR		APR	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	0	0.0	0	0.0	0	0.0	2	0.1
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0
AMERICAN EEL	4	0.3	1	0.2	2	0.2	8	0.4
AMERICAN SHAD	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC MENHADEN	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC TOMCOD	199	16.9	33	8.0	7	0.8	0	0.0
BANDED KILLIFISH	15	1.3	14	3.4	12	1.4	1	0.1
BAY ANCHOVY	0	0.0	0	0.0	0	0.0	0	0.0
BLACK BULLHEAD	0	0.0	0	0.0	0	0.0	0	0.0
BLACK CRAPPIE	1	0.1	1	0.2	0	0.0	0	0.0
BLUEBACK HERRING	0	0.0	0	0.0	1	0.1	3	0.2
BLUEFISH	0	0.0	0	0.0	0	0.0	0	0.0
BLUEGILL	1	0.1	1	0.2	1	0.1	2	0.1
BROWN BULLHEAD	8	0.7	0	0.0	4	0.5	6	0.3
BROWN TROUT	0	0.0	0	0.0	0	0.0	0	0.0
CARP	4	0.3	0	0.0	0	0.0	0	0.0
FATHEAD MINNOW	0	0.0	0	0.0	0	0.0	1	0.1
FOURSPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	5	0.3
GIZZARD SHAD	11	0.9	0	0.0	0	0.0	0	0.0
GOLDEN SHINER	8	0.7	6	1.5	10	1.2	3	0.2
GOLDFISH	39	3.3	25	6.1	37	4.4	41	2.1
HICKORY SHAD	0	0.0	0	0.0	0	0.0	0	0.0
HOGCHOKER	0	0.0	0	0.0	0	0.0	7	0.4
LARGEMOUTH BASS	0	0.0	0	0.0	1	0.1	0	0.0
PUMPKINSEED	89	7.5	36	8.7	28	3.3	8	0.4
RAINBOW SMELT	2	0.2	15	3.6	81	9.6	101	5.3
REDBREAST SUNFISH	1	0.1	0	0.0	1	0.1	3	0.2
ROCK BASS	1	0.1	1	0.2	3	0.4	0	0.0
SPOTTAIL SHINER	237	20.0	182	44.1	327	38.7	150	7.8
STRIPED BASS	7	0.6	1	0.2	4	0.5	1	0.1
SUNFISHES	0	0.0	0	0.0	0	0.0	0	0.0
TESSELLATED DARTER	2	0.2	3	0.7	70	8.3	74	11.7
THREESPINE STICKLEBACK	0	0.0	0	0.0	7	0.8	1	0.1
WHITE CATFISH	8	0.7	8	1.9	12	1.4	6	0.3
WHITE PERCH	530	44.7	69	16.7	228	27.0	1340	69.9
WHITE SUCKER	0	0.0	0	0.0	0	0.0	0	0.0
YELLOW BULLHEAD	1	0.1	0	0.0	0	0.0	0	0.0
YELLOW PERCH	17	1.4	17	4.1	13	1.2	4	0.2

TABLE 6.0-72 (Page 2 of 6)

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
ROSETON GENERATING STATION - 1979

	JAN		FEB		MAR		APR	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
TOTAL	1185	100.1	413	99.8	846	100.1	1016	100.3
MONTHLY FLOW SAMPLED (MG)	2385		2406		2463		3392	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS, ALL UNITS COMBINED

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
ROSETON GENERATING STATION - 1979

	MAY		JUN		JUL		AUG	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	21	1.4	0	0.0	72	13.8	1216	8.0
ALOSA SP	0	0.0	1	0.4	4	0.8	0	0.0
AMERICAN EEL	5	0.3	4	1.8	4	0.8	8	0.1
AMERICAN SHAD	0	0.0	0	0.0	102	19.5	635	4.2
ATLANTIC MENHADEN	0	0.0	0	0.0	0	0.0	2	*
ATLANTIC TOMCOD	34	2.2	6	2.7	3	0.6	35	0.2
BANDED KILLIFISH	9	0.6	0	0.0	5	1.0	3	*
BAY ANCHOVY	3	0.2	0	0.0	216	41.3	6035	39.8
BLACK BULLHEAD	0	0.0	0	0.0	0	0.0	0	0.0
BLACK CRAPPIE	0	0.0	0	0.0	0	0.0	0	0.0
BLUEBACK HERRING	35	2.3	10	4.4	35	6.7	1850	12.2
BLUEFISH	0	0.0	0	0.0	0	0.0	1	*
BLUEGILL	3	0.2	0	0.0	0	0.0	2	*
BROWN BULLHEAD	4	0.3	2	0.9	9	1.7	49	0.3
BROWN TROUT	0	0.0	0	0.0	0	0.0	0	0.0
CARP	0	0.0	0	0.0	0	0.0	0	0.0
FATHEAD MINNOW	0	0.0	0	0.0	0	0.0	0	0.0
FOURSPINE STICKLEBACK	1	0.1	0	0.0	0	0.0	1	*
GIZZARD SHAD	0	0.0	0	0.0	0	0.0	0	0.0
GOLDEN SHINER	3	0.2	1	0.4	2	0.4	2	*
GOLDFISH	41	2.7	4	1.8	2	0.4	5	*
HICKORY SHAD	0	0.0	0	0.0	0	0.0	1	*
HOGCHOKER	78	5.0	1	0.4	11	2.1	13	0.1
LARGEMOUTH BASS	0	0.0	0	0.0	0	0.0	0	0.0
PUMPKINSEED	23	1.5	4	1.8	5	1.0	22	0.1
RAINBOW SMELT	50	3.2	3	1.3	6	1.1	11	0.1
REDBREAST SUNFISH	0	0.0	0	0.0	0	0.0	0	0.0
ROCK BASS	1	0.1	0	0.0	0	0.0	0	0.0
SPOTTAIL SHINER	40	2.6	7	3.1	2	0.4	25	0.2
STRIPED BASS	1	0.1	0	0.0	7	1.3	67	0.4
SUNFISHES	0	0.0	0	0.0	1	0.2	0	0.0
TESSELLATED DARTER	100	6.5	5	2.2	5	1.0	9	0.1
THREESPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0
WHITE CATFISH	17	1.1	2	0.9	3	0.6	7	*
WHITE PERCH	1076	69.6	176	77.9	29	5.5	5177	34.1
WHITE SUCKER	0	0.0	0	0.0	0	0.0	0	0.0
YELLOW BULLHEAD	2	0.1	0	0.0	0	0.0	0	0.0
YELLOW PERCH	0	0.0	0	0.0	0	0.0	0	0.0

TABLE 6.0-72 (Page 4 of 6)

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
ROSETON GENERATING STATION - 1979

	MAY		JUN		JUL		AUG	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
TOTAL	1547	100.3	226	100.0	523	100.2	15167	99.9
MONTHLY FLOW SAMPLED (MG)	4458		2163		3505		6309	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS, ALL UNITS COMBINED

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
ROSETON GENERATING STATION - 1979

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	124	4.4	423	5.6	347	3.3	3	0.1	2208	4.9
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0	5	*
AMERICAN EEL	9	0.3	5	0.1	7	0.1	2	0.1	59	0.1
AMERICAN SHAD	89	3.1	150	2.0	119	1.1	2	0.1	1097	2.4
ATLANTIC MENHADEN	0	0.0	0	0.0	0	0.0	0	0.0	2	*
ATLANTIC TOMCOD	0	0.0	12	0.2	11	0.1	202	8.7	542	1.2
BANDED KILLIFISH	4	0.1	12	0.2	27	0.3	1	*	103	0.2
BAY ANCHOVY	150	5.3	1	*	1	*	0	0.0	6406	14.2
BLACK BULLHEAD	0	0.0	0	0.0	1	*	0	0.0	1	*
BLACK CRAPPIE	0	0.0	0	0.0	0	0.0	0	0.0	2	*
BLUEBACK HERRING	1283	45.3	3616	47.6	1585	14.9	4	0.2	8422	18.6
BLUEFISH	0	0.0	0	0.0	0	0.0	0	0.0	1	*
BLUEGILL	2	0.1	15	0.2	44	0.4	8	0.3	79	0.2
BROWN BULLHEAD	0	0.0	1	*	1	*	0	0.0	74	0.2
BROWN TROUT	0	0.0	0	0.0	1	*	0	0.0	1	*
CARP	0	0.0	0	0.0	2	*	5	0.2	11	*
FATHEAD MINNOW	0	0.0	0	0.0	0	0.0	0	0.0	1	*
FOURSPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	2	0.1	9	*
GIZZARD SHAD	0	0.0	1	*	122	1.1	57	2.5	191	0.4
GOLDEN SHINER	8	0.3	1	*	7	0.1	6	0.3	57	0.1
GOLDFISH	0	0.0	4	0.1	3	*	5	0.2	206	0.5
HICKORY SHAD	1	*	0	0.0	0	0.0	0	0.0	2	*
HOGCHOKER	11	0.4	18	0.2	12	0.1	0	0.0	151	0.3
LARGEMOUTH BASS	1	*	0	0.0	7	0.1	2	0.1	11	*
PUMPKINSEED	17	0.6	220	2.9	149	1.4	6	0.3	607	1.3
RAINBOW SMELT	0	0.0	17	0.2	59	0.6	55	2.4	400	0.9
REDBREAST SUNFISH	0	0.0	2	*	1	*	0	0.0	8	*
ROCK BASS	0	0.0	0	0.0	0	0.0	0	0.0	6	*
SPOTTAIL SHINER	6	0.2	90	1.2	253	2.4	134	5.8	1453	3.2
STRIPED BASS	20	0.7	9	0.1	25	0.2	65	2.8	207	0.5
SUNFISHES	0	0.0	0	0.0	0	0.0	0	0.0	1	*
TESSELLATED DARTER	2	0.1	6	0.1	17	0.2	7	0.3	450	1.0
THREESPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0	8	*
WHITE CATFISH	4	0.1	19	0.3	47	0.4	7	0.3	140	0.3
WHITE PERCH	1100	38.9	2965	39.1	7804	73.2	1718	74.1	22212	49.1
WHITE SUCKER	0	0.0	0	0.0	1	*	0	0.0	1	*
YELLOW BULLHEAD	0	0.0	1	*	0	0.0	0	0.0	4	*
YELLOW PERCH	0	0.0	1	*	6	0.1	28	1.2	83	0.2

TABLE 6.0-72 (Page 6 of 6)

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
ROSETON GENERATING STATION - 1979

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
TOTAL	2831	99.9	7589	100.1	10659	100.1	2319	100.1	45221	99.8
MONTHLY FLOW SAMPLED (MG)	4557		4800		7552		2553.		47040	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS, ALL UNITS COMBINED

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
DANSKAMMER POINT GENERATING STATION - 1979

	JAN		FEB		MAR		APR	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	1	*	0	0.0	5	0.1	14	0.6
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0
AMERICAN EEL	3	0.1	2	0.2	9	0.2	24	1.0
AMERICAN SHAD	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC STURGEON	0	0.0	0	0.0	0	0.0	1	*
ATLANTIC TOMCOD	3555	62.8	396	42.1	509	13.7	2	0.1
BANDED KILLIFISH	33	0.6	10	1.1	19	0.5	3	0.1
BAY ANCHOVY	0	0.0	0	0.0	0	0.0	0	0.0
BLACK BULLHEAD	1	*	0	0.0	0	0.0	0	0.0
BLACK CRAPPIE	4	0.1	5	0.5	4	0.1	4	0.2
BLUEBACK HERRING	0	0.0	0	0.0	0	0.0	2	0.1
BLUEGILL	6	0.1	0	0.0	1	*	4	0.2
BRINDLED MADTOM	0	0.0	0	0.0	1	*	0	0.0
BROWN BULLHEAD	11	0.2	5	0.5	9	0.2	4	0.2
BROWN TROUT	0	0.0	0	0.0	0	0.0	0	0.0
CARP	14	0.2	3	0.3	4	0.1	1	*
CHAIN PICKEREL	0	0.0	0	0.0	0	0.0	1	*
CHANNEL CATFISH	3	0.1	0	0.0	0	0.0	0	0.0
COMMON SHINER	1	*	0	0.0	0	0.0	0	0.0
FOURSPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	3	0.1
GIZZARD SHAD	37	0.7	0	0.0	0	0.0	0	0.0
GOLDEN SHINER	254	4.5	72	7.7	168	4.5	24	1.0
GOLDFISH	269	4.7	133	14.1	247	6.6	33	1.4
HOGCHOKER	0	0.0	0	0.0	0	0.0	1	*
LARGEMOUTH BASS	2	*	0	0.0	2	0.1	0	0.0
LEPOMIS SP	0	0.0	0	0.0	0	0.0	0	0.0
NORTHERN PIKE	1	*	1	0.1	0	0.0	0	0.0
PUMPKINSEED	256	4.5	47	5.0	47	1.3	22	0.9
RAINBOW SMELT	2	*	5	0.5	615	16.6	74	3.2
REDBREAST SUNFISH	0	0.0	0	0.0	0	0.0	0	0.0
ROCK BASS	0	0.0	0	0.0	1	*	1	*
SEA LAMPREY	0	0.0	0	0.0	0	0.0	1	*
SPOTTAIL SHINER	526	9.3	202	21.5	888	23.9	322	13.7
STRIPED BASS	59	1.0	2	0.2	5	0.1	1	*
TESSELLATED DARTER	18	0.3	0	0.0	19	0.5	30	1.3
THREESPINE STICKLEBACK	0	0.0	0	0.0	1	*	1	*
WHITE CATFISH	49	0.9	9	1.0	22	0.6	5	0.2
WHITE CRAPPIE	1	*	1	0.1	1	*	0	0.0

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
DANSKAMMER POINT GENERATING STATION - 1979

	JAN		FEB		MAR		APR	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
WHITE PERCH	537	9.5	38	4.0	1095	29.5	1735	74.1
WHITE SUCKER	0	0.0	0	0.0	1	*	0	0.0
YELLOW PERCH	21	0.4	9	1.0	42	1.1	29	1.2
TOTAL	5664	100.0	940	99.9	3715	99.7	2342	99.6
MONTHLY FLOW SAMPLED (MG)	1529		987		1371		1128	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS, ALL UNITS COMBINED

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
DANSKAMMER POINT GENERATING STATION - 1979

	MAY		JUN		JUL		AUG	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	249	24.2	14	0.8	71	11.0	244	15.4
ALOSA SP	0	0.0	11	0.7	37	5.8	0	0.0
AMERICAN EEL	10	1.0	9	0.5	12	1.9	7	0.4
AMERICAN SHAD	0	0.0	3	0.2	73	11.4	127	8.0
ATLANTIC STURGEON	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC TOMCOD	1	0.1	45	2.7	3	0.5	6	0.4
BANDED KILLIFISH	3	0.3	2	0.1	3	0.5	3	0.2
BAY ANCHOVY	0	0.0	1	0.1	91	14.2	171	10.8
BLACK BULLHEAD	0	0.0	0	0.0	0	0.0	0	0.0
BLACK CRAPPIE	0	0.0	1	0.1	0	0.0	0	0.0
BLUEBACK HERRING	15	1.5	84	5.0	65	10.1	264	16.7
BLUEGILL	9	0.9	9	0.5	3	0.5	10	0.6
BRINDLED MADTOM	0	0.0	0	0.0	0	0.0	0	0.0
BROWN BULLHEAD	2	0.2	15	0.9	6	0.9	5	0.3
BROWN TROUT	0	0.0	0	0.0	2	0.3	0	0.0
CARP	0	0.0	0	0.0	0	0.0	0	0.0
CHAIN PICKEREL	0	0.0	0	0.0	0	0.0	0	0.0
CHANNEL CATFISH	0	0.0	0	0.0	0	0.0	0	0.0
COMMON SHINER	0	0.0	0	0.0	0	0.0	0	0.0
FOURSPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	3	0.2
GIZZARD SHAD	0	0.0	0	0.0	0	0.0	0	0.0
GOLDEN SHINER	11	1.1	0	0.0	2	0.3	4	0.3
GOLDFISH	25	2.4	13	0.8	2	0.3	0	0.0
HOGCHOKER	21	2.0	2	0.1	5	0.8	2	0.1
LARGEMOUTH BASS	0	0.0	0	0.0	0	0.0	4	0.3
LEPOMIS SP	0	0.0	0	0.0	0	0.0	1	0.1
NORTHERN PIKE	0	0.0	0	0.0	0	0.0	0	0.0
PUMPKINSEED	64	6.2	31	1.8	27	4.2	28	1.8
RAINBOW SMELT	3	0.3	0	0.0	2	0.3	4	0.3
REDBREAST SUNFISH	6	0.6	6	0.4	3	0.5	3	0.2
ROCK BASS	0	0.0	0	0.0	0	0.0	0	0.0
SEA LAMPREY	0	0.0	0	0.0	0	0.0	0	0.0
SPOTTAIL SHINER	87	8.4	34	2.0	9	1.4	6	0.4
STRIPED BASS	6	0.6	4	0.2	10	1.6	14	0.9
TESSELLATED DARTER	42	4.1	4	0.2	1	0.2	1	0.1
THREESPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0
WHITE CATFISH	4	0.4	5	0.3	9	1.4	9	0.6
WHITE CRAPPIE	0	0.0	1	0.1	0	0.0	0	0.0

TABLE 6.0-73 (Page 4 of 6)

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
DANSKAMMER POINT GENERATING STATION - 1979

	MAY		JUN		JUL		AUG	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
WHITE PERCH	448	43.5	1387	82.3	207	32.2	664	42.0
WHITE SUCKER	6	0.6	3	0.2	0	0.0	0	0.0
YELLOW PERCH	18	1.7	1	0.1	0	0.0	0	0.0
TOTAL	1030	100.1	1685	100.1	643	100.3	1580	100.1
MONTHLY FLOW SAMPLED (MG)	1150		1427		1401		1488	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS, ALL UNITS COMBINED

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
DANSKAMMER POINT GENERATING STATION - 1979

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	122	9.7	1168	9.6	573	10.9	13	0.6	2474	6.4
ALOSA SP	1	0.1	3	*	1	*	0	0.0	53	0.1
AMERICAN EEL	4	0.3	10	0.1	5	0.1	2	0.1	97	0.3
AMERICAN SHAD	42	3.3	537	4.4	98	1.9	9	0.4	889	2.3
ATLANTIC STURGEON	0	0.0	0	0.0	0	0.0	0	0.0	1	*
ATLANTIC TOMCOD	1	0.1	3	*	69	1.3	692	31.1	5282	13.7
BANDED KILLIFISH	4	0.3	7	0.1	7	0.1	27	1.2	121	0.3
BAY ANCHOVY	15	1.2	0	0.0	0	0.0	0	0.0	278	0.7
BLACK BULLHEAD	0	0.0	0	0.0	2	*	1	*	4	*
BLACK CRAPPIE	0	0.0	0	0.0	2	*	1	*	21	0.1
BLUEBACK HERRING	447	35.6	4640	38.3	722	13.8	2	0.1	6241	16.2
BLUEGILL	2	0.2	27	0.2	41	0.8	18	0.8	130	0.3
BRINDLED MADTOM	0	0.0	0	0.0	0	0.0	0	0.0	1	*
BROWN BULLHEAD	1	0.1	1	*	2	*	2	0.1	63	0.2
BROWN TROUT	0	0.0	0	0.0	0	0.0	0	0.0	2	*
CARP	0	0.0	0	0.0	1	*	6	0.3	29	0.1
CHAIN PICKEREL	0	0.0	0	0.0	0	0.0	0	0.0	1	*
CHANNEL CATFISH	0	0.0	0	0.0	0	0.0	0	0.0	3	*
COMMON SHINER	0	0.0	0	0.0	0	0.0	0	0.0	1	*
FOURSPINE STICKLEBACK	1	0.1	0	0.0	0	0.0	0	0.0	7	*
GIZZARD SHAD	0	0.0	9	0.1	105	2.0	83	3.7	234	0.6
GOLDEN SHINER	2	0.2	3	*	16	0.3	9	0.4	565	1.5
GOLDFISH	0	0.0	4	*	6	0.1	26	1.2	758	2.0
HOGCHOKER	2	0.2	2	*	5	0.1	0	0.0	40	0.1
LARGEMOUTH BASS	2	0.2	11	0.1	19	0.4	14	0.6	54	0.1
LEPOMIS SP	1	0.1	0	0.0	1	*	0	0.0	3	*
NORTHERN PIKE	0	0.0	0	0.0	0	0.0	0	0.0	2	*
PUMPKINSEED	29	2.3	126	1.0	72	1.4	18	0.8	767	2.0
RAINBOW SMELT	0	0.0	4	*	14	0.3	4	0.2	727	1.9
REDBREAST SUNFISH	3	0.2	5	*	2	*	0	0.0	28	0.1
ROCK BASS	0	0.0	0	0.0	0	0.0	0	0.0	2	*
SEA LAMPREY	0	0.0	0	0.0	0	0.0	0	0.0	1	*
SPOTTAIL SHINER	3	0.2	86	0.7	222	4.2	251	11.3	2636	6.9
STRIPED BASS	11	0.9	50	0.4	42	0.8	137	6.2	341	0.9
TESSELLATED DARTER	1	0.1	0	0.0	0	0.0	0	0.0	116	0.3
THREESPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0	2	*
WHITE CATFISH	4	0.3	41	0.3	41	0.8	3	0.1	201	0.5
WHITE CRAPPIE	0	0.0	0	0.0	0	0.0	0	0.0	4	*

TABLE 6.0-73 (Page 6 of 6)

CENTRAL HUDSON GAS AND ELECTRIC CORP.
1979 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
DANSKAMMER POINT GENERATING STATION - 1979

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
WHITE PERCH	558	44.4	5370	44.4	3166	60.4	890	40.0	16095	41.9
WHITE SUCKER	0	0.0	0	0.0	0	0.0	0	0.0	10	*
YELLOW PERCH	0	0.0	1	*	7	0.1	19	0.9	147	0.4
TOTAL	1256	100.1	12108	99.7	5241	99.8	2227	100.1	38431	99.9
MONTHLY FLOW SAMPLED (MG)	1046		2092		1768		748		16115	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS, ALL UNITS COMBINED

At Roseton (Table 6.0-74) the annual estimate for impingement was 205,320 fish, and monthly estimates varied from 1,778 fish in June to 62,608 fish in August. Dominant species at Roseton were white perch, blueback herring, and bay anchovy, which accounted for 45.5, 19.9, and 13.7%, respectively, of the total annual impingement. Alewife, spottail shiner, and American shad ranked fourth, fifth, and sixth at 4.7, 4.2, and 2.6%, respectively.

The annual estimated impingement total at Danskammer Point (Table 6.0-75) was 194,879. Estimated monthly impingement varied from 4,533 fish in July to 41,775 fish in October. Abundance rankings for major species impinged at Danskammer were white perch (40.6%), Atlantic tomcod (16.5%), blueback herring (13.6%), spottail shiner (7.8%), alewife (5.6%), and American shad (2.2%).

While total calculated impingement was similar for the two plants, the rate of impingement was not. Roseton impinged fish at the mean annual rate of 0.7541 fish per million gallons, while Danskammer Point impinged at the rate of 2.1288 fish per million gallons. The difference between the two plants in total flow (258,123.51 million gallons at Roseton and 95,068.11 million gallons at Danskammer Point) caused the similarity in calculated figures for total impingement. Calculated impingement rates by week, month, and year are presented in the Report Appendix.

Estimated annual biomass, calculated in a manner analogous to abundance, was approximately 3.2 times higher at Danskammer Point than at Roseton (6202.65 and 1939.59 kg, respectively (Tables 6.0-76 and 6.0-77). In contrast to abundance patterns, biomass at Roseton and Danskammer Point was dominated by white perch and goldfish. Percent representation of white perch and goldfish at Roseton was 34.4 and 20.7% of the annual total, respectively. The next five species which contributed the most to biomass at Roseton were

TABLE 6.0-74

MONTHLY ESTIMATED NUMBER AND PERCENT COMPOSITION
OF THE SEVEN MOST ABUNDANT SPECIES COLLECTED IN IMPINGEMENT SAMPLES

Roseton Generating Station - 1979

	ALEWIFE		AMERICAN SHAD		BAY ANCHOVY		BLUEBACK HERRING		SPOTTAIL SHINER		WHITE PERCH		TOTAL SPECIES
	ESTIMATED		ESTIMATED		ESTIMTED		ESTIMATED		ESTIMATED		ESTIMATED		ESTIMATED
MONTH	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER
Jan	0	-	0	-	0	-	0	-	1851	20.1	4122	44.7	9231
Feb	0	-	0	-	0	-	0	-	1274	44.1	484	16.7	2892
Mar	0	-	0	-	0	-	8	0.2	2188	41.1	1472	27.7	5323
Apr	12	0.1	0	-	0	-	16	0.2	832	10.0	5390	64.8	8323
May	133	1.3	0	-	16	0.2	191	1.9	212	2.1	7094	68.8	10312
Jun	0	-	0	-	0	-	80	4.5	54	3.0	1384	77.8	1778
Jul	499	13.5	719	19.5	1513	41.0	252	6.8	15	0.4	207	5.6	3687
Aug	4984	8.0	2657	4.2	25487	40.7	7524	12.0	103	0.2	20846	33.3	62608
Sep	1948	7.6	1037	4.0	1095	4.3	9631	37.6	64	0.2	10893	42.5	25638
Oct	1049	3.5	603	2.0	7	<0.05	18863	63.4	270	0.9	8277	27.8	29750
Nov	936	3.3	366	1.3	2	<0.05	4344	15.3	675	2.4	20293	71.5	28374
Dec	17	0.1	15	0.1	0	-	27	0.2	999	5.7	12929	74.3	17404
Total	9578	4.7	5397	2.6	28120	13.7	40936	19.9	8537	4.2	93391	45.5	205320

TABLE 6.0-75

MONTHLY ESTIMATED NUMBER AND PERCENT COMPOSITION
OF THE SEVEN MOST ABUNDANT SPECIES COLLECTED IN IMPINGEMENT SAMPLES

Danskammer Point Generating Station - 1979

	ALEWIFE		AMERICAN SHAD		ATLANTIC TOMCOD		BLUEBACK HERRING		SPOTTAIL SHINER		WHITE PERCH		TOTAL SPECIES
	ESTIMATED		ESTIMATED		ESTIMTED		ESTIMATED		ESTIMATED		ESTIMATED		ESTIMATED
MONTH	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER
Jan	7	<0.05	0	-	17691	59.9	0	-	3110	10.5	2913	9.9	29526
Feb	0	-	0	-	2882	42.5	0	-	1468	21.7	273	4.0	6777
Mar	18	0.1	0	-	3853	21.7	0	-	4070	23.0	4726	26.7	17729
Apr	71	0.5	0	-	16	0.1	12	0.1	2000	15.1	9617	72.6	13247
May	1411	23.7	0	-	5	0.1	76	1.3	482	8.1	2672	44.9	5952
Jun	121	1.0	23	0.2	321	2.6	656	5.3	273	2.2	10219	81.9	12480
Jul	493	10.9	517	11.4	21	0.5	426	9.4	64	1.4	1494	33.0	4533
Aug	1755	16.4	877	8.2	50	0.5	1516	14.1	44	0.4	4608	42.9	10733
Sep	890	9.5	333	3.6	7	0.1	3382	36.2	22	0.2	4100	43.9	9333
Oct	3573	8.6	1853	4.4	7	<0.05	17469	41.8	232	0.6	17638	42.2	41775
Nov	2431	9.9	549	2.2	379	1.5	2849	11.6	1326	5.4	14800	60.5	24480
Dec	71	0.4	49	0.3	6942	37.9	11	0.1	2079	11.4	6029	32.9	18314
Total	10841	5.6	4201	2.2	32174	16.5	26397	13.6	15170	7.8	79089	40.6	194879

TABLE 6.0-76

MONTHLY ESTIMATED BIOMASS[a] AND PERCENT COMPOSITION
OF THE SIX MOST ABUNDANT SPECIES COLLECTED IN IMPINGEMENT SAMPLES

Danskammer Point Generating Station - 1979

	ALEWIFE		ATLANTIC TOMCOD		GOLDFISH		PUMPKINSEED		WHITE PERCH		TOTAL SPECIES
MONTH	ESTIMATED BIOMASS	PERCENT	ESTIMATED BIOMASS	PERCENT	ESTIMATED BIOMASS	PERCENT	ESTIMATED BIOMASS	PERCENT	ESTIMATED BIOMASS	PERCENT	ESTIMATED BIOMASS
Jan	0.20	<0.05	535.56	36.2	418.89	28.3	120.11	8.1	115.48	7.8	1477.96
Feb	0.00	-	79.58	12.3	321.11	49.8	24.91	3.9	5.60	0.9	645.30
Mar	6.30	0.6	97.09	9.9	367.14	37.6	18.47	1.9	260.67	26.7	977.41
Apr	20.52	3.9	0.40	0.1	44.38	8.4	7.10	1.3	373.07	70.9	526.21
May	326.39	59.4	0.30	0.1	51.91	9.4	30.13	5.5	79.21	14.4	549.43
Jun	8.28	1.3	1.22	0.2	23.87	3.6	13.97	2.1	479.46	72.7	659.54
Jul	5.53	4.7	0.53	0.4	4.48	3.8	15.48	13.1	58.42	49.4	118.31
Aug	22.96	16.5	0.21	0.2	0.00	-	13.12	9.4	71.56	51.5	138.88
Sep	12.34	13.1	0.03	<0.05	0.00	-	10.30	10.9	49.94	53.0	94.29
Oct	33.45	14.2	0.08	<0.05	2.10	0.9	11.06	4.7	117.07	49.5	236.47
Nov	27.87	10.0	10.75	3.9	3.01	1.1	16.63	6.0	135.29	48.5	278.76
Dec	1.76	0.4	240.69	48.1	24.35	4.9	8.24	1.6	73.93	14.8	500.11
Total	465.60	7.5	966.41	15.6	1261.23	20.3	289.53	4.7	1819.70	29.3	6202.65

[a]Biomass presented in kilograms.

TABLE 6.0-77

MONTHLY ESTIMATED BIOMASS[a] AND PERCENT COMPOSITION
OF THE EIGHT MOST ABUNDANT SPECIES COLLECTED IN IMPINGEMENT SAMPLES

Roseton Generating Station - 1979

	ALEWIFE		ATLANTIC TOMCOD		BAY ANCHOVY		BLUEBACK HERRING		GOLDFISH		PUMPKINSEED		WHITE PERCH		TOTAL SPECIES
MONTH	ESTIMATED BIOMASS	PERCENT	ESTIMATED BIOMASS	PERCENT	ESTIMATED BIOMASS	PERCENT	ESTIMATED BIOMASS	PERCENT	ESTIMATED BIOMASS	PERCENT	ESTIMATED BIOMASS	PERCENT	ESTIMATED BIOMASS	PERCENT	ESTIMATED BIOMASS
Jan	0.00	-	43.77	14.8	0.00	-	0.00	-	44.27	14.9	55.89	18.9	80.29	27.1	296.30
Feb	0.00	-	5.27	7.6	0.00	-	0.00	-	21.56	31.1	17.18	24.8	6.27	9.1	69.22
Mar	0.00	-	1.07	0.5	0.00	-	2.09	1.0	94.28	43.5	10.87	5.0	58.56	27.0	216.73
Apr	4.00	2.3	0.00	-	0.00	-	2.53	1.5	69.69	40.9	0.66	0.4	71.09	41.7	170.46
May	21.03	8.3	0.28	0.1	0.07	<0.05	13.15	5.2	132.09	52.3	8.98	3.6	53.34	21.1	252.68
Jun	0.00	-	0.15	0.2	0.00	-	9.21	11.5	12.21	15.2	2.48	3.1	51.86	64.6	80.28
Jul	1.07	1.8	0.11	0.2	4.76	7.9	6.21	10.3	6.52	10.8	2.98	5.0	7.15	11.9	60.16
Aug	26.65	11.1	1.03	0.4	68.55	28.7	17.68	7.4	1.79	0.7	6.52	2.7	84.10	35.2	239.09
Sep	20.97	14.7	0.00	-	2.93	2.1	23.46	16.4	0.00	-	9.71	6.8	49.20	34.5	142.65
Oct	6.76	6.7	0.32	0.3	0.00	-	38.64	38.6	12.81	12.8	1.46	1.5	32.79	32.7	100.16
Nov	6.33	4.4	0.55	0.4	0.00	-	9.34	6.5	0.09	0.1	2.87	2.0	102.14	71.4	142.99
Dec	0.13	0.01	45.01	26.7	0.00	-	0.10	0.1	6.54	3.9	1.62	1.0	70.27	41.6	168.85
Total	86.92	4.5	97.57	5.0	76.31	3.9	122.40	6.3	401.85	20.7	121.22	6.2	667.07	34.4	1939.59

[a]Biomass presented in kilograms.

blueback herring (6.3%), pumpkinseed (6.2%), Atlantic tomcod (5.0%), alewife (4.5%), and bay anchovy (3.9%). Biomass rank order at Danskammer Point was white perch (29.3%), goldfish (20.3%), Atlantic tomcod (15.6%), alewife (7.5%), and pumpkinseed (4.7%).

6.4.5 Seasonal Impingement Patterns and Length Frequency of Selected Species

The mean monthly impingement rate for all species combined and for selected species was plotted separately for each plant to illustrate the seasonal impingement patterns (Figure 6.0-8). The pattern for all species combined was similar for the two plants, with the impingement rate higher at Danskammer Point than Roseton for each month except August. The seasonal pattern of impingement at the two plants was similar for the selected species; the principal difference was in the magnitude of the seasonal peaks. The 1979 seasonal rate graphs were very similar to those of 1978 (LMS 1980) in the timing of both major and minor peaks.

Length distributions for selected species were prepared from the length measurements taken on fishes collected in impingement samples. The distributions were prepared separately for each plant by grouping the measurements into 1 cm size intervals.

6.4.5.1 Alewife. The peak alewife impingement at Roseton occurred in August, while the peak at Danskammer Point was in October and was more than twice the rate of Roseton (Figure 6.0-9). Three size groups of alewife were collected from both plants (Tables 6.0-78 and 6.0-79). Adult fish approximately 25 cm and larger were collected from March through November at Danskammer Point and in April, May, August, and September at Roseton. A secondary peak in alewife impingement which occurred in May at both plants consisted of predominately adult fish and was paralleled by increased seasonal

FIGURE 6.0-8

MEAN MONTHLY IMPINGEMENT RATE FOR ALL SPECIES

Roseton and Danskammer Point Generating Stations - 1979



1979

FIGURE 6.0- 9

MEAN MONTHLY IMPINGEMENT RATE FOR ALEWIFE

Roseton and Danskammer Point Generating Stations - 1979

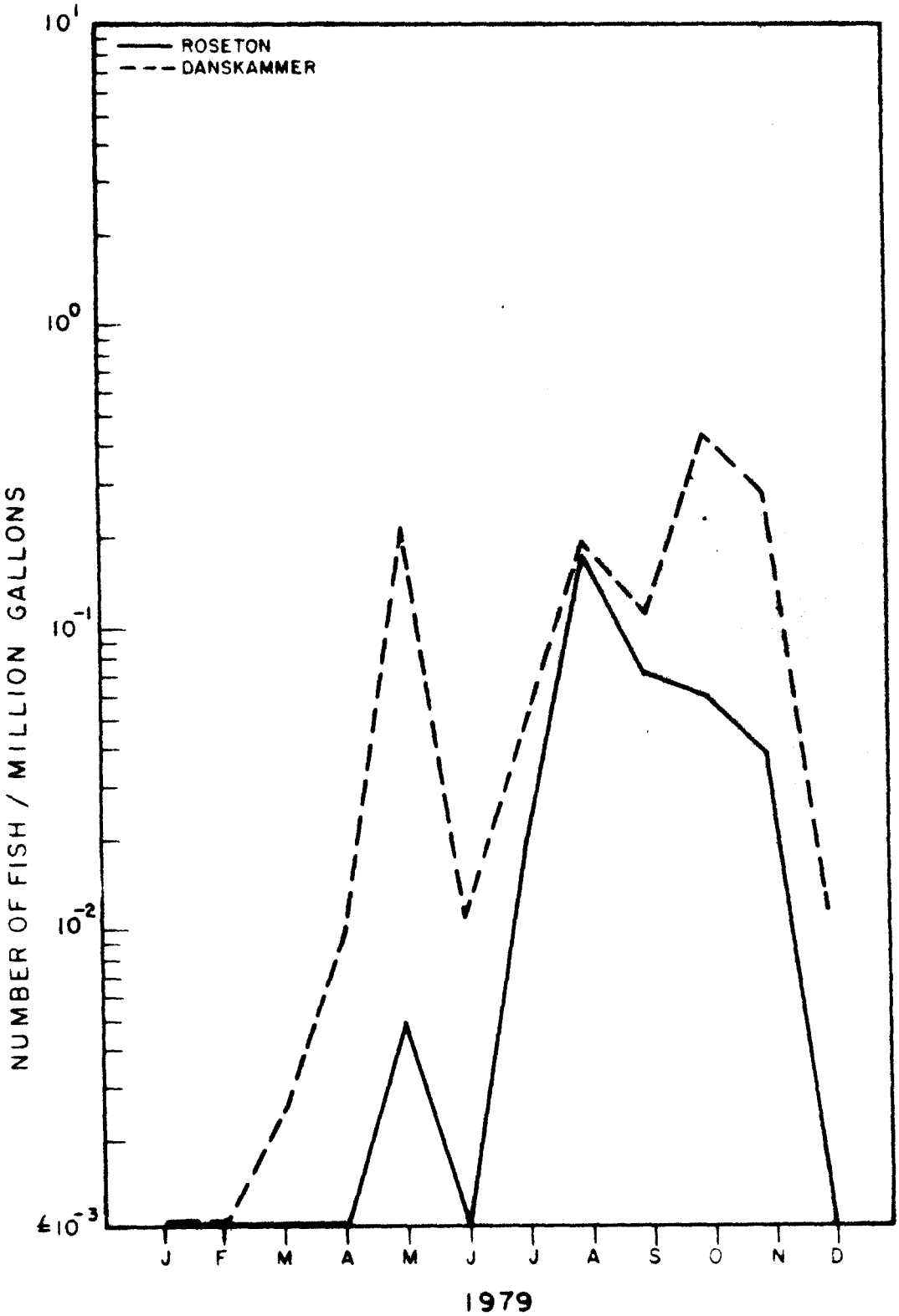


TABLE 6.0-78

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF ALEWIFE

ROSETON GENERATING STATION

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3.1- 4.0	0	0	0	0	0	0	2	0	0	0	0	0
4.1- 5.0	0	0	0	0	0	0	3	0	0	0	0	0
5.1- 6.0	0	0	0	0	0	0	12	14	4	0	0	0
6.1- 7.0	0	0	0	0	0	0	33	131	12	3	5	0
7.1- 8.0	0	0	0	0	0	0	9	285	35	21	31	0
8.1- 9.0	0	0	0	0	0	0	0	148	44	132	116	1
9.1- 10.0	0	0	0	0	0	0	0	30	11	68	81	1
10.1- 11.0	0	0	0	0	3	0	0	5	1	22	29	1
11.1- 12.0	0	0	0	0	2	0	0	1	0	7	15	0
12.1- 13.0	0	0	0	0	0	0	0	4	0	0	4	0
13.1- 14.0	0	0	0	0	0	0	0	6	0	0	0	0
14.1- 15.0	0	0	0	0	0	0	0	13	0	0	0	0
15.1- 16.9	0	0	0	0	0	0	0	7	1	0	0	0
16.1- 17.0	0	0	0	0	0	0	0	7	4	3	2	0
17.1- 18.0	0	0	0	0	0	0	0	2	4	1	1	0
18.1- 19.0	0	0	0	0	0	0	0	1	0	0	0	0
19.1- 20.0	0	0	0	0	1	0	0	0	0	0	0	0
20.1- 21.0	0	0	0	0	0	0	0	0	0	0	0	0
21.1- 22.0	0	0	0	0	0	0	0	0	0	0	0	0
22.1- 23.0	0	0	0	0	0	0	0	0	0	0	0	0
23.1- 24.0	0	0	0	0	0	0	0	0	0	0	0	0
24.1- 25.0	0	0	0	0	0	0	0	0	0	0	0	0
25.1- 26.0	0	0	0	0	0	0	0	0	1	0	0	0
26.1- 27.0	0	0	0	0	1	0	0	0	0	0	0	0
27.1- 28.0	0	0	0	0	4	0	0	0	0	0	0	0
28.1- 29.0	0	0	0	0	3	0	0	1	0	0	0	0
29.1- 30.0	0	0	0	0	2	0	0	1	0	0	0	0
30.1- 31.0	0	0	0	2	3	0	0	2	1	0	0	0
31.1- 32.0	0	0	0	0	0	0	0	1	0	0	0	0
TOTAL ANALYZED	0	0	0	2	19	0	59	659	118	257	284	3
MEAN LENGTH				30.8	23.6		6.3	8.2	9.1	9.1	9.2	9.6
LEN RANGE(MIN)	.0	.0	.0	30.7	10.3	.0	3.8	5.4	5.9	6.2	6.3	8.8
(MAX)	.0	.0	.0	30.8	30.9	.0	7.4	31.1	30.5	17.9	17.3	10.4

NOTE. NS - NO SAMPLE.

TABLE 6.0-79

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF ALEWIFE

DANSKAMMER POINT GENERATING STATION

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
4.1- 5.0	0	0	0	0	0	0	1	0	0	0	0	0
5.1- 6.0	0	0	0	0	0	0	1	3	2	1	0	0
6.1- 7.0	0	0	0	0	0	0	16	35	3	8	2	0
7.1- 8.0	0	0	0	0	0	0	15	87	13	38	24	0
8.1- 9.0	0	0	0	1	0	0	2	41	35	337	178	1
9.1- 10.0	0	0	0	0	0	0	1	2	16	264	179	0
10.1- 11.0	0	0	0	0	1	0	0	2	9	94	73	2
11.1- 12.0	0	0	0	0	3	1	0	0	4	56	22	1
12.1- 13.0	0	0	0	0	0	0	0	0	2	19	13	3
13.1- 14.0	0	0	0	0	2	0	0	1	0	11	5	0
14.1- 15.0	1	0	0	0	0	0	0	6	0	4	0	0
15.1- 16.0	0	0	0	0	0	0	0	8	2	6	4	1
16.1- 17.0	0	0	0	0	0	1	1	2	6	13	13	2
17.1- 18.0	0	0	0	0	0	0	0	0	4	13	17	3
18.1- 19.0	0	0	0	0	0	0	1	2	0	9	18	0
19.1- 20.0	0	0	0	0	0	0	0	0	1	1	4	0
20.1- 21.0	0	0	0	0	0	0	0	0	0	0	0	0
21.1- 22.0	0	0	0	0	0	0	0	0	0	0	0	0
22.1- 23.0	0	0	0	0	0	0	0	0	0	0	0	0
23.1- 24.0	0	0	0	0	0	0	0	0	0	0	0	0
24.1- 25.0	0	0	0	0	0	0	0	0	0	0	0	0
25.1- 26.0	0	0	0	0	6	0	0	0	0	0	0	0
26.1- 27.0	0	0	0	0	18	0	0	0	0	0	0	0
27.1- 28.0	0	0	0	1	18	1	0	1	0	1	0	0
28.1- 29.0	0	0	0	5	58	0	0	2	1	0	2	0
29.1- 30.0	0	0	2	3	70	2	2	3	1	2	0	0
30.1- 31.0	0	0	1	1	41	2	0	1	2	2	0	0
31.1- 32.0	0	0	0	1	17	0	1	2	0	2	1	0
32.1- 33.0	0	0	1	0	7	0	0	0	0	0	0	0
33.1- 34.0	0	0	1	1	2	0	0	0	0	0	0	0
34.1- 35.0	0	0	0	0	1	0	0	0	0	0	0	0
TOTAL ANALYZED	1	0	5	13	244	7	41	198	101	881	555	13
MEAN LENGTH	14.9		31.1	28.0	28.9	25.0	9.3	9.4	10.7	9.9	10.4	13.8
LEN RANGE(MIN)	14.9	.0	29.4	8.9	10.7	11.4	5.0	5.4	5.3	5.6	6.5	8.2
(MAX)	14.9	.0	33.2	34.0	34.1	30.6	31.1	32.0	31.0	31.9	31.2	17.6

NOTE. NS - NO SAMPLE.

catches of these fish in beach seines. The Danskammer Point peak was both broader and nearly two orders of magnitude larger than the Roseton peak. Yearling alewives were impinged sporadically and in low numbers at Roseton from May, and August to November. At Danskammer Point they were impinged in January (one fish) and from April to December. The Danskammer peak in yearling impingement occurred in October and November. Young-of-the-year dominated the impingement collections at both plants during the periods of peak alewife impingement. Both plants began impinging young-of-the-year in July in the length range of 3.1 to 4.0 cm at Roseton and 4.1 to 5.0 cm at Danskammer Point. Growth of the young occurred at least through November, by which time most were 7.0 to 12.0 cm in length. After November the impingement rate dropped precipitously at both plants.

6.4.5.2 Atlantic tomcod. There was a winter peak in tomcod impingement at Danskammer Point which extended through March, while the Roseton peak in January was more than an order of magnitude less and declined more rapidly (Figure 6.0-10). Atlantic tomcod rarely live more than one year and a few months in the Hudson River, and those impinged during the winter and early spring were spawning and post-spawning adults (Tables 6.0-80 and 6.0-81). Impingement of young-of-the-year started in May in the 4.1 to 5.0 cm range at Roseton and in June in the 5.1 to 6.0 cm range at Danskammer Point. From April through November, tomcod impingement rates fluctuated at generally low levels at both plants, and nearly all collected were young-of-the-year. In December tomcod impingement increased to a second winter peak. As indicated by the length data from river collections, impingement length data showed little growth until September and rapid growth from September through December.

6.4.5.3 American Shad. With the exception of two older fish at Danskammer Point and one at Roseton, young-of-the-year American shad

FIGURE 6.0-10

MEAN MONTHLY IMPINGEMENT RATE FOR ATLANTIC TOMCOD

Roseton and Danskammer Point Generating Stations - 1979

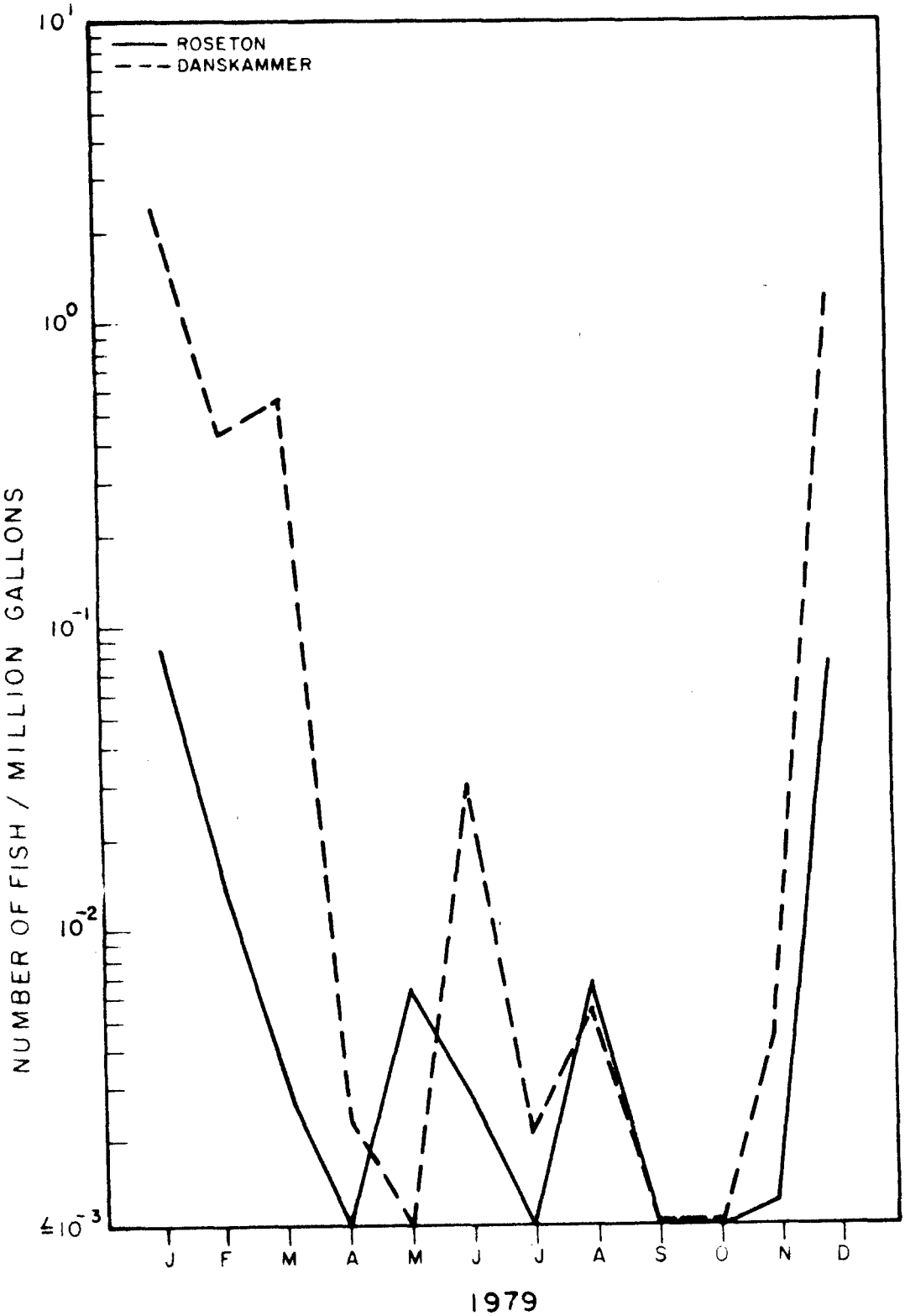


TABLE 6.0-80

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF ATLANTIC TOMCOD

DANSKAMMER POINT GENERATING STATION

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
5.1- 6.0	0	0	0	0	0	1	0	0	0	0	0	0
6.1- 7.0	0	0	0	0	0	9	0	1	0	0	0	0
7.1- 8.0	0	0	0	0	0	21	1	4	1	0	0	0
8.1- 9.0	0	0	0	0	0	2	0	1	0	0	0	0
9.1- 10.0	1	0	0	0	0	0	1	0	0	0	0	0
10.1- 11.0	15	2	2	0	0	0	0	0	0	2	2	1
11.1- 12.0	71	16	8	0	0	0	0	0	0	1	11	14
12.1- 13.0	189	35	37	0	0	0	0	0	0	0	11	68
13.1- 14.0	354	77	92	2	0	0	0	0	0	0	19	130
14.1- 15.0	389	54	88	0	0	0	0	0	0	0	13	130
15.1- 16.0	337	46	86	0	0	0	0	0	0	0	5	99
16.1- 17.0	199	24	45	0	0	0	0	0	0	0	2	57
17.1- 18.0	108	16	30	0	0	0	1	0	0	0	2	30
18.1- 19.0	52	11	10	0	1	1	0	0	0	0	1	6
19.1- 20.0	31	3	4	0	0	0	0	0	0	0	0	5
20.1- 21.0	14	4	3	0	0	0	0	0	0	0	0	3
21.1- 22.0	8	1	1	0	0	0	0	0	0	0	0	2
22.1- 23.0	8	1	0	0	0	0	0	0	0	0	0	0
23.1- 24.0	3	1	0	0	0	0	0	0	0	0	0	1
24.1- 25.0	4	0	0	0	0	0	0	0	0	0	0	0
25.1- 26.0	1	0	0	0	0	0	0	0	0	0	0	2
26.1- 27.0	2	1	0	0	0	0	0	0	0	0	0	0
27.1- 28.0	0	0	0	0	0	0	0	0	0	0	0	0
28.1- 29.0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL ANALYZED	1787	292	406	2	1	34	3	6	1	3	66	549
MEAN LENGTH	14.9	14.8	14.9	14.0	18.4	7.6	11.6	7.7	7.3	10.6	13.7	14.8
LEN RANGE (MIN)	9.8	10.6	10.9	14.0	18.4	6.0	7.1	7.0	7.3	10.2	11.0	10.5
(MAX)	29.0	26.8	21.1	14.0	18.4	18.2	17.8	8.2	7.3	11.5	18.4	28.5

NOTE. NS - NO SAMPLE.

TABLE 6.0-81

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF ATLANTIC TOMCOD

ROSETON GENERATING STATION

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
4.1- 5.0	0	0	0	0	9	0	0	0	0	0	0	0
5.1- 6.0	0	0	0	0	14	0	0	0	0	0	0	0
6.1- 7.0	0	0	0	0	10	4	0	4	0	0	0	0
7.1- 8.0	0	0	0	0	1	2	2	9	0	0	0	0
8.1- 9.0	0	0	0	0	0	0	1	15	0	0	0	0
9.1- 10.0	1	0	0	0	0	0	0	4	0	1	0	0
10.1- 11.0	4	0	0	0	0	0	0	2	0	1	1	5
11.1- 12.0	16	3	0	0	0	0	0	1	0	4	4	18
12.1- 13.0	34	8	0	0	0	0	0	0	0	1	2	46
13.1- 14.0	40	12	2	0	0	0	0	0	0	1	1	41
14.1- 15.0	39	3	2	0	0	0	0	0	0	0	1	43
15.1- 16.0	24	2	1	0	0	0	0	0	0	1	0	23
16.1- 17.0	28	3	1	0	0	0	0	0	0	0	0	12
17.1- 18.0	2	0	0	0	0	0	0	0	0	0	0	2
18.1- 19.0	4	0	0	0	0	0	0	0	0	0	0	2
19.1- 20.0	3	1	0	0	0	0	0	0	0	0	0	2
20.1- 21.0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL ANALYZED	195	32	6	0	34	6	3	35	0	9	9	195
MEAN LENGTH	14.2	13.9	14.8		5.7	7.0	7.8	8.3		12.0	12.2	13.9
LEN RANGE(MIN)	9.5	11.4	13.7	.0	4.3	6.6	7.4	6.6	.0	9.7	10.9	10.6
(MAX)	19.5	20.0	16.4	.0	7.1	7.2	8.3	11.2	.0	15.5	14.3	20.6

NOTE. NS - NO SAMPLE.

was the only age class impinged at both plants (Tables 6.0-82 and 6.0-83). Impingement of young-of-the-year, in the 2.1 to 3.0 cm range began in June at Danskammer Point and in the 3.1 to 4.0 cm group in July at Roseton. Peak impingement occurred in August at Roseton and October at Danskammer Point, after which impingement rates declined sharply as a result of the shad's downstream movement (Figure 6.0-11). By December most of the shad impinged were 7.0 to 12.0 cm in length.

6.4.5.4 Bay Anchovy. Peak impingement of bay anchovy occurred in August at both plants (Figure 6.0-12). Except for three specimens collected in May at Roseton, impingement at both plants was restricted to July through September, corresponding closely with data from river collections. Young-of-the-year were taken in August and September in small numbers compared to adults, and the mean lengths of bay anchovy were similar at the two plants (Tables 6.0-84 and 6.0-85).

6.4.5.5 Blueback Herring. Except for a slight dip in June at Roseton and in July at Danskammer Point, blueback herring impingement increased steadily from spring until the October peak for both plants (Figure 6.0-13). The impingement rate dropped sharply after November. Both plants collected three age groups of blueback herring (Tables 6.0-86 and 6.0-87). Adults were present at Roseton in small numbers from March through October. Danskammer Point impinged more adults than Roseton, particularly during June, over a similar time period. Yearlings were impinged in small numbers from May to November at Danskammer Point and from April to November at Roseton. Young-of-the-year, 3.1 to 4.0 cm range, became susceptible to impingement at Roseton and in the 4.1 to 5.0 cm range at Danskammer Point (Tables 6.0-86 and 6.0-87). Impingement of young-of-the-year began in July and continued to December at both plants, although December was represented by very few specimens. The 6.1 to

TABLE 6.0-82

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF AMERICAN SHAD

DANSKAMMER POINT GENERATING STATION

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2.1- 3.0	0	0	0	0	0	2	0	0	0	0	0	0
3.1- 4.0	0	0	0	0	0	1	0	0	0	0	0	0
4.1- 5.0	0	0	0	0	0	0	4	0	0	0	0	0
5.1- 6.0	0	0	0	0	0	0	10	1	0	0	0	0
6.1- 7.0	0	0	0	0	0	0	14	33	1	1	0	0
7.1- 8.0	0	0	0	0	0	0	1	38	8	21	2	1
8.1- 9.0	0	0	0	0	0	0	0	24	13	222	37	1
9.1- 10.0	0	0	0	0	0	0	0	6	9	130	38	3
10.1- 11.0	0	0	0	0	0	0	0	0	4	102	9	2
11.1- 12.0	0	0	0	0	0	0	0	0	0	44	5	0
12.1- 13.0	0	0	0	0	0	0	0	0	0	2	2	0
13.1- 14.0	0	0	0	0	0	0	0	0	0	0	0	0
14.1- 15.0	0	0	0	0	0	0	0	0	0	0	0	0
15.1- 16.0	0	0	0	0	0	0	0	0	0	0	0	0
16.1- 17.0	0	0	0	0	0	0	0	0	0	0	0	0
17.1- 18.0	0	0	0	0	0	0	0	0	0	0	0	0
18.1- 19.0	0	0	0	0	0	0	1	0	0	0	0	0
19.1- 20.0	0	0	0	0	0	0	0	0	0	0	0	0
20.1- 21.0	0	0	0	0	0	0	0	0	0	0	0	0
21.1- 22.0	0	0	0	0	0	0	0	0	0	0	1	0
TOTAL ANALYZED	0	0	0	0	0	3	30	102	35	522	94	7
MEAN LENGTH	.					3.0	6.3	7.5	8.8	9.4	9.5	9.5
LEN RANGE(MIN)	.0	.0	.0	.0	.0	2.6	4.3	5.2	7.0	7.0	7.5	7.7
(MAX)	.0	.0	.0	.0	.0	3.5	18.1	10.0	10.6	12.1	21.9	10.2

NOTE. NS - NO SAMPLE.

TABLE 6.0-83

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF AMERICAN SHAD

ROSETON GENERATING STATION

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3.1- 4.0	0	0	0	0	0	0	1	0	0	0	0	0
4.1- 5.0	0	0	0	0	0	0	10	0	0	0	0	0
5.1- 6.0	0	0	0	0	0	0	36	11	0	0	0	0
6.1- 7.0	0	0	0	0	0	0	35	243	3	0	0	0
7.1- 8.0	0	0	0	0	0	0	5	177	40	12	2	0
8.1- 9.0	0	0	0	0	0	0	0	54	29	64	49	0
9.1- 10.0	0	0	0	0	0	0	0	17	6	41	41	1
10.1- 11.0	0	0	0	0	0	0	0	1	0	5	2	0
11.1- 12.0	0	0	0	0	0	0	0	0	0	0	2	1
12.1- 13.0	0	0	0	0	0	0	0	0	0	0	0	0
13.1- 14.0	0	0	0	0	0	0	0	0	0	0	0	0
14.1- 15.0	0	0	0	0	0	0	0	0	0	0	0	0
15.1- 16.0	0	0	0	0	0	0	0	0	0	0	0	0
16.1- 17.0	0	0	0	0	0	0	0	0	0	0	0	0
17.1- 18.0	0	0	0	0	0	0	0	0	0	0	0	0
18.1- 19.0	0	0	0	0	0	0	0	0	0	0	0	0
19.1- 20.0	0	0	0	0	0	0	0	0	0	0	0	0
20.1- 21.0	0	0	0	0	0	0	0	0	0	0	0	0
21.1- 22.0	0	0	0	0	0	0	0	0	0	0	0	0
22.1- 23.0	0	0	0	0	0	0	0	0	1	0	0	0
TOTAL ANALYZED	0	0	0	0	0	0	87	503	79	122	96	2
MEAN LENGTH	.						5.9	7.2	8.2	8.9	9.0	10.6
LEN RANGE(MIN)	.0	.0	.0	.0	.0	.0	4.0	5.3	6.6	7.5	7.7	9.5
(MAX)	.0	.0	.0	.0	.0	.0	7.7	10.1	23.0	11.0	11.3	11.6

NOTE. NS - NO SAMPLE.

FIGURE 6.0-11

MEAN MONTHLY IMPINGEMENT RATE FOR AMERICAN SHAD

Roseton and Danskammer Point Generating Stations - 1979

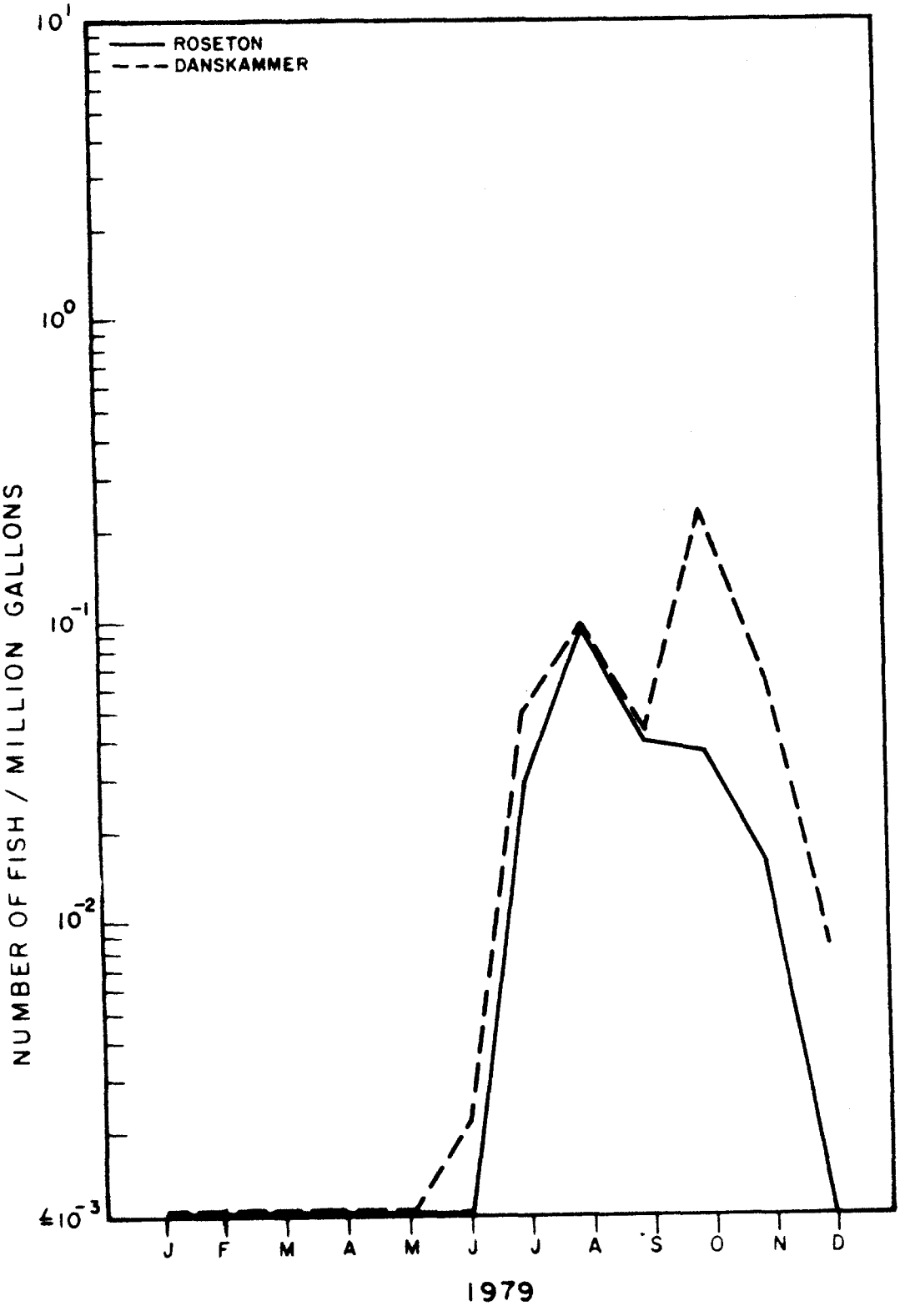


FIGURE 6.0-12

MEAN MONTHLY IMPINGEMENT RATE FOR BAY ANCHOVY

Roseton and Danskammer Point Generating Stations - 1979

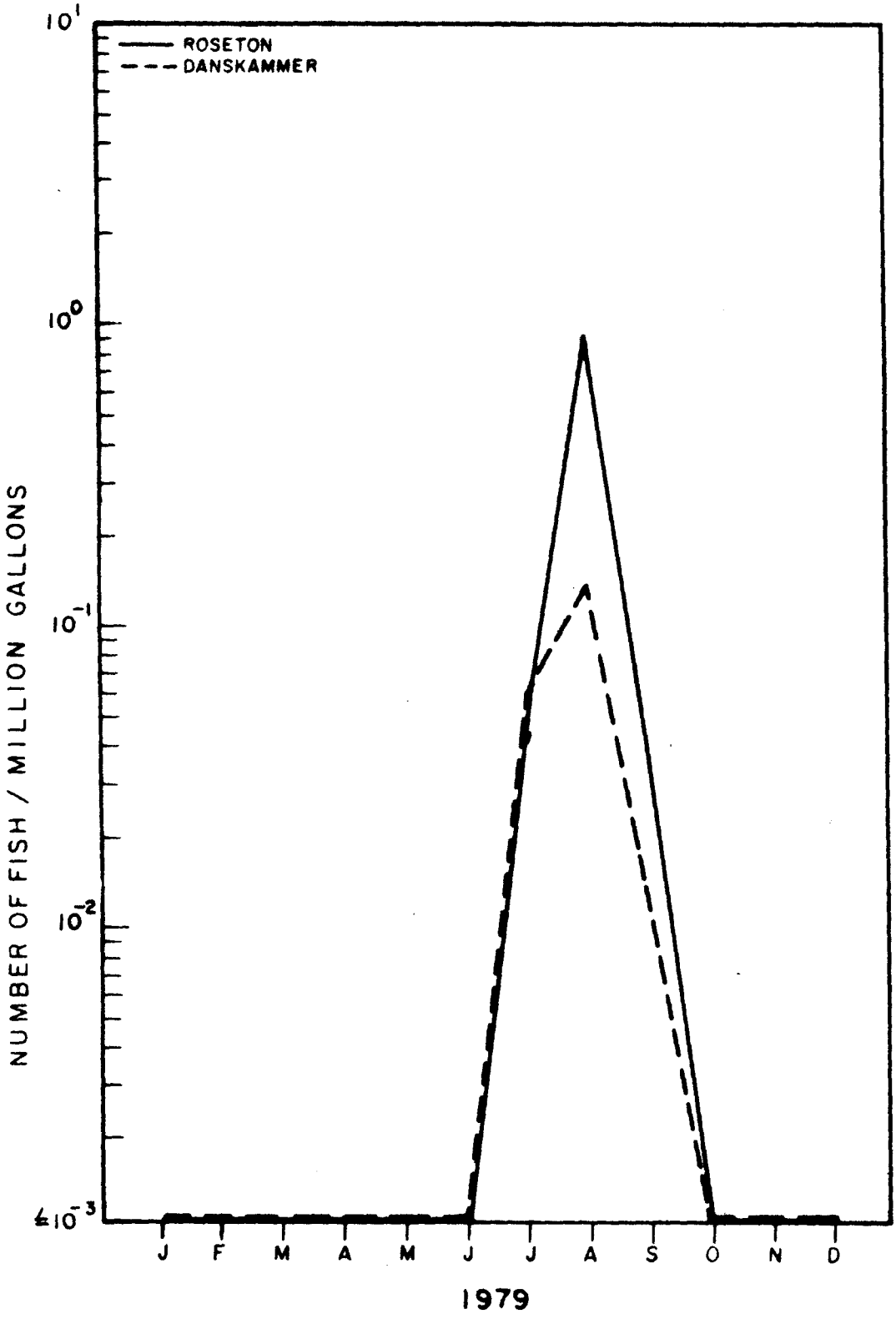


TABLE 6.0-84

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF BAY ANCHOVY

ROSETON GENERATING STATION

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3.1- 4.0	0	0	0	0	0	0	0	1	2	0	0	0
4.1- 5.0	0	0	0	0	0	0	0	7	10	0	0	0
5.1- 6.0	0	0	0	0	0	0	2	7	33	0	0	0
6.1- 7.0	0	0	0	0	0	0	31	256	20	0	0	0
7.1- 8.0	0	0	0	0	2	0	71	665	28	0	0	0
8.1- 9.0	0	0	0	0	0	0	71	282	26	0	0	0
9.1- 10.0	0	0	0	0	1	0	10	18	4	0	0	0
TOTAL ANALYZED	0	0	0	0	3	0	185	1236	123	0	0	0
MEAN LENGTH					8.5		7.9	7.6	6.8			
LEN RANGE(MIN)	.0	.0	.0	.0	7.8	.0	6.0	3.9	3.6	.0	.0	.0
(MAX)	.0	.0	.0	.0	9.7	.0	9.6	9.8	9.7	.0	.0	.0

NOTE. NS - NO SAMPLE.

TABLE 6.0-85

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF BAY ANCHOVY

DANSKAMMER POINT GENERATING STATION

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3.1- 4.0	0	0	0	0	0	0	0	1	0	0	0	0
4.1- 5.0	0	0	0	0	0	0	0	4	3	0	0	0
5.1- 6.0	0	0	0	0	0	0	0	0	0	0	0	0
6.1- 7.0	0	0	0	0	0	0	3	10	2	0	0	0
7.1- 8.0	0	0	0	0	0	0	27	51	2	0	0	0
8.1- 9.0	0	0	0	0	0	0	39	20	3	0	0	0
9.1- 10.0	0	0	0	0	0	0	1	2	0	0	0	0
TOTAL ANALYZED	0	0	0	0	0	0	70	88	10	0	0	0
MEAN LENGTH							8.1	7.6	6.7			
LEN RANGE (MIN)	.0	.0	.0	.0	.0	.0	6.5	3.9	4.2	.0	.0	.0
(MAX)	.0	.0	.0	.0	.0	.0	9.1	9.3	8.6	.0	.0	.0

NOTE. NS - NO SAMPLE.

FIGURE 6.0-13

MEAN MONTHLY IMPINGEMENT RATE FOR BLUEBACK HERRING

Roseton and Danskammer Point Generating Stations - 1979

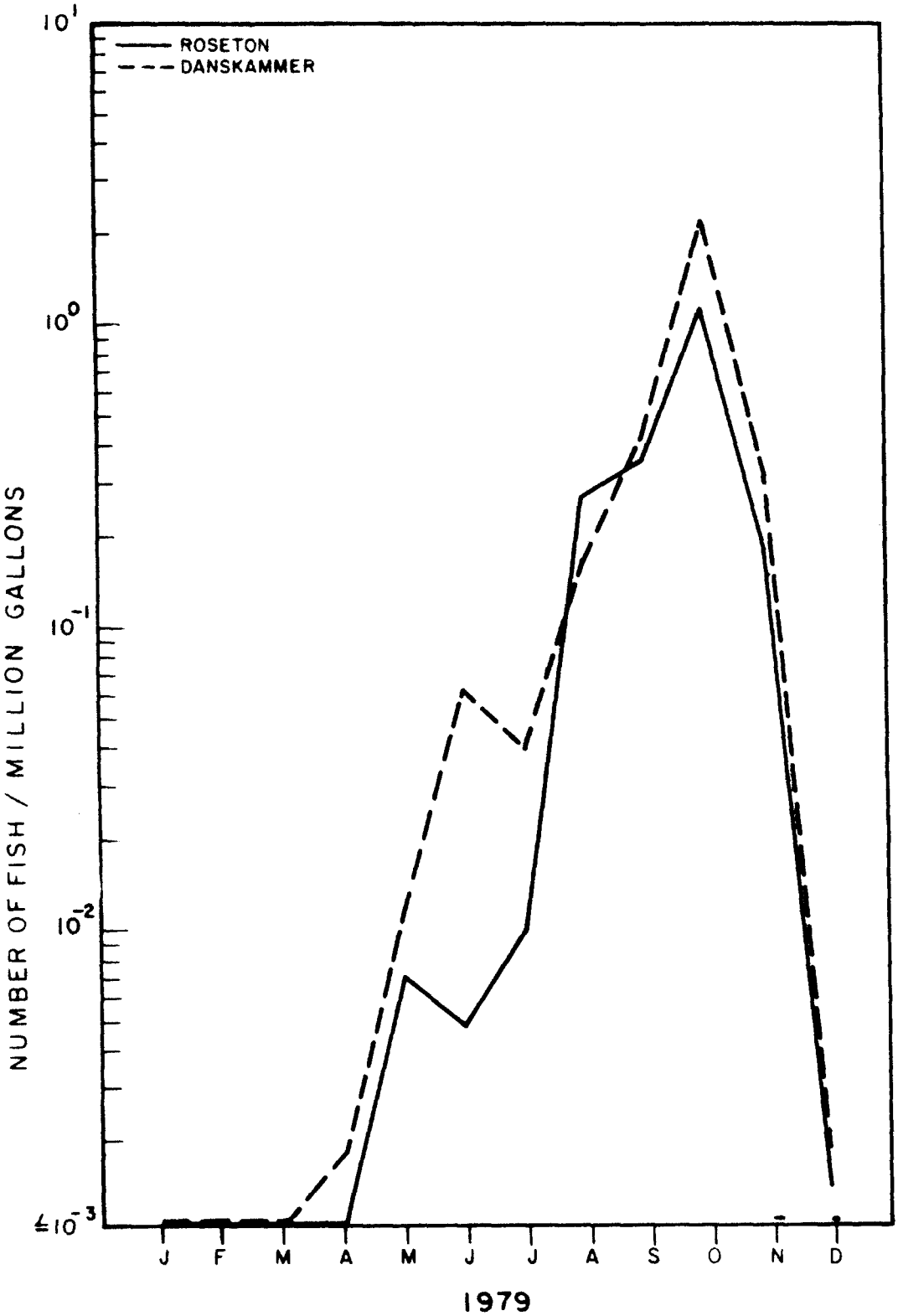


TABLE 6.0-86

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF BLUEBACK HERRING

ROSETON GENERATING STATION

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3.1- 4.0	0	0	0	0	0	0	1	0	0	0	0	0
4.1- 5.0	0	0	0	0	0	0	3	8	0	1	1	0
5.1- 6.0	0	0	0	0	0	0	4	169	33	82	98	0
6.1- 7.0	0	0	0	1	0	0	11	523	302	530	507	0
7.1- 8.0	0	0	0	0	0	0	3	135	178	412	298	2
8.1- 9.0	0	0	0	0	1	0	0	2	17	70	25	1
9.1- 10.0	0	0	0	0	9	0	0	0	0	2	0	1
10.1- 11.0	0	0	0	0	8	0	0	0	1	0	1	0
11.1- 12.0	0	0	0	0	0	0	0	2	3	0	0	0
12.1- 13.0	0	0	0	0	0	0	0	1	1	1	0	0
13.1- 14.0	0	0	0	0	0	0	0	0	3	0	0	0
14.1- 15.0	0	0	0	0	0	0	0	0	0	0	0	0
15.1- 16.0	0	0	0	0	0	0	0	0	0	0	0	0
16.1- 17.0	0	0	0	0	0	0	0	0	0	0	0	0
17.1- 18.0	0	0	0	0	1	0	0	0	0	0	1	0
18.1- 19.0	0	0	0	0	0	0	0	0	0	0	0	0
19.1- 20.0	0	0	0	0	1	0	0	0	0	0	0	0
20.1- 21.0	0	0	0	0	0	0	0	0	0	0	0	0
21.1- 22.0	0	0	0	0	0	0	0	0	0	0	0	0
22.1- 23.0	0	0	0	0	0	0	0	0	0	0	0	0
23.1- 24.0	0	0	0	0	0	0	0	0	0	0	0	0
24.1- 25.0	0	0	0	0	0	0	0	0	0	0	0	0
25.1- 26.0	0	0	0	0	0	0	1	0	1	0	0	0
26.1- 27.0	0	0	1	0	2	5	2	0	0	1	0	0
27.1- 28.0	0	0	0	1	1	0	1	2	1	0	0	0
28.1- 29.0	0	0	0	1	3	0	0	0	0	0	0	0
29.1- 30.0	0	0	0	0	3	1	0	3	0	0	0	0
30.1- 31.0	0	0	0	0	1	0	1	0	0	0	0	0
31.1- 32.0	0	0	0	0	1	0	0	0	0	0	0	0
TOTAL ANALYZED	0	0	1	3	31	6	27	845	540	1099	931	4
MEAN LENGTH			26.3	20.9	17.3	26.9	10.1	6.6	7.0	7.0	6.8	8.2
LEN RANGE(MIN)	.0	.0	26.3	6.3	8.3	26.1	4.0	4.2	5.3	5.0	5.0	7.1
(MAX)	.0	.0	26.3	28.7	31.3	29.4	30.9	29.9	27.1	26.3	17.3	9.5

NOTE. NS - NO SAMPLE.

TABLE 6.0- 87

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF BLUEBACK HERRING

DANSKAMMER POINT GENERATING STATION

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
4.1- 5.0	0	0	0	0	0	0	5	7	1	7	1	0
5.1- 6.0	0	0	0	0	0	0	1	54	28	104	39	0
6.1- 7.0	0	0	0	0	0	0	10	109	126	685	270	2
7.1- 8.0	0	0	0	0	0	0	3	25	122	831	236	0
8.1- 9.0	0	0	0	0	1	0	0	0	11	189	54	0
9.1- 10.0	0	0	0	0	0	0	0	0	0	16	9	0
10.1- 11.0	0	0	0	0	0	2	0	1	0	5	4	0
11.1- 12.0	0	0	0	0	1	3	1	0	0	4	3	0
12.1- 13.0	0	0	0	0	0	3	1	0	0	0	0	0
13.1- 14.0	0	0	0	0	0	1	1	0	0	0	0	0
14.1- 15.0	0	0	0	0	0	0	1	0	1	0	0	0
15.1- 16.0	0	0	0	0	0	0	1	0	0	2	1	0
16.1- 17.0	0	0	0	0	0	0	1	0	0	0	1	0
17.1- 18.0	0	0	0	0	0	0	0	0	0	1	0	0
18.1- 19.0	0	0	0	0	0	0	0	0	0	0	0	0
19.1- 20.0	0	0	0	0	0	0	0	0	0	0	0	0
20.1- 21.0	0	0	0	0	0	0	0	0	0	0	0	0
21.1- 22.0	0	0	0	0	0	0	0	0	0	0	0	0
22.1- 23.0	0	0	0	0	0	0	0	0	0	0	0	0
23.1- 24.0	0	0	0	0	0	0	0	0	0	0	0	0
24.1- 25.0	0	0	0	0	1	0	0	0	0	0	0	0
25.1- 26.0	0	0	0	0	0	8	2	0	0	0	1	0
26.1- 27.0	0	0	0	0	1	20	2	0	0	2	3	0
27.1- 28.0	0	0	0	0	3	12	0	1	0	1	0	0
28.1- 29.0	0	0	0	1	3	11	0	0	0	0	0	0
29.1- 30.0	0	0	0	1	2	8	0	0	0	1	0	0
30.1- 31.0	0	0	0	0	1	3	1	0	0	0	0	0
31.1- 32.0	0	0	0	0	1	1	0	0	0	0	0	0
TOTAL ANALYZED	0	0	0	2	14	72	30	197	289	1848	622	2
MEAN LENGTH				28.9	25.6	25.6	11.2	6.4	7.0	7.2	7.3	7.0
LEN RANGE(MIN)	.0	.0	.0	28.2	8.5	10.8	4.1	4.1	4.9	4.7	4.5	7.0
(MAX)	.0	.0	.0	29.6	31.5	31.1	30.6	27.6	14.4	29.4	27.0	7.0

NOTE. NS - NO SAMPLE.

8.0 cm size groups were best represented at each plant during the months young-of-the-year bluebacks were collected, and it may be that herring in this size range are more susceptible to impingement.

6.4.5.6 White Perch. The seasonal pattern of impingement of white perch was similar at the two plants, having a spring peak due to yearling and adult individuals, a summer decline, and a fall peak due to young-of-the-year (Figure 6.0-14). The impingement rate at Danskammer Point was greater than at Roseton for each month except for August. Impingement involved a broad range of sizes at both plants throughout the year (Tables 6.0-88 and 6.0-89). Yearling fish impinged from January through May showed little evidence of growth. Growth of these fish resumed in June and continued to about October. Impingement of young-of-the-year started in July and continued to the end of the year. Growth of the young-of-the-year appeared to have ceased by November, with the majority between 5.1 to 9.0 cm in length.

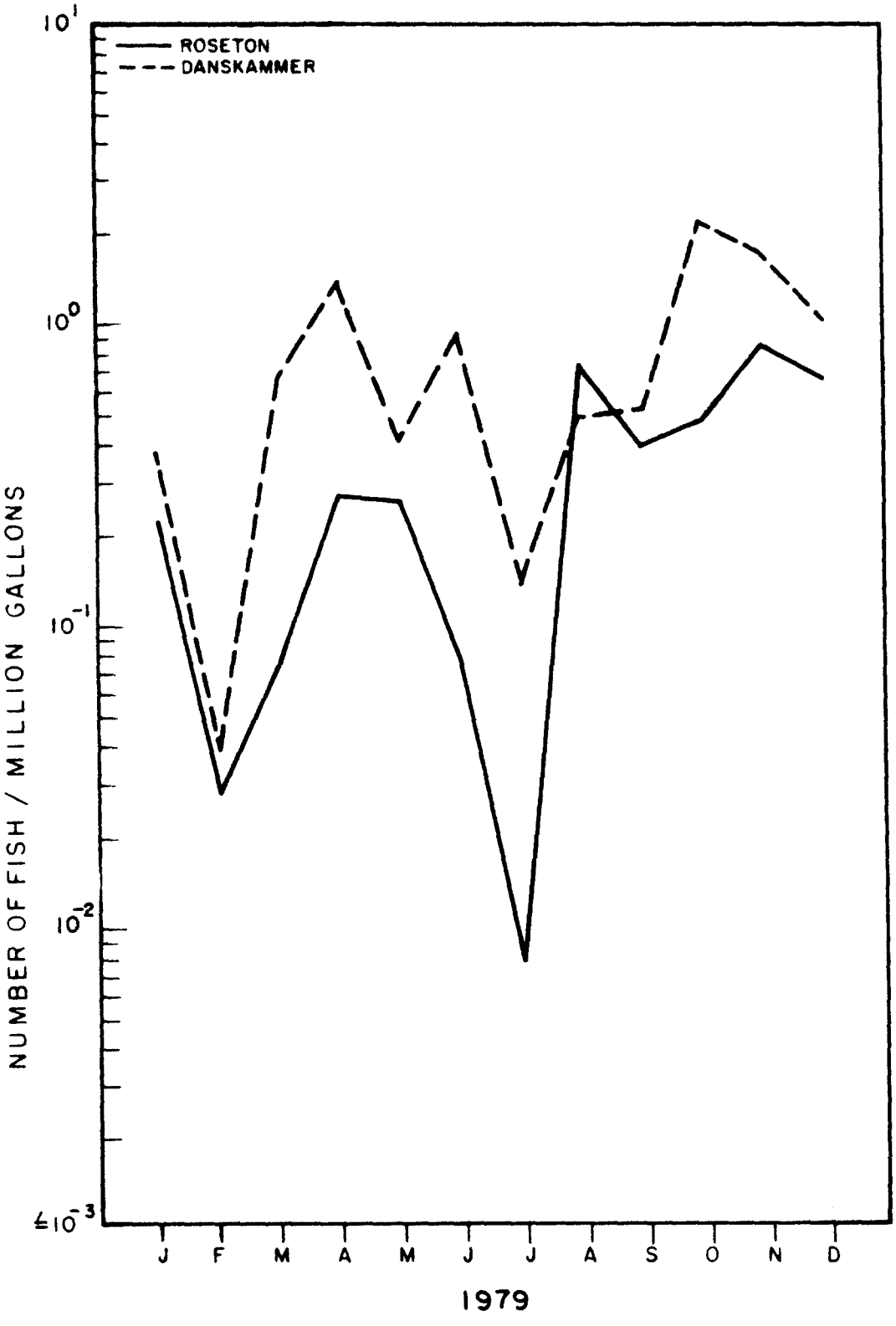
6.4.5.7 Striped Bass. Collections of striped bass were small throughout the year and they were not considered a dominant species at either plant (Figure 6.0-15). Danskammer Point generally had a higher impingement rate than Roseton, and collected a larger number of yearling and older fish (Tables 6.0-90 and 6.0-91). Impingement of young-of-the-year in the 3.1 to 4.0 cm range began in July at both plants and continued through December, by which time most were 6.1 to 10.0 cm in length.

6.4.5.8 Spottail Shiner. Impingement of spottail shiner was generally high in the winter, early spring, and late fall, and low during the summer (Figure 6.0-16). The pattern was similar at both plants, although the rate at Danskammer was consistently higher than that at Roseton.

FIGURE 6.0-14

MEAN MONTHLY IMPINGEMENT RATE FOR WHITE PERCH

Roseton and Danskammer Point Generating Stations - 1979



1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF WHITE PERCH

DANSKAMMER POINT GENERATING STATION

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2.1- 3.0	0	0	0	0	0	0	5	1	0	0	0	0
3.1- 4.0	0	0	0	0	0	0	2	2	1	0	0	0
4.1- 5.0	0	0	0	0	0	0	4	28	7	5	5	2
5.1- 6.0	10	1	0	0	1	0	1	160	169	375	145	103
6.1- 7.0	61	3	12	13	22	4	0	83	136	962	573	225
7.1- 8.0	137	9	31	136	84	49	0	4	39	765	562	195
8.1- 9.0	60	11	76	166	97	57	3	1	4	143	174	62
9.1- 10.0	21	5	26	39	27	30	39	0	0	22	18	12
10.1- 11.0	11	0	11	8	1	5	27	30	7	18	8	10
11.1- 12.0	8	1	32	21	4	12	9	30	16	59	37	21
12.1- 13.0	18	2	98	57	21	42	4	7	10	97	85	42
13.1- 14.0	14	0	95	48	21	61	8	11	4	49	45	43
14.1- 15.0	25	0	89	61	23	165	17	13	6	28	28	21
15.1- 16.0	41	3	101	84	38	202	17	17	6	15	21	12
16.1- 17.0	30	0	84	126	31	166	19	20	5	18	8	9
17.1- 18.0	36	3	89	81	31	108	12	18	8	11	3	7
18.1- 19.0	22	0	44	46	21	73	17	9	5	6	4	2
19.1- 20.0	12	0	32	17	9	23	8	7	5	2	1	3
20.1- 21.0	9	0	13	3	3	4	0	4	2	1	3	0
21.1- 22.0	1	0	6	2	1	1	1	0	0	1	0	0
22.1- 23.0	2	0	5	1	0	0	0	0	1	1	1	0
23.1- 24.0	2	0	2	0	0	1	0	1	0	0	0	0
24.1- 25.0	2	0	1	0	0	0	0	0	0	0	1	0
25.1- 26.0	0	0	1	0	0	0	0	0	0	0	0	0
26.1- 27.0	0	0	0	0	0	1	0	0	2	0	0	0
27.1- 28.0	0	0	0	0	0	1	1	0	0	0	0	0
TOTAL ANALYZED	522	38	848	909	435	1005	194	446	433	2578	1722	769
MEAN LENGTH	11.4	9.8	14.2	12.8	11.7	14.8	13.1	9.0	7.7	7.6	8.0	8.4
LEN RANGE(MIN)	5.5	6.0	6.3	6.5	6.0	6.5	2.6	2.7	3.6	4.6	4.6	4.8
(MAX)	24.5	17.7	25.2	22.8	21.2	27.9	27.8	23.1	26.5	22.2	24.8	19.7

NOTE. NS - NO SAMPLE.

TABLE 6.0-89

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF WHITE PERCH

ROSETON GENERATING STATION

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
.1- 1.0	0	0	0	0	0	0	0	0	0	0	0	1
1.1- 2.0	0	0	0	0	0	0	0	0	0	0	0	0
2.1- 3.0	0	0	0	0	0	0	0	0	0	0	0	0
3.1- 4.0	0	0	0	0	0	0	7	15	0	0	0	1
4.1- 5.0	0	0	0	0	0	0	7	219	23	8	16	28
5.1- 6.0	12	1	1	1	2	0	0	765	260	267	363	307
6.1- 7.0	76	13	4	50	121	1	0	321	254	535	965	315
7.1- 8.0	115	19	28	204	308	1	0	14	57	253	759	257
8.1- 9.0	61	10	35	171	190	4	0	0	1	30	178	66
9.1- 10.0	27	1	12	31	24	1	0	5	1	2	19	12
10.1- 11.0	12	0	6	5	0	0	2	30	1	1	4	5
11.1- 12.0	17	2	4	13	4	2	0	22	2	6	24	8
12.1- 13.0	12	0	27	23	4	8	1	3	7	4	41	23
13.1- 14.0	13	0	12	7	8	12	0	6	6	6	26	24
14.1- 15.0	10	0	15	15	9	28	1	11	2	1	13	16
15.1- 16.0	12	0	31	26	10	29	2	15	3	2	4	3
16.1- 17.0	17	1	15	9	9	24	4	18	0	1	3	1
17.1- 18.0	8	2	14	7	2	9	0	18	1	1	2	2
18.1- 19.0	3	1	7	1	0	4	2	21	3	1	0	1
19.1- 20.0	1	0	2	1	0	1	1	9	4	0	0	1
20.1- 21.0	0	0	0	0	0	1	0	1	0	0	0	0
21.1- 22.0	0	1	2	0	0	0	0	2	1	0	0	0
22.1- 23.0	0	0	0	0	0	0	0	1	0	0	0	0
23.1- 24.0	2	0	0	0	0	0	0	3	0	0	0	0
24.1- 25.0	0	0	0	0	0	0	1	2	0	0	0	0
25.1- 26.0	0	0	0	0	0	0	0	1	0	0	0	0
TOTAL ANALYZED	398	51	215	564	691	125	28	1502	626	1118	2417	1071
MEAN LENGTH	9.4	8.8	12.4	9.1	8.2	15.0	10.1	6.7	6.6	6.7	7.2	7.2
LEN RANGE(MIN)	5.1	5.8	5.8	5.6	5.7	6.5	3.1	3.4	4.5	4.8	4.7	.3
(MAX)	23.9	21.9	21.4	19.2	17.4	20.2	24.3	25.8	21.1	18.4	17.7	19.1

NOTE. NS - NO SAMPLE.

FIGURE 6.0-15

MEAN MONTHLY IMPINGEMENT RATE FOR STRIPED BASS

Roseton and Danskammer Point Generating Station - 1979

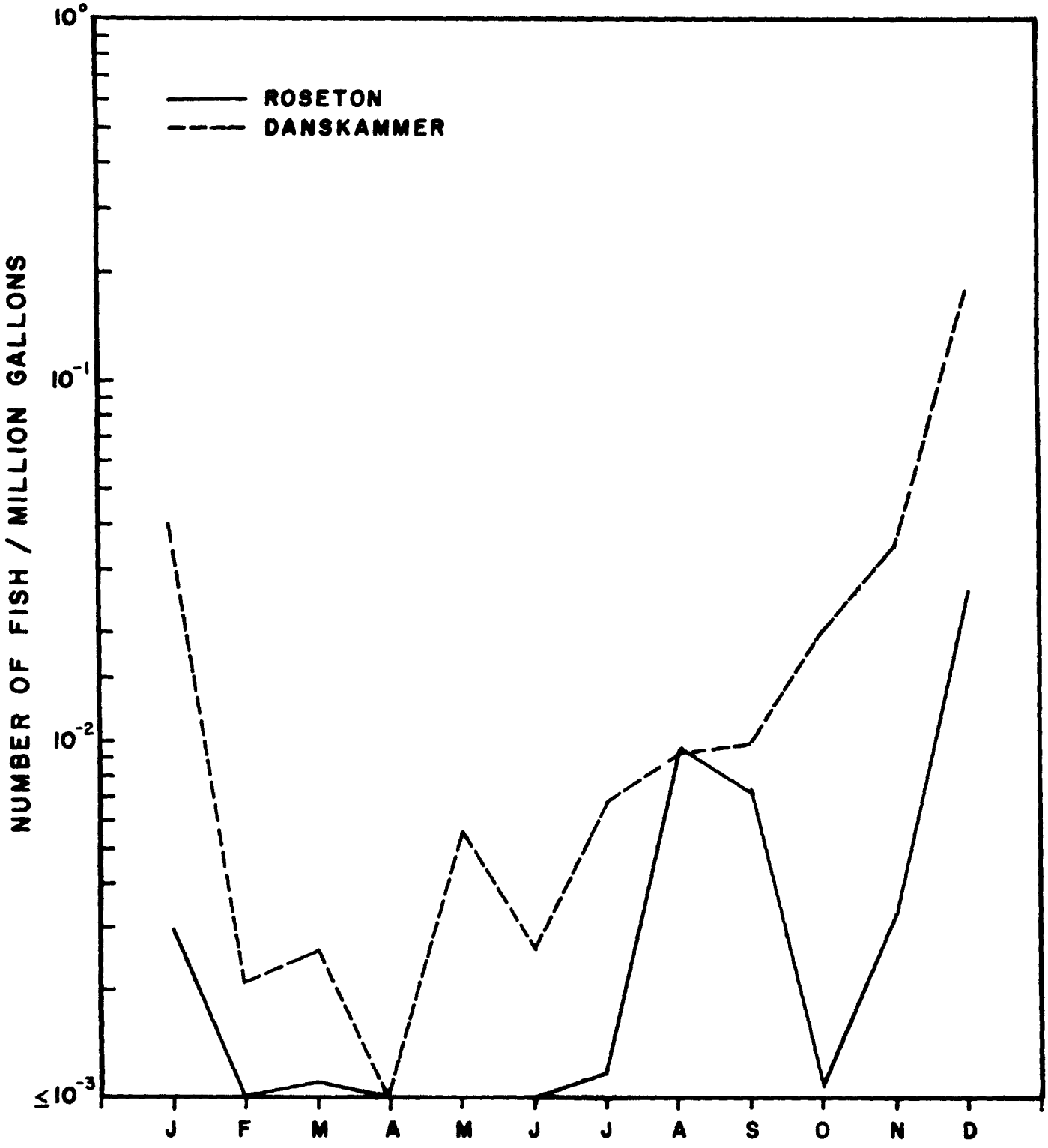


TABLE 6.0-90 (Page 1 of 2)

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF STRIPED BASS

DANSKAMMER POINT GENERATING STATION

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3.1- 4.0	0	0	0	0	0	0	1	0	0	0	0	0
4.1- 5.0	0	0	0	0	0	0	0	0	0	0	0	0
5.1- 6.0	0	0	0	0	0	0	0	0	0	0	0	0
6.1- 7.0	0	0	0	0	0	0	1	0	1	2	2	2
7.1- 8.0	1	0	0	0	0	0	0	3	0	18	4	10
8.1- 9.0	4	0	0	0	2	0	0	3	2	13	5	33
9.1- 10.0	7	0	0	0	1	1	0	0	1	7	4	9
10.1- 11.0	2	0	0	1	0	0	0	0	1	0	3	2
11.1- 12.0	0	0	1	0	0	0	0	0	1	2	4	1
12.1- 13.0	1	0	0	0	3	0	0	0	0	1	4	6
13.1- 14.0	0	0	0	0	0	0	0	0	1	0	1	9
14.1- 15.0	2	0	0	0	0	1	2	0	0	1	3	4
15.1- 16.0	1	0	0	0	0	0	0	0	0	0	3	2
16.1- 17.0	1	0	0	0	0	1	0	1	3	0	2	4
17.1- 18.0	0	0	0	0	0	0	1	0	0	1	1	5
18.1- 19.0	0	0	1	0	0	0	0	1	0	0	0	8
19.1- 20.0	0	0	1	0	0	0	0	1	0	2	0	11
20.1- 21.0	1	0	0	0	0	0	0	0	1	0	2	14
21.1- 22.0	0	0	0	0	0	0	0	0	0	0	2	4
22.1- 23.0	3	1	1	0	0	0	0	0	0	0	0	7
23.1- 24.0	3	0	0	0	0	0	1	0	0	1	0	2
24.1- 25.0	7	0	0	0	0	1	1	0	0	1	0	1
25.1- 26.0	9	0	0	0	0	0	0	0	0	0	0	1
26.1- 27.0	6	0	0	0	0	0	1	1	0	0	0	0
27.1- 28.0	4	0	0	0	0	0	1	0	0	0	0	1
28.1- 29.0	3	0	0	0	0	0	0	0	0	1	0	0
29.1- 30.0	0	1	0	0	0	0	0	1	0	0	0	1
30.1- 31.0	0	0	0	0	0	0	0	0	0	0	1	0
31.1- 32.0	0	0	0	0	0	0	0	0	0	0	1	0
32.1- 33.0	1	0	0	0	0	0	0	0	0	0	0	0
33.1- 34.0	1	0	0	0	0	0	0	0	0	0	0	0
34.1- 35.0	1	0	0	0	0	0	0	0	0	0	0	0
35.1- 36.0	0	0	0	0	0	0	0	0	0	0	0	0
36.1- 37.0	0	0	0	0	0	0	0	0	0	0	0	0
37.1- 38.0	0	0	0	0	0	0	0	0	0	0	0	0
38.1- 39.0	1	0	0	0	0	0	0	0	0	0	0	0
39.1- 40.0	0	0	0	0	0	0	0	0	0	0	0	0
40.1- 41.0	0	0	0	0	0	0	0	0	0	0	0	0
41.1- 42.0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 6.0-90 (Page 2 of 2)

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF STRIPED BASS

DANSKAMMER POINT GENERATING STATION

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
(CONT'D)												
42.1- 43.0	0	0	0	0	0	0	0	0	0	0	0	0
43.1- 44.0	0	0	0	0	0	0	0	0	0	0	0	0
44.1- 45.0	0	0	0	0	0	0	0	0	0	0	0	0
45.1- 46.0	0	0	0	0	0	0	0	0	0	0	0	0
46.1- 47.0	0	0	1	0	0	0	0	0	0	0	0	0
TOTAL ANALYZED	59	2	5	1	6	4	9	11	11	50	42	137
MEAN LENGTH	21.3	26.1	23.8	10.2	10.8	16.2	17.6	14.3	12.7	10.2	13.2	14.4
LEN RANGE (MIN)	7.9	22.7	11.5	10.2	8.5	9.6	3.1	7.1	6.5	6.6	6.7	6.4
(MAX)	38.2	29.4	46.4	10.2	12.8	24.3	27.3	29.3	20.7	28.7	31.1	29.5

NOTE. NS - NO SAMPLE.

TABLE 6.0-91 (Page 1 of 2)

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF STRIPED BASS

ROSETON GENERATING STATION

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3.1- 4.0	0	0	0	0	0	0	0	4	0	0	0	0
4.1- 5.0	0	0	0	0	0	0	1	9	0	0	0	0
5.1- 6.0	0	0	0	0	0	0	3	13	3	0	0	0
6.1- 7.0	0	0	0	0	0	0	1	15	4	2	2	2
7.1- 8.0	1	0	1	0	0	0	0	15	6	3	9	17
8.1- 9.0	1	0	0	1	0	0	0	3	1	0	1	30
9.1- 10.0	3	1	1	0	0	0	0	1	1	1	2	11
10.1- 11.0	0	0	1	0	0	0	0	1	2	0	1	1
11.1- 12.0	0	0	0	0	0	0	0	0	0	0	0	0
12.1- 13.0	0	0	0	0	0	0	0	0	0	0	0	2
13.1- 14.0	0	0	0	0	0	0	1	1	0	0	0	1
14.1- 15.0	0	0	0	0	0	0	0	2	0	0	0	0
15.1- 16.0	0	0	0	0	0	0	0	0	1	0	0	0
16.1- 17.0	0	0	0	0	1	0	0	0	0	0	0	0
17.1- 18.0	0	0	1	0	0	0	0	0	0	0	0	0
18.1- 19.0	0	0	0	0	0	0	0	0	1	0	0	0
19.1- 20.0	0	0	0	0	0	0	0	0	0	0	0	1
20.1- 21.0	0	0	0	0	0	0	0	0	0	0	0	0
21.1- 22.0	0	0	0	0	0	0	0	0	0	0	1	0
22.1- 23.0	0	0	0	0	0	0	0	0	1	0	0	0
23.1- 24.0	0	0	0	0	0	0	0	0	0	0	0	0
24.1- 25.0	0	0	0	0	0	0	0	0	0	0	0	0
25.1- 26.0	0	0	0	0	0	0	0	0	0	0	0	0
26.1- 27.0	0	0	0	0	0	0	0	0	0	0	0	0
27.1- 28.0	0	0	0	0	0	0	0	0	0	0	0	0
28.1- 29.0	0	0	0	0	0	0	0	2	0	0	0	0
29.1- 30.0	1	0	0	0	0	0	0	0	0	0	0	0
30.1- 31.0	0	0	0	0	0	0	0	0	0	0	0	0
31.1- 32.0	0	0	0	0	0	0	0	0	0	0	0	0
32.1- 33.0	0	0	0	0	0	0	0	0	0	0	0	0
33.1- 34.0	0	0	0	0	0	0	0	0	0	0	0	0
34.1- 35.0	0	0	0	0	0	0	0	0	0	0	0	0
35.1- 36.0	0	0	0	0	0	0	0	0	0	0	0	0
36.1- 37.0	0	0	0	0	0	0	0	0	0	0	0	0
37.1- 38.0	0	0	0	0	0	0	0	0	0	0	0	0
38.1- 39.0	0	0	0	0	0	0	0	0	0	0	0	0
39.1- 40.0	0	0	0	0	0	0	0	0	0	0	0	0
40.1- 41.0	0	0	0	0	0	0	0	0	0	0	0	0
41.1- 42.0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 6.0-91 (Page 2 of 2)

1979 AQUATIC ECOLOGY STUDIES
CENTRAL HUDSON GAS & ELECTRIC CORP.

LENGTH-FREQUENCY OF STRIPED BASS

ROSETON GENERATING STATION

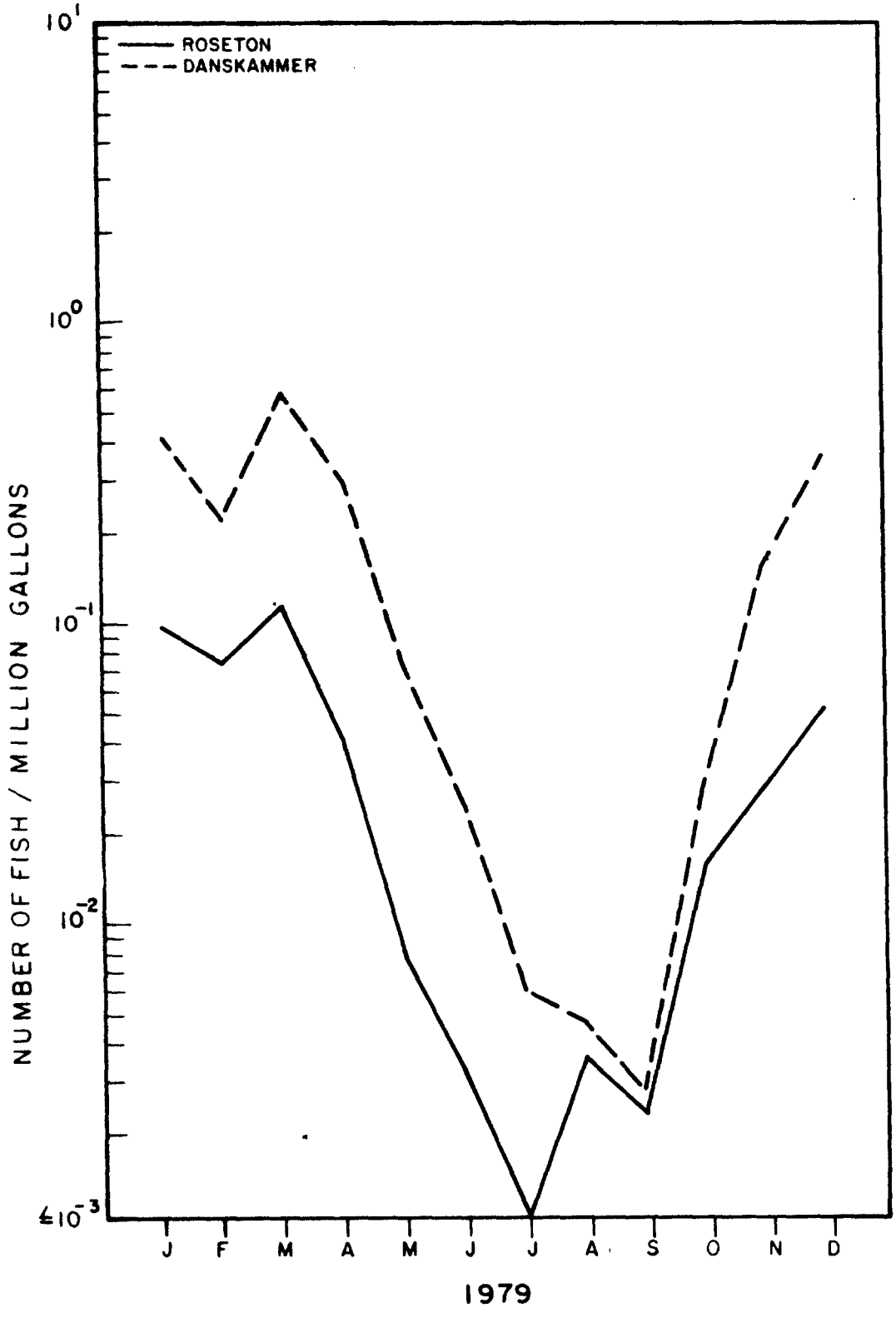
INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
(CONT'D)												
42.1- 43.0	0	0	0	0	0	0	0	0	0	0	0	0
43.1- 44.0	0	0	0	0	0	0	0	0	0	0	0	0
44.1- 45.0	0	0	0	0	0	0	0	0	0	0	0	0
45.1- 46.0	0	0	0	0	0	0	0	0	0	0	0	0
46.1- 47.0	0	0	0	0	0	0	0	0	0	0	0	0
47.1- 48.0	0	0	0	0	0	0	0	0	0	0	0	0
48.1- 49.0	0	0	0	0	0	0	1	0	0	0	0	0
TOTAL ANALYZED	6	1	4	1	1	0	7	66	20	6	16	65
MEAN LENGTH	12.3	9.4	11.4	8.6	16.2		12.9	7.4	9.2	7.7	8.8	8.8
LEN RANGE(MIN)	7.4	9.4	7.1	8.6	16.2	.0	4.8	3.6	5.4	6.7	6.6	6.9
(MAX)	29.4	9.4	17.8	8.6	16.2	.0	48.8	28.9	22.6	9.1	21.4	20.0

NOTE. NS - NO SAMPLE.

FIGURE 6.0-16

MEAN MONTHLY IMPINGEMENT RATE FOR SPOTTAIL SHINER

Roseton and Danskammer Point Generating Stations - 1979



6.4.6 Comparison Between Plants

The seasonality of the dominant species impinged (Section 6.4.5) at the two plants corresponded closely. Impingement rate differences were evident for some species during portions of the year and are probably due to the difference in intake design and the position of the intake relative to the preferred habitat and movement patterns of the major species during particular life stages. As indicated by the biomass tables (Tables 6.0-76 and 6.0-77), Danskammer Point tended to impinge more fish of a larger size than did Roseton. This phenomenon was particularly evident for Atlantic tomcod in the winter, alewife in May, and, to a lesser extent, white perch in the spring and blueback herring in June. Conversely, impingement rates for smaller sized fish tended to be proportionately higher at Roseton. Examples are August impingement of young-of-the-year white perch, and Alosa spp. and adult bay anchovy. The difference in dominant species at the two plants may also be size-dependent. Atlantic tomcod, impinged mostly as adults, figured prominently in the Danskammer Point collections, but not at Roseton, while conversely bay anchovy were more prevalent at Roseton when compared to Danskammer Point.

Recruitment size at the two plants varied slightly for individual species but differences were not consistent.

6.4.7 Plant Impingement Compared to River Collections

Comparisons between impingement and river collection data (see Section 6.2) were made for select species and for each gear type (Table 6.0-92). White perch was the dominant species for each collection method, and blueback herring ranked second for each method except Danskammer impingement, where it was displaced by Atlantic tomcod. It seems likely that, had trawls been conducted

TABLE 6.0-92

COMPARISON OF THE PERCENT CONTRIBUTION TO THE MEAN ANNUAL CATCH-PER-EFFORT FOR RIVER FISH VS THE PERCENT CONTRIBUTION OF IMPINGEMENT TOTALS FOR SELECTED SPECIES

Roseton and Danskammer Point Vicinity - 1979

	PERCENTAGE (%)			
	RIVER FISH		IMPINGEMENT[a]	
SPECIES	SEINES[b]	TRAWLS[c]	ROSETON	DANSKAMMER POINT
Alewife	3.6	1.6	4.7	5.6
American shad	13.1	2.5	2.6	2.2
Atlantic tomcod	NC	3.7	1.8	16.5
Banded killifish	6.0	<0.1	0.2	0.3
Bay anchovy	NC	1.0	13.7	1.0
Blueback herring	22.4	18.1	19.9	13.6
Pumpkinseed	4.8	<0.1	1.3	2.2
Spottail shiner	12.9	4.9	4.2	7.8
White perch	26.7	62.3	45.5	40.6

[a]Values based on catch per million gallons.
[b]Values based on catch per haul data.
[c]Values based on catch per 10 minute effort; surface and bottom trawls combined.
NC - None collected.

during January and February, Atlantic tomcod would have figured more prominently in annual trawl data. Bay anchovy ranked third in Roseton impingement but was not well represented by the other three collection types. Banded killifish and pumpkinseed were considered principal species for seines only.

Seasonal catch patterns differed between the river and impingement collections. Seine and trawl catches each peaked sharply in August and declined through the fall. While Roseton impingement peaked in August, rates remained relatively high through the fall, and the Danskammer Point impingement rate for total fish did not peak until October. Impingement of blueback herring, spottail shiner, and Atlantic tomcod paralleled seasonal patterns of trawl catches rather closely. Peak impingement of American shad lagged behind the July peak in the seine collections, occurring in August at Roseton and in October at Danskammer. The white perch impingement rate was bi-modal, with spring and fall peaks for both plants. The trawl catch of white perch exhibited a sharp August peak with lower spring and fall values, and seine catches remained relatively constant at moderate levels from May through November.

6.4.8 Comparison to Previous Years

Impingement sampling has been conducted at Danskammer Point since 1972 and at Roseton since July of 1973. The mean annual impingement rate, the estimated annual number impinged, and the percentage of the total number impinged for selected and total species since 1973 are presented in Tables 6.0-93 and 6.0-94. The following sections discuss impingement trends at each plant for the study period.

The 1979 Roseton and Danskammer Point annual mean rate for total species was similar to those of 1976 and 1978, and was near the middle of the range recorded from 1973 to 1979. The annual mean

TABLE 6.0-93

ANNUAL MEAN IMPINGEMENT RATE, ESTIMATED TOTAL NUMBER AND PERCENTAGE OF THE TOTAL ESTIMATED NUMBER IMPINGED FOR SELECTED SPECIES

Danskammer Point Generating Station - 1973-1979

YEAR	WHITE PERCH			STRIPED BASS			ATLANTIC TOMCOD			ALEWIFE		
	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED
1973	0.8015	110,545	10.8	0.1451	18,992	1.8	6.9843	647,076	63.0	1.0048	148,912	14.5
1974	0.7105	84,253	25.5	0.0464	6,293	1.9	1.5781	155,908	47.1	0.2190	31,379	9.5
1975	0.8054	98,230	30.3	0.0214	2,588	0.8	0.6212	46,926	14.5	0.2338	29,755	9.2
1976	1.2230	117,738	47.8	0.0142	1,421	0.6	0.5373	54,637	22.2	0.0921	9,920	4.0
1977	1.3002	140,835	47.4	0.0175	1,859	0.6	0.3041	26,879	9.1	0.2076	24,633	8.3
1978	0.5456	52,240	29.3	0.0141	1,495	0.8	0.1976	18,395	10.3	0.2298	24,343	13.7
1979	0.8349	79,089	40.6	0.0257	2,087	1.1	0.3874	32,174	16.5	0.1112	10,841	5.6

YEAR	AMERICAN SHAD			BAY ANCHOVY			BLUEBACK HERRING			SPOTTAIL SHINER			TOTAL SPECIES	
	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER
1973	0.0089	1,266	0.1	0.1540	1,852	0.2	0.2230	29,234	2.8	0.1499	16,137	1.6	9.7541	1,027,304
1974	0.0164	2,444	0.7	0.0148	2,252	0.7	0.0959	13,339	4.0	0.0886	9,672	2.9	3.0032	330,788
1975	0.0186	2,456	0.8	0.0138	2,047	0.6	0.7473	100,111	30.9	0.0967	9,855	3.0	2.8647	323,874
1976	0.0180	2,011	0.8	0.0005	69	<0.1	0.1224	14,176	5.8	0.1584	14,279	5.8	2.4985	246,258
1977	0.0209	2,600	0.9	0.0102	1,253	0.4	0.2546	30,096	10.1	0.2127	21,547	7.3	2.8116	296,947
1978	0.0325	3,624	2.0	0.0292	2,829	1.6	0.3826	40,526	22.7	0.0743	6,856	3.8	1.7946	178,155
1979	0.0409	4,201	2.2	0.0174	1,962	1.0	0.2662	26,397	13.6	0.1814	15,170	7.8	2.1290	194,879

[a]Number of fish collected per million gallons sampled.

TABLE 6.0-94

ANNUAL MEAN IMPINGEMENT RATE, ESTIMATED TOTAL NUMBER AND PERCENTAGE OF THE TOTAL ESTIMATED NUMBER IMPINGED FOR SELECTED SPECIES

Roseton Generating Station - 1973-1979

	WHITE PERCH			STRIPED BASS			ATLANTIC TOMCOD			ALEWIFE		
YEAR	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED
1973[b]	0.898	9,157	41.4	0.039	490	2.2	0.014	259	1.2	0.187	1,873	8.5
1974	0.3733	37,330	64.6	0.0051	642	1.1	0.0445	4,296	7.4	0.0125	1,464	2.5
1975	0.6123	139,400	48.4	0.0058	1,338	0.5	0.0203	4,755	1.7	0.0484	12,214	4.2
1976	0.5290	104,183	69.4	0.0030	607	0.4	0.0388	7,208	4.8	0.0093	2,424	1.6
1977	0.5988	131,747	43.1	0.0098	2,730	0.9	0.0775	19,424	6.3	0.1248	37,251	12.2
1978	0.2135	57,980	28.2	0.0045	1,220	0.6	0.0065	1,670	0.8	0.0896	25,971	12.6
1979	0.3443	93,391	45.5	0.0044	1,187	0.6	0.0163	3,770	1.8	0.0314	9,578	4.7

	AMERICAN SHAD			BAY ANCHOVY			BLUEBACK HERRING			SPOTTAIL SHINER			TOTAL SPECIES	
YEAR	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER
1973[b]	0.0016	21	0.1	0.176	1,107	5.0	0.599	6,377	28.8	0.064	1,515	6.9	2.062	22,105
1974	0.0025	337	0.6	0.0211	3,414	5.9	0.0257	2,746	4.8	0.0543	3,661	6.3	0.5944	57,775
1975	0.0094	2,348	0.8	0.0097	2,348	0.8	0.3338	78,854	27.4	0.0698	14,999	5.2	1.2518	288,149
1976	0.0015	367	0.2	0.0085	2,380	1.6	0.0444	10,447	7.0	0.0403	8,502	5.7	0.7449	150,069
1977	0.0082	2,426	0.8	0.0970	31,184	10.2	0.1777	46,066	15.1	0.0623	13,205	4.3	1.2578	305,956
1978	0.0137	4,138	2.0	0.1947	59,265	28.9	0.1081	28,984	14.1	0.0215	5,464	2.7	0.7297	205,341
1979	0.0177	5,397	2.6	0.0829	28,120	13.7	0 1629	40,936	19.9	0.0372	8,537	4.2	0.7541	205,320

[a]Number of fish collected per million gallons sampled.
[b]Impingement samples began July 1973.

rate was highest in 1973 and lowest in 1974 at Roseton. The highest annual mean rate at Danskammer was in 1973, while the lowest rate occurred in 1978. The high 1973 rate was the result of increased impingement rates for striped bass, Atlantic tomcod, alewife, and bay anchovy, especially at Danskammer Point. Striped bass, alewife, and Atlantic tomcod peak rates co-occurred in 1977 at Roseton and contributed to that year's high total rate. The lowest annual impingement rate, which occurred in 1974, was not associated with outstandingly low rates for any major species but resulted from a general decrease in the rates of all species.

6.4.8.1 Roseton. The mean annual impingement rates of the major species considered have fluctuated from year to year. With the exclusion of 1973 data due to its incompleteness, 1979 annual impingement rates were the second lowest recorded for white perch, striped bass, Atlantic tomcod, and spottail shiner. Alewife impingement in 1979 was at its third lowest.

American shad is the only species of those considered for which a trend is indicated. With the exception of 1976, each year has shown an increased rate over the year preceding it, and the peak rate was observed in 1979. No trend for annual mean rate for total species is evidenced by the data.

6.4.8.2 Danskammer Point. The trend in total species impingement at Danskammer Point appears to be one of general decline for the period studied. This is due to the unusually high early rates caused by the abundance of Atlantic tomcod in 1973 and 1974, when they accounted for 63.0 and 47.1% of the total impingement, respectively. From 1975 through 1979 Atlantic tomcod averaged 14.5% of the total fish impinged, with 1977 the lowest at 9.1% and 1976 the highest at 22.2%. This decline from 1975 through 1979, when compared to 1973 and 1974, is largely responsible for the drop in total numbers impinged.

Of the major species, white perch, bay anchovy, spottail shiner, alewife, and blueback herring have exhibited no discernible trends in mean annual impingement rate at Danskammer Point. The seven-year history of each of these species has shown two to three peaks and low points in the impingement rate. In comparison to the previous years, 1979 impingement of these species was at an intermediate level, with none of the species showing either highest or lowest rates. White perch, striped bass, Atlantic tomcod, American shad, and spottail shiner showed an increase in mean annual rate when compared to 1978.

Striped bass, Atlantic tomcod, and American shad have shown evidence of trends in their mean annual impingement rates. From 1973 to 1978 striped bass displayed a general decline followed by an 82.3% increase in the 1979 rate over 1978 (0.0257 and 0.0141, respectively). Atlantic tomcod, which decreased steadily in impingement rate from 1973 to 1978, also experienced an upward swing in 1979, rising 96.1% over the 1978 rate. In contrast, American shad has increased in impingement rate from 1973 to 1979, with 1976 being the only year for which the annual impingement rate was slightly lower than the previous year.

CHAPTER 7.0

SPECIAL STUDIES

7.1 TRAWL COMPARISON: YANKEE TRAWL VS OTTER TRAWL

7.1.1 Introduction

The 7.9 m (headrope) otter trawl has been used as the primary nekton sampling device for the Central Hudson Gas & Electric Corporation Aquatic Ecology Studies since 1971. This gear was designed for use as a bottom trawl; however, since the program's inception in 1971, this trawl has been used to sample the bottom and surface water strata to facilitate comparison between the two strata.

Evaluation of previous surface and bottom trawl data indicated a major difference between the two trawls related to catch-per-effort and species composition (LMS 1979a, LMS 1979b, LMS 1980). In addition, nekton sampling conducted in October 1978, using a yankee trawl as part of a hydroacoustic survey (LMS 1980) of the northern Newburgh Bay area, indicated the presence of large concentrations of fish in the mid-water strata. The yankee trawl also proved to be an effective surface and midwater sampler, as indicated by a comparison to hydroacoustic assessment of fish concentrations.

To evaluate the effectiveness of the otter trawl as an upper water strata sampler, it was tested against the yankee trawl on a diel schedule. The assumption was that if the yankee trawl caught more fish per unit volume than the otter trawl under similar conditions, it was more efficient. This might occur if a larger proportion of fish were avoiding capture by the smaller otter trawl. If the yankee trawl caught fish with a different length-frequency distribution (more large fish) than the otter trawl, then it would have a different efficiency related to fish size.

This gear comparison was conducted at surface and mid-water depths on a diel schedule. The study was not conducted for bottom sampling because (1) the otter trawl is an accepted bottom sampling gear, and (2) past experience with the yankee trawl in this region of the Hudson River indicated its propensity for getting "snagged" on the bottom.

7.1.2 Objectives

The objectives of this study were twofold: (1) To compare the catch yields of the otter and yankee trawls from the surface and mid-water strata and to determine their relative efficiencies with relation to catch-per-volume and selectivity; (2) to examine the mid-water zone as a fish habitat and to assess diel vertical distribution with the two trawls. To determine relative efficiencies, the catch-per-unit-volume was calculated for total fish and select species (white perch, blueback herring, alewife, and American shad). The select species were defined as the most abundant species collected at the surface and mid-water strata. The length-frequency distribution of these species was also determined and compared.

7.1.3 Materials and Methods

7.1.3.1 Gear Description

The physical dimensions of the two trawls used for this study are described below.

PARTS	OTTER TRAWL	YANKEE TRAWL
Headrope	7.92 m	11.89 m
Footrope	8.53 m	15.54 m
Wing height	1.07 m	1.98 m
Total length	10.67 m_2	17.68 m_2
Fishing mouth area	2.14 m^2	10.78 m^2
Wing mesh (square)	2.54 cm	4.44 cm
Body mesh (square)	2.54 cm	3.18 cm
Cod end mesh (square)	1.90 cm	3.18 cm
Cod end liner mesh (square)	0.64 cm	0.64 cm
Trawl doors	81.28 x 40.64 x 2.54 cm oak	152.4 x 76.2 x 1.90 cm plywood
Tow-line length	61.0 m	61.0 m
Floats	two 18.92 liter jugs	two 113.55 liter drums

7.1.3.2 Fishing Mouth Area Determinations

7.1.3.2.1 Otter trawl. The estimation of fishing mouth area of the otter trawl was facilitated with the use of underwater photographs taken by LMS in 1975. Photographs indicate a fairly deep "U" shape in the trawl mouth while under tow (90-95 cm/s) (Figure 7.0-1). A 12.7 cm (5 in) float was used as a reference and the actual effective mouth area was estimated to be 2.14 m^2 (23 ft^2)(Figure 7.0-2).

7.1.3.2.2 Yankee trawl. Information regarding the dimensions of the yankee trawl was provided by the U.S. Fish and Wildlife Service, Great Lakes Fishery Laboratory in Ann Arbor, Michigan. The trawl measured at Ann Arbor had the same dimensions and mesh size as the yankee trawl used in this study and its fishing mouth area was measured at a towing velocity of 900 RPM (boats maintained a speed between 900 and 950 RPM's for this trawl comparison study). Measurements were made by SCUBA divers during actual trawls. The mouth area was determined to be 10.78 m^2 (116 ft^2)(Figure 7.0-2). The relative shape of the Yankee trawl is provided in Figure 7.0-1.

FIGURE 7.0-1

SCHEMATIC ILLUSTRATION OF THE FISHING MOUTH FOR THE YANKEE AND OTTER TRAWLS-TOP VIEW

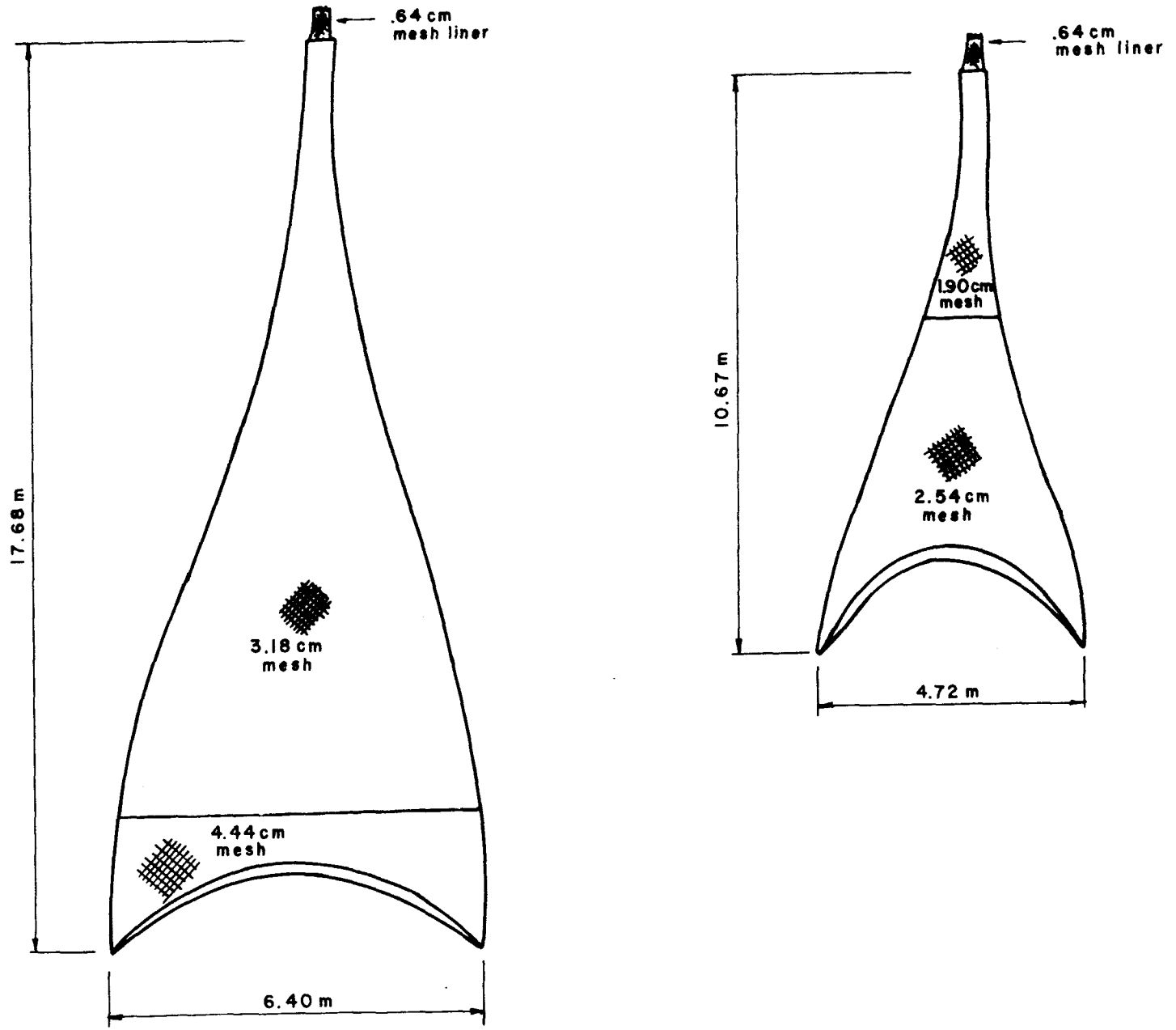
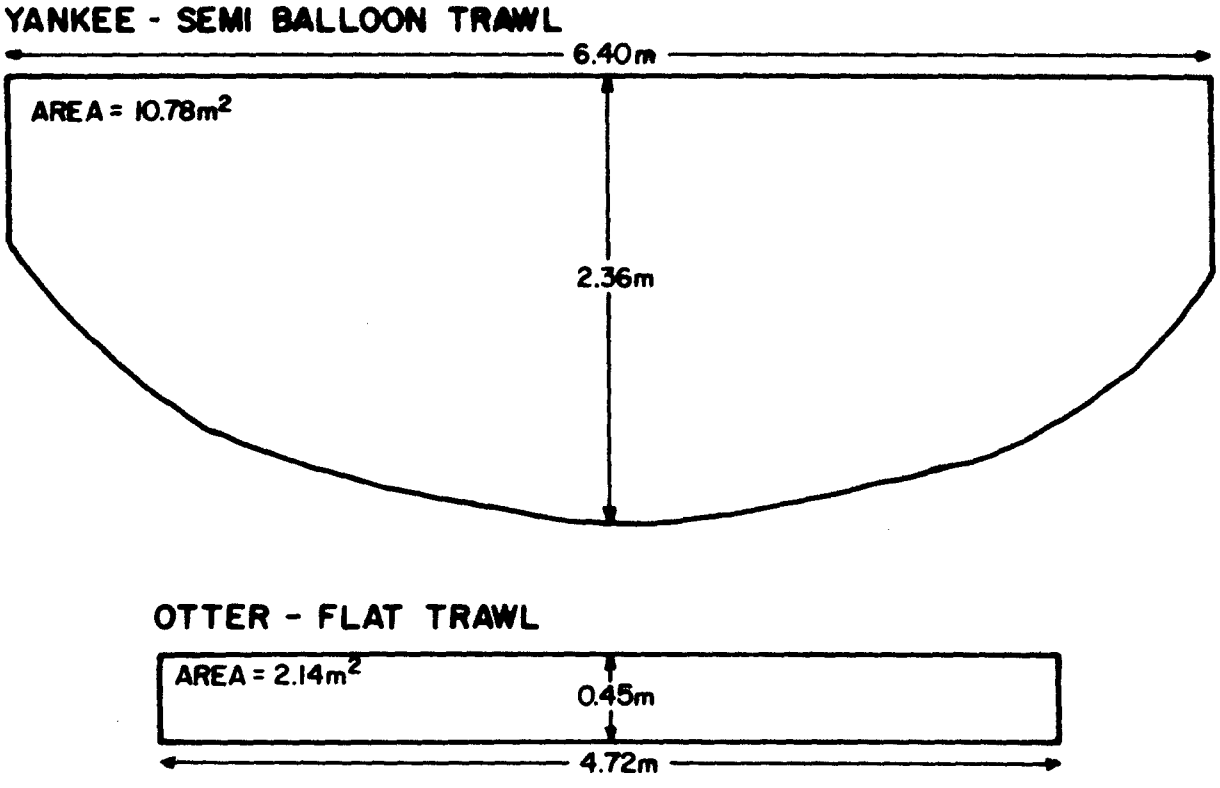


FIGURE 7.0-2

SCHEMATIC ILLUSTRATION OF THE FISHING MOUTH FOR YANKEE AND OTTER TRAWLS

FRONT VIEW



7.1.3.3 Sampling Program. Sampling was conducted on three dates in October in conjunction with the standard CHGE river fish program at Stations RDE, RDW, and RDCH. Surface, mid-depth, and bottom water strata were sampled with the otter trawl, and surface and mid-depth with the yankee trawl. Sampling was conducted on a diel schedule to collect a total of 90 samples or 36 paired samples (no paired samples for bottom trawls).

Yankee/otter trawls were conducted side by side using two boats. The trawls were towed at the same depth behind each boat. A distance of 30 to 60 m between the two boats was always maintained. The order in which the stations were sampled was random. Each boat used only one net (yankee or otter) for each survey; however, the nets were rotated between the two boats among the three surveys to avoid any bias related to the boats. The procedures utilized for trawling are outlined in the River Fish section (1.2.3) of the 1979 CHGE Workplans. Trawl speed was maintained at 120 to 150 cm/s. Trawling was conducted over a specified distance as described in Table 7.0-1. All fish were preserved with 10% buffered formalin and stored for a minimum of two weeks before being analyzed.

7.1.3.4 Laboratory Analysis. Laboratory analysis consisted of sorting, counting, and identifying all nekton collected in each sample. Up to 150 individuals per species per sample were measured for total length to the nearest 0.1 cm. If more than 150 individuals of a single species were collected, a random numbers table was used to provide a subsample of specimens to be measured.

7.1.3.5 Abundance Calculations. Abundance comparisons were performed by converting catch per trawl to catch per unit volume. A volume of 1500 m^3 was used since it was a convenient round number

TABLE 7.0-1

STATION LENGTH AND COMPARATIVE VOLUMES

Roseton and Danskammer Point Vicinity - 1979

STATION	LENGTH (m)	STATIC VOLUME WITH OTTER	STATIC VOLUME WITH YANKEE	TIME (MIN) DURATION OF TRAWL RANGE	MEAN
RDW	823.9	1763.1	8881.6	10.0-39.0	17.4
RDCH	823.9	1763.1	8881.6	12.0-24.0	19.6
RDE	928.1	1986.1	10004.9	10.0-26.0	15.9

that did not exceed the volume of the shortest trawl. The water volume sampled is said to be the static volume or "water that is 'carved out' by the trawl, as opposed to actual flow volume moving through the net as it is towed against the prevailing current" (EPRI 1980). The per effort volume was calculated as:

Static Volume = Length of trawl transect x trawl fishing mouth area.

Catch per unit static volume is calculated as:

$$\text{Catch}/1500\ m^3 = \frac{\text{Number of Fish Caught}}{\text{Static Volume Sampled}} \times 1500\ m^3$$

7.1.4 Results and Discussion

7.1.4.1 Comparison Between Trawls

7.1.4.1.1 Total catch. The concentrations of total fish collected by the two gear on the three test dates are presented in Table 7.0-2 and the actual number of fish collected is presented in the Report Appendix. The design of this study was such that a paired t-test could be used to determine if the two trawls have the same catch-per-volume. This test does not assume that the concentrations of fish are normally distributed but does assume that differences between concentrations in the otter and yankee trawls are normal. A Shapiro-Wilk test (Shapiro and Wilk 1965) was performed to test the assumption of normality of difference, and normality was accepted for all diel strata tested (Table 7.0-3).

The results of the paired t-test (α = .05) show that there is no significant difference between total catch-per-volume for

TABLE 7.0-2

CONCENTRATION[a] OF TOTAL FISH FROM OTTER AND YANKEE TRAWL COLLECTIONS

Roseton and Danskammer Point Vicinity - 1979

		DAY						NIGHT					
		SURFACE		MID		MEAN[b]		SURFACE		MID		MEAN[c]	
DATE	STATION	OTTER	YANKEE	OTTER	YANKEE	OTTER	YANKEE	OTTER	YANKEE	OTTER	YANKEE	OTTER	YANKEE
11-12 Oct	RDW	0.00	112.32	0.85	0.34	0.42	56.33	0.00	5.74	20.42	98.64	10.21	52.19
	RDCH	0.00	348.78	0.00	0.84	0.00	174.81	0.00	4.22	51.90	165.35	25.95	84.78
	RDE	0.00	78.70	0.00	1.05	0.00	39.88	0.76	0.00	0.00	59.96	0.38	29.98
	Mean	0.00	179.93	0.28	0.74	0.14	90.34	0.25	3.32	24.11	107.98	12.18	55.65
18-19 Oct	RDW	68.06	121.78	3.40	0.34	35.73	61.06	21.27	8.78	147.19	94.25	84.23	51.52
	RDCH	91.89	79.72	10.21	0.68	51.05	40.20	1.70	1.18	40.84	116.03	21.27	58.60
	RDE	5417.80	2267.99	42.29	7.79	2730.04	1137.89	1.51	4.50	73.25	159.34	37.38	81.92
	Mean	1859.25	823.16	18.63	2.94	938.96	413.05	8.16	4.82	87.09	123.21	47.62	64.02
25-26 Oct	RDW	11.91	33.95	0.85	2.36	6.38	18.16	9.36	4.90	30.63	9.29	20.00	7.10
	RDCH	5.96	40.70	29.78	1.69	17.87	21.20	0.00	1.01	0.85	2.20	0.42	1.60
	RDE	13.59	164.74	11.33	1.65	12.46	83.20	2.27	1.05	18.12	6.90	10.20	3.98
	Mean	10.49	79.80	13.99	1.90	12.24	40.85	3.88	2.32	16.53	6.13	10.20	4.23
Station Mean	RDW	26.66	89.35	1.70	1.01			10.21	6.47	66.08	67.39		
	RDCH	32.62	156.40	13.33	1.07			0.57	2.14	31.20	94.53		
	RDE	1810.46	837.14	17.87	3.50			1.51	1.85	30.46	75.40		
Study Mean		623.25	360.96	10.97	1.86			4.10	3.49	42.58	79.11		

[a]Number of fish per 1500 m^3.
[b]Mean of surface and mid depth day samples.
[c]Mean of surface and mid depth night samples.

TABLE 7.0-3

SHAPIRO-WILK TEST FOR NORMALITY

Roseton and Danskammer Point Vicinity - 1979

DIEL	STRATA	W-VALUE					CRITICAL VALUE[a] AT 95%
		WP	BBH	AW	ASD	TOTAL	
Day	Surface	0.43	0.48	0.60	0.89	0.48	0.98
	Mid	0.85	0.70	0.57	0.80	0.78	0.98
	Surf and Mid	0.68	0.34	0.46	0.94	0.35	0.98
Night	Surface	0.80	0.54	0.95	0.56	0.90	0.98
	Mid	0.78	0.94	0.90	0.97	0.92	0.98
	Surf and Mid	0.60	0.79	0.95	0.82	0.85	0.98
Day and Night	Surf and Mid	0.46	0.25	0.65	0.88	0.26	0.99

[a]Normality accepted for all cases.
WP-White perch.
BBH-Blueback herring.
AW-Alewife.
ASD-American shad.

these two trawls (Table 7.0-4). The null hypothesis, μotter = μyankee, was accepted for each of the four strata tested.

A three-factor ANOVA was performed for total fish after the data was log (Y+1) transformed (Table 7.0-5). The results indicate no significant difference between gear and confirm the results of the paired t-test. The ANOVA did detect depth distributional differences for two of the interactions tested.

Of the 36 paired samples, the otter trawl had nine samples with no fish and the yankee had only one. Eight of the nine otter no-catches and the single yankee no-catch were on 11-12 October. There were relatively few fish collected on this date with the otter trawl, especially during the day, and the data indicate that when sampling in an area of low fish densities, the yankee trawl has a greater chance of collecting fish.

7.1.4.1.2 Select species. The concentrations of the select species (white perch, blueback herring, American shad, and alewife) are presented by date in Tables 7.0-6 through 7.0-8. Collection information related to the four select species was tested for differences in catch-per-volume between the gear, and of the twenty tests performed, four indicated a significant difference between the two trawls (Table 7.0-4). White perch night/surface, alewife night/mid-depth, and American shad day/surface and night/mid-depth were collected in significantly greater numbers with the yankee trawl.

The results of the three-factor ANOVA's for the select species demonstrated no difference in catch/1500 m^3 for any species except American shad (Tables 7.0-9 through 7.0-12). The follow-up multiple comparison revealed greater catches for the

TABLE 7.0-4

PAIRED t-TEST FOR CATCH-PER-VOLUME DIFFERENCES

Roseton and Danskammer Point Vicinity - 1979

DIEL	STRATA	t-VALUE WP	BBH	AW	ASD	TOTAL	CRITICAL VALUE AT 95%
Day	Surface	0.93	0.74	-0.94	-3.71[a]	0.72	2.31
	Mid	-0.85	1.63	1.27	2.15	2.04	2.31
Night	Surface	-2.83[a]	0.84	0.04	-1.41	0.34	2.31
	Mid	-0.93	-1.70	-2.62[a]	-2.67[a]	-1.89	2.31
Day/Night combined	Surface/mid combined	-0.94	0.68	0.16	-1.16	0.66	2.03

[a]Significant differences at the 95% level.
WP - White perch.
BBH - Blueback herring.
AW - Alewife.
ASD - American shad.

TABLE 7.0-5

STATISTICAL ANALYSIS FOR TOTAL FISH[a] IN TRAWL COMPARISON STUDY COLLECTIONS

Roseton and Danskammer Point Vicinity - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	SS	DF	MS	F
Gear	1.2670	1	1.2670	2.90
Photoperiod	0.2492	1	0.2492	0.57
Depth	0.0993	1	0.0993	0.23
G x P	0.0301	1	0.0301	0.07
G x D	1.3522	1	1.3522	3.09
P x D	19.4970	1	19.4970	44.55*
G x P x D	2.4983	1	2.4983	5.71*
Error	28.0066	64	0.4376	
Total	52.9997	71		

TUKEY COMPARISONS (α = .05)

PHOTOPERIOD x DEPTH:	Largest:				:Smallest
	SURFACE DAY	MID NIGHT	MID DAY	SURFACE NIGHT	

[a]Number of fish per 1500 m^3.
*Significant at the 95% level.

TABLE 7.0-6

CONCENTRATION[a] OF TOTAL AND SELECTED SPECIES FROM OTTER AND YANKEE TRAWLS COLLECTED ON 11-12 OCTOBER

Roseton and Danskammer Point Vicinity - 1979

DAY

STATION		OTTER WP	OTTER BBH	OTTER AW	OTTER ASD	OTTER TOTAL	YANKEE WP	YANKEE BBH	YANKEE AW	YANKEE ASD	YANKEE TOTAL
RDW	S	0.00	0.00	0.00	0.00	0.00	0.00	105.39	0.00	6.92	112.32
	M	0.00	0.00	0.00	0.00	0.85	0.17	0.17	0.00	0.00	0.34
	B	21.27	0.00	0.00	0.00	53.60	NS	NS	NS	NS	NS
RDCH	S	0.00	0.00	0.00	0.00	0.00	0.00	342.53	0.00	6.24	348.78
	M	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.68	0.00	0.84
	B	31.48	0.00	0.00	6.81	115.71	NS	NS	NS	NS	NS
RDE	S	0.00	0.00	0.00	0.00	0.00	0.00	70.90	0.00	7.79	78.70
	M	0.00	0.00	0.00	0.00	0.00	0.30	0.15	0.45	0.00	1.05
	B	14.35	0.00	0.00	4.53	20.39	NS	NS	NS	NS	NS

NIGHT

STATION		OTTER WP	OTTER BBH	OTTER AW	OTTER ASD	OTTER TOTAL	YANKEE WP	YANKEE BBH	YANKEE AW	YANKEE ASD	YANKEE TOTAL
RDW	S	0.00	0.00	0.00	0.00	0.00	0.00	0.34	5.40	0.00	5.74
	M	1.70	15.31	1.70	0.00	20.42	8.28	79.21	7.43	3.38	98.64
	B	20.42	20.42	0.00	0.00	57.00	NS	NS	NS	NS	NS
RDCH	S	0.00	0.00	0.00	0.00	0.00	0.00	0.17	1.86	0.00	4.22
	M	0.85	45.09	4.25	0.85	51.90	7.09	142.04	9.80	5.07	165.35
	B	9.36	636.40	6.81	37.44	696.81	NS	NS	NS	NS	NS
RDE	S	0.00	0.00	0.76	0.00	0.76	0.00	0.00	0.00	0.00	0.00
	M	0.00	0.00	0.00	0.00	0.00	39.57	11.99	4.20	2.55	59.96
	B	0.76	0.00	0.00	0.00	1.51	NS	NS	NS	NS	NS

[a]Number of fish per 1500 m^3.

NS - No sample.
S - Surface.
M - Mid.
B - Bottom.

WP - White perch.
BBH - Blueback herring.
AW - Alewife.
ASD - American shad.

TABLE 7.0-7

CONCENTRATION[a] OF TOTAL AND SELECTED SPECIES FROM OTTER AND YANKEE TRAWLS COLLECTED ON 18-19 OCTOBER

Roseton and Danskammer Point Vicinity - 1979

AY

TATION		OTTER WP	OTTER BBH	OTTER AW	OTTER ASD	OTTER TOTAL	YANKEE WP	YANKEE BBH	YANKEE AW	YANKEE ASD	YANKEE TOTAL
DW	S	0.00	57.85	0.85	9.36	68.06	0.00	100.33	4.56	16.72	121.78
	M	0.00	1.70	0.00	0.85	3.40	0.17	0.00	0.00	0.00	0.34
	B	20.42	0.00	0.00	0.00	23.82	NS	NS	NS	NS	NS
DCH	S	0.00	78.27	0.00	13.61	91.89	0.00	69.42	0.17	9.97	79.72
	M	0.00	0.85	0.00	9.36	10.21	0.00	0.00	0.17	0.51	0.68
	B	5.96	0.00	0.00	1.70	8.51	NS	NS	NS	NS	NS
DE	S	0.00	5416.29	0.76	0.76	5417.80	0.00	2261.69	0.00	6.30	2267.99
	M	0.00	0.76	27.94	13.59	42.29	0.15	1.35	2.25	1.50	7.79
	B	1.51	3.02	0.00	2.27	6.80	NS	NS	NS	NS	NS

GHT

ATION		OTTER WP	OTTER BBH	OTTER AW	OTTER ASD	OTTER TOTAL	YANKEE WP	YANKEE BBH	YANKEE AW	YANKEE ASD	YANKEE TOTAL
W	S	0.00	19.57	1.70	0.00	21.27	0.17	7.43	1.01	0.00	8.78
	M	5.10	132.72	5.96	3.40	147.19	5.40	79.72	3.88	4.73	94.25
	B	23.82	68.91	1.70	1.70	124.22	NS	NS	NS	NS	NS
CH	S	0.00	1.70	0.00	0.00	1.70	0.00	0.51	0.34	0.00	1.18
	M	3.40	32.33	4.25	0.85	40.84	7.60	91.54	10.81	5.57	116.03
	B	13.61	183.77	12.76	12.76	226.31	NS	NS	NS	NS	NS
E	S	0.76	0.76	0.00	0.00	1.51	0.90	2.25	0.75	0.15	4.50
	M	29.45	40.03	0.76	0.76	73.25	32.08	118.12	5.25	3.00	159.34
	B	6.04	268.85	7.55	4.53	290.00	NS	NS	NS	NS	NS

mber of fish per 1500 m^3.
- No sample.
- Surface.
- Mid.
- Bottom.

WP - White perch.
BBH - Blueback herring.
AW - Alewife.
ASD - American shad.

TABLE 7.0-8

CONCENTRATION[a] OF TOTAL AND SELECTED SPECIES FROM OTTER AND YANKEE TRAWLS COLLECTED ON 25-26 OCTOBER

Roseton and Danskammer Point Vicinity - 1979

DAY

STATION		OTTER					YANKEE				
		WP	BBH	AW	ASD	TOTAL	WP	BBH	AW	ASD	TOTAL
RDW	S	2.55	0.85	0.85	7.66	11.91	0.00	11.65	1.18	20.94	33.95
	M	0.00	0.00	0.85	0.00	0.85	1.01	0.34	0.00	0.34	2.36
	B	4.25	0.00	0.00	0.00	5.96	NS	NS	NS	NS	NS
RDCH	S	0.00	2.55	0.00	3.40	5.96	0.00	29.73	0.00	10.64	40.70
	M	0.00	9.36	8.51	11.91	29.78	0.84	0.17	0.17	0.17	1.69
	B	5.10	0.00	0.00	0.85	5.96	NS	NS	NS	NS	NS
RDE	S	0.00	12.08	0.00	1.51	13.59	0.15	161.44	0.15	2.85	164.74
	M	2.27	7.55	0.00	1.51	11.33	1.05	0.00	0.45	0.00	1.65
	B	12.08	0.76	0.00	0.00	17.37	NS	NS	NS	NS	NS

NIGHT

STATION		OTTER					YANKEE				
		WP	BBH	AW	ASD	TOTAL	WP	BBH	AW	ASD	TOTAL
RDW	S	0.00	1.70	7.66	0.00	9.36	0.34	2.36	2.20	0.00	4.90
	M	15.31	11.06	0.85	0.85	30.63	3.88	3.72	0.68	0.84	9.29
	B	1.70	0.85	0.85	2.55	5.96	NS	NS	NS	NS	NS
RDCH	S	0.00	0.00	0.00	0.00	0.00	0.34	0.34	0.17	0.00	1.01
	M	0.85	0.00	0.00	0.00	0.85	0.51	0.34	1.18	0.17	2.20
	B	0.00	1.70	0.00	0.85	86.78	NS	NS	NS	NS	NS
RDE	S	0.00	0.00	2.27	0.00	2.27	0.30	0.15	0.30	0.30	1.50
	M	12.08	1.51	1.51	2.27	18.12	4.65	0.60	1.05	0.60	6.90
	B	2.27	0.00	0.00	0.00	3.02	NS	NS	NS	NS	NS

[a]Number of fish per 1500 m^3.

NS - No sample.
S - Surface.
M - Mid.
B - Bottom.

WP - White perch.
BBH - Blueback herring.
AW - Alewife.
ASD - American shad.

TABLE 7.0-9

STATISTICAL ANALYSIS FOR WHITE PERCH[a]
IN TRAWL COMPARISON STUDY COLLECTIONS

Roseton and Danskammer Point Vicinity - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	SS	DF	MS	F
Gear	0.1153	1	0.1153	1.75
Photoperiod	2.4005	1	2.4005	36.39*
Depth	3.0309	1	3.0309	45.95*
G x P	0.0781	1	0.0881	1.18
G x D	0.1185	1	0.1185	1.80
P x D	2.1519	1	2.1519	32.63*
G x P x D	0.0029	1	0.0029	0.04*
Error	4.2213	64	0.0660	
Total	12.1194	71		

TUKEY COMPARISONS (α = .05)

PHOTOPERIOD: Night > Day
Depth: Mid > Surface

PHOTOPERIOD x DEPTH:	Largest:	Mid Night	Mid Day	Surface Night	Surface Day	:Smallest

[a]Number of fish per 1500 m^3.
*Significant at the 95% level.

TABLE 7.0-10

STATISTICAL ANALYSIS FOR BLUEBACK HERRING[a]
IN TRAWL COMPARISON STUDY COLLECTIONS

Roseton and Danskammer Point Vicinity - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	SS	DF	MS	F
Gear	1.2557	1	1.2557	2.70
Photoperiod	0.3012	1	0.3012	0.65
Depth	0.7562	1	0.7562	1.63
G x P	0.2547	1	0.2547	0.55
G x D	1.0961	1	1.0961	2.36
P x D	23.3215	1	23.3215	50.15*
G x P x D	2.6035	1	2.6035	5.60*
Error	29.7633	64	0.4651	
Total	59.3522	71		

TUKEY COMPARISONS (α = .05)

PHOTOPERIOD x DEPTH:	Largest:	Surface Day	Mid Night	Surface Night	Mid Day	:Smallest

[a]Number of fish per 1500 m^3.
*Significant at the 95% level.

TABLE 7.0-11

STATISTICAL ANALYSIS FOR ALEWIFE[a] IN TRAWL COMPARISON STUDY COLLECTIONS

Roseton and Danskammer Point Vicinity - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	SS	DF	MS	F
Gear	0.0500	1	0.0500	0.51
Photoperiod	1.0250	1	1.0250	10.56*
Depth	0.6599	1	0.6599	6.80*
G x P	0.2281	1	0.2281	2.35
G x D	0.0000	1	0.0000	0.00
P x D	0.1310	1	0.1310	1.35
G x P x D	0.2145	1	2.2145	2.21
Error	6.2117	64	0.0971	
Total	8.5202	71		

TUKEY COMPARISONS ($\alpha = .05$)

PHOTOPERIOD: NIGHT > DAY
DEPTH: MID > SURFACE

[a]Number of fish per 1500 m^3.
*Significant at the 95% level.

TABLE 7.0-12

STATISTICAL ANALYSIS FOR AMERICAN SHAD[a]
IN TRAWL COMPARISON STUDY COLLECTIONS

Roseton and Danskammer Point Vicinity - 1979

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	SS	DF	MS	F
Gear	0.2129	1	0.2129	2.51
Photoperiod	1.6541	1	1.6541	19.47*
Depth	0.0452	1	0.0452	0.53
G x P	0.0274	1	0.0274	0.32
G x D	0.3925	1	0.3925	4.62*
P x D	3.2275	1	3.2275	37.99*
G x P x D	1.3712	1	1.3712	16.14*
Error	5.4368	64	0.0895	
Total	12.3676	71		

TUKEY COMPARISONS (α = .05)

PHOTOPERIOD: DAY > NIGHT

GEAR x DEPTH:	Largest:	YANKEE SURFACE	OTTER MID	YANKEE MID	OTTER SURFACE	:Smallest
PHOTOPERIOD x DEPTH:	Largest:	SURFACE DAY	MID NIGHT	MID DAY	SURFACE NIGHT	:Smallest

[a]Number of fish per 1500 m^3.
*Significant at the 95% level.

Yankee trawl for this species only. This finding coincides with the results of the paired t-test in which American shad were found in significantly greater concentrations in two of the four diel-strata tested. Significant results were detected by the ANOVA for various depth, photoperiod and gear interactions.

Examination of the abundance data reveals that white perch in night/surface collections were sparse, with eight no-catches in the otter trawl and four in the yankee trawl. Alewife and American shad were caught in moderate numbers; however, more no-catches of these species with the otter trawl contributed to the significantly different results.

7.1.4.2 Length-Frequency Comparisons. Length-frequency distributions of the major fish populations collected by the yankee and otter trawls were compared by date using a Kolmogorov-Smirnov test (Lindgren 1968) ($\alpha = .05$) (Table 7.0-13). This test was performed for each of the three sample dates for white perch, blueback herring, alewife, and American shad. This statistic tests the hypothesis of whether the two catches come from populations with the same length-frequency distribution functions. No significant differences were found for any of the species tested.

Figure 7.0-3 presents a comparison of the mean lengths of selected species. The largest difference was recorded for white perch on 25-26 October. Very small mean-length differences (0.1 to 0.2 cm) were calculated for blueback herring and American shad. Neither trawl consistently collected larger or smaller fish than the other. The two trawls provide the same length information and, therefore, are equally efficient in this respect.

TABLE 7.0-13

KOLMOGOROV-SMIRNOV TEST FOR LENGTH-FREQUENCY DIFFERENCES

Roseton and Danskammer Point Vicinity - 1979

SPECIES	DATE	N		RANGE (cm)		MEAN LENGTH (cm)		D	CONCLUSION
		OTTER	YANKEE	OTTER	YANKEE	OTTER	YANKEE		
White perch	11-12 Oct	3	187	6.8-18.6	4.8-26.0	10.8	9.4	0.296	Not Significant
	18-19 Oct	49	195	5.4-20.1	5.2-21.0	10.2	9.4	0.059	Not Significant
	25-26 Oct	41	81	4.5-16.0	5.7-18.2	7.4	8.8	0.187	Not Significant
Blueback herring	11-12 Oct	67	746	6.1- 8.9	4.1-28.0	7.1	6.9	0.077	Not Significant
	18-19 Oct	492	839	5.2- 8.6	5.0- 9.2	6.6	6.7	0.071	Not Significant
	25-26 Oct	50	336	5.6- 8.3	5.3-16.8	6.7	6.8	0.086	Not Significant
Alewife	11-12 Oct	8	180	7.2-15.7	6.9-18.9	10.4	10.7	0.145	Not Significant
	18-19 Oct	54	179	7.6-11.2	7.7-18.6	8.9	9.4	0.142	Not Significant
	25-26 Oct	27	46	7.0-19.2	6.8-17.6	9.2	9.2	0.172	Not Significant
American shad	18-19 Oct	64	295	7.6-11.6	7.2-12.7	9.0	9.1	0.069	Not Significant
	25-26 Oct	35	172	8.1-10.3	7.8-10.9	9.1	8.9	0.143	Not Significant

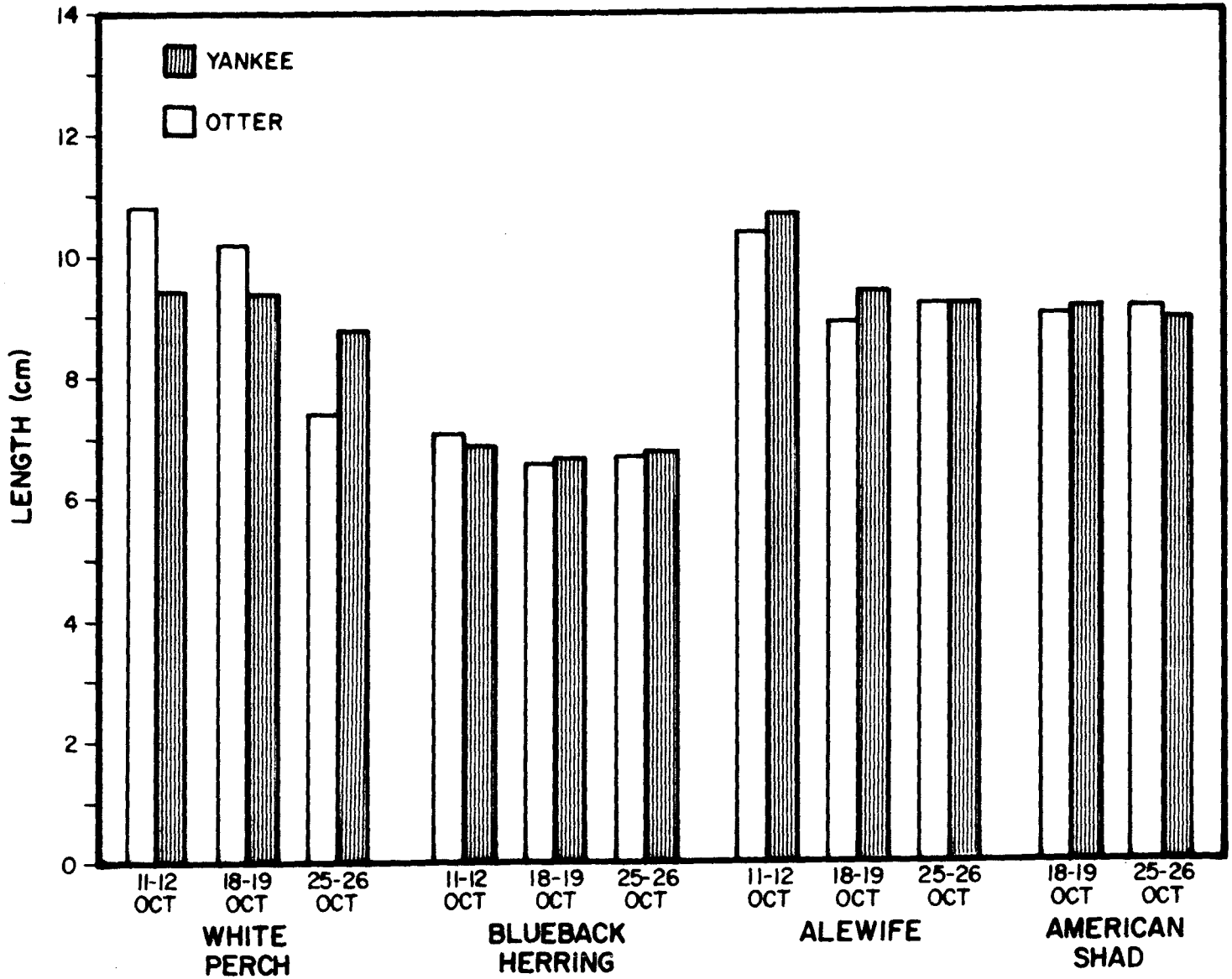
N - Number of fish collected and analyzed for length.
D - Kolmogorov-Smirnov statistic.

Critical Value = $1.36\sqrt{\frac{n_1+n_2}{n_1+n_2}}$

FIGURE 7.0-3

MEAN LENGTHS OF SELECTED SPECIES FOR OTTER AND YANKEE TRAWLS

Roseton and Danskammer Point Vicinity - 1979



7.1.4.3 Abundance and Trawl Duration. Trawls for this study were performed for a predetermined distance at a fixed speed as previously described. Because of the nature of the currents in a tidal estuary, the time or duration of the trawls varied (Table 7.0-1). For example, a trawl during maximum ebb could take twice as long to complete as a trawl during flood just before slack. Because comparative trawls were performed side by side this variable does not influence the results of the gear comparison. Comparison of abundances from station to station and between day and night could be influenced, however, if the duration of the tow were correlated to the number of fish collected. In other words, if more fish were collected during "long" tows than "short" tows the duration of the tow would have to be considered in spatial and temporal analysis of the data.

Figure 7.0-4 presents a scatter diagram for number of fish/1500 m^3 and trawl duration, and no correlation is evidenced. Statistical analysis of these data was performed for each trawl separately and in combination and is presented in the table below.

CORRELATION OF NUMBER OF FISH/1500 m^3 AND TRAWL DURATION

TRAWL	r	CRITICAL VALUE
Otter	0.203	0.320
Yankee	0.217	0.320
Both	0.192	0.232

None of the correlations were significant, indicating trawl duration is not related to number of fish collected when towing over a fixed distance.

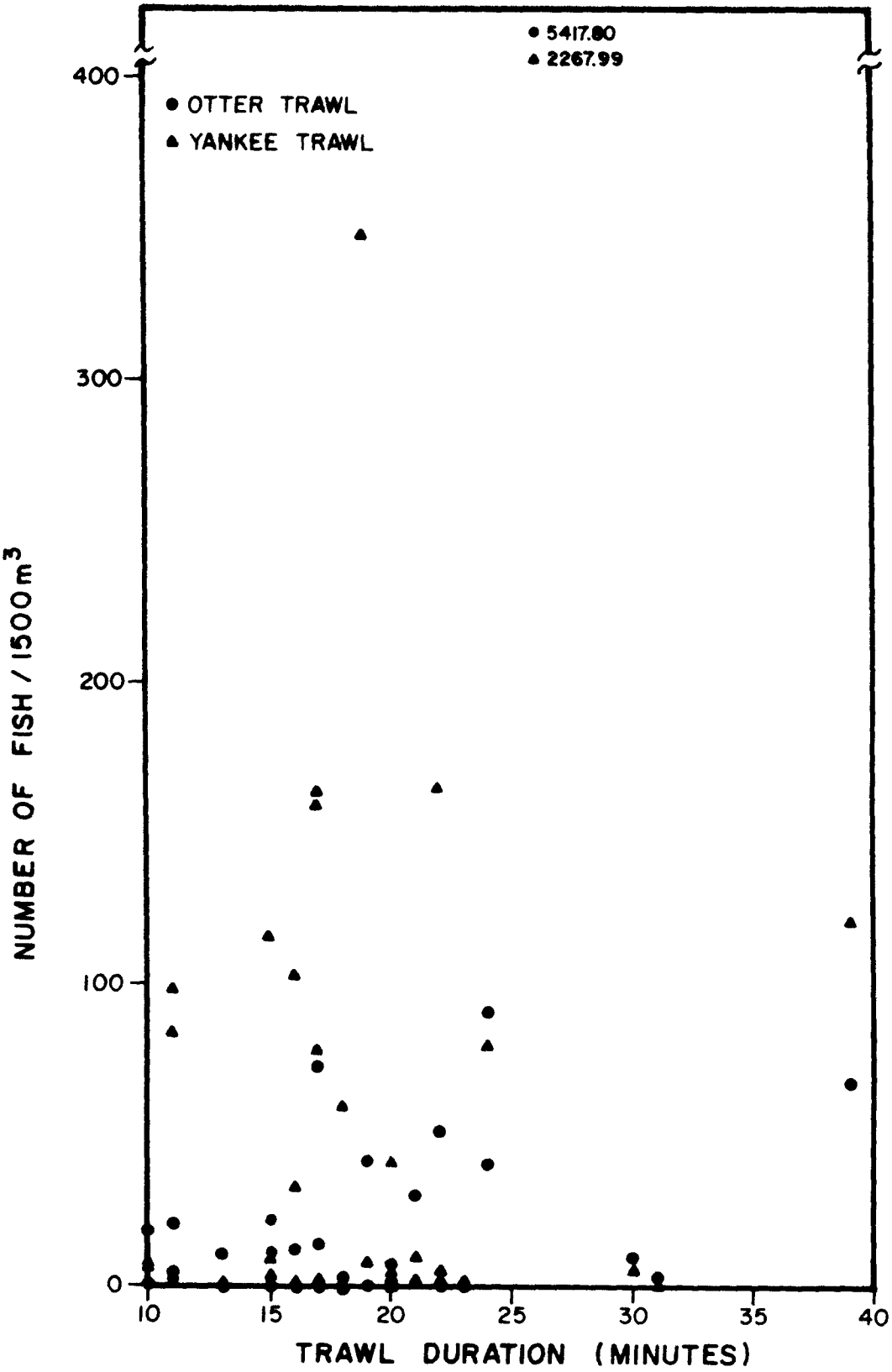
7.1.4.4 Abundance and Distribution

7.1.4.4.1 Total fish. The abundance data for both the yankee and otter trawls indicate similar abundance patterns and trends

FIGURE 7.0-4

CORRELATION BETWEEN THE NUMBER OF FISH[a] PER 1500m^3 AND THE TRAWL DURATION

Roseton and Danskammer Point Vicinity - 1979



[a]Surface and mid-depth trawls only; all stations combined.

(Table 7.0-2). The data suggest an east to west increase in abundance at night and somewhat of the reverse trend during the day. High abundances at the surface during the day, and mid- and bottom depths at night, are evidenced from the data (Tables 7.0-6 through 7.0-8). The greatest number of fish was collected during the day at the surface and peak abundance occurred on 18-19 October.

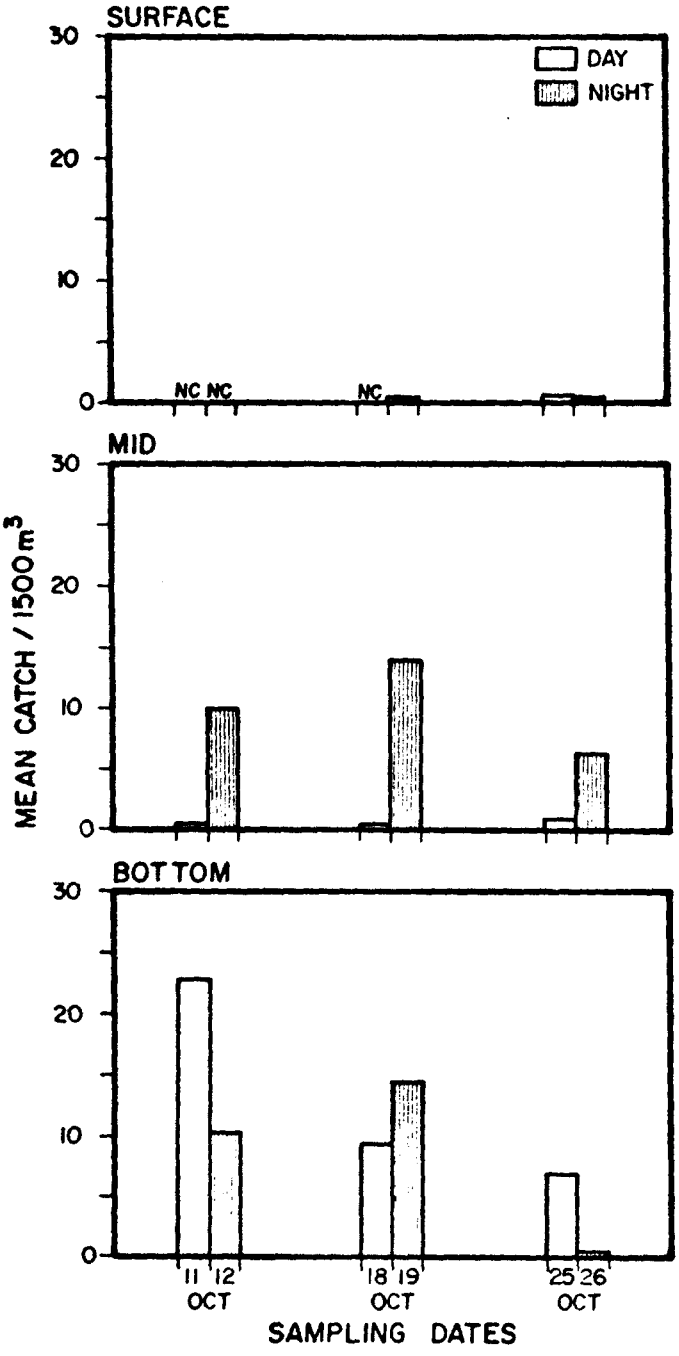
7.1.4.4.2 Select species. White perch appear to have a preference for the bottom during the day and tend to move up toward the mid-depth at night (Figure 7.0-5). Sheri and Power (1969) report a diel migration of white perch with a movement toward the surface at night and to deeper water during the day. This movement, along with an inshore-offshore diel movement, appears to be associated with feeding.

Blueback herring was the most abundant species collected during this survey. Both trawls collected a large number of these clupeids on 18 October at Station RDE during the day. The otter trawl caught 7,172 blueback herring at the surface, one at mid-depth, and four at the bottom, while the yankee trawl collected 15,088 at the surface and nine at mid-depth on this date. This large catch is most likely the result of trawling through a large school of these young-of-the-year herring migrating down the Hudson River estuary. Scott and Crossman (1973) note rapid growth of young-of-the-year bluebacks and a migration to the sea when they reach a length of approximately 30 to 50 mm. This migration through the northern Newburgh Bay area occurred during mid-October, as evidenced by the decrease in the abundance of blueback herring in the 25-26 October samples. The length range for young-of-the-year bluebacks collected on the three sample dates was 41 to 92 mm, which is slightly larger than the size reported by Scott and Crossman.

FIGURE 7.0-5

DIEL MIGRATION OF WHITE PERCH FOR YANKEE AND OTTER TRAWLS[a] COMBINED

Roseton and Danskammer Point Vicinity - 1979



[a]All river stations combined.
[b]Bottom trawls from Otter trawls only.
NC - None collected.

A diel vertical migration by bluebacks appeared to occur in the reverse pattern to that observed for white perch (Figure 7.0-6). Surface collections during the day had high catches, while mid-depth and day/bottom samples yielded very low collections. The night samples had higher catches recorded at the mid- and bottom depths with few bluebacks collected at the surface. There is very little information available on vertical migrations of blueback herring; however, Scott and Crossman (1973) note that juvenile alewife, a cogeneric species, are found in shallow water at night and are located more toward deeper water during the day. This seems to be a different pattern than evidenced by the study data for blueback herring. Bluebacks were in the surface water during the day and moved down toward the bottom at night. Data collected by LMS in northern Newburgh Bay from 1976-1978 confirm this pattern of blueback herring diel-vertical migrations (LMS 1979a, LMS 1979b).

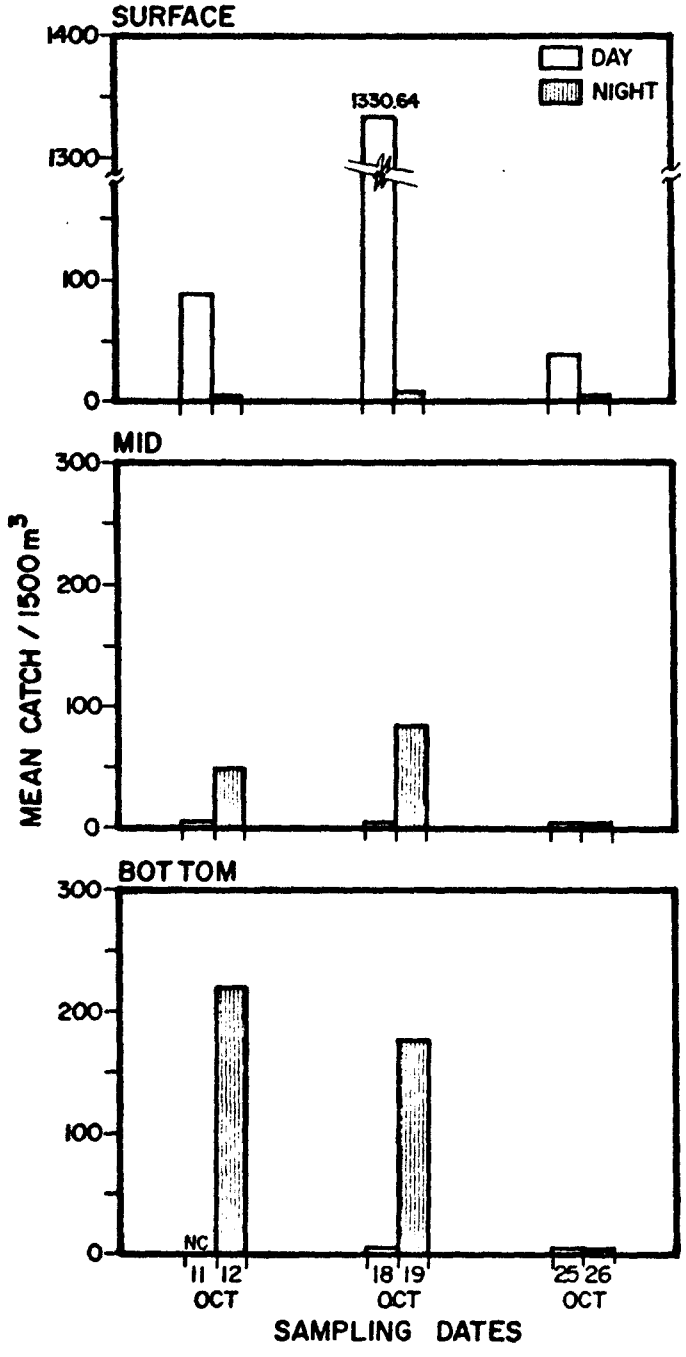
American shad exhibited a similar diel vertical migration pattern to blueback herring (Figure 7.0-7). American shad appear to inhabit the surface water during the day and migrate down to the bottom water strata at night. American shad are found at mid-depth during both the day and night in moderately low abundances.

Alewives were collected in relatively low abundances and analysis of diel-vertical migration patterns is, therefore, difficult. Figure 7.0-8 presents the diel distribution of alewives and shows generally higher abundances at night for all depths. Greatest concentrations were found at night in bottom samples, and no alewives were collected in day/bottom samples.

FIGURE 7.0-6

DIEL MIGRATION OF BLUEBACK HERRING FOR YANKEE AND OTTER TRAWLS[a] COMBINED[b]

Roseton and Danskammer Point Vicinity - 1979

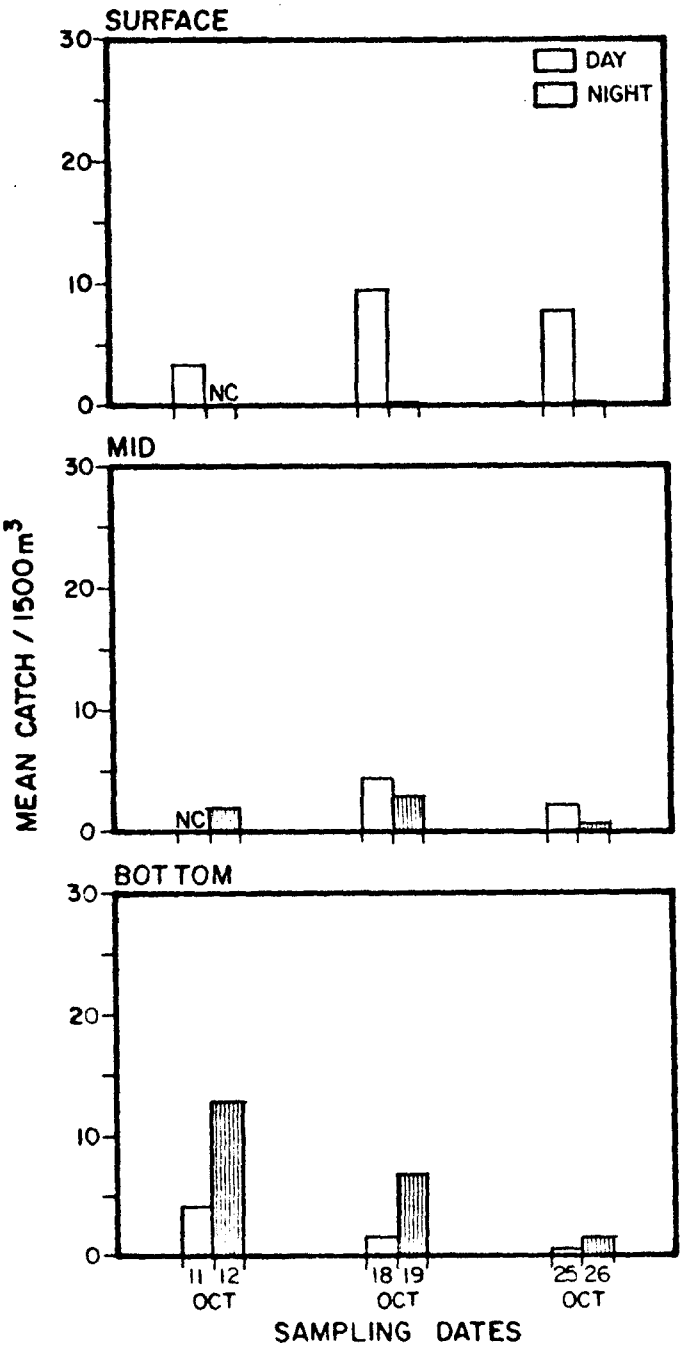


[a]All river stations combined.
[b]Bottom trawls are from Otter trawl only.
NC - None collected.

FIGURE 7.0-7

DIEL MIGRATION OF AMERICAN SHAD FOR YANKEE AND OTTER TRAWLS[a] COMBINED[b]

Roseton and Danskammer Point Vicinity - 1979

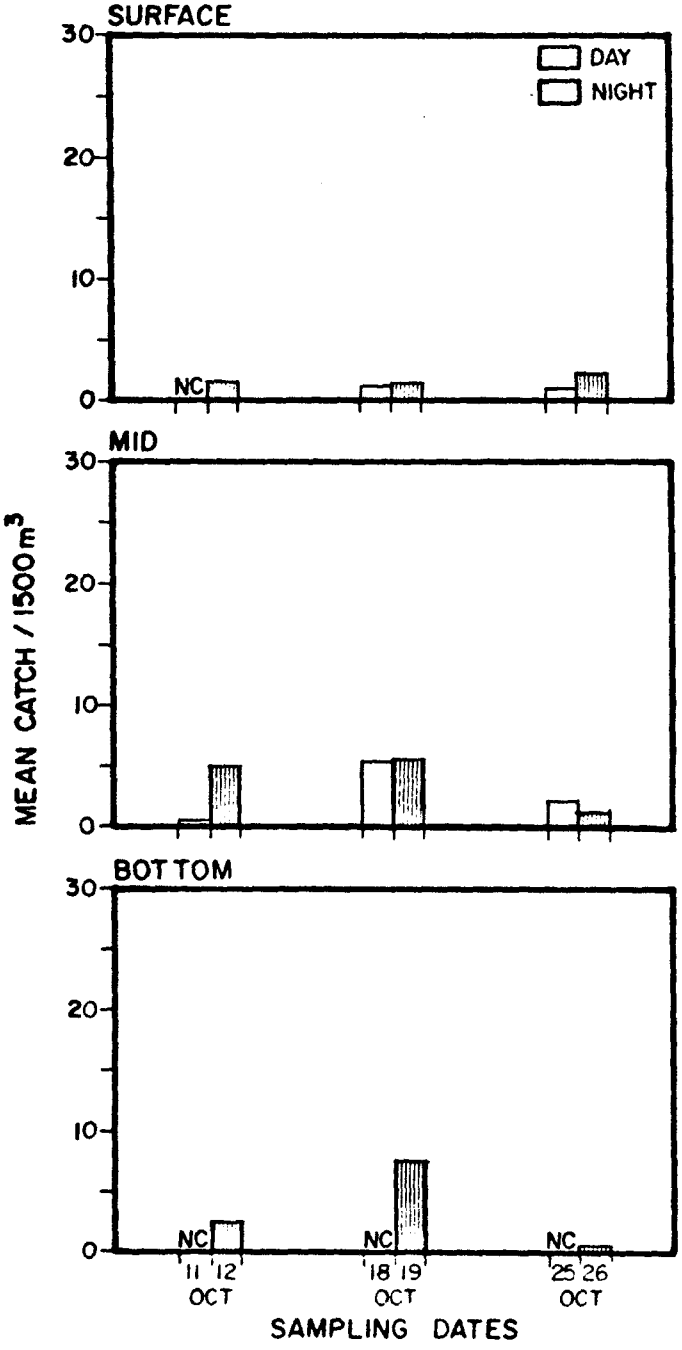


[a]All river stations combined.
[b]Bottom trawls are from Otter trawl only.
NC - None collected.

FIGURE 7.0-8

DIEL MIGRATION OF ALEWIFE FOR YANKEE AND OTTER TRAWLS[a] COMBINED[b]

Roseton and Danskammer Point Vicinity - 1979



[a]All river stations combined.
[b]Bottom trawls are from Otter trawl only.
NC - None collected.

Very few alewives were collected in day/surface samples, and slightly higher concentrations were found at the mid-depth. It appears that alewives tend to stay more toward the mid- and bottom water strata at night and the mid- and surface depths during the day. The data for this species are, however, too scant to make a definitive statement.

7.1.5 Conclusions

A study designed to assess the collection efficiency of an otter trawl relative to a larger yankee trawl was performed in northern Newburgh Bay on three dates in October during the day and night. Comparison of the total catch-per-volume of the yankee and otter trawls at the surface and mid-depths revealed no significant differences. No consistent statistical differences were detected for catch-per-volume data from the two trawls for white perch, blueback herring, alewife, or American shad. Isolated differences (yankee> otter) were detected for white perch, alewife, and American shad using a paired t-test. Length-frequency distribution data provided by the two trawls were not significantly different.

No correlation between abundance and trawl duration was detected for either trawl or a combination of the two.

Diel abundances for total fish differed laterally (east-west) and vertically (surface-bottom) in the study area. Vertical diel migrations appeared to occur for white perch, blueback herring, American shad, and alewife. White perch were more abundant at the bottom during the day and moved up in the water column at night, while the three Alosa species were generally more abundant at the surface during the day and migrate down toward the mid- and bottom depths at night.

7.2 ROSETON AIR-BUBBLE CURTAIN

7.2.1 Introduction

7.2.1.1 Roseton Impingement. The Roseton plant is a fossil-fueled steam electric generating station, whose two independent units have a total maximum net generating capacity of 1200 MW. Steam is cooled by means of a once-through cooling system which uses Hudson River water. The plant is located on the river's west bank approximately 160 km (66 miles) north of the New York Battery and six miles north of the Newburgh-Beacon Bridge.

The intake structure consists of 12 portals (3.45 m wide x 6.55 m high) on the front face and 2 portals on each side. Trash racks are located between the intake portals and the traveling screens to prevent large floating and submerged debris from entering the traveling screen approach. There are 10 trash racks, 8 on the front of the intake, and 1 on each side. The 8 traveling screens are the conventional vertical rotating, single-entry, band type screen, mounted facing the waterway. The overall dimensions of each screen are 12.80 m in height and 2.95 m in width, with 0.95 cm square steel mesh.

Once through condenser cooling water for the two generating units is provided by four circulating water pumps each having a rated capacity of 824 m^3/min. Circulating water pump operation and generating unit combinations and the resulting plant flows are summarized in the following table:

No. PUMPS-No. UNITS	COOLING WATER FLOW RATE			
	PER MINUTE (gpm)	PER HOUR (gph)	PER DAY (gpd)	TOTAL DISCHARGE HEAD (ft)
1 pump -1 unit	218,000	13,080,000	313,920,000	15.9
2 pumps-1 unit	376,000	22,560,000	541,440,000	35.1
2 pumps-2 units	418,000	25,080,000	601,920,000	22.6
3 pumps-2 units	561,000	33,660,000	807,840,000	35.5
4 pumps-2 units	641,000	38,460,000	923,040,000	44.2

Impingement has been monitored since this plant came on line in 1974. The total number of fish impinged per million gallons of cooling water flow typically has two annual peaks. The first peak occurs in the early spring and is primarily due to yearling white perch; the second peak occurs in the early fall and is due to an increase of Alosa spp., particularly blueback herring. These are primarily young-of-the-year herring that use the area as a nursery and eventually migrate out to sea. They are usually in the Roseton vicinity for approximately three months, with the seasonal peak normally occurring in October.

7.2.1.2 Mitigation - The Air-Bubble Curtain. In recent years, several utilities and researchers have studied the capability of various devices to mitigate the impact of impingement on aquatic populations. Among these have been physical barriers such as chains, nets, dikes, and angled screens, and behavorial barriers such as lights, sound, electricity, and bubbles. Various combinations of these barriers have also been used, all with varying degrees of success.

Several types of fish protection devices are under consideration for testing at the Roseton intake, specifically to reduce seasonally high impingement of young-of-the-year fish during the late summer and early fall. Because of the location of the intake structure

immediately adjacent to the Hudson River, resulting in exposure to stress by tidal currents, several types of mitigating devices, such as barrier nets, require extensive engineering and are very costly to evaluate.

An investigation of the current literature regarding fish protection devices indicated extensive interest in the use of a variety of arrangements of air-bubble curtains. Bibko, Wirtenan, and Kueser (1974) studied the effects of air bubbles and intense illumination on the swimming behavior of striped bass and gizzard shad at the Edonton National Fish Hatchery, Edonton, North Carolina. They concluded that an air-bubble screen with a 2.5 cm (1 in) gap between holes successfully deterred the passage of striped bass in a test tank for an indefinite amount of time. They state: "The air-bubble screen seemed equally effective in deterring bass passage during the day and during the night when little ambient light was available." Kupfer and Gordan (1966) used an air-bubble curtain as a barrier to alewife migration in the Milwaukee River. A plastic hose with holes every 15.2 cm (6 in) was set on the river bottom and compressed air pumped through it to form a barrier. No quantitative results relating to the effectiveness of the barrier were presented, however, local fishermen noted that fish seemed to move constantly between the air curtain and the outer harbor. Few fish were seen at or near the air curtain at most times. Based on visual observations of dead fish downstream from the air curtain, and few upstream of it, the authors concluded that the air curtain was somewhat successful in stopping alewives from migrating up the Milwaukee River. Kobayashi et al (1959) successfully used an air screen in water to contain "medaka" (Oryzias latipes) and "goldfish" (Carassius carassius) in an experimental tank. K. Smith (1961) demonstrated the successful use of an air-curtain for fishing Maine sardines. Smith notes that "in the past three years, the usefulness and effectiveness of an air-bubble curtain for driving and guiding

the herring has been demonstrated in the industry, and at least 12 air-curtain units have now been constructed by members of the Maine industry." Imamura and Ogura (1959) experimented with the behavior of Tracchurous japonicus and found that the air bubbles initially repelled these fish, but after one hour the fish grew accustomed to them and were seen gathering around the air bubbles. Warner (1956), Brett and Mackinnon (1953), and Zweiacker, et al. (1977) found the air-bubble curtain to be of no use as a fish barrier.

Consolidated Edison Company of New York Inc. (Con. Ed) used an air-bubble curtain at their Indian Point Nuclear Generating Station Unit II in 1972 and found it to be of little or no use in reducing impingement (Alevras 1974). A successful application of an air-bubble screen was reported at the Pulliam Generating Station on Lake Michigan in Wisconsin (U.S. EPA 1974). After installation of an air-bubble screen, impingement of alewife was considerably reduced. The purpose of this screen was to divert schools of fish rather than to stop all individuals. The operation of this system at the Pulliam plant was reported to be equally as successful at night as in the day.

Many other authors have experimented with air bubbles to contain, divert, repel, or lift fish. There is great disparity in the conclusions reached by these experimenters ranging from reports that air bubbles as fish barriers are totally useless to reports that they are very successful. Of the species tested, herring were more often reported as being somewhat repelled by air-bubble curtains. Results of diel experiments with bubble barriers are also conflicting.

Based on the disparity of results with air-bubble curtains, their relatively moderate cost to deploy, and their potential for success as a deterrent of herring, it was decided to experiment with an

air-bubble curtain at the Roseton plant intake during the fall of 1979.

7.2.2 Objectives

The objectives of this study are to determine if an air-bubble curtain can divert fish from the Roseton intake and thereby reduce impingement, and to determine if the air-bubble curtain has any effects on the species composition, or on the rate of impingement during the test period at the Roseton plant.

7.2.3 Materials and Methods

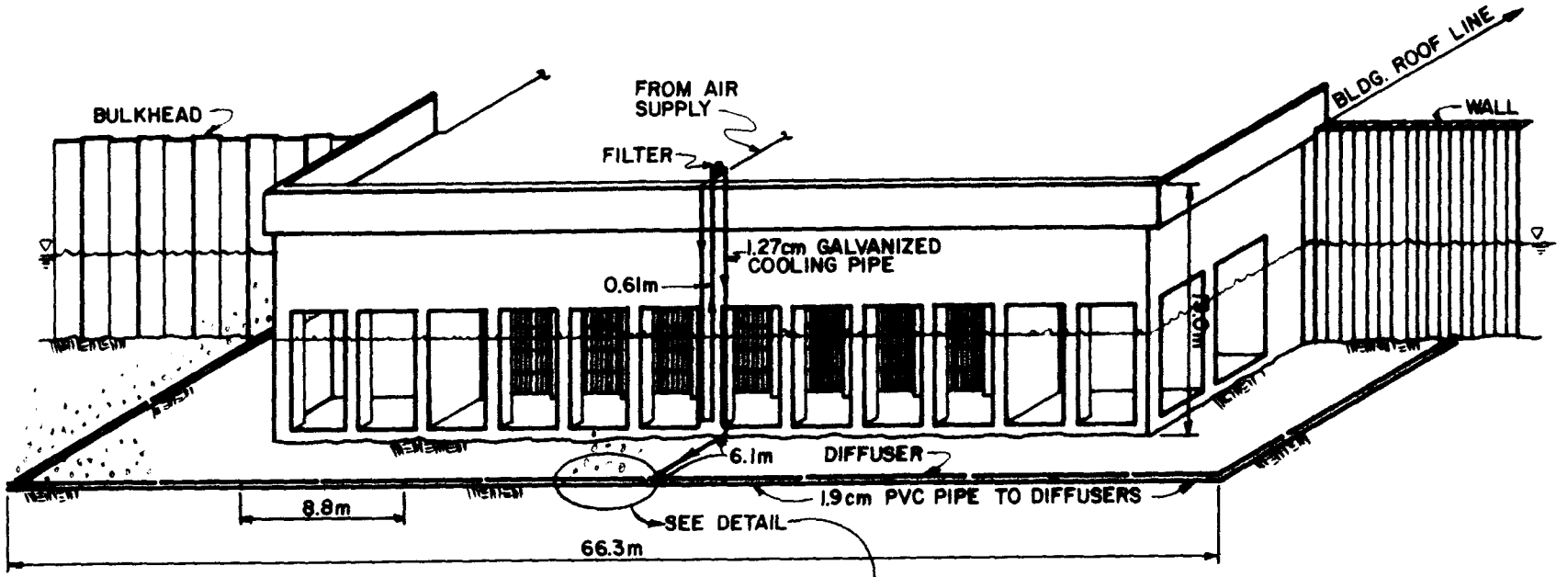
7.2.3.1 Air-Bubble Equipment. The air-bubble curtain was formed by pumping air at 20 psi through a Bio-Weve® diffuser system. Bio-Weve® , provided by Schramm, Inc., consists of an outer woven polyester fiber hose and an inner flexible tube having perforations along its entire length. Between the inner tube and outer diffuser hose is a layer of sized pellets (washed gravel) which helps to neutralize the buoyancy of the system and acts as a lateral air-flow restrictor between the inner distributor tube and outer diffuser hose. Air bubbles formed by the system were continuous over the entire length of hose and were approximately 1.6 mm or less in diameter. Each section of Bio-Weve® diffuser hose was 4.42 m in length. Air was supplied to the Bio-Weve® diffuser hose through 1.90 cm PVC pipe which also acted as the frame around the perimeter of the Roseton intake structure. Figure 7.0-9 illustrates the Bio-Weve® configuration and attachment to the PVC pipe and Figure 7.0-10 are photographs of the Bio-Weve® in operation.

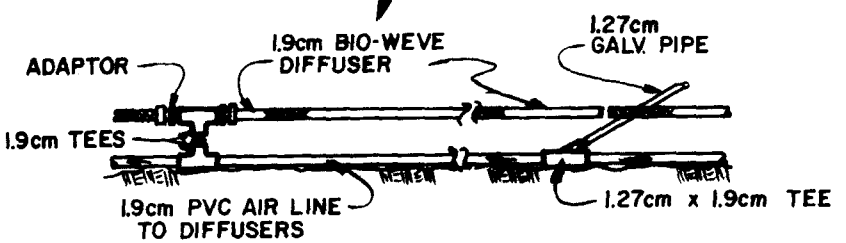
Air was delivered to the diffuser system through 1.27 cm galvanized pipe. At the face of the intake, an air cooling loop to facilitate filtering the air was formed by a "U" in the pipe between the top of

FIGURE 7.0-9

SCHEMATIC DIAGRAM OF THE BUBBLER

Roseton Generation Station





DETAIL

SCALE: NONE

FIGURE 7.0-10

END AND SIDE VIEWS OF THE BIO-WEVE DIFFUSER



the intake and the river bottom. An air filter was employed to remove any oil from the compressed air. An Ingersoll-Rand industrial compressor located in the Roseton plant was utilized to supply the air.

Other equipment used for sampling is described in Section 1.2.1 of the 1979 CHGE Workplans for impingment.

7.2.3.2 Sampling Program. The air-bubble curtain study was conducted during a three-week period from 22 October-10 November 1979 for four 24-hr periods per week. Samples were collected every 2 hours during each 24-hr survey so that comparisons among photoperiods could be made. In order to compare impingement with the bubbler-on to normal (bubbler-off) impingement, samples were taken on two dates in each week with the bubbler-on, and on two dates with the bubbler-off. Two weekly schedules were followed, depending on the need for additional impingement sampling on Monday. (The 1979 CHGE impingement program required an additional Monday-Tuesday collection following a Thursday-Friday collection containing over 1000 total fish).

	If Additional Monday Impingement	If No Additional Monday Impingement
Monday 0630 - Tuesday 0630	bubbler - off	on
Tuesday 0830 - Wednesday 0830	bubbler - on	off
Thursday 0630 - Friday 0630	bubbler - off	off
Friday 0830 - Saturday 0830	bubbler - on	on

Two-hour impingement samples were collected according to procedures outlined in the impingement section of the 1979 CHGE Workplans (Section 1.2.3.2). Approximately one-half hour before daily sampling began, all screens were prewashed.

7.2.3.4 Laboratory Analysis. The procedures for laboratory analysis are outlined in Section 1.3 of the impingement section of the 1979 CHGE Workplans. Length-frequency analysis was performed on fish from composite samples corresponding to dawn, day, dusk, and night. Major species (clupeids, bay anchovy, and white perch) were categorized as young-of-the-year or non-young-of-the-year.

7.2.4 Results and Discussion

7.2.4.1 Comparison of Abundance and Species Composition for Bubbler On and Off. The species and number of fish impinged during bubbler-on and bubbler-off conditions are presented in Tables 7.0-14 and 7.0-15. The species number and percent composition collected under these two conditions are similar. Two species, black bullhead and goldfish, each represented by a single individual, and carp, represented by two individuals, were collected only during days when the bubbler was on, while a single yellow bullhead was collected during bubbler-off operation. These species were incidental and they do not provide any indication of the effects of the bubbler as an impingement mitigating device.

Considering the total number of fish collected throughout the complete study period, about 6.0% more fish were taken when the bubbler was on (6467) than when it was off (6080).

White perch was consistently the most numerous species impinged during the air-curtain study period, representing 70.0% of the bubbler-on total fish and 64.0% of the bubbler-off total. White perch ranged in length from 4.1 to 18.0 cm and were predominantly young-of-the-year. Blueback herring was the dominant species only on 22-23 October when 480 individuals were impinged during bubbler-off operation. Blueback herring, which was the second most abundant species impinged during the study period, progressively decreased

TABLE 7.0-14

ACTUAL NUMBER OF FISH IMPINGED WITH THE BUBBLER-ON

Roseton Generating Station - 1979

SPECIES	SAMPLING DATES					
	23-24 OCT	26-27 OCT	29-30 OCT	2-3 NOV	6-7 NOV	9-10 NOV
Alewife	36	93	114	26	34	36
American eel	1	0	2	1	0	1
American shad	13	23	6	7	12	25
Atlantic tomcod	0	2	1	0	1	5
Banded killifish	7	0	0	4	0	5
Black bullhead	0	0	0	0	0	1
Blueback herring	246	217	228	159	147	56
Bluegill sunfish	2	2	4	2	6	7
Brown bullhead	0	0	1	0	0	0
Carp	0	0	0	1	1	0
Gizzard shad	0	0	0	0	3	4
Golden shiner	0	0	0	1	0	2
Goldfish	0	0	0	0	0	1
Hogchoker	0	3	3	2	1	3
Largemouth bass	0	0	0	0	1	0
Pumpkinseed	71	33	5	37	7	9
Rainbow smelt	1	4	8	3	3	10
Redbreast sunfish	0	0	0	1	0	0
Spottail shiner	22	18	2	50	3	46
Striped bass	2	3	2	3	2	4
Tessellated darter	0	0	0	4	1	3
White catfish	0	8	2	4	3	12
White perch	296	591	527	1146	737	1222
Yellow perch	1	0	0	1	0	1
Total Fish	698	997	905	1452	962	1453

TABLE 7.0-15

ACTUAL NUMBER OF FISH IMPINGED WITH THE BUBBLER-OFF

Roseton Generating Station - 1979

SPECIES	SAMPLING DATES					
	22-23 OCT	25-26 OCT	30-31 OCT	1-2 NOV	5-6 NOV	8-9 NOV
Alewife	20	55	41	23	21	52
American eel	0	1	0	0	0	0
American shad	21	24	10	5	10	9
Atlantic tomcod	1	6	2	3	0	0
Banded killifish	3	0	1	8	0	0
Blueback herring	480	299	189	132	248	97
Bluegill sunfish	4	1	1	10	4	4
Brown bullhead	0	0	0	1	0	0
Gizzard shad	0	0	0	2	0	2
Golden shiner	0	1	0	1	0	0
Hogchoker	3	6	2	0	3	2
Largemouth bass	0	0	0	1	2	0
Pumpkinseed	53	35	8	43	10	10
Rainbow smelt	0	4	0	2	11	19
Redbreast sunfish	0	1	1	0	0	0
Spottail shiner	22	3	4	78	11	6
Striped bass	0	1	0	2	2	3
Tessellated darter	2	2	1	1	2	1
White catfish	1	1	5	3	7	3
White perch	248	360	384	1105	1007	804
Yellow bullhead	0	0	1	0	0	0
Yellow perch	0	0	0	1	0	1
Total Fish	858	800	650	1421	1338	1013

in abundance from the beginning to the end of the study. Bluebacks ranged from 4.1 to 12.0 cm and were predominantly young-of-the-year. Alewife and American shad were also more abundant at the beginning of the program. Alewives ranged from 6.1 to 16.0 cm and American shad from 7.1 to 12.0 cm; both species were predominantly represented by young-of-the-year.

The abundance and species composition of fish impinged during this study period was similar to that of previous years (LMS 1978, LMS 1979a, LMS 1979b, LMS 1980). Blueback herring and white perch were the dominant species during this time of year with blueback abundance peaking in October and white perch most numerous in November-December collections.

7.2.4.2 Comparison of Impingement Rates for Bubbler-On and Off. The number of fish impinged is partially a function of the amount of cooling water drawn into the plant. In order to facilitate a comparison between impingement with the bubbler-on versus off, impingement is expressed as the number of fish per million gallons of water withdrawn (Tables 7.0-16 and 7.0-17). Six pairs of consecutive 24-hr periods, one with the bubbler-on and the other with the bubbler-off, are used for comparison. With the bubbler-on, the total impingement rate was less than its paired bubbler-off rate on only one occasion (1.19 fish/mg on 6-7 November as opposed to 1.66 fish/mg on 5-6 November). For all other pairs of dates the total impingement rate was higher with the bubbler on. Student's t-test at an $\alpha = .05$ significance level demonstrates that there is no significant difference between impingement rates for total fish with the bubbler-on or off (Table 7.0-18). This statistic indicates that the hypothesis of no difference between bubbler-on and bubbler-off impingement rates cannot be rejected.

TABLE 7.0-16

NUMBER[a] OF FISH IMPINGED WITH THE BUBBLER-ON

Roseton Generating Station - 1979

SPECIES	SAMPLING DATES					
	23-24 OCT	26-27 OCT	29-30 OCT	2-3 NOV	6-7 NOV	9-10 NOV
Alewife	0.11	0.17	0.23	0.05	0.04	0.04
American eel	0.00	NC	0.00	0.00	NC	0.00
American shad	0.04	0.04	0.01	0.01	0.01	0.03
Atlantic tomcod	NC	0.00	0.00	NC	0.00	0.01
Banded killifish	0.02	NC	NC	0.01	NC	0.01
Black bullhead	NC	NC	NC	NC	NC	0.00
Blueback herring	0.75	0.40	0.46	0.29	0.18	0.07
Bluegill sunfish	0.01	0.00	0.01	0.00	0.01	0.01
Brown bullhead	NC	NC	0.00	NC	NC	NC
Carp	NC	NC	NC	0.00	0.00	NC
Gizzard shad	NC	NC	NC	0.00	0.00	0.00
Golden shiner	NC	NC	NC	0.00	NC	0.00
Goldfish	NC	NC	NC	NC	NC	0.00
Hogchoker	NC	0.01	0.01	0.00	0.00	0.00
Largemouth bass	NC	NC	NC	NC	0.00	NC
Pumpkinseed	0.22	0.06	0.01	0.07	0.01	0.01
Rainbow smelt	0.00	0.01	0.02	0.01	0.00	0.01
Redbreast sunfish	NC	NC	NC	0.00	NC	NC
Spottail shiner	0.07	0.03	0.00	0.09	0.00	0.06
Striped bass	0.01	0.01	0.00	0.01	0.00	0.00
Tessellated darter	NC	NC	NC	0.01	0.00	0.00
White catfish	NC	0.01	0.00	0.01	0.00	0.01
White perch	0.91	1.09	1.06	2.12	0.91	1.51
Yellow perch	0.00	NC	NC	NC	NC	0.00
Total Fish	2.14	1.84	1.82	2.68	1.19	1.80

[a]Number of fish per million gallons.
NC - None collected.

TABLE 7.0-17

NUMBER[a] OF FISH IMPINGED WITH THE BUBBLER-OFF

Roseton Generating Station - 1979

SPECIES	SAMPLING DATES					
	22-23 OCT	25-26 OCT	30-31 OCT	1-2 NOV	5-6 NOV	8-9 NOV
Alewife	0.04	0.10	0.08	0.04	0.03	0.06
American eel	NC	0.00	NC	NC	NC	NC
American shad	0.04	0.05	0.02	0.01	0.01	0.01
Atlantic tomcod	0.00	0.01	0.00	0.01	NC	NC
Banded killifish	0.01	NC	0.00	0.01	NC	NC
Blueback herring	0.89	0.56	0.35	0.24	0.31	0.12
Bluegill sunfish	0.01	0.00	0.00	0.02	0.00	0.00
Brown bullhead	NC	NC	NC	0.00	NC	NC
Gizzard shad	NC	NC	NC	0.00	NC	0.00
Golden shiner	NC	0.00	NC	0.00	NC	NC
Hogchoker	0.01	0.01	0.00	NC	0.00	0.00
Largemouth bass	NC	NC	NC	0.00	0.00	NC
Pumpkinseed	0.10	0.07	0.01	0.08	0.01	0.01
Rainbow smelt	NC	0.01	NC	0.00	0.01	0.02
Redbreast sunfish	NC	0.00	0.00	NC	NC	NC
Spottail shiner	0.04	0.01	0.01	0.14	0.01	0.01
Striped bass	NC	0.00	NC	0.00	0.00	0.00
Tessellated darter	0.00	0.00	0.00	0.00	0.00	0.00
White catfish	0.00	0.00	0.01	0.01	0.01	0.00
White perch	0.46	0.68	0.71	2.00	1.25	1.00
Yeloow bullhead	NC	NC	0.00	NC	NC	NC
Yellow perch	NC	NC	NC	0.00	NC	0.00
Total Fish	1.60	1.50	1.20	2.57	1.66	1.26

[a]Number of fish per million gallons.
NC - None collected.

TABLE 7.0-18

STUDENT'S t-TEST FOR BUBBLER-ON VS BUBBLER-OFF USING ESTIMATED RATES[a] FOR SELECT SPECIES AND TOTAL FISH

Roseton Generating Station-1979

	SELECT SPECIES									
	BLUEBACK HERRING		ALEWIFE		AMERICAN SHAD		WHITE PERCH		TOTAL FISH	
DATE	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
22-23 Oct		0.89		0.04		0.04		0.46		1.60
23-24 Oct	0.75		0.11		0.04		0.91		2.14	
25-26 Oct		0.56		0.10		0.05		0.68		1.50
26-27 Oct	0.40		0.17		0.04		1.09		1.84	
29-30 Oct	0.46		0.23		0.01		1.06		1.82	
30-31 Oct		0.35		0.08		0.02		0.71		1.20
1- 2 Nov		0.24		0.04		0.01		2.00		2.57
2- 3 Nov	0.29		0.05		0.01		2.12		2.68	
5- 6 Nov		0.31		0.03		0.01		1.25		1.66
6- 7 Nov	0.18		0.04		0.01		0.91		1.19	
8- 9 Nov		0.12		0.06		0.01		1.00		1.26
9-10 Nov	0.07		0.04		0.03		1.51		1.80	
Mean	0.36	0.41	0.11	0.06	0.02	0.02	1.27	1.02	1.91	1.63
t-statistic	-0.36		1.41		0.00		0.84		0.99	

Critical value = 2.23 for 2 sided t-test (α = .05, df=10)

[a]Abundances expressed as number of fish per million gallons.

Of primary interest during this study was the effect of the bubbler-on Alosa spp. Examination of Tables 7.0-16 and 7.0-17 shows that the impingement rate for blueback herring was lower on four of the six paired dates when the bubbler was on. Student's t-test, however, reveals that there is no significant difference (α = .05) between impingement rates for bluebacks with the bubbler-on versus off (Table 7.0-18). Alewives were impinged only once and American shad just twice at a lower rate when the bubbler was on.

There was no significant difference (α = .05) between impingement rates during bubbler-on and bubbler-off for either species (Table 7.0-18). For white perch, the most abundant species collected, impingement rates were lower with the bubbler on for only one set of paired dates; there was no significant difference between impingement rates for bubbler-on and bubbler-off. Tables 7.0-16 and 7.0-17 indicate that impingement rates were not consistently reduced for any fish species with the bubbler on.

7.2.4.3 Comparison of Impingement Rates for Bubbler-On and Off By Photoperiod. In order to evaluate the effectiveness of the bubbler during the different photoperiods, the data were broken down into four 6-hr periods: dawn (0430-0830), day (0830-1430), dusk (1430-1830), and night (1830-0430). Impingement rates were generally highest at night and dawn and lowest during the day (Tables 7.0-19 through 7.0-23). This corresponds to trends found in previous years and further demonstrates that impingement during this study period was similar to impingement rates and patterns found in past years. Comparative impingement rates for total fish, blueback herring, alewife, American shad, and white perch were analyzed by performing Student's t-test for each photoperiod. For all species and photoperiods tested it was found that there was no significant difference (α = .05) in impingement rates with the bubbler-on or off, and the bubbler did not have a significant effect in reducing impingement for a particular photoperiod.

TABLE 7.0-19

STUDENT'S t-TEST FOR BUBBLER-ON VS BUBBLER-OFF USING ESTIMATED RATES[a] BY PHOTOPERIOD FOR TOTAL FISH

Roseton Generating Station-1979

	PHOTOPERIOD							
	DAWN		DAY		DUSK		NIGHT	
DATE	ON	OFF	ON	OFF	ON	OFF	ON	OFF
22-23 Oct		1.23		0.15		0.20		3.15
23-24 Oct	4.17		0.26		0.05		4.72	
25-26 Oct		2.36		0.21		0.18		2.46
26-27 Oct	1.76		0.32		0.19		3.45	
29-30 Oct	2.37		0.09		0.62		2.89	
30-31 Oct		1.08		0.15		0.51		2.15
1- 2 Nov		2.65		0.19		1.90		4.22
2- 3 Nov	4.02		0.31		5.24		2.55	
5- 6 Nov		0.95		0.10		1.55		2.91
6- 7 Nov	0.78		0.12		0.00		2.47	
8- 9 Nov		1.61		0.17		0.80		1.96
9-10 Nov	1.10		0.14		0.66		3.53	
Mean	2.37	1.65	0.21	0.16	1.13	0.86	3.27	2.81
t-statistic	1.09		1.01		0.31		0.96	

Critical value = 2.23 for 2 sided t-test (α = .05, df=10)

[a]Abundances expressed as number of fish per million gallons.

TABLE 7.0-20

STUDENT'S t-TEST FOR BUBBLER-ON VS BUBBLER-OFF USING ESTIMATED RATES[a] BY PHOTOPERIOD FOR BLUEBACK HERRING

Roseton Generating Station-1979

	PHOTOPERIOD							
	DAWN		DAY		DUSK		NIGHT	
DATE	ON	OFF	ON	OFF	ON	OFF	ON	OFF
22-23 Oct		0.61		0.07		0.01		1.84
23-24 Oct	2.04		0.07		0.05		1.09	
25-26 Oct		1.54		0.04		0.02		0.69
26-27 Oct	1.30		0.12		0.02		0.36	
29-30 Oct	1.36		0.04		0.18		0.41	
30-31 Oct		0.69		0.04		0.11		0.49
1- 2 Nov		0.12		0.06		0.10		0.43
2- 3 Nov	0.44		0.03		0.11		0.47	
5- 6 Nov		0.34		0.01		0.02		0.58
6- 7 Nov	0.11		0.03		0.00		0.38	
8- 9 Nov		0.32		0.02		0.02		0.13
9-10 Nov	0.10		0.02		0.08		0.08	
Mean	0.89	0.60	0.05	0.04	1.07	0.05	0.46	0.69
t-statistic	0.75		0.65		0.82		-0.82	

Critical value = 2.23 for 2 sided t-test (α = .05, df=10)

[a]Abundances expressed as number of fish per million gallons.

TABLE 7.0-21

STUDENT'S t-TEST FOR BUBBLER-ON VS BUBBLER-OFF USING ESTIMATED RATES[a] BY PHOTOPERIOD FOR WHITE PERCH

Roseton Generating Station-1979

	PHOTOPERIOD							
	DAWN		DAY		DUSK		NIGHT	
DATE	ON	OFF	ON	OFF	ON	OFF	ON	OFF
22-23 Oct		0.23		0.01		0.03		0.99
23-24 Oct	1.42		0.01		0.00		2.64	
25-26 Oct		0.44		0.03		0.08		1.38
26-27 Oct	0.18		0.05		0.03		2.50	
29-30 Oct	0.84		0.04		0.24		1.92	
30-31 Oct		0.24		0.05		0.24		1.47
1- 2 Nov		2.35		0.12		1.52		3.19
2- 3 Nov	3.20		0.19		4.91		1.72	
5- 6 Nov		0.52		0.07		1.47		2.16
6- 7 Nov	0.55		0.05		0.00		1.94	
8- 9 Nov		1.06		0.08		0.73		1.64
9-10 Nov	0.84		0.06		0.40		3.10	
Mean	1.17	0.81	0.07	0.06	0.93	0.68	2.30	1.80
t-statistic	0.66		0.22		0.30		1.30	

Critical value = 2.23 for 2 sided t-test (α = .05, df=10)

[a]Abundances expressed as number of fish per million gallons.

TABLE 7.0-22

STUDENT'S t-TEST FOR BUBBLER-ON VS BUBBLER-OFF USING ESTIMATED RATES[a] BY PHOTOPERIOD FOR ALEWIFE

Roseton Generating Station-1979

	PHOTOPERIOD							
	DAWN		DAY		DUSK		NIGHT	
DATE	ON	OFF	ON	OFF	ON	OFF	ON	OFF
22-23 Oct		0.09		0.01		0.00		0.05
23-24 Oct	0.35		0.05		0.00		0.12	
25-26 Oct		0.19		0.02		0.00		0.16
26-27 Oct	0.16		0.07		0.01		0.30	
29-30 Oct	0.14		0.00		0.09		0.43	
30-31 Oct		0.10		0.03		0.04		0.10
1- 2 Nov		0.01		0.01		0.01		0.08
2- 3 Nov	0.03		0.01		0.01		0.09	
5- 6 Nov		0.04		0.00		0.02		0.04
6- 7 Nov	0.08		0.01		0.00		0.06	
8- 9 Nov		0.12		0.02		0.01		0.09
9-10 Nov	0.05		0.01		0.05		0.05	
Mean	0.14	0.09	0.02	0.02	0.03	0.01	0.18	0.09
t-statistic	0.80		0.82		0.83		1.35	

Critical value = 2.23 for 2 sided t-test (α = .05, df=10)

[a]Abundances expressed as number of fish per million gallons.

TABLE 7.0-23

STUDENT'S t-TEST FOR BUBBLER-ON VS BUBBLER-OFF USING ESTIMATED RATES[a] BY PHOTOPERIOD FOR AMERICAN SHAD

Roseton Generating Station-1979

	PHOTOPERIOD							
	DAWN		DAY		DUSK		NIGHT	
DATE	ON	OFF	ON	OFF	ON	OFF	ON	OFF
22-23 Oct		0.10		0.00		0.00		0.06
23-24 Oct	0.09		0.04		0.00		0.01	
25-26 Oct		0.18		0.01		0.00		0.04
26-27 Oct	0.08		0.04		0.04		0.03	
29-30 Oct	0.04		0.00		0.00		0.01	
30-31 Oct		0.04		0.00		0.02		0.02
1- 2 Nov		0.02		0.00		0.00		0.01
2- 3 Nov	0.02		0.00		0.04		0.01	
5- 6 Nov		0.02		0.00		0.01		0.02
6- 7 Nov	0.03		0.00		0.00		0.02	
8- 9 Nov		0.04		0.00		0.01		0.00
9-10 Nov	0.02		0.00		0.05		0.04	
Mean	0.05	0.07	0.01	0.00	0.02	0.01	0.02	0.02
t-statistic	-0.70		1.36		1.45		-0.49	

Critical value = 2.23 for 2 sided t-test (α = .05, df=10)

[a]Abundances expressed as number of fish per million gallons.

7.2.5 Conclusions

A bubbler system designed to form an air-bubble curtain around the Roseton intake had no effect on the species composition of fish impinged during the period 22 October-10 November. The impingement rates were not significantly altered for any species collected during days of bubbler operation. The impingement rates by photoperiod were not significantly altered for any species collected.

The literature points out that the limited success some authors have had with air curtains has been mostly with herring. Although peak herring abundance (primarily bluebacks) occurred in the Roseton vicinity prior to the air-bubble curtain sampling period (Section 6.4), several hundred herring were collected during the study. Field observations of the bubbler indicated that gaps were present in the bubble screen rising to the surface. This may indicate that the bubbler was not forming a solid screen for its entire length.

The overall average rate at which blueback herring were impinged with the bubbler-on was 0.36 fish per million gallons. The blueback herring impingement rate with the bubbler-off was 0.41. The reduction in the impingement rate was about 13.0% with the bubbler-on, however, because two test periods had a higher rate with the bubbler-off, the statistical difference is not significant.

In contrast, the next four most abundant species were impinged at a higher average rate when the bubbler was on (alewife, pumpkinseed, spottail shiner and white perch). Again, however, the difference is not statistically significant.

A comparison of the study data to 1975-1978 Roseton impingement data during similar time periods demonstrates that no unusual trends or rates were found. The data fall within a range that would be expected in the autumn and are a good representation of impingement during this time frame.

Physical barriers designed to alter the behavior of or to guide fish have had limited success. It appears that the air-bubble curtain is one such device whose success is dependent on species, water body, and duration of exposure of the fish. The air-bubble curtain, as utilized in this study, was not a successful impingement mitigating device.

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CENTRAL HUDSON GAS & ELECTRIC CORPORATION

ENVIRONMENTAL AFFAIRS DIVISION

1980

ICHTHYOPLANKTON ENTRAINMENT SURVIVAL STUDY

ROSETON GENERATING STATION

March 1981

Revised September 1982

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Project No. 176-197

TABLE OF CONTENTS

	Page No.
LIST OF FIGURES	iii
LIST OF TABLES	iv
1.0 INTRODUCTION	1.0-1
2.0 MATERIALS AND METHODS	2.0-1
2.1 Field Program	2.0-1
2.1.1 Sampling Location and Frequency	2.0-1
2.1.2 Collection Procedure	2.0-1
2.1.3 Sorting Procedure	2.0-9
2.1.4 Viability Observation Procedure	2.0-9
2.2 Laboratory Analysis	2.0-10
2.2.1 Sort - Fish Egg and Larval Analysis	2.0-10
2.2.2 Identification - Fish Eggs and Larvae	2.0-10
2.3 Data Analysis	2.0-11
3.0 STUDY RESULTS	3.0-1
3.1 Species Inventory	3.0-1
3.2 Collection Parameters	3.0-1
3.2.1 Roseton Intake	3.0-1
3.2.2 Seal Well Discharge	3.0-3
3.2.3 Physical/Chemical Information	3.0-3
3.3 Temporal Abundance Pattern	3.0-7
3.4 Initial Survival	3.0-15
3.4.1 Eggs	3.0-15
3.4.2 *Alosa* spp. Larvae	3.0-15
3.4.3 Striped Bass Larvae	3.0-17
3.4.4 White Perch Larvae	3.0-19
3.5 Extended Ichthyoplankton Survival	3.0-22
3.5.1 *Alosa* spp.	3.0-22
3.5.2 Striped Bass	3.0-22
3.5.3 White Perch	3.0-26
3.6 Plant Entrainment Survival	3.0-26

TABLE OF CONTENTS
(Continued)

	Page No.
4.0 REPORT SUMMARY	4.0-1
REFERENCES CITED	R-1
APPENDICES	
A - Collection Velocity Comparison	
B - Collection Information by Water Temperature	
C - Initial Survival Data Analysis	
D - Intake and Seal Well Collection Information Sample Abundance and Concentration	
E - Intake and Seal Well Collection Information Inital and Extended Survival Data	
F - Intake and Seal Well Collection Information Length Frequency Data	

LIST OF FIGURES

Figure No.	Title	Page No.
2.0-1	Roseton Intake Sampling Location	2.0-2
2.0-2	Ichthyoplankton Survival Sampling Program Roseton Discharge - Seal Well	2.0-3
2.0-3	Ichthyoplankton Collection Table - General Design	2.0-5
2.0-4	Schematic Diagram - Intake Larval Table	2.0-7
2.0-5	Roseton Seal Well Larval Table	2.0-8
3.0-1	Mean Concentration of Alosa spp. Collected During the Entrainment Survival Study	3.0-8
3.0-2	Length Intervals and Frequency of Occurrence for Alosa spp. During Roseton Entrainment Survival Study	3.0-9
3.0-3	Mean Concentration of Striped Bass Collected During the Entrainment Survival Study	3.0-10
3.0-4	Length Intervals and Frequency of Occurrence for Striped Bass During Roseton Entrainment Survival Study	3.0-12
3.0-5	Mean Concentration of White Perch Collected During the Entrainment Survival Study	3.0-13
3.0-6	Length Intervals and Frequency of Occurrence for White Perch During Roseton Entrainment Survival Study	3.0-14
3.0-7	Initial Survival of Post-Yolk-Sac Alosa Larvae Relative to Water Temperature	3.0-18
3.0-8	Initial Survival of Striped Bass Larvae Relative to Water Temperature	3.0-20
3.0-9	Initial Survival of Post-Yolk-Sac White Perch Larvae Relative to Water Temperature	3.0-21

LIST OF TABLES

Table No.	Title	Page No.
2.0-1	Sample Period, Pump Operation, and Number of Samples Collected During the Roseton Entrainment Survival Study	2.0-4
3.0-1	Total Number of Ichthyoplankton Collected by Lifestage During Entrainment Survival Study	3.0-2
3.0-2	Physical and Chemical Data Recorded at Danskammer Point and Roseton Intakes During Ichthyoplankton Survival Study	3.0-4
3.0-3	Water Temperature Recorded During Entrainment Survival Study	3.0-5
3.0-4	Conductivity Recorded During Entrainment Survival Study	3.0-6
3.0-5	Initial Survival Information Collected During the Ichthyoplankton Survival Study	3.0-16
3.0-6	Ichthyoplankton Survival Study - Latent Survival Observation Information - All Samples	3.0-23
3.0-7	Ichthyoplankton Survival Study - Latent Survival Observation Information - Comparative Samples	3.0-24
3.0-8	Ichthyoplankton Survival Study - Calculated Extended Survival	3.0-25
3.0-9	Plant Entrainment Survival	3.0-28

CHAPTER 1.0

INTRODUCTION

Since 1975, ichthyoplankton entrainment survival studies have been conducted at the Roseton Generating Station using a pump/ larval table combination designed by Ecological Analysts, Inc. (EAI 1980). Developmental work on the larval table as a method of collecting fish larvae with minimum stress was conducted at the Roseton and Danskammer Point plants by Lawler, Matusky & Skelly Engineers (LMS) during 1974 (McGroddy and Wyman 1977; LMS 1978). During recent years, LMS and EAI have refined the basic larval table and each has developed a somewhat different design based on an induced-flow concept.

Central Hudson Gas & Electric Corp. (CHGE) proposed a comprehensive entrainment survival study for 1980 that would require the use of induced-flow larval tables during the season when Alosa spp. and Morone spp. larvae were expected to be abundant in the Roseton region of the Hudson River estuary. Both LMS and EAI collected entrainment survival samples at similar time intervals at intake and seal well locations permitting the comparison of survival results achieved by the two different designs.

The program schedule proposed for the 1980 Roseton entrainment survival program was to collect ichthyoplankton during four night periods per week at the intake and discharge seal well between 25 May and 21 June. Six samples were scheduled to be collected at each location, with sampling timed to coincide with the diel period of peak larval entrainment based on previous entrainment programs. Initial ichthyoplankton survival information was to be recorded for all organisms. Following these observations, made during the collection sort procedure in the laboratory, all live and stunned

specimens were to be held in a flow-through system for evaluation of extended survival (48 hrs).

The following sections detail the results of LMS' Roseton entrainment survival program. Sample collection information and summary data are presented in the report appendix.

CHAPTER 2.0

MATERIALS AND METHODS

2.1 FIELD PROGRAM

2.1.1 Sampling Locations and Frequency

Ichthyoplankton survival samples were collected at the Roseton intake and discharge seal well during the period 28 May-26 June 1980. The two sample locations are described below:

- Roseton Intake (RI) - Station at the northern end of the Roseton intake structure. Larval table intake hose (10.2 cm) located in front of traveling screen 1B (circulating water pump 1A) bar rack anchored 3 m from the river bottom (Figure 2.0-1).
- Roseton Discharge Seal Well (RDSW) - Sample water withdrawal from the main discharge flow through a 10.2-cm pipe with inlet opening approximately 2 m from the bottom of the seal well structure (Figure 2.0-2).

Samples were collected simultaneously at both sampling locations six times on each date between 1900-0430 hrs. No samples were collected at the discharge seal well during the first six dates, and only limited sampling was conducted at each location during the last sampling week (Table 2.0-1). Therefore, simultaneous sampling was conducted on only nine dates. A total of 88 samples were collected at the intake and 58 at the seal well with 52 comparative sample sets collected between the two locations.

2.1.2 Collection Procedure

Sampling was conducted at each station for 15 min with an induced-flow larval table. Its general design is shown in Figure 2.0-3; detailed designs of the intake and seal well tables are shown in

FIGURE 2.0-1

ROSETON INTAKE SAMPLING LOCATION

Entrainment Survival Study - 1980

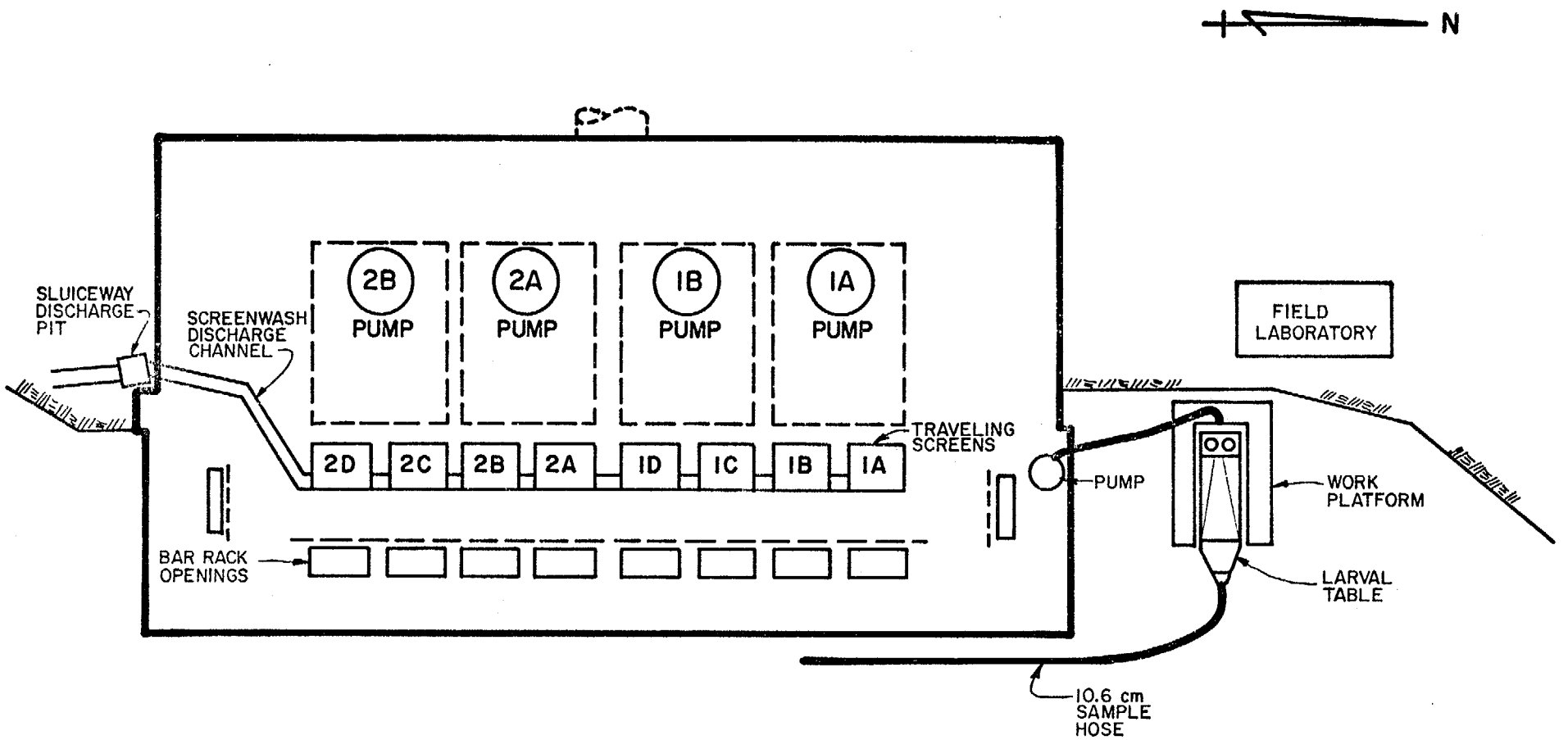


FIGURE 2.0-2

ICHTHYOPLANKTON SURVIVAL SAMPLING PROGRAM

Roseton Discharge - Seal Well
1980

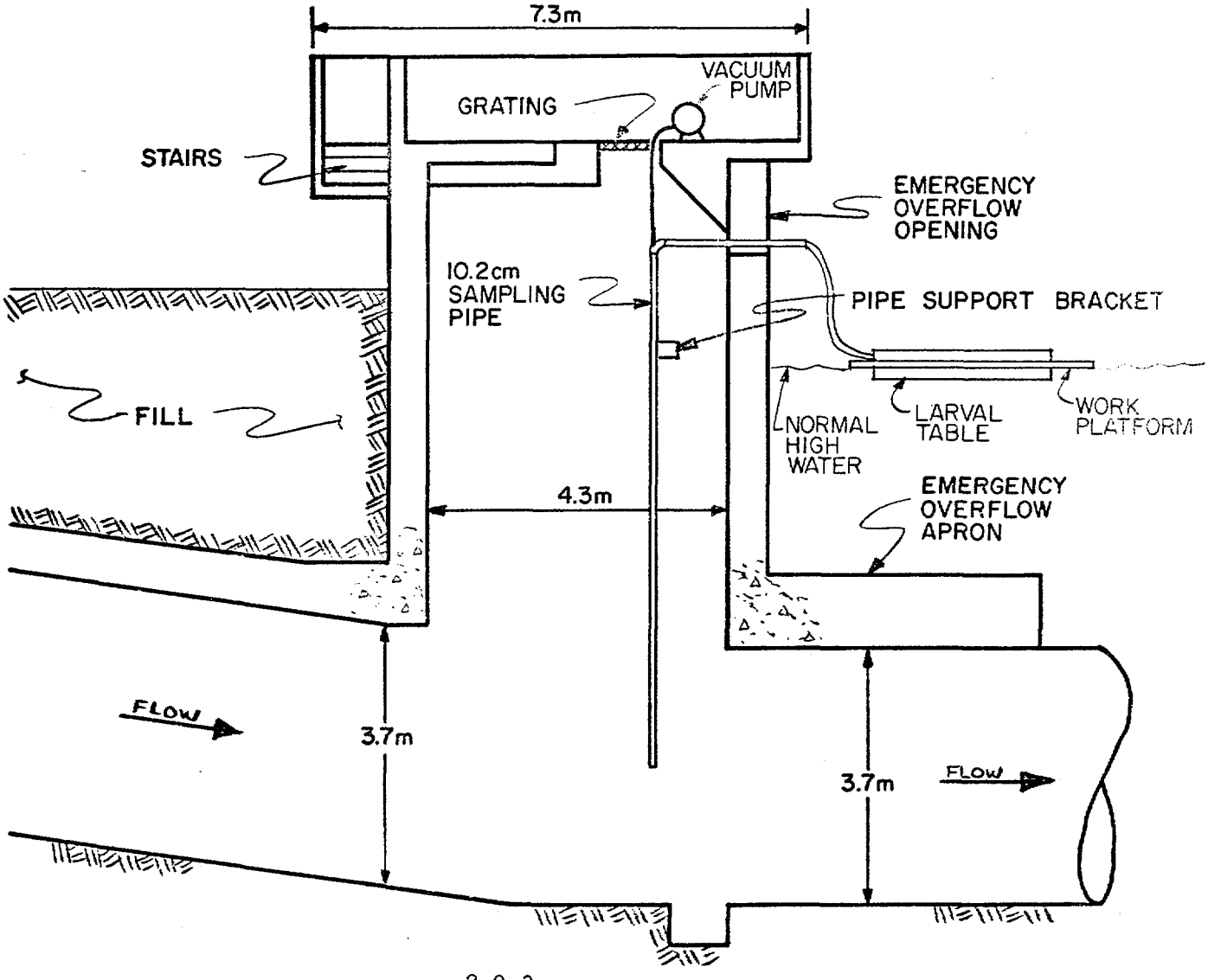


TABLE 2.0-1

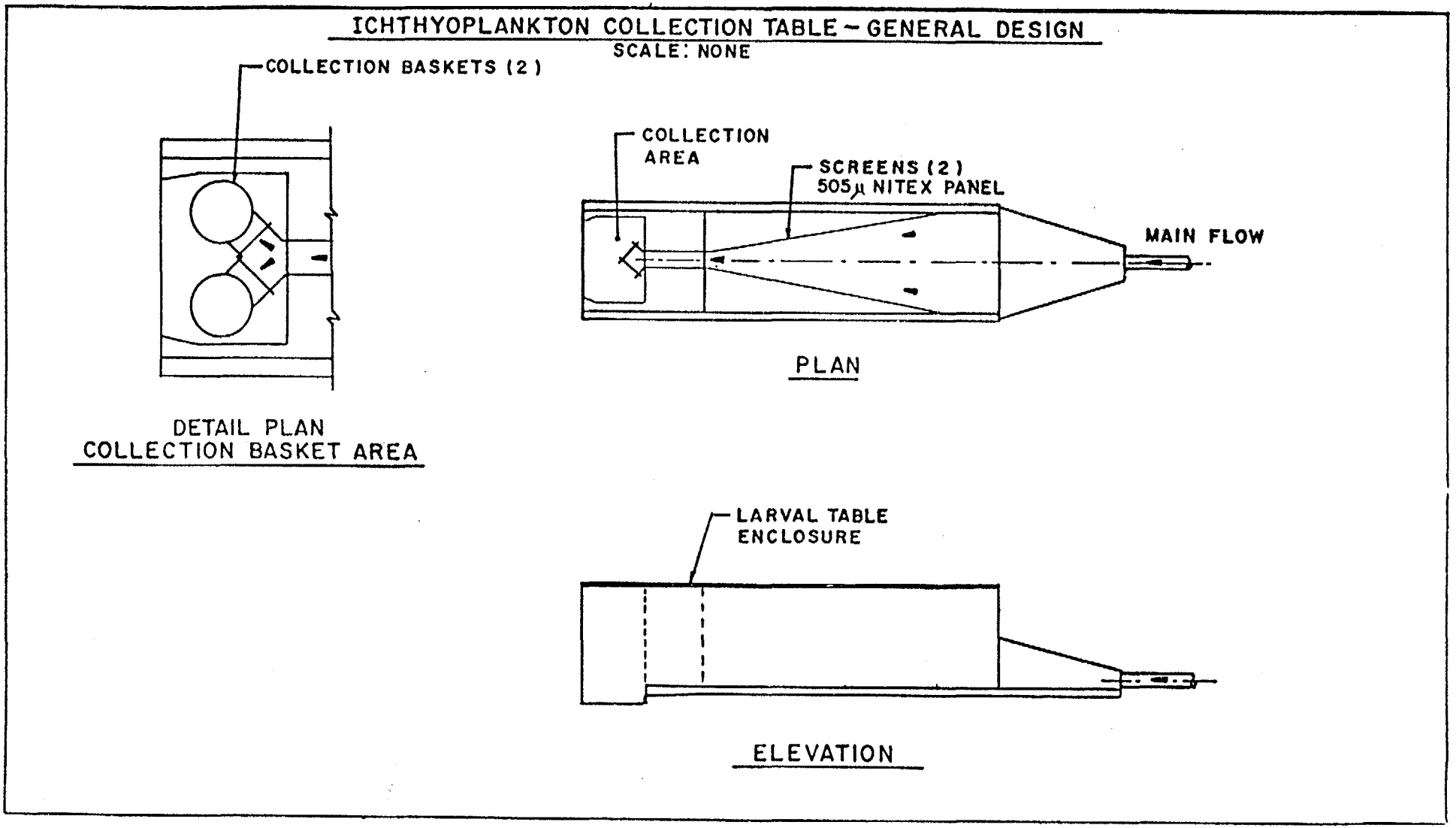
SAMPLE PERIOD, PUMP OPERATION, AND NUMBER OF SAMPLES COLLECTED DURING THE ROSETON ENTRAINMENT SURVIVAL STUDY

Roseton Generating Station - 1980

	INTAKE				SEAL WELL		
	SAMPLE PERIOD			CIRCULATING	SAMPLE PERIOD		
SAMPLE DATE	START TIME	END TIME	NUMBER SAMPLES COLLECTED	WATER PUMP OPERATION	START TIME	END TIME	NUMBER SAMPLES COLLECTED
28-29 May	2201	0410	6	1A,2A	-	-	NS
29-30 May	2038	0131	6	1A,2A	-	-	NS
2- 3 Jun	2000	0004	6	1A,2A	-	-	NS
3- 4 Jun	1943	0013	6	1A,2A	-	-	NS
4- 5 Jun	1942	0118	6	1A,1B,2A	-	-	NS
5- 6 Jun	2013	0100	6	1A,1B,2A	-	-	NS
9-10 Jun	2050	0130	6	1A,2A[a],2B	2050	0130	6
10-11 Jun	2005	0115	6	1A,2A,2B	2005	0115	6
11-12 Jun	1932	0100	6	1A,1B[b],2A	1932	0100	6
12-13 Jun	2015	0115	6	1A,1B,2A	2015	0115	6
16-17 Jun	1945	0030	6	1A,1B,2A	1945	0030	6
17-18 Jun	1920	0010	6	1A,1B,2A	1920	0010	6
18-19 Jun	1915	0010	6	1A,1B,2A	1915	0010	6
19 Jun	1938	2345	6	1A,1B,2A	1938	2345	6
23 Jun	1950	2330	4	1A,1B,2A	1950	2330	4
24 Jun	-	-	NS		-	-	NS
25 Jun	-	-	NS		-	-	NS
26 Jun	-	-	NS	1B,2A,2B	1912	2304	6
Total			88				58

[a] Pump 2A not operating 2159-2225 9 Jun 80.
[b] Pump 1B commenced operation at 2050.
NS - No Sample.

FIGURE 2.0-3


ICHTHYOPLANKTON COLLECTION TABLE - GENERAL DESIGN
SCALE: NONE
COLLECTION BASKETS (2)
DETAIL PLAN
COLLECTION BASKET AREA
COLLECTION AREA
SCREENS (2) 505μ NITEX PANEL
MAIN FLOW
PLAN
LARVAL TABLE ENCLOSURE
ELEVATION

Figures 2.0-4 and 2.0-5, respectively. Sample collection velocities and subsequent sample volumes were monitored with velocity meters on each discharge line and regulated with valves on the intake lines, and valves and pumps on the discharge lines.

Flow rates varied among samples, which are defined as all ichthyoplankton and extraneous material collected from water filtered through the table for 15 min at a constant flow rate. Rates ranged from 0.76 to 1.57 m^3/min (11.36 to 23.56 m^3 in 15 min). Nominal sample volume was 11.36 m^3, but samples of greater volume were taken at the request of CHGE during the latter part of the program.

Temperature and conductivity of the water in the larval table were recorded during the collection of each sample. Tide height and stage were also recorded.

A sampling interval was initiated when the table was filled with water to its operating depth of 50 cm from behind the angled screens (thus eliminating sample contamination). Actual sample time of 15 min was started by opening a 6-in. knife-gate valve on the bow of the table, permitting water to flow through the angled screens and collection baskets. Closing the knife-gate valve terminated the sample run time. After sampling, the larval table was completely drained and the sample collection baskets were removed and transported to the laboratory for analysis. Each of the two larval tables was outfitted with two collection baskets. Although only one basket was used at a time, each sample was comprised of the contents of both baskets. One basket was operational during the 15-min sample time and the second was operational during the table drain period of up to 15 min. The time from the end of one sample to the start of the next was approximately 45 min.

FIGURE 2.0-4

SCHEMATIC DIAGRAM OF THE LARVAL TABLE

Roseton Intake

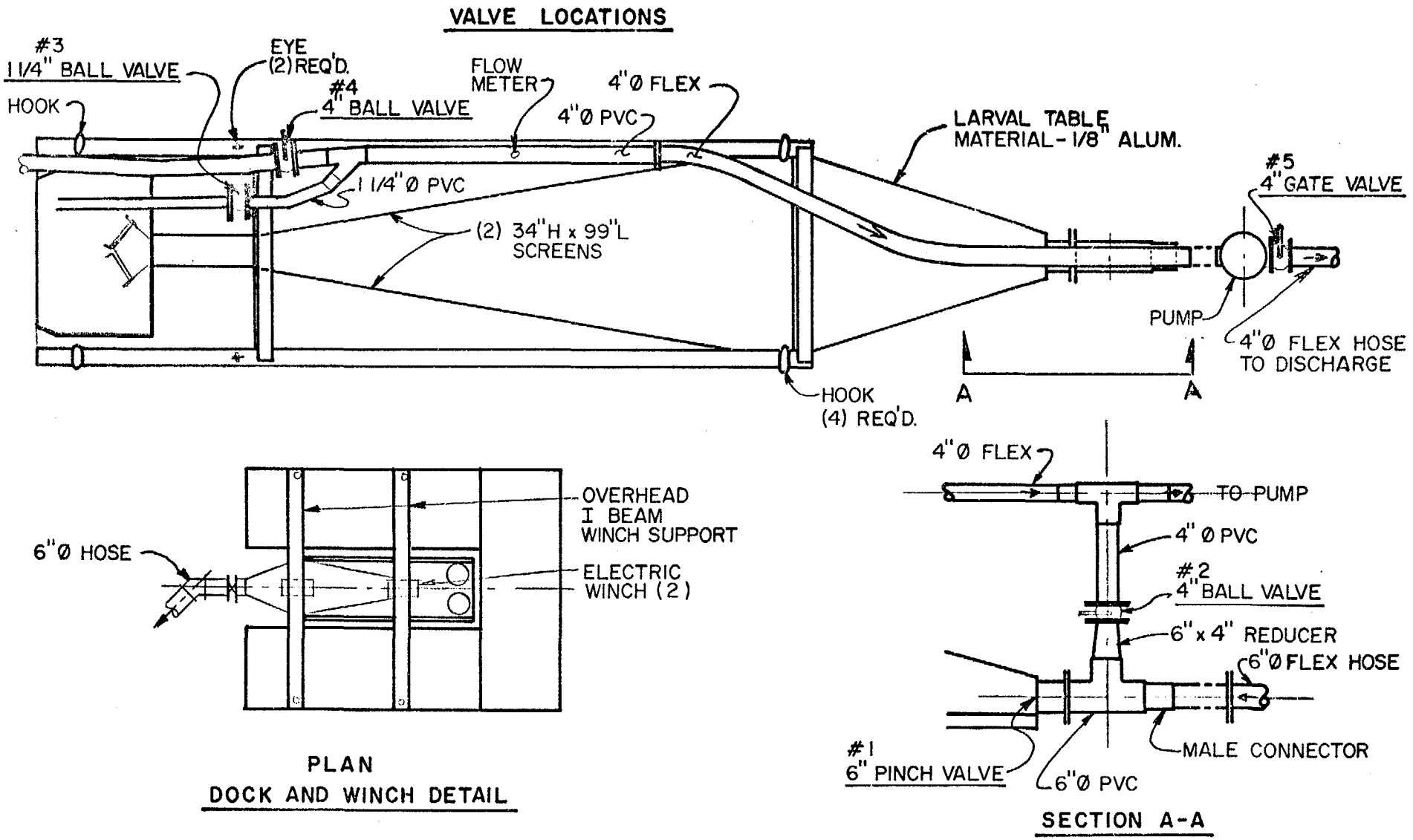
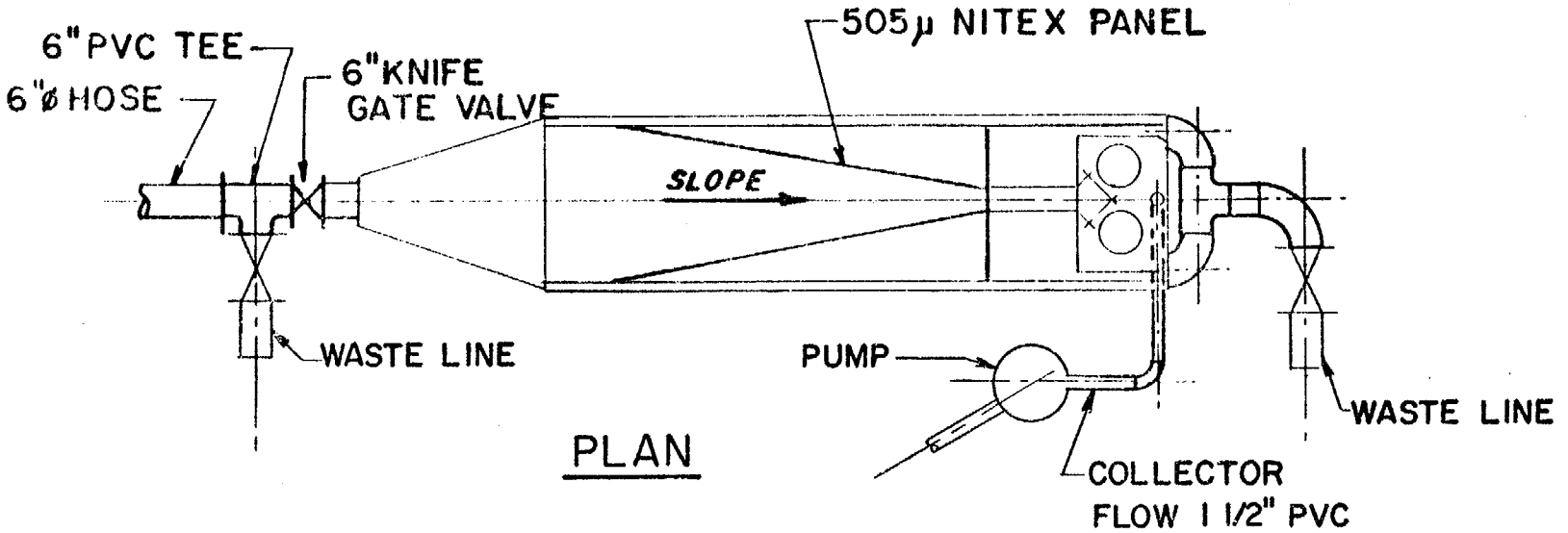
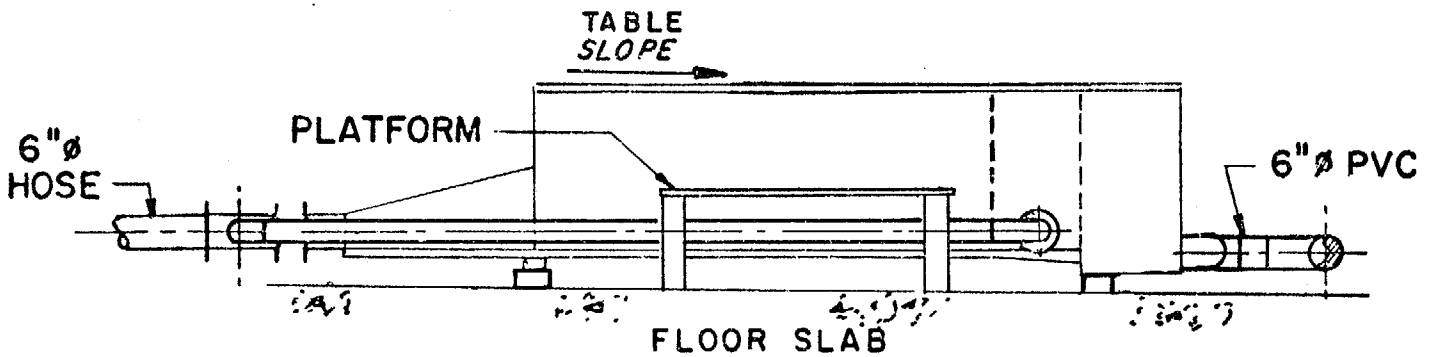


FIGURE 2.0-5

ROSETON SEAL WELL LARVAL TABLE



PLAN



ELEVATION

2.1.3 Sorting Procedure

The collection containers were transported to the wet lab and placed in a lighted flow-through sorting table. All live (swimming normally) and stunned (swimming erratically) Morone spp., Alosa spp., and other larvae were removed from the container (with widebore turkey basters or plastic spoons) and placed in separate long-term holding containers (live larvae of a species in one container and stunned in another). Sorting was aided by a 5X illuminated magnifier. Separate containers were used to isolate the larvae by species and life stage and to minimize predation. The maximum number of larvae per container was 20. All live eggs - those that are clear and transparent - were removed and placed in special cups. All dead eggs - cloudy and opaque - and larvae were removed (after 10 June 1980) and preserved with 5% buffered formalin in sample vials. A data sheet with all field observations and water quality data was maintained for each sample through the sort and analysis programs. Sort time to separate larvae for initial observation was limited to 45 min; samples containing ichthyoplankton that were not completed in that time were preserved for later analysis.

After initial viability sorting, each numbered holding container was placed in a prescribed area in the flow-through water system. Lights were on in the wet lab at all times. The remainder of the sample in the collection container was thoroughly rinsed into a mason jar containing a premeasured volume of 5% buffered formalin and labeled. This portion was later processed in the laboratory; all larvae were considered in the QC count.

2.1.4 Viability Observation Procedure

The initially live and stunned ichthyoplankton were observed at 6, 12, 24, and 48 hrs following each individual collection. Dead

organisms were removed, placed in separate vials, and labeled according to collection location, date, time, run number, and condition (live or stunned when sorted). Color-coded labels were used for the various observation periods and larval conditions, which were recorded for all larvae remaining at the 48-hr observation. Larvae were preserved in color-coded vials for laboratory analysis.

2.2 LABORATORY ANALYSIS

Analysis of ichthyoplankton survival samples proceeded in two stages:

- Any fish eggs or larvae remaining in the sample after initial field sorting and subsequent preservation were removed and identified.
- All fish eggs and larvae from each survival time period of each sample were identified.

2.2.1 Sort - Fish Egg and Larval Analysis

Following a rinse to remove formalin, the preserved sample contents remaining after the initial viability sort were placed in shallow pans and examined for fish eggs and larvae. This procedure served as a quality control check on the viability sort and ensured that all eggs and larvae were separated from the remaining sample material. Fish eggs and larvae found in the sample were preserved for later analysis.

2.2.2 Identification - Fish Eggs and Larvae

Fish eggs and larvae from each observation period and from the sample sort procedure were identified to the lowest possible taxon.

In addition, life stage and length were determined for each larval specimen. Keys specific to Hudson River ichthyoplankton were used to identify the larvae and eggs: Jones et al. (1978) and Alber and Arvidson (in preparation).

2.3 DATA ANALYSIS

Sample information was input to LMS' HP 3000 computer using a view screen format. Summary reports detailing species abundance, life stage, initial and latent viability, and length-frequency information were prepared and are presented in the report appendix.

Initial ichthyoplankton survival from the intake and seal well discharge stations was calculated using the following formula:

$$P_I \text{ or } P_{SW} = \frac{L_I + S_I}{N_{TOT}} \qquad (1)$$

Where:

P_I (P_{SW}) = Proportion surviving at the intake (seal well)
L_I = Larvae initially counted as live
S_I = Larvae initially counted as stunned
N_{TOT} = Total number larvae collected

Initial survival estimates were based on all organisms initially collected. Extended survival was calculated for those organisms initially classified as live or stunned and monitored throughout the 48-hr period following collection. The initial effects of entrainment were measured by comparing survival at the intake with survival at the seal well. The proportion surviving at each location (calculated by using Formula 1) were tested for differences using the z statistic (Fleiss 1973).

$$z = \frac{P_I - P_{SW}}{\sqrt{\bar{p}\bar{q}\left(\frac{1}{n_I} + \frac{1}{n_{SW}}\right)}} \qquad (2)$$

Where:

$$\bar{p} = \frac{\text{Number live and stunned at both locations}}{\text{Total number caught at both locations}}$$

$\bar{q} = 1 - \bar{p}$

n_I = Number collected at intake

n_{SW} = Number collected at seal well

In order to test the null hypothesis, $H_o : P_I = P_{SW}$, against the one-sided alternative, $H_A : P_I > P_{SW}$, z is compared to a normal probability table. If z is greater than 1.645, the conclusion is $P_I > P_{SW}$ at $\alpha = .05$.

With small sample sizes (n_I or $n_{SW} \leq 25$) or extreme proportions (P_I or $P_{SW} \geq 0.95$), the expected number live or dead could be very small. In this case the z statistic may reject the null hypothesis (H_o) more often than it should. To avoid this, Fisher's exact test for a 2 x 2 table was used (Everitt 1977). If the data were arranged in a table as follows:

	LIVE	DEAD
Seal Well	a	b
Intake	c	d

Then, under the assumption that the row and column totals are fixed, the probability of getting this table is:

$$p = \frac{(a+b)!\ (c+d)!\ (a+c)!\ (b+d)!}{a!\ b!\ c!\ d!\ N!} \qquad (3)$$

This probability under the fixed totals assumption is calculated for the observed table and every possible table with lower survival at the seal well. If the sum of the probabilities is less than or equal to .05, then $H_o : P_I = P_{SW}$ is rejected. For the 1980 sampling program no test was performed if fewer than five larvae were caught at either location.

The results of the z statistic comparison between the proportion surviving at the plant intake and the proportion surviving at the seal well following plant passage indicate:

a.	$P_I = P_{SW}$	No plant-induced mortality
b.	$P_I > P_{SW}$	Plant-induced mortality
c.	$P_I < P_{SW}$	No plant impact can be detected

Survival at the seal well is the result of the conditional probabilities of surviving plant passage and collection. Assuming there is no interaction between the two probabilities:

$$P_{SW} = P_S \times P_E$$

Where:

P_S = Probability of surviving collection
P_E = Probability of surviving plant passage

P_I was used as an estimate of P_S.

CHAPTER 3.0

STUDY RESULTS

3.1 SPECIES INVENTORY

The ichthyoplankton species collected at the Roseton intake and seal well discharge stations and their total abundance by life stage are presented in Table 3.0-1. Similar species representation was observed at both locations, differing only in the identification of a single post-yolk-sac yellow perch larva collected at the intake station. Eggs belonging to Alosa spp., striped bass, and white perch were identified. However, only white perch eggs were collected from the seal well station. Larvae of three taxa - Alosa spp., striped bass, and white perch - accounted for 86% and 87% of the intake and seal well collections, respectively, with Alosa spp. the most abundant of the three.

3.2 COLLECTION PARAMETERS

3.2.1 Roseton Intake

A total of 88 samples were collected at the Roseton intake on 15 dates. Six samples were collected on each date, with the exception of 23 June when only four were collected. The highest sample abundance, 108 larvae, was collected during 29-30 May (between 2325 and 2340 hrs) and was comprised of five species: the major species were Alosa spp. (38), striped bass (24), and white perch (41). The Alosa spp. and white perch were predominantly post-yolk-sac and the striped bass were predominantly yolk-sac. No larvae were found in 10 of the 88 samples collected.

TABLE 3.0-1

TOTAL NUMBER OF ICHTHYOPLANKTON COLLECTED BY LIFESTAGE
DURING ENTRAINMENT SURVIVAL STUDY

Roseton Generating Station - 1980

I. ROSETON INTAKE

	NUMBER COLLECTED					
SPECIES	EGG	YOLK-SAC	POST-YOLK-SAC	JUVENILE	UID	TOTAL LARVAE[a]
Alosa spp.	20	14	266	0	0	280
American shad	0	0	10	0	0	10
Cyprinidae	0	11	49	0	0	60
Rainbow smelt	0	0	0	1	0	0
Striped bass	21	115	57	0	5	177
Tessellated darter	0	13	8	1	0	21
Morone spp.	0	0	5	0	7	12
UID	4	0	1	0	0	1
White perch	30	24	174	0	0	198
Yellow perch	0	0	1	0	0	1
TOTAL	75	177	571	2	12	760

II. ROSETON SEAL WELL DISCHARGE

	NUMBER COLLECTED					
SPECIES	EGG	YOLK-SAC	POST-YOLK-SAC	JUVENILE	UID	TOTAL LARVAE[a]
Alosa spp.	0	0	328	0	3	331
American shad	0	0	16	0	0	16
Cyprinidae	0	11	19	0	2	32
Rainbow smelt	0	0	4	4	0	4
Striped bass	0	21	57	0	1	79
Tessellated darter	0	8	4	1	0	12
Morone spp.	0	0	8	0	1	9
UID	2	0	2	0	0	2
White perch	13	1	84	0	0	85
TOTAL	15	41	522	5	7	570

[a]Larvae include yolk-sac, post-yolk-sac, and UID; juveniles and eggs excluded.

3.2.2 Seal Well Discharge

Fifty-eight samples were collected on 10 sampling dates at the Roseton seal well. Six samples each were collected simultaneously from the seal well and the intake except on 23-24 June when only four samples were collected and 26 June when no intake samples were collected. The highest single sample abundance was recorded on 12 June at 2205-2220 hrs, when 32 larvae representing seven species were collected. Post-yolk-sac Alosa spp. (19) and striped bass (8) were the major taxa collected. Only one seal well collection did not yield any larvae.

3.2.3 Physical/Chemical Information

Table 3.0-2 shows minimum daily intake temperature and daily chloride data (as NaCl) recorded at the Danskammer Point Generating Station during the ichthyoplankton survival study. Mean daily water temperature and conductivity monitored as part of the Roseton entrainment and impingement abundance studies (LMS 1981) are also presented in this table. Water temperature increased gradually during the 31-day study period, ranging from 17.8 to 22.8°C and averaged 20.1°C. Chloride and conductivity data used to indicate saltwater intrusion into the study area were stable at low values throughout the study period, and were not representative of marine-derived waters.

Water temperature and conductivity readings taken in the larval table flume during each intake and seal well sample are presented in Tables 3.0-3 and 3.0-4, respectively. Generally, the intake values corresponded to the daily values recorded at the Danskammer Point intake and the entrainment and impingement abundance values collected at Roseton. No difference in conductivity was noted between intake and seal well samples. Water temperature from the intake samples ranged from 18.0 to 23.0°C and averaged 19.8°C; seal well samples ranged from 20.0 to 30.0°C and averaged 25.3°C.

TABLE 3.0-2

PHYSICAL AND CHEMICAL DATA RECORDED AT DANSKAMMER POINT AND ROSETON INTAKES DURING ICHTHYOPLANKTON SURVIVAL STUDY

May-June 1980

	DANSKAMMER POINT INTAKE DATA		ROSETON INTAKE	BIOLOGICAL COLLECTION[a]
DATE	MINIMUM DAILY TEMP. (°C)	CHLORIDE (mg/l NaCl)	MEAN WATER TEMP (°C)	MEAN CONDUCTIVITY (μmhos/cm)
26 May	17.8	-	-	-
27 May	17.8	48	18.4	190
28 May	17.8	61	18.8	195
29 May	18.3	48	19.0	195
30 May	18.9	52	18.8	195
31 May	18.9	-	-	-
1 Jun	18.9	-	-	-
2 Jun	19.4	74	-	-
3 Jun	19.4	84	19.7	467
4 Jun	19.4	93	19.8	352
5 Jun	19.4	78	19.9	275
6 Jun	20.0	62	19.8	326
7 Jun	20.0	-	20.2	252
8 Jun	20.0	-	-	-
9 Jun	19.4	65	-	-
10 Jun	19.4	55	19.5	254
11 Jun	19.4	63	18.7	273
12 Jun	19.4	66	19.9	233
13 Jun	-	43	19.9	253
14 Jun	20.0	50	19.6	248
15 Jun	20.6	54	-	-
16 Jun	20.6	55	-	-
17 Jun	20.6	57	21.0	231
18 Jun	21.1	65	19.8	238
19 Jun	21.1	78	21.9	237
20 Jun	21.1	70	20.8	338
21 Jun	21.1	76	19.9	273
22 Jun	-	42	-	-
23 Jun	21.1	44	-	-
24 Jun	21.7	48	22.5	242
25 Jun	21.7	58	22.1	248
26 Jun	-	64	21.7	217
27 Jun	22.8	69	22.5	235
28 Jun	-	65	-	-
29 Jun	22.8	61	-	-

- No Data

[a]Roseton entrainment and impingement surveys.

TABLE 3.0-3

WATER TEMPERATURE (°C) RECORDED DURING ENTRAINMENT SURVIVAL STUDY

Roseton Generating Station - 1980

DATE	RUN #1		RUN #2		RUN #3		RUN #4		RUN #5		RUN #6	
	INTAKE	SEAL WELL	INTAKE	SEAL WELL	INTAKE	SEAL WELL	INTAKE	SEAL WELL	INTAKE	SEAL WELL	INTAKE	SEAL WELL
28-29 May	19.0	-	20.0	-	19.0	-	19.0	-	18.0	-	18.0	-
29-30 May	19.0	-	19.0	-	19.0	-	18.5	-	18.0	-	18.0	-
2- 3 Jun	20.0	-	20.0	-	20.0	-	20.0	-	20.0	-	20.0	-
3- 4 Jun	20.5	-	20.0	-	20.0	-	20.0	-	20.0	-	20.5	-
4- 5 Jun	20.0	-	21.0	-	19.0	-	20.0	-	21.0	-	20.0	-
5- 6 Jun	20.0	-	19.5	-	19.0	-	19.0	-	19.0	-	19.0	-
9-10 Jun	20.0	22.5	19.5	23.0	19.5	23.0	19.0	23.0	19.0	21.5	19.0	21.0
10-11 Jun	19.0	23.0	19.0	27.0	19.0	25.0	19.0	23.0	19.0	23.0	18.0	21.0
11-12 Jun	19.0	25.0	19.5	25.0	19.0	25.0	19.0	23.0	18.0	24.0	18.0	23.0
12-13 Jun	19.0	25.0	19.0	24.0	19.0	25.0	19.5	25.0	NA	23.0	19.0	22.0
16-17 Jun	21.0	25.0	20.5	20.0	20.0	25.0	20.0	24.0	20.0	24.0	20.0	23.0
17-18 Jun	22.0	27.0	21.0	26.5	20.0	26.5	21.0	26.0	20.5	25.0	20.0	25.0
18-19 Jun	21.0	27.0	21.0	27.0	21.0	27.0	21.0	26.0	21.0	26.0	21.0	26.0
19-20 Jun	21.5	28.0	20.5	27.0	20.5	27.0	20.5	27.0	19.0	26.0	19.5	26.0
23-24 Jun	23.0	24.0	22.0	28.5	22.0	28.0	22.0	27.0	-	-	-	-
24-25 Jun	-	-	-	-	-	-	-	-	-	-	-	-
25-26 Jun	-	-	-	-	-	-	-	-	-	-	-	-
26-27 Jun	-	30.0	-	30.0	-	30.0	-	30.0	-	30.00	-	30.0

- No sample
NA - Not available

TABLE 3.0-4

CONDUCTIVITY (μmhos/cm) RECORDED DURING ENTRAINMENT SURVIVAL STUDY

Roseton Generating Station - 1980

DATE	RUN #1		RUN #2		RUN #3		RUN #4		RUN #5		RUN #6	
	INTAKE	SEAL WELL	INTAKE	SEAL WELL	INTAKE	SEAL WELL	INTAKE	SEAL WELL	INTAKE	SEAL WELL	INTAKE	SEAL WELL
28-29 May	200	-	190	-	190	-	190	-	200	-	200	-
29-30 May	190	-	200	-	200	-	190	-	190	-	190	-
2- 3 Jun	230	-	220	-	210	-	210	-	210	-	260	-
3- 4 Jun	450	-	1100	-	940	-	880	-	370	-	340	-
4- 5 Jun	300	-	280	-	270	-	260	-	230	-	220	-
5- 6 Jun	250	-	260	-	350	-	530	-	300	-	240	-
9-10 Jun	210	220	220	250	230	230	260	270	260	280	250	260
10-11 Jun	260	260	260	240	260	260	260	300	270	260	290	300
11-12 Jun	240	220	340	220	240	230	250	230	270	230	280	230
12-13 Jun	200	260	210	210	210	260	220	270	NA	270	210	210
16-17 Jun	230	200	230	220	230	200	230	200	230	200	220	230
17-18 Jun	250	240	230	240	230	240	230	240	230	240	230	230
18-19 Jun	230	220	240	220	230	220	230	200	230	220	230	210
19-20 Jun	260	220	270	220	260	230	260	220	250	220	240	220
23-24 Jun	210	240	210	230	260	230	210	230	-	-	-	-
24-25 Jun	-	-	-	-	-	-	-	-	-	-	-	-
25-26 Jun	-	-	-	-	-	-	-	-	-	-	-	-
26-27 Jun	-	220	-	220	-	220	-	230	-	230	-	230

- No sample
NA - Not available

3.3 TEMPORAL ABUNDANCE PATTERN

Alosa spp. larvae were collected on every sample date at both locations. Utilizing primarily the intake data (Figure 3.0-1) that cover the longest time span, peak abundance was observed during 29-30 May, reaching a mean concentration of 1350.4 larvae per 1000 m^3. Alosa spp. larval abundance declined following the peak, but did exhibit a smaller, secondary peak during the third week of June. Post-yolk-sac larvae predominated, with small numbers of yolk-sac observed primarily in the 3.1 to 5.0-mm length range (Figure 3.0-2) during the period 28 May-11 June.

When sampling was conducted at both locations, the mean concentration of larvae was greater in seal well samples than in intake samples on all but one date (18-19 June). Peak mean date abundance of Alosa spp. larvae at the seal well location (1089.1/1000 m^3) was observed during 12-13 June, which corresponds to the peak from the entrainment abundance program (LMS 1981) conducted during the same time period.

Length-frequency information for post-yolk-sac Alosa spp. larvae (Figure 3.0-2) indicates a similar range of larval lengths between intake and seal well collections, However, the frequency of occurrence points to a greater percentage of smaller larvae at the intake than at the seal well. The higher incidence of smaller larvae at the intake was probably the result of sampling commencing two weeks earlier, i.e.; 146 of the total 266 larvae measured at the intake were collected prior to 9 June 1980.

Striped bass larvae were present throughout the sampling period. Highest concentrations were observed during the first two weekly sampling periods (Figure 3.0-3). Yolk-sac larvae comprised a greater percent of the total collection on several of the sampling dates and persisted in collections through 18-19 June. Generally,

FIGURE 3.0-1

MEAN CONCENTRATION OF ALOSA SPP. COLLECTED DURING THE ENTRAINMENT SURVIVAL STUDY

Roseton Generating Station — 1980

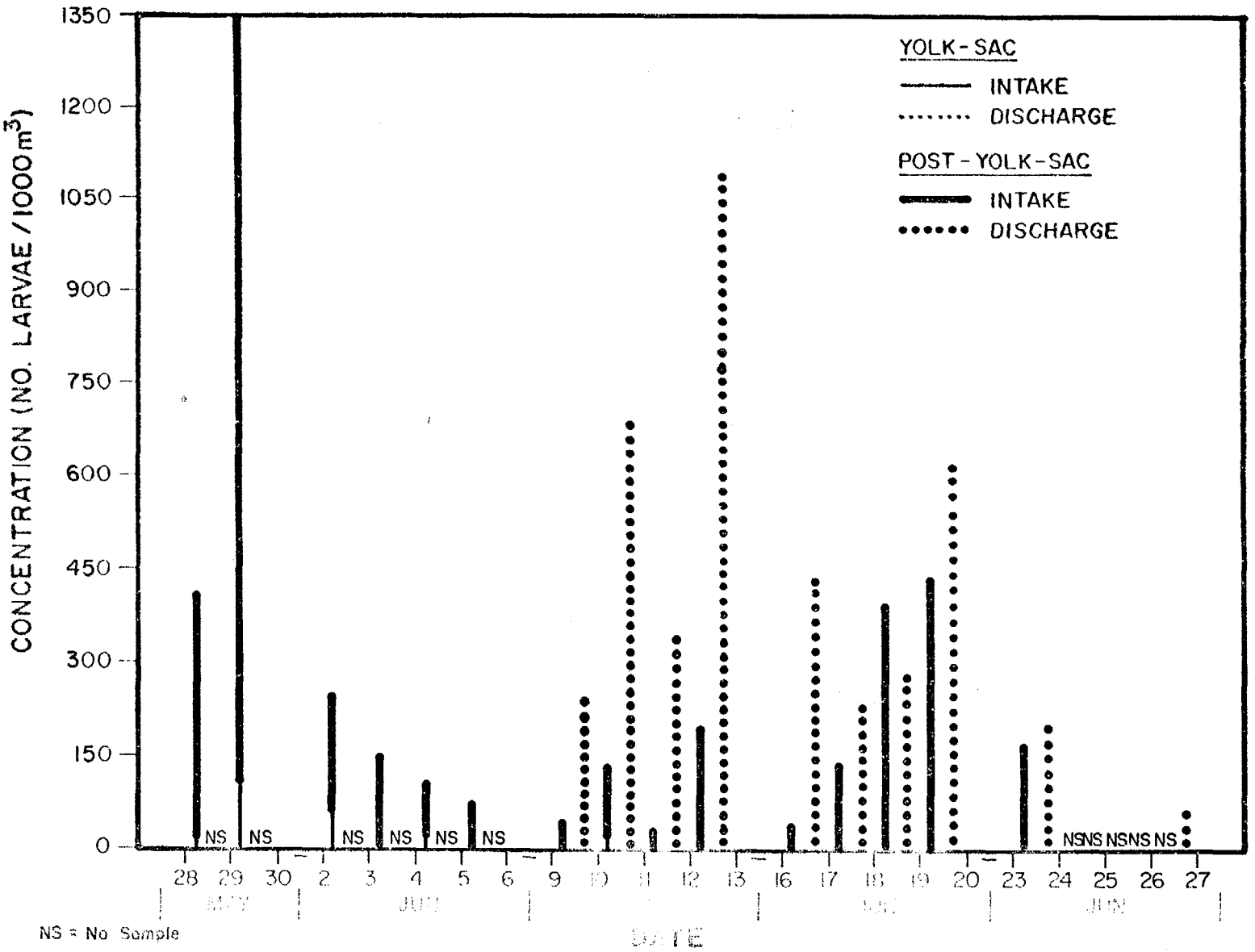
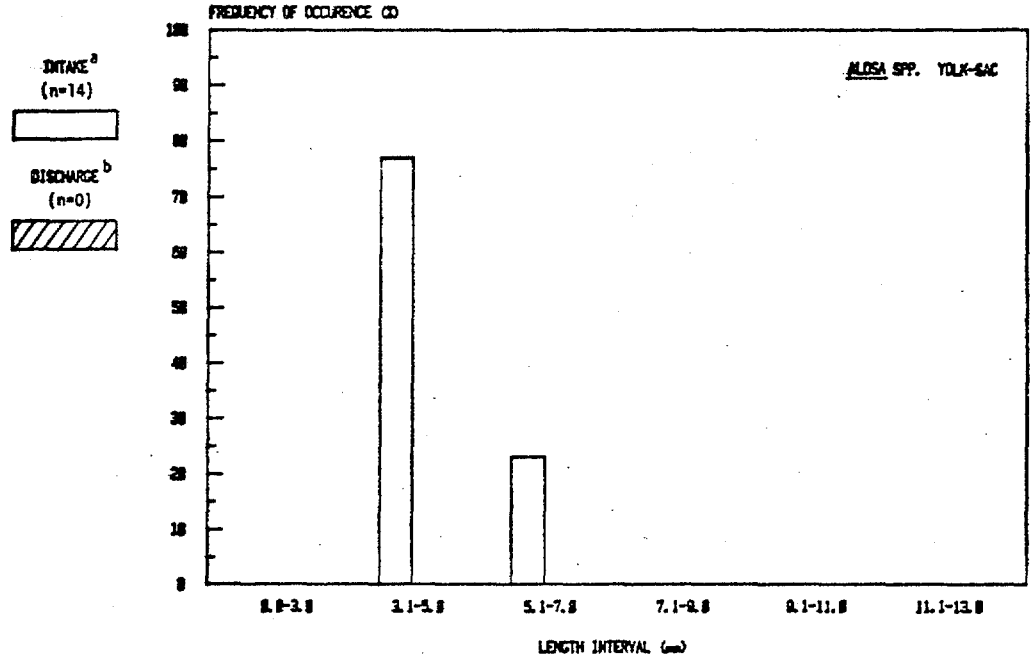
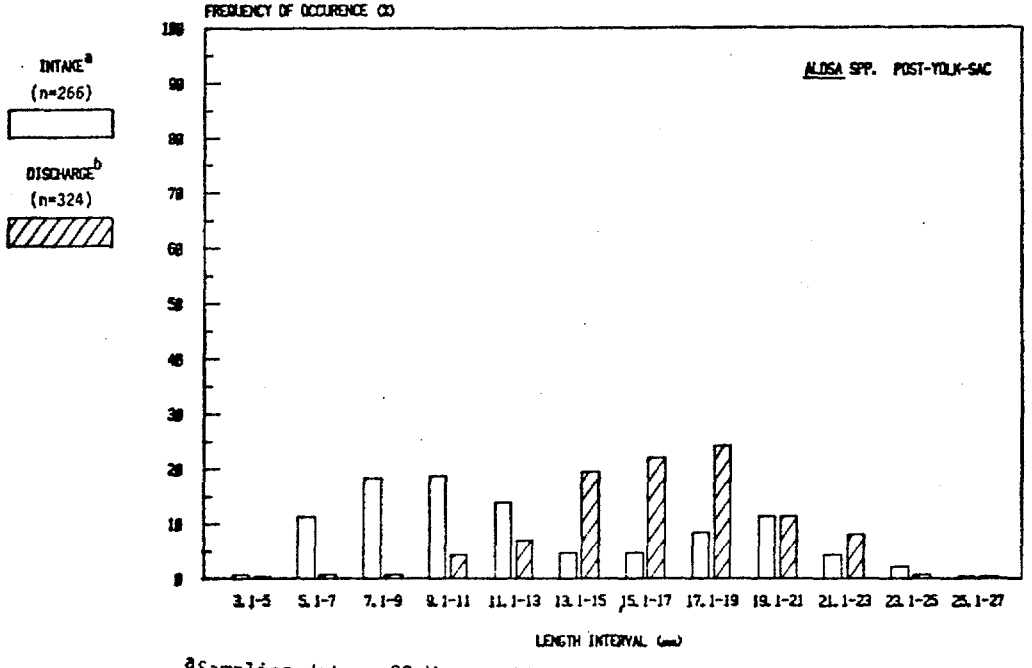


FIGURE 3.0-2

LENGTH INTERVALS AND FREQUENCY OF OCCURRENCE FOR ALOSA SPP. COLLECTED DURING ROSETON ENTRAINMENT SURVIVAL STUDY

ROSETON GENERATING STATION - 1980



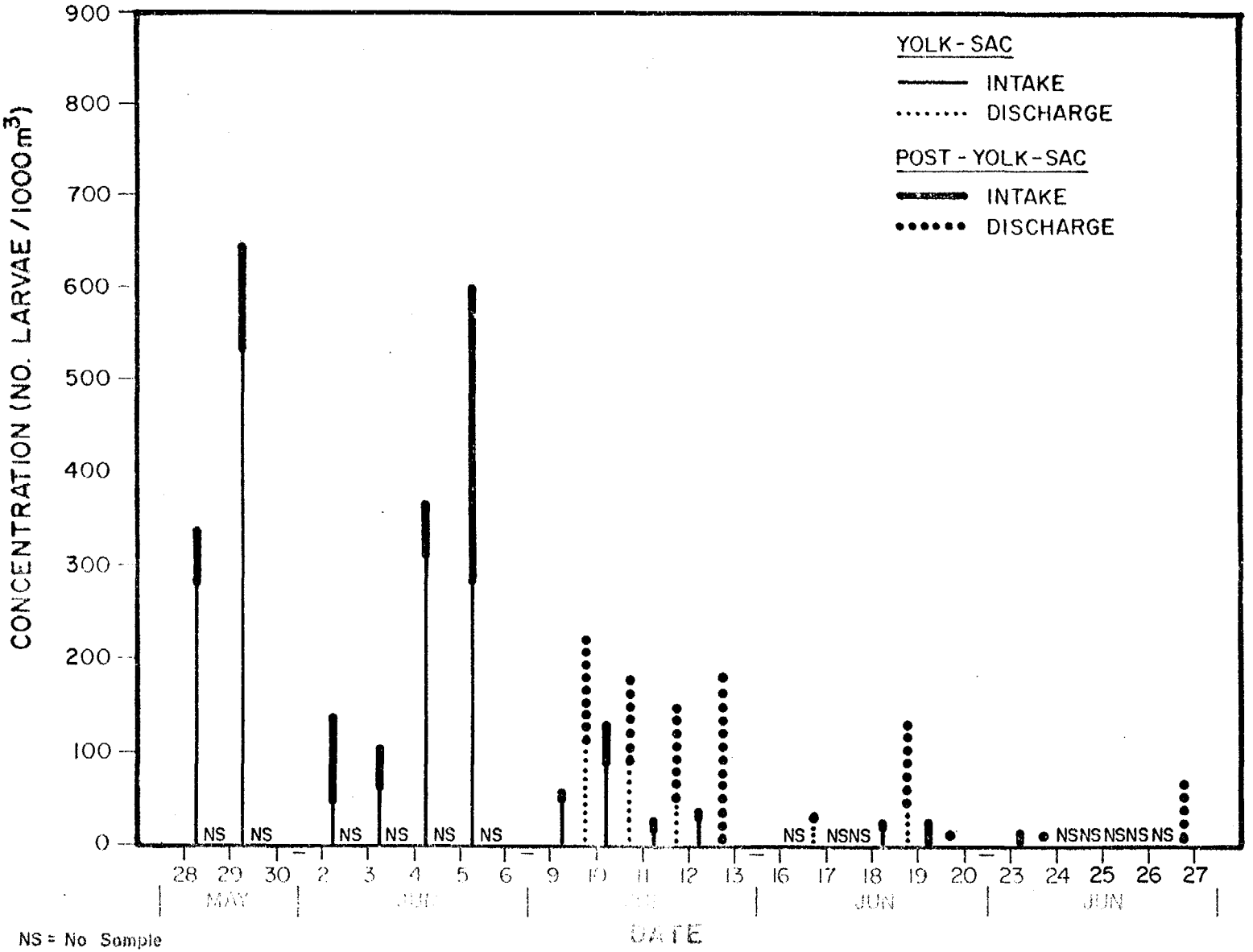


[a]Sampling dates: 28 May to 23 June.
[b]Sampling dates: 9 June to 26 June.

FIGURE 3.0-3

MEAN CONCENTRATION OF STRIPED BASS COLLECTED DURING THE ENTRAINMENT SURVIVAL STUDY

Roseton Generating Station — 1980



NS = No Sample

the mean striped bass larval concentration at the seal well station was higher than the intake concentration on the same date.

A similar distribution and frequency of occurrence of striped bass yolk-sac larval lengths were found in the intake and seal well collections (Figure 3.0-4), although post-yolk-sac larvae were smaller at the intake station than at the seal well location (Figure 3.0-4). In addition, the range of larval lengths was greater at the seal well. As noted for Alosa spp. larvae, the difference in the observed frequency of occurrence of larval lengths between the two stations is attributed primarily to earlier sampling at the intake.

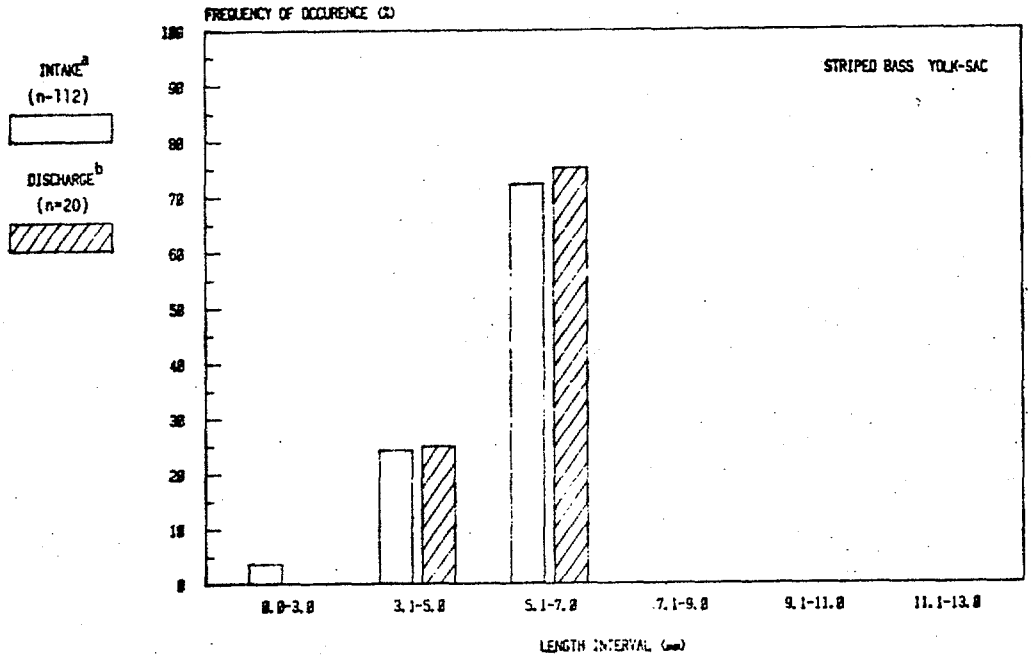
White perch larvae were present throughout the study period. The peak concentration (based on intake data) was observed during 29-30 May, when a mean concentration of 763.2/1000 m^2 was found (Figure 3.0-5). During this period, post-yolk-sac larvae predominated. However, yolk-sac larvae were collected in low numbers through 17-18 June. They were collected at the seal well station on only one date in a concentration similar to the intake value. As noted for Alosa spp. and striped bass, the mean concentration at the seal well was generally greater than the corresponding intake sample date concentration.

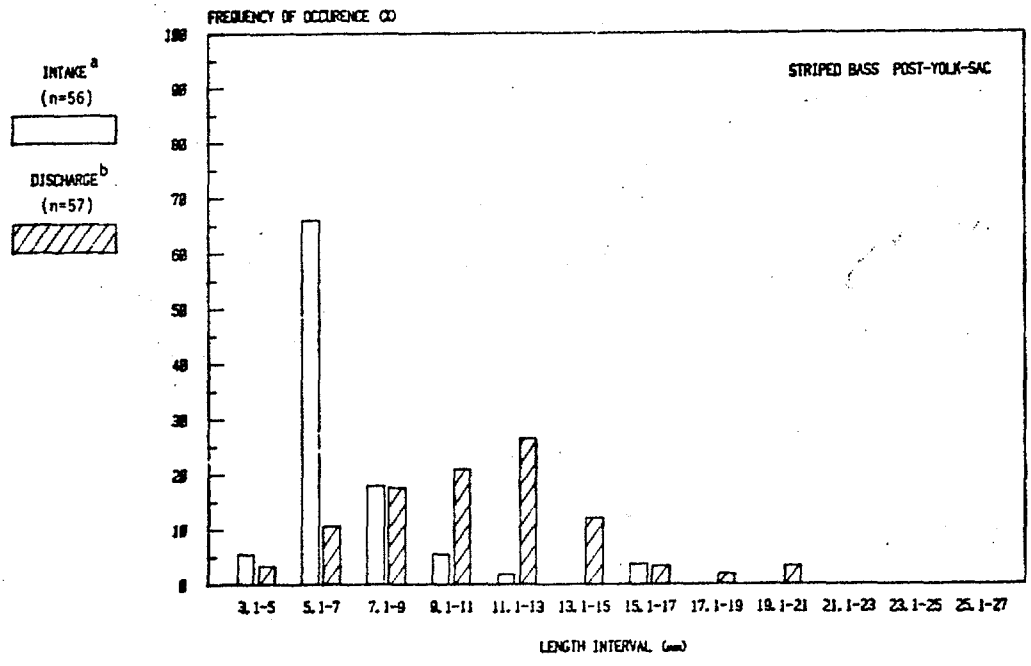
Low numbers of white perch yolk-sac larvae collected during the study precluded any meaningful length-frequency comparison between the two sampling locations. Post-yolk-sac white perch larvae collected at the two locations exhibited similar ranges in length, with the frequency of occurrence of smaller larvae slightly higher in intake samples than in seal well samples (Figure 3.0-6).

FIGURE 3.0-4

LENGTH INTERVALS AND FREQUENCY OF OCCURRENCE FOR STRIPED BASS COLLECTED DURING ROSETON ENTRAINMENT SURVIVAL STUDY

ROSETON GENERATING STATION - 1980





[a]Sampling dates: 28 May to 23 June.
[b]Sampling dates: 9 June to 26 June.

FIGURE 3.0-5

MEAN CONCENTRATION OF WHITE PERCH COLLECTED DURING THE ENTRAINMENT SURVIVAL STUDY

Roseton Generating Station — 1980

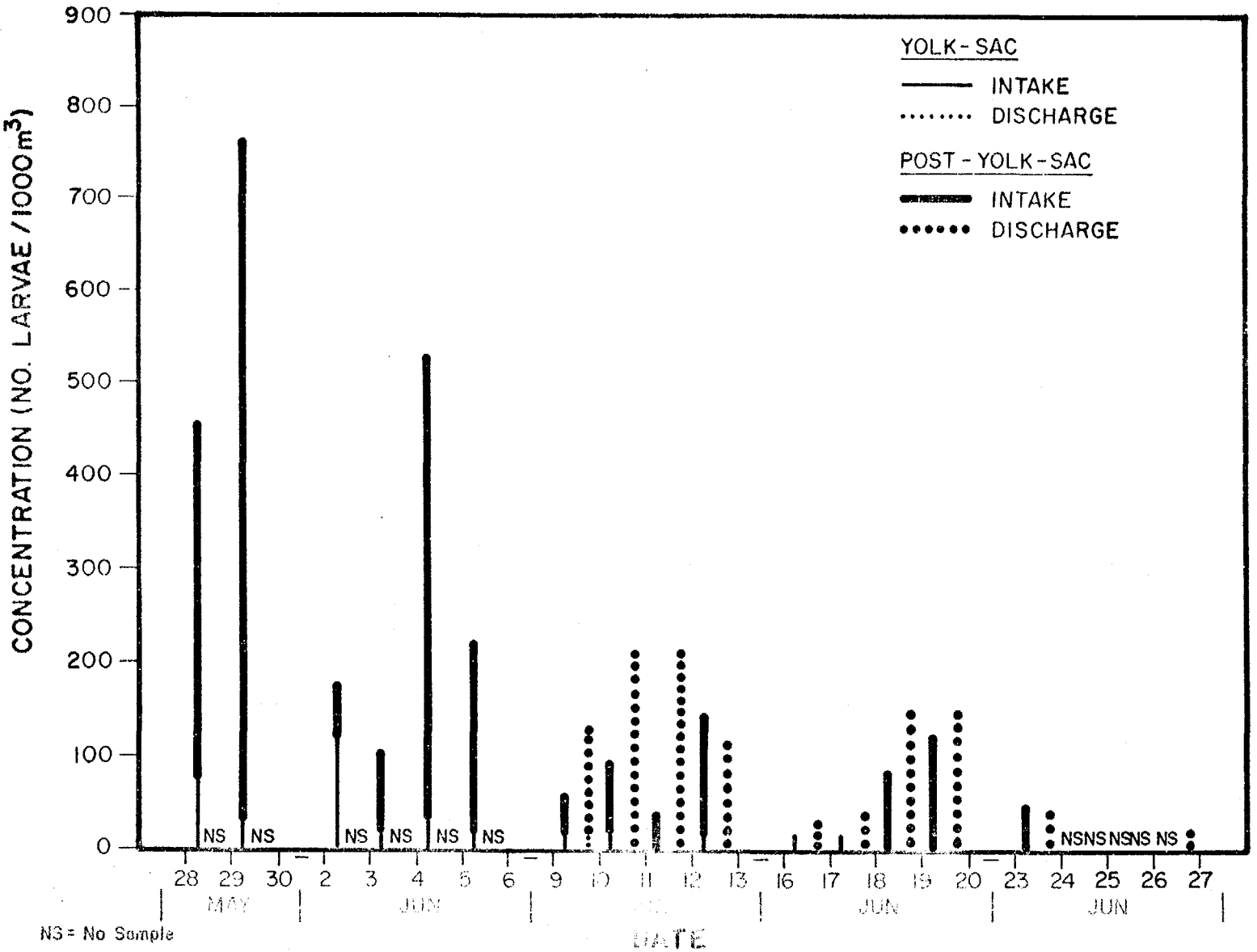
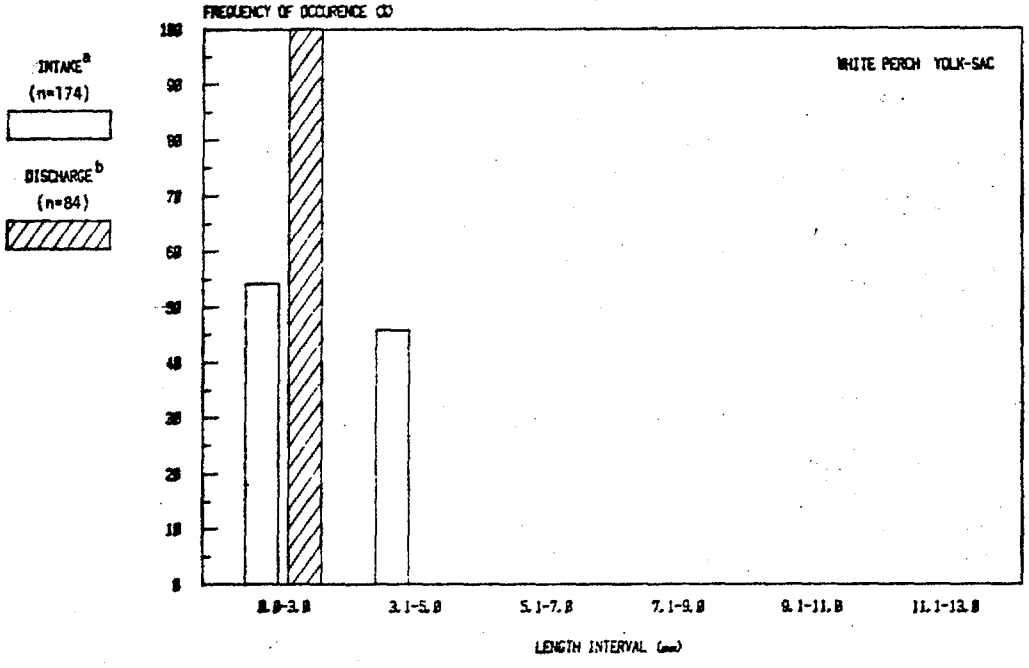
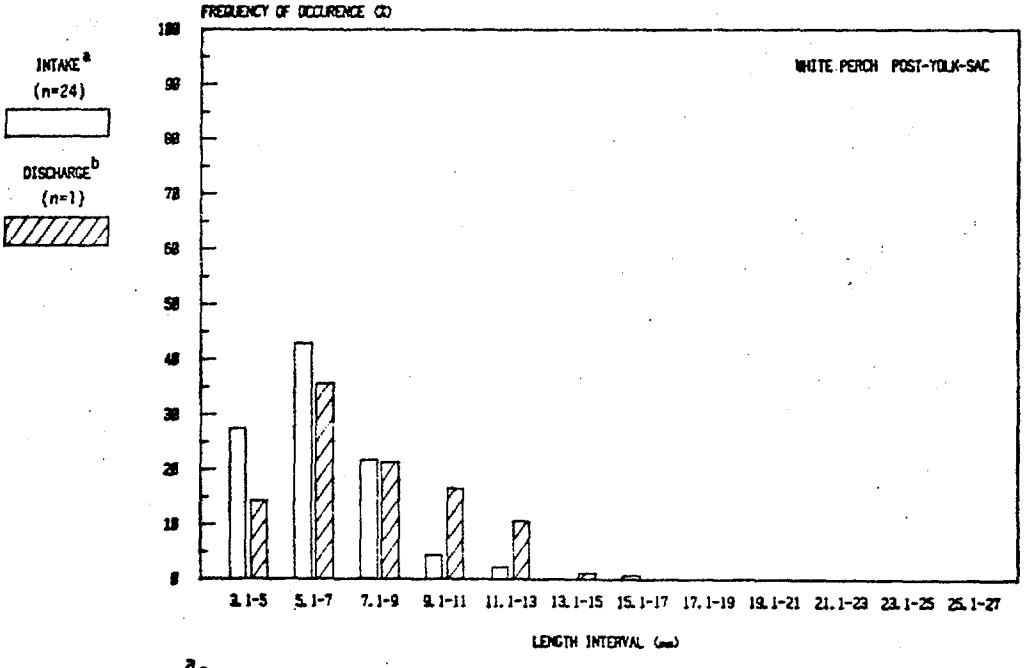


FIGURE 3.0-6

LENGTH INTERVALS AND FREQUENCY OF OCCURRENCE FOR WHITE PERCH COLLECTED DURING ROSETON ENTRAINMENT SURVIVAL STUDY

ROSETON GENERATING STATION - 1980





[a]Sampling dates: 28 May to 23 June.
[b]Sampling dates: 9 June to 26 June.

3.4 INITIAL SURVIVAL

3.4.1 Eggs

A total of 20 Alosa spp. eggs and 21 striped bass eggs were collected during the entrainment survival study. All were collected at the intake location (Table 3.0-5). These eggs were all found during the second (quality control) sort.

Thirty white perch eggs were collected at the intake station and 13 at the discharge. Only two were observed in the initial viability sort. Both were from intake samples and both were recorded as dead.

3.4.2 Alosa spp. Larvae

Fourteen yolk-sac and 276 post-yolk-sac Alosa spp. larvae were identified in intake collections (Table 3.0-5). Initial count from intake samples for survival analysis yielded zero yolk-sac and 209 post-yolk-sac larvae, resulting in sort efficiencies of zero for yolk-sac and 0.76 for post-yolk-sac larvae. At the seal well station 335 post-yolk-sac larvae were sorted for viability analysis out of a collection of 344 post-yolk-sac larvae, yielding a 0.97 sort efficiency.

Initial survival of post-yolk-sac larvae at the intake, based on the total number collected and combining the initial live and initial stunned counts, was 0.66. Initial survival recorded for post-yolk-sac Alosa spp. larvae at the seal well location was 0.19. Comparing the proportions surviving at the two locations, survival at the seal well was significantly lower ($\alpha = .05$) than at the intake.

TABLE 3.0-5

INITIAL SURVIVAL INFORMATION COLLECTED DURING THE ICHTHYOPLANKTON SURVIVAL STUDY

Roseton Generating Station - 28 May-27 June 1980

I. BASED ON ALL SAMPLES COLLECTED

TAXON	SAMPLE LOCATION	TOTAL NUMBER COLLECTED			INITIAL COUNT			INITIAL VIABILITY INFORMATION: INITIAL LIVE			INITIAL VIABILITY INFORMATION: INITIAL STUNNED		
		EGG	YOLK-SAC	POST-YOLK-SAC	EGG	YOLK-SAC	POST-YOLK-SAC	EGG	YOLK-SAC	POST-YOLK-SAC	EGG	YOLK-SAC	POST YOLK-SAC
Alosa spp.[a]	I	20	14	276	0	0	209	0	0	162	0	0	21
	SW	0	0	344	0	0	335	0	0	8	0	0	56
Striped bass	I	21	115	57	0	61	37	0	49	33	0	6	3
	SW	0	21	57	0	9	54	0	2	38	0	3	5
White perch	I	30	24	174	2	0	124	0	0	100	0	0	11
	SW	13	1	84	0	0	70	0	0	26	0	0	6

II. BASED ON SIMULTANEOUS COLLECTION AT THE INTAKE AND SEAL WELL

TAXON	SAMPLE LOCATION	TOTAL NUMBER COLLECTED			INITIAL COUNT			INITIAL VIABILITY INFORMATION: INITIAL LIVE			INITIAL VIABILITY INFORMATION: INITIAL STUNNED		
		EGG	YOLK-SAC	POST-YOLK-SAC	EGG	YOLK-SAC	POST-YOLK-SAC	EGG	YOLK-SAC	POST-YOLK-SAC	EGG	YOLK-SAC	POST YOLK-SAC
Alosa spp.[a]	I	0	1	130	0	0	127	0	0	80	0	0	21
	SW	0	0	335	0	0	326	0	0	8	0	0	56
Striped bass	I	1	13	10	0	9	7	0	2	5	0	1	1
	SW	0	21	47	0	9	45	0	2	35	0	3	5
White perch	I	9	5	40	2	0	34	0	0	17	0	0	5
	SW	12	1	81	0	0	67	0	0	26	0	0	6

[a]Includes American shad
I = Intake
SW = Seal Well

Initial survival of post-yolk-sac Alosa spp. larvae was evaluated relative to the water temperature recorded at the time of collection. The survival data broken down by 1.0°C increments is graphically presented in Figure 3.0-7. Intake survival collected over a temperature range of 18-22°C remained consistent over the entire five degree range, averaging 66% and ranging between 60 and 83%. Seal well collections were made over a 10 degree temperature range from 20 to 30°C; survival at the two lowest temperatures (20-21°C) was approximately 32%. It decreased to 15-20% between 22 and 28°C and was zero at 30°C.

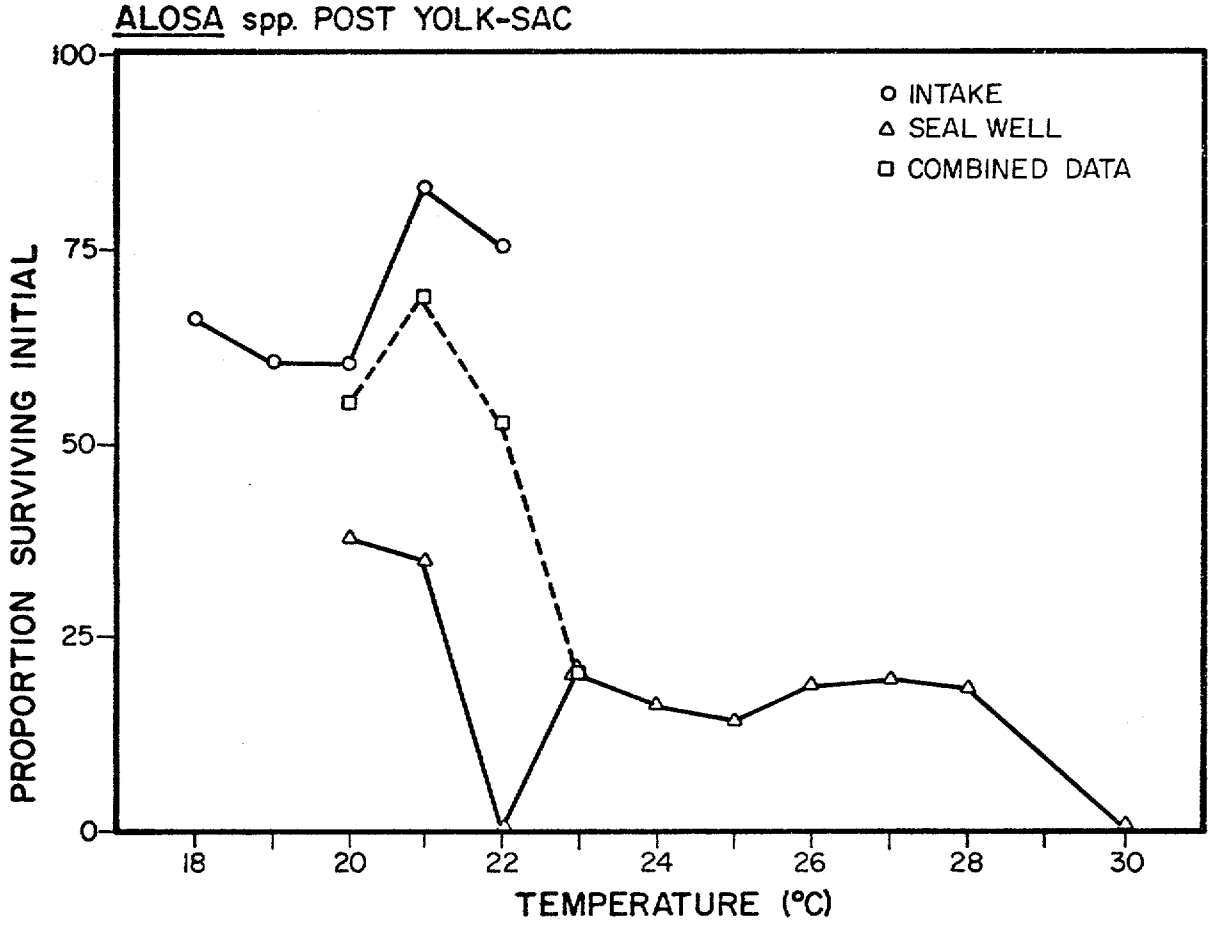
3.4.3 Striped Bass Larvae

Striped bass larvae collected during the ichthyoplankton survival study were predominantly yolk-sac, accounting for 67% of the total 172 larvae collected at the intake and 27% of the 78 larvae identified to life stage at the seal well. Sort efficiencies for yolk-sac and post-yolk-sac striped bass larvae at the intake station were 0.53 and 0.65, respectively. Yolk-sac sort efficiencies from seal well samples were comparable to the intake: 0.43. However, post-yolk-sac sort efficiency was much higher at the seal well (0.95) than at the intake.

Initial survival of yolk-sac striped bass at the Roseton intake was 0.48; post-yolk-sac larval initial survival was 0.63. Yolk-sac survival at the seal well was 0.24, while post-yolk-sac larval initial survival was 0.75. Proportional survival comparisons between intake and seal well samples for yolk-sac striped bass indicated a significant difference, with the survival at the seal well lower than at the intake. There was no difference in intake and seal well survival for post-yolk-sac striped bass larvae.

FIGURE 3.0-7

INITIAL SURVIVAL OF POST-YOLK-SAC ALOSA LARVAE RELATIVE TO WATER TEMPERATURE



Initial survival of both yolk-sac and post-yolk-sac striped bass larvae was evaluated based on water temperature (Figure 3.0-8). Because of the low abundance of these larvae in entrainment survival collections, a large degree of variability is present in the data, especially for yolk-sacs. Generally, initial intake survival was high for both life stages, with a similar pattern of the lowest survival observed at 19°C. Very few (21) yolk-sac striped bass were collected at the seal well, making observations on survival and temperature extremely tenuous. Post-yolk-sac larvae exhibited a high initial survival up to 28°C, where a definite decline in survival was suggested.

3.4.4 White Perch Larvae

White perch larvae were the second most abundant taxon collected during the entrainment survival program. A total of 198 larvae were identified from the intake samples, consisting of 24 yolk-sac and 174 post-yolk-sac. Initial sorting for survival observation did not yield any yolk-sac larvae, resulting in an initial survival of zero; all yolk-sac were recovered in the quality control sort. Post-yolk-sac initial survival at the intake was 0.64. At the seal well station a collection of 85 white perch larvae were comprised of one yolk-sac and 84 post-yolk-sac organisms. No yolk-sac larvae were observed during the initial sort, while 70 post-yolk-sac larvae were observed, resulting in sort efficiencies of zero and 0.83. Initial survival for post-yolk-sac larvae collected from the seal well was 0.38. For post-yolk-sac white perch larvae, a significantly lower initial survival was found at the seal well than at the intake location.

White perch post-yolk-sac initial survival related to water temperature (Figure 3.0-9) pointed to a decreasing trend in survival with an increase in temperature at the intake: from 82% at 18°C to 33%

FIGURE 3.0-8

INITIAL SURVIVAL OF STRIPED BASS LARVAE RELATIVE TO WATER TEMPERATURE

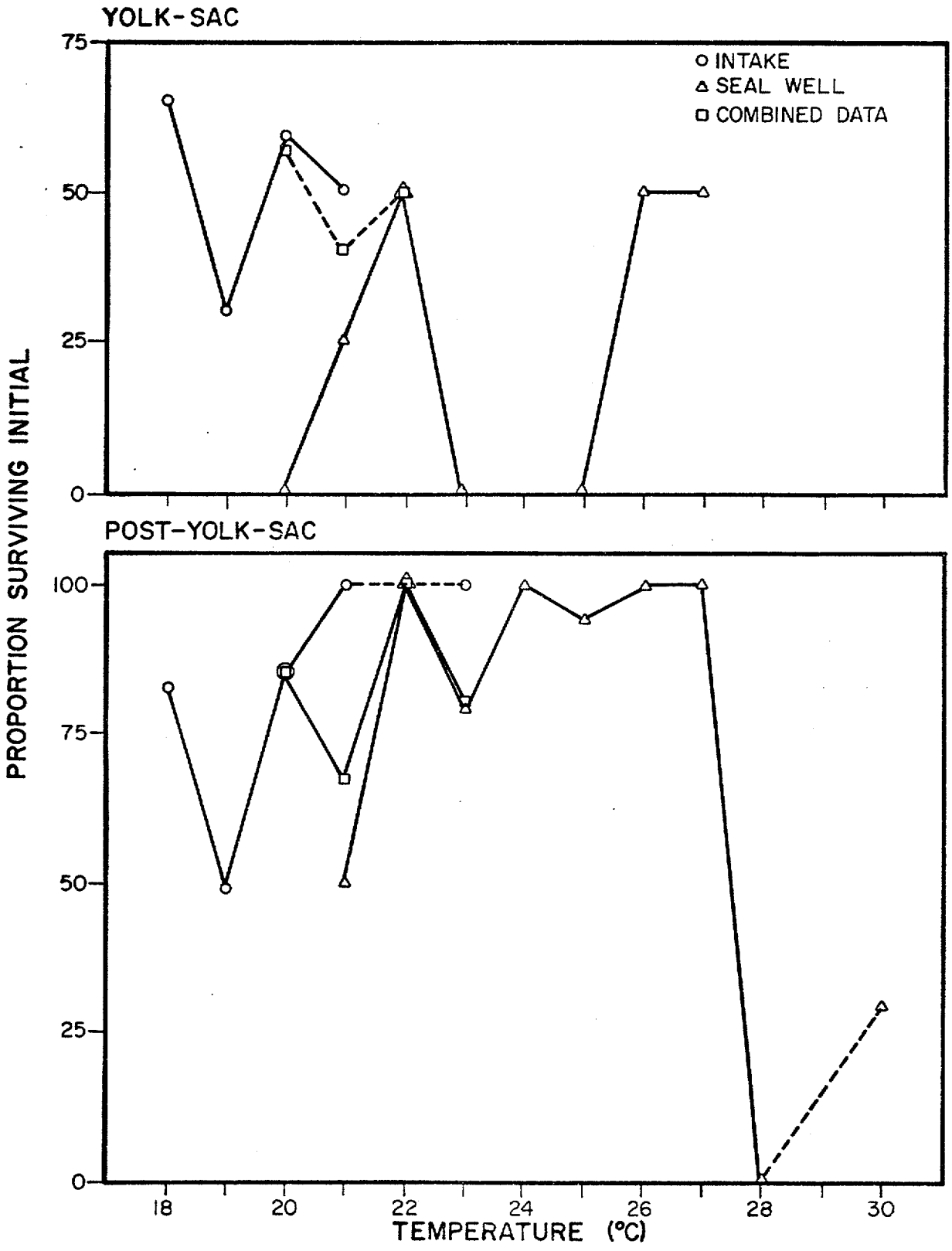
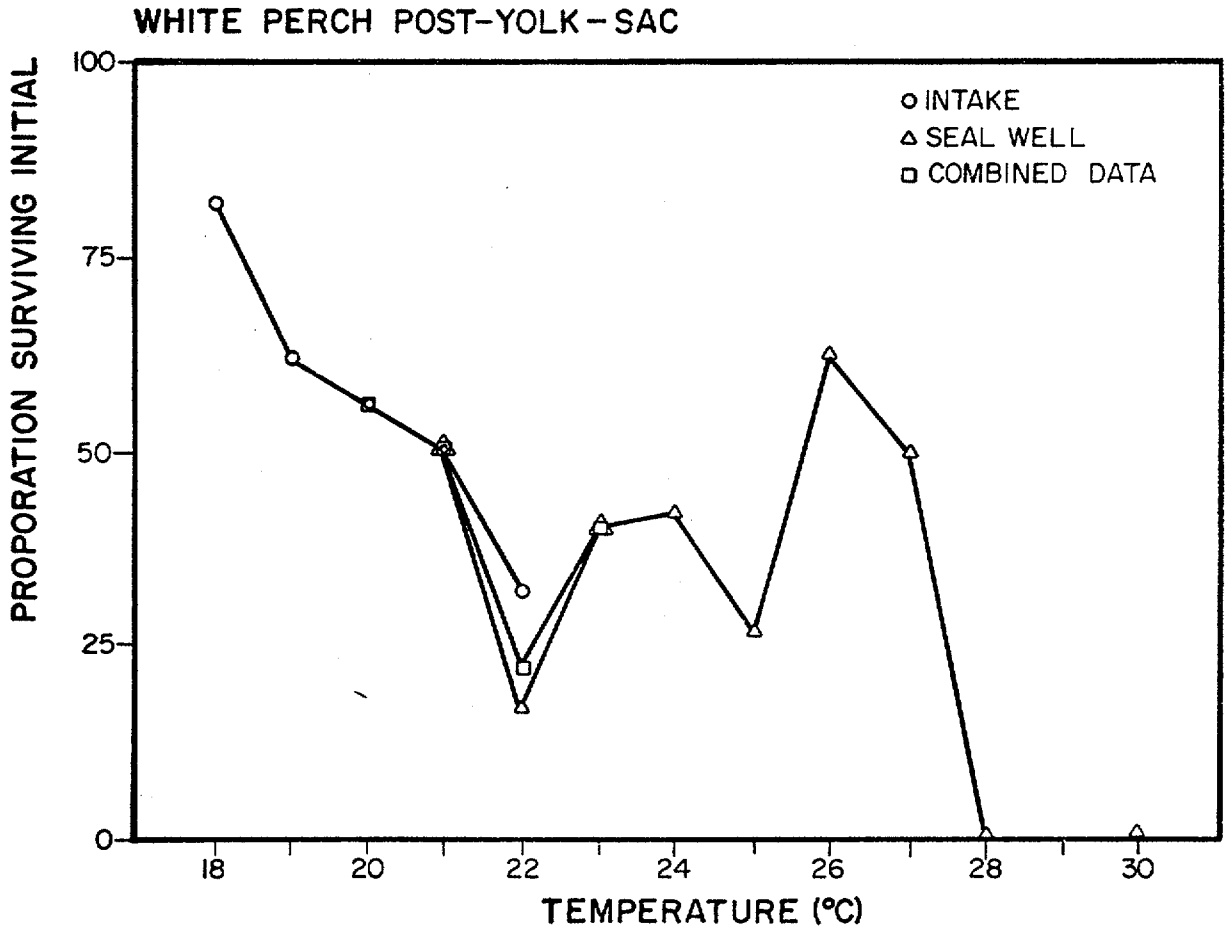


FIGURE 3.0-9

INITIAL SURVIVAL OF POST YOLK-SAC WHITE PERCH LARVAE RELATIVE TO WATER TEMPERATURE



at 22°C. At the seal well station, initial survival exhibited a range from 17% to 63% and averaged 32%.

3.5 EXTENDED ICHTHYOPLANKTON SURVIVAL

Extended survival observations were conducted on all ichthyoplankton species collected. Following an initial determination of condition, latent survival checks were made at 6, 12, 24, and 48 hrs following collection. Results of these checks for the major species collected during the study period by location and life stage are presented in Table 3.0-6; latent survival data for the comparative samples are given in Table 3.0-7. Results for the major species are discussed below. Extended survival for the major species calculated for each data set by observation period is shown in Table 3.0-8.

3.5.1 Alosa spp.

No yolk-sac Alosa spp. larvae were initially sorted from samples collected at Roseton intake and seal well locations. Forty-eight-hour survival for all post-yolk-sac larvae collected at the Roseton seal well and initially determined to be live or stunned was zero, with all specimens dying within 6 hrs of collection. More than 20% of the post-yolk-sac larvae collected at the intake survived through the first 6-hr period following collection. Alosa spp. larvae initially determined to be stunned experienced 100% mortality during the first 6-hr observation period. Latent survival declined dramatically following the 6-hr period, terminating in a 3.8% survival at 48 hrs.

3.5.2 Striped Bass

Striped bass was the only major species collected for which latent survival information was obtained for both yolk-sac and post-yolk-sac larvae, although the number of data points - especially for yolk-sac larvae - is generally small.

TABLE 3.0-6

ICHTHYOPLANKTON SURVIVAL STUDY -
LATENT SURVIVAL OBSERVATION INFORMATION[a]

Roseton Generating Station - 1980

I. ROSETON INTAKE

SPECIES	LIFESTAGE	INITIAL SURVIVAL COUNT			LATENT SURVIVAL							
					6 HOUR		12 HOUR		24 HOUR		48 HOUR	
		LIVE	STUNNED	DEAD	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED
Alosa spp.[b]	Yolk-sac	0	0	0	0	0	0	0	0	0	0	0
	Post-yolk-sac	162	21	26	38	0	15	0	10	0	6	0
Striped bass	Yolk-sac	49	6	6	28	1	14	1	3	0	2	0
	Post-yolk-sac	33	3	1	25	1	17	1	8	0	6	0
White perch	Yolk-sac	0	0	0	0	0	0	0	0	0	0	0
	Post-yolk-sac	100	11	13	61	3	42	1	27	0	24	0

II. ROSETON SEAL WELL

SPECIES	LIFESTAGE	INITIAL SURVIVAL COUNT			LATENT SURVIVAL							
					6 HOUR		12 HOUR		24 HOUR		48 HOUR	
		LIVE	STUNNED	DEAD	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED
Alosa spp.	Yolk-sac	0	0	0	0	0	0	0	0	0	0	0
	Post-yolk-sac	8	56	271	0	0	0	0	0	0	0	0
Striped bass	Yolk-sac	2	3	4	1	2	0	1	0	0	0	0
	Post-yolk-sac	38	5	11	35	1	34	1	32	1	31	1
White perch	Yolk-sac	0	0	0	0	0	0	0	0	0	0	0
	Post-yolk-sac	26	6	38	18	1	16	1	13	1	13	1

[a] Information obtained using all samples and photoperiods.
[b] Alosa spp. = Alewife, blueback herring, and American shad.

TABLE 3.0-7

ICHTHYOPLANKTON SURVIVAL STUDY -
LATENT SURVIVAL OBSERVATION INFORMATION[a]

Roseton Generating Station - 1980

I. ROSETON INTAKE

SPECIES	LIFESTAGE	INITIAL SURVIVAL COUNT			LATENT SURVIVAL							
					6 HOUR		12 HOUR		24 HOUR		48 HOUR	
		LIVE	STUNNED	DEAD	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED
Alosa spp.[b]	Yolk-sac	0	0	0	0	0	0	0	0	0	0	0
	Post-yolk-sac	80	21	26	10	0	7	0	6	0	2	0
Striped bass	Yolk-sac	2	1	6	1	0	0	0	0	0	0	0
	Post-yolk-sac	5	1	1	4	0	4	0	3	0	3	0
White perch	Yolk-sac	0	0	0	0	0	0	0	0	0	0	0
	Post-yolk-sac	17	5	12	12	1	11	0	11	0	10	0

II. ROSETON SEAL WELL

SPECIES	LIFESTAGE	INITIAL SURVIVAL COUNT			LATENT SURVIVAL							
					6 HOUR		12 HOUR		24 HOUR		48 HOUR	
		LIVE	STUNNED	DEAD	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED
Alosa spp.	Yolk-sac	0	0	0	0	0	0	0	0	0	0	0
	Post-yolk-sac	8	56	262	0	0	0	0	0	0	0	0
Striped bass	Yolk-sac	2	3	4	1	2	0	1	0	0	0	0
	Post-yolk-sac	35	5	5	32	1	31	1	29	1	28	1
White perch	Yolk-sac	0	0	0	0	0	0	0	0	0	0	0
	Post-yolk-sac	26	6	35	18	1	16	1	13	1	13	1

[a] Information obtained using samples collected simultaneously at intake and seal well.
[b] *Alosa* spp. = Alewife, blueback herring, and American shad.

TABLE 3.0-8

ICHTHYOPLANKTON SURVIVAL STUDY -
CALCULATED EXTENDED SURVIVAL

Roseton Generating Station - 1980

I. BASED ON ALL SAMPLE DATA

TAXON	LIFESTAGE	COLLECTION LOCATION	EXTENDED SURVIVAL 6 HOUR	12 HOUR	24 HOUR	48 HOUR
Alosa spp.	Post-yolk-sac	Intake	0.211	0.083	0.056	0.033
		Seal Well	0.0	0.0	0.0	0.0
Striped bass	Yolk-sac	Intake	0.509	0.228	0.053	0.035
		Seal Well	0.600	0.200	0.0	0.0
	Post-yolk-sac	Intake	0.743	0.514	0.229	0.171
		Seal Well	0.837	0.814	0.767	0.744
White perch	Post-yolk-sac	Intake	0.577	0.387	0.243	0.216
		Seal Well	0.594	0.531	0.438	0.438

II. BASED ON COMPARATIVE COLLECTION DATA

TAXON	LIFESTAGE	COLLECTION LOCATION	EXTENDED SURVIVAL 6 HOUR	12 HOUR	24 HOUR	48 HOUR
Alosa spp.	Post-yolk-sac	Intake	0.099	0.069	0.059	0.020
		Seal Well	0.0	0.0	0.0	0.0
Striped bass	Yolk-sac	Intake	0.667	0.0	0.0	0.0
		Seal Well	0.600	0.200	0.0	0.0
	Post-yolk-sac	Intake	0.667	0.667	0.500	0.500
		Seal Well	0.825	0.800	0.750	0.725
White perch	Post-yolk-sac	Intake	0.591	0.500	0.500	0.455
		Seal Well	0.594	0.531	0.438	0.438

$$\text{Extended Survival } (ES_i) = \frac{\text{Number of larvae alive and stunned at observation time } i}{\text{Total number of larvae initially alive and stunned}}$$

A total of 28 yolk-sac larvae out of the 49 initially collected live at the intake survived the first 6 hrs following collection, resulting in a 57.1% survival rate. Survival through the 48-hr observation period was 4.1%, with 50% mortality occurring between the 6- and 12-hr observation checks. Only two striped bass larvae classified live were collected at the seal well; both were still alive at the 6-hr check and one survived through the 12-hr check but was dead at 24 hrs.

Twenty-five of the 33 initially live striped bass post-yolk-sac larvae collected at the intake station were alive at the 6-hr check, yielding a 75.8% survival. Intake larval survival gradually decreased with time over the next 42 hrs, with 18.2% surviving through the 48-hr observation period. Overall long-term survival of post-yolk-sac striped bass larvae collected at the seal well was consistently high throughout the 48-hr holding period; 81.6% (31) of the 38 initially live larvae were still alive at 48 hrs.

3.5.3 White Perch

Approximately four times more white perch post-yolk-sac larvae were sorted and determined to be live at the intake (100) than at the seal well (26). However, latent survival at the first observation check was similar for both locations: 61% at the intake and 69.2% at the seal well. Long-term survival remained high for larvae collected at the seal well, with 50% of the initially live organisms surviving through the 48-hr period; 48-hr survival for intake samples was 24.0%.

3.6 PLANT ENTRAINMENT SURVIVAL

Plant entrainment survival was calculated using initial survival data for Alosa spp. post-yolk-sac, striped bass yolk-sac, and

white perch post-yolk-sac, those species and life stages having a proportion surviving in the intake collections significantly greater than the proportion surviving at the seal well. Entrainment survival calculated for all samples and for comparative samples is presented in Table 3.0-9.

Alosa spp. post-yolk-sac entrainment survival for comparative sample dates was 0.246; striped bass yolk-sac entrainment survival was the same at both locations; and the white perch post-yolk-sac value was 0.718. No plant-induced mortality was detected for striped bass post-yolk-sac larvae since initial survival of samples was greater at the seal well than at the intake. Calculated entrainment survival values using all sample dates were similar to those from comparative sample dates with the exception of striped bass yolk-sac, which had a value of 0.498.

TABLE 3.0-9

PLANT ENTRAINMENT SURVIVAL

Roseton Generating Station - 1980

I. BASED ON ALL SAMPLES COLLECTED

TAXON	SAMPLING LOCATION	INITIAL SURVIVAL[a] YOLK-SAC	INITIAL SURVIVAL[a] POST-YOLK-SAC	ENTRAINMENT SURVIVAL (S_e)[b] YOLK-SAC	ENTRAINMENT SURVIVAL (S_e)[b] POST-YOLK-SAC
Alosa spp.[c]	I	0	0.663		0.281
	SW	0	0.186		
Striped bass	I	0.478	0.632	0.498	$P_I < P_{SW}$
	SW	0.238	0.754		
White perch	I	0	0.638		0.597
	SW	0	0.381		

II. BASED ON COMPARATIVE SAMPLES

TAXON	SAMPLING LOCATION	INITIAL SURVIVAL[a] YOLK-SAC	INITIAL SURVIVAL[a] POST-YOLK-SAC	ENTRAINMENT SURVIVAL (S_e)[b] YOLK-SAC	ENTRAINMENT SURVIVAL (S_e)[b] POST-YOLK-SAC
Alosa spp.[c]	I	0	0.777		0.246
	SW	0	0.191		
Striped bass	I	0.231	0.600	$P_I = P_{SW}$	$P_I < P_{SW}$
	SW	0.238	0.851		
White perch	I	0	0.550		0.718
	SW	0	0.395		

[a] Initial Survival = $\frac{\text{Initial Number Live + Initial Number Stunned}}{\text{Total Number Collected}}$

[b] $S_e = \frac{P_{SW}}{P_I}$

[c] Includes American shad.

CHAPTER 4.0

REPORT SUMMARY

An entrainment survival program was conducted at the Roseton Generating Station during the period 28 May-26 June 1980 using induced-flow larval tables. Larval tables were located at and sampled from the cooling water intake and the condenser cooling water discharge at the seal well.

- Similar species representation was observed at both locations, with the dominant species being Alosa spp. (alewife, blueback herring), striped bass, and white perch.
- Eighty-eight samples were collected at the intake and 58 were collected at the seal well. Ten samples collected at the intake contained no larvae, while only one seal well sample had no larvae. Evaluation of different larval table flow-through velocities and resultant sample volumes indicated differences with greater larval abundances associated with higher sample volumes.
- Abundance patterns based on larval table samples followed normal seasonal trends. Peak abundance periods based on larval table samples corresponded closely to peak periods based on 24-hr entrainment abundance samples collected over the same time period. Post-yolk-sac larvae were the dominant life stage collected for Alosa spp. and white perch, while yolk-sac larvae were the major striped bass life stage collected.
- Very few fish eggs were observed during the initial viability sort, precluding any evaluation of survival for this group. No yolk-sac Alosa spp. larvae were collected at the seal well station; initial survival for post-yolk-sac Alosa spp. was 0.65 and 0.18 at the intake and seal well, respectively. Alosa spp. post-yolk-sac survival was significantly lower in seal well samples than in intake samples. Yolk-sac and post-yolk-sac striped bass larvae were collected at each location

with no difference in initial survival for post-yolk-sac larvae between the two locations, but significantly lower survival for yolk-sac observed at the seal well. Initial survival of yolk-sac striped bass larvae at the intake was 0.48 and post-yolk-sac survival was 0.63. Yolk-sac striped bass survival at the seal well was 0.24, while post-yolk-sac initial survival was 0.75. Post-yolk-sac white perch survival was significantly lower ($\alpha = .05$) at the seal well, with initial survival values of 0.64 and 0.38 at the intake and seal well stations.

- Extended survival based on dates when samples were collected at both locations was low for Alosa spp. larvae (only post-yolk-sac were evaluated), with no organisms collected at the seal well surviving through the first 6-hr period following collection and approximately 20% of the organisms collected at the intake surviving. Striped bass yolk-sac survival at the 6-hr observation check was 66.7% and 60.0% at the intake and seal well, respectively; survival at 48 hrs was zero for intake and seal well samples. Post-yolk-sac survival at the 6-hr check was high for striped bass collected at both locations: 66.7 and 82.5%, respectively. Survival at 48 hrs for post-yolk-sac striped bass was highly variable between samples collected at the two locations: 50.0% for the intake samples and 72.5% for the seal well samples. White perch post-yolk-sac survival was comparable for intake (59.1%) and seal well (59.4%) collections at 6 hrs; 48-hr survival for intake specimens was 45.5%, while seal well specimens exhibited a survival of 43.8%.

- Plant entrainment survival calculated on initial survival values for comparable sample dates were 24.6 for Alosa spp. post-yolk-sac and 71.8 for post-yolk-sac white perch. Intake and seal well survival were the same for yolk-sac striped bass and intake survival was lower than seal well survival for post yolk-sac striped bass.

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REPORT APPENDIX

ROSETON ICHTHYOPLANKTON SURVIVAL PROGRAM

1980

APPENDIX - A

COLLECTION VELOCITY COMPARISON

APPENDIX A

COLLECTION VELOCITY EVALUATION

Four different through-table velocities were used for the intake collections. All samples from the first seven dates and the majority of the rest were collected at velocities of 0.76 m^3/min (200 gpm). The following table presents a summary of the velocities employed during the sampling program.

ROSETON SAMPLE COLLECTION INFORMATION - INTAKE

PUMP RATE (m^3/min	VOLUME SAMPLED (m^3)	No. OF SAMPLES	No. ZERO COLLECTIONS	TOTAL LARVAE COLLECTED	MEAN LARVAL ABUNDANCE
0.76	11.36	62	5	606	9.77
0.92	13.74	21	4	135	6.43
0.93	13.91	1	1	0	-
1.10	16.46	4	0	18	4.50

Four through-table velocities were used as part of the seal well collection program, with the largest percentages corresponding to either 0.76 m^3/min or 0.95 m^3/min. The following table presents a summary of velocities employed at the seal well station.

ROSETON SAMPLE COLLECTION INFORMATION - SEAL WELL

PUMP RATE (m^3/min	VOLUME SAMPLED (m^3)	No. OF SAMPLES	No. ZERO COLLECTIONS	TOTAL LARVAE COLLECTED	MEAN LARVAL ABUNDANCE
0.76	11.36	26	0	230	8.85
0.95	14.19	22	0	289	13.14
0.17	17.60	4	0	22	5.50
1.57	23.56	6	1	29	4.83

Sample Volume Comparison

The total number of ichthyoplankton collected in the larval tables at the Roseton intake and seal was was analyzed separately using a two-way analysis of variance (ANOVA) (Snedecor and Cochran 1967) to examine the effect of different sample volumes on sample larval abundance. Only dates with comparison volume sampling were included in the ANOVA. Before an ANOVA was implemented on either data set, Bartlett's test (Snedecor and Cochran 1967) was used to determine if an assumption of homogeneity of variance was valid. The assumption was not rejected in either case (α = .05), resulting in the ANOVA's being performed on the actual collection data.

At α = .05 significance level, both the intake and seal well data sets had the same results: the samples with higher volume had significantly more larvae than the 11.36 m^3 samples (Table A-1). Both locations also exhibited differences among dates, so the higher volume samples collected during 23 and 26 June were eliminated in the ANOVA because their effects would be confounded with the effect of date.

Evaluation of ichthyoplankton survival at the different through-table velocities (Table A-2) suggests for Alosa spp post-yolk-sac and both life stages of striped bass an increase in survival with an increase in velocity; white perch post-yolk-sac demonstrate the opposite trend, with decreasing survival with an increase in velocity. It should be noted that combining the survival data to obtain the trends is tenuous because of the influence of temperature, which appears to be the major influence, at the seal well station.

TABLE A-1

STATISTICAL ANALYSIS FOR LARVAE COLLECTED DURING SAMPLE VOLUME COMPARISON

Roseton Generating Station - 1980

INTAKE

TWO-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F
Date[a] (D)	6	365.706	60.951	4.20*
Volume[b] (V)	1	72.781	72.781	5.02*
(D) x (V)	6	93.039	15.506	1.07
Error	28	406.083	14.503	
Total	41	937.609		

*Significant at α = .05.

VOLUME	MEAN[c]	SD
11.36	3.8	3.38
13.74	6.1	5.75

SEAL WELL

TWO-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F
Date[a] (D)	6	1063.739	177.290	4.85*
Volume[d] (V)	1	186.114	186.114	5.09*
(D) x (V)	6	236.817	39.469	1.08
Error	28	1024.250	36.580	
Total	41	2510.920		

*Significant at α = .05.

VOLUME	MEAN[c]	SD
11.36	8.9	7.29
14.19	13.1	8.00

[a]Dates used were from 10 June through 19 June.
[b]Volumes used were 11.36 and 13.74.
[c]Mean of all samples collected at the particular volume.
[d]Volumes used were 11.36 and 14.19.

TABLE A-2

ICHTHYOPLANKTON SURVIVAL AND THROUGH TABLE VELOCITY

Roseton Generating Station - 1980

INTAKE

TAXON	COLLECTION VELOCITY (m^3/min)	INITIAL VIABILITY LIVE	STUNNED	DEAD	48-hr SURVIVAL LIVE	STUNNED	NUMBER COLLECTED
Alosa spp. Post-Yolk-Sac	0.76	96	8	6	4	0	175
	0.92	54	5	17	2	0	80
	0.93						0
	1.10	6	3	2	0	0	11
Striped bass Yolk-Sac	0.76	49	6	3	2	0	112
	0.92	0	0	3	0	0	3
	0.93						0
	1.10						0
Striped bass Post-Yolk-Sac	0.76	31	2	1	4	0	53
	0.92	2	0	0	2	0	3
	0.93						0
	1.10	0	1	0	0	0	1
White perch Post-Yolk-Sac	0.76	90	10	5	18	0	153
	0.92	9	1	6	5	0	18
	0.93						0
	1.10	1	0	2	1	0	3

SEAL WELL

TAXON	COLLECTION VELOCITY (m^3/min)	INITIAL VIABILITY LIVE	STUNNED	DEAD	48-hr SURVIVAL LIVE	STUNNED	NUMBER COLLECTED
Alosa spp. Post-Yolk-Sac	0.76	4	25	84	0	0	120
	0.95	3	26	154	0	0	185
	1.17	0	2	12	0	0	14
	1.57	0	0	9	0	0	9
Striped bass Yolk-Sac	0.76	1	3	2	0	0	16
	0.95	1	0	2	0	0	4
	1.17						0
	1.57						0
Striped bass Post-Yolk-Sac	0.76	20	4	3	15	1	29
	0.95	15	1	1	13	0	17
	1.17	0	0	1	0	0	1
	1.57	3	0	6	3	0	10
White perch Post-Yolk-Sac	0.76	12	1	11	6	0	35
	0.95	14	5	22	7	1	43
	1.17	0	0	2	0	0	3
	1.57	0	0	3	0	0	3

APPENDIX - B

COLLECTION INFORMATION BY WATER TEMPERATURE

- o *Alosa* spp. — Post-yolk-sac
- o Striped bass — Yolk-sac
- o Striped bass — Post-yolk-sac
- o White perch — Post-yolk-sac

TABLE B-1

ICHTHYOPLANKTON SURVIVAL INFORMATION BY WATER TEMPERATURE

Roseton Generating Station

ALOSA SPP. POST-YOLK-SAC

SAMPLE TEMPERATURE (°C)	LOCATION	NUMBER OF SAMPLES	INITIAL SURVIVAL			48-hr SURVIVAL		TOTAL NUMBER COLLECTED
			LIVE	STUNNED	DEAD	LIVE	STUNNED	
18	I	8	58	0	1	4	0	88
	SW	-						
19	I	33	38	3	10	2	0	68
	SW	-						
20	I	29	26	6	2	0	0	53
	SW	1	0	6	10	0	0	16
21	I	12	27	6	5	0	0	40
	SW	3	1	5	8	0	0	17
22	I	4	6	3	3	0	0	12
	SW	2	0	0	3	0	0	5
23	I	1	0	0	0	0	0	0
	SW	10	3	10	49	0	0	65
24	I	-						
	SW	5	3	2	27	0	0	32
25	I	-						
	SW	11	0	11	69	0	0	81
26	I	-						
	SW	8	0	12	54	0	0	66
27	I	-						
	SW	9	0	5	21	0	0	26
28	I	-						
	SW	3	0	2	9	0	0	11
29	I	-						
	SW	-						
30	I	-						
	SW	6	0	0	9	0	0	9
TOTAL	I	87	155	18	21	6	0	261
	SW	58	7	53	259	0	0	328

- No Sample.

TABLE B-2

ICHTHYOPLANKTON SURVIVAL INFORMATION BY WATER TEMPERATURE

STRIPED BASS YOLK-SAC

SAMPLE TEMPERATURE (°C)	LOCATION	NUMBER OF SAMPLES	INITIAL SURVIVAL			48-hr SURVIVAL		TOTAL NUMBER COLLECTED
			LIVE	STUNNED	DEAD	LIVE	STUNNED	
18	I	8	17	3	1	0	0	31
	SW	-						
19	I	33	14	1	5	0	0	49
	SW	-						
20	I	29	16	1	0	2	0	29
	SW	1	0	0	0	0	0	1
21	I	12	2	1	0	0	0	6
	SW	3	0	1	0	0	0	4
22	I	4	0	0	0	0	0	0
	SW	2	1	0	0	0	0	2
23	I	1	0	0	0	0	0	0
	SW	10	0	0	0	0	0	4
24	I	-						
	SW	5	0	0	0	0	0	0
25	I	-						
	SW	11	0	0	0	0	0	4
26	I	-						
	SW	8	1	0	1	0	0	2
27	I	-						
	SW	9	0	2	0	0	0	4
28	I	-						
	SW	3	0	0	0	0	0	0
29	I	-						
	SW	-						
30	I	-						
	SW	6	0	0	0	0	0	0
TOTAL	I	87	49	6	6	2	0	115
	SW	58	2	3	1	0	0	21

TABLE B-3

ICHTHYOPLANKTON SURVIVAL INFORMATION BY WATER TEMPERATURE

STRIPED BASS POST-YOLK-SAC

SAMPLE TEMPERATURE (°C)	LOCATION	NUMBER OF SAMPLES	INITIAL SURVIVAL			48-hr SURVIVAL		TOTAL NUMBER COLLECTED
			LIVE	STUNNED	DEAD	LIVE	STUNNED	
18	I	8	5	0	0	0	0	6
	SW	-						
19	I	33	16	1	1	3	0	35
	SW	-						
20	I	29	10	1	0	2	0	13
	SW	1	0	0	0	0	0	0
21	I	12	2	0	0	1	0	2
	SW	3	1	1	0	1	0	4
22	I	4	0	0	0	0	0	0
	SW	2	3	0	0	0	0	3
23	I	1	0	1	0	0	0	1
	SW	10	9	2	3	7	0	14
24	I	-						
	SW	5	1	0	0	1	0	1
25	I	-						
	SW	11	14	1	1	12	0	16
26	I	-						
	SW	8	3	1	0	3	1	4
27	I	-						
	SW	9	4	0	0	4	0	4
28	I	-						
	SW	3	0	0	1	0	0	1
29	I	-						
	SW	-						
30	I	-						
	SW	6	3	0	6	3	0	10
TOTAL	I	87	33	3	1	6	0	57
	SW	58	38	5	11	31	1	57

TABLE B-4

ICHTHYOPLANKTON SURVIVAL INFORMATION BY WATER TEMPERATURE

WHITE PERCH POST-YOLK-SAC

SAMPLE TEMPERATURE (°C)	LOCATION	NUMBER OF SAMPLES	INITIAL SURVIVAL			48-hr SURVIVAL		TOTAL NUMBER COLLECTED
			LIVE	STUNNED	DEAD	LIVE	STUNNED	
18	I	8	35	5	0	6	0	49
	SW	-						
19	I	33	36	2	7	8	0	61
	SW	-						
20	I	29	19	3	1	7	0	39
	SW	1	0	0	0	0	0	0
21	I	12	9	1	2	2	0	20
	SW	3	1	0	0	0	0	2
22	I	4	1	0	2	1	0	3
	SW	2	1	0	0	0	0	6
23	I	1	0	0	0	0	0	0
	SW	10	9	1	11	1	0	25
24	I	-						
	SW	5	3	0	4	3	0	7
25	I	-						
	SW	11	2	1	7	2	0	11
26	I	-						
	SW	8	5	0	3	4	0	8
27	I	-						
	SW	9	5	4	7	3	1	18
28	I	-						
	SW	3	0	0	3	0	0	4
29	I	-						
	SW	-						
30	I	-						
	SW	6	0	0	3	0	0	3
TOTAL	I	87	100	11	12	24	0	172
	SW	58	26	6	38	13	1	84

APPENDIX - C

INITIAL SURVIVAL DATA ANALYSIS

ALL SAMPLES COLLECTED

Alosa spp.: Post-Yolk-Sac

$$P_I = \frac{162 + 21}{276} = 0.663 \qquad P_{SW} = \frac{8 + 56}{344} = 0.186$$

$$Z = \frac{0.663 - 0.186}{0.396\ (0.602)\left(\frac{1}{276} + \frac{1}{344}\right)} = \frac{0.477}{0.039} = 12.231^*$$

Striped bass: Yolk-Sac

$$P_I = \frac{49 + 6}{115} = 0.478 \qquad P_{SW} = \frac{2 + 3}{21} = 0.238$$

$$Z = \frac{0.478 - 0.238}{0.441\ (0.559)\left(\frac{1}{115} + \frac{1}{21}\right)} = \frac{0.240}{0.118} = 2.034^*$$

Striped bass: Post-Yolk-Sac

$$P_I = \frac{33 + 3}{57} = 0.632 \qquad P_{SW} = \frac{38 + 5}{57} = 0.754$$

White perch: Post-Yolk-Sac

$$P_I = \frac{100 + 11}{174} = 0.638 \qquad P_{SW} = \frac{26 + 6}{84} = 0.381$$

$$Z = \frac{0.638 - 0.381}{0.554\ (0.446)\left(\frac{1}{174} + \frac{1}{84}\right)} = \frac{0.257}{0.666} = 3.894^*$$

*Significantly different @ $\alpha = 0.05$

COMPARATIVE SAMPLES

Alosa spp.: Post-Yolk-Sac

$$P_I = \frac{80 + 21}{130} = 0.777 \qquad P_D = \frac{8 + 56}{335} = 0.191$$

$$Z = \frac{0.777 - 0.191}{0.355\ (0.645)\ \left(\frac{1}{130} + \frac{1}{335}\right)} = \frac{0.586}{0.041} = 14.327^*$$

Striped bass: Yolk-Sac

$$P_I = \frac{2 + 1}{13} = 0.231 \qquad P_{SW} = \frac{2 + 3}{21} = 0.238$$

Striped bass: Post-Yolk-Sac

$$P_I = \frac{5 + 1}{10} = 0.600 \qquad P_{SW} = \frac{35 + 5}{47} = 0.851$$

White perch: Post-Yolk-Sac

$$P_I = \frac{17 + 5}{90} = 0.550 \qquad P_{SW} = \frac{26 + 6}{81} = 0.395$$

$$Z = \frac{0.550 - 0.395}{0.446\ (0.554)\ \left(\frac{1}{40} + \frac{1}{81}\right)} = \frac{0.155}{0.096} = 1.615$$

*Significantly different @ $\alpha = 0.05$

APPENDIX - D

INTAKE AND SEAL WELL COLLECTION INFORMATION

SAMPLE ABUNDANCE AND CONCENTRATION

APPENDIX - E

INTAKE AND SEAL WELL COLLECTION INFORMATION

INITIAL AND EXTENDED SURVIVAL DATA

APPENDIX - F

INTAKE AND SEAL WELL COLLECTION INFORMATION

LENGTH FREQUENCY DATA

- o *Alosa* spp.
- o Cyprinidae
- o *Morone* spp.
- o White perch
- o Rainbow smelt
- o Striped bass
- o Tessellated darter
- o Yellow perch

CENTRAL HUDSON GAS & ELECTRIC CORPORATION

AQUATIC ECOLOGY STUDIES

1980

REPORT APPENDIX

VOLUME II

APPENDICES 1 THROUGH 6

NOVEMBER 1981

LMSE-81/0191&176/174

LAWLER, MATUSKY & SKELLY ENGINEERS
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REPORT APPENDIX

TABLE OF CONTENTS

APPENDIX 1 - Ichthyoplankton Collection Data

APPENDIX 2 - Statistical Analysis for Select Species in Entrainment Collections at the Roseton and Danskammer Point Generating Stations

APPENDIX 3 - Danskammer Point Intake Velocity Study

APPENDIX 4 - Daily Estimated Entrainment Rate for Select Species Collected at the Roseton and Danskammer Point Electric Generating Stations

APPENDIX 5 - Weekly Estimated Impingement Rate for Select Species Collected at the Roseton and Danskammer Point Electric Generating Stations

APPENDIX 6 - Water Quality Data - Weekly Parameters

APPENDIX 1 - ICHTHYOPLANKTON COLLECTION DATA

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES ALOSA SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
ROSW	551527	BOT	4/25/80	0517	0817	48940.0	185.2379	.00	.00	.00	.00	.00	.00	**
ROSW	551528	BOT	4/25/80	0817	1117	45620.0	187.8117	10.65	.00	.00	.00	.00	.00	
ROSW	551522	BOT	4/24/80	1417	1717	48320.0	182.8912	10.94	.00	.00	.00	.00	.00	
ROSW	551529	BOT	4/25/80	1117	1417	47830.0	181.0366	66.28	.00	.00	.00	.00	.00	
ROSW	551523	BOT	4/24/80	1717	2017	49060.0	185.6921	10.77	.00	.00	.00	.00	.00	
ROSW	551524	BOT	4/24/80	2017	2317	48350.0	183.0048	5.46	.00	.00	.00	.00	.00	
ROSW	551525	BOT	4/24/80	2317	0217	49050.0	185.6543	5.39	.00	.00	.00	.00	.00	
ROSW	551526	BOT	4/25/80	0217	0517	48910.0	185.1244	16.21	.00	.00	.00	.00	.00	
ROSW	551530	MID	4/29/80	0607	0907	48900.0	185.0865	32.42	10.81	10.81	.00	.00	.00	
ROSW	551531	MID	4/29/80	0907	1207	49180.0	186.1463	96.70	.00	.00	.00	.00	.00	
ROSW	551532	MID	4/29/80	1207	1507	41890.0	158.5537	44.15	.00	.00	.00	.00	.00	
ROSW	551533	MID	4/29/80	1507	1807	58230.0	220.4006	54.45	.00	.00	.00	.00	.00	
ROSW	551534	MID	4/29/80	1807	2038	40230.0	152.2706	91.94	.00	.00	.00	.00	.00	
ROSW	551535	MID	4/29/80	2038	2338	49630.0	187.8496	58.56	5.32	.00	5.32	.00	.00	
ROSW	551536	MID	4/29/80	2338	0238	48910.0	185.1244	10.80	.00	.00	.00	.00	.00	
ROSW	551537	MID	4/30/80	0238	0607	56190.0	212.6792	89.34	9.40	.00	.00	.00	9.40	
ROSW	551538	MID	5/06/80	0559	0859	50190.0	189.9692	10.53	.00	.00	.00	.00	.00	
ROSW	551539	MID	5/06/80	0859	1159	49870.0	188.7580	5.30	5.30	.00	.00	.00	5.30	
ROSW	551540	MID	5/06/80	1159	1459	51340.0	194.3219	5.15	25.73	.00	.00	.00	25.73	
ROSW	551541	MID	5/06/80	1459	1759	51860.0	196.2901	25.47	10.19	.00	5.09	.00	5.09	
ROSW	551542	MID	5/06/80	1759	2059	48210.0	182.4749	16.44	27.40	16.44	.00	.00	10.96	
ROSW	551543	MID	5/06/80	2059	2359	47840.0	181.0744	38.66	27.61	.00	.00	.00	27.61	
ROSW	551544	MID	5/06/80	2359	0259	48370.0	183.0805	5.46	5.46	.00	5.46	.00	.00	
ROSW	551545	MID	5/07/80	0259	0559	49760.0	188.3416	21.24	15.93	.00	15.93	.00	.00	
ROSW	551546	MID	5/13/80	0602	0902	50180.0	189.9313	168.48	94.77	21.06	42.12	.00	31.59	
ROSW	551553	MID	5/14/80	0302	0602	47900.0	181.3015	341.97	.00	.00	.00	.00	.00	
ROSW	551547	MID	5/13/80	0902	1202	49600.0	187.7360	340.90	63.92	.00	31.96	.00	31.96	
ROSW	551548	MID	5/13/80	1202	1502	49360.0	186.8276	240.86	37.47	.00	.00	.00	37.47	
ROSW	551549	MID	5/13/80	1502	1802	47920.0	181.3772	562.36	16.54	.00	11.03	.00	5.51	
ROSW	551550	MID	5/13/80	1802	2102	47970.0	181.5665	473.66	55.08	.00	55.08	.00	.00	
ROSW	551551	MID	5/13/80	2102	0002	48630.0	184.0646	249.91	48.90	.00	27.16	.00	21.73	
ROSW	551552	MID	5/14/80	0002	0302	49160.0	186.0706	53.74	.00	.00	.00	.00	.00	
ROSW	551554	BOT	5/20/80	0624	0924	48840.0	184.8594	405.71	167.70	10.82	156.88	.00	.00	
ROSW	551561	BOT	5/21/80	0324	0624	55600.0	210.4460	337.38	204.33	.00	199.58	.00	4.75	
ROSW	551555	BOT	5/20/80	0924	1224	48000.0	181.6800	275.21	159.62	16.51	44.03	.00	99.08	
ROSW	551556	BOT	5/20/80	1224	1524	50390.0	190.7262	298.86	152.05	10.49	26.22	.00	115.35	
ROSW	551557	BOT	5/20/80	1524	1824	48990.0	185.4272	275.04	16.18	.00	.00	.00	16.18	
ROSW	551558	BOT	5/20/80	1824	2124	49900.0	188.8715	37.06	15.88	5.29	.00	.00	10.59	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES ALOSA SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
RDSW	551559	BOT	5/20/80	2124	0024	50110.0	189.6664	84.36	36.91	.00	.00	.00	36.91
RDSW	551560	BOT	5/21/80	0024	0324	49890.0	188.8337	15.89	42.37	.00	15.89	.00	26.48
RDSW	551567	BOT	5/28/80	0600	0900	48180.0	182.3613	.00	82.25	.00	71.29	.00	10.97
RDSW	551568	BOT	5/28/80	0900	1200	51710.0	195.7224	45.98	168.61	.00	132.84	.00	35.76
RDSW	551569	BOT	5/28/80	1200	1500	50540.0	191.2939	41.82	245.70	.00	230.01	.00	15.68
RDSW	551562	BOT	5/27/80	1530	1800	41110.0	155.6014	.00	244.21	.00	244.21	.00	.00
RDSW	551563	BOT	5/27/80	1800	2100	49710.0	188.1524	.00	212.59	.00	201.96	.00	10.63
RDSW	551564	BOT	5/27/80	2100	0000	48500.0	183.5725	.00	288.71	.00	185.21	.00	103.50
RDSW	551565	BOT	5/28/80	0000	0300	47360.0	179.2576	.00	781.00	.00	769.84	.00	11.16
RDSW	551566	BOT	5/28/80	0300	0600	46470.0	175.8890	22.74	528.74	.00	517.37	.00	11.37
RDSW	551570	BOT	6/03/80	0603	0903	49840.0	188.6444	.00	811.05	.00	784.54	.00	26.50
RDSW	551579	BOT	6/04/80	0303	0603	49760.0	188.3416	.00	366.36	.00	366.36	.00	.00
RDSW	551571	BOT	6/03/80	0903	1203	49140.0	185.9949	48.39	215.06	.00	204.31	.00	10.75
RDSW	551572	BOT	6/03/80	1203	1503	51400.0	194.5490	.00	534.57	.00	519.15	.00	15.42
RDSW	551573	BOT	6/03/80	1503	1803	49950.0	189.0608	.00	296.20	.00	296.20	.00	.00
RDSW	551574	BOT	6/03/80	1803	2103	49070.0	185.7300	37.69	387.66	.00	344.59	.00	43.07
RDSW	551575	BOT	6/03/80	2103	2133	8200.0	31.0370	.00	579.95	.00	579.95	.00	.00
RDSW	551576	BOT	6/03/80	2133	2203	8400.0	31.7940	.00	408.88	.00	377.43	.00	31.45
RDSW	551577	BOT	6/03/80	2203	0003	32940.0	124.6779	8.02	144.37	.00	144.37	.00	.00
RDSW	551578	BOT	6/04/80	0003	0303	50640.0	191.6724	5.22	490.42	.00	490.42	.00	.00
RDSW	551580	BOT	6/06/80	0603	0903	50650.0	191.7103	.00	224.30	.00	224.30	.00	.00
RDSW	551581	BOT	6/06/80	0903	1203	50910.0	192.6944	5.19	77.84	.00	62.27	.00	15.57
RDSW	551582	BOT	6/06/80	1203	1503	50240.0	190.1584	.00	68.36	.00	68.36	.00	.00
RDSW	551583	BOT	6/06/80	1503	1633	26310.0	99.5834	.00	261.09	.00	261.09	.00	.00
RDSW	551584	BOT	6/06/80	1633	1703	8690.0	32.8917	.00	364.83	.00	364.83	.00	.00
RDSW	551585	BOT	6/06/80	1703	1733	8460.0	32.0211	.00	499.67	.00	499.67	.00	.00
RDSW	551586	BOT	6/06/80	1733	1803	8730.0	33.0431	.00	847.38	.00	847.38	.00	.00
RDSW	551587	BOT	6/06/80	1803	1933	24920.0	94.3222	.00	508.89	.00	498.29	.00	10.60
RDSW	551588	BOT	6/06/80	1933	2003	8210.0	31.0749	.00	257.44	.00	257.44	.00	.00
RDSW	551589	BOT	6/06/80	2003	2033	8180.0	30.9613	.00	193.79	.00	193.79	.00	.00
RDSW	551590	BOT	6/06/80	2033	2103	8350.0	31.6048	.00	1487.12	.00	1487.12	.00	.00
RDSW	551591	BOT	6/06/80	2103	2333	33350.0	126.2298	.00	324.80	.00	324.80	.00	.00
RDSW	551593	BOT	6/07/80	0300	0600	49540.0	187.5089	.00	250.65	.00	250.65	.00	.00
RDSW	551594	BOT	6/10/80	0558	0858	49750.0	188.3038	.00	440.78	.00	419.53	.00	21.24
RDSW	551595	BOT	6/10/80	0858	1158	50260.0	190.2341	.00	1035.57	.00	1019.80	.00	15.77
RDSW	551596	BOT	6/10/80	1158	1458	49160.0	186.0706	.00	252.59	.00	252.59	.00	.00
RDSW	551597	BOT	6/10/80	1458	1758	49160.0	186.0706	.00	257.97	.00	247.22	.00	10.75
RDSW	551598	BOT	6/10/80	1758	2058	49290.0	186.5627	.00	418.09	.00	418.09	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES ALOSA SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
ROSW	551599	BOT	6/10/80	2058	2358	49540.0	187.5089	.00	650.64	.00	650.64	.00	.00
ROSW	551600	BOT	6/10/80	2358	0258	47350.0	179.2198	.00	730.95	.00	730.95	.00	.00
ROSW	551601	BOT	6/11/80	0258	0558	48120.0	182.1342	.00	554.54	.00	554.54	.00	.00
ROSW	551602	BOT	6/13/80	0604	0904	50550.0	191.3318	.00	224.74	.00	224.74	.00	.00
ROSW	551609	BOT	6/14/80	0304	0604	51100.0	193.4135	.00	553.22	.00	553.22	.00	.00
ROSW	551603	BOT	6/13/80	0904	1204	51570.0	195.1925	.00	225.42	.00	225.42	.00	.00
ROSW	551604	BOT	6/13/80	1204	1504	51330.0	194.2841	.00	854.42	.00	854.42	.00	.00
ROSW	551605	BOT	6/13/80	1504	1804	50330.0	190.4991	.00	188.98	.00	188.98	.00	.00
ROSW	551606	BOT	6/13/80	1804	2104	51760.0	195.9116	.00	438.97	.00	438.97	.00	.00
ROSW	551607	BOT	6/13/80	2104	0004	51750.0	195.8738	168.48	1230.38	.00	1230.38	.00	.00
ROSW	551608	BOT	6/14/80	0004	0304	52350.0	198.1448	5.05	1423.20	.00	948.80	474.40	.00
ROSW	551610	BOT	6/17/80	0600	0900	49570.0	187.6225	.00	213.19	.00	186.54	26.65	.00
ROSW	551611	BOT	6/17/80	0900	1200	49700.0	188.1145	.00	186.06	.00	186.06	.00	.00
ROSW	551612	BOT	6/17/80	1200	1500	50710.0	191.9374	.00	62.52	.00	62.52	.00	.00
ROSW	551613	BOT	6/17/80	1500	1800	50490.0	191.1047	.00	418.62	.00	418.62	.00	.00
ROSW	551614	BOT	6/17/80	1800	2100	50450.0	190.9533	.00	125.69	.00	125.69	.00	.00
ROSW	551615	BOT	6/17/80	2100	0007	51360.0	194.3976	.00	607.00	.00	607.00	.00	.00
ROSW	551616	BOT	6/18/80	0007	0300	47610.0	180.2039	5.55	543.83	.00	543.83	.00	.00
ROSW	551617	BOT	6/18/80	0300	0600	48660.0	184.1781	.00	526.66	.00	515.81	10.86	.00
ROSW	551618	BOT	6/20/80	0600	0900	48550.0	183.7618	.00	168.70	.00	168.70	.00	.00
ROSW	551619	BOT	6/20/80	0900	1200	48700.0	184.3295	5.43	75.95	.00	75.95	.00	.00
ROSW	551620	BOT	6/20/80	1200	1500	48770.0	184.5945	.00	81.26	.00	81.26	.00	.00
ROSW	551621	BOT	6/20/80	1500	1800	49600.0	187.7360	.00	42.61	.00	42.61	.00	.00
ROSW	551622	BOT	6/20/80	1800	2100	49740.0	188.2659	.00	31.87	.00	31.87	.00	.00
ROSW	551623	BOT	6/20/80	2100	0000	49840.0	188.6444	.00	259.75	.00	238.54	21.20	.00
ROSW	551624	BOT	6/21/80	0000	0300	48980.0	185.3893	.00	474.68	.00	474.68	.00	.00
ROSW	551625	BOT	6/21/80	0300	0600	49370.0	186.8655	.00	128.43	.00	123.08	5.35	.00
ROSW	551626	BOT	6/24/80	0603	0903	50100.0	189.6285	.00	42.19	.00	42.19	.00	.00
ROSW	551633	BOT	6/25/80	0315	0615	50780.0	192.2023	.00	431.84	.00	374.61	57.23	.00
ROSW	551627	BOT	6/24/80	0915	1215	51640.0	195.4574	.00	51.16	.00	51.16	.00	.00
ROSW	551628	BOT	6/24/80	1215	1515	49810.0	188.5309	.00	37.13	.00	37.13	.00	.00
ROSW	551629	BOT	6/24/80	1515	1815	50610.0	191.5589	.00	67.86	.00	67.86	.00	.00
ROSW	551630	BOT	6/24/80	1815	2115	50310.0	190.4234	.00	105.03	.00	105.03	.00	.00
ROSW	551631	BOT	6/24/80	2115	0015	51190.0	193.7542	.00	87.74	.00	82.58	5.16	.00
ROSW	551632	BOT	6/25/80	0015	0315	51820.0	196.1387	.00	163.15	.00	137.66	25.49	.00
ROSW	551634	BOT	7/01/80	0610	0910	51220.0	193.8677	.00	46.42	.00	46.42	.00	.00
ROSW	551641	BOT	7/02/80	0310	0610	51680.0	195.6088	.00	71.57	.00	15.34	56.23	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES ALOSA SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
RDSW	551635	BOT	7/01/80	0910	1210	51060.0	193.2621	.00	20.70	.00	15.52	5.17	.00
RDSW	551636	BOT	7/01/80	1210	1510	53360.0	201.9676	.00	19.81	.00	19.81	.00	.00
RDSW	551637	BOT	7/01/80	1510	1810	53110.0	201.0214	.00	34.82	.00	34.82	.00	.00
RDSW	551638	BOT	7/01/80	1810	2110	50100.0	189.6285	.00	42.19	.00	36.91	5.27	.00
RDSW	551639	BOT	7/01/80	2110	0010	51420.0	194.6247	.00	35.97	.00	25.69	10.28	.00
RDSW	551640	BOT	7/02/80	0010	0310	48680.0	184.2538	.00	146.54	.00	70.55	75.98	.00
RDSW	551642	BOT	7/08/80	0630	0930	49620.0	187.8117	.00	5.32	.00	5.32	.00	.00
RDSW	551649	BOT	7/09/80	0330	0630	48140.0	182.2099	.00	32.93	.00	5.49	27.44	.00
RDSW	551643	BOT	7/08/80	0930	1230	50390.0	190.7262	.00	.00	.00	.00	.00	.00
RDSW	551644	BOT	7/08/80	1230	1530	50450.0	190.9533	.00	5.24	.00	5.24	.00	.00
RDSW	551645	BOT	7/08/80	1530	1830	46160.0	174.7156	.00	.00	.00	.00	.00	.00
RDSW	551646	BOT	7/08/80	1830	2130	44600.0	168.8110	.00	.00	.00	.00	.00	.00
RDSW	551647	BOT	7/08/80	2130	0030	49580.0	187.6603	.00	58.62	.00	10.66	47.96	.00
RDSW	551648	BOT	7/09/80	0030	0330	45090.0	170.6657	.00	70.31	.00	.00	70.31	.00
RDSW	551650	BOT	7/15/80	0635	0935	49940.0	189.0229	.00	.00	.00	.00	.00	.00
RDSW	551657	BOT	7/16/80	0335	0635	51590.0	195.2682	.00	46.09	.00	5.12	40.97	.00
RDSW	551651	BOT	7/15/80	0935	1235	51680.0	195.6088	.00	.00	.00	.00	.00	.00
RDSW	551652	BOT	7/15/80	1235	1535	52110.0	197.2364	.00	.00	.00	.00	.00	.00
RDSW	551653	BOT	7/15/80	1535	1835	49420.0	187.0547	.00	.00	.00	.00	.00	.00
RDSW	551654	BOT	7/15/80	1835	2135	49290.0	186.5627	.00	.00	.00	.00	.00	.00
RDSW	551655	BOT	7/15/80	2135	0035	52990.0	200.5672	.00	4.99	.00	4.99	.00	.00
RDSW	551656	BOT	7/16/80	0035	0335	52590.0	199.0532	.00	5.02	.00	.00	5.02	.00
RDSW	551658	BOT	7/22/80	0610	0910	52670.0	199.3560	.00	.00	.00	.00	.00	.00
RDSW	551665	BOT	7/23/80	0310	0610	46970.0	177.7815	.00	28.12	.00	5.62	22.50	.00
RDSW	551659	BOT	7/22/80	0910	1210	52970.0	200.4915	.00	.00	.00	.00	.00	.00
RDSW	551660	BOT	7/22/80	1210	1510	51220.0	193.8677	.00	5.16	.00	5.16	.00	.00
RDSW	551661	BOT	7/22/80	1510	1810	51120.0	193.4892	.00	.00	.00	.00	.00	.00
RDSW	551662	BOT	7/22/80	1810	2110	52370.0	198.2205	.00	5.04	.00	.00	5.04	.00
RDSW	551663	BOT	7/22/80	2110	0010	51780.0	195.9873	.00	10.20	.00	.00	10.20	.00
RDSW	551664	BOT	7/23/80	0010	0310	49040.0	185.6164	.00	5.39	.00	.00	5.39	.00
RDSW	551666	BOT	7/29/80	0610	0910	51170.0	193.6785	.00	5.16	.00	.00	5.16	.00
RDSW	551673	BOT	7/30/80	0310	0610	49180.0	186.1463	.00	.00	.00	.00	.00	.00
RDSW	551667	BOT	7/29/80	0910	1210	50730.0	192.0131	.00	5.21	.00	5.21	.00	.00
RDSW	551668	BOT	7/29/80	1210	1510	51430.0	194.6626	.00	.00	.00	.00	.00	.00
RDSW	551669	BOT	7/29/80	1510	1810	50250.0	190.1963	.00	.00	.00	.00	.00	.00
RDSW	551670	BOT	7/29/80	1810	2110	52480.0	198.6368	.00	.00	.00	.00	.00	.00
RDSW	551671	BOT	7/29/80	2110	0010	51350.0	194.3598	.00	5.15	.00	.00	5.15	.00
RDSW	551672	BOT	7/30/80	0010	0310	51410.0	194.5869	.00	.00	.00	.00	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES ALOSA SP.

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ROSW	551674	BOT	8/05/80	0613	0913	51440.0	194.7004	.00	.00	.00	.00	.00	.00
ROSW	551681	BOT	8/06/80	0313	0613	50630.0	191.6346	.00	.00	.00	.00	.00	.00
ROSW	551675	BOT	8/05/80	0913	1213	49450.0	187.1683	.00	.00	.00	.00	.00	.00
ROSW	551676	BOT	8/05/80	1213	1513	51240.0	193.9434	.00	.00	.00	.00	.00	.00
ROSW	551677	BOT	8/05/80	1513	1813	49140.0	185.9949	.00	.00	.00	.00	.00	.00
ROSW	551678	BOT	8/05/80	1813	2113	52150.0	197.3878	.00	.00	.00	.00	.00	.00
ROSW	551679	BOT	8/05/80	2113	0013	50980.0	192.9593	.00	.00	.00	.00	.00	.00
ROSW	551680	BOT	8/06/80	0013	0313	49720.0	188.1902	.00	.00	.00	.00	.00	.00
ROSW	551682	BOT	8/12/80	0625	0925	52660.0	199.3181	.00	.00	.00	.00	.00	.00
ROSW	551689	BOT	8/13/80	0325	0625	50300.0	190.3855	.00	.00	.00	.00	.00	.00
ROSW	551683	BOT	8/12/80	0925	1225	54900.0	207.7965	.00	.00	.00	.00	.00	.00
ROSW	551684	BOT	8/12/80	1225	1525	54220.0	205.2227	.00	.00	.00	.00	.00	.00
ROSW	551685	BOT	8/12/80	1525	1825	51030.0	193.1486	.00	.00	.00	.00	.00	.00
ROSW	551686	BOT	8/12/80	1825	2125	49530.0	187.4711	.00	.00	.00	.00	.00	.00
ROSW	551687	BOT	8/12/80	2125	0025	52010.0	196.8579	.00	.00	.00	.00	.00	.00
ROSW	551688	BOT	8/13/80	0025	0325	52740.0	199.6209	.00	.00	.00	.00	.00	.00
ROSW	551690	BOT	8/19/80	0605	0905	51090.0	193.3757	.00	.00	.00	.00	.00	.00
ROSW	551697	BOT	8/20/80	0305	0605	50570.0	191.4075	.00	.00	.00	.00	.00	.00
ROSW	551691	BOT	8/19/80	0905	1205	50610.0	191.5589	.00	.00	.00	.00	.00	.00
ROSW	551692	BOT	8/19/80	1205	1505	50930.0	192.7701	.00	.00	.00	.00	.00	.00
ROSW	551693	BOT	8/19/80	1505	1805	51440.0	194.7004	.00	.00	.00	.00	.00	.00
ROSW	551694	BOT	8/19/80	1805	2105	52580.0	199.0153	.00	.00	.00	.00	.00	.00
ROSW	551695	BOT	8/19/80	2105	0005	51340.0	194.3219	.00	.00	.00	.00	.00	.00
ROSW	551696	BOT	8/20/80	0005	0305	49490.0	187.3197	.00	.00	.00	.00	.00	.00
ROSW	551698	BOT	8/26/80	0606	0906	52360.0	198.1826	.00	.00	.00	.00	.00	.00
ROSW	551705	BOT	8/27/80	0306	0606	53230.0	201.4756	.00	.00	.00	.00	.00	.00
ROSW	551699	BOT	8/26/80	0906	1206	53620.0	202.9517	.00	.00	.00	.00	.00	.00
ROSW	551700	BOT	8/26/80	1206	1506	51330.0	194.2841	.00	.00	.00	.00	.00	.00
ROSW	551701	BOT	8/26/80	1506	1806	50930.0	192.7701	.00	.00	.00	.00	.00	.00
ROSW	551702	BOT	8/26/80	1806	2106	51220.0	193.8677	.00	.00	.00	.00	.00	.00
ROSW	551703	BOT	8/26/80	2106	0006	54350.0	205.7148	.00	.00	.00	.00	.00	.00
ROSW	551704	BOT	8/27/80	0006	0306	53990.0	204.3522	.00	.00	.00	.00	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES AMERICAN SHAD

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
RDSW	551527	BOT	4/25/80	0517	0817	48940.0	185.2379	.00	.00	.00	.00	.00	.00	**
RDSW	551528	BOT	4/25/80	0817	1117	49620.0	187.8117	.00	.00	.00	.00	.00	.00	
RDSW	551522	BOT	4/24/80	1417	1717	48320.0	182.8912	.00	.00	.00	.00	.00	.00	
RDSW	551529	BOT	4/25/80	1117	1417	47830.0	181.0366	.00	.00	.00	.00	.00	.00	
RDSW	551523	BOT	4/24/80	1717	2017	49060.0	185.6921	.00	.00	.00	.00	.00	.00	
RDSW	551524	BOT	4/24/80	2017	2317	48350.0	183.0048	.00	.00	.00	.00	.00	.00	
RDSW	551525	BOT	4/24/80	2317	0217	49050.0	185.6543	.00	.00	.00	.00	.00	.00	
RDSW	551526	BOT	4/25/80	0217	0517	48910.0	185.1244	.00	.00	.00	.00	.00	.00	
RDSW	551530	MID	4/29/80	0607	0907	48900.0	185.0865	.00	.00	.00	.00	.00	.00	
RDSW	551531	MID	4/29/80	0907	1207	49180.0	186.1463	.00	.00	.00	.00	.00	.00	
RDSW	551532	MID	4/29/80	1207	1507	41890.0	158.5537	.00	.00	.00	.00	.00	.00	
RDSW	551533	MID	4/29/80	1507	1807	58230.0	220.4006	.00	.00	.00	.00	.00	.00	
RDSW	551534	MID	4/29/80	1807	2038	40230.0	152.2706	.00	.00	.00	.00	.00	.00	
RDSW	551535	MID	4/29/80	2038	2338	49630.0	187.8496	.00	.00	.00	.00	.00	.00	
RDSW	551536	MID	4/29/80	2338	0238	48910.0	185.1244	.00	.00	.00	.00	.00	.00	
RDSW	551537	MID	4/30/80	0238	0607	56190.0	212.6792	.00	.00	.00	.00	.00	.00	
RDSW	551538	MID	5/06/80	0559	0859	50190.0	189.9692	.00	.00	.00	.00	.00	.00	
RDSW	551539	MID	5/06/80	0859	1159	49870.0	188.7580	.00	.00	.00	.00	.00	.00	
RDSW	551540	MID	5/06/80	1159	1459	51340.0	194.3219	.00	.00	.00	.00	.00	.00	
RDSW	551541	MID	5/06/80	1459	1759	51860.0	196.2901	5.09	.00	.00	.00	.00	.00	
RDSW	551542	MID	5/06/80	1759	2059	48210.0	182.4749	.00	.00	.00	.00	.00	.00	
RDSW	551543	MID	5/06/80	2059	2359	47840.0	181.0744	.00	.00	.00	.00	.00	.00	
RDSW	551544	MID	5/06/80	2359	0259	48370.0	183.0805	.00	.00	.00	.00	.00	.00	
RDSW	551545	MID	5/07/80	0259	0559	49760.0	188.3416	.00	.00	.00	.00	.00	.00	
RDSW	551546	MID	5/13/80	0602	0902	50180.0	189.9313	.00	.00	.00	.00	.00	.00	
RDSW	551553	MID	5/14/80	0302	0602	47900.0	181.3015	.00	.00	.00	.00	.00	.00	
RDSW	551547	MID	5/13/80	0902	1202	49600.0	187.7360	.00	.00	.00	.00	.00	.00	
RDSW	551548	MID	5/13/80	1202	1502	49360.0	186.8276	.00	.00	.00	.00	.00	.00	
RDSW	551549	MID	5/13/80	1502	1802	47920.0	181.3772	.00	5.51	.00	5.51	.00	.00	
RDSW	551550	MID	5/13/80	1802	2102	47970.0	181.5665	.00	.00	.00	.00	.00	.00	
RDSW	551551	MID	5/13/80	2102	0002	48630.0	184.0646	.00	.00	.00	.00	.00	.00	
RDSW	551552	MID	5/14/80	0002	0302	49160.0	186.0706	.00	.00	.00	.00	.00	.00	
RDSW	551554	BOT	5/20/80	0624	0924	48840.0	184.8594	.00	.00	.00	.00	.00	.00	
RDSW	551561	BOT	5/21/80	0324	0624	55600.0	210.4460	.00	9.50	.00	9.50	.00	.00	
RDSW	551555	BOT	5/20/80	0924	1224	48000.0	181.6800	.00	.00	.00	.00	.00	.00	
RDSW	551556	BOT	5/20/80	1224	1524	50390.0	190.7262	.00	.00	.00	.00	.00	.00	
RDSW	551557	BOT	5/20/80	1524	1824	48990.0	185.4272	.00	5.39	.00	5.39	.00	.00	
RDSW	551558	BOT	5/20/80	1824	2124	49900.0	188.8715	.00	10.59	.00	10.59	.00	.00	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES AMERICAN SHAD

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
RDSW	551559	BOT	5/20/80	2124	0024	50110.0	189.6664	.00	.00	.00	.00	.00	.00
RDSW	551560	BOT	5/21/80	0024	0324	49890.0	188.8337	.00	.00	.00	.00	.00	.00
RDSW	551567	BOT	5/28/80	0600	0900	48180.0	182.3613	.00	5.48	.00	5.48	.00	.00
RDSW	551568	BOT	5/28/80	0900	1200	51710.0	195.7224	.00	5.11	.00	5.11	.00	.00
RDSW	551569	BOT	5/28/80	1200	1500	50540.0	191.2939	.00	.00	.00	.00	.00	.00
RDSW	551562	BOT	5/27/80	1530	1800	41110.0	155.6014	.00	.00	.00	.00	.00	.00
RDSW	551563	BOT	5/27/80	1800	2100	49710.0	188.1524	.00	5.31	.00	5.31	.00	.00
RDSW	551564	BOT	5/27/80	2100	0000	48500.0	183.5725	.00	5.45	.00	5.45	.00	.00
RDSW	551565	BOT	5/28/80	0000	0300	47360.0	179.2576	.00	.00	.00	.00	.00	.00
RDSW	551566	BOT	5/28/80	0300	0600	46470.0	175.8890	.00	5.69	.00	5.69	.00	.00
RDSW	551570	BOT	6/03/80	0603	0903	49840.0	188.6444	.00	15.90	.00	15.90	.00	.00
RDSW	551579	BOT	6/04/80	0303	0603	49760.0	188.3416	.00	.00	.00	.00	.00	.00
RDSW	551571	BOT	6/03/80	0903	1203	49140.0	185.9949	.00	.00	.00	.00	.00	.00
RDSW	551572	BOT	6/03/80	1203	1503	51400.0	194.5490	.00	10.28	.00	10.28	.00	.00
RDSW	551573	BOT	6/03/80	1503	1803	49950.0	189.0608	.00	.00	.00	.00	.00	.00
RDSW	551574	BOT	6/03/80	1803	2103	49070.0	185.7300	.00	.00	.00	.00	.00	.00
RDSW	551575	BOT	6/03/80	2103	2133	8200.0	31.0370	.00	.00	.00	.00	.00	.00
RDSW	551576	BOT	6/03/80	2133	2203	8400.0	31.7940	.00	31.45	.00	31.45	.00	.00
RDSW	551577	BOT	6/03/80	2203	0003	32940.0	124.6779	.00	.00	.00	.00	.00	.00
RDSW	551578	BOT	6/04/80	0003	0303	50640.0	191.6724	.00	.00	.00	.00	.00	.00
RDSW	551580	BOT	6/06/80	0603	0903	50650.0	191.7103	.00	.00	.00	.00	.00	.00
RDSW	551581	BOT	6/06/80	0903	1203	50910.0	192.6944	.00	.00	.00	.00	.00	.00
RDSW	551582	BOT	6/06/80	1203	1503	50240.0	190.1584	.00	15.78	.00	15.78	.00	.00
RDSW	551583	BOT	6/06/80	1503	1633	26310.0	99.5834	.00	.00	.00	.00	.00	.00
RDSW	551584	BOT	6/06/80	1633	1703	8690.0	32.8917	.00	30.40	.00	30.40	.00	.00
RDSW	551585	BOT	6/06/80	1703	1733	8460.0	32.0211	.00	31.23	.00	31.23	.00	.00
RDSW	551586	BOT	6/06/80	1733	1803	8730.0	33.0431	.00	.00	.00	.00	.00	.00
RDSW	551587	BOT	6/06/80	1803	1933	24920.0	94.3222	.00	21.20	.00	21.20	.00	.00
RDSW	551588	BOT	6/06/80	1933	2003	8210.0	31.0749	.00	.00	.00	.00	.00	.00
RDSW	551589	BOT	6/06/80	2003	2033	8180.0	30.9613	.00	96.90	.00	96.90	.00	.00
RDSW	551590	BOT	6/06/80	2033	2103	8350.0	31.6048	.00	.00	.00	.00	.00	.00
RDSW	551591	BOT	6/06/80	2103	2333	33350.0	126.2298	.00	7.92	.00	7.92	.00	.00
RDSW	551593	BOT	6/07/80	0300	0600	49540.0	187.5089	.00	32.00	.00	32.00	.00	.00
RDSW	551594	BOT	6/10/80	0558	0858	49750.0	188.3038	.00	5.31	.00	5.31	.00	.00
RDSW	551595	BOT	6/10/80	0858	1158	50260.0	190.2341	.00	5.26	.00	5.26	.00	.00
RDSW	551596	BOT	6/10/80	1158	1458	49160.0	186.0706	.00	.00	.00	.00	.00	.00
RDSW	551597	BOT	6/10/80	1458	1758	49160.0	186.0706	.00	10.75	.00	10.75	.00	.00
RDSW	551598	BOT	6/10/80	1758	2058	49290.0	186.5627	.00	5.36	.00	5.36	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES AMERICAN SHAD

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
RDSW	551599	BOT	6/10/80	2058	2358	49540.0	187.5089	.00	48.00	.00	48.00	.00	.00
RDSW	551600	BOT	6/10/80	2358	0258	47350.0	179.2198	.00	33.48	.00	33.48	.00	.00
RDSW	551601	BOT	6/11/80	0258	0558	48120.0	182.1342	.00	10.98	.00	10.98	.00	.00
RDSW	551602	BOT	6/13/80	0604	0904	50550.0	191.3318	.00	20.91	.00	5.23	15.68	.00
RDSW	551609	BOT	6/14/80	0304	0604	51100.0	193.4135	.00	41.36	.00	20.68	20.68	.00
RDSW	551603	BOT	6/13/80	0904	1204	51570.0	195.1925	.00	.00	.00	.00	.00	.00
RDSW	551604	BOT	6/13/80	1204	1504	51330.0	194.2841	.00	.00	.00	.00	.00	.00
RDSW	551605	BOT	6/13/80	1504	1804	50330.0	190.4991	.00	10.50	.00	5.25	5.25	.00
RDSW	551606	BOT	6/13/80	1804	2104	51760.0	195.9116	.00	.00	.00	.00	.00	.00
RDSW	551607	BOT	6/13/80	2104	0004	51750.0	195.8738	.00	5.11	.00	5.11	.00	.00
RDSW	551608	BOT	6/14/80	0004	0304	52350.0	198.1448	.00	.00	.00	.00	.00	.00
RDSW	551610	BOT	6/17/80	0600	0900	49570.0	187.6225	.00	5.33	.00	.00	5.33	.00
RDSW	551611	BOT	6/17/80	0900	1200	49700.0	188.1145	.00	5.32	.00	.00	5.32	.00
RDSW	551612	BOT	6/17/80	1200	1500	50710.0	191.9374	.00	.00	.00	.00	.00	.00
RDSW	551613	BOT	6/17/80	1500	1800	50490.0	191.1047	.00	5.23	.00	.00	5.23	.00
RDSW	551614	BOT	6/17/80	1800	2100	50450.0	190.9533	.00	.00	.00	.00	.00	.00
RDSW	551615	BOT	6/17/80	2100	0007	51360.0	194.3976	.00	20.58	.00	15.43	5.14	.00
RDSW	551616	BOT	6/18/80	0007	0300	47610.0	180.2039	.00	.00	.00	.00	.00	.00
RDSW	551617	BOT	6/18/80	0300	0600	48660.0	184.1781	.00	.00	.00	.00	.00	.00
RDSW	551618	BOT	6/20/80	0600	0900	48550.0	183.7618	.00	.00	.00	.00	.00	.00
RDSW	551619	BOT	6/20/80	0900	1200	48700.0	184.3295	.00	.00	.00	.00	.00	.00
RDSW	551620	BOT	6/20/80	1200	1500	48770.0	184.5945	.00	.00	.00	.00	.00	.00
RDSW	551621	BOT	6/20/80	1500	1800	49600.0	187.7360	.00	.00	.00	.00	.00	.00
RDSW	551622	BOT	6/20/80	1800	2100	49740.0	188.2659	.00	.00	.00	.00	.00	.00
RDSW	551623	BOT	6/20/80	2100	0000	49840.0	188.6444	.00	5.30	.00	.00	5.30	.00
RDSW	551624	BOT	6/21/80	0000	0300	48980.0	185.3893	.00	16.18	.00	16.18	.00	.00
RDSW	551625	BOT	6/21/80	0300	0600	49370.0	186.8655	.00	.00	.00	.00	.00	.00
RDSW	551626	BOT	6/24/80	0603	0903	50100.0	189.6285	.00	.00	.00	.00	.00	.00
RDSW	551633	BOT	6/25/80	0315	0615	50780.0	192.2023	.00	10.41	.00	5.20	5.20	.00
RDSW	551627	BOT	6/24/80	0915	1215	51640.0	195.4574	.00	.00	.00	.00	.00	.00
RDSW	551628	BOT	6/24/80	1215	1515	49810.0	188.5309	.00	.00	.00	.00	.00	.00
RDSW	551629	BOT	6/24/80	1515	1815	50610.0	191.5589	.00	.00	.00	.00	.00	.00
RDSW	551630	BOT	6/24/80	1815	2115	50310.0	190.4234	.00	.00	.00	.00	.00	.00
RDSW	551631	BOT	6/24/80	2115	0015	51190.0	193.7542	.00	.00	.00	.00	.00	.00
RDSW	551632	BOT	6/25/80	0015	0315	51820.0	196.1387	.00	5.10	.00	5.10	.00	.00
RDSW	551634	BOT	7/01/80	0610	0910	51220.0	193.8677	.00	.00	.00	.00	.00	.00
RDSW	551641	BOT	7/02/80	0310	0610	51680.0	195.6088	.00	.00	.00	.00	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES AMERICAN SHAD

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
RDSW	551635	BOT	7/01/80	0910	1210	51060.0	193.2621	.00	.00	.00	.00	.00	.00
RDSW	551636	BOT	7/01/80	1210	1510	53360.0	201.9676	.00	.00	.00	.00	.00	.00
RDSW	551637	BOT	7/01/80	1510	1810	53110.0	201.0214	.00	.00	.00	.00	.00	.00
RDSW	551638	BOT	7/01/80	1810	2110	50100.0	189.6285	.00	.00	.00	.00	.00	.00
RDSW	551639	BOT	7/01/80	2110	0010	51420.0	194.6247	.00	.00	.00	.00	.00	.00
RDSW	551640	BOT	7/02/80	0010	0310	48680.0	184.2538	.00	.00	.00	.00	.00	.00
RDSW	551642	BOT	7/08/80	0630	0930	49620.0	187.8117	.00	.00	.00	.00	.00	.00
RDSW	551649	BOT	7/09/80	0330	0630	48140.0	182.2099	.00	5.49	.00	.00	5.49	.00
RDSW	551643	BOT	7/08/80	0930	1230	50390.0	190.7262	.00	.00	.00	.00	.00	.00
RDSW	551644	BOT	7/08/80	1230	1530	50450.0	190.9533	.00	.00	.00	.00	.00	.00
RDSW	551645	BOT	7/08/80	1530	1830	46160.0	174.7156	.00	.00	.00	.00	.00	.00
RDSW	551646	BOT	7/08/80	1830	2130	44600.0	168.8110	.00	.00	.00	.00	.00	.00
RDSW	551647	BOT	7/08/80	2130	0030	49580.0	187.6603	.00	.00	.00	.00	.00	.00
RDSW	551648	BOT	7/09/80	0030	0330	45090.0	170.6657	.00	5.86	.00	.00	5.86	.00
RDSW	551650	BOT	7/15/80	0635	0935	49940.0	189.0229	.00	.00	.00	.00	.00	.00
RDSW	551657	BOT	7/16/80	0335	0635	51590.0	195.2682	.00	5.12	.00	.00	5.12	.00
RDSW	551651	BOT	7/15/80	0935	1235	51680.0	195.6088	.00	.00	.00	.00	.00	.00
RDSW	551652	BOT	7/15/80	1235	1535	52110.0	197.2364	.00	.00	.00	.00	.00	.00
RDSW	551653	BOT	7/15/80	1535	1835	49420.0	187.0547	.00	.00	.00	.00	.00	.00
RDSW	551654	BOT	7/15/80	1835	2135	49290.0	186.5627	.00	.00	.00	.00	.00	.00
RDSW	551655	BOT	7/15/80	2135	0035	52990.0	200.5672	.00	.00	.00	.00	.00	.00
RDSW	551656	BOT	7/16/80	0035	0335	52590.0	199.0532	.00	.00	.00	.00	.00	.00
RDSW	551658	BOT	7/22/80	0610	0910	52670.0	199.3560	.00	.00	.00	.00	.00	.00
RDSW	551665	BOT	7/23/80	0310	0610	46970.0	177.7815	.00	.00	.00	.00	.00	.00
RDSW	551659	BOT	7/22/80	0910	1210	52970.0	200.4915	.00	.00	.00	.00	.00	.00
RDSW	551660	BOT	7/22/80	1210	1510	51220.0	193.8677	.00	.00	.00	.00	.00	.00
RDSW	551661	BOT	7/22/80	1510	1810	51120.0	193.4892	.00	.00	.00	.00	.00	.00
RDSW	551662	BOT	7/22/80	1810	2110	52370.0	198.2205	.00	.00	.00	.00	.00	.00
RDSW	551663	BOT	7/22/80	2110	0010	51780.0	195.9873	.00	.00	.00	.00	.00	.00
RDSW	551664	BOT	7/23/80	0010	0310	49040.0	185.6164	.00	.00	.00	.00	.00	.00
RDSW	551666	BOT	7/29/80	0610	0910	51170.0	193.6785	.00	.00	.00	.00	.00	.00
RDSW	551673	BOT	7/30/80	0310	0610	49180.0	186.1463	.00	.00	.00	.00	.00	.00
RDSW	551667	BOT	7/29/80	0910	1210	50730.0	192.0131	.00	.00	.00	.00	.00	.00
RDSW	551668	BOT	7/29/80	1210	1510	51430.0	194.6626	.00	.00	.00	.00	.00	.00
RDSW	551669	BOT	7/29/80	1510	1810	50250.0	190.1963	.00	.00	.00	.00	.00	.00
RDSW	551670	BOT	7/29/80	1810	2110	52480.0	198.6368	.00	.00	.00	.00	.00	.00
RDSW	551671	BOT	7/29/80	2110	0010	51350.0	194.3598	.00	.00	.00	.00	.00	.00
RDSW	551672	BOT	7/30/80	0010	0310	51410.0	194.5869	.00	.00	.00	.00	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES AMERICAN SHAD

STATION LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
RDSW	551674	BOT	8/05/80	0613	0913	51440.0	194.7004	.00	.00	.00	.00	.00	.00
RDSW	551681	BOT	8/06/80	0313	0613	50650.0	191.6346	.00	.00	.00	.00	.00	.00
RDSW	551675	BOT	8/05/80	0913	1213	49450.0	187.1683	.00	.00	.00	.00	.00	.00
RDSW	551676	BOT	8/05/80	1213	1513	51240.0	193.9434	.00	.00	.00	.00	.00	.00
RDSW	551677	BOT	8/05/80	1513	1813	49140.0	185.9949	.00	.00	.00	.00	.00	.00
RDSW	551678	BOT	8/05/80	1813	2113	52150.0	197.3878	.00	.00	.00	.00	.00	.00
RDSW	551679	BOT	8/05/80	2113	0013	50980.0	192.9593	.00	.00	.00	.00	.00	.00
RDSW	551680	BOT	8/06/80	0013	0313	49720.0	188.1902	.00	.00	.00	.00	.00	.00
RDSW	551682	BOT	8/12/80	0625	0925	52660.0	199.3181	.00	.00	.00	.00	.00	.00
RDSW	551689	BOT	8/13/80	0325	0625	50300.0	190.3855	.00	.00	.00	.00	.00	.00
RDSW	551683	BOT	8/12/80	0925	1225	54900.0	207.7965	.00	.00	.00	.00	.00	.00
RDSW	551684	BOT	8/12/80	1225	1525	54220.0	205.2227	.00	.00	.00	.00	.00	.00
RDSW	551685	BOT	8/12/80	1525	1825	51030.0	193.1486	.00	.00	.00	.00	.00	.00
RDSW	551686	BOT	8/12/80	1825	2125	49530.0	187.4711	.00	.00	.00	.00	.00	.00
RDSW	551687	BOT	8/12/80	2125	0025	52010.0	196.8579	.00	.00	.00	.00	.00	.00
RDSW	551688	BOT	8/13/80	0025	0325	52740.0	199.6209	.00	.00	.00	.00	.00	.00
RDSW	551693	BOT	8/19/80	0605	0905	51090.0	193.3757	.00	.00	.00	.00	.00	.00
RDSW	551697	BOT	8/20/80	0305	0605	50570.0	191.4075	.00	.00	.00	.00	.00	.00
RDSW	551691	BOT	8/19/80	0905	1205	50610.0	191.5589	.00	.00	.00	.00	.00	.00
RDSW	551692	BOT	8/19/80	1205	1505	50950.0	192.7701	.00	.00	.00	.00	.00	.00
RDSW	551693	BOT	8/19/80	1505	1805	51440.0	194.7004	.00	.00	.00	.00	.00	.00
RDSW	551694	BOT	8/19/80	1805	2105	52580.0	199.0153	.00	.00	.00	.00	.00	.00
RDSW	551695	BOT	8/19/80	2105	0005	51340.0	194.3219	.00	.00	.00	.00	.00	.00
RDSW	551696	BOT	8/20/80	0005	0305	49490.0	187.3197	.00	.00	.00	.00	.00	.00
RDSW	551698	BOT	8/26/80	0606	0906	52360.0	198.1826	.00	.00	.00	.00	.00	.00
RDSW	551705	BOT	8/27/80	0306	0606	53230.0	201.4756	.00	.00	.00	.00	.00	.00
RDSW	551699	BOT	8/26/80	0906	1206	53620.0	202.9517	.00	.00	.00	.00	.00	.00
RDSW	551700	BOT	8/26/80	1206	1506	51330.0	194.2841	.00	.00	.00	.00	.00	.00
RDSW	551701	BOT	8/26/80	1506	1806	50930.0	192.7701	.00	.00	.00	.00	.00	.00
RDSW	551702	BOT	8/26/80	1806	2106	51220.0	193.8677	.00	.00	.00	.00	.00	.00
RDSW	551703	BOT	8/26/80	2106	0006	54350.0	205.7148	.00	.00	.00	.00	.00	.00
RDSW	551704	BOT	8/27/80	0006	0306	53990.0	204.3522	.00	.00	.00	.00	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES BAY ANCHOVY

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
ROSW	551527	BOT	4/25/80	0517	0817	48940.0	185.2379	.00	.00	.00	.00	.00	.00	**
ROSW	551528	BOT	4/25/80	0817	1117	49620.0	187.8117	.00	.00	.00	.00	.00	.00	
ROSW	551522	BOT	4/24/80	1417	1717	48320.0	182.8912	.00	.00	.00	.00	.00	.00	
ROSW	551529	BOT	4/25/80	1117	1417	47830.0	181.0366	.00	.00	.00	.00	.00	.00	
ROSW	551523	BOT	4/24/80	1717	2017	49060.0	185.6921	.00	.00	.00	.00	.00	.00	
ROSW	551524	BOT	4/24/80	2017	2317	48350.0	183.0048	.00	.00	.00	.00	.00	.00	
ROSW	551525	BOT	4/24/80	2317	0217	49050.0	185.6543	.00	.00	.00	.00	.00	.00	
ROSW	551526	BOT	4/25/80	0217	0517	48910.0	185.1244	.00	.00	.00	.00	.00	.00	
ROSW	551530	MID	4/29/80	0607	0907	48900.0	185.0865	.00	.00	.00	.00	.00	.00	
ROSW	551531	MID	4/29/80	0907	1207	49180.0	186.1463	.00	.00	.00	.00	.00	.00	
ROSW	551532	MID	4/29/80	1207	1507	41890.0	158.5537	.00	.00	.00	.00	.00	.00	
ROSW	551533	MID	4/29/80	1507	1807	58230.0	220.4006	.00	.00	.00	.00	.00	.00	
ROSW	551534	MID	4/29/80	1807	2038	40230.0	152.2706	.00	.00	.00	.00	.00	.00	
ROSW	551535	MID	4/29/80	2038	2338	49630.0	187.8496	.00	.00	.00	.00	.00	.00	
ROSW	551536	MID	4/29/80	2338	0238	48910.0	185.1244	.00	.00	.00	.00	.00	.00	
ROSW	551537	MID	4/30/80	0238	0607	56190.0	212.6792	.00	.00	.00	.00	.00	.00	
ROSW	551538	MID	5/06/80	0559	0859	50190.0	189.9692	.00	.00	.00	.00	.00	.00	
ROSW	551539	MID	5/06/80	0859	1159	49870.0	188.7580	.00	.00	.00	.00	.00	.00	
ROSW	551540	MID	5/06/80	1159	1459	51340.0	194.3219	.00	.00	.00	.00	.00	.00	
ROSW	551541	MID	5/06/80	1459	1759	51860.0	196.2901	.00	.00	.00	.00	.00	.00	
ROSW	551542	MID	5/06/80	1759	2059	48210.0	182.4749	.00	.00	.00	.00	.00	.00	
ROSW	551543	MID	5/06/80	2059	2359	47840.0	181.0744	.00	.00	.00	.00	.00	.00	
ROSW	551544	MID	5/06/80	2359	0259	48370.0	183.0805	.00	.00	.00	.00	.00	.00	
ROSW	551545	MID	5/07/80	0259	0559	49760.0	188.3416	.00	.00	.00	.00	.00	.00	
ROSW	551546	MID	5/13/80	0602	0902	50180.0	189.9313	.00	.00	.00	.00	.00	.00	
ROSW	551553	MID	5/14/80	0302	0602	47900.0	181.3015	.00	.00	.00	.00	.00	.00	
ROSW	551547	MID	5/13/80	0902	1202	49600.0	187.7360	.00	.00	.00	.00	.00	.00	
ROSW	551548	MID	5/13/80	1202	1502	49360.0	186.8276	.00	.00	.00	.00	.00	.00	
ROSW	551549	MID	5/13/80	1502	1802	47920.0	181.3772	.00	.00	.00	.00	.00	.00	
ROSW	551550	MID	5/13/80	1802	2102	47970.0	181.5665	.00	.00	.00	.00	.00	.00	
ROSW	551551	MID	5/13/80	2102	0002	48630.0	184.0646	.00	.00	.00	.00	.00	.00	
ROSW	551552	MID	5/14/80	0002	0302	49160.0	186.0706	.00	.00	.00	.00	.00	.00	
ROSW	551554	BOT	5/20/80	0624	0924	48840.0	184.8594	.00	.00	.00	.00	.00	.00	
ROSW	551561	BOT	5/21/80	0324	0624	55600.0	210.4460	.00	.00	.00	.00	.00	.00	
ROSW	551555	BOT	5/20/80	0924	1224	48000.0	181.6800	.00	.00	.00	.00	.00	.00	
ROSW	551556	BOT	5/20/80	1224	1524	50390.0	190.7262	.00	.00	.00	.00	.00	.00	
ROSW	551557	BOT	5/20/80	1524	1824	48990.0	185.4272	.00	.00	.00	.00	.00	.00	
ROSW	551558	BOT	5/20/80	1824	2124	49930.0	188.8715	.00	.00	.00	.00	.00	.00	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES BAY ANCHOVY

STATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIFE STAGE
ROSW	[illegible]	BOT	5/20/80	2124	0024	50110.0	189.6664	.00	.00	.00	.00	.00	.00
ROSW	551565	BOT	5/21/80	0024	0324	49890.0	188.8337	.00	.00	.00	.00	.00	.00
ROSW	551567	BOT	5/28/80	0600	0900	48180.0	182.3613	.00	.00	.00	.00	.00	.00
ROSW	551568	BOT	5/28/80	0900	1200	51710.0	195.7224	.00	.00	.00	.00	.00	.00
ROSW	551569	BOT	5/28/80	1200	1500	50540.0	191.2939	.00	.00	.00	.00	.00	.00
ROSW	551562	BOT	5/27/80	1530	1800	41110.0	155.6014	.00	.00	.00	.00	.00	.00
ROSW	551563	BOT	5/27/80	1800	2100	49710.0	188.1524	.00	.00	.00	.00	.00	.00
ROSW	551564	BOT	5/27/80	2100	0000	48500.0	183.5725	.00	.00	.00	.00	.00	.00
ROSW	551565	BOT	5/28/80	0000	0300	47360.0	179.2576	.00	.00	.00	.00	.00	.00
ROSW	551566	BOT	5/28/80	0300	0600	46470.0	175.8890	.00	.00	.00	.00	.00	.00
ROSW	551570	BOT	6/03/80	0603	0903	49840.0	188.6444	.00	.00	.00	.00	.00	.00
ROSW	551579	BOT	6/04/80	0303	0603	49760.0	188.3416	.00	.00	.00	.00	.00	.00
ROSW	551571	BOT	6/03/80	0903	1203	49140.0	185.9949	.00	.00	.00	.00	.00	.00
ROSW	551572	BOT	6/03/80	1203	1503	51400.0	194.5490	.00	.00	.00	.00	.00	.00
ROSW	551573	BOT	6/03/80	1503	1803	49950.0	189.0608	.00	.00	.00	.00	.00	.00
ROSW	551574	BOT	6/03/80	1803	2103	49070.0	185.7300	.00	.00	.00	.00	.00	.00
ROSW	551575	BOT	6/03/80	2103	2133	8200.0	31.0370	.00	.00	.00	.00	.00	.00
ROSW	551576	BOT	6/03/80	2133	2203	8400.0	31.7940	.00	.00	.00	.00	.00	.00
ROSW	551577	BOT	6/03/80	2203	0003	32940.0	124.6779	.00	.00	.00	.00	.00	.00
ROSW	551578	BOT	6/04/80	0003	0303	50640.0	191.6724	.00	.00	.00	.00	.00	.00
ROSW	551580	BOT	6/06/80	0603	0903	50650.0	191.7103	.00	.00	.00	.00	.00	.00
ROSW	551581	BOT	6/06/80	0903	1203	50910.0	192.6944	.00	.00	.00	.00	.00	.00
ROSW	551582	BOT	6/06/80	1203	1503	50240.0	190.1584	.00	.00	.00	.00	.00	.00
ROSW	551583	BOT	6/06/80	1503	1633	26310.0	99.5834	.00	.00	.00	.00	.00	.00
ROSW	551584	BOT	6/06/80	1633	1703	8690.0	32.8917	.00	.00	.00	.00	.00	.00
ROSW	551585	BOT	6/06/80	1703	1733	8460.0	32.0211	.00	.00	.00	.00	.00	.00
ROSW	551586	BOT	6/06/80	1733	1803	8730.0	33.0431	.00	.00	.00	.00	.00	.00
ROSW	551587	BOT	6/06/80	1803	1933	24920.0	94.3222	.00	.00	.00	.00	.00	.00
ROSW	551588	BOT	6/06/80	1933	2003	8210.0	31.0749	.00	.00	.00	.00	.00	.00
ROSW	551589	BOT	6/06/80	2003	2033	8180.0	30.9613	.00	.00	.00	.00	.00	.00
ROSW	551590	BOT	6/06/80	2033	2103	8350.0	31.6048	.00	.00	.00	.00	.00	.00
ROSW	551591	BOT	6/06/80	2103	2333	33350.0	126.2298	.00	.00	.00	.00	.00	.00
ROSW	551593	BOT	6/07/80	0300	0600	49540.0	187.5089	.00	.00	.00	.00	.00	.00
ROSW	551594	BOT	6/10/80	0558	0858	49750.0	188.3038	.00	.00	.00	.00	.00	.00
ROSW	551595	BOT	6/10/80	0858	1158	50260.0	190.2341	.00	.00	.00	.00	.00	.00
ROSW	551596	BOT	6/10/80	1158	1458	49160.0	186.0706	.00	.00	.00	.00	.00	.00
ROSW	551597	BOT	6/10/80	1458	1758	49160.0	186.0706	.00	.00	.00	.00	.00	.00
ROSW	551598	BOT	6/10/80	1758	2058	49290.0	186.5627	.00	.00	.00	.00	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES BAY ANCHOVY

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
ROSW	551599	BOT	6/10/80	2058	2358	49540.0	187.5089	.00	.00	.00	.00	.00	.00
ROSW	551600	BOT	6/10/80	2358	0258	47350.0	179.2198	.00	.00	.00	.00	.00	.00
ROSW	551601	BOT	6/11/80	0258	0558	48120.0	182.1342	.00	.00	.00	.00	.00	.00
ROSW	551602	BOT	6/13/80	0604	0904	50550.0	191.3318	.00	.00	.00	.00	.00	.00
ROSW	551603	BOT	6/14/80	0304	0604	51100.0	193.4135	.00	.00	.00	.00	.00	.00
ROSW	551603	BOT	6/13/80	0904	1204	51570.0	195.1925	.00	.00	.00	.00	.00	.00
ROSW	551604	BOT	6/13/80	1204	1504	51330.0	194.2841	.00	.00	.00	.00	.00	.00
ROSW	551605	BOT	6/13/80	1504	1804	50330.0	190.4991	.00	.00	.00	.00	.00	.00
ROSW	551606	BOT	6/13/80	1804	2104	51760.0	195.9116	.00	.00	.00	.00	.00	.00
ROSW	551607	BOT	6/13/80	2104	0004	51750.0	195.8738	.00	.00	.00	.00	.00	.00
ROSW	551609	BOT	6/14/80	0004	0304	52350.0	198.1448	.00	.00	.00	.00	.00	.00
ROSW	551610	BOT	6/17/80	0600	0900	49570.0	187.6225	.00	.00	.00	.00	.00	.00
ROSW	551611	BOT	6/17/80	0900	1200	49700.0	188.1145	.00	.00	.00	.00	.00	.00
ROSW	551612	BOT	6/17/80	1200	1500	50710.0	191.9374	.00	.00	.00	.00	.00	.00
ROSW	551613	BOT	6/17/80	1500	1800	50490.0	191.1047	.00	.00	.00	.00	.00	.00
ROSW	551614	BOT	6/17/80	1800	2100	50450.0	190.9533	.00	.00	.00	.00	.00	.00
ROSW	551615	BOT	6/17/80	2100	0007	51360.0	194.3976	.00	.00	.00	.00	.00	.00
ROSW	551616	BOT	6/18/80	0007	0300	47610.0	180.2039	.00	.00	.00	.00	.00	.00
ROSW	551617	BOT	6/18/80	0300	0600	48660.0	184.1781	.00	.00	.00	.00	.00	.00
ROSW	551618	BOT	6/20/80	0600	0900	48550.0	183.7618	.00	.00	.00	.00	.00	.00
ROSW	551619	BOT	6/20/80	0900	1200	48700.0	184.3295	.00	.00	.00	.00	.00	.00
ROSW	551620	BOT	6/20/80	1200	1500	48770.0	184.5945	.00	.00	.00	.00	.00	.00
ROSW	551621	BOT	6/20/80	1500	1800	49600.0	187.7360	.00	.00	.00	.00	.00	.00
ROSW	551622	BOT	6/20/80	1800	2100	49740.0	188.2659	.00	.00	.00	.00	.00	.00
ROSW	551623	BOT	6/20/80	2100	0000	49840.0	188.6444	.00	.00	.00	.00	.00	.00
ROSW	551624	BOT	6/21/80	0000	0300	48980.0	185.3893	.00	.00	.00	.00	.00	.00
ROSW	551625	BOT	6/21/80	0300	0600	49370.0	186.8655	.00	.00	.00	.00	.00	.00
ROSW	551626	BOT	6/24/80	0603	0903	50100.0	189.6285	.00	.00	.00	.00	.00	.00
ROSW	551633	BOT	6/25/80	0315	0615	50780.0	192.2023	.00	.00	.00	.00	.00	.00
ROSW	551627	BOT	6/24/80	0915	1215	51640.0	195.4574	.00	.00	.00	.00	.00	.00
ROSW	551628	BOT	6/24/80	1215	1515	49810.0	188.5309	.00	.00	.00	.00	.00	.00
ROSW	551629	BOT	6/24/80	1515	1815	50610.0	191.5589	.00	.00	.00	.00	.00	.00
ROSW	551630	BOT	6/24/80	1815	2115	50310.0	190.4234	.00	.00	.00	.00	.00	.00
ROSW	551631	BOT	6/24/80	2115	0015	51190.0	193.7542	.00	.00	.00	.00	.00	.00
ROSW	551632	BOT	6/25/80	0015	0315	51820.0	196.1387	.00	.00	.00	.00	.00	.00
ROSW	551634	BOT	7/01/80	0610	0910	51220.0	193.8677	.00	.00	.00	.00	.00	.00
ROSW	551641	BOT	7/02/80	0310	0610	51680.0	195.6088	.00	.00	.00	.00	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES BAY ANCHOVY

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
ROSW	551635	BOT	7/01/80	0910	1210	51060.0	193.2621	.00	.00	.00	.00	.00	.00
ROSW	551636	BOT	7/01/80	1210	1510	53360.0	201.9676	.00	.00	.00	.00	.00	.00
ROSW	551637	BOT	7/01/80	1510	1810	53110.0	201.0214	.00	.00	.00	.00	.00	.00
ROSW	551638	BOT	7/01/80	1810	2110	50100.0	189.6285	.00	.00	.00	.00	.00	.00
ROSW	551639	BOT	7/01/80	2110	0010	51420.0	194.6247	.00	.00	.00	.00	.00	.00
ROSW	551640	BOT	7/02/80	0010	0310	48680.0	184.2538	.00	.00	.00	.00	.00	.00
ROSW	551642	BOT	7/08/80	0630	0930	49620.0	187.8117	.00	.00	.00	.00	.00	.00
ROSW	551649	BOT	7/09/80	0330	0630	48140.0	182.2099	.00	.00	.00	.00	.00	.00
ROSW	551643	BOT	7/08/80	0930	1230	50390.0	190.7262	.00	.00	.00	.00	.00	.00
ROSW	551644	BOT	7/08/80	1230	1530	50450.0	190.9533	.00	5.24	.00	.00	.00	5.24
ROSW	551645	BOT	7/08/80	1530	1830	46160.0	174.7156	.00	5.72	.00	.00	.00	5.72
ROSW	551646	BOT	7/08/80	1830	2130	44600.0	168.8110	.00	.00	.00	.00	.00	.00
ROSW	551647	BOT	7/08/80	2130	0030	49580.0	187.6603	.00	.00	.00	.00	.00	.00
ROSW	551648	BOT	7/09/80	0030	0330	45090.0	170.6657	.00	5.86	.00	.00	.00	5.86
ROSW	551650	BOT	7/15/80	0635	0935	49940.0	189.0229	.00	15.87	.00	.00	.00	15.87
ROSW	551657	BOT	7/16/80	0335	0635	51590.0	195.2682	.00	.00	.00	.00	.00	.00
ROSW	551651	BOT	7/15/80	0935	1235	51680.0	195.6088	.00	5.11	.00	.00	.00	5.11
ROSW	551652	BOT	7/15/80	1235	1535	52110.0	197.2364	.00	.00	.00	.00	.00	.00
ROSW	551653	BOT	7/15/80	1535	1835	49420.0	187.0547	.00	5.35	.00	.00	.00	5.35
ROSW	551654	BOT	7/15/80	1835	2135	49290.0	186.5627	.00	48.24	.00	.00	.00	48.24
ROSW	551655	BOT	7/15/80	2135	0035	52990.0	200.5672	.00	.00	.00	.00	.00	.00
ROSW	551656	BOT	7/16/80	0035	0335	52590.0	199.0532	.00	5.02	.00	.00	.00	5.02
ROSW	551658	BOT	7/22/80	0610	0910	52670.0	199.3560	.00	.00	.00	.00	.00	.00
ROSW	551665	BOT	7/23/80	0310	0610	46970.0	177.7815	.00	.00	.00	.00	.00	.00
ROSW	551659	BOT	7/22/80	0910	1210	52970.0	200.4915	.00	9.98	.00	.00	.00	9.98
ROSW	551660	BOT	7/22/80	1210	1510	51220.0	193.8677	.00	.00	.00	.00	.00	.00
ROSW	551661	BOT	7/22/80	1510	1810	51120.0	193.4892	.00	5.17	.00	.00	.00	5.17
ROSW	551662	BOT	7/22/80	1810	2110	52370.0	198.2205	.00	.00	.00	.00	.00	.00
ROSW	551663	BOT	7/22/80	2110	0010	51780.0	195.9873	.00	10.20	.00	.00	.00	10.20
ROSW	551664	BOT	7/23/80	0010	0310	49040.0	185.6164	.00	.00	.00	.00	.00	.00
ROSW	551666	BOT	7/29/80	0610	0910	51170.0	193.6785	.00	.00	.00	.00	.00	.00
ROSW	551673	BOT	7/30/80	0310	0610	49180.0	186.1463	.00	37.60	.00	.00	.00	37.60
ROSW	551667	BOT	7/29/80	0910	1210	50730.0	192.0131	.00	.00	.00	.00	.00	.00
ROSW	551668	BOT	7/29/80	1210	1510	51430.0	194.6626	.00	.00	.00	.00	.00	.00
ROSW	551669	BOT	7/29/80	1510	1810	50250.0	190.1963	.00	10.52	.00	.00	.00	10.52
ROSW	551670	BOT	7/29/80	1810	2110	52480.0	198.6368	.00	30.21	.00	.00	.00	30.21
ROSW	551671	BOT	7/29/80	2110	0010	51350.0	194.3598	.00	10.29	.00	.00	.00	10.29
ROSW	551672	BOT	7/30/80	0010	0310	51410.0	194.5869	.00	10.28	.00	.00	.00	10.28

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES BAY ANCHOVY

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ROSW	551674	BOT	8/05/80	0613	0913	51440.0	194.7004	.00	5.14	.00	.00	.00	5.14
ROSW	551681	BOT	8/06/80	0313	0613	50630.0	191.6346	.00	.00	.00	.00	.00	.00
ROSW	551675	BOT	8/05/80	0913	1213	49450.0	187.1683	.00	5.34	.00	.00	.00	5.34
ROSW	551676	BOT	8/05/80	1213	1513	51240.0	193.9434	.00	20.62	.00	.00	.00	20.62
ROSW	551677	BOT	8/05/80	1513	1813	49140.0	185.9949	.00	10.75	.00	.00	.00	10.75
ROSW	551678	BOT	8/05/80	1813	2113	52150.0	197.3878	.00	.00	.00	.00	.00	.00
ROSW	551679	BOT	8/05/80	2113	0013	50980.0	192.9593	.00	46.64	.00	.00	.00	46.64
ROSW	551680	BOT	8/06/80	0013	0313	49720.0	188.1902	.00	5.31	.00	.00	.00	5.31
ROSW	551682	BOT	8/12/80	0625	0925	52660.0	199.3181	.00	15.05	.00	.00	.00	15.05
ROSW	551689	BOT	8/13/80	0325	0625	50300.0	190.3855	.00	126.06	.00	.00	.00	126.06
ROSW	551683	BOT	8/12/80	0925	1225	54930.0	207.7965	.00	24.06	.00	.00	.00	24.06
ROSW	551684	BOT	8/12/80	1225	1525	54220.0	205.2227	.00	14.62	.00	.00	.00	14.62
ROSW	551685	BOT	8/12/80	1525	1825	51030.0	193.1486	.00	20.71	.00	.00	.00	20.71
ROSW	551686	BOT	8/12/80	1825	2125	49530.0	187.4711	.00	48.01	.00	.00	.00	48.01
ROSW	551687	BOT	8/12/80	2125	0025	52010.0	196.8579	.00	35.56	.00	.00	.00	35.56
ROSW	551688	BOT	8/13/80	0025	0325	52740.0	199.6209	.00	80.15	.00	.00	.00	80.15
ROSW	551692	BOT	8/19/80	0605	0905	51090.0	193.3757	.00	10.34	.00	.00	.00	10.34
ROSW	551697	BOT	8/20/80	0305	0605	50570.0	191.4075	.00	.00	.00	.00	.00	.00
ROSW	551691	BOT	8/19/80	0905	1205	50610.0	191.5589	.00	.00	.00	.00	.00	.00
ROSW	551692	BOT	8/19/80	1205	1505	50930.0	192.7701	.00	15.56	.00	.00	.00	15.56
ROSW	551693	BOT	8/19/80	1505	1805	51440.0	194.7004	.00	10.27	.00	.00	.00	10.27
ROSW	551694	BOT	8/19/80	1805	2105	52580.0	199.0153	.00	25.12	.00	.00	.00	25.12
ROSW	551695	BOT	8/19/80	2105	0005	51340.0	194.3219	.00	41.17	.00	.00	.00	41.17
ROSW	551696	BOT	8/20/80	0005	0305	49490.0	187.3197	.00	21.35	.00	.00	.00	21.35
ROSW	551698	BOT	8/26/80	0606	0906	52360.0	198.1826	.00	141.28	.00	.00	.00	141.28
ROSW	551705	BOT	8/27/80	0306	0606	53230.0	201.4756	.00	198.54	.00	.00	.00	198.54
ROSW	551699	BOT	8/26/80	0906	1206	53620.0	202.9517	.00	24.64	.00	.00	.00	24.64
ROSW	551700	BOT	8/26/80	1206	1506	51330.0	194.2841	.00	30.88	.00	.00	.00	30.88
ROSW	551701	BOT	8/26/80	1506	1806	50930.0	192.7701	.00	150.44	.00	.00	.00	150.44
ROSW	551702	BOT	8/26/80	1806	2106	51220.0	193.8677	.00	113.48	.00	.00	.00	113.48
ROSW	551703	BOT	8/26/80	2106	0006	54350.0	205.7148	.00	58.33	.00	.00	.00	58.33
ROSW	551704	BOT	8/27/80	0006	0306	53990.0	204.3522	.00	137.02	.00	.00	.00	137.02

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES MORONE SP.

SAMPLE LOCATION	INVENTORY NUMBER	GEAR	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
RDSW	551527	BOT	4/25/80	0517	0817	48940.0	185.2379	.00	.00	.00	.00	.00	.00	**
RDSW	551528	BOT	4/25/80	0817	1117	49620.0	187.8117	.00	.00	.00	.00	.00	.00	
RDSW	551522	BOT	4/24/80	1417	1717	48320.0	182.8912	.00	.00	.00	.00	.00	.00	
RDSW	551529	BOT	4/25/80	1117	1417	47830.0	181.0366	.00	.00	.00	.00	.00	.00	
RDSW	551523	BOT	4/24/80	1717	2017	49060.0	185.6921	.00	.00	.00	.00	.00	.00	
RDSW	551524	BOT	4/24/80	2017	2317	48350.0	183.0048	.00	.00	.00	.00	.00	.00	
RDSW	551525	BOT	4/24/80	2317	0217	49050.0	185.6543	.00	.00	.00	.00	.00	.00	
RDSW	551526	BOT	4/25/80	0217	0517	48910.0	185.1244	.00	.00	.00	.00	.00	.00	
RDSW	551530	MID	4/29/80	0607	0907	48900.0	185.0865	.00	.00	.00	.00	.00	.00	
RDSW	551531	MID	4/29/80	0907	1207	49180.0	186.1463	.00	.00	.00	.00	.00	.00	
RDSW	551532	MID	4/29/80	1207	1507	41890.0	158.5537	.00	.00	.00	.00	.00	.00	
RDSW	551533	MID	4/29/80	1507	1807	58230.0	220.4006	.00	.00	.00	.00	.00	.00	
RDSW	551534	MID	4/29/80	1807	2038	40230.0	152.2706	.00	.00	.00	.00	.00	.00	
RDSW	551535	MID	4/29/80	2038	2338	49630.0	187.8496	.00	.00	.00	.00	.00	.00	
RDSW	551536	MID	4/29/80	2338	0238	48910.0	185.1244	.00	.00	.00	.00	.00	.00	
RDSW	551537	MID	4/30/80	0238	0607	56190.0	212.6792	.00	.00	.00	.00	.00	.00	
RDSW	551538	MID	5/06/80	0559	0859	50190.0	189.9692	.00	.00	.00	.00	.00	.00	
RDSW	551539	MID	5/06/80	0859	1159	49870.0	188.7580	.00	.00	.00	.00	.00	.00	
RDSW	551540	MID	5/06/80	1159	1459	51340.0	194.3219	.00	.00	.00	.00	.00	.00	
RDSW	551541	MID	5/06/80	1459	1759	51860.0	196.2901	.00	.00	.00	.00	.00	.00	
RDSW	551542	MID	5/06/80	1759	2059	48210.0	182.4749	.00	.00	.00	.00	.00	.00	
RDSW	551543	MID	5/06/80	2059	2359	47840.0	181.0744	.00	.00	.00	.00	.00	.00	
RDSW	551544	MID	5/06/80	2359	0259	48370.0	183.0805	.00	.00	.00	.00	.00	.00	
RDSW	551545	MID	5/07/80	0259	0559	49760.0	188.3416	.00	.00	.00	.00	.00	.00	
RDSW	551546	MID	5/13/80	0602	0902	50180.0	189.9313	.00	.00	.00	.00	.00	.00	
RDSW	551553	MID	5/14/80	0302	0602	47900.0	181.3015	.00	.00	.00	.00	.00	.00	
RDSW	551547	MID	5/13/80	0902	1202	49600.0	187.7360	.00	.00	.00	.00	.00	.00	
RDSW	551548	MID	5/13/80	1202	1502	49360.0	186.8276	.00	.00	.00	.00	.00	.00	
RDSW	551549	MID	5/13/80	1502	1802	47920.0	181.3772	.00	.00	.00	.00	.00	.00	
RDSW	551550	MID	5/13/80	1802	2102	47970.0	181.5665	.00	.00	.00	.00	.00	.00	
RDSW	551551	MID	5/13/80	2102	0002	48630.0	184.0646	.00	.00	.00	.00	.00	.00	
RDSW	551552	MID	5/14/80	0002	0302	49160.0	186.0706	.00	.00	.00	.00	.00	.00	
RDSW	551554	BOT	5/20/80	0624	0924	48840.0	184.8594	.00	21.64	.00	.00	.00	21.64	
RDSW	551561	BOT	5/21/80	0324	0624	55600.0	210.4460	.00	.00	.00	.00	.00	.00	
RDSW	551555	BOT	5/20/80	0924	1224	48000.0	181.6800	.00	.00	.00	.00	.00	.00	
RDSW	551556	BOT	5/20/80	1224	1524	50390.0	190.7262	.00	.00	.00	.00	.00	.00	
RDSW	551557	BOT	5/20/80	1524	1824	48990.0	185.4272	.00	5.39	.00	.00	.00	5.39	
RDSW	551558	BOT	5/20/80	1824	2124	49900.0	188.8715	.00	10.59	.00	.00	.00	10.59	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES MORONE SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
ROSW	551559	BOT	5/20/80	2124	0024	50110.0	189.6664	.00	73.81	.00	.00	.00	73.81
ROSW	551560	BOT	5/21/80	0024	0324	49890.0	188.8337	.00	26.48	.00	.00	.00	26.48
ROSW	551567	BOT	5/28/80	0600	0900	48180.0	182.3613	.00	32.90	.00	.00	.00	32.90
ROSW	551568	BOT	5/28/80	0900	1200	51710.0	195.7224	.00	.00	.00	.00	.00	.00
ROSW	551569	BOT	5/28/80	1200	1500	50540.0	191.2939	.00	78.41	.00	.00	.00	78.41
ROSW	551562	BOT	5/27/80	1530	1800	41110.0	155.6014	.00	96.40	.00	.00	.00	96.40
ROSW	551563	BOT	5/27/80	1800	2100	49710.0	188.1524	.00	37.20	.00	.00	.00	37.20
ROSW	551564	BOT	5/27/80	2100	0000	48500.0	183.5725	.00	653.69	.00	.00	.00	653.69
ROSW	551565	BOT	5/28/80	0000	0300	47360.0	179.2576	.00	83.68	.00	.00	.00	83.68
ROSW	551566	BOT	5/28/80	0300	0600	46470.0	175.8890	.00	102.34	.00	.00	.00	102.34
ROSW	551573	BOT	6/03/80	0603	0903	49840.0	188.6444	.00	482.39	.00	.00	.00	482.39
ROSW	551570	BOT	6/04/80	0303	0603	49760.0	188.3416	.00	138.05	.00	.00	.00	138.05
ROSW	551571	BOT	6/03/80	0903	1203	49140.0	185.9949	.00	37.64	.00	.00	.00	37.64
ROSW	551572	BOT	6/03/80	1203	1503	51400.0	194.5490	.00	25.70	.00	.00	.00	25.70
ROSW	551573	BOT	6/03/80	1503	1803	49950.0	189.0608	.00	47.60	.00	.00	.00	47.60
ROSW	551574	BOT	6/03/80	1803	2103	49070.0	185.7300	.00	839.93	.00	.00	.00	839.93
ROSW	551575	BOT	6/03/80	2103	2133	8200.0	31.0370	.00	161.10	.00	.00	.00	161.10
ROSW	551576	BOT	6/03/80	2133	2203	8400.0	31.7940	.00	31.45	.00	.00	.00	31.45
ROSW	551577	BOT	6/03/80	2203	0003	32940.0	124.6779	.00	24.06	.00	.00	.00	24.06
ROSW	551578	BOT	6/04/80	0003	0303	50640.0	191.6724	.00	93.91	.00	.00	.00	93.91
ROSW	551580	BOT	6/06/80	0603	0903	50650.0	191.7103	.00	125.19	.00	.00	.00	125.19
ROSW	551581	BOT	6/06/80	0903	1203	50910.0	192.6944	.00	586.42	.00	.00	.00	586.42
ROSW	551582	BOT	6/06/80	1203	1503	50240.0	190.1584	.00	94.66	.00	.00	.00	94.66
ROSW	551583	BOT	6/06/80	1503	1633	26310.0	99.5834	.00	130.54	.00	.00	.00	130.54
ROSW	551584	BOT	6/06/80	1633	1703	8690.0	32.8917	.00	304.03	.00	.00	.00	304.03
ROSW	551585	BOT	6/06/80	1703	1733	8460.0	32.0211	.00	93.69	.00	.00	.00	93.69
ROSW	551586	BOT	6/06/80	1733	1803	8730.0	33.0431	.00	30.26	.00	.00	.00	30.26
ROSW	551587	BOT	6/06/80	1803	1933	24920.0	94.3222	.00	74.21	.00	.00	.00	74.21
ROSW	551588	BOT	6/06/80	1933	2003	8210.0	31.0749	.00	225.26	.00	.00	.00	225.26
ROSW	551589	BOT	6/06/80	2003	2033	8180.0	30.9613	.00	96.90	.00	.00	.00	96.90
ROSW	551590	BOT	6/06/80	2033	2103	8350.0	31.6048	.00	284.77	.00	.00	.00	284.77
ROSW	551591	BOT	6/06/80	2103	2333	33350.0	126.2298	.00	332.73	.00	.00	.00	332.73
ROSW	551593	BOT	6/07/80	0300	0600	49540.0	187.5089	.00	143.99	.00	.00	.00	143.99
ROSW	551594	BOT	6/10/80	0558	0858	49750.0	188.3038	.00	106.21	.00	.00	.00	106.21
ROSW	551595	BOT	6/10/80	0858	1158	50260.0	190.2341	.00	.00	.00	.00	.00	.00
ROSW	551596	BOT	6/10/80	1158	1458	49160.0	186.0706	.00	204.22	.00	.00	.00	204.22
ROSW	551597	BOT	6/10/80	1458	1758	49160.0	186.0706	.00	85.99	.00	.00	.00	85.99
ROSW	551598	BOT	6/10/80	1758	2058	49290.0	186.5627	.00	26.80	.00	.00	.00	26.80

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES MORONE SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
RDSW	551599	BOT	6/10/80	2058	2358	49540.0	187.5089	.00	106.66	.00	.00	.00	106.66
RDSW	551600	BOT	6/10/80	2358	0258	47350.0	179.2198	.00	61.38	.00	.00	.00	61.38
RDSW	551601	BOT	6/11/80	0258	0558	48120.0	182.1342	.00	21.96	.00	.00	.00	21.96
RDSW	551602	BOT	6/13/80	0604	0904	50550.0	191.3318	.00	.00	.00	.00	.00	.00
RDSW	551603	BOT	6/14/80	0304	0604	51100.0	193.4135	.00	31.02	.00	.00	.00	31.02
RDSW	551603	BOT	6/13/80	0904	1204	51570.0	195.1925	.00	15.37	.00	.00	.00	15.37
RDSW	551604	BOT	6/13/80	1204	1504	51330.0	194.2841	.00	5.15	.00	.00	.00	5.15
RDSW	551605	BOT	6/13/80	1504	1804	50330.0	190.4991	.00	41.99	.00	.00	.00	41.99
RDSW	551606	BOT	6/13/80	1804	2104	51760.0	195.9116	.00	.00	.00	.00	.00	.00
RDSW	551607	BOT	6/13/80	2104	0304	51750.0	195.8738	.00	15.32	.00	.00	.00	15.32
RDSW	551608	BOT	6/14/80	0904	0304	52350.0	198.1448	.00	35.33	.00	.00	.00	35.33
RDSW	551610	BOT	6/17/80	0600	0900	49570.0	187.6225	.00	26.65	.00	.00	.00	26.65
RDSW	551611	BOT	6/17/80	0900	1200	49700.0	188.1145	.00	.00	.00	.00	.00	.00
RDSW	551612	BOT	6/17/80	1200	1500	50710.0	191.9374	.00	.00	.00	.00	.00	.00
RDSW	551613	BOT	6/17/80	1500	1800	50490.0	191.1047	.00	5.23	.00	.00	.00	5.23
RDSW	551614	BOT	6/17/80	1800	2100	50450.0	190.9533	.00	36.66	.00	.00	.00	36.66
RDSW	551615	BOT	6/17/80	2100	0007	51360.0	194.3976	.00	.00	.00	.00	.00	.00
RDSW	551616	BOT	6/18/80	0007	0300	47610.0	180.2039	.00	11.10	.00	.00	.00	11.10
RDSW	551617	BOT	6/18/80	0300	0600	48660.0	184.1781	.00	.00	.00	.00	.00	.00
RDSW	551618	BOT	6/20/80	0600	0900	48550.0	183.7618	.00	10.88	.00	.00	.00	10.88
RDSW	551619	BOT	6/20/80	0900	1200	48700.0	184.3295	.00	.00	.00	.00	.00	.00
RDSW	551620	BOT	6/20/80	1200	1500	48770.0	184.5945	.00	.00	.00	.00	.00	.00
RDSW	551621	BOT	6/20/80	1500	1800	49600.0	187.7360	.00	10.65	.00	.00	.00	10.65
RDSW	551622	BOT	6/20/80	1800	2100	49740.0	188.2659	.00	10.62	.00	.00	.00	10.62
RDSW	551623	BOT	6/20/80	2100	0000	49840.0	188.6444	.00	.00	.00	.00	.00	.00
RDSW	551624	BOT	6/21/80	0000	0300	48980.0	185.3893	.00	10.79	.00	.00	.00	10.79
RDSW	551625	BOT	6/21/80	0300	0600	49370.0	186.8655	.00	5.35	.00	.00	.00	5.35
RDSW	551626	BOT	6/24/80	0603	0903	50100.0	189.6285	.00	.00	.00	.00	.00	.00
RDSW	551633	BOT	6/25/80	0315	0615	50780.0	192.2023	.00	67.64	.00	.00	.00	67.64
RDSW	551627	BOT	6/24/80	0915	1215	51640.0	195.4574	.00	15.35	.00	.00	.00	15.35
RDSW	551628	BOT	6/24/80	1215	1515	49810.0	188.5309	.00	15.91	.00	.00	.00	15.91
RDSW	551629	BOT	6/24/80	1515	1815	50610.0	191.5589	.00	.00	.00	.00	.00	.00
RDSW	551630	BOT	6/24/80	1815	2115	50310.0	190.4234	.00	.00	.00	.00	.00	.00
RDSW	551631	BOT	6/24/80	2115	0015	51190.0	193.7542	.00	5.16	.00	.00	.00	5.16
RDSW	551632	BOT	6/25/80	0015	0315	51820.0	196.1387	.00	15.30	.00	.00	.00	15.30
RDSW	551634	BOT	7/01/80	0610	0910	51220.0	193.8677	.00	5.16	.00	.00	.00	5.16
RDSW	551641	BOT	7/02/80	0310	0610	51680.0	195.6088	.00	10.22	.00	.00	.00	10.22

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES MORONE SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
ROSW	551635	BOT	7/01/80	0910	1210	51060.0	193.2621	.00	.00	.00	.00	.00	.00
ROSW	551636	BOT	7/01/80	1210	1510	53360.0	201.9676	.00	4.95	.00	.00	.00	4.95
ROSW	551637	BOT	7/01/80	1510	1810	53110.0	201.0214	.00	.00	.00	.00	.00	.00
ROSW	551638	BOT	7/01/80	1810	2110	50100.0	189.6285	.00	.00	.00	.00	.00	.00
ROSW	551639	BOT	7/01/80	2110	0010	51420.0	194.6247	.00	.00	.00	.00	.00	.00
ROSW	551640	BOT	7/02/80	0010	0310	48680.0	184.2538	.00	.00	.00	.00	.00	.00
ROSW	551642	BOT	7/08/80	0630	0930	49620.0	187.8117	.00	.00	.00	.00	.00	.00
ROSW	551649	BOT	7/09/80	0330	0630	48140.0	182.2099	.00	.00	.00	.00	.00	.00
ROSW	551643	BOT	7/08/80	0930	1230	50390.0	190.7262	.00	.00	.00	.00	.00	.00
ROSW	551644	BOT	7/08/80	1230	1530	50450.0	190.9533	.00	.00	.00	.00	.00	.00
ROSW	551645	BOT	7/08/80	1530	1830	46160.0	174.7156	.00	.00	.00	.00	.00	.00
ROSW	551646	BOT	7/08/80	1830	2130	44600.0	168.8110	.00	5.92	.00	.00	.00	5.92
ROSW	551647	BOT	7/08/80	2130	0030	49580.0	187.6603	.00	.00	.00	.00	.00	.00
ROSW	551648	BOT	7/09/80	0030	0330	45090.0	170.6657	.00	.00	.00	.00	.00	.00
ROSW	551650	BOT	7/15/80	0635	0935	49940.0	189.0229	.00	.00	.00	.00	.00	.00
ROSW	551657	BOT	7/16/80	0335	0635	51590.0	195.2682	.00	5.12	.00	.00	.00	5.12
ROSW	551651	BOT	7/15/80	0935	1235	51680.0	195.6088	.00	.00	.00	.00	.00	.00
ROSW	551652	BOT	7/15/80	1235	1535	52110.0	197.2364	.00	.00	.00	.00	.00	.00
ROSW	551653	BOT	7/15/80	1535	1835	49420.0	187.0547	.00	.00	.00	.00	.00	.00
ROSW	551654	BOT	7/15/80	1835	2135	49290.0	186.5627	.00	.00	.00	.00	.00	.00
ROSW	551655	BOT	7/15/80	2135	0035	52990.0	200.5672	.00	.00	.00	.00	.00	.00
ROSW	551656	BOT	7/16/80	0035	0335	52590.0	199.0532	.00	.00	.00	.00	.00	.00
ROSW	551658	BOT	7/22/80	0610	0910	52670.0	199.3560	.00	.00	.00	.00	.00	.00
ROSW	551665	BOT	7/23/80	0310	0610	46970.0	177.7815	.00	.00	.00	.00	.00	.00
ROSW	551659	BOT	7/22/80	0910	1210	52970.0	200.4915	.00	.00	.00	.00	.00	.00
ROSW	551660	BOT	7/22/80	1210	1510	51220.0	193.8677	.00	.00	.00	.00	.00	.00
ROSW	551661	BOT	7/22/80	1510	1810	51120.0	193.4892	.00	.00	.00	.00	.00	.00
ROSW	551662	BOT	7/22/80	1810	2110	52370.0	198.2205	.00	.00	.00	.00	.00	.00
ROSW	551663	BOT	7/22/80	2110	0010	51780.0	195.9873	.00	.00	.00	.00	.00	.00
ROSW	551664	BOT	7/23/80	0010	0310	49040.0	185.6164	.00	.00	.00	.00	.00	.00
ROSW	551666	BOT	7/29/80	0610	0910	51170.0	193.6785	.00	.00	.00	.00	.00	.00
ROSW	551673	BOT	7/30/80	0310	0610	49180.0	186.1463	.00	.00	.00	.00	.00	.00
ROSW	551667	BOT	7/29/80	0910	1210	50730.0	192.0131	.00	.00	.00	.00	.00	.00
ROSW	551668	BOT	7/29/80	1210	1510	51430.0	194.6626	.00	.00	.00	.00	.00	.00
ROSW	551669	BOT	7/29/80	1510	1810	50250.0	190.1963	.00	.00	.00	.00	.00	.00
ROSW	551670	BOT	7/29/80	1810	2110	52480.0	198.6368	.00	.00	.00	.00	.00	.00
ROSW	551671	BOT	7/29/80	2110	0010	51350.0	194.3598	.00	.00	.00	.00	.00	.00
ROSW	551672	BOT	7/30/80	0010	0310	51410.0	194.5869	.00	.00	.00	.00	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES MORONE SP.

AGENCY IDENTITY	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
RDSW	551674	BOT	8/05/80	0613	0913	51480.0	194.7004	.00	.00	.00	.00	.00	.00
RDSW	551681	BOT	8/06/80	0313	0613	50630.0	191.6346	.00	.00	.00	.00	.00	.00
RDSW	551675	BOT	8/05/80	0913	1213	49450.0	187.1683	.00	.00	.00	.00	.00	.00
RDSW	551676	BOT	8/05/80	1213	1513	51240.0	193.9434	.00	.00	.00	.00	.00	.00
RDSW	551677	BOT	8/05/80	1513	1813	49140.0	185.9949	.00	.00	.00	.00	.00	.00
RDSW	551678	BOT	8/05/80	1813	2113	52150.0	197.3878	.00	.00	.00	.00	.00	.00
RDSW	551679	BOT	8/05/80	2113	0013	50980.0	192.9593	.00	.00	.00	.00	.00	.00
RDSW	551680	BOT	8/06/80	0013	0313	49720.0	188.1902	.00	.00	.00	.00	.00	.00
RDSW	551682	BOT	8/12/80	0625	0925	52660.0	199.3181	.00	.00	.00	.00	.00	.00
RDSW	551689	BOT	8/13/80	0325	0625	50300.0	190.3855	.00	.00	.00	.00	.00	.00
RDSW	551683	BOT	8/12/80	0925	1225	54900.0	207.7965	.00	.00	.00	.00	.00	.00
RDSW	551684	BOT	8/12/80	1225	1525	54220.0	205.2227	.00	.00	.00	.00	.00	.00
RDSW	551685	BOT	8/12/80	1525	1825	51030.0	193.1486	.00	.00	.00	.00	.00	.00
RDSW	551686	BOT	8/12/80	1825	2125	49530.0	187.4711	.00	.00	.00	.00	.00	.00
RDSW	551687	BOT	8/12/80	2125	0025	52010.0	196.8579	.00	.00	.00	.00	.00	.00
RDSW	551688	BOT	8/13/80	0025	0325	52740.0	199.6209	.00	.00	.00	.00	.00	.00
RDSW	551690	BOT	8/19/80	0605	0905	51090.0	193.3757	.00	.00	.00	.00	.00	.00
RDSW	551697	BOT	8/20/80	0305	0605	50570.0	191.4075	.00	.00	.00	.00	.00	.00
RDSW	551691	BOT	8/19/80	0905	1205	50610.0	191.5589	.00	.00	.00	.00	.00	.00
RDSW	551692	BOT	8/19/80	1205	1505	50930.0	192.7701	.00	.00	.00	.00	.00	.00
RDSW	551693	BOT	8/19/80	1505	1805	51440.0	194.7004	.00	.00	.00	.00	.00	.00
RDSW	551694	BOT	8/19/80	1805	2105	52580.0	199.0153	.00	.00	.00	.00	.00	.00
RDSW	551695	BOT	8/19/80	2105	0005	51340.0	194.3219	.00	.00	.00	.00	.00	.00
RDSW	551696	BOT	8/20/80	0005	0305	49490.0	187.3197	.00	.00	.00	.00	.00	.00
RDSW	551698	BOT	8/26/80	0606	0906	52360.0	198.1826	.00	.00	.00	.00	.00	.00
RDSW	551705	BOT	8/27/80	0306	0606	53230.0	201.4756	.00	.00	.00	.00	.00	.00
RDSW	551699	BOT	8/26/80	0906	1206	53620.0	202.9517	.00	.00	.00	.00	.00	.00
RDSW	551700	BOT	8/26/80	1206	1506	51330.0	194.2841	.00	.00	.00	.00	.00	.00
RDSW	551701	BOT	8/26/80	1506	1806	50930.0	192.7701	.00	.00	.00	.00	.00	.00
RDSW	551702	BOT	8/26/80	1806	2106	51220.0	193.8677	.00	.00	.00	.00	.00	.00
RDSW	551703	BOT	8/26/80	2106	0006	54350.0	205.7148	.00	.00	.00	.00	.00	.00
RDSW	551704	BOT	8/27/80	0006	0306	53990.0	204.3522	.00	.00	.00	.00	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES STRIPED BASS (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
ROSW	551527	BOT	4/25/80	0517	0817	48940.0	185.2379	.00	.00	.00	.00	.00	.00	**
ROSW	551528	BOT	4/25/80	0817	1117	49620.0	187.8117	.00	.00	.00	.00	.00	.00	
ROSW	551522	BOT	4/24/80	1417	1717	48320.0	182.8912	.00	.00	.00	.00	.00	.00	
ROSW	551529	BOT	4/25/80	1117	1417	47830.0	181.0366	.00	.00	.00	.00	.00	.00	
ROSW	551523	BOT	4/24/80	1717	2017	49060.0	185.6921	.00	.00	.00	.00	.00	.00	
ROSW	551524	BOT	4/24/80	2017	2317	48350.0	183.0048	.00	.00	.00	.00	.00	.00	
ROSW	551525	BOT	4/24/80	2317	0217	49050.0	185.6543	.00	.00	.00	.00	.00	.00	
ROSW	551526	BOT	4/25/80	0217	0517	48910.0	185.1244	.00	.00	.00	.00	.00	.00	
ROSW	551530	MID	4/29/80	0607	0907	48900.0	185.0865	.00	.00	.00	.00	.00	.00	
ROSW	551531	MID	4/29/80	0907	1207	49180.0	186.1463	.00	.00	.00	.00	.00	.00	
ROSW	551532	MID	4/29/80	1207	1507	41890.0	158.5537	.00	.00	.00	.00	.00	.00	
ROSW	551533	MID	4/29/80	1507	1807	58230.0	220.4006	.00	.00	.00	.00	.00	.00	
ROSW	551534	MID	4/29/80	1807	2038	40230.0	152.2706	.00	.00	.00	.00	.00	.00	
ROSW	551535	MID	4/29/80	2038	2338	49630.0	187.8496	.00	.00	.00	.00	.00	.00	
ROSW	551536	MID	4/29/80	2338	0238	48910.0	185.1244	.00	.00	.00	.00	.00	.00	
ROSW	551537	MID	4/30/80	0238	0607	56190.0	212.6792	.00	.00	.00	.00	.00	.00	
ROSW	551538	MID	5/06/80	0559	0859	50190.0	189.9692	.00	.00	.00	.00	.00	.00	
ROSW	551539	MID	5/06/80	0859	1159	49870.0	188.7580	.00	.00	.00	.00	.00	.00	
ROSW	551540	MID	5/06/80	1159	1459	51340.0	194.3219	.00	.00	.00	.00	.00	.00	
ROSW	551541	MID	5/06/80	1459	1759	51860.0	196.2901	.00	.00	.00	.00	.00	.00	
ROSW	551542	MID	5/06/80	1759	2059	48210.0	182.4749	.00	.00	.00	.00	.00	.00	
ROSW	551543	MID	5/06/80	2059	2359	47840.0	181.0744	.00	.00	.00	.00	.00	.00	
ROSW	551544	MID	5/06/80	2359	0259	48370.0	183.0805	.00	.00	.00	.00	.00	.00	
ROSW	551545	MID	5/07/80	0259	0559	49760.0	188.3416	.00	.00	.00	.00	.00	.00	
ROSW	551546	MID	5/13/80	0602	0902	50180.0	189.9313	.00	5.27	5.27	.00	.00	.00	
ROSW	551553	MID	5/14/80	0302	0602	47900.0	181.3015	.00	.00	.00	.00	.00	.00	
ROSW	551547	MID	5/13/80	0902	1202	49600.0	187.7360	.00	.00	.00	.00	.00	.00	
ROSW	551548	MID	5/13/80	1202	1502	49360.0	186.8276	.00	.00	.00	.00	.00	.00	
ROSW	551549	MID	5/13/80	1502	1802	47920.0	181.3772	.00	.00	.00	.00	.00	.00	
ROSW	551550	MID	5/13/80	1802	2102	47970.0	181.5665	.00	.00	.00	.00	.00	.00	
ROSW	551551	MID	5/13/80	2102	0002	48630.0	184.0646	.00	5.43	5.43	.00	.00	.00	
ROSW	551552	MID	5/14/80	0002	0302	49160.0	186.0706	.00	.00	.00	.00	.00	.00	
ROSW	551554	BOT	5/20/80	0624	0924	48840.0	184.8594	.00	13.42	.00	10.82	.00	2.60	
ROSW	551561	BOT	5/21/80	0324	0624	55600.0	210.4460	.00	4.75	.00	4.75	.00	.00	
ROSW	551555	BOT	5/20/80	0924	1224	48000.0	181.6800	.00	.00	.00	.00	.00	.00	
ROSW	551556	BOT	5/20/80	1224	1524	50390.0	190.7262	.00	.00	.00	.00	.00	.00	
ROSW	551557	BOT	5/20/80	1524	1824	48990.0	185.4272	.00	2.70	.00	.00	.00	2.70	
ROSW	551558	BOT	5/20/80	1824	2124	49900.0	188.8715	.00	5.30	.00	.00	.00	5.30	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES STRIPED BASS (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIFE STAGE
RDSW	551559	BOT	5/20/80	2124	0024	50110.0	189.6664	.00	2.66	.00	.00	.00	2.60
RDSW	551560	BOT	5/21/80	0024	0324	49890.0	188.8337	.00	6.23	5.30	.00	.00	.93
RDSW	551567	BOT	5/28/80	0600	0900	48180.0	182.3613	.00	77.64	10.97	38.39	.00	28.29
RDSW	551568	BOT	5/28/80	0900	1200	51710.0	195.7224	.00	.00	.00	.00	.00	.00
RDSW	551569	BOT	5/28/80	1200	1500	50540.0	191.2939	.00	90.92	5.23	31.37	.00	54.33
RDSW	551562	BOT	5/27/80	1530	1800	41110.0	155.6014	.00	235.72	6.43	167.09	.00	62.20
RDSW	551563	BOT	5/27/80	1800	2100	49710.0	188.1524	.00	61.20	5.31	26.57	.00	29.31
RDSW	551564	BOT	5/27/80	2100	0000	48500.0	183.5725	.00	650.55	76.26	92.61	.00	481.68
RDSW	551565	BOT	5/28/80	0000	0300	47360.0	179.2576	.00	108.74	.00	78.10	.00	30.64
RDSW	551566	BOT	5/28/80	0300	0600	46470.0	175.8890	.00	134.12	39.80	51.17	.00	43.16
RDSW	551571	BOT	6/03/80	0603	0903	49840.0	188.6444	.00	1491.34	15.90	1060.20	.00	415.24
RDSW	551572	BOT	6/04/80	0303	0603	49760.0	188.3416	.00	421.47	84.95	217.69	.00	118.83
RDSW	551571	BOT	6/03/80	0903	1203	49140.0	185.9949	.00	64.33	.00	37.64	.00	26.69
RDSW	551572	BOT	6/03/80	1203	1503	51400.0	194.5490	.00	79.91	20.56	41.12	.00	18.23
RDSW	551573	BOT	6/03/80	1503	1803	49950.0	189.0608	.00	160.49	5.29	116.36	.00	38.84
RDSW	551574	BOT	6/03/80	1803	2103	49070.0	185.7300	.00	2176.71	48.46	1442.95	.00	685.30
RDSW	551575	BOT	6/03/80	2103	2133	8200.0	31.0370	.00	2282.55	.00	2126.49	.00	156.06
RDSW	551576	BOT	6/03/80	2133	2203	8400.0	31.7940	.00	187.73	.00	157.26	.00	30.47
RDSW	551577	BOT	6/03/80	2203	0003	32940.0	124.6779	.00	63.41	.00	40.10	.00	23.31
RDSW	551578	BOT	6/04/80	0003	0303	50640.0	191.6724	.00	278.79	5.22	182.60	.00	90.97
RDSW	551580	BOT	6/06/80	0603	0903	50650.0	191.7103	.00	171.42	.00	114.76	.00	56.67
RDSW	551581	BOT	6/06/80	0903	1203	50910.0	192.6944	.00	1095.72	.00	762.87	.00	332.85
RDSW	551582	BOT	6/06/80	1203	1503	50240.0	190.1584	.00	143.13	10.52	78.88	.00	53.73
RDSW	551583	BOT	6/06/80	1503	1633	26310.0	99.5834	.00	189.12	.00	90.38	.00	98.74
RDSW	551584	BOT	6/06/80	1633	1703	8690.0	32.8917	.00	1354.87	30.40	1094.50	.00	229.97
RDSW	551585	BOT	6/06/80	1703	1733	8460.0	32.0211	.00	570.54	.00	499.67	.00	70.87
RDSW	551586	BOT	6/06/80	1733	1803	8730.0	33.0431	.00	295.26	.00	272.37	.00	22.89
RDSW	551587	BOT	6/06/80	1803	1933	24920.0	94.3222	.00	140.95	.00	84.82	.00	56.13
RDSW	551588	BOT	6/06/80	1933	2003	8210.0	31.0749	.00	620.91	.00	450.52	.00	170.39
RDSW	551589	BOT	6/06/80	2003	2033	8180.0	30.9613	.00	137.90	32.30	32.30	.00	73.30
RDSW	551590	BOT	6/06/80	2033	2103	8350.0	31.6048	.00	531.81	.00	316.41	.00	215.40
RDSW	551591	BOT	6/06/80	2103	2333	33350.0	126.2298	.00	555.66	39.61	316.88	.00	199.17
RDSW	551593	BOT	6/07/80	0300	0600	49540.0	187.5089	.00	395.51	21.33	277.32	.00	96.86
RDSW	551594	BOT	6/10/80	0558	0858	49750.0	188.3038	.00	116.54	.00	84.97	.00	31.57
RDSW	551595	BOT	6/10/80	0858	1158	50260.0	190.2341	.00	.00	.00	.00	.00	.00
RDSW	551596	BOT	6/10/80	1158	1458	49160.0	186.0706	.00	493.96	96.74	252.59	.00	144.63
RDSW	551597	BOT	6/10/80	1458	1758	49160.0	186.0706	.00	195.26	.00	134.36	.00	60.90
RDSW	551598	BOT	6/10/80	1758	2058	49290.0	186.5627	.00	51.98	10.72	26.80	.00	14.46

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES STRIPED BASS (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
RDSW	551599	BOT	6/10/80	2058	2358	49540.0	187.5089	.00	313.52	16.00	239.99	.00	57.53
RDSW	551600	BOT	6/10/80	2358	0258	47350.0	179.2198	.00	155.74	.00	122.75	.00	32.99
RDSW	551601	BOT	6/11/80	0258	0558	48120.0	182.1342	.00	83.18	10.98	60.40	.00	11.80
RDSW	551602	BOT	6/13/80	0604	0904	50550.0	191.3318	.00	5.23	.00	5.23	.00	.00
RDSW	551603	BOT	6/14/80	0304	0604	51100.0	193.4135	.00	26.06	.00	20.68	.00	5.38
RDSW	551603	BOT	6/13/80	0904	1204	51570.0	195.1925	.00	1.67	.00	.00	.00	1.67
RDSW	551604	BOT	6/13/80	1204	1504	51330.0	194.2841	.00	10.85	5.15	5.15	.00	.56
RDSW	551605	BOT	6/13/80	1504	1804	50330.0	190.4991	.00	65.64	.00	52.49	.00	13.15
RDSW	551606	BOT	6/13/80	1804	2104	51760.0	195.9116	.00	15.31	5.10	10.21	.00	.00
RDSW	551607	BOT	6/13/80	2104	0004	51750.0	195.8738	.00	152.49	.00	142.95	.00	9.54
RDSW	551608	BOT	6/14/80	0004	0304	52350.0	198.1448	.00	274.35	20.19	232.15	.00	22.01
RDSW	551610	BOT	6/17/80	0600	0900	49570.0	187.6225	.00	26.10	.00	21.32	.00	4.78
RDSW	551611	BOT	6/17/80	0900	1200	49700.0	188.1145	.00	.00	.00	.00	.00	.00
RDSW	551612	BOT	6/17/80	1200	1500	50710.0	191.9374	.00	.00	.00	.00	.00	.00
RDSW	551613	BOT	6/17/80	1500	1800	50490.0	191.1047	.00	.00	.00	.00	.00	.00
RDSW	551614	BOT	6/17/80	1800	2100	50450.0	190.9533	.00	16.36	.00	10.47	.00	5.89
RDSW	551615	BOT	6/17/80	2100	0007	51360.0	194.3976	.00	25.72	.00	15.43	10.29	.00
RDSW	551616	BOT	6/18/80	0007	0300	47610.0	180.2039	.00	41.31	.00	38.84	.00	2.47
RDSW	551617	BOT	6/18/80	0300	0600	48660.0	184.1781	.00	5.43	.00	5.43	.00	.00
RDSW	551618	BOT	6/20/80	0600	0900	48550.0	183.7618	.00	13.23	.00	10.88	.00	2.35
RDSW	551619	BOT	6/20/80	0900	1200	48700.0	184.3295	.00	21.70	.00	21.70	.00	.00
RDSW	551620	BOT	6/20/80	1200	1500	48770.0	184.5945	.00	.00	.00	.00	.00	.00
RDSW	551621	BOT	6/20/80	1500	1800	49600.0	187.7360	.00	5.69	5.33	.00	.00	.36
RDSW	551622	BOT	6/20/80	1800	2100	49740.0	188.2659	.00	29.34	.00	26.56	.00	2.78
RDSW	551623	BOT	6/20/80	2100	0000	49840.0	188.6444	.00	127.22	.00	121.92	5.30	.00
RDSW	551624	BOT	6/21/80	0000	0300	48980.0	185.3893	.00	52.59	.00	48.55	.00	4.04
RDSW	551625	BOT	6/21/80	0300	0600	49370.0	186.8655	.00	55.51	.00	53.51	.00	2.00
RDSW	551626	BOT	6/24/80	0603	0903	50130.0	189.6285	.00	10.55	.00	10.55	.00	.00
RDSW	551633	BOT	6/25/80	0315	0615	50780.0	192.2023	.00	91.88	.00	72.84	.00	19.04
RDSW	551627	BOT	6/24/80	0915	1215	51640.0	195.4574	.00	5.71	.00	5.12	.00	.59
RDSW	551628	BOT	6/24/80	1215	1515	49810.0	188.5309	.00	.61	.00	.00	.00	.61
RDSW	551629	BOT	6/24/80	1515	1815	50610.0	191.5589	.00	.00	.00	.00	.00	.00
RDSW	551630	BOT	6/24/80	1815	2115	50310.0	190.4234	.00	21.01	.00	21.01	.00	.00
RDSW	551631	BOT	6/24/80	2115	0015	51190.0	193.7542	.00	44.00	.00	41.29	.00	2.71
RDSW	551632	BOT	6/25/80	0015	0315	51820.0	196.1387	.00	59.02	.00	50.98	.00	8.04
RDSW	551634	BOT	7/01/80	0610	0910	51220.0	193.8677	.00	.00	.00	.00	.00	.00
RDSW	551641	BOT	7/02/80	0310	0610	51680.0	195.6088	.00	.00	.00	.00	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES STRIPED BASS (MORONE ALLOCATED)

STATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
RDSW	551679	BOT	8/05/80	2113	0013	50980.0	192.9593	.00	5.18	.00	5.18	.00
RDSW	551680	BOT	8/06/80	0013	0313	49720.0	188.1902	.00	.00	.00	.00	.00
RDSW	551681	BOT	8/06/80	0313	0613	50630.0	191.6346	.00	.00	.00	.00	.00
RDSW	551675	BOT	8/05/80	0913	1213	49450.0	187.1683	.00	.00	.00	.00	.00
RDSW	551676	BOT	8/05/80	1213	1513	51240.0	193.9434	.00	.00	.00	.00	.00
RDSW	551677	BOT	8/05/80	1513	1813	49140.0	185.9949	.00	.00	.00	.00	.00
RDSW	551678	BOT	8/05/80	1813	2113	52150.0	197.3878	.00	.00	.00	.00	.00
RDSW	551682	BOT	8/12/80	0625	0925	52660.0	199.3181	.00	.00	.00	.00	.00
RDSW	551689	BOT	8/13/80	0325	0625	50300.0	190.3855	.00	.00	.00	.00	.00
RDSW	551683	BOT	8/12/80	0925	1225	54900.0	207.7965	.00	.00	.00	.00	.00
RDSW	551684	BOT	8/12/80	1225	1525	54220.0	205.2227	.00	.00	.00	.00	.00
RDSW	551685	BOT	8/12/80	1525	1825	51030.0	193.1486	.00	.00	.00	.00	.00
RDSW	551686	BOT	8/12/80	1825	2125	49530.0	187.4711	.00	.00	.00	.00	.00
RDSW	551687	BOT	8/12/80	2125	0025	52010.0	196.8579	.00	.00	.00	.00	.00
RDSW	551688	BOT	8/13/80	0025	0325	52740.0	199.6209	.00	.00	.00	.00	.00
RDSW	551690	BOT	8/19/80	0605	0905	51090.0	193.3757	.00	.00	.00	.00	.00
RDSW	551697	BOT	8/20/80	0305	0605	50570.0	191.4075	.00	.00	.00	.00	.00
RDSW	551691	BOT	8/19/80	0905	1205	50610.0	191.5589	.00	.00	.00	.00	.00
RDSW	551692	BOT	8/19/80	1205	1505	50930.0	192.7701	.00	.00	.00	.00	.00
RDSW	551693	BOT	8/19/80	1505	1805	51440.0	194.7004	.00	.00	.00	.00	.00
RDSW	551694	BOT	8/19/80	1805	2105	52580.0	199.0153	.00	.00	.00	.00	.00
RDSW	551695	BOT	8/19/80	2105	0005	51340.0	194.3219	.00	.00	.00	.00	.00
RDSW	551696	BOT	8/20/80	0005	0305	49490.0	187.3197	.00	.00	.00	.00	.00
RDSW	551698	BOT	8/26/80	0606	0906	52360.0	198.1826	.00	.00	.00	.00	.00
RDSW	551705	BOT	8/27/80	0306	0606	53230.0	201.4756	.00	.00	.00	.00	.00
RDSW	551699	BOT	8/26/80	0906	1206	53620.0	202.9517	.00	.00	.00	.00	.00
RDSW	551700	BOT	8/26/80	1206	1506	51330.0	194.2841	.00	.00	.00	.00	.00
RDSW	551701	BOT	8/26/80	1506	1806	50930.0	192.7701	.00	.00	.00	.00	.00
RDSW	551702	BOT	8/26/80	1806	2106	51220.0	193.8677	.00	.00	.00	.00	.00
RDSW	551703	BOT	8/26/80	2106	0006	54350.0	205.7148	.00	.00	.00	.00	.00
RDSW	551704	BOT	8/27/80	0006	0306	53990.0	204.3522	.00	.00	.00	.00	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
RDSW	551527	BOT	4/25/80	0517	0817	48940.0	185.2379	.00	.00	.00	.00	.00	.00	**
RDSW	551528	BOT	4/25/80	0817	1117	49620.0	187.8117	.00	.00	.00	.00	.00	.00	
RDSW	551522	BOT	4/24/80	1417	1717	48320.0	182.8912	.00	.00	.00	.00	.00	.00	
RDSW	551529	BOT	4/25/80	1117	1417	47830.0	181.0366	.00	.00	.00	.00	.00	.00	
RDSW	551523	BOT	4/24/80	1717	2017	49060.0	185.6921	.00	.00	.00	.00	.00	.00	
RDSW	551524	BOT	4/24/80	2017	2317	48350.0	183.0048	.00	.00	.00	.00	.00	.00	
RDSW	551525	BOT	4/24/80	2317	0217	49050.0	185.6543	.00	.00	.00	.00	.00	.00	
RDSW	551526	BOT	4/25/80	0217	0517	48910.0	185.1244	.00	.00	.00	.00	.00	.00	
RDSW	551530	MID	4/29/80	0607	0907	48900.0	185.0865	.00	.00	.00	.00	.00	.00	
RDSW	551531	MID	4/29/80	0907	1207	49180.0	186.1463	5.37	.00	.00	.00	.00	.00	
RDSW	551532	MID	4/29/80	1207	1507	41890.0	158.5537	6.31	.00	.00	.00	.00	.00	
RDSW	551533	MID	4/29/80	1507	1807	58230.0	220.4006	4.54	.00	.00	.00	.00	.00	
RDSW	551534	MID	4/29/80	1807	2038	40230.0	152.2706	.00	.00	.00	.00	.00	.00	
RDSW	551535	MID	4/29/80	2038	2338	49630.0	187.8496	.00	.00	.00	.00	.00	.00	
RDSW	551536	MID	4/29/80	2338	0238	48910.0	185.1244	.00	.00	.00	.00	.00	.00	
RDSW	551537	MID	4/30/80	0238	0607	56190.0	212.6792	32.91	.00	.00	.00	.00	.00	
RDSW	551538	MID	5/06/80	0559	0859	50190.0	189.9692	21.06	.00	.00	.00	.00	.00	
RDSW	551539	MID	5/06/80	0859	1159	49870.0	188.7580	10.60	.00	.00	.00	.00	.00	
RDSW	551540	MID	5/06/80	1159	1459	51340.0	194.3219	5.15	.00	.00	.00	.00	.00	
RDSW	551541	MID	5/06/80	1459	1759	51860.0	196.2901	45.85	.00	.00	.00	.00	.00	
RDSW	551542	MID	5/06/80	1759	2059	48210.0	182.4749	21.92	.00	.00	.00	.00	.00	
RDSW	551543	MID	5/06/80	2059	2359	47840.0	181.0744	33.14	.00	.00	.00	.00	.00	
RDSW	551544	MID	5/06/80	2359	0259	48370.0	183.0805	.00	.00	.00	.00	.00	.00	
RDSW	551545	MID	5/07/80	0259	0559	49760.0	188.3416	31.86	.00	.00	.00	.00	.00	
RDSW	551546	MID	5/13/80	0602	0902	50180.0	189.9313	21.06	.00	.00	.00	.00	.00	
RDSW	551553	MID	5/14/80	0302	0602	47900.0	181.3015	22.06	.00	.00	.00	.00	.00	
RDSW	551547	MID	5/13/80	0902	1202	49600.0	187.7360	5.33	.00	.00	.00	.00	.00	
RDSW	551548	MID	5/13/80	1202	1502	49360.0	186.8276	85.64	.00	.00	.00	.00	.00	
RDSW	551549	MID	5/13/80	1502	1802	47920.0	181.3772	60.65	.00	.00	.00	.00	.00	
RDSW	551550	MID	5/13/80	1802	2102	47970.0	181.5665	33.05	5.51	5.51	.00	.00	.00	
RDSW	551551	MID	5/13/80	2102	0002	48630.0	184.0646	54.33	.00	.00	.00	.00	.00	
RDSW	551552	MID	5/14/80	0002	0302	49160.0	186.0706	.00	.00	.00	.00	.00	.00	
RDSW	551554	BOT	5/20/80	0624	0924	48840.0	184.8594	86.55	46.09	.00	27.05	.00	19.04	
RDSW	551561	BOT	5/21/80	0324	0624	55600.0	210.4460	76.03	90.28	.00	90.28	.00	.00	
RDSW	551555	BOT	5/20/80	0924	1224	48000.0	181.6800	192.65	16.51	5.50	5.50	.00	5.50	
RDSW	551556	BOT	5/20/80	1224	1524	50390.0	190.7262	31.46	26.22	5.24	15.73	.00	5.24	
RDSW	551557	BOT	5/20/80	1524	1824	48990.0	185.4272	59.32	2.70	.00	.00	.00	2.70	
RDSW	551558	BOT	5/20/80	1824	2124	49900.0	188.8715	42.36	5.30	.00	.00	.00	5.30	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE ALLOCATED)

STATION LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
RDSW	551559	BOT	5/20/80	2120	2320	50110.0	189.6664	121.27	114.66	.00	26.56	.00	92.53
RDSW	551560	BOT	5/21/80	0024	0324	49890.0	188.8337	21.18	115.58	10.59	79.43	.00	25.55
RDSW	551567	BOT	5/28/80	0600	0900	48180.0	182.3613	21.93	59.45	.00	43.87	.00	15.58
RDSW	551568	BOT	5/28/80	0900	1200	51710.0	195.7224	71.53	10.22	.00	10.22	.00	.00
RDSW	551569	BOT	5/28/80	1200	1500	50540.0	191.2939	73.19	71.13	.00	36.59	.00	34.54
RDSW	551562	BOT	5/27/80	1530	1800	41110.0	155.6014	224.93	53.48	.00	19.28	.00	34.20
RDSW	551563	BOT	5/27/80	1800	2100	49710.0	188.1524	79.72	55.72	.00	42.52	.00	13.20
RDSW	551564	BOT	5/27/80	2100	0000	48500.0	183.5725	70.82	411.70	.00	130.74	.00	280.96
RDSW	551565	BOT	5/28/80	0000	0300	47360.0	179.2576	117.15	237.13	.00	184.09	.00	53.04
RDSW	551566	BOT	5/28/80	0300	0600	46470.0	175.8890	301.33	184.26	5.69	108.02	.00	70.56
RDSW	551570	BOT	6/03/80	0603	0903	49840.0	188.6444	890.56	257.99	.00	190.84	.00	67.15
RDSW	551579	BOT	6/04/80	0303	0603	49760.0	188.3416	169.90	51.08	.00	31.86	.00	19.22
RDSW	551571	BOT	6/03/80	0903	1203	49140.0	185.9949	241.94	16.33	.00	5.38	.00	10.95
RDSW	551572	BOT	6/03/80	1203	1503	51400.0	194.5490	616.81	43.45	.00	35.98	.00	7.47
RDSW	551573	BOT	6/03/80	1503	1803	49950.0	189.0608	142.81	140.99	.00	132.23	.00	8.76
RDSW	551574	BOT	6/03/80	1803	2103	49070.0	185.7300	463.04	386.15	.00	231.52	.00	154.63
RDSW	551575	BOT	6/03/80	2103	2133	8230.0	31.0370	386.64	5.04	.00	.00	.00	5.04
RDSW	551576	BOT	6/03/80	2133	2203	8400.0	31.7940	283.07	.98	.00	.00	.00	.98
RDSW	551577	BOT	6/03/80	2203	0003	32940.0	124.6779	72.19	24.81	.00	24.06	.00	.75
RDSW	551578	BOT	6/04/80	0003	0303	50640.0	191.6724	219.12	60.33	.00	57.39	.00	2.94
RDSW	551580	BOT	6/06/80	0603	0903	50650.0	191.7103	146.05	245.87	.00	172.13	.00	73.74
RDSW	551581	BOT	6/06/80	0903	1203	50910.0	192.6944	280.24	876.32	10.38	612.37	.00	253.57
RDSW	551582	BOT	6/06/80	1203	1503	50240.0	190.1584	163.02	67.22	.00	26.29	.00	40.93
RDSW	551583	BOT	6/06/80	1503	1633	26310.0	99.5834	170.71	92.05	.00	60.25	.00	31.80
RDSW	551584	BOT	6/06/80	1633	1703	8690.0	32.8917	273.63	134.87	.00	60.81	.00	74.06
RDSW	551585	BOT	6/06/80	1703	1733	8460.0	32.0211	156.15	22.82	.00	.00	.00	22.82
RDSW	551586	BOT	6/06/80	1733	1803	8730.0	33.0431	211.84	128.42	.00	121.05	.00	7.37
RDSW	551587	BOT	6/06/80	1803	1933	24920.0	94.3222	31.81	39.28	.00	21.20	.00	18.08
RDSW	551588	BOT	6/06/80	1933	2003	8210.0	31.0749	836.69	280.13	.00	225.26	.00	54.87
RDSW	551589	BOT	6/06/80	2003	2033	8180.0	30.9613	193.79	249.69	.00	226.09	.00	23.60
RDSW	551590	BOT	6/06/80	2033	2103	8350.0	31.6048	63.28	290.86	.00	221.49	.00	69.37
RDSW	551591	BOT	6/06/80	2103	2333	33350.0	126.2298	213.90	339.53	.00	205.97	.00	133.56
RDSW	551593	BOT	6/07/80	0300	0600	49540.0	187.5089	175.99	297.79	.00	239.99	.00	57.80
RDSW	551594	BOT	6/10/80	0558	0858	49750.0	188.3038	26.55	228.65	.00	154.01	.00	74.64
RDSW	551595	BOT	6/10/80	0858	1158	50260.0	190.2341	36.80	47.31	5.26	42.05	.00	.00
RDSW	551596	BOT	6/10/80	1158	1458	49160.0	186.0706	59.12	145.58	.00	85.99	.00	59.59
RDSW	551597	BOT	6/10/80	1458	1758	49160.0	186.0706	37.62	137.95	.00	107.49	.00	30.46
RDSW	551598	BOT	6/10/80	1758	2058	49290.0	186.5627	48.24	87.38	.00	75.04	.00	12.34

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
ROSW	551599	BOT	6/10/80	2058	2358	49540.0	187.5089	16.00	225.12	.00	175.99	.00	49.13
ROSW	551600	BOT	6/10/80	2358	0258	47350.0	179.2198	61.38	162.30	.00	133.91	.00	28.39
ROSW	551601	BOT	6/11/80	0258	0558	48120.0	182.1342	27.45	43.10	.00	32.94	.00	10.16
ROSW	551602	BOT	6/13/80	0604	0904	50550.0	191.3318	20.91	31.36	.00	31.36	.00	.00
ROSW	551609	BOT	6/14/80	0304	0604	51100.0	193.4135	56.87	118.70	.00	93.06	.00	25.64
ROSW	551603	BOT	6/13/80	0904	1204	51570.0	195.1925	66.60	34.19	.00	20.49	.00	13.70
ROSW	551604	BOT	6/13/80	1204	1504	51330.0	194.2841	25.74	66.36	.00	61.77	.00	4.59
ROSW	551605	BOT	6/13/80	1504	1804	50330.0	190.4991	36.75	170.57	.00	136.48	.00	34.09
ROSW	551606	BOT	6/13/80	1804	2104	51760.0	195.9116	30.63	178.65	.00	178.65	.00	.00
ROSW	551607	BOT	6/13/80	2104	0004	51750.0	195.8738	86.79	158.94	.00	153.16	.00	5.78
ROSW	551608	BOT	6/14/80	0004	0304	52350.0	198.1448	15.14	99.12	.00	60.56	25.23	13.32
ROSW	551610	BOT	6/17/80	0600	0900	49570.0	187.6225	58.63	75.17	.00	53.30	.00	21.87
ROSW	551611	BOT	6/17/80	0900	1200	49700.0	188.1145	26.58	42.53	.00	42.53	.00	.00
ROSW	551612	BOT	6/17/80	1200	1500	50710.0	191.9374	5.21	5.21	.00	5.21	.00	.00
ROSW	551613	BOT	6/17/80	1500	1800	50490.0	191.1047	36.63	41.86	.00	36.63	.00	5.23
ROSW	551614	BOT	6/17/80	1800	2100	50450.0	190.9533	.00	177.40	.00	146.63	.00	30.77
ROSW	551615	BOT	6/17/80	2100	0007	51360.0	194.3976	36.01	41.15	.00	41.15	.00	.00
ROSW	551616	BOT	6/18/80	0007	0300	47610.0	180.2039	44.39	97.42	.00	88.79	.00	8.63
ROSW	551617	BOT	6/18/80	0300	0600	48660.0	184.1781	27.15	65.15	.00	65.15	.00	.00
ROSW	551618	BOT	6/20/80	0600	0900	48550.0	183.7618	21.77	95.60	.00	81.63	.00	13.97
ROSW	551619	BOT	6/20/80	0900	1200	48700.0	184.3295	10.85	32.55	.00	32.55	.00	.00
ROSW	551620	BOT	6/20/80	1200	1500	48770.0	184.5945	27.09	10.83	.00	10.83	.00	.00
ROSW	551621	BOT	6/20/80	1500	1800	49600.0	187.7360	10.65	143.46	.00	133.17	.00	10.29
ROSW	551622	BOT	6/20/80	1800	2100	49740.0	188.2659	15.93	183.12	.00	175.28	.00	7.84
ROSW	551623	BOT	6/20/80	2100	0000	49840.0	188.6444	15.90	259.75	.00	254.45	5.30	.00
ROSW	551624	BOT	6/21/80	0000	0300	48980.0	185.3893	43.15	82.27	.00	75.52	.00	6.75
ROSW	551625	BOT	6/21/80	0300	0600	49370.0	186.8655	.00	99.68	.00	96.33	.00	3.35
ROSW	551626	BOT	6/24/80	0603	0903	50100.0	189.6285	10.55	189.84	.00	189.84	.00	.00
ROSW	551633	BOT	6/25/80	0315	0615	50780.0	192.2023	26.01	209.89	.00	150.88	.00	59.00
ROSW	551627	BOT	6/24/80	0915	1215	51640.0	195.4574	5.12	86.39	.00	71.63	.00	14.76
ROSW	551628	BOT	6/24/80	1215	1515	49810.0	188.5309	.00	68.34	.00	53.04	.00	15.30
ROSW	551629	BOT	6/24/80	1515	1815	50610.0	191.5589	.00	10.44	.00	10.44	.00	.00
ROSW	551630	BOT	6/24/80	1815	2115	50310.0	190.4234	5.25	26.26	.00	26.26	.00	.00
ROSW	551631	BOT	6/24/80	2115	0015	51190.0	193.7542	.00	54.06	.00	51.61	.00	2.45
ROSW	551632	BOT	6/25/80	0015	0315	51820.0	196.1387	40.79	37.85	.00	30.59	.00	7.26
ROSW	551634	BOT	7/01/80	0610	0910	51220.0	193.8677	.00	20.63	.00	15.47	.00	5.16
ROSW	551641	BOT	7/02/80	0310	0610	51680.0	195.6088	.00	66.45	.00	56.23	.00	10.22

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE
RDSW	551635	BOT	7/01/80	0910	1210	51060.0	193.2621	.00	.00	.00	.00	.00	.00
RDSW	551636	BOT	7/01/80	1210	1510	53360.0	201.9676	.00	2.48	.00	.00	.00	2.48
RDSW	551637	BOT	7/01/80	1510	1810	53110.0	201.0214	.00	24.87	.00	24.87	.00	.00
RDSW	551638	BOT	7/01/80	1810	2110	50100.0	189.6285	.00	10.55	.00	10.55	.00	.00
RDSW	551639	BOT	7/01/80	2110	0010	51420.0	194.6247	.00	30.83	.00	30.83	.00	.00
RDSW	551640	BOT	7/02/80	0010	0310	48680.0	184.2538	.00	54.27	.00	43.42	10.85	.00
RDSW	551642	BOT	7/08/80	0630	0930	49620.0	187.8117	.00	15.97	.00	15.97	.00	.00
RDSW	551649	BOT	7/09/80	0330	0630	48140.0	182.2099	.00	.00	.00	.00	.00	.00
RDSW	551643	BOT	7/08/80	0930	1230	50390.0	190.7262	.00	5.24	.00	5.24	.00	.00
RDSW	551644	BOT	7/08/80	1230	1530	50450.0	190.9533	.00	.00	.00	.00	.00	.00
RDSW	551645	BOT	7/08/80	1530	1830	46160.0	174.7156	.00	5.72	.00	5.72	.00	.00
RDSW	551646	BOT	7/08/80	1830	2130	44600.0	168.8110	.00	23.69	.00	17.77	.00	5.92
RDSW	551647	BOT	7/08/80	2130	0030	49580.0	187.6603	.00	15.99	.00	15.99	.00	.00
RDSW	551648	BOT	7/09/80	0030	0330	45090.0	170.6657	.00	.00	.00	.00	.00	.00
RDSW	551650	BOT	7/15/80	0635	0935	49940.0	189.0229	.00	.00	.00	.00	.00	.00
RDSW	551657	BOT	7/16/80	0335	0635	51590.0	195.2682	.00	7.68	.00	5.12	.00	2.56
RDSW	551651	BOT	7/15/80	0935	1235	51680.0	195.6088	.00	.00	.00	.00	.00	.00
RDSW	551652	BOT	7/15/80	1235	1535	52110.0	197.2364	.00	15.21	.00	15.21	.00	.00
RDSW	551653	BOT	7/15/80	1535	1835	49420.0	187.0547	.00	.00	.00	.00	.00	.00
RDSW	551654	BOT	7/15/80	1835	2135	49290.0	186.5627	.00	.00	.00	.00	.00	.00
RDSW	551655	BOT	7/15/80	2135	0035	52990.0	200.5672	.00	4.99	.00	.00	4.99	.00
RDSW	551656	BOT	7/16/80	0035	0335	52590.0	199.0532	.00	5.02	.00	.00	5.02	.00
RDSW	551658	BOT	7/22/80	0610	0910	52670.0	199.3560	.00	.00	.00	.00	.00	.00
RDSW	551665	BOT	7/23/80	0310	0610	46970.0	177.7815	.00	11.25	.00	5.62	5.62	.00
RDSW	551659	BOT	7/22/80	0910	1210	52970.0	200.4915	.00	4.99	.00	4.99	.00	.00
RDSW	551660	BOT	7/22/80	1210	1510	51220.0	193.8677	.00	5.16	.00	5.16	.00	.00
RDSW	551661	BOT	7/22/80	1510	1810	51120.0	193.4892	.00	.00	.00	.00	.00	.00
RDSW	551662	BOT	7/22/80	1810	2110	52370.0	198.2205	.00	.00	.00	.00	.00	.00
RDSW	551663	BOT	7/22/80	2110	0010	51780.0	195.9873	.00	.00	.00	.00	.00	.00
RDSW	551664	BOT	7/23/80	0010	0310	49040.0	185.6164	.00	32.32	.00	10.77	21.55	.00
RDSW	551666	BOT	7/29/80	0610	0910	51170.0	193.6785	.00	.00	.00	.00	.00	.00
RDSW	551673	BOT	7/30/80	0310	0610	49180.0	186.1463	.00	5.37	.00	.00	5.37	.00
RDSW	551667	BOT	7/29/80	0910	1210	50730.0	192.0131	.00	.00	.00	.00	.00	.00
RDSW	551668	BOT	7/29/80	1210	1510	51430.0	194.6626	.00	.00	.00	.00	.00	.00
RDSW	551669	BOT	7/29/80	1510	1810	50250.0	190.1963	.00	5.26	.00	.00	5.26	.00
RDSW	551670	BOT	7/29/80	1810	2110	52480.0	198.6368	.00	.00	.00	.00	.00	.00
RDSW	551671	BOT	7/29/80	2110	0010	51350.0	194.3598	.00	5.15	.00	5.15	.00	.00
RDSW	551672	BOT	7/30/80	0010	0310	51410.0	194.5869	.00	20.56	.00	15.42	5.14	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE ALLOCATED)

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RDSW	551674	BOT	8/05/80	0613	0913	51440.0	194.7004	.00	.00	.00	.00	.00	.00
RDSW	551681	BOT	8/06/80	0313	0613	50630.0	191.6346	.00	.00	.00	.00	.00	.00
RDSW	551675	BOT	8/05/80	0913	1213	49450.0	187.1683	.00	.00	.00	.00	.00	.00
RDSW	551676	BOT	8/05/80	1213	1513	51240.0	193.9434	.00	.00	.00	.00	.00	.00
RDSW	551677	BOT	8/05/80	1513	1813	49140.0	185.9949	.00	5.38	.00	.00	5.38	.00
RDSW	551678	BOT	8/05/80	1813	2113	52150.0	197.3878	.00	.00	.00	.00	.00	.00
RDSW	551679	BOT	8/05/80	2113	0013	50980.0	192.9593	.00	15.55	.00	.00	15.55	.00
RDSW	551680	BOT	8/06/80	0013	0313	49720.0	188.1902	.00	.00	.00	.00	.00	.00
RDSW	551682	BOT	8/12/80	0625	0925	52660.0	199.3181	.00	.00	.00	.00	.00	.00
RDSW	551689	BOT	8/13/80	0325	0625	50300.0	190.3855	.00	10.51	.00	.00	10.51	.00
RDSW	551683	BOT	8/12/80	0925	1225	54900.0	207.7965	.00	.00	.00	.00	.00	.00
RDSW	551684	BOT	8/12/80	1225	1525	54220.0	205.2227	.00	.00	.00	.00	.00	.00
RDSW	551685	BOT	8/12/80	1525	1825	51030.0	193.1486	.00	.00	.00	.00	.00	.00
RDSW	551686	BOT	8/12/80	1825	2125	49530.0	187.4711	.00	.00	.00	.00	.00	.00
RDSW	551687	BOT	8/12/80	2125	0025	52010.0	196.8579	.00	.00	.00	.00	.00	.00
RDSW	551688	BOT	8/13/80	0025	0325	52740.0	199.6209	.00	.00	.00	.00	.00	.00
RDSW	551690	BOT	8/19/80	0605	0905	51090.0	193.3757	.00	.00	.00	.00	.00	.00
RDSW	551697	BOT	8/20/80	0305	0605	50570.0	191.4075	.00	5.22	.00	.00	5.22	.00
RDSW	551691	BOT	8/19/80	0905	1205	50610.0	191.5589	.00	.00	.00	.00	.00	.00
RDSW	551692	BOT	8/19/80	1205	1505	50930.0	192.7701	.00	.00	.00	.00	.00	.00
RDSW	551693	BOT	8/19/80	1505	1805	51440.0	194.7004	.00	.00	.00	.00	.00	.00
RDSW	551694	BOT	8/19/80	1805	2105	52580.0	199.0153	.00	.00	.00	.00	.00	.00
RDSW	551695	BOT	8/19/80	2105	0005	51340.0	194.3219	.00	.00	.00	.00	.00	.00
RDSW	551696	BOT	8/20/80	0005	0305	49490.0	187.3197	.00	.00	.00	.00	.00	.00
RDSW	551698	BOT	8/26/80	0606	0906	52360.0	198.1826	.00	.00	.00	.00	.00	.00
RDSW	551735	BOT	8/27/80	0306	0606	53230.0	201.4756	.00	.00	.00	.00	.00	.00
RDSW	551699	BOT	8/26/80	0906	1206	53620.0	202.9517	.00	.00	.00	.00	.00	.00
RDSW	551700	BOT	8/26/80	1206	1506	51330.0	194.2841	.00	.00	.00	.00	.00	.00
RDSW	551701	BOT	8/26/80	1506	1806	50930.0	192.7701	.00	.00	.00	.00	.00	.00
RDSW	551702	BOT	8/26/80	1806	2106	51220.0	193.8677	.00	.00	.00	.00	.00	.00
RDSW	551703	BOT	8/26/80	2106	0006	54350.0	205.7148	.00	4.86	.00	.00	4.86	.00
RDSW	551704	BOT	8/27/80	0006	0306	53990.0	204.3522	.00	4.89	.00	.00	4.89	.00

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES ALOSA SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIFE STAGE	
DITW	38680	BOT	4/22/80	0559	0659	17270.0	65.3670	.00	.00	.00	.00	.00	.00	**
DITE	38681	BOT	4/22/80	0702	0802	16900.0	63.9665	31.27	.00	.00	.00	.00	.00	**
DITCH	38682	BOT	4/22/80	0805	0905	17110.0	64.7614	308.83	.00	.00	.00	.00	.00	**
DITE	38683	BOT	4/22/80	0908	1008	16970.0	64.2315	46.71	.00	.00	.00	.00	.00	**
DITCH	38684	BOT	4/22/80	1009	1109	17010.0	64.3829	.00	.00	.00	.00	.00	.00	**
DITW	38685	BOT	4/22/80	1110	1210	17120.0	64.7992	200.62	.00	.00	.00	.00	.00	**
DITW	38686	BOT	4/22/80	1210	1310	17250.0	65.2913	15.32	.00	.00	.00	.00	.00	
DITCH	38687	BOT	4/22/80	1312	1412	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITE	38688	BOT	4/22/80	1415	1515	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	38689	BOT	4/22/80	1517	1617	17380.0	65.7833	30.40	.00	.00	.00	.00	.00	**
DITW	38690	BOT	4/22/80	1619	1719	17750.0	67.1838	14.88	14.88	.00	14.88	.00	.00	**
DITE	38691	BOT	4/22/80	1721	1821	16900.0	63.9665	15.63	.00	.00	.00	.00	.00	**
DITCH	38692	BOT	4/22/80	1823	1923	16790.0	63.5502	.00	.00	.00	.00	.00	.00	**
DITW	38693	BOT	4/22/80	1925	2025	17070.0	64.6100	.00	.00	.00	.00	.00	.00	**
DITE	38694	BOT	4/22/80	2028	2128	17310.0	65.5184	106.84	15.26	15.26	.00	.00	.00	**
DITE	38695	BOT	4/22/80	2128	2228	16760.0	63.4366	.00	.00	.00	.00	.00	.00	
DITW	38696	BOT	4/22/80	2230	2330	17250.0	65.2913	.00	.00	.00	.00	.00	.00	**
DITCH	38697	BOT	4/22/80	2331	0031	16660.0	63.0581	15.86	.00	.00	.00	.00	.00	**
DITW	38698	BOT	4/23/80	0033	0133	16420.0	62.1497	16.09	.00	.00	.00	.00	.00	**
DITE	38699	BOT	4/23/80	0135	0235	16350.0	61.8848	.00	.00	.00	.00	.00	.00	**
DITCH	38700	BOT	4/23/80	0237	0337	16820.0	63.6637	.00	.00	.00	.00	.00	.00	**
DITCH	38701	BOT	4/23/80	0337	0437	16980.0	64.2693	.00	.00	.00	.00	.00	.00	
DITE	38702	BOT	4/23/80	0439	0539	17130.0	64.8371	431.85	.00	.00	.00	.00	.00	**
DITW	38703	BOT	4/23/80	0540	0640	18240.0	69.0384	57.94	.00	.00	.00	.00	.00	**
DITCH	38704	BOT	4/29/80	0600	0700	16590.0	62.7932	939.59	15.93	.00	15.93	.00	.00	**
DITE	38705	BOT	4/29/80	0702	0802	16870.0	63.8530	297.56	.00	.00	.00	.00	.00	**
DITW	38706	BOT	4/29/80	0804	0904	16470.0	62.3390	224.58	16.04	16.04	.00	.00	.00	**
DITCH	38707	BOT	4/29/80	0906	1006	16970.0	64.2315	685.02	.00	.00	.00	.00	.00	**
DITE	38708	BOT	4/29/80	1008	1108	16640.0	62.9824	650.98	.00	.00	.00	.00	.00	**
DITW	38709	BOT	4/29/80	1110	1210	17490.0	66.1997	498.49	30.21	30.21	.00	.00	.00	**
DITCH	38710	BOT	4/29/80	1212	1312	16990.0	64.3072	279.91	.00	.00	.00	.00	.00	**
DITW	38711	BOT	4/29/80	1315	1415	17220.0	65.1777	46.03	.00	.00	.00	.00	.00	**
DITE	38712	BOT	4/29/80	1417	1517	16610.0	62.8689	620.34	.00	.00	.00	.00	.00	**
DITCH	38713	BOT	4/29/80	1518	1618	16710.0	63.2474	458.52	15.81	15.81	.00	.00	.00	**
DITW	38714	BOT	4/29/80	1620	1720	16300.0	61.6955	259.34	48.63	48.63	.00	.00	.00	**
DITE	38715	BOT	4/29/80	1723	1823	15650.0	59.2353	168.82	16.88	.00	.00	.00	16.88	**
DITE	38716	BOT	4/29/80	1823	1923	17060.0	64.5721	603.98	.00	.00	.00	.00	.00	
DITW	38717	BOT	4/29/80	1924	2024	16430.0	62.1876	1157.79	16.08	16.08	.00	.00	.00	**
DITCH	38718	BOT	4/29/80	2026	2126	15730.0	59.5381	1679.60	16.80	16.80	.00	.00	.00	**
DITW	38719	BOT	4/29/80	2127	2227	16870.0	63.8530	626.44	.00	.00	.00	.00	.00	**
DITE	38720	BOT	4/29/80	2229	2329	16480.0	62.3768	1074.12	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES ALOSA SP.

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DITCH	38721	BOT	4/29/80	2334	0034	16820.0	63.6637	644.01	.00	.00	.00	.00	.00	**
DITCH	38722	BOT	4/30/80	0034	0134	16810.0	63.6259	125.73	.00	.00	.00	.00	.00	
DITE	38723	BOT	4/30/80	0137	0237	16470.0	62.3390	80.21	16.04	16.04	.00	.00	.00	**
DITW	38724	BOT	4/30/80	0240	0340	17390.0	65.8212	501.36	.00	.00	.00	.00	.00	**
DITCH	38725	BOT	4/30/80	0342	0442	16790.0	63.5502	298.98	31.47	31.47	.00	.00	.00	**
DITE	38726	BOT	4/30/80	0445	0545	17150.0	64.9128	369.73	77.03	77.03	.00	.00	.00	**
DITW	38727	BOT	4/30/80	0547	0647	17030.0	64.4586	868.77	46.54	46.54	.00	.00	.00	**
DITCH	38728	BOT	5/06/80	0606	0706	16740.0	63.3609	63.13	15.78	.00	15.78	.00	.00	**
DITW	38729	BOT	5/06/80	0709	0809	16670.0	63.0960	142.64	126.79	.00	126.79	.00	.00	**
DITE	38730	BOT	5/06/80	0811	0911	16680.0	63.1338	15.84	31.68	.00	31.68	.00	.00	**
DITE	38731	BOT	5/06/80	0911	1011	16770.0	63.4745	110.28	31.51	.00	31.51	.00	.00	
DITCH	38732	BOT	5/06/80	1014	1114	16720.0	63.2852	63.21	94.81	.00	79.01	.00	15.80	**
DITW	38733	BOT	5/06/80	1116	1216	17240.0	65.2534	15.32	91.95	30.65	30.65	.00	30.65	**
DITE	38734	BOT	5/06/80	1219	1319	16450.0	62.2633	16.06	.00	.00	.00	.00	.00	**
DITW	38735	BOT	5/06/80	1321	1421	16940.0	64.1179	77.98	15.60	.00	15.60	.00	.00	**
DITCH	38736	BOT	5/06/80	1423	1523	16750.0	63.3988	189.28	47.32	15.77	.00	.00	31.55	**
DITCH	38737	BOT	5/06/80	1523	1623	16840.0	63.7394	674.62	31.38	15.69	15.69	.00	.00	
DITE	38738	BOT	5/06/80	1626	1726	16680.0	63.1338	174.23	79.20	31.68	47.52	.00	.00	**
DITW	38739	BOT	5/06/80	1728	1828	16990.0	64.3072	15.55	46.65	31.10	15.55	.00	.00	**
DITW	38740	BOT	5/06/80	1828	1928	16940.0	64.1179	15.60	46.79	.00	15.60	.00	31.19	
DITE	38741	BOT	5/06/80	1930	2030	16860.0	63.8151	141.03	31.34	.00	31.34	.00	.00	**
DITCH	38742	BOT	5/06/80	2032	2132	17140.0	64.8749	77.07	30.83	.00	30.83	.00	.00	**
DITE	38743	BOT	5/06/80	2134	2234	16740.0	63.3609	.00	31.57	.00	31.57	.00	.00	**
DITCH	38744	BOT	5/06/80	2236	2336	17240.0	65.2534	.00	30.65	.00	30.65	.00	.00	**
DITW	38745	BOT	5/06/80	2337	0037	16490.0	62.4147	16.02	112.15	80.11	32.04	.00	.00	**
DITW	38746	BOT	5/07/80	0037	0137	16630.0	62.9446	15.89	.00	.00	.00	.00	.00	
DITE	38747	BOT	5/07/80	0139	0239	16630.0	62.9446	63.55	31.77	.00	15.89	.00	15.89	**
DITCH	38748	BOT	5/07/80	0241	0341	16510.0	62.4904	432.07	.00	.00	.00	.00	.00	**
DITW	38749	BOT	5/07/80	0344	0444	16770.0	63.4745	157.54	31.51	15.75	15.75	.00	.00	**
DITE	38750	BOT	5/07/80	0446	0546	16730.0	63.3231	.00	126.34	15.79	110.54	.00	.00	**
DITCH	38751	BOT	5/07/80	0547	0647	16550.0	62.6418	63.86	.00	.00	.00	.00	.00	**
DITE	38752	BOT	5/13/80	0605	0705	16700.0	63.2095	949.22	94.92	.00	94.92	.00	.00	**
DITW	38753	BOT	5/13/80	0707	0807	17030.0	64.4586	1272.13	77.57	.00	77.57	.00	.00	**
DITCH	38754	BOT	5/13/80	0809	0909	15930.0	60.2951	1741.44	149.27	49.76	99.51	.00	.00	**
DITE	38755	BOT	5/13/80	0910	1010	16870.0	63.8530	2176.88	78.30	.00	62.64	.00	15.66	**
DITW	38756	BOT	5/13/80	1012	1112	17030.0	64.4586	1504.84	186.17	62.06	93.08	.00	31.03	**
DITCH	38757	BOT	5/13/80	1113	1213	16860.0	63.8151	2413.22	78.35	.00	78.35	.00	.00	**
DITCH	38758	BOT	5/13/80	1213	1313	16520.0	62.5282	319.86	367.83	.00	367.83	.00	.00	
DITE	38759	BOT	5/13/80	1314	1414	16590.0	62.7932	1688.08	143.33	.00	143.33	.00	.00	**
DITW	38760	BOT	5/13/80	1415	1515	16590.0	62.7932	1242.17	143.33	.00	143.33	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES ALOSA SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITE	38761	BOT	5/13/80	1516	1616	15690.0	59.3867	1161.88	67.36	.00	67.36	.00	.00	**
DITW	38762	BOT	5/13/80	1616	1716	16120.0	61.0142	1048.94	65.56	16.39	49.17	.00	.00	**
DITCH	38763	BOT	5/13/80	1717	1817	16000.0	60.5600	941.22	66.05	.00	66.05	.00	.00	**
DITW	38764	BOT	5/13/80	1819	1919	16980.0	64.2693	233.39	93.36	.00	93.36	.00	.00	**
DITCH	38765	BOT	5/13/80	1921	2021	16890.0	63.9287	422.35	172.07	.00	172.07	.00	.00	**
DITE	38766	BOT	5/13/80	2023	2123	16660.0	63.0581	3964.60	31.72	31.72	.00	.00	.00	**
DITCH	38767	BOT	5/13/80	2125	2225	17080.0	64.6478	2103.71	30.94	.00	30.94	.00	.00	**
DITE	38768	BOT	5/13/80	2226	2326	16760.0	63.4366	1418.74	110.35	63.06	47.29	.00	.00	**
DITW	38769	BOT	5/13/80	2328	0028	17260.0	65.3291	1500.10	.00	.00	.00	.00	.00	**
DITCH	38770	BOT	5/14/80	0029	0129	16960.0	64.1936	451.76	93.47	15.58	77.89	.00	.00	**
DITE	38771	BOT	5/14/80	0131	0231	16550.0	62.6418	2665.95	95.78	.00	79.82	.00	15.96	**
DITW	38772	BOT	5/14/80	0232	0332	16510.0	62.4904	1104.17	160.02	.00	160.02	.00	.00	**
DITCH	38773	BOT	5/14/80	0333	0433	16780.0	63.5123	928.95	125.96	31.49	94.47	.00	.00	**
DITE	38774	BOT	5/14/80	0434	0534	15860.0	60.0301	1799.10	83.29	.00	83.29	.00	.00	**
DITW	38775	BOT	5/14/80	0535	0635	16540.0	62.6039	926.46	143.76	79.87	63.89	.00	.00	**
DITE	38776	BOT	5/20/80	0607	0707	17010.0	64.3829	2329.81	512.56	15.53	310.64	.00	186.38	**
DITW	38777	BOT	5/20/80	0709	0809	16860.0	63.8151	1551.36	532.79	94.02	297.74	.00	141.03	**
DITCH	38778	BOT	5/20/80	0810	0910	16860.0	63.8151	3322.10	783.51	282.06	141.03	.00	360.42	**
DITE	38779	BOT	5/20/80	0911	1011	16410.0	62.1119	2366.70	450.80	32.20	257.60	.00	161.00	**
DITCH	38780	BOT	5/20/80	1012	1112	16700.0	63.2095	759.38	553.71	63.28	189.84	.00	300.59	**
DITW	38781	BOT	5/20/80	1113	1213	16720.0	63.2852	1627.55	553.05	.00	284.43	.00	268.63	**
DITE	38782	BOT	5/20/80	1214	1314	16260.0	61.5441	4013.38	211.23	.00	178.73	.00	32.50	**
DITW	38783	BOT	5/20/80	1315	1415	17040.0	64.4964	2000.11	294.59	31.01	155.05	.00	108.53	**
DITCH	38784	BOT	5/20/80	1416	1516	16370.0	61.9605	2582.29	242.09	32.28	209.81	.00	.00	**
DITCH	38785	BOT	5/20/80	1516	1616	16330.0	61.8091	2896.01	242.68	.00	242.68	.00	.00	
DITW	38786	BOT	5/20/80	1620	1720	16330.0	61.8091	760.41	598.62	113.25	420.65	.00	64.72	**
DITE	38787	BOT	5/20/80	1722	1822	16600.0	62.8310	1543.82	206.90	63.66	143.24	.00	.00	**
DITCH	38788	BOT	5/20/80	1824	1924	16960.0	64.1936	171.36	327.14	46.73	77.89	.00	202.51	**
DITW	38789	BOT	5/20/80	1926	2026	16470.0	62.3390	128.33	288.74	144.37	48.12	.00	96.25	**
DITE	38790	BOT	5/20/80	2027	2127	15760.0	59.6516	251.46	234.70	100.58	100.58	.00	33.53	**
DITE	38791	BOT	5/20/80	2127	2227	16970.0	64.2315	217.96	358.08	140.12	46.71	.00	171.26	
DITW	38792	BOT	5/20/80	2228	2328	16750.0	63.3988	394.33	220.82	47.32	47.32	.00	126.19	**
DITCH	38793	BOT	5/20/80	2329	0029	16800.0	63.5880	1745.61	283.07	.00	220.17	.00	62.90	**
DITCH	38794	BOT	5/21/80	0029	0129	17110.0	64.7614	1451.48	46.32	.00	46.32	.00	.00	
DITE	38795	BOT	5/21/80	0131	0231	17070.0	64.6100	11019.97	77.39	15.48	46.43	.00	15.48	**
DITW	38796	BOT	5/21/80	0233	0333	17370.0	65.7455	1916.48	334.62	228.15	30.42	.00	76.05	**
DITE	38797	BOT	5/21/80	0335	0435	17060.0	64.5721	2292.01	464.60	139.38	154.87	.00	170.35	**
DITW	38798	BOT	5/21/80	0437	0537	17980.0	68.0543	1939.63	1043.28	411.44	484.91	.00	146.94	**
DITCH	38799	BOT	5/21/80	0539	0639	17670.0	66.8810	1390.53	478.46	149.52	134.57	.00	194.38	**
DITW	38800	BOT	5/27/80	1556	1656	16500.0	62.4525	32.02	64.05	.00	64.05	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES ALOSA SP.

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DITE	38801	BOT	5/27/80	1659	1759	16310.0	61.7334	3434.12	826.13	.00	809.93	.00	16.20	**
DITCH	38802	BOT	5/27/80	1800	1900	16950.0	64.1558	31.17	1278.14	.00	1278.14	.00	.00	**
DITCH	38803	BOT	5/27/80	1902	2002	16800.0	63.5880	94.36	660.50	47.18	613.32	.00	.00	
DITE	38804	BOT	5/27/80	2004	2104	16570.0	62.7175	318.89	510.22	.00	478.34	.00	31.89	**
DITW	38805	BOT	5/27/80	2105	2205	17140.0	64.8749	61.66	323.70	.00	323.70	.00	.00	**
DITW	38806	BOT	5/27/80	2207	2307	17020.0	64.4207	31.05	372.55	.00	279.41	.00	93.14	
DITCH	38807	BOT	5/27/80	2310	0010	16810.0	63.6259	31.43	455.79	.00	455.79	.00	.00	**
DITE	38808	BOT	5/28/80	0013	0113	16900.0	63.9665	31.27	1125.59	.00	1125.59	.00	.00	**
DITCH	38809	BOT	5/28/80	0117	0217	17010.0	64.3829	15.53	823.20	31.06	792.14	.00	.00	**
DITE	38810	BOT	5/28/80	0221	0321	16750.0	63.3988	157.73	583.61	.00	583.61	.00	.00	**
DITW	38811	BOT	5/28/80	0324	0424	16740.0	63.3609	78.91	363.00	15.78	347.22	.00	.00	**
DITCH	38812	BOT	5/28/80	0428	0528	16940.0	64.1179	15.60	249.54	.00	249.54	.00	.00	**
DITE	38813	BOT	5/28/80	0531	0631	16740.0	63.3609	15.78	220.96	15.78	205.17	.00	.00	**
DITW	38814	BOT	5/28/80	0634	0734	16860.0	63.8151	78.35	689.49	.00	689.49	.00	.00	**
DITE	38815	BOT	5/28/80	0736	0836	16640.0	62.9824	.00	682.73	.00	682.73	.00	.00	**
DITCH	38816	BOT	5/28/80	0837	0937	16640.0	62.9824	1127.30	428.69	47.63	381.06	.00	.00	**
DITW	38817	BOT	5/28/80	0939	1039	16940.0	64.1179	31.19	77.98	.00	62.39	.00	15.60	**
DITCH	38818	BOT	5/28/80	1041	1141	16670.0	63.0960	.00	110.94	15.85	95.09	.00	.00	**
DITE	38819	BOT	5/28/80	1143	1243	16330.0	61.8091	32.36	177.97	16.18	161.79	.00	.00	**
DITW	38820	BOT	5/28/80	1245	1345	16730.0	63.3231	.00	300.05	.00	300.05	.00	.00	**
DITE	38821	BOT	5/28/80	1346	1446	16860.0	63.8151	15.67	188.04	15.67	156.70	.00	15.67	**
DITW	38822	BOT	5/28/80	1448	1548	16650.0	63.0203	1079.02	317.36	15.87	253.89	.00	47.60	**
DITCH	38823	BOT	5/28/80	1550	1650	16710.0	63.2474	15.81	490.14	31.62	426.90	.00	31.62	**
DITE	38824	BOT	6/03/80	0604	0704	16480.0	62.3768	16.03	1218.40	.00	1218.40	.00	.00	**
DITW	38825	BOT	6/03/80	0705	0805	16060.0	60.7871	115.16	1283.17	65.80	1217.36	.00	.00	**
DITCH	38826	BOT	6/03/80	0806	0906	16580.0	62.7553	31.87	2007.80	95.61	1880.32	.00	31.87	**
DITE	38827	BOT	6/03/80	0907	1007	15410.0	58.3269	17.14	3257.50	.00	3257.50	.00	.00	**
DITW	38828	BOT	6/03/80	1008	1108	16790.0	63.5502	31.47	3461.83	.00	3461.83	.00	.00	**
DITCH	38829	BOT	6/03/80	1109	1209	16320.0	61.7712	.00	1991.22	.00	1991.22	.00	.00	**
DITE	38830	BOT	6/03/80	1210	1310	16970.0	64.2315	62.27	840.71	.00	840.71	.00	.00	**
DITCH	38831	BOT	6/03/80	1312	1412	16870.0	63.8530	31.32	62.64	.00	62.64	.00	.00	**
DITW	38832	BOT	6/03/80	1413	1513	16860.0	63.8151	31.34	109.69	31.34	78.35	.00	.00	**
DITCH	38833	BOT	6/03/80	1514	1614	16420.0	62.1497	48.27	96.54	.00	96.54	.00	.00	**
DITE	38834	BOT	6/03/80	1616	1716	16790.0	63.5502	15.74	298.98	.00	298.98	.00	.00	**
DITW	38835	BOT	6/03/80	1717	1817	16570.0	62.7175	.00	382.67	15.94	350.78	.00	15.94	**
DITE	38836	BOT	6/03/80	1818	1918	15850.0	59.9923	.00	350.04	.00	350.04	.00	.00	**
DITW	38837	BOT	6/03/80	1920	2020	16060.0	60.7871	16.45	460.62	.00	460.62	.00	.00	**
DITCH	38838	BOT	6/03/80	2022	2122	16020.0	60.6357	.00	1484.27	49.48	1434.80	.00	.00	**
DITW	38839	BOT	6/03/80	2124	2224	16340.0	61.8469	.00	258.70	32.34	226.37	.00	.00	**
DITCH	38840	BOT	6/03/80	2226	2326	16600.0	62.8310	.00	381.98	.00	381.98	.00	.00	**
DITE	38841	BOT	6/03/80	2329	0029	16700.0	63.2095	.00	727.74	15.82	664.46	.00	47.46	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
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DITE	38842	BOT	6/04/80	0029	0129	16310.0	61.7334	.00	890.93	97.19	761.34	.00	32.40	
DITW	38843	BOT	6/04/80	0131	0231	16810.0	63.6259	15.72	565.81	62.87	502.94	.00	.00	**
DITCH	38844	BOT	6/04/80	0234	0334	16720.0	63.2852	47.40	916.49	.00	869.08	.00	47.40	**
DITW	38845	BOT	6/04/80	0337	0437	16720.0	63.2852	47.40	774.27	.00	774.27	.00	.00	**
DITE	38846	BOT	6/04/80	0440	0540	16360.0	61.9226	80.75	1598.77	.00	1598.77	.00	.00	**
DITCH	38847	BOT	6/04/80	0544	0644	16490.0	62.4147	.00	1185.62	.00	1185.62	.00	.00	**
DITW	38848	BOT	6/06/80	0600	0700	16510.0	62.4904	.00	416.06	48.01	368.06	.00	.00	**
DITE	38849	BOT	6/06/80	0701	0801	16490.0	62.4147	.00	208.28	32.04	176.24	.00	.00	**
DITCH	38850	BOT	6/06/80	0802	0902	16380.0	61.9983	.00	435.50	.00	435.50	.00	.00	**
DITCH	38851	BOT	6/06/80	0902	1002	16130.0	61.0521	32.76	278.45	.00	278.45	.00	.00	
DITE	38852	BOT	6/06/80	1003	1103	15940.0	60.3329	49.72	679.56	.00	679.56	.00	.00	**
DITW	38853	BOT	6/06/80	1104	1204	16030.0	60.6736	.00	1269.09	.00	1269.09	.00	.00	**
DITE	38854	BOT	6/06/80	1205	1305	16230.0	61.4306	.00	1497.62	.00	1497.62	.00	.00	**
DITW	38855	BOT	6/06/80	1306	1406	16380.0	61.9983	64.52	1580.69	.00	1580.69	.00	.00	**
DITCH	38856	BOT	6/06/80	1407	1507	16340.0	61.8469	.00	840.79	.00	840.79	.00	.00	**
DITE	38857	BOT	6/06/80	1508	1608	16820.0	63.6637	.00	219.91	.00	219.91	.00	.00	**
DITCH	38858	BOT	6/06/80	1609	1709	16720.0	63.2852	.00	110.61	.00	110.61	.00	.00	**
DITW	38859	BOT	6/06/80	1710	1810	17070.0	64.6100	15.48	216.68	15.48	170.25	.00	30.95	**
DITE	38860	BOT	6/06/80	1811	1911	16440.0	62.2254	16.07	305.34	.00	257.13	.00	48.21	**
DITW	38861	BOT	6/06/80	1912	2012	16700.0	63.2095	.00	1597.86	.00	1597.86	.00	.00	**
DITCH	38862	BOT	6/06/80	2014	2114	16910.0	64.0044	.00	781.20	.00	765.57	.00	15.62	**
DITCH	38863	BOT	6/06/80	2114	2214	16550.0	62.6418	.00	287.35	.00	271.38	.00	15.96	
DITW	38864	BOT	6/06/80	2215	2315	16490.0	62.4147	.00	496.68	.00	496.68	.00	.00	**
DITE	38865	BOT	6/06/80	2316	0016	15830.0	59.9166	.00	567.46	16.69	550.77	.00	.00	**
DITE	38866	BOT	6/07/80	0016	0116	16250.0	61.5063	.00	715.37	.00	715.37	.00	.00	
DITW	38867	BOT	6/07/80	0119	0219	16410.0	62.1119	.00	434.70	.00	434.70	.00	.00	**
DITCH	38868	BOT	6/07/80	0221	0321	16490.0	62.4147	.00	544.74	.00	544.74	.00	.00	**
DITE	38869	BOT	6/07/80	0323	0423	15760.0	59.6516	.00	754.38	.00	754.38	.00	.00	**
DITW	38870	BOT	6/07/80	0428	0528	17050.0	64.5343	.00	309.91	.00	309.91	.00	.00	**
DITCH	38871	BOT	6/07/80	0531	0631	16920.0	64.0422	.00	374.75	46.84	327.91	.00	.00	**
DITCH	38872	BOT	6/10/80	0554	0654	17050.0	64.5343	.00	526.85	.00	526.85	.00	.00	
DITE	38873	BOT	6/10/80	0655	0755	16400.0	62.0740	.00	563.84	.00	563.84	.00	.00	**
DITW	38874	BOT	6/10/80	0756	0856	16350.0	61.8848	.00	145.43	48.48	80.80	.00	16.16	**
DITE	38875	BOT	6/10/80	0857	0957	16490.0	62.4147	.00	304.42	.00	304.42	.00	.00	**
DITW	38876	BOT	6/10/80	0958	1058	15900.0	60.1815	.00	315.71	16.62	299.10	.00	.00	**
DITCH	38877	BOT	6/10/80	1059	1159	16420.0	62.1497	.00	193.08	.00	193.08	.00	.00	**
DITCH	38878	BOT	6/10/80	1159	1259	16400.0	62.0740	.00	193.32	.00	193.32	.00	.00	
DITE	38879	BOT	6/10/80	1300	1400	16350.0	61.8848	.00	96.95	.00	96.95	.00	.00	**
DITW	38880	BOT	6/10/80	1401	1501	16720.0	63.2852	.00	616.26	.00	616.26	.00	.00	**
DITCH	38881	BOT	6/10/80	1502	1602	16970.0	64.2315	.00	451.49	.00	451.49	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES ALOSA SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITW	38882	BOT	6/10/80	1603	1703	16610.0	62.8689	.00	1304.30	.00	1304.30	.00	.00	**
DITE	38883	BOT	6/10/80	1704	1804	15900.0	60.1815	.00	3456.21	.00	3456.21	.00	.00	**
DITE	38884	BOT	6/10/80	1805	1905	17290.0	65.4427	.00	932.11	.00	932.11	.00	.00	
DITW	38885	BOT	6/10/80	1906	2006	15310.0	57.9484	.00	1449.57	.00	1449.57	.00	.00	**
DITCH	38886	BOT	6/10/80	2007	2107	16660.0	63.0581	.00	634.34	.00	634.34	.00	.00	**
DITW	38887	BOT	6/10/80	2108	2208	13100.0	49.5835	.00	806.72	.00	806.72	.00	.00	**
DITE	38888	BOT	6/10/80	2209	2309	16990.0	64.3072	.00	1352.88	.00	1352.88	.00	.00	**
DITCH	38889	BOT	6/10/80	2310	0010	16890.0	63.9287	.00	344.13	.00	344.13	.00	.00	**
DITCH	38890	BOT	6/11/80	0010	0110	16860.0	63.8151	.00	313.41	15.67	297.74	.00	.00	
DITE	38891	BOT	6/11/80	0111	0211	16630.0	62.9446	.00	524.27	.00	524.27	.00	.00	**
DITW	38892	BOT	6/11/80	0212	0312	17140.0	64.8749	.00	755.30	.00	508.67	246.63	.00	**
DITW	38893	BOT	6/11/80	0312	0412	17100.0	64.7235	.00	772.52	.00	772.52	.00	.00	
DITCH	38894	BOT	6/11/80	0413	0513	16200.0	61.3170	.00	962.21	.00	962.21	.00	.00	**
DITE	38895	BOT	6/11/80	0514	0614	17450.0	66.0483	.00	1241.52	.00	1241.52	.00	.00	**
DITE	38896	BOT	6/13/80	0556	0656	16190.0	61.2792	.00	766.98	.00	766.98	.00	.00	
DITCH	38897	BOT	6/13/80	0657	0757	16480.0	62.3768	.00	865.71	.00	865.71	.00	.00	**
DITW	38898	BOT	6/13/80	0758	0858	16490.0	62.4147	.00	1249.71	.00	1249.71	.00	.00	**
DITW	38899	BOT	6/13/80	0858	0958	16670.0	63.0960	.00	602.26	.00	602.26	.00	.00	
DITCH	38900	BOT	6/13/80	0959	1059	16470.0	62.3390	.00	32.08	.00	32.08	.00	.00	**
DITE	38901	BOT	6/13/80	1100	1200	16120.0	61.0142	.00	65.56	.00	65.56	.00	.00	**
DITE	38902	BOT	6/13/80	1200	1300	16110.0	60.9764	.00	49.20	.00	49.20	.00	.00	
DITCH	38903	BOT	6/13/80	1301	1401	15920.0	60.2572	.00	82.98	.00	82.98	.00	.00	**
DITW	38904	BOT	6/13/80	1402	1502	16280.0	61.6198	.00	146.06	.00	146.06	.00	.00	**
DITW	38905	BOT	6/13/80	1502	1602	16090.0	60.9007	.00	114.94	.00	114.94	.00	.00	
DITCH	38906	BOT	6/13/80	1603	1703	16390.0	62.0362	.00	177.32	.00	177.32	.00	.00	**
DITE	38907	BOT	6/13/80	1704	1804	16220.0	61.3927	.00	749.27	.00	749.27	.00	.00	**
DITE	38908	BOT	6/13/80	1804	1904	16160.0	61.1656	.00	637.61	.00	637.61	.00	.00	
DITW	38909	BOT	6/13/80	1905	2005	16480.0	62.3768	.00	929.83	.00	929.83	.00	.00	**
DITCH	38910	BOT	6/13/80	2006	2106	16420.0	62.1497	.00	386.16	.00	386.16	.00	.00	**
DITCH	38911	BOT	6/13/80	2106	2206	16690.0	63.1717	.00	538.22	.00	538.22	.00	.00	
DITW	38912	BOT	6/13/80	2207	2307	16660.0	63.0581	.00	602.62	.00	602.62	.00	.00	**
DITE	38913	BOT	6/13/80	2308	0008	14250.0	53.9363	.00	945.56	.00	945.56	.00	.00	**
DITE	38914	BOT	6/14/80	0008	0108	17490.0	66.1997	.00	830.82	.00	830.82	.00	.00	
DITCH	38915	BOT	6/14/80	0109	0209	16970.0	64.2315	.00	1276.63	.00	1276.63	.00	.00	**
DITW	38916	BOT	6/14/80	0210	0310	16350.0	61.8848	.00	484.77	.00	484.77	.00	.00	**
DITCH	38917	BOT	6/14/80	0311	0411	17820.0	67.4487	.00	266.87	.00	266.87	.00	.00	**
DITW	38918	BOT	6/14/80	0412	0512	15860.0	60.0301	.00	183.24	.00	183.24	.00	.00	**
DITE	38919	BOT	6/14/80	0513	0613	17520.0	66.3132	.00	512.72	.00	512.72	.00	.00	**
DITE	38920	BOT	6/17/80	0555	0655	16520.0	62.5282	.00	111.95	.00	111.95	.00	.00	
DITW	38921	BOT	6/17/80	0656	0756	16370.0	61.9605	.00	177.53	.00	177.53	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES ALOSA SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITCH	38922	BOT	6/17/80	0757	0857	16280.0	61.6198	48.69	275.89	.00	275.89	.00	.00	**
DITCH	38923	BOT	6/17/80	0857	0957	16390.0	62.0362	.00	209.56	.00	209.56	.00	.00	
DITE	38924	BOT	6/17/80	0957	1057	16200.0	61.3170	.00	260.94	.00	260.94	.00	.00	**
DITW	38925	BOT	6/17/80	1058	1158	16440.0	62.2254	.00	530.33	.00	530.33	.00	.00	**
DITW	38926	BOT	6/17/80	1158	1258	16240.0	61.4684	.00	146.42	.00	146.42	.00	.00	
DITCH	38927	BOT	6/17/80	1259	1359	16130.0	61.0521	.00	.00	.00	.00	.00	.00	**
DITE	38928	BOT	6/17/80	1400	1500	16410.0	62.1119	.00	32.20	.00	32.20	.00	.00	**
DITE	38929	BOT	6/17/80	1500	1600	16460.0	62.3011	.00	16.05	.00	16.05	.00	.00	
DITCH	38930	BOT	6/17/80	1602	1702	17090.0	64.6857	.00	15.46	.00	15.46	.00	.00	**
DITW	38931	BOT	6/17/80	1705	1805	17240.0	65.2534	.00	30.65	.00	30.65	.00	.00	**
DITW	38932	BOT	6/17/80	1805	1905	15720.0	59.5002	.00	.00	.00	.00	.00	.00	
DITCH	38933	BOT	6/17/80	1907	2007	15070.0	57.0400	17.53	.00	.00	.00	.00	.00	**
DITE	38934	BOT	6/17/80	2009	2109	16120.0	61.0142	.00	.00	.00	.00	.00	.00	**
DITCH	38935	BOT	6/17/80	2111	2211	16330.0	61.8091	.00	501.54	.00	501.54	.00	.00	**
DITW	38936	BOT	6/17/80	2213	2313	16270.0	61.5820	.00	763.21	.00	763.21	.00	.00	**
DITE	38937	BOT	6/17/80	2315	0015	16440.0	62.2254	.00	96.42	.00	96.42	.00	.00	**
DITE	38938	BOT	6/18/80	0016	0116	16650.0	63.0203	.00	47.60	.00	47.60	.00	.00	
DITW	38939	BOT	6/18/80	0118	0218	16290.0	61.6577	.00	129.75	.00	129.75	.00	.00	**
DITCH	38940	BOT	6/18/80	0220	0320	16340.0	61.8469	.00	161.69	.00	161.69	.00	.00	**
DITCH	38941	BOT	6/18/80	0320	0420	16170.0	61.2035	.00	539.18	.00	539.18	.00	.00	
DITW	38942	BOT	6/18/80	0422	0522	16610.0	62.8689	.00	477.18	.00	477.18	.00	.00	**
DITE	38943	BOT	6/18/80	0524	0624	16360.0	61.9226	.00	64.60	.00	64.60	.00	.00	**
DITE	38944	BOT	6/20/80	0557	0657	16650.0	63.0203	.00	126.94	.00	126.94	.00	.00	
DITW	38945	BOT	6/20/80	0658	0758	16500.0	62.4525	.00	240.18	.00	240.18	.00	.00	**
DITCH	38946	BOT	6/20/80	0759	0859	16080.0	60.8628	.00	49.29	.00	49.29	.00	.00	**
DITW	38947	BOT	6/20/80	0900	1000	16560.0	62.6796	.00	47.86	.00	47.86	.00	.00	**
DITCH	38948	BOT	6/20/80	1001	1101	16430.0	62.1876	.00	48.24	.00	48.24	.00	.00	**
DITE	38949	BOT	6/20/80	1102	1202	16070.0	60.8250	.00	213.73	.00	213.73	.00	.00	**
DITCH	38950	BOT	6/20/80	1203	1303	16360.0	61.9226	.00	209.94	.00	209.94	.00	.00	**
DITW	38951	BOT	6/20/80	1304	1404	16050.0	60.7493	.00	246.92	.00	246.92	.00	.00	**
DITE	38952	BOT	6/20/80	1405	1505	16310.0	61.7334	.00	145.79	.00	145.79	.00	.00	**
DITCH	38953	BOT	6/20/80	1506	1606	16260.0	61.5441	.00	32.50	.00	32.50	.00	.00	**
DITW	38954	BOT	6/20/80	1607	1707	16210.0	61.3549	.00	.00	.00	.00	.00	.00	**
DITE	38955	BOT	6/20/80	1708	1808	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**
DITW	38956	BOT	6/20/80	1809	1909	16450.0	62.2633	.00	64.24	.00	64.24	.00	.00	**
DITCH	38957	BOT	6/20/80	1910	2010	15950.0	60.3708	.00	16.56	.00	16.56	.00	.00	**
DITE	38958	BOT	6/20/80	2011	2111	15760.0	59.6516	.00	83.82	.00	83.82	.00	.00	**
DITCH	38959	BOT	6/20/80	2112	2212	16870.0	63.8530	.00	15.66	.00	15.66	.00	.00	**
DITE	38960	BOT	6/20/80	2213	2313	16080.0	60.8628	.00	49.29	.00	49.29	.00	.00	**
DITW	38961	BOT	6/20/80	2314	0014	16310.0	61.7334	.00	48.60	.00	48.60	.00	.00	**
DITE	38962	BOT	6/21/80	0015	0115	16550.0	62.6418	.00	63.86	.00	63.86	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES ALOSA SP.

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DITCH	38963	BOT	6/21/80	0116	0216	15680.0	59.3488	.00	67.40	.00	67.40	.00	.00	**
DITW	38964	BOT	6/21/80	0218	0318	16620.0	62.9067	.00	270.24	.00	238.45	31.79	.00	**
DITE	38965	BOT	6/21/80	0319	0419	16610.0	62.8689	.00	31.81	.00	31.81	.00	.00	**
DITW	38966	BOT	6/21/80	0420	0520	16600.0	62.8310	.00	143.24	.00	143.24	.00	.00	**
DITCH	38967	BOT	6/21/80	0521	0621	16320.0	61.7712	.00	48.57	.00	48.57	.00	.00	**
DITE	38968	BOT	6/24/80	0625	0725	16660.0	63.0581	.00	79.29	.00	79.29	.00	.00	**
DITCH	38969	BOT	6/24/80	0726	0826	16070.0	60.8250	.00	.00	.00	.00	.00	.00	**
DITW	38970	BOT	6/24/80	0828	0928	16320.0	61.7712	.00	16.19	.00	16.19	.00	.00	**
DITE	38971	BOT	6/24/80	0929	1029	16520.0	62.5282	.00	.00	.00	.00	.00	.00	**
DITW	38972	BOT	6/24/80	1030	1130	16850.0	63.7773	.00	15.68	.00	15.68	.00	.00	**
DITCH	38973	BOT	6/24/80	1132	1232	16620.0	62.9067	.00	15.90	.00	15.90	.00	.00	**
DITCH	38974	BOT	6/24/80	1232	1332	16600.0	62.8310	.00	15.92	.00	15.92	.00	.00	
DITW	38975	BOT	6/24/80	1333	1433	16680.0	63.1338	.00	47.52	.00	47.52	.00	.00	**
DITE	38976	BOT	6/24/80	1435	1535	16660.0	63.0581	.00	63.43	.00	63.43	.00	.00	**
DITE	38977	BOT	6/24/80	1535	1635	16440.0	62.2254	.00	128.56	.00	128.56	.00	.00	
DITW	38978	BOT	6/24/80	1636	1736	16480.0	62.3768	.00	112.22	.00	112.22	.00	.00	**
DITCH	38979	BOT	6/24/80	1737	1837	16470.0	62.3390	.00	64.17	.00	64.17	.00	.00	**
DITE	38980	BOT	6/24/80	1838	1938	16950.0	64.1558	.00	.00	.00	.00	.00	.00	**
DITW	38981	BOT	6/24/80	1940	2040	16550.0	62.6418	.00	47.89	.00	47.89	.00	.00	**
DITCH	38982	BOT	6/24/80	2041	2141	16440.0	62.2254	.00	128.56	.00	128.56	.00	.00	**
DITCH	38983	BOT	6/24/80	2141	2241	16150.0	61.1278	.00	65.44	.00	65.44	.00	.00	
DITE	38984	BOT	6/24/80	2242	2342	16310.0	61.7334	.00	64.79	.00	48.60	16.20	.00	**
DITW	38985	BOT	6/24/80	2343	0043	16330.0	61.8091	.00	48.54	.00	48.54	.00	.00	**
DITE	38986	BOT	6/25/80	0044	0144	16220.0	61.3927	.00	.00	.00	.00	.00	.00	**
DITW	38987	BOT	6/25/80	0145	0245	16440.0	62.2254	.00	32.14	.00	32.14	.00	.00	**
DITCH	38988	BOT	6/25/80	0246	0346	15770.0	59.6895	.00	33.51	.00	33.51	.00	.00	**
DITCH	38989	BOT	6/25/80	0346	0446	16410.0	62.1119	.00	64.40	.00	48.30	16.10	.00	
DITE	38990	BOT	6/25/80	0447	0547	16610.0	62.8689	.00	254.50	.00	238.59	15.91	.00	**
DITW	38991	BOT	6/25/80	0548	0648	16680.0	63.1338	.00	63.36	.00	63.36	.00	.00	**
DITE	38992	BOT	7/01/80	0612	0712	16260.0	61.5441	.00	48.75	.00	48.75	.00	.00	**
DITCH	38993	BOT	7/01/80	0715	0815	16580.0	62.7553	.00	.00	.00	.00	.00	.00	**
DITW	38994	BOT	7/01/80	0817	0917	15990.0	60.5222	.00	66.09	.00	66.09	.00	.00	**
DITW	38995	BOT	7/01/80	0917	1017	16210.0	61.3549	.00	48.90	.00	48.90	.00	.00	
DITCH	38996	BOT	7/01/80	1018	1118	16000.0	60.5600	.00	33.03	.00	33.03	.00	.00	**
DITE	38997	BOT	7/01/80	1120	1220	16210.0	61.3549	.00	97.79	.00	97.79	.00	.00	**
DITE	38998	BOT	7/01/80	1220	1320	16590.0	62.7932	.00	15.93	.00	15.93	.00	.00	
DITW	38999	BOT	7/01/80	1322	1422	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITCH	39000	BOT	7/01/80	1425	1525	16170.0	61.2035	.00	.00	.00	.00	.00	.00	**
DITCH	39001	BOT	7/01/80	1525	1625	15930.0	60.2951	.00	.00	.00	.00	.00	.00	
DITW	39002	BOT	7/01/80	1626	1726	16400.0	62.0740	.00	16.11	.00	16.11	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES ALOSA SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.-METER REVS.	VOLUME (CU. M.)	(IN NO./100 CU. M.) TOTAL EGGS	TOTAL LARVAL	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITE	39003	BOT	7/01/80	1727	1827	15960.0	60.4086	.00	49.66	.00	49.66	.00	.00	**
DITE	39004	BOT	7/01/80	1827	1927	16400.0	62.0740	.00	16.11	.00	16.11	.00	.00	
DITCH	39005	BOT	7/01/80	1929	2029	16420.0	62.1497	.00	.00	.00	.00	.00	.00	**
DITW	39006	BOT	7/01/80	2030	2130	16530.0	62.5661	.00	31.97	.00	.00	31.97	.00	**
DITCH	39007	BOT	7/01/80	2131	2231	16510.0	62.4904	.00	64.01	.00	64.01	.00	.00	**
DITW	39008	BOT	7/01/80	2233	2333	16560.0	62.6796	.00	31.91	.00	31.91	.00	.00	**
DITE	39009	BOT	7/01/80	2335	0035	16540.0	62.6039	.00	15.97	.00	15.97	.00	.00	**
DITW	39010	BOT	7/02/80	0037	0137	16480.0	62.3768	.00	80.16	.00	48.09	32.06	.00	**
DITE	39011	BOT	7/02/80	0139	0239	17150.0	64.9128	.00	200.27	.00	107.84	92.43	.00	**
DITCH	39012	BOT	7/02/80	0241	0341	16690.0	63.1717	.00	332.43	.00	142.47	189.96	.00	**
DITW	39013	BOT	7/02/80	0343	0443	16450.0	62.2633	.00	176.67	.00	112.43	64.24	.00	**
DITCH	39014	BOT	7/02/80	0445	0545	15950.0	60.3708	.00	.00	.00	.00	.00	.00	**
DITE	39015	BOT	7/02/80	0547	0647	16530.0	62.5661	.00	.00	.00	.00	.00	.00	**
DITE	39016	BOT	7/08/80	0546	0646	16200.0	61.3170	.00	.00	.00	.00	.00	.00	
DITCH	39017	BOT	7/08/80	0648	0748	15990.0	60.5222	.00	.00	.00	.00	.00	.00	**
DITW	39018	BOT	7/08/80	0750	0850	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITE	39019	BOT	7/08/80	0851	0951	15990.0	60.5222	.00	.00	.00	.00	.00	.00	**
DITW	39020	BOT	7/08/80	0953	1053	16010.0	60.5979	.00	16.50	.00	16.50	.00	.00	**
DITCH	39021	BOT	7/08/80	1055	1155	16360.0	61.9226	.00	.00	.00	.00	.00	.00	**
DITW	39022	BOT	7/08/80	1157	1257	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITCH	39023	BOT	7/08/80	1259	1359	16850.0	63.7773	.00	.00	.00	.00	.00	.00	**
DITE	39024	BOT	7/08/80	1401	1501	16690.0	63.1717	.00	15.83	.00	15.83	.00	.00	**
DITE	39025	BOT	7/08/80	1501	1601	16500.0	62.4525	.00	.00	.00	.00	.00	.00	
DITW	39026	BOT	7/08/80	1603	1703	17540.0	66.3889	.00	.00	.00	.00	.00	.00	**
DITCH	39027	BOT	7/08/80	1704	1804	17070.0	64.6100	.00	.00	.00	.00	.00	.00	**
DITCH	39028	BOT	7/08/80	1804	1904	16690.0	63.1717	.00	.00	.00	.00	.00	.00	
DITE	39029	BOT	7/08/80	1906	2006	17170.0	64.9885	.00	.00	.00	.00	.00	.00	**
DITW	39030	BOT	7/08/80	2008	2108	17650.0	66.8053	.00	14.97	.00	14.97	.00	.00	**
DITW	39031	BOT	7/08/80	2108	2208	17250.0	65.2913	.00	15.32	.00	15.32	.00	.00	
DITCH	39032	BOT	7/08/80	2210	2310	17270.0	65.3670	.00	15.30	.00	15.30	.00	.00	**
DITE	39033	BOT	7/08/80	2312	0012	15930.0	60.2951	.00	.00	.00	.00	.00	.00	**
DITE	39034	BOT	7/09/80	0012	0112	16160.0	61.1656	.00	.00	.00	.00	.00	.00	
DITW	39035	BOT	7/09/80	0113	0213	16620.0	62.9067	.00	.00	.00	.00	.00	.00	**
DITCH	39036	BOT	7/09/80	0214	0314	16270.0	61.5820	.00	.00	.00	.00	.00	.00	**
DITW	39037	BOT	7/09/80	0315	0415	16080.0	60.8628	.00	.00	.00	.00	.00	.00	**
DITCH	39038	BOT	7/09/80	0416	0516	15960.0	60.4086	.00	.00	.00	.00	.00	.00	**
DITE	39039	BOT	7/09/80	0517	0617	17020.0	64.4207	.00	15.52	.00	.00	15.52	.00	**
DITCH	39040	BOT	7/15/80	0606	0706	16980.0	64.2693	.00	.00	.00	.00	.00	.00	**
DITW	39041	BOT	7/15/80	0714	0814	16710.0	63.2474	.00	.00	.00	.00	.00	.00	**
DITE	39042	BOT	7/15/80	0816	0916	16410.0	62.1119	.00	32.20	.00	32.20	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES ALOSA SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITE	39043	BOT	7/15/80	0916	1016	16200.0	61.3170	.00	.00	.00	.00	.00	.00	
DITW	39044	BOT	7/15/80	1017	1117	17110.0	64.7614	.00	15.44	.00	15.44	.00	.00	**
DITCH	39045	BOT	7/15/80	1119	1219	17080.0	64.6478	.00	.00	.00	.00	.00	.00	**
DITCH	39046	BOT	7/15/80	1219	1319	17190.0	65.0642	.00	.00	.00	.00	.00	.00	
DITW	39047	BOT	7/15/80	1321	1421	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITE	39048	BOT	7/15/80	1423	1523	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITE	39049	BOT	7/15/80	1523	1623	16110.0	60.9764	.00	.00	.00	.00	.00	.00	
DITW	39050	BOT	7/15/80	1625	1725	16030.0	60.6736	.00	.00	.00	.00	.00	.00	**
DITCH	39051	BOT	7/15/80	1727	1827	16770.0	63.4745	.00	.00	.00	.00	.00	.00	**
DITW	39052	BOT	7/15/80	1829	1929	15830.0	59.9166	.00	.00	.00	.00	.00	.00	**
DITCH	39053	BOT	7/15/80	1930	2030	15660.0	59.2731	.00	16.87	.00	16.87	.00	.00	**
DITE	39054	BOT	7/15/80	2031	2131	16890.0	63.9287	.00	.00	.00	.00	.00	.00	**
DITCH	39055	BOT	7/15/80	2133	2203	7950.0	30.0908	.00	.00	.00	.00	.00	.00	**
DITW	39056	BOT	7/15/80	2235	2335	16700.0	63.2095	.00	.00	.00	.00	.00	.00	**
DITE	39057	BOT	7/15/80	2336	0036	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**
DITCH	39058	BOT	7/16/80	0038	0138	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITW	39059	BOT	7/16/80	0139	0239	17210.0	65.1399	.00	15.35	.00	.00	15.35	.00	**
DITE	39060	BOT	7/16/80	0240	0340	16020.0	60.6357	.00	.00	.00	.00	.00	.00	**
DITW	39061	BOT	7/16/80	0341	0441	16870.0	63.8530	.00	78.30	.00	31.32	46.98	.00	**
DITCH	39062	BOT	7/16/80	0442	0542	16240.0	61.4684	.00	.00	.00	.00	.00	.00	**
DITE	39063	BOT	7/16/80	0543	0643	16100.0	60.9385	.00	.00	.00	.00	.00	.00	**
DITCH	39064	BOT	7/22/80	0600	0700	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITE	39065	BOT	7/22/80	0701	0801	16020.0	60.6357	.00	.00	.00	.00	.00	.00	**
DITW	39066	BOT	7/22/80	0803	0903	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITE	39067	BOT	7/22/80	0904	1004	16230.0	61.4306	.00	.00	.00	.00	.00	.00	**
DITCH	39068	BOT	7/22/80	1005	1105	16310.0	61.7334	.00	.00	.00	.00	.00	.00	**
DITW	39069	BOT	7/22/80	1106	1206	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**
DITCH	39070	BOT	7/22/80	1207	1307	16300.0	61.6955	.00	.00	.00	.00	.00	.00	**
DITW	39071	BOT	7/22/80	1308	1408	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITE	39072	BOT	7/22/80	1409	1509	16670.0	63.0960	.00	15.85	.00	15.85	.00	.00	**
DITCH	39073	BOT	7/22/80	1511	1611	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**
DITE	39074	BOT	7/22/80	1613	1713	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITW	39075	BOT	7/22/80	1715	1815	16230.0	61.4306	.00	.00	.00	.00	.00	.00	**
DITW	39076	BOT	7/22/80	1815	1915	16210.0	61.3549	.00	.00	.00	.00	.00	.00	
DITCH	39077	BOT	7/22/80	1917	2017	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITE	39078	BOT	7/22/80	2019	2119	16580.0	62.7553	.00	.00	.00	.00	.00	.00	**
DITW	39079	BOT	7/22/80	2121	2221	16120.0	61.0142	.00	.00	.00	.00	.00	.00	**
DITCH	39080	BOT	7/22/80	2223	2323	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITE	39081	BOT	7/22/80	2325	0025	15910.0	60.2194	.00	.00	.00	.00	.00	.00	**
DITE	39082	BOT	7/23/80	0025	0125	17180.0	65.0263	.00	.00	.00	.00	.00	.00	
DITCH	39083	BOT	7/23/80	0148	0248	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES ALOSA SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITW	39084	BOT	7/23/80	0250	0350	16580.0	62.7553	.00	.00	.00	.00	.00	.00	**
DITW	39085	BOT	7/23/80	0350	0450	16220.0	61.3927	.00	.00	.00	.00	.30	.00	
DITE	39086	BOT	7/23/80	0451	0551	15390.0	58.2512	.00	34.33	.00	17.17	17.17	.00	**
DITCH	39087	BOT	7/23/80	0553	0653	16130.0	61.0521	.00	.00	.00	.00	.00	.00	**
DITCH	39088	BOT	7/29/80	0559	0659	16000.0	60.5600	.00	.00	.00	.00	.00	.00	
DITW	39089	BOT	7/29/80	0700	0800	16250.0	61.5063	.00	.00	.00	.00	.00	.00	**
DITE	39090	BOT	7/29/80	0802	0902	16370.0	61.9605	.00	.00	.00	.00	.00	.00	**
DITE	39091	BOT	7/29/80	0902	1002	16510.0	62.4904	.00	.00	.00	.00	.00	.00	
DITW	39092	BOT	7/29/80	1003	1103	17660.0	66.8431	.00	.00	.00	.00	.00	.00	**
DITCH	39093	BOT	7/29/80	1104	1204	16340.0	61.8469	.00	.00	.00	.00	.00	.00	**
DITW	39094	BOT	7/29/80	1205	1305	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITCH	39095	BOT	7/29/80	1307	1407	16750.0	63.3988	.00	.00	.00	.00	.00	.00	**
DITE	39096	BOT	7/29/80	1409	1509	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**
DITCH	39097	BOT	7/29/80	1510	1610	15800.0	59.8030	.00	.00	.00	.00	.00	.00	**
DITE	39098	BOT	7/29/80	1612	1712	15780.0	59.7273	.00	.00	.00	.00	.00	.00	**
DITW	39099	BOT	7/29/80	1713	1813	16590.0	62.7932	.00	.00	.00	.00	.00	.00	**
DITW	39100	BOT	7/29/80	1813	1913	16490.0	62.4147	.00	.00	.00	.00	.00	.00	
DITE	39101	BOT	7/29/80	1916	2016	15710.0	59.4624	.00	.00	.00	.00	.00	.00	**
DITCH	39102	BOT	7/29/80	2017	2117	15760.0	59.6516	.00	.00	.00	.00	.00	.00	**
DITCH	39103	BOT	7/29/80	2117	2217	16000.0	60.5600	.00	.00	.00	.00	.00	.00	
DITE	39104	BOT	7/29/80	2219	2319	16980.0	64.2693	.00	.00	.00	.00	.00	.00	**
DITW	39105	BOT	7/29/80	2321	0021	17000.0	64.3450	.00	.00	.00	.00	.00	.00	**
DITW	39106	BOT	7/30/80	0022	0122	16610.0	62.8689	.00	.00	.00	.00	.00	.00	
DITE	39107	BOT	7/30/80	0124	0224	14110.0	53.4064	.00	.00	.00	.00	.00	.00	**
DITCH	39108	BOT	7/30/80	0225	0325	15230.0	57.6456	.00	.00	.00	.00	.00	.00	**
DITCH	39109	BOT	7/30/80	0325	0425	16050.0	60.7493	.00	.00	.00	.00	.00	.00	
DITE	39110	BOT	7/30/80	0427	0527	15710.0	59.4624	.00	.00	.00	.00	.00	.00	**
DITW	39111	BOT	7/30/80	0529	0629	17390.0	65.8212	.00	.00	.00	.00	.00	.00	**
DITE	39112	BOT	8/05/80	0613	0713	16260.0	61.5441	.00	.00	.00	.00	.00	.00	**
DITCH	39113	BOT	8/05/80	0714	0814	15560.0	58.8946	.00	.00	.00	.00	.00	.00	**
DITW	39114	BOT	8/05/80	0816	0916	16830.0	63.7016	.00	.00	.00	.00	.00	.00	**
DITCH	39115	BOT	8/05/80	0918	1018	15940.0	60.3329	.00	.00	.00	.00	.00	.00	**
DITW	39116	BOT	8/05/80	1019	1119	16160.0	61.1656	.00	.00	.00	.00	.00	.00	**
DITE	39117	BOT	8/05/80	1120	1220	15690.0	59.3867	.00	.00	.00	.00	.00	.00	**
DITE	39118	BOT	8/05/80	1220	1320	16270.0	61.5820	.00	.00	.00	.00	.00	.00	
DITW	39119	BOT	8/05/80	1322	1422	16380.0	61.9983	.00	.00	.00	.00	.00	.00	**
DITCH	39120	BOT	8/05/80	1424	1524	16570.0	62.7175	.00	.00	.00	.00	.00	.00	**
DITCH	39121	BOT	8/05/80	1524	1624	18260.0	69.1141	.00	.00	.00	.00	.00	.00	
DITE	39122	BOT	8/05/80	1626	1726	17140.0	64.8749	.00	.00	.00	.00	.00	.00	**
DITW	39123	BOT	8/05/80	1728	1828	18890.0	71.4987	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES ALOSA SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITW	39124	BOT	8/05/80	1828	1928	16240.0	61.4684	.00	.00	.00	.00	.00	.00	
DITE	39125	BOT	8/05/80	1930	2030	16060.0	60.7871	.00	.00	.00	.00	.00	.00	**
DITCH	39126	BOT	8/05/80	2032	2132	18150.0	68.6978	.00	.00	.00	.00	.00	.00	**
DITCH	39127	BOT	8/05/80	2132	2232	17450.0	66.0483	.00	.00	.00	.00	.00	.00	
DITE	39128	BOT	8/05/80	2234	2334	15180.0	57.4563	.00	.00	.00	.00	.00	.00	**
DITW	39129	BOT	8/05/80	2336	0036	16530.0	62.5661	.00	.00	.00	.00	.00	.00	**
DITE	39130	BOT	8/06/80	0037	0137	16220.0	61.3927	.00	.00	.00	.00	.00	.00	**
DITCH	39131	BOT	8/06/80	0139	0239	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITW	39132	BOT	8/06/80	0240	0340	16150.0	61.1278	.00	.00	.00	.00	.00	.00	**
DITE	39133	BOT	8/06/80	0341	0441	16330.0	61.8091	.00	.00	.00	.00	.00	.00	**
DITW	39134	BOT	8/06/80	0442	0542	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITCH	39135	BOT	8/06/80	0544	0644	16450.0	62.2633	.00	.00	.00	.00	.00	.00	**
DITW	39136	BOT	8/12/80	0605	0705	16130.0	61.0521	.00	.00	.00	.00	.00	.00	**
DITE	39137	BOT	8/12/80	0706	0806	15770.0	59.6895	.00	.00	.00	.00	.00	.00	**
DITCH	39138	BOT	8/12/80	0807	0907	16180.0	61.2413	.00	.00	.00	.00	.00	.00	**
DITCH	39139	BOT	8/12/80	0907	1007	16260.0	61.5441	.00	.00	.00	.00	.00	.00	
DITE	39140	BOT	8/12/80	1009	1109	16800.0	63.5880	.00	.00	.00	.00	.00	.00	**
DITW	39141	BOT	8/12/80	1111	1211	16820.0	63.6637	.00	.00	.00	.00	.00	.00	**
DITE	39142	BOT	8/12/80	1212	1312	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITW	39143	BOT	8/12/80	1314	1414	16760.0	63.4366	.00	.00	.00	.00	.00	.00	**
DITCH	39144	BOT	8/12/80	1416	1516	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITW	39145	BOT	8/12/80	1517	1617	16140.0	61.0899	.00	.00	.00	.00	.00	.00	**
DITCH	39146	BOT	8/12/80	1619	1719	16350.0	61.8848	.00	.00	.00	.00	.00	.00	**
DITE	39147	BOT	8/12/80	1721	1821	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITE	39148	BOT	8/12/80	1821	1921	15830.0	59.9166	.00	.00	.00	.00	.00	.00	
DITCH	39149	BOT	8/12/80	1922	2022	16050.0	60.7493	.00	.00	.00	.00	.00	.00	**
DITW	39150	BOT	8/12/80	2024	2124	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITE	39151	BOT	8/12/80	2126	2226	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITCH	39152	BOT	8/12/80	2228	2328	15610.0	59.0839	.00	.00	.00	.00	.00	.00	**
DITW	39153	BOT	8/12/80	2330	0030	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITE	39154	BOT	8/13/80	0031	0131	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITW	39155	BOT	8/13/80	0132	0232	17140.0	64.8749	.00	.00	.00	.00	.00	.00	**
DITCH	39156	BOT	8/13/80	0233	0333	17610.0	66.6539	.00	.00	.00	.00	.00	.00	**
DITCH	39157	BOT	8/13/80	0333	0433	16560.0	62.6796	.00	.00	.00	.00	.00	.00	
DITW	39158	BOT	8/13/80	0435	0535	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITE	39159	BOT	8/13/80	0536	0636	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITCH	39160	BOT	8/19/80	0601	0701	12300.0	46.5555	.00	.00	.00	.00	.00	.00	**
DITW	39161	BOT	8/19/80	0705	0805	14780.0	55.9423	.00	.00	.00	.00	.00	.00	**
DITE	39162	BOT	8/19/80	0810	0910	16390.0	62.0362	.00	.00	.00	.00	.00	.00	**
DITE	39163	BOT	8/19/80	0910	1010	16420.0	62.1497	.00	.00	.00	.00	.00	.00	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES ALOSA SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(EN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITW	39164	BOT	8/19/80	1012	1112	16140.0	61.0899	.00	.00	.00	.00	.00	.00	**
DITCH	39165	BOT	8/19/80	1113	1213	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	39166	BOT	8/19/80	1213	1313	16690.0	63.1717	.00	.00	.00	.00	.00	.00	
DITE	39167	BOT	8/19/80	1314	1414	15780.0	59.7273	.00	.00	.00	.00	.00	.00	**
DITW	39168	BOT	8/19/80	1416	1516	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITCH	39169	BOT	8/19/80	1519	1619	16880.0	63.8908	.00	.00	.00	.00	.00	.00	**
DITW	39170	BOT	8/19/80	1620	1720	17110.0	64.7614	.00	.00	.00	.00	.00	.00	**
DITE	39171	BOT	8/19/80	1721	1821	16080.0	60.8628	.00	.00	.00	.00	.00	.00	**
DITW	39172	BOT	8/19/80	1822	1922	16940.0	64.1179	.00	.00	.00	.00	.00	.00	**
DITCH	39173	BOT	8/19/80	1923	2023	16340.0	61.8469	.00	.00	.00	.00	.00	.00	**
DITE	39174	BOT	8/19/80	2024	2124	18490.0	69.9847	.00	.00	.00	.00	.00	.00	**
DITCH	39175	BOT	8/19/80	2125	2225	16410.0	62.1119	.00	.00	.00	.00	.00	.00	**
DITW	39176	BOT	8/19/80	2226	2326	16090.0	60.9007	.00	.00	.00	.00	.00	.00	**
DITE	39177	BOT	8/19/80	2327	0027	15340.0	58.0619	.00	.00	.00	.00	.00	.00	**
DITW	39178	BOT	8/20/80	0029	0129	16280.0	61.6198	.00	.00	.00	.00	.00	.00	**
DITCH	39179	BOT	8/20/80	0130	0230	16890.0	63.9287	.00	.00	.00	.00	.00	.00	**
DITE	39180	BOT	8/20/80	0232	0332	16450.0	62.2633	.00	.00	.00	.00	.00	.00	**
DITW	39181	BOT	8/20/80	0333	0433	17130.0	64.8371	.00	.00	.00	.00	.00	.00	**
DITE	39182	BOT	8/20/80	0434	0534	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	39183	BOT	8/20/80	0536	0636	16750.0	63.3988	.00	.00	.00	.00	.00	.00	**
DITW	39184	BOT	8/26/80	0640	0740	15500.0	58.6675	.00	.00	.00	.00	.00	.00	**
DITCH	39185	BOT	8/26/80	0741	0841	16170.0	61.2035	.00	.00	.00	.00	.00	.00	**
DITE	39186	BOT	8/26/80	0842	0942	16110.0	60.9764	.00	.00	.00	.00	.00	.00	**
DITW	39187	BOT	8/26/80	0944	1044	15520.0	58.7432	.00	.00	.00	.00	.00	.00	**
DITE	39188	BOT	8/26/80	1045	1145	16900.0	63.9665	.00	.00	.00	.00	.00	.00	**
DITCH	39189	BOT	8/26/80	1146	1246	15570.0	58.9325	.00	.00	.00	.00	.00	.00	**
DITE	39190	BOT	8/26/80	1247	1347	16460.0	62.3011	.00	.00	.00	.00	.00	.00	**
DITCH	39191	BOT	8/26/80	1348	1448	15810.0	59.8409	.00	.00	.00	.00	.00	.00	**
DITW	39192	BOT	8/26/80	1449	1549	16500.0	62.4525	.00	.00	.00	.00	.00	.00	**
DITE	39193	BOT	8/26/80	1550	1650	15530.0	58.7811	.00	.00	.00	.00	.00	.00	**
DITW	39194	BOT	8/26/80	1651	1751	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITCH	39195	BOT	8/26/80	1751	1851	16850.0	63.7773	.00	.00	.00	.00	.00	.00	**
DITCH	39196	BOT	8/26/80	1851	1951	17000.0	64.3450	.00	.00	.00	.00	.00	.00	
DITE	39197	BOT	8/26/80	1952	2052	15890.0	60.1437	.00	.00	.00	.00	.00	.00	**
DITW	39198	BOT	8/26/80	2053	2153	16960.0	64.1936	.00	.00	.00	.00	.00	.00	**
DITW	39199	BOT	8/26/80	2153	2253	16630.0	62.9446	.00	.00	.00	.00	.00	.00	
DITCH	39200	BOT	8/26/80	2301	0001	18260.0	69.1141	.00	.00	.00	.00	.00	.00	**
DITE	39201	BOT	8/27/80	0002	0102	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITCH	39202	BOT	8/27/80	0104	0204	17790.0	67.3352	.00	.00	.00	.00	.00	.00	**
DITE	39203	BOT	8/27/80	0210	0310	14030.0	53.1036	.00	.00	.00	.00	.00	.00	**
DITW	39204	BOT	8/27/80	0312	0412	18990.0	71.8772	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES ALOSA SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITE	39205	BOT	8/27/80	0415	0515	12910.0	48.8644	.00	.00	.00	.00	.00	.00	**
DITCH	39206	BOT	8/27/80	0517	0617	19710.0	74.6024	.00	.00	.00	.00	.00	.00	**
DITW	39207	BOT	8/27/80	0618	0718	12840.0	48.5994	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES AMERICAN SHAD

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	FLOWMETER REVS.	VOLUME (CU. M.)	CONCENTRATION NO./1000 CU. M.: TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIFE STAGE	
DITW	38680	BOT	4/22/80	0559	0659	17270.0	65.3670	.00	.00	.00	.00	.00	.00	**
DITE	38681	BOT	4/22/80	0702	0802	16900.0	63.9665	.00	.00	.00	.00	.00	.00	**
DITCH	38682	BOT	4/22/80	0805	0905	17110.0	64.7614	.00	.00	.00	.00	.00	.00	**
DITE	38683	BOT	4/22/80	0908	1008	16970.0	64.2315	.00	.00	.00	.00	.00	.00	**
DITCH	38684	BOT	4/22/80	1009	1109	17010.0	64.3829	.00	.00	.00	.00	.00	.00	**
DITW	38685	BOT	4/22/80	1110	1210	17120.0	64.7992	.00	.00	.00	.00	.00	.00	**
DITW	38686	BOT	4/22/80	1210	1310	17250.0	65.2913	.00	.00	.00	.00	.00	.00	
DITCH	38687	BOT	4/22/80	1312	1412	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITE	38688	BOT	4/22/80	1415	1515	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	38689	BOT	4/22/80	1517	1617	17380.0	65.7833	.00	.00	.00	.00	.00	.00	**
DITW	38690	BOT	4/22/80	1619	1719	17750.0	67.1838	.00	.00	.00	.00	.00	.00	**
DITE	38691	BOT	4/22/80	1721	1821	16900.0	63.9665	.00	.00	.00	.00	.00	.00	**
DITCH	38692	BOT	4/22/80	1823	1923	16790.0	63.5502	.00	.00	.00	.00	.00	.00	**
DITW	38693	BOT	4/22/80	1925	2025	17070.0	64.6100	.00	.00	.00	.00	.00	.00	**
DITE	38694	BOT	4/22/80	2028	2128	17310.0	65.5184	.00	.00	.00	.00	.00	.00	**
DITE	38695	BOT	4/22/80	2128	2228	16760.0	63.4366	.00	.00	.00	.00	.00	.00	
DITW	38696	BOT	4/22/80	2230	2330	17250.0	65.2913	.00	.00	.00	.00	.00	.00	**
DITCH	38697	BOT	4/22/80	2331	0031	16660.0	63.0581	.00	.00	.00	.00	.00	.00	**
DITW	38698	BOT	4/23/80	0033	0133	16420.0	62.1497	.00	.00	.00	.00	.00	.00	**
DITE	38699	BOT	4/23/80	0135	0235	16350.0	61.8848	.00	.00	.00	.00	.00	.00	**
DITCH	38700	BOT	4/23/80	0237	0337	16820.0	63.6637	.00	.00	.00	.00	.00	.00	**
DITCH	38701	BOT	4/23/80	0337	0437	16980.0	64.2693	.00	.00	.00	.00	.00	.00	
DITE	38702	BOT	4/23/80	0439	0539	17130.0	64.8371	.00	.00	.00	.00	.00	.00	**
DITW	38703	BOT	4/23/80	0540	0640	18240.0	69.0384	.00	.00	.00	.00	.00	.00	**
DITCH	38704	BOT	4/29/80	0600	0700	16590.0	62.7932	.00	.00	.00	.00	.00	.00	**
DITE	38705	BOT	4/29/80	0702	0802	16870.0	63.8530	.00	.00	.00	.00	.00	.00	**
DITW	38706	BOT	4/29/80	0804	0904	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITCH	38707	BOT	4/29/80	0906	1006	16970.0	64.2315	.00	.00	.00	.00	.00	.00	**
DITE	38708	BOT	4/29/80	1008	1108	16640.0	62.9824	.00	.00	.00	.00	.00	.00	**
DITW	38709	BOT	4/29/80	1110	1210	17490.0	66.1997	.00	.00	.00	.00	.00	.00	**
DITCH	38710	BOT	4/29/80	1212	1312	16990.0	64.3072	.00	.00	.00	.00	.00	.00	**
DITW	38711	BOT	4/29/80	1315	1415	17220.0	65.1777	.00	.00	.00	.00	.00	.00	**
DITE	38712	BOT	4/29/80	1417	1517	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITCH	38713	BOT	4/29/80	1518	1618	16710.0	63.2474	.00	.00	.00	.00	.00	.00	**
DITW	38714	BOT	4/29/80	1620	1720	16300.0	61.6955	.00	.00	.00	.00	.00	.00	**
DITE	38715	BOT	4/29/80	1723	1823	15650.0	59.2353	.00	.00	.00	.00	.00	.00	**
DITE	38716	BOT	4/29/80	1823	1923	17060.0	64.5721	.00	.00	.00	.00	.00	.00	
DITW	38717	BOT	4/29/80	1924	2024	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITCH	38718	BOT	4/29/80	2026	2126	15730.0	59.5381	.00	.00	.00	.00	.00	.00	**
DITW	38719	BOT	4/29/80	2127	2227	16870.0	63.8530	.00	.00	.00	.00	.00	.00	**
DITE	38720	BOT	4/29/80	2229	2329	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES AMERICAN SHAD

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DITCH	38721	BOT	4/29/80	2334	0034	16820.0	63.6637	15.71	.00	.00	.00	.00	.00	**
DITCH	38722	BOT	4/30/80	0034	0134	16810.0	63.6259	.00	.00	.00	.00	.00	.00	
DITE	38723	BOT	4/30/80	0137	0237	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITW	38724	BOT	4/30/80	0240	0340	17390.0	65.8212	.00	.00	.00	.00	.00	.00	**
DITCH	38725	BOT	4/30/80	0342	0442	16790.0	63.5502	15.74	.00	.00	.00	.00	.00	**
DITE	38726	BOT	4/30/80	0445	0545	17150.0	64.9128	.00	.00	.00	.00	.00	.00	**
DITW	38727	BOT	4/30/80	0547	0647	17030.0	64.4586	.00	.00	.00	.00	.00	.00	**
DITCH	38728	BOT	5/06/80	0606	0706	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITW	38729	BOT	5/06/80	0709	0809	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITE	38730	BOT	5/06/80	0811	0911	16680.0	63.1338	.00	.00	.00	.00	.00	.00	**
DITE	38731	BOT	5/06/80	0911	1011	16770.0	63.4745	.00	.00	.00	.00	.00	.00	
DITCH	38732	BOT	5/06/80	1014	1114	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITW	38733	BOT	5/06/80	1116	1216	17240.0	65.2534	.00	.00	.00	.00	.00	.00	**
DITE	38734	BOT	5/06/80	1219	1319	16450.0	62.2633	.00	.00	.00	.00	.00	.00	**
DITW	38735	BOT	5/06/80	1321	1421	16940.0	64.1179	.00	.00	.00	.00	.00	.00	**
DITCH	38736	BOT	5/06/80	1423	1523	16750.0	63.3988	.00	.00	.00	.00	.00	.00	**
DITCH	38737	BOT	5/06/80	1523	1623	16840.0	63.7394	.00	.00	.00	.00	.00	.00	
DITE	38738	BOT	5/06/80	1626	1726	16680.0	63.1338	.00	.00	.00	.00	.00	.00	**
DITW	38739	BOT	5/06/80	1728	1828	16990.0	64.3072	.00	.00	.00	.00	.00	.00	**
DITW	38740	BOT	5/06/80	1828	1928	16940.0	64.1179	.00	.00	.00	.00	.00	.00	
DITE	38741	BOT	5/06/80	1930	2030	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITCH	38742	BOT	5/06/80	2032	2132	17140.0	64.8749	.00	.00	.00	.00	.00	.00	**
DITE	38743	BOT	5/06/80	2134	2234	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITCH	38744	BOT	5/06/80	2236	2336	17240.0	65.2534	.00	.00	.00	.00	.00	.00	**
DITW	38745	BOT	5/06/80	2337	0037	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITW	38746	BOT	5/07/80	0037	0137	16630.0	62.9446	.00	.00	.00	.00	.00	.00	
DITE	38747	BOT	5/07/80	0139	0239	16630.0	62.9446	.00	.00	.00	.00	.00	.00	**
DITCH	38748	BOT	5/07/80	0241	0341	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITW	38749	BOT	5/07/80	0344	0444	16770.0	63.4745	.00	.00	.00	.00	.00	.00	**
DITE	38750	BOT	5/07/80	0446	0546	16730.0	63.3231	.00	.00	.00	.00	.00	.00	**
DITCH	38751	BOT	5/07/80	0547	0647	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**
DITE	38752	BOT	5/13/80	0605	0705	16700.0	63.2095	.00	.00	.00	.00	.00	.00	**
DITW	38753	BOT	5/13/80	0707	0807	17030.0	64.4586	.00	.00	.00	.00	.00	.00	**
DITCH	38754	BOT	5/13/80	0809	0909	15930.0	60.2951	.00	.00	.00	.00	.00	.00	**
DITE	38755	BOT	5/13/80	0910	1010	16870.0	63.8530	.00	.00	.00	.00	.00	.00	**
DITW	38756	BOT	5/13/80	1012	1112	17030.0	64.4586	.00	15.51	.00	15.51	.00	.00	**
DITCH	38757	BOT	5/13/80	1113	1213	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITCH	38758	BOT	5/13/80	1213	1313	16520.0	62.5282	.00	15.99	.00	15.99	.00	.00	
DITE	38759	BOT	5/13/80	1314	1414	16590.0	62.7932	.00	.00	.00	.00	.00	.00	**
DITW	38760	BOT	5/13/80	1415	1515	16590.0	62.7932	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

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DITE	38761	BOT	5/13/80	1516	1616	15690.0	59.3867	.00	.00	.00	.00	.00	.00	**
DITW	38762	BOT	5/13/80	1616	1716	16120.0	61.0142	.00	.00	.00	.00	.00	.00	**
DITCH	38763	BOT	5/13/80	1717	1817	16000.0	60.5600	.00	16.51	.00	16.51	.00	.00	**
DITW	38764	BOT	5/13/80	1819	1919	16980.0	64.2693	.00	.00	.00	.00	.00	.00	**
DITCH	38765	BOT	5/13/80	1921	2021	16890.0	63.9287	.00	.00	.00	.00	.00	.00	**
DITE	38766	BOT	5/13/80	2023	2123	16660.0	63.0581	.00	.00	.00	.00	.00	.00	**
DITCH	38767	BOT	5/13/80	2125	2225	17080.0	64.6478	.00	.00	.00	.00	.00	.00	**
DITE	38768	BOT	5/13/80	2226	2326	16760.0	63.4366	15.76	.00	.00	.00	.00	.00	**
DITW	38769	BOT	5/13/80	2328	0028	17260.0	65.3291	.00	.00	.00	.00	.00	.00	**
DITCH	38770	BOT	5/14/80	0029	0129	16960.0	64.1936	.00	.00	.00	.00	.00	.00	**
DITE	38771	BOT	5/14/80	0131	0231	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**
DITW	38772	BOT	5/14/80	0232	0332	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	38773	BOT	5/14/80	0333	0433	16780.0	63.5123	.00	.00	.00	.00	.00	.00	**
DITE	38774	BOT	5/14/80	0434	0534	15860.0	60.0301	.00	.00	.00	.00	.00	.00	**
DITW	38775	BOT	5/14/80	0535	0635	16540.0	62.6039	.00	15.97	15.97	.00	.00	.00	**
DITE	38776	BOT	5/20/80	0607	0707	17010.0	64.3829	.00	15.53	.00	15.53	.00	.00	**
DITW	38777	BOT	5/20/80	0709	0809	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITCH	38778	BOT	5/20/80	0810	0910	16860.0	63.8151	.00	15.67	.00	15.67	.00	.00	**
DITE	38779	BOT	5/20/80	0911	1011	16410.0	62.1119	.00	16.10	.00	16.10	.00	.00	**
DITCH	38780	BOT	5/20/80	1012	1112	16700.0	63.2095	.00	.00	.00	.00	.00	.00	**
DITW	38781	BOT	5/20/80	1113	1213	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITE	38782	BOT	5/20/80	1214	1314	16260.0	61.5441	.00	.00	.00	.00	.00	.00	**
DITW	38783	BOT	5/20/80	1315	1415	17040.0	64.4964	.00	.00	.00	.00	.00	.00	**
DITCH	38784	BOT	5/20/80	1416	1516	16370.0	61.9605	.00	.00	.00	.00	.00	.00	**
DITCH	38785	BOT	5/20/80	1516	1616	16330.0	61.8091	.00	.00	.00	.00	.00	.00	
DITW	38786	BOT	5/20/80	1620	1720	16330.0	61.8091	.00	.00	.00	.00	.00	.00	**
DITE	38787	BOT	5/20/80	1722	1822	16600.0	62.8310	.00	15.92	.00	15.92	.00	.00	**
DITCH	38788	BOT	5/20/80	1824	1924	16960.0	64.1936	.00	.00	.00	.00	.00	.00	**
DITW	38789	BOT	5/20/80	1926	2026	16470.0	62.3390	.00	32.08	.00	32.08	.00	.00	**
DITE	38790	BOT	5/20/80	2027	2127	15760.0	59.6516	.00	.00	.00	.00	.00	.00	**
DITE	38791	BOT	5/20/80	2127	2227	16970.0	64.2315	.00	31.14	.00	31.14	.00	.00	
DITW	38792	BOT	5/20/80	2228	2328	16750.0	63.3988	.00	15.77	.00	15.77	.00	.00	**
DITCH	38793	BOT	5/20/80	2329	0029	16800.0	63.5880	.00	15.73	.00	15.73	.00	.00	**
DITCH	38794	BOT	5/21/80	0029	0129	17110.0	64.7614	.00	.00	.00	.00	.00	.00	
DITE	38795	BOT	5/21/80	0131	0231	17070.0	64.6100	.00	.00	.00	.00	.00	.00	**
DITW	38796	BOT	5/21/80	0233	0333	17370.0	65.7455	.00	.00	.00	.00	.00	.00	**
DITE	38797	BOT	5/21/80	0335	0435	17060.0	64.5721	.00	30.97	.00	30.97	.00	.00	**
DITW	38798	BOT	5/21/80	0437	0537	17980.0	68.0543	.00	44.08	.00	44.08	.00	.00	**
DITCH	38799	BOT	5/21/80	0539	0639	17670.0	66.8810	.00	.00	.00	.00	.00	.00	**
DITW	38800	BOT	5/27/80	1556	1656	16500.0	62.4525	.00	16.01	.00	16.01	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES AMERICAN SHAD

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DITE	38801	BOT	5/27/80	1659	1759	16310.0	61.7334	.00	.00	.00	.00	.00	.00	**
DITCH	38802	BOT	5/27/80	1800	1900	16950.0	64.1558	.00	.00	.00	.00	.00	.00	**
DITCH	38803	BOT	5/27/80	1902	2002	16800.0	63.5880	.00	.00	.00	.00	.00	.00	
DITE	38804	BOT	5/27/80	2004	2104	16570.0	62.7175	.00	.00	.00	.00	.00	.00	**
DITW	38805	BOT	5/27/80	2105	2205	17140.0	64.8749	.00	.00	.00	.00	.00	.00	**
DITW	38806	BOT	5/27/80	2207	2307	17020.0	64.4207	.00	.00	.00	.00	.00	.00	
DITCH	38807	BOT	5/27/80	2310	0010	16810.0	63.6259	.00	15.72	.00	15.72	.00	.00	**
DITE	38808	BOT	5/28/80	0013	0113	16900.0	63.9665	.00	.00	.00	.00	.00	.00	**
DITCH	38809	BOT	5/28/80	0117	0217	17010.0	64.3829	.00	.00	.00	.00	.00	.00	**
DITE	38810	BOT	5/28/80	0221	0321	16750.0	63.3988	.00	.00	.00	.00	.00	.00	**
DITW	38811	BOT	5/28/80	0324	0424	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITCH	38812	BOT	5/28/80	0428	0528	16940.0	64.1179	.00	.00	.00	.00	.00	.00	**
DITE	38813	BOT	5/28/80	0531	0631	16740.0	63.3609	.00	15.78	.00	15.78	.00	.00	**
DITW	38814	BOT	5/28/80	0634	0734	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITE	38815	BOT	5/28/80	0736	0836	16640.0	62.9824	.00	.00	.00	.00	.00	.00	**
DITCH	38816	BOT	5/28/80	0837	0937	16640.0	62.9824	.00	15.88	.00	15.88	.00	.00	**
DITW	38817	BOT	5/28/80	0939	1039	16940.0	64.1179	.00	.00	.00	.00	.00	.00	**
DITCH	38818	BOT	5/28/80	1041	1141	16670.0	63.0960	15.85	.00	.00	.00	.00	.00	**
DITE	38819	BOT	5/28/80	1143	1243	16330.0	61.8091	.00	.00	.00	.00	.00	.00	**
DITW	38820	BOT	5/28/80	1245	1345	16730.0	63.3231	.00	.00	.00	.00	.00	.00	**
DITE	38821	BOT	5/28/80	1346	1446	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITW	38822	BOT	5/28/80	1448	1548	16650.0	63.0203	.00	.00	.00	.00	.00	.00	**
DITCH	38823	BOT	5/28/80	1550	1650	16710.0	63.2474	.00	.00	.00	.00	.00	.00	**
DITE	38824	BOT	6/03/80	0604	0704	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITW	38825	BOT	6/03/80	0705	0805	16060.0	60.7871	.00	.00	.00	.00	.00	.00	**
DITCH	38826	BOT	6/03/80	0806	0906	16580.0	62.7553	.00	.00	.00	.00	.00	.00	**
DITE	38827	BOT	6/03/80	0907	1007	15410.0	58.3269	.00	17.14	.00	17.14	.00	.00	**
DITW	38828	BOT	6/03/80	1008	1108	16790.0	63.5502	.00	31.47	.00	31.47	.00	.00	**
DITCH	38829	BOT	6/03/80	1109	1209	16320.0	61.7712	.00	16.19	.00	16.19	.00	.00	**
DITE	38830	BOT	6/03/80	1210	1310	16970.0	64.2315	.00	108.98	.00	108.98	.00	.00	**
DITCH	38831	BOT	6/03/80	1312	1412	16870.0	63.8530	.00	.00	.00	.00	.00	.00	**
DITW	38832	BOT	6/03/80	1413	1513	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITCH	38833	BOT	6/03/80	1514	1614	16420.0	62.1497	.00	.00	.00	.00	.00	.00	**
DITE	38834	BOT	6/03/80	1616	1716	16790.0	63.5502	.00	.00	.00	.00	.00	.00	**
DITW	38835	BOT	6/03/80	1717	1817	16570.0	62.7175	.00	15.94	.00	15.94	.00	.00	**
DITE	38836	BOT	6/03/80	1818	1918	15850.0	59.9923	.00	16.67	.00	16.67	.00	.00	**
DITW	38837	BOT	6/03/80	1920	2020	16060.0	60.7871	.00	.00	.00	.00	.00	.00	**
DITCH	38838	BOT	6/03/80	2022	2122	16020.0	60.6357	.00	.00	.00	.00	.00	.00	**
DITW	38839	BOT	6/03/80	2124	2224	16340.0	61.8469	.00	.00	.00	.00	.00	.00	**
DITCH	38840	BOT	6/03/80	2226	2326	16600.0	62.8310	.00	31.83	.00	31.83	.00	.00	**
DITE	38841	BOT	6/03/80	2329	0029	16700.0	63.2095	.00	15.82	.00	15.82	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES AMERICAN SHAD

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DITE	38842	BOT	6/04/80	0029	0129	16310.0	61.7334	.00	.00	.00	.00	.00	.00	
DITW	38843	BOT	6/04/80	0131	0231	16810.0	63.6259	.00	.00	.00	.00	.00	.00	**
DITCH	38844	BOT	6/04/80	0234	0334	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITW	38845	BOT	6/04/80	0337	0437	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITE	38846	BOT	6/04/80	0440	0540	16360.0	61.9226	.00	.00	.00	.00	.00	.00	**
DITCH	38847	BOT	6/04/80	0544	0644	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITW	38848	BOT	6/06/80	0600	0700	16510.0	62.4904	.00	48.01	.00	48.01	.00	.00	**
DITE	38849	BOT	6/06/80	0701	0801	16490.0	62.4147	.00	32.04	.00	32.04	.00	.00	**
DITCH	38850	BOT	6/06/80	0802	0902	16380.0	61.9983	.00	.00	.00	.00	.00	.00	**
DITCH	38851	BOT	6/06/80	0902	1002	16130.0	61.0521	.00	.00	.00	.00	.00	.00	
DITE	38852	BOT	6/06/80	1003	1103	15940.0	60.3329	.00	116.02	.00	116.02	.00	.00	**
DITW	38853	BOT	6/06/80	1104	1204	16030.0	60.6736	.00	16.48	.00	16.48	.00	.00	**
DITE	38854	BOT	6/06/80	1205	1305	16230.0	61.4306	.00	195.34	.00	195.34	.00	.00	**
DITW	38855	BOT	6/06/80	1306	1406	16380.0	61.9983	.00	16.13	.00	16.13	.00	.00	**
DITCH	38856	BOT	6/06/80	1407	1507	16340.0	61.8469	.00	.00	.00	.00	.00	.00	**
DITE	38857	BOT	6/06/80	1508	1608	16820.0	63.6637	.00	.00	.00	.00	.00	.00	**
DITCH	38858	BOT	6/06/80	1609	1709	16720.0	63.2852	.00	15.80	.00	15.80	.00	.00	**
DITW	38859	BOT	6/06/80	1710	1810	17070.0	64.6100	.00	30.95	.00	30.95	.00	.00	**
DITE	38860	BOT	6/06/80	1811	1911	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITW	38861	BOT	6/06/80	1912	2012	16700.0	63.2095	.00	47.46	.00	47.46	.00	.00	**
DITCH	38862	BOT	6/06/80	2014	2114	16910.0	64.0044	.00	15.62	.00	15.62	.00	.00	**
DITCH	38863	BOT	6/06/80	2114	2214	16550.0	62.6418	.00	15.96	.00	15.96	.00	.00	
DITW	38864	BOT	6/06/80	2215	2315	16490.0	62.4147	.00	32.04	.00	32.04	.00	.00	**
DITE	38865	BOT	6/06/80	2316	0016	15830.0	59.9166	.00	.00	.00	.00	.00	.00	**
DITE	38866	BOT	6/07/80	0016	0116	16250.0	61.5063	.00	32.52	.00	32.52	.00	.00	
DITW	38867	BOT	6/07/80	0119	0219	16410.0	62.1119	.00	.00	.00	.00	.00	.00	**
DITCH	38868	BOT	6/07/80	0221	0321	16490.0	62.4147	.00	32.04	.00	32.04	.00	.00	**
DITE	38869	BOT	6/07/80	0323	0423	15760.0	59.6516	.00	100.58	.00	100.58	.00	.00	**
DITW	38870	BOT	6/07/80	0428	0528	17050.0	64.5343	.00	61.98	.00	61.98	.00	.00	**
DITCH	38871	BOT	6/07/80	0531	0631	16920.0	64.0422	.00	15.61	.00	15.61	.00	.00	**
DITCH	38872	BOT	6/10/80	0554	0654	17050.0	64.5343	.00	15.50	.00	15.50	.00	.00	
DITE	38873	BOT	6/10/80	0655	0755	16400.0	62.0740	.00	32.22	.00	32.22	.00	.00	**
DITW	38874	BOT	6/10/80	0756	0856	16350.0	61.8848	.00	.00	.00	.00	.00	.00	**
DITE	38875	BOT	6/10/80	0857	0957	16490.0	62.4147	.00	32.04	.00	32.04	.00	.00	**
DITW	38876	BOT	6/10/80	0958	1058	15900.0	60.1815	.00	49.85	.00	49.85	.00	.00	**
DITCH	38877	BOT	6/10/80	1059	1159	16420.0	62.1497	.00	.00	.00	.00	.00	.00	**
DITCH	38878	BOT	6/10/80	1159	1259	16400.0	62.0740	.00	16.11	.00	16.11	.00	.00	
DITE	38879	BOT	6/10/80	1300	1400	16350.0	61.8848	.00	129.27	.00	129.27	.00	.00	**
DITW	38880	BOT	6/10/80	1401	1501	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITCH	38881	BOT	6/10/80	1502	1602	16970.0	64.2315	.00	46.71	.00	46.71	.00	.00	**

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DITW	38882	BOT	6/10/80	1603	1703	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITE	38883	BOT	6/10/80	1704	1804	15900.0	60.1815	.00	.00	.00	.00	.00	.00	**
DITE	38884	BOT	6/10/80	1805	1905	17290.0	65.4427	.00	30.56	.00	.00	30.56	.00	
DITW	38885	BOT	6/10/80	1906	2006	15310.0	57.9484	.00	34.51	.00	34.51	.00	.00	**
DITCH	38886	BOT	6/10/80	2007	2107	16660.0	63.0581	.00	15.86	.00	15.86	.00	.00	**
DITW	38887	BOT	6/10/80	2108	2208	13100.0	49.5835	.00	20.17	.00	20.17	.00	.00	**
DITE	38888	BOT	6/10/80	2209	2309	16990.0	64.3072	.00	46.65	.00	46.65	.00	.00	**
DITCH	38889	BOT	6/10/80	2310	0010	16890.0	63.9287	.00	.00	.00	.00	.00	.00	**
DITCH	38890	BOT	6/11/80	0010	0110	16860.0	63.8151	.00	.00	.00	.00	.00	.00	
DITE	38891	BOT	6/11/80	0111	0211	16630.0	62.9446	.00	31.77	.00	31.77	.00	.00	**
DITW	38892	BOT	6/11/80	0212	0312	17140.0	64.8749	.00	.00	.00	.00	.00	.00	**
DITW	38893	BOT	6/11/80	0312	0412	17100.0	64.7235	.00	15.45	.00	15.45	.00	.00	
DITCH	38894	BOT	6/11/80	0413	0513	16200.0	61.3170	.00	16.31	.00	.00	16.31	.00	**
DITE	38895	BOT	6/11/80	0514	0614	17450.0	66.0483	.00	90.84	.00	90.84	.00	.00	**
DITE	38896	BOT	6/13/80	0556	0656	16190.0	61.2792	.00	130.55	.00	97.91	32.64	.00	
DITCH	38897	BOT	6/13/80	0657	0757	16480.0	62.3768	.00	16.03	.00	16.03	.00	.00	**
DITW	38898	BOT	6/13/80	0758	0858	16490.0	62.4147	.00	64.09	.00	64.09	.00	.00	**
DITW	38899	BOT	6/13/80	0858	0958	16670.0	63.0960	.00	.00	.00	.00	.00	.00	
DITCH	38900	BOT	6/13/80	0959	1059	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITE	38901	BOT	6/13/80	1100	1200	16120.0	61.0142	.00	.00	.00	.00	.00	.00	**
DITE	38902	BOT	6/13/80	1200	1300	16110.0	60.9764	.00	49.20	.00	.00	49.20	.00	
DITCH	38903	BOT	6/13/80	1301	1401	15920.0	60.2572	.00	.00	.00	.00	.00	.00	**
DITW	38904	BOT	6/13/80	1402	1502	16280.0	61.6198	.00	.00	.00	.00	.00	.00	**
DITW	38905	BOT	6/13/80	1502	1602	16090.0	60.9007	.00	.00	.00	.00	.00	.00	
DITCH	38906	BOT	6/13/80	1603	1703	16390.0	62.0362	.00	.00	.00	.00	.00	.00	**
DITE	38907	BOT	6/13/80	1704	1804	16220.0	61.3927	.00	16.29	.00	16.29	.00	.00	**
DITE	38908	BOT	6/13/80	1804	1904	16160.0	61.1656	.00	.00	.00	.00	.00	.00	
DITW	38909	BOT	6/13/80	1905	2005	16480.0	62.3768	.00	32.06	.00	32.06	.00	.00	**
DITCH	38910	BOT	6/13/80	2006	2106	16420.0	62.1497	.00	.00	.00	.00	.00	.00	**
DITCH	38911	BOT	6/13/80	2106	2206	16690.0	63.1717	.00	.00	.00	.00	.00	.00	
DITW	38912	BOT	6/13/80	2207	2307	16660.0	63.0581	.00	63.43	.00	63.43	.00	.00	**
DITE	38913	BOT	6/13/80	2308	0008	14250.0	53.9363	.00	92.70	.00	92.70	.00	.00	**
DITE	38914	BOT	6/14/80	0008	0108	17490.0	66.1997	.00	45.32	.00	45.32	.00	.00	
DITCH	38915	BOT	6/14/80	0109	0209	16970.0	64.2315	.00	46.71	.00	46.71	.00	.00	**
DITW	38916	BOT	6/14/80	0210	0310	16350.0	61.8848	.00	16.16	.00	16.16	.00	.00	**
DITCH	38917	BOT	6/14/80	0311	0411	17820.0	67.4487	.00	.00	.00	.00	.00	.00	**
DITW	38918	BOT	6/14/80	0412	0512	15860.0	60.0301	.00	16.66	.00	16.66	.00	.00	**
DITE	38919	BOT	6/14/80	0513	0613	17520.0	66.3132	.00	45.24	.00	45.24	.00	.00	**
DITE	38920	BOT	6/17/80	0555	0655	16520.0	62.5282	.00	.00	.00	.00	.00	.00	
DITW	38921	BOT	6/17/80	0656	0756	16370.0	61.9605	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES AMERICAN SHAD

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITCH	38922	BOT	6/17/80	0757	0857	16280.0	61.6198	.00	.00	.00	.00	.00	.00	**
DITCH	38923	BOT	6/17/80	0857	0957	16390.0	62.0362	.00	.00	.00	.00	.00	.00	
DITE	38924	BOT	6/17/80	0957	1057	16200.0	61.3170	.00	.00	.00	.00	.00	.00	**
DITW	38925	BOT	6/17/80	1058	1158	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITW	38926	BOT	6/17/80	1158	1258	16240.0	61.4684	.00	.00	.00	.00	.00	.00	
DITCH	38927	BOT	6/17/80	1259	1359	16130.0	61.0521	.00	16.38	.00	16.38	.00	.00	**
DITE	38928	BOT	6/17/80	1400	1500	16410.0	62.1119	.00	.00	.00	.00	.00	.00	**
DITE	38929	BOT	6/17/80	1500	1600	16460.0	62.3011	.00	.00	.00	.00	.00	.00	
DITCH	38930	BOT	6/17/80	1602	1702	17090.0	64.6857	.00	.00	.00	.00	.00	.00	**
DITW	38931	BOT	6/17/80	1705	1805	17240.0	65.2534	.00	.00	.00	.00	.00	.00	**
DITW	38932	BOT	6/17/80	1805	1905	15720.0	59.5002	.00	.00	.00	.00	.00	.00	
DITCH	38933	BOT	6/17/80	1907	2007	15070.0	57.0400	.00	.00	.00	.00	.00	.00	**
DITE	38934	BOT	6/17/80	2009	2109	16120.0	61.0142	.00	16.39	.00	.00	16.39	.00	**
DITCH	38935	BOT	6/17/80	2111	2211	16330.0	61.8091	.00	.00	.00	.00	.00	.00	**
DITW	38936	BOT	6/17/80	2213	2313	16270.0	61.5820	.00	16.24	.00	.00	16.24	.00	**
DITE	38937	BOT	6/17/80	2315	0015	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITE	38938	BOT	6/18/80	0016	0116	16650.0	63.0203	.00	.00	.00	.00	.00	.00	
DITW	38939	BOT	6/18/80	0118	0218	16290.0	61.6577	.00	16.22	.00	16.22	.00	.00	**
DITCH	38940	BOT	6/18/80	0220	0320	16340.0	61.8469	.00	.00	.00	.00	.00	.00	**
DITCH	38941	BOT	6/18/80	0320	0420	16170.0	61.2035	.00	.00	.00	.00	.00	.00	
DITW	38942	BOT	6/18/80	0422	0522	16610.0	62.8689	.00	15.91	.00	.00	15.91	.00	**
DITE	38943	BOT	6/18/80	0524	0624	16360.0	61.9226	.00	.00	.00	.00	.00	.00	**
DITE	38944	BOT	6/20/80	0557	0657	16650.0	63.0203	.00	.00	.00	.00	.00	.00	
DITW	38945	BOT	6/20/80	0658	0758	16500.0	62.4525	.00	.00	.00	.00	.00	.00	**
DITCH	38946	BOT	6/20/80	0759	0859	16080.0	60.8628	.00	.00	.00	.00	.00	.00	**
DITW	38947	BOT	6/20/80	0900	1000	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITCH	38948	BOT	6/20/80	1001	1101	16430.0	62.1876	.00	16.08	.00	16.08	.00	.00	**
DITE	38949	BOT	6/20/80	1102	1202	16070.0	60.8250	.00	.00	.00	.00	.00	.00	**
DITCH	38950	BOT	6/20/80	1203	1303	16360.0	61.9226	.00	.00	.00	.00	.00	.00	**
DITW	38951	BOT	6/20/80	1304	1404	16050.0	60.7493	.00	.00	.00	.00	.00	.00	**
DITE	38952	BOT	6/20/80	1405	1505	16310.0	61.7334	.00	.00	.00	.00	.00	.00	**
DITCH	38953	BOT	6/20/80	1506	1606	16260.0	61.5441	.00	.00	.00	.00	.00	.00	**
DITW	38954	BOT	6/20/80	1607	1707	16210.0	61.3549	.00	.00	.00	.00	.00	.00	**
DITE	38955	BOT	6/20/80	1708	1808	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**
DITW	38956	BOT	6/20/80	1809	1909	16450.0	62.2633	.00	.00	.00	.00	.00	.00	**
DITCH	38957	BOT	6/20/80	1910	2010	15950.0	60.3708	.00	33.13	.00	.00	33.13	.00	**
DITE	38958	BOT	6/20/80	2011	2111	15760.0	59.6516	.00	.00	.00	.00	.00	.00	**
DITCH	38959	BOT	6/20/80	2112	2212	16870.0	63.8530	.00	.00	.00	.00	.00	.00	**
DITE	38960	BOT	6/20/80	2213	2313	16080.0	60.8628	.00	.00	.00	.00	.00	.00	**
DITW	38961	BOT	6/20/80	2314	0014	16310.0	61.7334	.00	.00	.00	.00	.00	.00	**
DITE	38962	BOT	6/21/80	0015	0115	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES AMERICAN SHAD

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DITCH	38963	BOT	6/21/80	0116	0216	15680.0	59.3488	.00	.00	.00	.00	.00	.00	**
DITW	38964	BOT	6/21/80	0218	0318	16620.0	62.9067	.00	.00	.00	.00	.00	.00	**
DITE	38965	BOT	6/21/80	0319	0419	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITW	38966	BOT	6/21/80	0420	0520	16600.0	62.8310	.00	.00	.00	.00	.00	.00	**
DITCH	38967	BOT	6/21/80	0521	0621	16320.0	61.7712	.00	.00	.00	.00	.00	.00	**
DITE	38968	BOT	6/24/80	0625	0725	16660.0	63.0581	.00	.00	.00	.00	.00	.00	**
DITCH	38969	BOT	6/24/80	0726	0826	16070.0	60.8250	.00	.00	.00	.00	.00	.00	**
DITW	38970	BOT	6/24/80	0828	0928	16320.0	61.7712	.00	.00	.00	.00	.00	.00	**
DITE	38971	BOT	6/24/80	0929	1029	16520.0	62.5282	.00	.00	.00	.00	.00	.00	**
DITW	38972	BOT	6/24/80	1030	1130	16850.0	63.7773	.00	.00	.00	.00	.00	.00	**
DITCH	38973	BOT	6/24/80	1132	1232	16620.0	62.9067	.00	.00	.00	.00	.00	.00	**
DITCH	38974	BOT	6/24/80	1232	1332	16600.0	62.8310	.00	.00	.00	.00	.00	.00	
DITW	38975	BOT	6/24/80	1333	1433	16680.0	63.1338	.00	.00	.00	.00	.00	.00	**
DITE	38976	BOT	6/24/80	1435	1535	16660.0	63.0581	.00	.00	.00	.00	.00	.00	**
DITE	38977	BOT	6/24/80	1535	1635	16440.0	62.2254	.00	.00	.00	.00	.00	.00	
DITW	38978	BOT	6/24/80	1636	1736	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITCH	38979	BOT	6/24/80	1737	1837	16470.0	62.3390	.00	16.04	.00	16.04	.00	.00	**
DITE	38980	BOT	6/24/80	1838	1938	16950.0	64.1558	.00	.00	.00	.00	.00	.00	**
DITW	38981	BOT	6/24/80	1940	2040	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**
DITCH	38982	BOT	6/24/80	2041	2141	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITCH	38983	BOT	6/24/80	2141	2241	16150.0	61.1278	.00	.00	.00	.00	.00	.00	
DITE	38984	BOT	6/24/80	2242	2342	16310.0	61.7334	.00	.00	.00	.00	.00	.00	**
DITW	38985	BOT	6/24/80	2343	0043	16330.0	61.8091	.00	.00	.00	.00	.00	.00	**
DITE	38986	BOT	6/25/80	0044	0144	16220.0	61.3927	.00	.00	.00	.00	.00	.00	**
DITW	38987	BOT	6/25/80	0145	0245	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITCH	38988	BOT	6/25/80	0246	0346	15770.0	59.6895	.00	.00	.00	.00	.00	.00	**
DITCH	38989	BOT	6/25/80	0346	0446	16410.0	62.1119	.00	.00	.00	.00	.00	.00	
DITE	38990	BOT	6/25/80	0447	0547	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITW	38991	BOT	6/25/80	0548	0648	16680.0	63.1338	.00	.00	.00	.00	.00	.00	**
DITE	38992	BOT	7/01/80	0612	0712	16260.0	61.5441	.00	.00	.00	.00	.00	.00	**
DITCH	38993	BOT	7/01/80	0715	0815	16580.0	62.7553	.00	.00	.00	.00	.00	.00	**
DITW	38994	BOT	7/01/80	0817	0917	15990.0	60.5222	.00	.00	.00	.00	.00	.00	**
DITW	38995	BOT	7/01/80	0917	1017	16210.0	61.3549	.00	.00	.00	.00	.00	.00	
DITCH	38996	BOT	7/01/80	1018	1118	16000.0	60.5600	.00	16.51	.00	.00	16.51	.00	**
DITE	38997	BOT	7/01/80	1120	1220	16210.0	61.3549	.00	.00	.00	.00	.00	.00	**
DITE	38998	BOT	7/01/80	1220	1320	16590.0	62.7932	.00	.00	.00	.00	.00	.00	
DITW	38999	BOT	7/01/80	1322	1422	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITCH	39000	BOT	7/01/80	1425	1525	16170.0	61.2035	.00	.00	.00	.00	.00	.00	**
DITCH	39001	BOT	7/01/80	1525	1625	15930.0	60.2951	.00	.00	.00	.00	.00	.00	
DITW	39002	BOT	7/01/80	1626	1726	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

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DITE	39003	BOT	7/01/80	1727	1827	15960.0	60.4086	.00	.00	.00	.00	.00	.00	**
DITE	39004	BOT	7/01/80	1827	1927	16400.0	62.0740	.00	.00	.00	.00	.00	.00	
DITCH	39005	BOT	7/01/80	1929	2029	16420.0	62.1497	.00	.00	.00	.00	.00	.00	**
DITW	39006	BOT	7/01/80	2030	2130	16530.0	62.5661	.00	.00	.00	.00	.00	.00	**
DITCH	39007	BOT	7/01/80	2131	2231	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITW	39008	BOT	7/01/80	2233	2333	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITE	39009	BOT	7/01/80	2335	0035	16540.0	62.6039	.00	.00	.00	.00	.00	.00	**
DITW	39010	BOT	7/02/80	0037	0137	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITE	39011	BOT	7/02/80	0139	0239	17150.0	64.9128	.00	30.81	.00	.00	30.81	.00	**
DITCH	39012	BOT	7/02/80	0241	0341	16690.0	63.1717	.00	.00	.00	.00	.00	.00	**
DITW	39013	BOT	7/02/80	0343	0443	16450.0	62.2633	.00	.00	.00	.00	.00	.00	**
DITCH	39014	BOT	7/02/80	0445	0545	15950.0	60.3708	.00	.00	.00	.00	.00	.00	**
DITE	39015	BOT	7/02/80	0547	0647	16530.0	62.5661	.00	.00	.00	.00	.00	.00	**
DITE	39016	BOT	7/08/80	0546	0646	16200.0	61.3170	.00	.00	.00	.00	.00	.00	
DITCH	39017	BOT	7/08/80	0648	0748	15990.0	60.5222	.00	.00	.00	.00	.00	.00	**
DITW	39018	BOT	7/08/80	0750	0850	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITE	39019	BOT	7/08/80	0851	0951	15990.0	60.5222	.00	.00	.00	.00	.00	.00	**
DITW	39020	BOT	7/08/80	0953	1053	16010.0	60.5979	.00	.00	.00	.00	.00	.00	**
DITCH	39021	BOT	7/08/80	1055	1155	16360.0	61.9226	.00	.00	.00	.00	.00	.00	**
DITW	39022	BOT	7/08/80	1157	1257	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITCH	39023	BOT	7/08/80	1259	1359	16850.0	63.7773	.00	.00	.00	.00	.00	.00	**
DITE	39024	BOT	7/08/80	1401	1501	16690.0	63.1717	.00	.00	.00	.00	.00	.00	**
DITE	39025	BOT	7/08/80	1501	1601	16500.0	62.4525	.00	.00	.00	.00	.00	.00	
DITW	39026	BOT	7/08/80	1603	1703	17540.0	66.3889	.00	.00	.00	.00	.00	.00	**
DITCH	39027	BOT	7/08/80	1704	1804	17070.0	64.6100	.00	.00	.00	.00	.00	.00	**
DITCH	39028	BOT	7/08/80	1804	1904	16690.0	63.1717	.00	.00	.00	.00	.00	.00	
DITE	39029	BOT	7/08/80	1906	2006	17170.0	64.9885	.00	.00	.00	.00	.00	.00	**
DITW	39030	BOT	7/08/80	2008	2108	17650.0	66.8053	.00	59.88	.00	.00	59.88	.00	**
DITW	39031	BOT	7/08/80	2108	2208	17250.0	65.2913	.00	.00	.00	.00	.00	.00	
DITCH	39032	BOT	7/08/80	2210	2310	17270.0	65.3670	.00	.00	.00	.00	.00	.00	**
DITE	39033	BOT	7/08/80	2312	0012	15930.0	60.2951	.00	16.59	.00	.00	16.59	.00	**
DITE	39034	BOT	7/09/80	0012	0112	16160.0	61.1656	.00	.00	.00	.00	.00	.00	
DITW	39035	BOT	7/09/80	0113	0213	16620.0	62.9067	.00	.00	.00	.00	.00	.00	**
DITCH	39036	BOT	7/09/80	0214	0314	16270.0	61.5820	.00	.00	.00	.00	.00	.00	**
DITW	39037	BOT	7/09/80	0315	0415	16080.0	60.8628	.00	.00	.00	.00	.00	.00	**
DITCH	39038	BOT	7/09/80	0416	0516	15960.0	60.4086	.00	.00	.00	.00	.00	.00	**
DITE	39039	BOT	7/09/80	0517	0617	17020.0	64.4207	.00	.00	.00	.00	.00	.00	**
DITCH	39040	BOT	7/15/80	0606	0706	16980.0	64.2693	.00	.00	.00	.00	.00	.00	**
DITW	39041	BOT	7/15/80	0714	0814	16710.0	63.2474	.00	.00	.00	.00	.00	.00	**
DITE	39042	BOT	7/15/80	0816	0916	16410.0	62.1119	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

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DITE	39043	BOT	7/15/80	0916	1016	16200.0	61.3170	.00	.00	.00	.00	.00	.00	
DITW	39044	BOT	7/15/80	1017	1117	17110.0	64.7614	.00	.00	.00	.00	.00	.00	**
DITCH	39045	BOT	7/15/80	1119	1219	17080.0	64.6478	.00	.00	.00	.00	.00	.00	**
DITCH	39046	BOT	7/15/80	1219	1319	17190.0	65.0642	.00	.00	.00	.00	.00	.00	
DITW	39047	BOT	7/15/80	1321	1421	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITE	39048	BOT	7/15/80	1423	1523	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITE	39049	BOT	7/15/80	1523	1623	16110.0	60.9764	.00	.00	.00	.00	.00	.00	
DITW	39050	BOT	7/15/80	1625	1725	16030.0	60.6736	.00	.00	.00	.00	.00	.00	**
DITCH	39051	BOT	7/15/80	1727	1827	16770.0	63.4745	.00	.00	.00	.00	.00	.00	**
DITW	39052	BOT	7/15/80	1829	1929	15830.0	59.9166	.00	.00	.00	.00	.00	.00	**
DITCH	39053	BOT	7/15/80	1930	2030	15660.0	59.2731	.00	.00	.00	.00	.00	.00	**
DITE	39054	BOT	7/15/80	2031	2131	16890.0	63.9287	.00	31.28	.00	.00	31.28	.00	**
DITCH	39055	BOT	7/15/80	2133	2203	7950.0	30.0908	.00	.00	.00	.00	.00	.00	**
DITW	39056	BOT	7/15/80	2235	2335	16700.0	63.2095	.00	.00	.00	.00	.00	.00	**
DITE	39057	BOT	7/15/80	2336	0036	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**
DITCH	39058	BOT	7/16/80	0038	0138	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITW	39059	BOT	7/16/80	0139	0239	17210.0	65.1399	.00	15.35	.00	.00	15.35	.00	**
DITE	39060	BOT	7/16/80	0240	0340	16020.0	60.6357	.00	.00	.00	.00	.00	.00	**
DITW	39061	BOT	7/16/80	0341	0441	16870.0	63.8530	.00	.00	.00	.00	.00	.00	**
DITCH	39062	BOT	7/16/80	0442	0542	16240.0	61.4684	.00	.00	.00	.00	.00	.00	**
DITE	39063	BOT	7/16/80	0543	0643	16100.0	60.9385	.00	.00	.00	.00	.00	.00	**
DITCH	39064	BOT	7/22/80	0600	0700	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITE	39065	BOT	7/22/80	0701	0801	16020.0	60.6357	.00	.00	.00	.00	.00	.00	**
DITW	39066	BOT	7/22/80	0803	0903	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITE	39067	BOT	7/22/80	0904	1004	16230.0	61.4306	.00	.00	.00	.00	.00	.00	**
DITCH	39068	BOT	7/22/80	1005	1105	16310.0	61.7334	.00	.00	.00	.00	.00	.00	**
DITW	39069	BOT	7/22/80	1106	1206	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**
DITCH	39070	BOT	7/22/80	1207	1307	16300.0	61.6955	.00	.00	.00	.00	.00	.00	**
DITW	39071	BOT	7/22/80	1308	1408	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITE	39072	BOT	7/22/80	1409	1509	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITCH	39073	BOT	7/22/80	1511	1611	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**
DITE	39074	BOT	7/22/80	1613	1713	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITW	39075	BOT	7/22/80	1715	1815	16230.0	61.4306	.00	.00	.00	.00	.00	.00	**
DITW	39076	BOT	7/22/80	1815	1915	16210.0	61.3549	.00	.00	.00	.00	.00	.00	
DITCH	39077	BOT	7/22/80	1917	2017	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITE	39078	BOT	7/22/80	2019	2119	16580.0	62.7553	.00	.00	.00	.00	.00	.00	**
DITW	39079	BOT	7/22/80	2121	2221	16120.0	61.0142	.00	.00	.00	.00	.00	.00	**
DITCH	39080	BOT	7/22/80	2223	2323	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITE	39081	BOT	7/22/80	2325	0025	15910.0	60.2194	.00	.00	.00	.00	.00	.00	**
DITE	39082	BOT	7/23/80	0025	0125	17180.0	65.0263	.00	.00	.00	.00	.00	.00	
DITCH	39083	BOT	7/23/80	0148	0248	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES AMERICAN SHAD

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITW	39084	BOT	7/23/80	0250	0350	16580.0	62.7553	.00	.00	.00	.00	.00	.00	**
DITW	39085	BOT	7/23/80	0350	0450	16220.0	61.3927	.00	.00	.00	.00	.00	.00	
DITE	39086	BOT	7/23/80	0451	0551	15390.0	58.2512	.00	.00	.00	.00	.00	.00	**
DITCH	39087	BOT	7/23/80	0553	0653	16130.0	61.0521	.00	.00	.00	.00	.00	.00	**
DITCH	39088	BOT	7/29/80	0559	0659	16000.0	60.5600	.00	.00	.00	.00	.00	.00	
DITW	39089	BOT	7/29/80	0700	0800	16250.0	61.5063	.00	.00	.00	.00	.00	.00	**
DITE	39090	BOT	7/29/80	0802	0902	16370.0	61.9605	.00	.00	.00	.00	.00	.00	**
DITE	39091	BOT	7/29/80	0902	1002	16510.0	62.4904	.00	.00	.00	.00	.00	.00	
DITW	39092	BOT	7/29/80	1003	1103	17660.0	66.8431	.00	.00	.00	.00	.00	.00	**
DITCH	39093	BOT	7/29/80	1104	1204	16340.0	61.8469	.00	.00	.00	.00	.00	.00	**
DITW	39094	BOT	7/29/80	1205	1305	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITCH	39095	BOT	7/29/80	1307	1407	16750.0	63.3988	.00	.00	.00	.00	.00	.00	**
DITE	39096	BOT	7/29/80	1409	1509	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**
DITCH	39097	BOT	7/29/80	1510	1610	15800.0	59.8030	.00	.00	.00	.00	.00	.00	**
DITE	39098	BOT	7/29/80	1612	1712	15780.0	59.7273	.00	.00	.00	.00	.00	.00	**
DITW	39099	BOT	7/29/80	1713	1813	16590.0	62.7932	.00	.00	.00	.00	.00	.00	**
DITW	39100	BOT	7/29/80	1813	1913	16490.0	62.4147	.00	.00	.00	.00	.00	.00	
DITE	39101	BOT	7/29/80	1916	2016	15710.0	59.4624	.00	.00	.00	.00	.00	.00	**
DITCH	39102	BOT	7/29/80	2017	2117	15760.0	59.6516	.00	.00	.00	.00	.00	.00	**
DITCH	39103	BOT	7/29/80	2117	2217	16000.0	60.5600	.00	.00	.00	.00	.00	.00	
DITE	39104	BOT	7/29/80	2219	2319	16980.0	64.2693	.00	.00	.00	.00	.00	.00	**
DITW	39105	BOT	7/29/80	2321	0021	17000.0	64.3450	.00	.00	.00	.00	.00	.00	**
DITW	39106	BOT	7/30/80	0022	0122	16610.0	62.8689	.00	.00	.00	.00	.00	.00	
DITE	39107	BOT	7/30/80	0124	0224	14110.0	53.4064	.00	.00	.00	.00	.00	.00	**
DITCH	39108	BOT	7/30/80	0225	0325	15230.0	57.6456	.00	.00	.00	.00	.00	.00	**
DITCH	39109	BOT	7/30/80	0325	0425	16050.0	60.7493	.00	.00	.00	.00	.00	.00	
DITE	39110	BOT	7/30/80	0427	0527	15710.0	59.4624	.00	.00	.00	.00	.00	.00	**
DITW	39111	BOT	7/30/80	0529	0629	17390.0	65.8212	.00	.00	.00	.00	.00	.00	**
DITE	39112	BOT	8/05/80	0613	0713	16260.0	61.5441	.00	.00	.00	.00	.00	.00	**
DITCH	39113	BOT	8/05/80	0714	0814	15560.0	58.8946	.00	.00	.00	.00	.00	.00	**
DITW	39114	BOT	8/05/80	0816	0916	16830.0	63.7016	.00	.00	.00	.00	.00	.00	**
DITCH	39115	BOT	8/05/80	0918	1018	15940.0	60.3329	.00	16.57	.00	.00	16.57	.00	**
DITW	39116	BOT	8/05/80	1019	1119	16160.0	61.1656	.00	.00	.00	.00	.00	.00	**
DITE	39117	BOT	8/05/80	1120	1220	15690.0	59.3867	.00	.00	.00	.00	.00	.00	**
DITE	39118	BOT	8/05/80	1220	1320	16270.0	61.5820	.00	.00	.00	.00	.00	.00	
DITW	39119	BOT	8/05/80	1322	1422	16380.0	61.9983	.00	.00	.00	.00	.00	.00	**
DITCH	39120	BOT	8/05/80	1424	1524	16570.0	62.7175	.00	.00	.00	.00	.00	.00	**
DITCH	39121	BOT	8/05/80	1524	1624	18260.0	69.1141	.00	.00	.00	.00	.00	.00	
DITE	39122	BOT	8/05/80	1626	1726	17140.0	64.8749	.00	.00	.00	.00	.00	.00	**
DITW	39123	BOT	8/05/80	1728	1828	18890.0	71.4987	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES AMERICAN SHAD

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DITW	39124	BOT	8/05/80	1828	1928	16240.0	61.4684	.00	.00	.00	.00	.00	.00	
DITE	39125	BOT	8/05/80	1930	2030	16060.0	60.7871	.00	.00	.00	.00	.00	.00	**
DITCH	39126	BOT	8/05/80	2032	2132	18150.0	68.6978	.00	.00	.00	.00	.00	.00	**
DITCH	39127	BOT	8/05/80	2132	2232	17450.0	66.0483	.00	.00	.00	.00	.00	.00	
DITE	39128	BOT	8/05/80	2234	2334	15180.0	57.4563	.00	.00	.00	.00	.00	.00	**
DITW	39129	BOT	8/05/80	2336	0036	16530.0	62.5661	.00	.00	.00	.00	.00	.00	**
DITE	39130	BOT	8/06/80	0037	0137	16220.0	61.3927	.00	.00	.00	.00	.00	.00	**
DITCH	39131	BOT	8/06/80	0139	0239	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITW	39132	BOT	8/06/80	0240	0340	16150.0	61.1278	.00	.00	.00	.00	.00	.00	**
DITE	39133	BOT	8/06/80	0341	0441	16330.0	61.8091	.00	.00	.00	.00	.00	.00	**
DITW	39134	BOT	8/06/80	0442	0542	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITCH	39135	BOT	8/06/80	0544	0644	16450.0	62.2633	.00	.00	.00	.00	.00	.00	**
DITW	39136	BOT	8/12/80	0605	0705	16130.0	61.0521	.00	.00	.00	.00	.00	.00	**
DITE	39137	BOT	8/12/80	0706	0806	15770.0	59.6895	.00	.00	.00	.00	.00	.00	**
DITCH	39138	BOT	8/12/80	0807	0907	16180.0	61.2413	.00	.00	.00	.00	.00	.00	**
DITCH	39139	BOT	8/12/80	0907	1007	16260.0	61.5441	.00	.00	.00	.00	.00	.00	
DITE	39140	BOT	8/12/80	1009	1109	16800.0	63.5880	.00	.00	.00	.00	.00	.00	**
DITW	39141	BOT	8/12/80	1111	1211	16820.0	63.6637	.00	.00	.00	.00	.00	.00	**
DITE	39142	BOT	8/12/80	1212	1312	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITW	39143	BOT	8/12/80	1314	1414	16760.0	63.4366	.00	.00	.00	.00	.00	.00	**
DITCH	39144	BOT	8/12/80	1416	1516	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITW	39145	BOT	8/12/80	1517	1617	16140.0	61.0899	.00	.00	.00	.00	.00	.00	**
DITCH	39146	BOT	8/12/80	1619	1719	16350.0	61.8848	.00	.00	.00	.00	.00	.00	**
DITE	39147	BOT	8/12/80	1721	1821	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITE	39148	BOT	8/12/80	1821	1921	15830.0	59.9166	.00	.00	.00	.00	.00	.00	
DITCH	39149	BOT	8/12/80	1922	2022	16050.0	60.7493	.00	.00	.00	.00	.00	.00	**
DITW	39150	BOT	8/12/80	2024	2124	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITE	39151	BOT	8/12/80	2126	2226	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITCH	39152	BOT	8/12/80	2228	2328	15610.0	59.0839	.00	.00	.00	.00	.00	.00	**
DITW	39153	BOT	8/12/80	2330	0030	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITE	39154	BOT	8/13/80	0031	0131	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITW	39155	BOT	8/13/80	0132	0232	17140.0	64.8749	.00	.00	.00	.00	.00	.00	**
DITCH	39156	BOT	8/13/80	0233	0333	17610.0	66.6539	.00	.00	.00	.00	.00	.00	**
DITCH	39157	BOT	8/13/80	0333	0433	16560.0	62.6796	.00	.00	.00	.00	.00	.00	
DITW	39158	BOT	8/13/80	0435	0535	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITE	39159	BOT	8/13/80	0536	0636	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITCH	39160	BOT	8/19/80	0601	0701	12300.0	46.5555	.00	.00	.00	.00	.00	.00	**
DITW	39161	BOT	8/19/80	0705	0805	14780.0	55.9423	.00	.00	.00	.00	.00	.00	**
DITE	39162	BOT	8/19/80	0810	0910	16390.0	62.0362	.00	.00	.00	.00	.00	.00	**
DITE	39163	BOT	8/19/80	0910	1010	16420.0	62.1497	.00	.00	.00	.00	.00	.00	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
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DITW	39164	BOT	8/19/80	1012	1112	16190.0	61.0899	.00	.00	.00	.00	.00	.00	**
DITCH	39165	BOT	8/19/80	1113	1213	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	39166	BOT	8/19/80	1213	1313	16690.0	63.1717	.00	.00	.00	.00	.00	.00	
DITE	39167	BOT	8/19/80	1314	1414	15780.0	59.7273	.00	.00	.00	.00	.00	.00	**
DITW	39168	BOT	8/19/80	1416	1516	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITCH	39169	BOT	8/19/80	1519	1619	16880.0	63.8908	.00	.00	.00	.00	.00	.00	**
DITW	39170	BOT	8/19/80	1620	1720	17110.0	64.7614	.00	.00	.00	.00	.00	.00	**
DITE	39171	BOT	8/19/80	1721	1821	16080.0	60.8628	.00	.00	.00	.00	.00	.00	**
DITW	39172	BOT	8/19/80	1822	1922	16940.0	64.1179	.00	.00	.00	.00	.00	.00	**
DITCH	39173	BOT	8/19/80	1923	2023	16340.0	61.8469	.00	.00	.00	.00	.00	.00	**
DITE	39174	BOT	8/19/80	2024	2124	18490.0	69.9847	.00	.00	.00	.00	.00	.00	**
DITCH	39175	BOT	8/19/80	2125	2225	16410.0	62.1119	.00	.00	.00	.00	.00	.00	**
DITW	39176	BOT	8/19/80	2226	2326	16090.0	60.9007	.00	.00	.00	.00	.00	.00	**
DITE	39177	BOT	8/19/80	2327	0027	15340.0	58.0619	.00	.00	.00	.00	.00	.00	**
DITW	39178	BOT	8/20/80	0029	0129	16280.0	61.6198	.00	.00	.00	.00	.00	.00	**
DITCH	39179	BOT	8/20/80	0130	0230	16890.0	63.9287	.00	.00	.00	.00	.00	.00	**
DITE	39180	BOT	8/20/80	0232	0332	16450.0	62.2633	.00	.00	.00	.00	.00	.00	**
DITW	39181	BOT	8/20/80	0333	0433	17130.0	64.8371	.00	.00	.00	.00	.00	.00	**
DITE	39182	BOT	8/20/80	0434	0534	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	39183	BOT	8/20/80	0536	0636	16750.0	63.3988	.00	.00	.00	.00	.00	.00	**
DITW	39184	BOT	8/26/80	0640	0740	15500.0	58.6675	.00	.00	.00	.00	.00	.00	**
DITCH	39185	BOT	8/26/80	0741	0841	16170.0	61.2035	.00	.00	.00	.00	.00	.00	**
DITE	39186	BOT	8/26/80	0842	0942	16110.0	60.9764	.00	.00	.00	.00	.00	.00	**
DITW	39187	BOT	8/26/80	0944	1044	15520.0	58.7432	.00	.00	.00	.00	.00	.00	**
DITE	39188	BOT	8/26/80	1045	1145	16900.0	63.9665	.00	.00	.00	.00	.00	.00	**
DITCH	39189	BOT	8/26/80	1146	1246	15570.0	58.9325	.00	.00	.00	.00	.00	.00	**
DITE	39190	BOT	8/26/80	1247	1347	16460.0	62.3011	.00	.00	.00	.00	.00	.00	**
DITCH	39191	BOT	8/26/80	1348	1448	15810.0	59.8409	.00	.00	.00	.00	.00	.00	**
DITW	39192	BOT	8/26/80	1449	1549	16500.0	62.4525	.00	.00	.00	.00	.00	.00	**
DITE	39193	BOT	8/26/80	1550	1650	15530.0	58.7811	.00	.00	.00	.00	.00	.00	**
DITW	39194	BOT	8/26/80	1651	1751	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITCH	39195	BOT	8/26/80	1751	1851	16850.0	63.7773	.00	.00	.00	.00	.00	.00	**
DITCH	39196	BOT	8/26/80	1851	1951	17000.0	64.3450	.00	.00	.00	.00	.00	.00	
DITE	39197	BOT	8/26/80	1952	2052	15890.0	60.1437	.00	.00	.00	.00	.00	.00	**
DITW	39198	BOT	8/26/80	2053	2153	16960.0	64.1936	.00	.00	.00	.00	.00	.00	**
DITW	39199	BOT	8/26/80	2153	2253	16630.0	62.9446	.00	.00	.00	.00	.00	.00	
DITCH	39200	BOT	8/26/80	2301	0001	18260.0	69.1141	.00	.00	.00	.00	.00	.00	**
DITE	39201	BOT	8/27/80	0002	0102	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITCH	39202	BOT	8/27/80	0104	0204	17790.0	67.3352	.00	.00	.00	.00	.00	.00	**
DITE	39203	BOT	8/27/80	0210	0310	14030.0	53.1036	.00	.00	.00	.00	.00	.00	**
DITW	39204	BOT	8/27/80	0312	0412	18990.0	71.8772	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES AMERICAN SHAD

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITE	39205	BOT	8/27/80	0415	0515	12910.0	48.8644	.00	.00	.00	.00	.00	.00	**
DITCH	39206	BOT	8/27/80	0517	0617	19710.0	74.6024	.00	.00	.00	.00	.00	.00	**
DITW	39207	BOT	8/27/80	0618	0718	12840.0	48.5994	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES BAY ANCHOVY

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITW	38680	BOT	4/22/80	0559	0659	17270.0	65.3670	.00	.00	.00	.00	.00	.00	**
DITE	38681	BOT	4/22/80	0702	0802	16900.0	63.9665	.00	.00	.00	.00	.00	.00	**
DITCH	38682	BOT	4/22/80	0805	0905	17110.0	64.7614	.00	.00	.00	.00	.00	.00	**
DITE	38683	BOT	4/22/80	0908	1008	16970.0	64.2315	.00	.00	.00	.00	.00	.00	**
DITCH	38684	BOT	4/22/80	1009	1109	17010.0	64.3829	.00	.00	.00	.00	.00	.00	**
DITW	38685	BOT	4/22/80	1110	1210	17120.0	64.7992	.00	.00	.00	.00	.00	.00	**
DITW	38686	BOT	4/22/80	1210	1310	17250.0	65.2913	.00	.00	.00	.00	.00	.00	
DITCH	38687	BOT	4/22/80	1312	1412	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITE	38688	BOT	4/22/80	1415	1515	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	38689	BOT	4/22/80	1517	1617	17380.0	65.7833	.00	.00	.00	.00	.00	.00	**
DITW	38690	BOT	4/22/80	1619	1719	17750.0	67.1838	.00	.00	.00	.00	.00	.00	**
DITE	38691	BOT	4/22/80	1721	1821	16900.0	63.9665	.00	.00	.00	.00	.00	.00	**
DITCH	38692	BOT	4/22/80	1823	1923	16790.0	63.5502	.00	.00	.00	.00	.00	.00	**
DITW	38693	BOT	4/22/80	1925	2025	17070.0	64.6100	.00	.00	.00	.00	.00	.00	**
DITE	38694	BOT	4/22/80	2028	2128	17310.0	65.5184	.00	.00	.00	.00	.00	.00	**
DITE	38695	BOT	4/22/80	2128	2228	16760.0	63.4366	.00	.00	.00	.00	.00	.00	
DITW	38696	BOT	4/22/80	2230	2330	17250.0	65.2913	.00	.00	.00	.00	.00	.00	**
DITCH	38697	BOT	4/22/80	2331	0031	16660.0	63.0581	.00	.00	.00	.00	.00	.00	**
DITW	38698	BOT	4/23/80	0033	0133	16420.0	62.1497	.00	.00	.00	.00	.00	.00	**
DITE	38699	BOT	4/23/80	0135	0235	16350.0	61.8848	.00	.00	.00	.00	.00	.00	**
DITCH	38700	BOT	4/23/80	0237	0337	16820.0	63.6637	.00	.00	.00	.00	.00	.00	**
DITCH	38701	BOT	4/23/80	0337	0437	16980.0	64.2693	.00	.00	.00	.00	.00	.00	
DITE	38702	BOT	4/23/80	0439	0539	17130.0	64.8371	.00	.00	.00	.00	.00	.00	**
DITW	38703	BOT	4/23/80	0540	0640	18240.0	69.0384	.00	.00	.00	.00	.00	.00	**
DITCH	38704	BOT	4/29/80	0600	0700	16590.0	62.7932	.00	.00	.00	.00	.00	.00	**
DITE	38705	BOT	4/29/80	0702	0802	16870.0	63.8530	.00	.00	.00	.00	.00	.00	**
DITW	38706	BOT	4/29/80	0804	0904	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITCH	38707	BOT	4/29/80	0906	1006	16970.0	64.2315	.00	.00	.00	.00	.00	.00	**
DITE	38708	BOT	4/29/80	1008	1108	16640.0	62.9824	.00	.00	.00	.00	.00	.00	**
DITW	38709	BOT	4/29/80	1110	1210	17490.0	66.1997	.00	.00	.00	.00	.00	.00	**
DITCH	38710	BOT	4/29/80	1212	1312	16990.0	64.3072	.00	.00	.00	.00	.00	.00	**
DITW	38711	BOT	4/29/80	1315	1415	17220.0	65.1777	.00	.00	.00	.00	.00	.00	**
DITE	38712	BOT	4/29/80	1417	1517	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITCH	38713	BOT	4/29/80	1518	1618	16710.0	63.2474	.00	.00	.00	.00	.00	.00	**
DITW	38714	BOT	4/29/80	1620	1720	16300.0	61.6955	.00	.00	.00	.00	.00	.00	**
DITE	38715	BOT	4/29/80	1723	1823	15650.0	59.2353	.00	.00	.00	.00	.00	.00	**
DITE	38716	BOT	4/29/80	1823	1923	17060.0	64.5721	.00	.00	.00	.00	.00	.00	
DITW	38717	BOT	4/29/80	1924	2024	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITCH	38718	BOT	4/29/80	2026	2126	15730.0	59.5381	.00	.00	.00	.00	.00	.00	**
DITW	38719	BOT	4/29/80	2127	2227	16870.0	63.8530	.00	.00	.00	.00	.00	.00	**
DITE	38720	BOT	4/29/80	2229	2329	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES BAY ANCHOVY

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITCH	38721	BOT	4/29/80	2334	0034	16820.0	63.6637	.00	.00	.00	.00	.00	.00	**
DITCH	38722	BOT	4/30/80	0034	0134	16810.0	63.6259	.00	.00	.00	.00	.00	.00	
DITE	38723	BOT	4/30/80	0137	0237	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITW	38724	BOT	4/30/80	0240	0340	17390.0	65.8212	.00	.00	.00	.00	.00	.00	**
DITCH	38725	BOT	4/30/80	0342	0442	16790.0	63.5502	.00	.00	.00	.00	.00	.00	**
DITE	38726	BOT	4/30/80	0445	0545	17150.0	64.9128	.00	.00	.00	.00	.00	.00	**
DITW	38727	BOT	4/30/80	0547	0647	17030.0	64.4586	.00	.00	.00	.00	.00	.00	**
DITCH	38728	BOT	5/06/80	0606	0706	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITW	38729	BOT	5/06/80	0709	0809	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITE	38730	BOT	5/06/80	0811	0911	16680.0	63.1338	.00	.00	.00	.00	.00	.00	**
DITE	38731	BOT	5/06/80	0911	1011	16770.0	63.4745	.00	.00	.00	.00	.00	.00	
DITCH	38732	BOT	5/06/80	1014	1114	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITW	38733	BOT	5/06/80	1116	1216	17240.0	65.2534	.00	.00	.00	.00	.00	.00	**
DITE	38734	BOT	5/06/80	1219	1319	16450.0	62.2633	.00	.00	.00	.00	.00	.00	**
DITW	38735	BOT	5/06/80	1321	1421	16940.0	64.1179	.00	.00	.00	.00	.00	.00	**
DITCH	38736	BOT	5/06/80	1423	1523	16750.0	63.3988	.00	.00	.00	.00	.00	.00	**
DITCH	38737	BOT	5/06/80	1523	1623	16840.0	63.7394	.00	.00	.00	.00	.00	.00	
DITE	38738	BOT	5/06/80	1626	1726	16680.0	63.1338	.00	.00	.00	.00	.00	.00	**
DITW	38739	BOT	5/06/80	1728	1828	16990.0	64.3072	.00	.00	.00	.00	.00	.00	**
DITW	38740	BOT	5/06/80	1828	1928	16940.0	64.1179	.00	.00	.00	.00	.00	.00	
DITE	38741	BOT	5/06/80	1930	2030	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITCH	38742	BOT	5/06/80	2032	2132	17140.0	64.8749	.00	.00	.00	.00	.00	.00	**
DITE	38743	BOT	5/06/80	2134	2234	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITCH	38744	BOT	5/06/80	2236	2336	17240.0	65.2534	.00	.00	.00	.00	.00	.00	**
DITW	38745	BOT	5/06/80	2337	0037	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITW	38746	BOT	5/07/80	0037	0137	16630.0	62.9446	.00	.00	.00	.00	.00	.00	
DITE	38747	BOT	5/07/80	0139	0239	16630.0	62.9446	.00	.00	.00	.00	.00	.00	**
DITCH	38748	BOT	5/07/80	0241	0341	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITW	38749	BOT	5/07/80	0344	0444	16770.0	63.4745	.00	.00	.00	.00	.00	.00	**
DITE	38750	BOT	5/07/80	0446	0546	16730.0	63.3231	.00	.00	.00	.00	.00	.00	**
DITCH	38751	BOT	5/07/80	0547	0647	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**
DITE	38752	BOT	5/13/80	0605	0705	16700.0	63.2095	.00	.00	.00	.00	.00	.00	**
DITW	38753	BOT	5/13/80	0707	0807	17030.0	64.4586	.00	.00	.00	.00	.00	.00	**
DITCH	38754	BOT	5/13/80	0809	0909	15930.0	60.2951	.00	.00	.00	.00	.00	.00	**
DITE	38755	BOT	5/13/80	0910	1010	16870.0	63.8530	.00	.00	.00	.00	.00	.00	**
DITW	38756	BOT	5/13/80	1012	1112	17030.0	64.4586	.00	.00	.00	.00	.00	.00	**
DITCH	38757	BOT	5/13/80	1113	1213	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITCH	38758	BOT	5/13/80	1213	1313	16520.0	62.5282	.00	.00	.00	.00	.00	.00	
DITE	38759	BOT	5/13/80	1314	1414	16590.0	62.7932	.00	.00	.00	.00	.00	.00	**
DITW	38760	BOT	5/13/80	1415	1515	16590.0	62.7932	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES BAY ANCHOVY

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIFE STAGE	
DITE	38761	BOT	5/13/80	1516	1616	15690.0	59.3867	.00	.00	.00	.00	.00	.00	**
DITW	38762	BOT	5/13/80	1616	1716	16120.0	61.0142	.00	.00	.00	.00	.00	.00	**
DITCH	38763	BOT	5/13/80	1717	1817	16000.0	60.5600	.00	.00	.00	.00	.00	.00	**
DITW	38764	BOT	5/13/80	1819	1919	16980.0	64.2693	.00	.00	.00	.00	.00	.00	**
DITCH	38765	BOT	5/13/80	1921	2021	16890.0	63.9287	.00	.00	.00	.00	.00	.00	**
DITE	38766	BOT	5/13/80	2023	2123	16660.0	63.0581	.00	.00	.00	.00	.00	.00	**
DITCH	38767	BOT	5/13/80	2125	2225	17080.0	64.6478	.00	.00	.00	.00	.00	.00	**
DITE	38768	BOT	5/13/80	2226	2326	16760.0	63.4366	.00	.00	.00	.00	.00	.00	**
DITW	38769	BOT	5/13/80	2328	0028	17260.0	65.3291	.00	.00	.00	.00	.00	.00	**
DITCH	38770	BOT	5/14/80	0029	0129	16960.0	64.1936	.00	.00	.00	.00	.00	.00	**
DITE	38771	BOT	5/14/80	0131	0231	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**
DITW	38772	BOT	5/14/80	0232	0332	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	38773	BOT	5/14/80	0333	0433	16780.0	63.5123	.00	.00	.00	.00	.00	.00	**
DITE	38774	BOT	5/14/80	0434	0534	15860.0	60.0301	.00	.00	.00	.00	.00	.00	**
DITW	38775	BOT	5/14/80	0535	0635	16540.0	62.6039	.00	.00	.00	.00	.00	.00	**
DITE	38776	BOT	5/20/80	0607	0707	17010.0	64.3829	.00	.00	.00	.00	.00	.00	**
DITW	38777	BOT	5/20/80	0709	0809	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITCH	38778	BOT	5/20/80	0810	0910	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITE	38779	BOT	5/20/80	0911	1011	16410.0	62.1119	.00	.00	.00	.00	.00	.00	**
DITCH	38780	BOT	5/20/80	1012	1112	16700.0	63.2095	.00	.00	.00	.00	.00	.00	**
DITW	38781	BOT	5/20/80	1113	1213	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITE	38782	BOT	5/20/80	1214	1314	16260.0	61.5441	.00	.00	.00	.00	.00	.00	**
DITW	38783	BOT	5/20/80	1315	1415	17040.0	64.4964	.00	.00	.00	.00	.00	.00	**
DITCH	38784	BOT	5/20/80	1416	1516	16370.0	61.9605	.00	.00	.00	.00	.00	.00	**
DITCH	38785	BOT	5/20/80	1516	1616	16330.0	61.8091	.00	.00	.00	.00	.00	.00	
DITW	38786	BOT	5/20/80	1620	1720	16330.0	61.8091	.00	.00	.00	.00	.00	.00	**
DITE	38787	BOT	5/20/80	1722	1822	16600.0	62.8310	.00	.00	.00	.00	.00	.00	**
DITCH	38788	BOT	5/20/80	1824	1924	16960.0	64.1936	.00	.00	.00	.00	.00	.00	**
DITW	38789	BOT	5/20/80	1926	2026	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITE	38790	BOT	5/20/80	2027	2127	15760.0	59.6516	.00	.00	.00	.00	.00	.00	**
DITE	38791	BOT	5/20/80	2127	2227	16970.0	64.2315	.00	.00	.00	.00	.00	.00	
DITW	38792	BOT	5/20/80	2228	2328	16750.0	63.3988	.00	.00	.00	.00	.00	.00	**
DITCH	38793	BOT	5/20/80	2329	0029	16800.0	63.5880	.00	.00	.00	.00	.00	.00	**
DITCH	38794	BOT	5/21/80	0029	0129	17110.0	64.7614	.00	.00	.00	.00	.00	.00	
DITE	38795	BOT	5/21/80	0131	0231	17070.0	64.6100	.00	.00	.00	.00	.00	.00	**
DITW	38796	BOT	5/21/80	0233	0333	17370.0	65.7455	.00	.00	.00	.00	.00	.00	**
DITE	38797	BOT	5/21/80	0335	0435	17060.0	64.5721	.00	.00	.00	.00	.00	.00	**
DITW	38798	BOT	5/21/80	0437	0537	17980.0	68.0543	.00	.00	.00	.00	.00	.00	**
DITCH	38799	BOT	5/21/80	0539	0639	17670.0	66.8810	.00	.00	.00	.00	.00	.00	**
DITW	38800	BOT	5/27/80	1556	1656	16500.0	62.4525	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES BAY ANCHOVY

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITE	38801	BOT	5/27/80	1659	1759	16310.0	61.7334	.00	.00	.00	.00	.00	.00	**
DITCH	38802	BOT	5/27/80	1800	1900	16950.0	64.1558	.00	.00	.00	.00	.00	.00	**
DITCH	38803	BOT	5/27/80	1902	2002	16800.0	63.5880	.00	.00	.00	.00	.00	.00	
DITE	38804	BOT	5/27/80	2004	2104	16570.0	62.7175	.00	.00	.00	.00	.00	.00	**
DITW	38805	BOT	5/27/80	2105	2205	17140.0	64.8749	.00	.00	.00	.00	.00	.00	**
DITW	38806	BOT	5/27/80	2207	2307	17020.0	64.4207	.00	.00	.00	.00	.00	.00	
DITCH	38807	BOT	5/27/80	2310	0010	16810.0	63.6259	.00	.00	.00	.00	.00	.00	**
DITE	38808	BOT	5/28/80	0013	0113	16900.0	63.9665	.00	.00	.00	.00	.00	.00	**
DITCH	38809	BOT	5/28/80	0117	0217	17010.0	64.3829	.00	.00	.00	.00	.00	.00	**
DITE	38810	BOT	5/28/80	0221	0321	16750.0	63.3988	.00	.00	.00	.00	.00	.00	**
DITW	38811	BOT	5/28/80	0324	0424	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITCH	38812	BOT	5/28/80	0428	0528	16940.0	64.1179	.00	.00	.00	.00	.00	.00	**
DITE	38813	BOT	5/28/80	0531	0631	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITW	38814	BOT	5/28/80	0634	0734	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITE	38815	BOT	5/28/80	0736	0836	16640.0	62.9824	.00	.00	.00	.00	.00	.00	**
DITCH	38816	BOT	5/28/80	0837	0937	16640.0	62.9824	.00	.00	.00	.00	.00	.00	**
DITW	38817	BOT	5/28/80	0939	1039	16940.0	64.1179	.00	.00	.00	.00	.00	.00	**
DITCH	38818	BOT	5/28/80	1041	1141	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITE	38819	BOT	5/28/80	1143	1243	16330.0	61.8091	.00	.00	.00	.00	.00	.00	**
DITW	38820	BOT	5/28/80	1245	1345	16730.0	63.3231	.00	.00	.00	.00	.00	.00	**
DITE	38821	BOT	5/28/80	1346	1446	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITW	38822	BOT	5/28/80	1448	1548	16650.0	63.0203	.00	.00	.00	.00	.00	.00	**
DITCH	38823	BOT	5/28/80	1550	1650	16710.0	63.2474	.00	.00	.00	.00	.00	.00	**
DITE	38824	BOT	6/03/80	0604	0704	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITW	38825	BOT	6/03/80	0705	0805	16060.0	60.7871	.00	.00	.00	.00	.00	.00	**
DITCH	38826	BOT	6/03/80	0806	0906	16580.0	62.7553	.00	.00	.00	.00	.00	.00	**
DITE	38827	BOT	6/03/80	0907	1007	15410.0	58.3269	.00	.00	.00	.00	.00	.00	**
DITW	38828	BOT	6/03/80	1008	1108	16790.0	63.5502	.00	.00	.00	.00	.00	.00	**
DITCH	38829	BOT	6/03/80	1109	1209	16320.0	61.7712	.00	.00	.00	.00	.00	.00	**
DITE	38830	BOT	6/03/80	1210	1310	16970.0	64.2315	.00	.00	.00	.00	.00	.00	**
DITCH	38831	BOT	6/03/80	1312	1412	16870.0	63.8530	.00	.00	.00	.00	.00	.00	**
DITW	38832	BOT	6/03/80	1413	1513	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITCH	38833	BOT	6/03/80	1514	1614	16420.0	62.1497	.00	.00	.00	.00	.00	.00	**
DITE	38834	BOT	6/03/80	1616	1716	16790.0	63.5502	.00	.00	.00	.00	.00	.00	**
DITW	38835	BOT	6/03/80	1717	1817	16570.0	62.7175	.00	.00	.00	.00	.00	.00	**
DITE	38836	BOT	6/03/80	1818	1918	15850.0	59.9923	.00	.00	.00	.00	.00	.00	**
DITW	38837	BOT	6/03/80	1920	2020	16060.0	60.7871	.00	.00	.00	.00	.00	.00	**
DITCH	38838	BOT	6/03/80	2022	2122	16020.0	60.6357	.00	.00	.00	.00	.00	.00	**
DITW	38839	BOT	6/03/80	2124	2224	16340.0	61.8469	.00	.00	.00	.00	.00	.00	**
DITCH	38840	BOT	6/03/80	2226	2326	16600.0	62.8310	.00	.00	.00	.00	.00	.00	**
DITE	38841	BOT	6/03/80	2329	0029	16700.0	63.2095	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES BAY ANCHOVY

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITE	38842	BOT	6/04/80	0029	0129	16310.0	61.7334	.00	.00	.00	.00	.00	.00	
DITW	38843	BOT	6/04/80	0131	0231	16810.0	63.6259	.00	.00	.00	.00	.00	.00	**
DITCH	38844	BOT	6/04/80	0234	0334	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITW	38845	BOT	6/04/80	0337	0437	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITE	38846	BOT	6/04/80	0440	0540	16360.0	61.9226	.00	.00	.00	.00	.00	.00	**
DITCH	38847	BOT	6/04/80	0544	0644	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITW	38848	BOT	6/06/80	0600	0700	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITE	38849	BOT	6/06/80	0701	0801	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITCH	38850	BOT	6/06/80	0802	0902	16380.0	61.9983	.00	.00	.00	.00	.00	.00	**
DITCH	38851	BOT	6/06/80	0902	1002	16130.0	61.0521	.00	.00	.00	.00	.00	.00	
DITE	38852	BOT	6/06/80	1003	1103	15940.0	60.3329	.00	.00	.00	.00	.00	.00	**
DITW	38853	BOT	6/06/80	1104	1204	16030.0	60.6736	.00	.00	.00	.00	.00	.00	**
DITE	38854	BOT	6/06/80	1205	1305	16230.0	61.4306	.00	.00	.00	.00	.00	.00	**
DITW	38855	BOT	6/06/80	1306	1406	16380.0	61.9983	.00	.00	.00	.00	.00	.00	**
DITCH	38856	BOT	6/06/80	1407	1507	16340.0	61.8469	.00	.00	.00	.00	.00	.00	**
DITE	38857	BOT	6/06/80	1508	1608	16820.0	63.6637	.00	.00	.00	.00	.00	.00	**
DITCH	38858	BOT	6/06/80	1609	1709	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITW	38859	BOT	6/06/80	1710	1810	17070.0	64.6100	.00	.00	.00	.00	.00	.00	**
DITE	38860	BOT	6/06/80	1811	1911	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITW	38861	BOT	6/06/80	1912	2012	16700.0	63.2095	.00	.00	.00	.00	.00	.00	**
DITCH	38862	BOT	6/06/80	2014	2114	16910.0	64.0044	.00	.00	.00	.00	.00	.00	**
DITCH	38863	BOT	6/06/80	2114	2214	16550.0	62.6418	.00	.00	.00	.00	.00	.00	
DITW	38864	BOT	6/06/80	2215	2315	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITE	38865	BOT	6/06/80	2316	0016	15830.0	59.9166	.00	.00	.00	.00	.00	.00	**
DITE	38866	BOT	6/07/80	0016	0116	16250.0	61.5063	.00	.00	.00	.00	.00	.00	
DITW	38867	BOT	6/07/80	0119	0219	16410.0	62.1119	.00	.00	.00	.00	.00	.00	**
DITCH	38868	BOT	6/07/80	0221	0321	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITE	38869	BOT	6/07/80	0323	0423	15760.0	59.6516	.00	.00	.00	.00	.00	.00	**
DITW	38870	BOT	6/07/80	0428	0528	17050.0	64.5343	.00	.00	.00	.00	.00	.00	**
DITCH	38871	BOT	6/07/80	0531	0631	16920.0	64.0422	.00	.00	.00	.00	.00	.00	**
DITCH	38872	BOT	6/10/80	0554	0654	17050.0	64.5343	.00	.00	.00	.00	.00	.00	
DITE	38873	BOT	6/10/80	0655	0755	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**
DITW	38874	BOT	6/10/80	0756	0856	16350.0	61.8848	.00	.00	.00	.00	.00	.00	**
DITE	38875	BOT	6/10/80	0857	0957	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITW	38876	BOT	6/10/80	0958	1058	15900.0	60.1815	.00	.00	.00	.00	.00	.00	**
DITCH	38877	BOT	6/10/80	1059	1159	16420.0	62.1497	.00	.00	.00	.00	.00	.00	**
DITCH	38878	BOT	6/10/80	1159	1259	16400.0	62.0740	.00	.00	.00	.00	.00	.00	
DITE	38879	BOT	6/10/80	1300	1400	16350.0	61.8848	.00	.00	.00	.00	.00	.00	**
DITW	38880	BOT	6/10/80	1401	1501	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITCH	38881	BOT	6/10/80	1502	1602	16970.0	64.2315	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES BAY ANCHOVY

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITW	38882	BOT	6/10/80	1603	1703	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITE	38883	BOT	6/10/80	1704	1804	15900.0	60.1815	.00	.00	.00	.00	.00	.00	**
DITE	38884	BOT	6/10/80	1805	1905	17290.0	65.4427	.00	.00	.00	.00	.00	.00	
DITW	38885	BOT	6/10/80	1906	2006	15310.0	57.9484	.00	.00	.00	.00	.00	.00	**
DITCH	38886	BOT	6/10/80	2007	2107	16660.0	63.0581	.00	.00	.00	.00	.00	.00	**
DITW	38887	BOT	6/10/80	2108	2208	13100.0	49.5835	.00	.00	.00	.00	.00	.00	**
DITE	38888	BOT	6/10/80	2209	2309	16990.0	64.3072	.00	.00	.00	.00	.00	.00	**
DITCH	38889	BOT	6/10/80	2310	0010	16890.0	63.9287	.00	.00	.00	.00	.00	.00	**
DITCH	38890	BOT	6/11/80	0010	0110	16860.0	63.8151	.00	.00	.00	.00	.00	.00	
DITE	38891	BOT	6/11/80	0111	0211	16630.0	62.9446	.00	.00	.00	.00	.00	.00	**
DITW	38892	BOT	6/11/80	0212	0312	17140.0	64.8749	.00	.00	.00	.00	.00	.00	**
DITW	38893	BOT	6/11/80	0312	0412	17100.0	64.7235	.00	.00	.00	.00	.00	.00	
DITCH	38894	BOT	6/11/80	0413	0513	16200.0	61.3170	.00	.00	.00	.00	.00	.00	**
DITE	38895	BOT	6/11/80	0514	0614	17450.0	66.0483	.00	.00	.00	.00	.00	.00	**
DITE	38896	BOT	6/13/80	0556	0656	16190.0	61.2792	.00	.00	.00	.00	.00	.00	
DITCH	38897	BOT	6/13/80	0657	0757	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITW	38898	BOT	6/13/80	0758	0858	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITW	38899	BOT	6/13/80	0858	0958	16670.0	63.0960	.00	.00	.00	.00	.00	.00	
DITCH	38900	BOT	6/13/80	0959	1059	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITE	38901	BOT	6/13/80	1100	1200	16120.0	61.0142	.00	.00	.00	.00	.00	.00	**
DITE	38902	BOT	6/13/80	1200	1300	16110.0	60.9764	.00	.00	.00	.00	.00	.00	
DITCH	38903	BOT	6/13/80	1301	1401	15920.0	60.2572	.00	.00	.00	.00	.00	.00	**
DITW	38904	BOT	6/13/80	1402	1502	16280.0	61.6198	.00	.00	.00	.00	.00	.00	**
DITW	38905	BOT	6/13/80	1502	1602	16090.0	60.9007	.00	.00	.00	.00	.00	.00	
DITCH	38906	BOT	6/13/80	1603	1703	16390.0	62.0362	.00	.00	.00	.00	.00	.00	**
DITE	38907	BOT	6/13/80	1704	1804	16220.0	61.3927	.00	.00	.00	.00	.00	.00	**
DITE	38908	BOT	6/13/80	1804	1904	16160.0	61.1656	.00	.00	.00	.00	.00	.00	
DITW	38909	BOT	6/13/80	1905	2005	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITCH	38910	BOT	6/13/80	2006	2106	16420.0	62.1497	.00	.00	.00	.00	.00	.00	**
DITCH	38911	BOT	6/13/80	2106	2206	16690.0	63.1717	.00	.00	.00	.00	.00	.00	
DITW	38912	BOT	6/13/80	2207	2307	16660.0	63.0581	.00	.00	.00	.00	.00	.00	**
DITE	38913	BOT	6/13/80	2308	0008	14250.0	53.9363	.00	.00	.00	.00	.00	.00	**
DITE	38914	BOT	6/14/80	0008	0108	17490.0	66.1997	.00	.00	.00	.00	.00	.00	
DITCH	38915	BOT	6/14/80	0109	0209	16970.0	64.2315	.00	.00	.00	.00	.00	.00	**
DITW	38916	BOT	6/14/80	0210	0310	16350.0	61.8848	.00	.00	.00	.00	.00	.00	**
DITCH	38917	BOT	6/14/80	0311	0411	17820.0	67.4487	.00	.00	.00	.00	.00	.00	**
DITW	38918	BOT	6/14/80	0412	0512	15860.0	60.0301	.00	.00	.00	.00	.00	.00	**
DITE	38919	BOT	6/14/80	0513	0613	17520.0	66.3132	.00	.00	.00	.00	.00	.00	**
DITE	38920	BOT	6/17/80	0555	0655	16520.0	62.5282	.00	.00	.00	.00	.00	.00	
DITW	38921	BOT	6/17/80	0656	0756	16370.0	61.9605	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
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SPECIES BAY ANCHOVY

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DITCH	38922	BOT	6/17/80	0757	0857	16280.0	61.6198	.00	.00	.00	.00	.00	.00	**
DITCH	38923	BOT	6/17/80	0857	0957	16390.0	62.0362	.00	.00	.00	.00	.00	.00	
DITE	38924	BOT	6/17/80	0957	1057	16200.0	61.3170	.00	.00	.00	.00	.00	.00	**
DITW	38925	BOT	6/17/80	1058	1158	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITW	38926	BOT	6/17/80	1158	1258	16240.0	61.4684	.00	.00	.00	.00	.00	.00	
DITCH	38927	BOT	6/17/80	1259	1359	16130.0	61.0521	.00	.00	.00	.00	.00	.00	**
DITE	38928	BOT	6/17/80	1400	1500	16410.0	62.1119	.00	.00	.00	.00	.00	.00	**
DITE	38929	BOT	6/17/80	1500	1600	16460.0	62.3011	.00	.00	.00	.00	.00	.00	
DITCH	38930	BOT	6/17/80	1602	1702	17090.0	64.6857	.00	.00	.00	.00	.00	.00	**
DITW	38931	BOT	6/17/80	1705	1805	17240.0	65.2534	.00	.00	.00	.00	.00	.00	**
DITW	38932	BOT	6/17/80	1805	1905	15720.0	59.5002	.00	.00	.00	.00	.00	.00	
DITCH	38933	BOT	6/17/80	1907	2007	15070.0	57.0400	.00	.00	.00	.00	.00	.00	**
DITE	38934	BOT	6/17/80	2009	2109	16120.0	61.0142	.00	.00	.00	.00	.00	.00	**
DITCH	38935	BOT	6/17/80	2111	2211	16330.0	61.8091	.00	.00	.00	.00	.00	.00	**
DITW	38936	BOT	6/17/80	2213	2313	16270.0	61.5820	.00	.00	.00	.00	.00	.00	**
DITE	38937	BOT	6/17/80	2315	0015	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITE	38938	BOT	6/18/80	0016	0116	16650.0	63.0203	.00	.00	.00	.00	.00	.00	
DITW	38939	BOT	6/18/80	0118	0218	16290.0	61.6577	.00	.00	.00	.00	.00	.00	**
DITCH	38940	BOT	6/18/80	0220	0320	16340.0	61.8469	.00	.00	.00	.00	.00	.00	**
DITCH	38941	BOT	6/18/80	0320	0420	16170.0	61.2035	.00	.00	.00	.00	.00	.00	
DITW	38942	BOT	6/18/80	0422	0522	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITE	38943	BOT	6/18/80	0524	0624	16360.0	61.9226	.00	.00	.00	.00	.00	.00	**
DITE	38944	BOT	6/20/80	0557	0657	16650.0	63.0203	.00	.00	.00	.00	.00	.00	
DITW	38945	BOT	6/20/80	0658	0758	16500.0	62.4525	.00	.00	.00	.00	.00	.00	**
DITCH	38946	BOT	6/20/80	0759	0859	16080.0	60.8628	.00	.00	.00	.00	.00	.00	**
DITW	38947	BOT	6/20/80	0900	1000	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITCH	38948	BOT	6/20/80	1001	1101	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITE	38949	BOT	6/20/80	1102	1202	16070.0	60.8250	.00	.00	.00	.00	.00	.00	**
DITCH	38950	BOT	6/20/80	1203	1303	16360.0	61.9226	.00	.00	.00	.00	.00	.00	**
DITW	38951	BOT	6/20/80	1304	1404	16050.0	60.7493	.00	.00	.00	.00	.00	.00	**
DITE	38952	BOT	6/20/80	1405	1505	16310.0	61.7334	.00	.00	.00	.00	.00	.00	**
DITCH	38953	BOT	6/20/80	1506	1606	16260.0	61.5441	.00	.00	.00	.00	.00	.00	**
DITW	38954	BOT	6/20/80	1607	1707	16210.0	61.3549	.00	.00	.00	.00	.00	.00	**
DITE	38955	BOT	6/20/80	1708	1808	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**
DITW	38956	BOT	6/20/80	1809	1909	16450.0	62.2633	.00	.00	.00	.00	.00	.00	**
DITCH	38957	BOT	6/20/80	1910	2010	15950.0	60.3708	.00	.00	.00	.00	.00	.00	**
DITE	38958	BOT	6/20/80	2011	2111	15760.0	59.6516	.00	.00	.00	.00	.00	.00	**
DITCH	38959	BOT	6/20/80	2112	2212	16870.0	63.8530	.00	.00	.00	.00	.00	.00	**
DITE	38960	BOT	6/20/80	2213	2313	16080.0	60.8628	.00	.00	.00	.00	.00	.00	**
DITW	38961	BOT	6/20/80	2314	0014	16310.0	61.7334	.00	.00	.00	.00	.00	.00	**
DITE	38962	BOT	6/21/80	0015	0115	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES BAY ANCHOVY

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITCH	38963	BOT	6/21/80	0116	0216	15680.0	59.3488	.00	.00	.00	.00	.00	.00	**
DITW	38964	BOT	6/21/80	0218	0318	16620.0	62.9067	.00	.00	.00	.00	.00	.00	**
DITE	38965	BOT	6/21/80	0319	0419	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITW	38966	BOT	6/21/80	0420	0520	16600.0	62.8310	.00	.00	.00	.00	.00	.00	**
DITCH	38967	BOT	6/21/80	0521	0621	16320.0	61.7712	.00	.00	.00	.00	.00	.00	**
DITE	38968	BOT	6/24/80	0625	0725	16660.0	63.0581	.00	.00	.00	.00	.00	.00	**
DITCH	38969	BOT	6/24/80	0726	0826	16070.0	60.8250	.00	.00	.00	.00	.00	.00	**
DITW	38970	BOT	6/24/80	0828	0928	16320.0	61.7712	.00	.00	.00	.00	.00	.00	**
DITE	38971	BOT	6/24/80	0929	1029	16520.0	62.5282	.00	.00	.00	.00	.00	.00	**
DITW	38972	BOT	6/24/80	1030	1130	16850.0	63.7773	.00	.00	.00	.00	.00	.00	**
DITCH	38973	BOT	6/24/80	1132	1232	16620.0	62.9067	.00	.00	.00	.00	.00	.00	**
DITCH	38974	BOT	6/24/80	1232	1332	16600.0	62.8310	.00	.00	.00	.00	.00	.00	
DITW	38975	BOT	6/24/80	1333	1433	16680.0	63.1338	.00	.00	.00	.00	.00	.00	**
DITE	38976	BOT	6/24/80	1435	1535	16660.0	63.0581	.00	.00	.00	.00	.00	.00	**
DITE	38977	BOT	6/24/80	1535	1635	16440.0	62.2254	.00	.00	.00	.00	.00	.00	
DITW	38978	BOT	6/24/80	1636	1736	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITCH	38979	BOT	6/24/80	1737	1837	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITE	38980	BOT	6/24/80	1838	1938	16950.0	64.1558	.00	.00	.00	.00	.00	.00	**
DITW	38981	BOT	6/24/80	1940	2040	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**
DITCH	38982	BOT	6/24/80	2041	2141	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITCH	38983	BOT	6/24/80	2141	2241	16150.0	61.1278	.00	.00	.00	.00	.00	.00	
DITE	38984	BOT	6/24/80	2242	2342	16310.0	61.7334	.00	.00	.00	.00	.00	.00	**
DITW	38985	BOT	6/24/80	2343	0043	16330.0	61.8091	.00	.00	.00	.00	.00	.00	**
DITE	38986	BOT	6/25/80	0044	0144	16220.0	61.3927	.00	.00	.00	.00	.00	.00	**
DITW	38987	BOT	6/25/80	0145	0245	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITCH	38988	BOT	6/25/80	0246	0346	15770.0	59.6895	.00	.00	.00	.00	.00	.00	**
DITCH	38989	BOT	6/25/80	0346	0446	16410.0	62.1119	.00	.00	.00	.00	.00	.00	
DITE	38990	BOT	6/25/80	0447	0547	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITW	38991	BOT	6/25/80	0548	0648	16680.0	63.1338	.00	.00	.00	.00	.00	.00	**
DITE	38992	BOT	7/01/80	0612	0712	16260.0	61.5441	.00	.00	.00	.00	.00	.00	**
DITCH	38993	BOT	7/01/80	0715	0815	16580.0	62.7553	.00	.00	.00	.00	.00	.00	**
DITW	38994	BOT	7/01/80	0817	0917	15990.0	60.5222	.00	.00	.00	.00	.00	.00	**
DITW	38995	BOT	7/01/80	0917	1017	16210.0	61.3549	.00	.00	.00	.00	.00	.00	
DITCH	38996	BOT	7/01/80	1018	1118	16000.0	60.5600	.00	.00	.00	.00	.00	.00	**
DITE	38997	BOT	7/01/80	1120	1220	16210.0	61.3549	.00	.00	.00	.00	.00	.00	**
DITE	38998	BOT	7/01/80	1220	1320	16590.0	62.7932	.00	.00	.00	.00	.00	.00	
DITW	38999	BOT	7/01/80	1322	1422	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITCH	39000	BOT	7/01/80	1425	1525	16170.0	61.2035	.00	.00	.00	.00	.00	.00	**
DITCH	39001	BOT	7/01/80	1525	1625	15930.0	60.2951	.00	.00	.00	.00	.00	.00	
DITW	39002	BOT	7/01/80	1626	1726	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES BAY ANCHOVY

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	POST YOLK-SAC		JUVENILE	UNID LIF STAGE	
										YOLK-SAC				
DITE	39003	BOT	7/01/80	1727	1827	15960.0	60.4086	.00	.00	.00	.00	.00	.00	**
DITE	39004	BOT	7/01/80	1827	1927	16400.0	62.0740	.00	.00	.00	.00	.00	.00	
DITCH	39005	BOT	7/01/80	1929	2029	16420.0	62.1497	.00	.00	.00	.00	.00	.00	**
DITW	39006	BOT	7/01/80	2030	2130	16530.0	62.5661	.00	.00	.00	.00	.00	.00	**
DITCH	39007	BOT	7/01/80	2131	2231	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITW	39008	BOT	7/01/80	2233	2333	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITE	39009	BOT	7/01/80	2335	0035	16540.0	62.6039	.00	.00	.00	.00	.00	.00	**
DITW	39010	BOT	7/02/80	0037	0137	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITE	39011	BOT	7/02/80	0139	0239	17150.0	64.9128	.00	.00	.00	.00	.00	.00	**
DITCH	39012	BOT	7/02/80	0241	0341	16690.0	63.1717	.00	.00	.00	.00	.00	.00	**
DITW	39013	BOT	7/02/80	0343	0443	16450.0	62.2633	.00	.00	.00	.00	.00	.00	**
DITCH	39014	BOT	7/02/80	0445	0545	15950.0	60.3708	.00	.00	.00	.00	.00	.00	**
DITE	39015	BOT	7/02/80	0547	0647	16530.0	62.5661	.00	.00	.00	.00	.00	.00	**
DITE	39016	BOT	7/08/80	0546	0646	16200.0	61.3170	.00	.00	.00	.00	.00	.00	
DITCH	39017	BOT	7/08/80	0648	0748	15990.0	60.5222	.00	16.52	.00	.00	.00	16.52	**
DITW	39018	BOT	7/08/80	0750	0850	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITE	39019	BOT	7/08/80	0851	0951	15990.0	60.5222	.00	.00	.00	.00	.00	.00	**
DITW	39020	BOT	7/08/80	0953	1053	16010.0	60.5979	.00	.00	.00	.00	.00	.00	**
DITCH	39021	BOT	7/08/80	1055	1155	16360.0	61.9226	.00	16.15	.00	.00	.00	16.15	**
DITW	39022	BOT	7/08/80	1157	1257	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITCH	39023	BOT	7/08/80	1259	1359	16850.0	63.7773	.00	.00	.00	.00	.00	.00	**
DITE	39024	BOT	7/08/80	1401	1501	16690.0	63.1717	.00	.00	.00	.00	.00	.00	**
DITE	39025	BOT	7/08/80	1501	1601	16500.0	62.4525	.00	.00	.00	.00	.00	.00	
DITW	39026	BOT	7/08/80	1603	1703	17540.0	66.3889	.00	15.06	.00	.00	.00	15.06	**
DITCH	39027	BOT	7/08/80	1704	1804	17070.0	64.6100	.00	.00	.00	.00	.00	.00	**
DITCH	39028	BOT	7/08/80	1804	1904	16690.0	63.1717	.00	.00	.00	.00	.00	.00	
DITE	39029	BOT	7/08/80	1906	2006	17170.0	64.9885	.00	.00	.00	.00	.00	.00	**
DITW	39030	BOT	7/08/80	2008	2108	17650.0	66.8053	.00	.00	.00	.00	.00	.00	**
DITW	39031	BOT	7/08/80	2108	2208	17250.0	65.2913	.00	.00	.00	.00	.00	.00	
DITCH	39032	BOT	7/08/80	2210	2310	17270.0	65.3670	.00	.00	.00	.00	.00	.00	**
DITE	39033	BOT	7/08/80	2312	0012	15930.0	60.2951	.00	.00	.00	.00	.00	.00	**
DITE	39034	BOT	7/09/80	0012	0112	16160.0	61.1656	.00	.00	.00	.00	.00	.00	
DITW	39035	BOT	7/09/80	0113	0213	16620.0	62.9067	.00	.00	.00	.00	.00	.00	**
DITCH	39036	BOT	7/09/80	0214	0314	16270.0	61.5820	.00	.00	.00	.00	.00	.00	**
DITW	39037	BOT	7/09/80	0315	0415	16080.0	60.8628	.00	.00	.00	.00	.00	.00	**
DITCH	39038	BOT	7/09/80	0416	0516	15960.0	60.4086	.00	.00	.00	.00	.00	.00	**
DITE	39039	BOT	7/09/80	0517	0617	17020.0	64.4207	.00	.00	.00	.00	.00	.00	**
DITCH	39040	BOT	7/15/80	0606	0706	16980.0	64.2693	.00	.00	.00	.00	.00	.00	**
DITW	39041	BOT	7/15/80	0714	0814	16710.0	63.2474	.00	15.81	.00	.00	.00	15.81	**
DITE	39042	BOT	7/15/80	0816	0916	16410.0	62.1119	.00	16.10	.00	.00	.00	16.10	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES BAY ANCHOVY

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITE	39043	BOT	7/15/80	0916	1016	16200.0	61.3170	.00	.00	.00	.00	.00	.00	
DITW	39044	BOT	7/15/80	1017	1117	17110.0	64.7614	.00	.00	.00	.00	.00	.00	**
DITCH	39045	BOT	7/15/80	1119	1219	17080.0	64.6478	.00	.00	.00	.00	.00	.00	**
DITCH	39046	BOT	7/15/80	1219	1319	17190.0	65.0642	.00	.00	.00	.00	.00	.00	
DITW	39047	BOT	7/15/80	1321	1421	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITE	39048	BOT	7/15/80	1423	1523	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITE	39049	BOT	7/15/80	1523	1623	16110.0	60.9764	.00	.00	.00	.00	.00	.00	
DITW	39050	BOT	7/15/80	1625	1725	16030.0	60.6736	.00	.00	.00	.00	.00	.00	**
DITCH	39051	BOT	7/15/80	1727	1827	16770.0	63.4745	.00	.00	.00	.00	.00	.00	**
DITW	39052	BOT	7/15/80	1829	1929	15830.0	59.9166	.00	50.07	.00	.00	.00	50.07	**
DITCH	39053	BOT	7/15/80	1930	2030	15660.0	59.2731	.00	16.87	.00	.00	.00	16.87	**
DITE	39054	BOT	7/15/80	2031	2131	16890.0	63.9287	.00	.00	.00	.00	.00	.00	**
DITCH	39055	BOT	7/15/80	2133	2203	7950.0	30.0908	.00	.00	.00	.00	.00	.00	**
DITW	39056	BOT	7/15/80	2235	2335	16700.0	63.2095	.00	.00	.00	.00	.00	.00	**
DITE	39057	BOT	7/15/80	2336	0036	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**
DITCH	39058	BOT	7/16/80	0038	0138	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITW	39059	BOT	7/16/80	0139	0239	17210.0	65.1399	.00	.00	.00	.00	.00	.00	**
DITE	39060	BOT	7/16/80	0240	0340	16020.0	60.6357	.00	.00	.00	.00	.00	.00	**
DITW	39061	BOT	7/16/80	0341	0441	16870.0	63.8530	.00	62.64	.00	.00	.00	62.64	**
DITCH	39062	BOT	7/16/80	0442	0542	16240.0	61.4684	.00	.00	.00	.00	.00	.00	**
DITE	39063	BOT	7/16/80	0543	0643	16100.0	60.9385	.00	.00	.00	.00	.00	.00	**
DITCH	39064	BOT	7/22/80	0600	0700	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITE	39065	BOT	7/22/80	0701	0801	16020.0	60.6357	.00	.00	.00	.00	.00	.00	**
DITW	39066	BOT	7/22/80	0803	0903	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITE	39067	BOT	7/22/80	0904	1004	16230.0	61.4306	.00	.00	.00	.00	.00	.00	**
DITCH	39068	BOT	7/22/80	1005	1105	16310.0	61.7334	.00	.00	.00	.00	.00	.00	**
DITW	39069	BOT	7/22/80	1106	1206	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**
DITCH	39070	BOT	7/22/80	1207	1307	16300.0	61.6955	.00	.00	.00	.00	.00	.00	**
DITW	39071	BOT	7/22/80	1308	1408	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITE	39072	BOT	7/22/80	1409	1509	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITCH	39073	BOT	7/22/80	1511	1611	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**
DITE	39074	BOT	7/22/80	1613	1713	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITW	39075	BOT	7/22/80	1715	1815	16230.0	61.4306	.00	.00	.00	.00	.00	.00	**
DITW	39076	BOT	7/22/80	1815	1915	16210.0	61.3549	.00	.00	.00	.00	.00	.00	
DITCH	39077	BOT	7/22/80	1917	2017	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITE	39078	BOT	7/22/80	2019	2119	16580.0	62.7553	.00	.00	.00	.00	.00	.00	**
DITW	39079	BOT	7/22/80	2121	2221	16120.0	61.0142	.00	.00	.00	.00	.00	.00	**
DITCH	39080	BOT	7/22/80	2223	2323	16490.0	62.4147	.00	16.02	.00	.00	.00	16.02	**
DITE	39081	BOT	7/22/80	2325	0025	15910.0	60.2194	.00	.00	.00	.00	.00	.00	**
DITE	39082	BOT	7/23/80	0025	0125	17180.0	65.0263	.00	.00	.00	.00	.00	.00	
DITCH	39083	BOT	7/23/80	0148	0248	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES BAY ANCHOVY

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITW	39084	BOT	7/23/80	0250	0350	16580.0	62.7553	.00	.00	.00	.00	.00	.00	**
DITW	39085	BOT	7/23/80	0350	0450	16220.0	61.3927	.00	16.29	.00	.00	.00	16.29	
DITE	39086	BOT	7/23/80	0451	0551	15390.0	58.2512	.00	.00	.00	.00	.00	.00	**
DITCH	39087	BOT	7/23/80	0553	0653	16130.0	61.0521	.00	16.38	.00	.00	.00	16.38	**
DITCH	39088	BOT	7/29/80	0559	0659	16000.0	60.5600	.00	.00	.00	.00	.00	.00	
DITW	39089	BOT	7/29/80	0700	0800	16250.0	61.5063	.00	.00	.00	.00	.00	.00	**
DITE	39090	BOT	7/29/80	0802	0902	16370.0	61.9605	.00	.00	.00	.00	.00	.00	**
DITE	39091	BOT	7/29/80	0902	1002	16510.0	62.4904	.00	.00	.00	.00	.00	.00	
DITW	39092	BOT	7/29/80	1003	1103	17660.0	66.8431	.00	.00	.00	.00	.00	.00	**
DITCH	39093	BOT	7/29/80	1104	1204	16340.0	61.8469	.00	.00	.00	.00	.00	.00	**
DITW	39094	BOT	7/29/80	1205	1305	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITCH	39095	BOT	7/29/80	1307	1407	16750.0	63.3988	.00	.00	.00	.00	.00	.00	**
DITE	39096	BOT	7/29/80	1409	1509	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**
DITCH	39097	BOT	7/29/80	1510	1610	15800.0	59.8030	.00	.00	.00	.00	.00	.00	**
DITE	39098	BOT	7/29/80	1612	1712	15780.0	59.7273	.00	.00	.00	.00	.00	.00	**
DITW	39099	BOT	7/29/80	1713	1813	16590.0	62.7932	.00	.00	.00	.00	.00	.00	**
DITW	39100	BOT	7/29/80	1813	1913	16490.0	62.4147	.00	16.02	.00	.00	.00	16.02	
DITE	39101	BOT	7/29/80	1916	2016	15710.0	59.4624	.00	.00	.00	.00	.00	.00	**
DITCH	39102	BOT	7/29/80	2017	2117	15760.0	59.6516	.00	16.76	.00	.00	.00	16.76	**
DITCH	39103	BOT	7/29/80	2117	2217	16000.0	60.5600	.00	.00	.00	.00	.00	.00	
DITE	39104	BOT	7/29/80	2219	2319	16980.0	64.2693	.00	.00	.00	.00	.00	.00	**
DITW	39105	BOT	7/29/80	2321	0021	17000.0	64.3450	.00	.00	.00	.00	.00	.00	**
DITW	39106	BOT	7/30/80	0022	0122	16610.0	62.8689	.00	.00	.00	.00	.00	.00	
DITE	39107	BOT	7/30/80	0124	0224	14110.0	53.4064	.00	.00	.00	.00	.00	.00	**
DITCH	39108	BOT	7/30/80	0225	0325	15230.0	57.6456	.00	34.69	.00	.00	.00	34.69	**
DITCH	39109	BOT	7/30/80	0325	0425	16050.0	60.7493	.00	32.92	.00	.00	.00	32.92	
DITE	39110	BOT	7/30/80	0427	0527	15710.0	59.4624	.00	.00	.00	.00	.00	.00	**
DITW	39111	BOT	7/30/80	0529	0629	17390.0	65.8212	.00	.00	.00	.00	.00	.00	**
DITE	39112	BOT	8/05/80	0613	0713	16260.0	61.5441	.00	.00	.00	.00	.00	.00	**
DITCH	39113	BOT	8/05/80	0714	0814	15560.0	58.8946	.00	.00	.00	.00	.00	.00	**
DITW	39114	BOT	8/05/80	0816	0916	16830.0	63.7016	.00	31.40	.00	.00	.00	31.40	**
DITCH	39115	BOT	8/05/80	0918	1018	15940.0	60.3329	.00	16.57	.00	.00	.00	16.57	**
DITW	39116	BOT	8/05/80	1019	1119	16160.0	61.1656	.00	.00	.00	.00	.00	.00	**
DITE	39117	BOT	8/05/80	1120	1220	15690.0	59.3867	.00	33.68	.00	.00	.00	33.68	**
DITE	39118	BOT	8/05/80	1220	1320	16270.0	61.5820	.00	32.48	.00	.00	.00	32.48	
DITW	39119	BOT	8/05/80	1322	1422	16380.0	61.9983	.00	96.78	.00	.00	.00	96.78	**
DITCH	39120	BOT	8/05/80	1424	1524	16570.0	62.7175	.00	31.89	.00	.00	.00	31.89	**
DITCH	39121	BOT	8/05/80	1524	1624	18260.0	69.1141	.00	14.47	.00	.00	.00	14.47	
DITE	39122	BOT	8/05/80	1626	1726	17140.0	64.8749	.00	30.83	.00	.00	.00	30.83	**
DITW	39123	BOT	8/05/80	1728	1828	18890.0	71.4987	.00	13.99	.00	.00	.00	13.99	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES BAY ANCHOVY

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITW	39124	BOT	8/05/80	1828	1928	16240.0	61.4684	.00	16.27	.00	.00	.00	16.27	
DITE	39125	BOT	8/05/80	1930	2030	16060.0	60.7871	.00	16.45	.00	.00	.00	16.45	**
DITCH	39126	BOT	8/05/80	2032	2132	18150.0	68.6978	.00	58.23	.00	.00	.00	58.23	**
DITCH	39127	BOT	8/05/80	2132	2232	17450.0	66.0483	.00	15.14	.00	.00	.00	15.14	
DITE	39128	BOT	8/05/80	2234	2334	15180.0	57.4563	.00	.00	.00	.00	.00	.00	**
DITW	39129	BOT	8/05/80	2336	0036	16530.0	62.5661	.00	.00	.00	.00	.00	.00	**
DITE	39130	BOT	8/06/80	0037	0137	16220.0	61.3927	.00	.00	.00	.00	.00	.00	**
DITCH	39131	BOT	8/06/80	0139	0239	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITW	39132	BOT	8/06/80	0240	0340	16150.0	61.1278	.00	.00	.00	.00	.00	.00	**
DITE	39133	BOT	8/06/80	0341	0441	16330.0	61.8091	.00	.00	.00	.00	.00	.00	**
DITW	39134	BOT	8/06/80	0442	0542	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITCH	39135	BOT	8/06/80	0544	0644	16450.0	62.2633	.00	.00	.00	.00	.00	.00	**
DITW	39136	BOT	8/12/80	0605	0705	16130.0	61.0521	.00	.00	.00	.00	.00	.00	**
DITE	39137	BOT	8/12/80	0706	0806	15770.0	59.6895	.00	16.75	.00	.00	.00	16.75	**
DITCH	39138	BOT	8/12/80	0807	0907	16180.0	61.2413	.00	.00	.00	.00	.00	.00	**
DITCH	39139	BOT	8/12/80	0907	1007	16260.0	61.5441	.00	.00	.00	.00	.00	.00	
DITE	39140	BOT	8/12/80	1009	1109	16800.0	63.5880	.00	31.45	.00	.00	.00	31.45	**
DITW	39141	BOT	8/12/80	1111	1211	16820.0	63.6637	.00	15.71	.00	.00	.00	15.71	**
DITE	39142	BOT	8/12/80	1212	1312	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITW	39143	BOT	8/12/80	1314	1414	16760.0	63.4366	.00	15.76	.00	.00	.00	15.76	**
DITCH	39144	BOT	8/12/80	1416	1516	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITW	39145	BOT	8/12/80	1517	1617	16140.0	61.0899	.00	49.11	.00	.00	.00	49.11	**
DITCH	39146	BOT	8/12/80	1619	1719	16350.0	61.8848	.00	113.11	.00	.00	.00	113.11	**
DITE	39147	BOT	8/12/80	1721	1821	16490.0	62.4147	.00	192.26	.00	.00	.00	192.26	**
DITE	39148	BOT	8/12/80	1821	1921	15830.0	59.9166	.00	233.66	.00	.00	.00	233.66	
DITCH	39149	BOT	8/12/80	1922	2022	16050.0	60.7493	.00	32.92	.00	.00	.00	32.92	**
DITW	39150	BOT	8/12/80	2024	2124	16470.0	62.3390	.00	112.29	.00	.00	.00	112.29	**
DITE	39151	BOT	8/12/80	2126	2226	16430.0	62.1876	.00	48.24	.00	.00	.00	48.24	**
DITCH	39152	BOT	8/12/80	2228	2328	15610.0	59.0839	.00	16.93	.00	.00	.00	16.93	**
DITW	39153	BOT	8/12/80	2330	0030	16740.0	63.3609	.00	31.57	.00	.00	.00	31.57	**
DITE	39154	BOT	8/13/80	0031	0131	16490.0	62.4147	.00	32.04	.00	.00	.00	32.04	**
DITW	39155	BOT	8/13/80	0132	0232	17140.0	64.8749	.00	154.14	.00	.00	.00	154.14	**
DITCH	39156	BOT	8/13/80	0233	0333	17610.0	66.6539	.00	150.03	.00	.00	.00	150.03	**
DITCH	39157	BOT	8/13/80	0333	0433	16560.0	62.6796	.00	175.50	.00	.00	.00	175.50	
DITW	39158	BOT	8/13/80	0435	0535	16560.0	62.6796	.00	63.82	.00	.00	.00	63.82	**
DITE	39159	BOT	8/13/80	0536	0636	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITCH	39160	BOT	8/19/80	0601	0701	12300.0	46.5555	.00	.00	.00	.00	.00	.00	**
DITW	39161	BOT	8/19/80	0705	0805	14780.0	55.9423	.00	.00	.00	.00	.00	.00	**
DITE	39162	BOT	8/19/80	0810	0910	16390.0	62.0362	.00	16.12	.00	.00	.00	16.12	**
DITE	39163	BOT	8/19/80	0910	1010	16420.0	62.1497	.00	16.09	.00	.00	.00	16.09	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES BAY ANCHOVY

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(EN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIFE STAGE	
DITW	39164	BOT	8/19/80	1012	1112	16140.0	61.0899	.00	16.37	.00	.00	.00	16.37	**
DITCH	39165	BOT	8/19/80	1113	1213	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	39166	BOT	8/19/80	1213	1313	16690.0	63.1717	.00	.00	.00	.00	.00	.00	
DITE	39167	BOT	8/19/80	1314	1414	15780.0	59.7273	.00	33.49	.00	.00	.00	33.49	**
DITW	39168	BOT	8/19/80	1416	1516	16430.0	62.1876	.00	16.08	.00	.00	.00	16.08	**
DITCH	39169	BOT	8/19/80	1519	1619	16880.0	63.8908	.00	.00	.00	.00	.00	.00	**
DITW	39170	BOT	8/19/80	1620	1720	17110.0	64.7614	.00	.00	.00	.00	.00	.00	**
DITE	39171	BOT	8/19/80	1721	1821	16080.0	60.8628	.00	16.43	.00	.00	.00	16.43	**
DITW	39172	BOT	8/19/80	1822	1922	16940.0	64.1179	.00	15.60	.00	.00	.00	15.60	**
DITCH	39173	BOT	8/19/80	1923	2023	16340.0	61.8469	.00	16.17	.00	.00	.00	16.17	**
DITE	39174	BOT	8/19/80	2024	2124	18490.0	69.9847	.00	14.29	.00	.00	.00	14.29	**
DITCH	39175	BOT	8/19/80	2125	2225	16410.0	62.1119	.00	.00	.00	.00	.00	.00	**
DITW	39176	BOT	8/19/80	2226	2326	16090.0	60.9007	.00	.00	.00	.00	.00	.00	**
DITE	39177	BOT	8/19/80	2327	0027	15340.0	58.0619	.00	.00	.00	.00	.00	.00	**
DITW	39178	BOT	8/20/80	0029	0129	16280.0	61.6198	.00	.00	.00	.00	.00	.00	**
DITCH	39179	BOT	8/20/80	0130	0230	16890.0	63.9287	.00	.00	.00	.00	.00	.00	**
DITE	39180	BOT	8/20/80	0232	0332	16450.0	62.2633	.00	16.06	.00	.00	.00	16.06	**
DITW	39181	BOT	8/20/80	0333	0433	17130.0	64.8371	.00	.00	.00	.00	.00	.00	**
DITE	39182	BOT	8/20/80	0434	0534	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	39183	BOT	8/20/80	0536	0636	16750.0	63.3988	.00	.00	.00	.00	.00	.00	**
DITW	39184	BOT	8/26/80	0640	0740	15500.0	58.6675	.00	17.05	.00	.00	.00	17.05	**
DITCH	39185	BOT	8/26/80	0741	0841	16170.0	61.2035	.00	.00	.00	.00	.00	.00	**
DITE	39186	BOT	8/26/80	0842	0942	16110.0	60.9764	.00	16.40	.00	.00	.00	16.40	**
DITW	39187	BOT	8/26/80	0944	1044	15520.0	58.7432	.00	17.02	.00	.00	.00	17.02	**
DITE	39188	BOT	8/26/80	1045	1145	16900.0	63.9665	.00	62.53	.00	.00	.00	62.53	**
DITCH	39189	BOT	8/26/80	1146	1246	15570.0	58.9325	.00	.00	.00	.00	.00	.00	**
DITE	39190	BOT	8/26/80	1247	1347	16460.0	62.3011	.00	64.20	.00	.00	.00	64.20	**
DITCH	39191	BOT	8/26/80	1348	1448	15810.0	59.8409	.00	167.11	.00	.00	.00	167.11	**
DITW	39192	BOT	8/26/80	1449	1549	16500.0	62.4525	.00	272.21	.00	.00	.00	272.21	**
DITE	39193	BOT	8/26/80	1550	1650	15530.0	58.7811	.00	204.15	.00	.00	.00	204.15	**
DITW	39194	BOT	8/26/80	1651	1751	16430.0	62.1876	.00	128.64	.00	.00	.00	128.64	**
DITCH	39195	BOT	8/26/80	1751	1851	16850.0	63.7773	.00	47.04	.00	.00	.00	47.04	**
DITCH	39196	BOT	8/26/80	1851	1951	17000.0	64.3450	.00	264.20	.00	.00	.00	264.20	
DITE	39197	BOT	8/26/80	1952	2052	15890.0	60.1437	.00	33.25	.00	.00	.00	33.25	**
DITW	39198	BOT	8/26/80	2053	2153	16960.0	64.1936	.00	.00	.00	.00	.00	.00	**
DITW	39199	BOT	8/26/80	2153	2253	16630.0	62.9446	.00	31.77	.00	.00	.00	31.77	
DITCH	39200	BOT	8/26/80	2301	0001	18260.0	69.1141	.00	.00	.00	.00	.00	.00	**
DITE	39201	BOT	8/27/80	0002	0102	16720.0	63.2852	.00	79.01	.00	.00	.00	79.01	**
DITCH	39202	BOT	8/27/80	0104	0204	17790.0	67.3352	.00	118.81	.00	.00	.00	118.81	**
DITE	39203	BOT	8/27/80	0210	0310	14030.0	53.1036	.00	.00	.00	.00	.00	.00	**
DITW	39204	BOT	8/27/80	0312	0412	18990.0	71.8772	.00	13.91	.00	.00	.00	13.91	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES BAY ANCHOVY

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITE	39205	BOT	8/27/80	0415	0515	12910.0	48.8644	.00	.00	.00	.00	.00	.00	**
DITCH	39206	BOT	8/27/80	0517	0617	19710.0	74.6024	.00	.00	.00	.00	.00	.00	**
DITW	39207	BOT	8/27/80	0618	0718	12840.0	48.5994	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES MORONE SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITW	38680	BOT	4/22/80	0559	0659	17270.0	65.3670	.00	.00	.00	.00	.00	.00	**
DITE	38681	BOT	4/22/80	0702	0802	16900.0	63.9665	.00	.00	.00	.00	.00	.00	**
DITCH	38682	BOT	4/22/80	0805	0905	17110.0	64.7614	.00	.00	.00	.00	.00	.00	**
DITE	38683	BOT	4/22/80	0908	1008	16970.0	64.2315	.00	.00	.00	.00	.00	.00	**
DITCH	38684	BOT	4/22/80	1009	1109	17010.0	64.3829	.00	.00	.00	.00	.00	.00	**
DITW	38685	BOT	4/22/80	1110	1210	17120.0	64.7992	.00	.00	.00	.00	.00	.00	**
DITW	38686	BOT	4/22/80	1210	1310	17250.0	65.2913	.00	.00	.00	.00	.00	.00	
DITCH	38687	BOT	4/22/80	1312	1412	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITE	38688	BOT	4/22/80	1415	1515	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	38689	BOT	4/22/80	1517	1617	17380.0	65.7833	.00	.00	.00	.00	.00	.00	**
DITW	38690	BOT	4/22/80	1619	1719	17750.0	67.1838	.00	.00	.00	.00	.00	.00	**
DITE	38691	BOT	4/22/80	1721	1821	16900.0	63.9665	.00	.00	.00	.00	.00	.00	**
DITCH	38692	BOT	4/22/80	1823	1923	16790.0	63.5502	.00	.00	.00	.00	.00	.00	**
DITW	38693	BOT	4/22/80	1925	2025	17070.0	64.6100	.00	.00	.00	.00	.00	.00	**
DITE	38694	BOT	4/22/80	2028	2128	17310.0	65.5184	.00	.00	.00	.00	.00	.00	**
DITE	38695	BOT	4/22/80	2128	2228	16760.0	63.4366	.00	.00	.00	.00	.00	.00	
DITW	38696	BOT	4/22/80	2230	2330	17250.0	65.2913	.00	.00	.00	.00	.00	.00	**
DITCH	38697	BOT	4/22/80	2331	0031	16660.0	63.0581	.00	.00	.00	.00	.00	.00	**
DITW	38698	BOT	4/23/80	0033	0133	16420.0	62.1497	.00	.00	.00	.00	.00	.00	**
DITE	38699	BOT	4/23/80	0135	0235	16350.0	61.8848	.00	.00	.00	.00	.00	.00	**
DITCH	38700	BOT	4/23/80	0237	0337	16820.0	63.6637	.00	.00	.00	.00	.00	.00	**
DITCH	38701	BOT	4/23/80	0337	0437	16980.0	64.2693	.00	.00	.00	.00	.00	.00	
DITE	38702	BOT	4/23/80	0439	0539	17130.0	64.8371	.00	.00	.00	.00	.00	.00	**
DITW	38703	BOT	4/23/80	0540	0640	18240.0	69.0384	.00	.00	.00	.00	.00	.00	**
DITCH	38704	BOT	4/29/80	0600	0700	16590.0	62.7932	.00	.00	.00	.00	.00	.00	**
DITE	38705	BOT	4/29/80	0702	0802	16870.0	63.8530	.00	.00	.00	.00	.00	.00	**
DITW	38706	BOT	4/29/80	0804	0904	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITCH	38707	BOT	4/29/80	0906	1006	16970.0	64.2315	.00	.00	.00	.00	.00	.00	**
DITE	38708	BOT	4/29/80	1008	1108	16640.0	62.9824	.00	.00	.00	.00	.00	.00	**
DITW	38709	BOT	4/29/80	1110	1210	17490.0	66.1997	.00	.00	.00	.00	.00	.00	**
DITCH	38710	BOT	4/29/80	1212	1312	16990.0	64.3072	.00	.00	.00	.00	.00	.00	**
DITW	38711	BOT	4/29/80	1315	1415	17220.0	65.1777	.00	.00	.00	.00	.00	.00	**
DITE	38712	BOT	4/29/80	1417	1517	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITCH	38713	BOT	4/29/80	1518	1618	16710.0	63.2474	.00	.00	.00	.00	.00	.00	**
DITW	38714	BOT	4/29/80	1620	1720	16300.0	61.6955	.00	.00	.00	.00	.00	.00	**
DITE	38715	BOT	4/29/80	1723	1823	15650.0	59.2353	.00	.00	.00	.00	.00	.00	**
DITE	38716	BOT	4/29/80	1823	1923	17060.0	64.5721	.00	.00	.00	.00	.00	.00	
DITW	38717	BOT	4/29/80	1924	2024	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITCH	38718	BOT	4/29/80	2026	2126	15730.0	59.5381	.00	.00	.00	.00	.00	.00	**
DITW	38719	BOT	4/29/80	2127	2227	16870.0	63.8530	.00	.00	.00	.00	.00	.00	**
DITE	38720	BOT	4/29/80	2229	2329	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES MORONE SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITCH	38721	BOT	4/29/80	2334	0034	16820.0	63.6637	.00	.00	.00	.00	.00	.00	**
DITCH	38722	BOT	4/30/80	0034	0134	16810.0	63.6259	.00	.00	.00	.00	.00	.00	
DITE	38723	BOT	4/30/80	0137	0237	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITW	38724	BOT	4/30/80	0240	0340	17390.0	65.8212	.00	.00	.00	.00	.00	.00	**
DITCH	38725	BOT	4/30/80	0342	0442	16790.0	63.5502	.00	.00	.00	.00	.00	.00	**
DITE	38726	BOT	4/30/80	0445	0545	17150.0	64.9128	.00	.00	.00	.00	.00	.00	**
DITW	38727	BOT	4/30/80	0547	0647	17030.0	64.4586	.00	.00	.00	.00	.00	.00	**
DITCH	38728	BOT	5/06/80	0606	0706	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITW	38729	BOT	5/06/80	0709	0809	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITE	38730	BOT	5/06/80	0811	0911	16680.0	63.1338	.00	.00	.00	.00	.00	.00	**
DITE	38731	BOT	5/06/80	0911	1011	16770.0	63.4745	.00	.00	.00	.00	.00	.00	
DITCH	38732	BOT	5/06/80	1014	1114	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITW	38733	BOT	5/06/80	1116	1216	17240.0	65.2534	.00	.00	.00	.00	.00	.00	**
DITE	38734	BOT	5/06/80	1219	1319	16450.0	62.2633	.00	.00	.00	.00	.00	.00	**
DITW	38735	BOT	5/06/80	1321	1421	16940.0	64.1179	.00	.00	.00	.00	.00	.00	**
DITCH	38736	BOT	5/06/80	1423	1523	16750.0	63.3988	.00	.00	.00	.00	.00	.00	**
DITCH	38737	BOT	5/06/80	1523	1623	16840.0	63.7394	.00	.00	.00	.00	.00	.00	
DITE	38738	BOT	5/06/80	1626	1726	16680.0	63.1338	.00	.00	.00	.00	.00	.00	**
DITW	38739	BOT	5/06/80	1728	1828	16990.0	64.3072	.00	.00	.00	.00	.00	.00	**
DITW	38740	BOT	5/06/80	1828	1928	16940.0	64.1179	.00	.00	.00	.00	.00	.00	
DITE	38741	BOT	5/06/80	1930	2030	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITCH	38742	BOT	5/06/80	2032	2132	17140.0	64.8749	.00	.00	.00	.00	.00	.00	**
DITE	38743	BOT	5/06/80	2134	2234	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITCH	38744	BOT	5/06/80	2236	2336	17240.0	65.2534	.00	.00	.00	.00	.00	.00	**
DITW	38745	BOT	5/06/80	2337	0037	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITW	38746	BOT	5/07/80	0037	0137	16630.0	62.9446	.00	.00	.00	.00	.00	.00	
DITE	38747	BOT	5/07/80	0139	0239	16630.0	62.9446	.00	.00	.00	.00	.00	.00	**
DITCH	38748	BOT	5/07/80	0241	0341	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITW	38749	BOT	5/07/80	0344	0444	16770.0	63.4745	.00	.00	.00	.00	.00	.00	**
DITE	38750	BOT	5/07/80	0446	0546	16730.0	63.3231	.00	.00	.00	.00	.00	.00	**
DITCH	38751	BOT	5/07/80	0547	0647	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**
DITE	38752	BOT	5/13/80	0605	0705	16700.0	63.2095	.00	.00	.00	.00	.00	.00	**
DITW	38753	BOT	5/13/80	0707	0807	17030.0	64.4586	.00	.00	.00	.00	.00	.00	**
DITCH	38754	BOT	5/13/80	0809	0909	15930.0	60.2951	.00	.00	.00	.00	.00	.00	**
DITE	38755	BOT	5/13/80	0910	1010	16870.0	63.8530	.00	.00	.00	.00	.00	.00	**
DITW	38756	BOT	5/13/80	1012	1112	17030.0	64.4586	.00	.00	.00	.00	.00	.00	**
DITCH	38757	BOT	5/13/80	1113	1213	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITCH	38758	BOT	5/13/80	1213	1313	16520.0	62.5282	.00	.00	.00	.00	.00	.00	
DITE	38759	BOT	5/13/80	1314	1414	16590.0	62.7932	.00	.00	.00	.00	.00	.00	**
DITW	38760	BOT	5/13/80	1415	1515	16590.0	62.7932	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES MORONE SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITE	38761	BOT	5/13/80	1516	1616	15690.0	59.3867	.00	.00	.00	.00	.00	.00	**
DITW	38762	BOT	5/13/80	1616	1716	16120.0	61.0142	.00	.00	.00	.00	.00	.00	**
DITCH	38763	BOT	5/13/80	1717	1817	16000.0	60.5600	.00	.00	.00	.00	.00	.00	**
DITW	38764	BOT	5/13/80	1819	1919	16980.0	64.2693	.00	.00	.00	.00	.00	.00	**
DITCH	38765	BOT	5/13/80	1921	2021	16890.0	63.9287	.00	.00	.00	.00	.00	.00	**
DITE	38766	BOT	5/13/80	2023	2123	16660.0	63.0581	.00	.00	.00	.00	.00	.00	**
DITCH	38767	BOT	5/13/80	2125	2225	17080.0	64.6478	.00	.00	.00	.00	.00	.00	**
DITE	38768	BOT	5/13/80	2226	2326	16760.0	63.4366	.00	.00	.00	.00	.00	.00	**
DITW	38769	BOT	5/13/80	2328	0028	17260.0	65.3291	.00	.00	.00	.00	.00	.00	**
DITCH	38770	BOT	5/14/80	0029	0129	16960.0	64.1936	.00	.00	.00	.00	.00	.00	**
DITE	38771	BOT	5/14/80	0131	0231	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**
DITW	38772	BOT	5/14/80	0232	0332	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	38773	BOT	5/14/80	0333	0433	16780.0	63.5123	.00	.00	.00	.00	.00	.00	**
DITE	38774	BOT	5/14/80	0434	0534	15860.0	60.0301	.00	.00	.00	.00	.00	.00	**
DITW	38775	BOT	5/14/80	0535	0635	16540.0	62.6039	.00	.00	.00	.00	.00	.00	**
DITE	38776	BOT	5/20/80	0607	0707	17010.0	64.3829	.00	15.53	.00	.00	.00	15.53	**
DITW	38777	BOT	5/20/80	0709	0809	16860.0	63.8151	.00	47.01	.00	.00	.00	47.01	**
DITCH	38778	BOT	5/20/80	0810	0910	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITE	38779	BOT	5/20/80	0911	1011	16410.0	62.1119	.00	.00	.00	.00	.00	.00	**
DITCH	38780	BOT	5/20/80	1012	1112	16700.0	63.2095	.00	.00	.00	.00	.00	.00	**
DITW	38781	BOT	5/20/80	1113	1213	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITE	38782	BOT	5/20/80	1214	1314	16260.0	61.5441	.00	.00	.00	.00	.00	.00	**
DITW	38783	BOT	5/20/80	1315	1415	17040.0	64.4964	.00	.00	.00	.00	.00	.00	**
DITCH	38784	BOT	5/20/80	1416	1516	16370.0	61.9605	.00	.00	.00	.00	.00	.00	**
DITCH	38785	BOT	5/20/80	1516	1616	16330.0	61.8091	.00	48.54	.00	.00	.00	48.54	
DITW	38786	BOT	5/20/80	1620	1720	16330.0	61.8091	.00	16.18	.00	.00	.00	16.18	**
DITE	38787	BOT	5/20/80	1722	1822	16600.0	62.8310	.00	.00	.00	.00	.00	.00	**
DITCH	38788	BOT	5/20/80	1824	1924	16960.0	64.1936	.00	.00	.00	.00	.00	.00	**
DITW	38789	BOT	5/20/80	1926	2026	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITE	38790	BOT	5/20/80	2027	2127	15760.0	59.6516	.00	.00	.00	.00	.00	.00	**
DITE	38791	BOT	5/20/80	2127	2227	16970.0	64.2315	.00	15.57	.00	.00	.00	15.57	
DITW	38792	BOT	5/20/80	2228	2328	16750.0	63.3988	.00	94.64	.00	.00	.00	94.64	**
DITCH	38793	BOT	5/20/80	2329	0029	16800.0	63.5880	.00	125.81	.00	.00	.00	125.81	**
DITCH	38794	BOT	5/21/80	0029	0129	17110.0	64.7614	.00	.00	.00	.00	.00	.00	
DITE	38795	BOT	5/21/80	0131	0231	17070.0	64.6100	.00	30.95	.00	.00	.00	30.95	**
DITW	38796	BOT	5/21/80	0233	0333	17370.0	65.7455	.00	30.42	.00	.00	.00	30.42	**
DITE	38797	BOT	5/21/80	0335	0435	17060.0	64.5721	.00	.00	.00	.00	.00	.00	**
DITW	38798	BOT	5/21/80	0437	0537	17980.0	68.0543	.00	44.08	.00	.00	.00	44.08	**
DITCH	38799	BOT	5/21/80	0539	0639	17670.0	66.8810	.00	.00	.00	.00	.00	.00	**
DITW	38800	BOT	5/27/80	1556	1656	16500.0	62.4525	.00	16.01	.00	.00	.00	16.01	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

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DITE	38801	BOT	5/27/80	1659	1759	16310.0	61.7334	.00	.00	.00	.00	.00	.00	**
DITCH	38802	BOT	5/27/80	1800	1900	16950.0	64.1558	.00	.00	.00	.00	.00	.00	**
DITCH	38803	BOT	5/27/80	1902	2002	16800.0	63.5880	.00	94.36	.00	.00	.00	94.36	
DITE	38804	BOT	5/27/80	2004	2104	16570.0	62.7175	.00	63.78	.00	.00	.00	63.78	**
DITW	38805	BOT	5/27/80	2105	2205	17140.0	64.8749	.00	46.24	.00	.00	.00	46.24	**
DITW	38806	BOT	5/27/80	2207	2307	17020.0	64.4207	.00	170.75	.00	.00	.00	170.75	
DITCH	38807	BOT	5/27/80	2310	0010	16810.0	63.6259	.00	235.75	.00	.00	.00	235.75	**
DITE	38808	BOT	5/28/80	0013	0113	16900.0	63.9665	.00	390.83	.00	.00	.00	390.83	**
DITCH	38809	BOT	5/28/80	0117	0217	17010.0	64.3829	.00	108.72	.00	.00	.00	108.72	**
DITE	38810	BOT	5/28/80	0221	0321	16750.0	63.3988	.00	236.60	.00	.00	.00	236.60	**
DITW	38811	BOT	5/28/80	0324	0424	16740.0	63.3609	.00	78.91	.00	.00	.00	78.91	**
DITCH	38812	BOT	5/28/80	0428	0528	16940.0	64.1179	.00	77.98	.00	.00	.00	77.98	**
DITE	38813	BOT	5/28/80	0531	0631	16740.0	63.3609	.00	15.78	.00	.00	.00	15.78	**
DITW	38814	BOT	5/28/80	0634	0734	16860.0	63.8151	.00	47.01	.00	.00	.00	47.01	**
DITE	38815	BOT	5/28/80	0736	0836	16640.0	62.9824	.00	47.63	.00	.00	.00	47.63	**
DITCH	38816	BOT	5/28/80	0837	0937	16640.0	62.9824	.00	174.65	.00	.00	.00	174.65	**
DITW	38817	BOT	5/28/80	0939	1039	16940.0	64.1179	.00	218.35	.00	.00	.00	218.35	**
DITCH	38818	BOT	5/28/80	1041	1141	16670.0	63.0960	.00	190.19	.00	.00	.00	190.19	**
DITE	38819	BOT	5/28/80	1143	1243	16330.0	61.8091	.00	355.93	.00	.00	.00	355.93	**
DITW	38820	BOT	5/28/80	1245	1345	16730.0	63.3231	.00	142.13	.00	.00	.00	142.13	**
DITE	38821	BOT	5/28/80	1346	1446	16860.0	63.8151	.00	235.05	.00	.00	.00	235.05	**
DITW	38822	BOT	5/28/80	1448	1548	16650.0	63.0203	.00	15.87	.00	.00	.00	15.87	**
DITCH	38823	BOT	5/28/80	1550	1650	16710.0	63.2474	.00	15.81	.00	.00	.00	15.81	**
DITE	38824	BOT	6/03/80	0604	0704	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITW	38825	BOT	6/03/80	0705	0805	16060.0	60.7871	.00	49.35	.00	.00	.00	49.35	**
DITCH	38826	BOT	6/03/80	0806	0906	16580.0	62.7553	.00	.00	.00	.00	.00	.00	**
DITE	38827	BOT	6/03/80	0907	1007	15410.0	58.3269	.00	.00	.00	.00	.00	.00	**
DITW	38828	BOT	6/03/80	1008	1108	16790.0	63.5502	.00	.00	.00	.00	.00	.00	**
DITCH	38829	BOT	6/03/80	1109	1209	16320.0	61.7712	.00	.00	.00	.00	.00	.00	**
DITE	38830	BOT	6/03/80	1210	1310	16970.0	64.2315	.00	.00	.00	.00	.00	.00	**
DITCH	38831	BOT	6/03/80	1312	1412	16870.0	63.8530	.00	.00	.00	.00	.00	.00	**
DITW	38832	BOT	6/03/80	1413	1513	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITCH	38833	BOT	6/03/80	1514	1614	16420.0	62.1497	.00	321.80	.00	.00	.00	321.80	**
DITE	38834	BOT	6/03/80	1616	1716	16790.0	63.5502	.00	377.65	.00	.00	.00	377.65	**
DITW	38835	BOT	6/03/80	1717	1817	16570.0	62.7175	.00	366.72	.00	.00	.00	366.72	**
DITE	38836	BOT	6/03/80	1818	1918	15850.0	59.9923	.00	166.69	.00	.00	.00	166.69	**
DITW	38837	BOT	6/03/80	1920	2020	16060.0	60.7871	.00	.00	.00	.00	.00	.00	**
DITCH	38838	BOT	6/03/80	2022	2122	16020.0	60.6357	.00	49.48	.00	.00	.00	49.48	**
DITW	38839	BOT	6/03/80	2124	2224	16340.0	61.8469	.00	.00	.00	.00	.00	.00	**
DITCH	38840	BOT	6/03/80	2226	2326	16600.0	62.8310	.00	63.66	.00	.00	.00	63.66	**
DITE	38841	BOT	6/03/80	2329	0029	16700.0	63.2095	.00	15.82	.00	.00	.00	15.82	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

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DITE	38842	BOT	6/04/80	0029	0129	16310.0	61.7334	.00	32.40	.00	.00	.00	32.40	
DITW	38843	BOT	6/04/80	0131	0231	16810.0	63.6259	.00	.00	.00	.00	.00	.00	**
DITCH	38844	BOT	6/04/80	0234	0334	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITW	38845	BOT	6/04/80	0337	0437	16720.0	63.2852	.00	15.80	.00	.00	.00	15.80	**
DITE	38846	BOT	6/04/80	0440	0540	16360.0	61.9226	.00	.00	.00	.00	.00	.00	**
DITCH	38847	BOT	6/04/80	0544	0644	16490.0	62.4147	.00	176.24	.00	.00	.00	176.24	**
DITW	38848	BOT	6/06/80	0600	0700	16510.0	62.4904	.00	96.01	.00	.00	.00	96.01	**
DITE	38849	BOT	6/06/80	0701	0801	16490.0	62.4147	.00	64.09	.00	.00	.00	64.09	**
DITCH	38850	BOT	6/06/80	0802	0902	16380.0	61.9983	.00	48.39	.00	.00	.00	48.39	**
DITCH	38851	BOT	6/06/80	0902	1002	16130.0	61.0521	.00	.00	.00	.00	.00	.00	
DITE	38852	BOT	6/06/80	1003	1103	15940.0	60.3329	.00	.00	.00	.00	.00	.00	**
DITW	38853	BOT	6/06/80	1104	1204	16030.0	60.6736	.00	16.48	.00	.00	.00	16.48	**
DITE	38854	BOT	6/06/80	1205	1305	16230.0	61.4306	.00	.00	.00	.00	.00	.00	**
DITW	38855	BOT	6/06/80	1306	1406	16380.0	61.9983	.00	.00	.00	.00	.00	.00	**
DITCH	38856	BOT	6/06/80	1407	1507	16340.0	61.8469	.00	32.34	.00	.00	.00	32.34	**
DITE	38857	BOT	6/06/80	1508	1608	16820.0	63.6637	.00	15.71	.00	.00	.00	15.71	**
DITCH	38858	BOT	6/06/80	1609	1709	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITW	38859	BOT	6/06/80	1710	1810	17070.0	64.6100	.00	15.48	.00	.00	.00	15.48	**
DITE	38860	BOT	6/06/80	1811	1911	16440.0	62.2254	.00	241.06	.00	.00	.00	241.06	**
DITW	38861	BOT	6/06/80	1912	2012	16700.0	63.2095	.00	31.64	.00	.00	.00	31.64	**
DITCH	38862	BOT	6/06/80	2014	2114	16910.0	64.0044	.00	62.50	.00	.00	.00	62.50	**
DITCH	38863	BOT	6/06/80	2114	2214	16550.0	62.6418	.00	47.89	.00	.00	.00	47.89	
DITW	38864	BOT	6/06/80	2215	2315	16490.0	62.4147	.00	80.11	.00	.00	.00	80.11	**
DITE	38865	BOT	6/06/80	2316	0016	15830.0	59.9166	.00	50.07	.00	.00	.00	50.07	**
DITE	38866	BOT	6/07/80	0016	0116	16250.0	61.5063	.00	162.58	.00	.00	.00	162.58	
DITW	38867	BOT	6/07/80	0119	0219	16410.0	62.1119	.00	32.20	.00	.00	.00	32.20	**
DITCH	38868	BOT	6/07/80	0221	0321	16490.0	62.4147	.00	96.13	.00	.00	.00	96.13	**
DITE	38869	BOT	6/07/80	0323	0423	15760.0	59.6516	.00	100.58	.00	.00	.00	100.58	**
DITW	38870	BOT	6/07/80	0428	0528	17050.0	64.5343	.00	170.45	.00	.00	.00	170.45	**
DITCH	38871	BOT	6/07/80	0531	0631	16920.0	64.0422	.00	31.23	.00	.00	.00	31.23	**
DITCH	38872	BOT	6/10/80	0554	0654	17050.0	64.5343	.00	.00	.00	.00	.00	.00	
DITE	38873	BOT	6/10/80	0655	0755	16400.0	62.0740	.00	16.11	.00	.00	.00	16.11	**
DITW	38874	BOT	6/10/80	0756	0856	16350.0	61.8848	.00	32.32	.00	.00	.00	32.32	**
DITE	38875	BOT	6/10/80	0857	0957	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITW	38876	BOT	6/10/80	0958	1058	15900.0	60.1815	.00	49.85	.00	.00	.00	49.85	**
DITCH	38877	BOT	6/10/80	1059	1159	16420.0	62.1497	.00	96.54	.00	.00	.00	96.54	**
DITCH	38878	BOT	6/10/80	1159	1259	16400.0	62.0740	.00	32.22	.00	.00	.00	32.22	
DITE	38879	BOT	6/10/80	1300	1400	16350.0	61.8848	.00	16.16	.00	.00	.00	16.16	**
DITW	38880	BOT	6/10/80	1401	1501	16720.0	63.2852	.00	15.80	.00	.00	.00	15.80	**
DITCH	38881	BOT	6/10/80	1502	1602	16970.0	64.2315	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES MORONE SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITW	38882	BOT	6/10/80	1603	1703	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITE	38883	BOT	6/10/80	1704	1804	15900.0	60.1815	.00	.00	.00	.00	.00	.00	**
DITE	38884	BOT	6/10/80	1805	1905	17290.0	65.4427	.00	15.28	.00	.00	.00	15.28	
DITW	38885	BOT	6/10/80	1906	2006	15310.0	57.9484	.00	.00	.00	.00	.00	.00	**
DITCH	38886	BOT	6/10/80	2007	2107	16660.0	63.0581	.00	47.58	.00	.00	.00	47.58	**
DITW	38887	BOT	6/10/80	2108	2208	13100.0	49.5835	.00	20.17	.00	.00	.00	20.17	**
DITE	38888	BOT	6/10/80	2209	2309	16990.0	64.3072	.00	15.55	.00	.00	.00	15.55	**
DITCH	38889	BOT	6/10/80	2310	0010	16890.0	63.9287	.00	.00	.00	.00	.00	.00	**
DITCH	38890	BOT	6/11/80	0010	0110	16860.0	63.8151	.00	78.35	.00	.00	.00	78.35	
DITE	38891	BOT	6/11/80	0111	0211	16630.0	62.9446	.00	95.32	.00	.00	.00	95.32	**
DITW	38892	BOT	6/11/80	0212	0312	17140.0	64.8749	.00	30.83	.00	.00	.00	30.83	**
DITW	38893	BOT	6/11/80	0312	0412	17100.0	64.7235	.00	15.45	.00	.00	.00	15.45	
DITCH	38894	BOT	6/11/80	0413	0513	16200.0	61.3170	.00	.00	.00	.00	.00	.00	**
DITE	38895	BOT	6/11/80	0514	0614	17450.0	66.0483	.00	.00	.00	.00	.00	.00	**
DITE	38896	BOT	6/13/80	0556	0656	16190.0	61.2792	.00	.00	.00	.00	.00	.00	
DITCH	38897	BOT	6/13/80	0657	0757	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITW	38898	BOT	6/13/80	0758	0858	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITW	38899	BOT	6/13/80	0858	0958	16670.0	63.0960	.00	.00	.00	.00	.00	.00	
DITCH	38900	BOT	6/13/80	0959	1059	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITE	38901	BOT	6/13/80	1100	1200	16120.0	61.0142	.00	.00	.00	.00	.00	.00	**
DITE	38902	BOT	6/13/80	1200	1300	16110.0	60.9764	.00	.00	.00	.00	.00	.00	
DITCH	38903	BOT	6/13/80	1301	1401	15920.0	60.2572	.00	33.19	.00	.00	.00	33.19	**
DITW	38904	BOT	6/13/80	1402	1502	16280.0	61.6198	.00	.00	.00	.00	.00	.00	**
DITW	38905	BOT	6/13/80	1502	1602	16090.0	60.9007	.00	.00	.00	.00	.00	.00	
DITCH	38906	BOT	6/13/80	1603	1703	16390.0	62.0362	.00	.00	.00	.00	.00	.00	**
DITE	38907	BOT	6/13/80	1704	1804	16220.0	61.3927	.00	.00	.00	.00	.00	.00	**
DITE	38908	BOT	6/13/80	1804	1904	16160.0	61.1656	.00	.00	.00	.00	.00	.00	
DITW	38909	BOT	6/13/80	1905	2005	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITCH	38910	BOT	6/13/80	2006	2106	16420.0	62.1497	.00	.00	.00	.00	.00	.00	**
DITCH	38911	BOT	6/13/80	2106	2206	16690.0	63.1717	.00	.00	.00	.00	.00	.00	
DITW	38912	BOT	6/13/80	2207	2307	16660.0	63.0581	.00	.00	.00	.00	.00	.00	**
DITE	38913	BOT	6/13/80	2308	0008	14250.0	53.9363	.00	.00	.00	.00	.00	.00	**
DITE	38914	BOT	6/14/80	0008	0108	17490.0	66.1997	.00	.00	.00	.00	.00	.00	
DITCH	38915	BOT	6/14/80	0109	0209	16970.0	64.2315	.00	31.14	.00	.00	.00	31.14	**
DITW	38916	BOT	6/14/80	0210	0310	16350.0	61.8848	.00	.00	.00	.00	.00	.00	**
DITCH	38917	BOT	6/14/80	0311	0411	17820.0	67.4487	.00	59.30	.00	.00	.00	59.30	**
DITW	38918	BOT	6/14/80	0412	0512	15860.0	60.0301	.00	.00	.00	.00	.00	.00	**
DITE	38919	BOT	6/14/80	0513	0613	17520.0	66.3132	.00	.00	.00	.00	.00	.00	**
DITE	38920	BOT	6/17/80	0555	0655	16520.0	62.5282	.00	.00	.00	.00	.00	.00	
DITW	38921	BOT	6/17/80	0656	0756	16370.0	61.9605	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

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1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES MORONE SP.

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DITCH	38922	BOT	6/17/80	0757	0857	16280.0	61.6198	.00	.00	.00	.00	.00	.00	**
DITCH	38923	BOT	6/17/80	0857	0957	16390.0	62.0362	.00	.00	.00	.00	.00	.00	
DITE	38924	BOT	6/17/80	0957	1057	16200.0	61.3170	.00	.00	.00	.00	.00	.00	**
DITW	38925	BOT	6/17/80	1058	1158	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITW	38926	BOT	6/17/80	1158	1258	16240.0	61.4684	.00	.00	.00	.00	.00	.00	
DITCH	38927	BOT	6/17/80	1259	1359	16130.0	61.0521	.00	.00	.00	.00	.00	.00	**
DITE	38928	BOT	6/17/80	1400	1500	16410.0	62.1119	.00	.00	.00	.00	.00	.00	**
DITE	38929	BOT	6/17/80	1500	1600	16460.0	62.3011	.00	.00	.00	.00	.00	.00	
DITCH	38930	BOT	6/17/80	1602	1702	17090.0	64.6857	.00	.00	.00	.00	.00	.00	**
DITW	38931	BOT	6/17/80	1705	1805	17240.0	65.2534	.00	.00	.00	.00	.00	.00	**
DITW	38932	BOT	6/17/80	1805	1905	15720.0	59.5002	.00	.00	.00	.00	.00	.00	
DITCH	38933	BOT	6/17/80	1907	2007	15070.0	57.0400	.00	.00	.00	.00	.00	.00	**
DITE	38934	BOT	6/17/80	2009	2109	16120.0	61.0142	.00	.00	.00	.00	.00	.00	**
DITCH	38935	BOT	6/17/80	2111	2211	16330.0	61.8091	.00	.00	.00	.00	.00	.00	**
DITW	38936	BOT	6/17/80	2213	2313	16270.0	61.5820	.00	.00	.00	.00	.00	.00	**
DITE	38937	BOT	6/17/80	2315	0015	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITE	38938	BOT	6/18/80	0016	0116	16650.0	63.0203	.00	.00	.00	.00	.00	.00	
DITW	38939	BOT	6/18/80	0118	0218	16290.0	61.6577	.00	.00	.00	.00	.00	.00	**
DITCH	38940	BOT	6/18/80	0220	0320	16340.0	61.8469	.00	64.68	.00	.00	.00	64.68	**
DITCH	38941	BOT	6/18/80	0320	0420	16170.0	61.2035	.00	.00	.00	.00	.00	.00	
DITW	38942	BOT	6/18/80	0422	0522	16610.0	62.8689	.00	15.91	.00	.00	.00	15.91	**
DITE	38943	BOT	6/18/80	0524	0624	16360.0	61.9226	.00	.00	.00	.00	.00	.00	**
DITE	38944	BOT	6/20/80	0557	0657	16650.0	63.0203	.00	15.87	.00	.00	.00	15.87	
DITW	38945	BOT	6/20/80	0658	0758	16500.0	62.4525	.00	.00	.00	.00	.00	.00	**
DITCH	38946	BOT	6/20/80	0759	0859	16080.0	60.8628	.00	.00	.00	.00	.00	.00	**
DITW	38947	BOT	6/20/80	0900	1000	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITCH	38948	BOT	6/20/80	1001	1101	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITE	38949	BOT	6/20/80	1102	1202	16070.0	60.8250	.00	.00	.00	.00	.00	.00	**
DITCH	38950	BOT	6/20/80	1203	1303	16360.0	61.9226	.00	.00	.00	.00	.00	.00	**
DITW	38951	BOT	6/20/80	1304	1404	16050.0	60.7493	.00	16.46	.00	.00	.00	16.46	**
DITE	38952	BOT	6/20/80	1405	1505	16310.0	61.7334	.00	.00	.00	.00	.00	.00	**
DITCH	38953	BOT	6/20/80	1506	1606	16260.0	61.5441	.00	.00	.00	.00	.00	.00	**
DITW	38954	BOT	6/20/80	1607	1707	16210.0	61.3549	.00	.00	.00	.00	.00	.00	**
DITE	38955	BOT	6/20/80	1708	1808	16550.0	62.6418	.00	15.96	.00	.00	.00	15.96	**
DITW	38956	BOT	6/20/80	1809	1909	16450.0	62.2633	.00	128.49	.00	.00	.00	128.49	**
DITCH	38957	BOT	6/20/80	1910	2010	15950.0	60.3708	.00	.00	.00	.00	.00	.00	**
DITE	38958	BOT	6/20/80	2011	2111	15760.0	59.6516	.00	16.76	.00	.00	.00	16.76	**
DITCH	38959	BOT	6/20/80	2112	2212	16870.0	63.8530	.00	.00	.00	.00	.00	.00	**
DITE	38960	BOT	6/20/80	2213	2313	16080.0	60.8628	.00	.00	.00	.00	.00	.00	**
DITW	38961	BOT	6/20/80	2314	0014	16310.0	61.7334	.00	16.20	.00	.00	.00	16.20	**
DITE	38962	BOT	6/21/80	0015	0115	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

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DITCH	38963	BOT	6/21/80	0116	0216	15680.0	59.3488	.00	.00	.00	.00	.00	.00	**
DITW	38964	BOT	6/21/80	0218	0318	16620.0	62.9067	.00	15.90	.00	.00	.00	15.90	**
DITE	38965	BOT	6/21/80	0319	0419	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITW	38966	BOT	6/21/80	0420	0520	16600.0	62.8310	.00	15.92	.00	.00	.00	15.92	**
DITCH	38967	BOT	6/21/80	0521	0621	16320.0	61.7712	.00	32.38	.00	.00	.00	32.38	**
DITE	38968	BOT	6/24/80	0625	0725	16660.0	63.0581	.00	31.72	.00	.00	.00	31.72	**
DITCH	38969	BOT	6/24/80	0726	0826	16070.0	60.8250	.00	.00	.00	.00	.00	.00	**
DITW	38970	BOT	6/24/80	0828	0928	16320.0	61.7712	.00	16.19	.00	.00	.00	16.19	**
DITE	38971	BOT	6/24/80	0929	1029	16520.0	62.5282	.00	63.97	.00	.00	.00	63.97	**
DITW	38972	BOT	6/24/80	1030	1130	16850.0	63.7773	.00	15.68	.00	.00	.00	15.68	**
DITCH	38973	BOT	6/24/80	1132	1232	16620.0	62.9067	.00	.00	.00	.00	.00	.00	**
DITCH	38974	BOT	6/24/80	1232	1332	16600.0	62.8310	.00	.00	.00	.00	.00	.00	
DITW	38975	BOT	6/24/80	1333	1433	16680.0	63.1338	.00	.00	.00	.00	.00	.00	**
DITE	38976	BOT	6/24/80	1435	1535	16660.0	63.0581	.00	.00	.00	.00	.00	.00	**
DITE	38977	BOT	6/24/80	1535	1635	16440.0	62.2254	.00	.00	.00	.00	.00	.00	
DITW	38978	BOT	6/24/80	1636	1736	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITCH	38979	BOT	6/24/80	1737	1837	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITE	38980	BOT	6/24/80	1838	1938	16950.0	64.1558	.00	.00	.00	.00	.00	.00	**
DITW	38981	BOT	6/24/80	1940	2040	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**
DITCH	38982	BOT	6/24/80	2041	2141	16440.0	62.2254	.00	16.07	.00	.00	.00	16.07	**
DITCH	38983	BOT	6/24/80	2141	2241	16150.0	61.1278	.00	16.36	.00	.00	.00	16.36	
DITE	38984	BOT	6/24/80	2242	2342	16310.0	61.7334	.00	.00	.00	.00	.00	.00	**
DITW	38985	BOT	6/24/80	2343	0043	16330.0	61.8091	.00	.00	.00	.00	.00	.00	**
DITE	38986	BOT	6/25/80	0044	0144	16220.0	61.3927	.00	.00	.00	.00	.00	.00	**
DITW	38987	BOT	6/25/80	0145	0245	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITCH	38988	BOT	6/25/80	0246	0346	15770.0	59.6895	.00	.00	.00	.00	.00	.00	**
DITCH	38989	BOT	6/25/80	0346	0446	16410.0	62.1119	.00	16.10	.00	.00	.00	16.10	
DITE	38990	BOT	6/25/80	0447	0547	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITW	38991	BOT	6/25/80	0548	0648	16680.0	63.1338	.00	15.84	.00	.00	.00	15.84	**
DITE	38992	BOT	7/01/80	0612	0712	16260.0	61.5441	.00	.00	.00	.00	.00	.00	**
DITCH	38993	BOT	7/01/80	0715	0815	16580.0	62.7553	.00	.00	.00	.00	.00	.00	**
DITW	38994	BOT	7/01/80	0817	0917	15990.0	60.5222	.00	.00	.00	.00	.00	.00	**
DITW	38995	BOT	7/01/80	0917	1017	16210.0	61.3549	.00	16.30	.00	.00	.00	16.30	
DITCH	38996	BOT	7/01/80	1018	1118	16000.0	60.5600	.00	.00	.00	.00	.00	.00	**
DITE	38997	BOT	7/01/80	1120	1220	16210.0	61.3549	.00	.00	.00	.00	.00	.00	**
DITE	38998	BOT	7/01/80	1220	1320	16590.0	62.7932	.00	.00	.00	.00	.00	.00	
DITW	38999	BOT	7/01/80	1322	1422	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITCH	39000	BOT	7/01/80	1425	1525	16170.0	61.2035	.00	.00	.00	.00	.00	.00	**
DITCH	39001	BOT	7/01/80	1525	1625	15930.0	60.2951	.00	.00	.00	.00	.00	.00	
DITW	39002	BOT	7/01/80	1626	1726	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES MORONE SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITE	39003	BOT	7/01/80	1727	1827	15960.0	60.4086	.00	.00	.00	.00	.00	.00	**
DITE	39004	BOT	7/01/80	1827	1927	16400.0	62.0740	.00	.00	.00	.00	.00	.00	
DITCH	39005	BOT	7/01/80	1929	2029	16420.0	62.1497	.00	.00	.00	.00	.00	.00	**
DITW	39006	BOT	7/01/80	2030	2130	16530.0	62.5661	.00	.00	.00	.00	.00	.00	**
DITCH	39007	BOT	7/01/80	2131	2231	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITW	39008	BOT	7/01/80	2233	2333	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITE	39009	BOT	7/01/80	2335	0035	16540.0	62.6039	.00	.00	.00	.00	.00	.00	**
DITW	39010	BOT	7/02/80	0037	0137	16480.0	62.3768	.00	16.03	.00	.00	.00	16.03	**
DITE	39011	BOT	7/02/80	0139	0239	17150.0	64.9128	.00	.00	.00	.00	.00	.00	**
DITCH	39012	BOT	7/02/80	0241	0341	16690.0	63.1717	.00	.00	.00	.00	.00	.00	**
DITW	39013	BOT	7/02/80	0343	0443	16450.0	62.2633	.00	.00	.00	.00	.00	.00	**
DITCH	39014	BOT	7/02/80	0445	0545	15950.0	60.3708	.00	.00	.00	.00	.00	.00	**
DITE	39015	BOT	7/02/80	0547	0647	16530.0	62.5661	.00	.00	.00	.00	.00	.00	**
DITE	39016	BOT	7/08/80	0546	0646	16200.0	61.3170	.00	.00	.00	.00	.00	.00	
DITCH	39017	BOT	7/08/80	0648	0748	15990.0	60.5222	.00	.00	.00	.00	.00	.00	**
DITW	39018	BOT	7/08/80	0750	0850	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITE	39019	BOT	7/08/80	0851	0951	15990.0	60.5222	.00	.00	.00	.00	.00	.00	**
DITW	39020	BOT	7/08/80	0953	1053	16010.0	60.5979	.00	.00	.00	.00	.00	.00	**
DITCH	39021	BOT	7/08/80	1055	1155	16360.0	61.9226	.00	.00	.00	.00	.00	.00	**
DITW	39022	BOT	7/08/80	1157	1257	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITCH	39023	BOT	7/08/80	1259	1359	16850.0	63.7773	.00	.00	.00	.00	.00	.00	**
DITE	39024	BOT	7/08/80	1401	1501	16690.0	63.1717	.00	.00	.00	.00	.00	.00	**
DITE	39025	BOT	7/08/80	1501	1601	16500.0	62.4525	.00	.00	.00	.00	.00	.00	
DITW	39026	BOT	7/08/80	1603	1703	17540.0	66.3889	.00	.00	.00	.00	.00	.00	**
DITCH	39027	BOT	7/08/80	1704	1804	17070.0	64.6100	.00	.00	.00	.00	.00	.00	**
DITCH	39028	BOT	7/08/80	1804	1904	16690.0	63.1717	.00	.00	.00	.00	.00	.00	
DITE	39029	BOT	7/08/80	1906	2006	17170.0	64.9885	.00	15.39	.00	.00	.00	15.39	**
DITW	39030	BOT	7/08/80	2008	2108	17650.0	66.8053	.00	.00	.00	.00	.00	.00	**
DITW	39031	BOT	7/08/80	2108	2208	17250.0	65.2913	.00	.00	.00	.00	.00	.00	
DITCH	39032	BOT	7/08/80	2210	2310	17270.0	65.3670	.00	.00	.00	.00	.00	.00	**
DITE	39033	BOT	7/08/80	2312	0012	15930.0	60.2951	.00	.00	.00	.00	.00	.00	**
DITE	39034	BOT	7/09/80	0012	0112	16160.0	61.1656	.00	.00	.00	.00	.00	.00	
DITW	39035	BOT	7/09/80	0113	0213	16620.0	62.9067	.00	.00	.00	.00	.00	.00	**
DITCH	39036	BOT	7/09/80	0214	0314	16270.0	61.5820	.00	.00	.00	.00	.00	.00	**
DITW	39037	BOT	7/09/80	0315	0415	16080.0	60.8628	.00	.00	.00	.00	.00	.00	**
DITCH	39038	BOT	7/09/80	0416	0516	15960.0	60.4086	.00	.00	.00	.00	.00	.00	**
DITE	39039	BOT	7/09/80	0517	0617	17020.0	64.4207	.00	.00	.00	.00	.00	.00	**
DITCH	39040	BOT	7/15/80	0606	0706	16980.0	64.2693	.00	.00	.00	.00	.00	.00	**
DITW	39041	BOT	7/15/80	0714	0814	16710.0	63.2474	.00	.00	.00	.00	.00	.00	**
DITE	39042	BOT	7/15/80	0816	0916	16410.0	62.1119	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES MORONE SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITE	39043	BOT	7/15/80	0916	1016	16200.0	61.3170	.00	.00	.00	.00	.00	.00	
DITW	39044	BOT	7/15/80	1017	1117	17110.0	64.7614	.00	.00	.00	.00	.00	.00	**
DITCH	39045	BOT	7/15/80	1119	1219	17080.0	64.6478	.00	.00	.00	.00	.00	.00	**
DITCH	39046	BOT	7/15/80	1219	1319	17190.0	65.0642	.00	.00	.00	.00	.00	.00	
DITW	39047	BOT	7/15/80	1321	1421	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITE	39048	BOT	7/15/80	1423	1523	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITE	39049	BOT	7/15/80	1523	1623	16110.0	60.9764	.00	.00	.00	.00	.00	.00	
DITW	39050	BOT	7/15/80	1625	1725	16030.0	60.6736	.00	.00	.00	.00	.00	.00	**
DITCH	39051	BOT	7/15/80	1727	1827	16770.0	63.4745	.00	.00	.00	.00	.00	.00	**
DITW	39052	BOT	7/15/80	1829	1929	15830.0	59.9166	.00	.00	.00	.00	.00	.00	**
DITCH	39053	BOT	7/15/80	1930	2030	15660.0	59.2731	.00	.00	.00	.00	.00	.00	**
DITE	39054	BOT	7/15/80	2031	2131	16890.0	63.9287	.00	.00	.00	.00	.00	.00	**
DITCH	39055	BOT	7/15/80	2133	2203	7950.0	30.0908	.00	.00	.00	.00	.00	.00	**
DITW	39056	BOT	7/15/80	2235	2335	16700.0	63.2095	.00	.00	.00	.00	.00	.00	**
DITE	39057	BOT	7/15/80	2336	0036	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**
DITCH	39058	BOT	7/16/80	0038	0138	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITW	39059	BOT	7/16/80	0139	0239	17210.0	65.1399	.00	.00	.00	.00	.00	.00	**
DITE	39060	BOT	7/16/80	0240	0340	16020.0	60.6357	.00	.00	.00	.00	.00	.00	**
DITW	39061	BOT	7/16/80	0341	0441	16870.0	63.8530	.00	.00	.00	.00	.00	.00	**
DITCH	39062	BOT	7/16/80	0442	0542	16240.0	61.4684	.00	.00	.00	.00	.00	.00	**
DITE	39063	BOT	7/16/80	0543	0643	16100.0	60.9385	.00	.00	.00	.00	.00	.00	**
DITCH	39064	BOT	7/22/80	0600	0700	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITE	39065	BOT	7/22/80	0701	0801	16020.0	60.6357	.00	.00	.00	.00	.00	.00	**
DITW	39066	BOT	7/22/80	0803	0903	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITE	39067	BOT	7/22/80	0904	1004	16230.0	61.4306	.00	.00	.00	.00	.00	.00	**
DITCH	39068	BOT	7/22/80	1005	1105	16310.0	61.7334	.00	.00	.00	.00	.00	.00	**
DITW	39069	BOT	7/22/80	1106	1206	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**
DITCH	39070	BOT	7/22/80	1207	1307	16300.0	61.6955	.00	.00	.00	.00	.00	.00	**
DITW	39071	BOT	7/22/80	1308	1408	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITE	39072	BOT	7/22/80	1409	1509	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITCH	39073	BOT	7/22/80	1511	1611	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**
DITE	39074	BOT	7/22/80	1613	1713	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITW	39075	BOT	7/22/80	1715	1815	16230.0	61.4306	.00	.00	.00	.00	.00	.00	**
DITW	39076	BOT	7/22/80	1815	1915	16210.0	61.3549	.00	.00	.00	.00	.00	.00	
DITCH	39077	BOT	7/22/80	1917	2017	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITE	39078	BOT	7/22/80	2019	2119	16580.0	62.7553	.00	.00	.00	.00	.00	.00	**
DITW	39079	BOT	7/22/80	2121	2221	16120.0	61.0142	.00	.00	.00	.00	.00	.00	**
DITCH	39080	BOT	7/22/80	2223	2323	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITE	39081	BOT	7/22/80	2325	0025	15910.0	60.2194	.00	.00	.00	.00	.00	.00	**
DITE	39082	BOT	7/23/80	0025	0125	17180.0	65.0263	.00	.00	.00	.00	.00	.00	
DITCH	39083	BOT	7/23/80	0148	0248	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**

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DITW	39084	BOT	7/23/80	0250	0350	16580.0	62.7553	.00	.00	.00	.00	.00	.00	**
DITW	39085	BOT	7/23/80	0350	0450	16220.0	61.3927	.00	.00	.00	.00	.00	.00	
DITE	39086	BOT	7/23/80	0451	0551	15390.0	58.2512	.00	.00	.00	.00	.00	.00	**
DITCH	39087	BOT	7/23/80	0553	0653	16130.0	61.0521	.00	.00	.00	.00	.00	.00	**
DITCH	39088	BOT	7/29/80	0559	0659	16000.0	60.5600	.00	.00	.00	.00	.00	.00	
DITW	39089	BOT	7/29/80	0700	0800	16250.0	61.5063	.00	.00	.00	.00	.00	.00	**
DITE	39090	BOT	7/29/80	0802	0902	16370.0	61.9605	.00	.00	.00	.00	.00	.00	**
DITE	39091	BOT	7/29/80	0902	1002	16510.0	62.4904	.00	.00	.00	.00	.00	.00	
DITW	39092	BOT	7/29/80	1003	1103	17660.0	66.8431	.00	.00	.00	.00	.00	.00	**
DITCH	39093	BOT	7/29/80	1104	1204	16340.0	61.8469	.00	.00	.00	.00	.00	.00	**
DITW	39094	BOT	7/29/80	1205	1305	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITCH	39095	BOT	7/29/80	1307	1407	16750.0	63.3988	.00	.00	.00	.00	.00	.00	**
DITE	39096	BOT	7/29/80	1409	1509	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**
DITCH	39097	BOT	7/29/80	1510	1610	15800.0	59.8030	.00	.00	.00	.00	.00	.00	**
DITE	39098	BOT	7/29/80	1612	1712	15780.0	59.7273	.00	.00	.00	.00	.00	.00	**
DITW	39099	BOT	7/29/80	1713	1813	16590.0	62.7932	.00	.00	.00	.00	.00	.00	**
DITW	39100	BOT	7/29/80	1813	1913	16490.0	62.4147	.00	.00	.00	.00	.00	.00	
DITE	39101	BOT	7/29/80	1916	2016	15710.0	59.4624	.00	.00	.00	.00	.00	.00	**
DITCH	39102	BOT	7/29/80	2017	2117	15760.0	59.6516	.00	.00	.00	.00	.00	.00	**
DITCH	39103	BOT	7/29/80	2117	2217	16000.0	60.5600	.00	.00	.00	.00	.00	.00	
DITE	39104	BOT	7/29/80	2219	2319	16980.0	64.2693	.00	.00	.00	.00	.00	.00	**
DITW	39105	BOT	7/29/80	2321	0021	17000.0	64.3450	.00	.00	.00	.00	.00	.00	**
DITW	39106	BOT	7/30/80	0022	0122	16610.0	62.8689	.00	.00	.00	.00	.00	.00	
DITE	39107	BOT	7/30/80	0124	0224	14110.0	53.4064	.00	.00	.00	.00	.00	.00	**
DITCH	39108	BOT	7/30/80	0225	0325	15230.0	57.6456	.00	.00	.00	.00	.00	.00	**
DITCH	39109	BOT	7/30/80	0325	0425	16050.0	60.7493	.00	.00	.00	.00	.00	.00	
DITE	39110	BOT	7/30/80	0427	0527	15710.0	59.4624	.00	.00	.00	.00	.00	.00	**
DITW	39111	BOT	7/30/80	0529	0629	17390.0	65.8212	.00	.00	.00	.00	.00	.00	**
DITE	39112	BOT	8/05/80	0613	0713	16260.0	61.5441	.00	.00	.00	.00	.00	.00	**
DITCH	39113	BOT	8/05/80	0714	0814	15560.0	58.8946	.00	.00	.00	.00	.00	.00	**
DITW	39114	BOT	8/05/80	0816	0916	16830.0	63.7016	.00	.00	.00	.00	.00	.00	**
DITCH	39115	BOT	8/05/80	0918	1018	15940.0	60.3329	.00	.00	.00	.00	.00	.00	**
DITW	39116	BOT	8/05/80	1019	1119	16160.0	61.1656	.00	.00	.00	.00	.00	.00	**
DITE	39117	BOT	8/05/80	1120	1220	15690.0	59.3867	.00	.00	.00	.00	.00	.00	**
DITE	39118	BOT	8/05/80	1220	1320	16270.0	61.5820	.00	.00	.00	.00	.00	.00	
DITW	39119	BOT	8/05/80	1322	1422	16380.0	61.9983	.00	.00	.00	.00	.00	.00	**
DITCH	39120	BOT	8/05/80	1424	1524	16570.0	62.7175	.00	.00	.00	.00	.00	.00	**
DITCH	39121	BOT	8/05/80	1524	1624	18260.0	69.1141	.00	.00	.00	.00	.00	.00	
DITE	39122	BOT	8/05/80	1626	1726	17140.0	64.8749	.00	.00	.00	.00	.00	.00	**
DITW	39123	BOT	8/05/80	1728	1828	18890.0	71.4987	.00	.00	.00	.00	.00	.00	**

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DITW	39124	BOT	8/05/80	1828	1928	16240.0	61.4684	.00	.00	.00	.00	.00	.00	
DITE	39125	BOT	8/05/80	1930	2030	16060.0	60.7871	.00	.00	.00	.00	.00	.00	**
DITCH	39126	BOT	8/05/80	2032	2132	18150.0	68.6978	.00	.00	.00	.00	.00	.00	**
DITCH	39127	BOT	8/05/80	2132	2232	17450.0	66.0483	.00	.00	.00	.00	.00	.00	
DITE	39128	BOT	8/05/80	2234	2334	15180.0	57.4563	.00	.00	.00	.00	.00	.00	**
DITW	39129	BOT	8/05/80	2336	0036	16530.0	62.5661	.00	.00	.00	.00	.00	.00	**
DITE	39130	BOT	8/06/80	0037	0137	16220.0	61.3927	.00	.00	.00	.00	.00	.00	**
DITCH	39131	BOT	8/06/80	0139	0239	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITW	39132	BOT	8/06/80	0240	0340	16150.0	61.1278	.00	.00	.00	.00	.00	.00	**
DITE	39133	BOT	8/06/80	0341	0441	16330.0	61.8091	.00	.00	.00	.00	.00	.00	**
DITW	39134	BOT	8/06/80	0442	0542	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITCH	39135	BOT	8/06/80	0544	0644	16450.0	62.2633	.00	.00	.00	.00	.00	.00	**
DITW	39136	BOT	8/12/80	0605	0705	16130.0	61.0521	.00	.00	.00	.00	.00	.00	**
DITE	39137	BOT	8/12/80	0706	0806	15770.0	59.6895	.00	.00	.00	.00	.00	.00	**
DITCH	39138	BOT	8/12/80	0807	0907	16180.0	61.2413	.00	.00	.00	.00	.00	.00	**
DITCH	39139	BOT	8/12/80	0907	1007	16260.0	61.5441	.00	.00	.00	.00	.00	.00	
DITE	39140	BOT	8/12/80	1009	1109	16800.0	63.5880	.00	.00	.00	.00	.00	.00	**
DITW	39141	BOT	8/12/80	1111	1211	16820.0	63.6637	.00	.00	.00	.00	.00	.00	**
DITE	39142	BOT	8/12/80	1212	1312	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITW	39143	BOT	8/12/80	1314	1414	16760.0	63.4366	.00	.00	.00	.00	.00	.00	**
DITCH	39144	BOT	8/12/80	1416	1516	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITW	39145	BOT	8/12/80	1517	1617	16140.0	61.0899	.00	.00	.00	.00	.00	.00	**
DITCH	39146	BOT	8/12/80	1619	1719	16350.0	61.8848	.00	.00	.00	.00	.00	.00	**
DITE	39147	BOT	8/12/80	1721	1821	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITE	39148	BOT	8/12/80	1821	1921	15830.0	59.9166	.00	.00	.00	.00	.00	.00	
DITCH	39149	BOT	8/12/80	1922	2022	16050.0	60.7493	.00	.00	.00	.00	.00	.00	**
DITW	39150	BOT	8/12/80	2024	2124	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITE	39151	BOT	8/12/80	2126	2226	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITCH	39152	BOT	8/12/80	2228	2328	15610.0	59.0839	.00	.00	.00	.00	.00	.00	**
DITW	39153	BOT	8/12/80	2330	0030	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITE	39154	BOT	8/13/80	0031	0131	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITW	39155	BOT	8/13/80	0132	0232	17140.0	64.8749	.00	.00	.00	.00	.00	.00	**
DITCH	39156	BOT	8/13/80	0233	0333	17610.0	66.6539	.00	.00	.00	.00	.00	.00	**
DITCH	39157	BOT	8/13/80	0333	0433	16560.0	62.6796	.00	.00	.00	.00	.00	.00	
DITW	39158	BOT	8/13/80	0435	0535	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITE	39159	BOT	8/13/80	0536	0636	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITCH	39160	BOT	8/19/80	0601	0701	12300.0	46.5555	.00	.00	.00	.00	.00	.00	**
DITW	39161	BOT	8/19/80	0705	0805	14780.0	55.9423	.00	.00	.00	.00	.00	.00	**
DITE	39162	BOT	8/19/80	0810	0910	16390.0	62.0362	.00	.00	.00	.00	.00	.00	**
DITE	39163	BOT	8/19/80	0910	1010	16420.0	62.1497	.00	.00	.00	.00	.00	.00	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES MORONE SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITW	39164	BOT	8/19/80	1012	1112	16140.0	61.0899	.00	.00	.00	.00	.00	.00	**
DITCH	39165	BOT	8/19/80	1113	1213	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	39166	BOT	8/19/80	1213	1313	16690.0	63.1717	.00	.00	.00	.00	.00	.00	
DITE	39167	BOT	8/19/80	1314	1414	15780.0	59.7273	.00	.00	.00	.00	.00	.00	**
DITW	39168	BOT	8/19/80	1416	1516	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITCH	39169	BOT	8/19/80	1519	1619	16880.0	63.8908	.00	.00	.00	.00	.00	.00	**
DITW	39170	BOT	8/19/80	1620	1720	17110.0	64.7614	.00	.00	.00	.00	.00	.00	**
DITE	39171	BOT	8/19/80	1721	1821	16080.0	60.8628	.00	.00	.00	.00	.00	.00	**
DITW	39172	BOT	8/19/80	1822	1922	16940.0	64.1179	.00	.00	.00	.00	.00	.00	**
DITCH	39173	BOT	8/19/80	1923	2023	16340.0	61.8469	.00	.00	.00	.00	.00	.00	**
DITE	39174	BOT	8/19/80	2024	2124	18490.0	69.9847	.00	.00	.00	.00	.00	.00	**
DITCH	39175	BOT	8/19/80	2125	2225	16410.0	62.1119	.00	.00	.00	.00	.00	.00	**
DITW	39176	BOT	8/19/80	2226	2326	16090.0	60.9007	.00	.00	.00	.00	.00	.00	**
DITE	39177	BOT	8/19/80	2327	0027	15340.0	58.0619	.00	.00	.00	.00	.00	.00	**
DITW	39178	BOT	8/20/80	0029	0129	16280.0	61.6198	.00	.00	.00	.00	.00	.00	**
DITCH	39179	BOT	8/20/80	0130	0230	16890.0	63.9287	.00	.00	.00	.00	.00	.00	**
DITE	39180	BOT	8/20/80	0232	0332	16450.0	62.2633	.00	.00	.00	.00	.00	.00	**
DITW	39181	BOT	8/20/80	0333	0433	17130.0	64.8371	.00	.00	.00	.00	.00	.00	**
DITE	39182	BOT	8/20/80	0434	0534	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	39183	BOT	8/20/80	0536	0636	16750.0	63.3988	.00	.00	.00	.00	.00	.00	**
DITW	39184	BOT	8/26/80	0640	0740	15500.0	58.6675	.00	.00	.00	.00	.00	.00	**
DITCH	39185	BOT	8/26/80	0741	0841	16170.0	61.2035	.00	.00	.00	.00	.00	.00	**
DITE	39186	BOT	8/26/80	0842	0942	16110.0	60.9764	.00	.00	.00	.00	.00	.00	**
DITW	39187	BOT	8/26/80	0944	1044	15520.0	58.7432	.00	.00	.00	.00	.00	.00	**
DITE	39188	BOT	8/26/80	1045	1145	16900.0	63.9665	.00	.00	.00	.00	.00	.00	**
DITCH	39189	BOT	8/26/80	1146	1246	15570.0	58.9325	.00	.00	.00	.00	.00	.00	**
DITE	39190	BOT	8/26/80	1247	1347	16460.0	62.3011	.00	.00	.00	.00	.00	.00	**
DITCH	39191	BOT	8/26/80	1348	1448	15810.0	59.8409	.00	.00	.00	.00	.00	.00	**
DITW	39192	BOT	8/26/80	1449	1549	16500.0	62.4525	.00	.00	.00	.00	.00	.00	**
DITE	39193	BOT	8/26/80	1550	1650	15530.0	58.7811	.00	.00	.00	.00	.00	.00	**
DITW	39194	BOT	8/26/80	1651	1751	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITCH	39195	BOT	8/26/80	1751	1851	16850.0	63.7773	.00	.00	.00	.00	.00	.00	**
DITCH	39196	BOT	8/26/80	1851	1951	17000.0	64.3450	.00	.00	.00	.00	.00	.00	
DITE	39197	BOT	8/26/80	1952	2052	15890.0	60.1437	.00	.00	.00	.00	.00	.00	**
DITW	39198	BOT	8/26/80	2053	2153	16960.0	64.1936	.00	.00	.00	.00	.00	.00	**
DITW	39199	BOT	8/26/80	2153	2253	16630.0	62.9446	.00	.00	.00	.00	.00	.00	
DITCH	39200	BOT	8/26/80	2301	0001	18260.0	69.1141	.00	.00	.00	.00	.00	.00	**
DITE	39201	BOT	8/27/80	0002	0102	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITCH	39202	BOT	8/27/80	0104	0204	17790.0	67.3352	.00	.00	.00	.00	.00	.00	**
DITE	39203	BOT	8/27/80	0210	0310	14030.0	53.1036	.00	.00	.00	.00	.00	.00	**
DITW	39204	BOT	8/27/80	0312	0412	18990.0	71.8772	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES MORONE SP.

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITE	39205	BOT	8/27/80	0415	0515	12910.0	48.8644	.00	.00	.00	.00	.00	.00	**
DITCH	39206	BOT	8/27/80	0517	0617	19710.0	74.6024	.00	.00	.00	.00	.00	.00	**
DITW	39207	BOT	8/27/80	0618	0718	12840.0	48.5994	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES STRIPED BASS (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	POST YOLK-SAC	JUVENILE	UNID LIFE STAGE	
DITW	38680	BOT	4/22/80	0559	0659	17270.0	65.3670	.00	.00	.00	.00	.00	.00 **
DITE	38681	BOT	4/22/80	0702	0802	16900.0	63.9665	.00	.00	.00	.00	.00	.00 **
DITCH	38682	BOT	4/22/80	0805	0905	17110.0	64.7614	.00	.00	.00	.00	.00	.00 **
DITE	38683	BOT	4/22/80	0908	1008	16970.0	64.2315	.00	.00	.00	.00	.00	.00 **
DITCH	38684	BOT	4/22/80	1009	1109	17010.0	64.3829	.00	.00	.00	.00	.00	.00 **
DITW	38685	BOT	4/22/80	1110	1210	17120.0	64.7992	.00	.00	.00	.00	.00	.00 **
DITW	38686	BOT	4/22/80	1210	1310	17250.0	65.2913	.00	.00	.00	.00	.00	.00
DITCH	38687	BOT	4/22/80	1312	1412	16860.0	63.8151	.00	.00	.00	.00	.00	.00 **
DITE	38688	BOT	4/22/80	1415	1515	16510.0	62.4904	.00	.00	.00	.00	.00	.00 **
DITCH	38689	BOT	4/22/80	1517	1617	17380.0	65.7833	.00	.00	.00	.00	.00	.00 **
DITW	38690	BOT	4/22/80	1619	1719	17750.0	67.1838	.00	.00	.00	.00	.00	.00 **
DITE	38691	BOT	4/22/80	1721	1821	16900.0	63.9665	.00	.00	.00	.00	.00	.00 **
DITCH	38692	BOT	4/22/80	1823	1923	16790.0	63.5502	.00	.00	.00	.00	.00	.00 **
DITW	38693	BOT	4/22/80	1925	2025	17070.0	64.6100	.00	.00	.00	.00	.00	.00 **
DITE	38694	BOT	4/22/80	2028	2128	17310.0	65.5184	.00	.00	.00	.00	.00	.00 **
DITE	38695	BOT	4/22/80	2128	2228	16760.0	63.4366	.00	.00	.00	.00	.00	.00
DITW	38696	BOT	4/22/80	2230	2330	17250.0	65.2913	.00	.00	.00	.00	.00	.00 **
DITCH	38697	BOT	4/22/80	2331	0031	16660.0	63.0581	.00	.00	.00	.00	.00	.00 **
DITW	38698	BOT	4/23/80	0033	0133	16420.0	62.1497	.00	.00	.00	.00	.00	.00 **
DITE	38699	BOT	4/23/80	0135	0235	16350.0	61.8848	.00	.00	.00	.00	.00	.00 **
DITCH	38700	BOT	4/23/80	0237	0337	16820.0	63.6637	.00	.00	.00	.00	.00	.00 **
DITCH	38701	BOT	4/23/80	0337	0437	16980.0	64.2693	.00	.00	.00	.00	.00	.00
DITE	38702	BOT	4/23/80	0439	0539	17130.0	64.8371	.00	.00	.00	.00	.00	.00 **
DITW	38703	BOT	4/23/80	0540	0640	18240.0	69.0384	.00	.00	.00	.00	.00	.00 **
DITCH	38704	BOT	4/29/80	0600	0700	16590.0	62.7932	.00	.00	.00	.00	.00	.00 **
DITE	38705	BOT	4/29/80	0702	0802	16870.0	63.8530	.00	.00	.00	.00	.00	.00 **
DITW	38706	BOT	4/29/80	0804	0904	16470.0	62.3390	.00	.00	.00	.00	.00	.00 **
DITCH	38707	BOT	4/29/80	0906	1006	16970.0	64.2315	.00	.00	.00	.00	.00	.00 **
DITE	38708	BOT	4/29/80	1008	1108	16640.0	62.9824	.00	.00	.00	.00	.00	.00 **
DITW	38709	BOT	4/29/80	1110	1210	17490.0	66.1997	.00	.00	.00	.00	.00	.00 **
DITCH	38710	BOT	4/29/80	1212	1312	16990.0	64.3072	.00	.00	.00	.00	.00	.00 **
DITW	38711	BOT	4/29/80	1315	1415	17220.0	65.1777	.00	.00	.00	.00	.00	.00 **
DITE	38712	BOT	4/29/80	1417	1517	16610.0	62.8689	.00	.00	.00	.00	.00	.00 **
DITCH	38713	BOT	4/29/80	1518	1618	16710.0	63.2474	.00	.00	.00	.00	.00	.00 **
DITW	38714	BOT	4/29/80	1620	1720	16300.0	61.6955	.00	.00	.00	.00	.00	.00 **
DITE	38715	BOT	4/29/80	1723	1823	15650.0	59.2353	.00	.00	.00	.00	.00	.00 **
DITE	38716	BOT	4/29/80	1823	1923	17060.0	64.5721	.00	.00	.00	.00	.00	.00
DITW	38717	BOT	4/29/80	1924	2024	16430.0	62.1876	.00	.00	.00	.00	.00	.00 **
DITCH	38718	BOT	4/29/80	2026	2126	15730.0	59.5381	.00	.00	.00	.00	.00	.00 **
DITW	38719	BOT	4/29/80	2127	2227	16870.0	63.8530	.00	.00	.00	.00	.00	.00 **
DITE	38720	BOT	4/29/80	2229	2329	16480.0	62.3768	.00	.00	.00	.00	.00	.00 **

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES STRIPED BASS (MORONE ALLOCATED)

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DITCH	38721	BOT	4/29/80	2334	0034	16820.0	63.6637	.00	.00	.00	.00	.00	.00	**
DITCH	38722	BOT	4/30/80	0034	0134	16810.0	63.6259	.00	.00	.00	.00	.00	.00	
DITE	38723	BOT	4/30/80	0137	0237	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITW	38724	BOT	4/30/80	0240	0340	17390.0	65.8212	.00	.00	.00	.00	.00	.00	**
DITCH	38725	BOT	4/30/80	0342	0442	16790.0	63.5502	.00	.00	.00	.00	.00	.00	**
DITE	38726	BOT	4/30/80	0445	0545	17150.0	64.9128	.00	.00	.00	.00	.00	.00	**
DITW	38727	BOT	4/30/80	0547	0647	17030.0	64.4586	.00	.00	.00	.00	.00	.00	**
DITCH	38728	BOT	5/06/80	0606	0706	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITW	38729	BOT	5/06/80	0709	0809	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITE	38730	BOT	5/06/80	0811	0911	16680.0	63.1338	.00	.00	.00	.00	.00	.00	**
DITE	38731	BOT	5/06/80	0911	1011	16770.0	63.4745	.00	.00	.00	.00	.00	.00	
DITCH	38732	BOT	5/06/80	1014	1114	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITW	38733	BOT	5/06/80	1116	1216	17240.0	65.2534	.00	.00	.00	.00	.00	.00	**
DITE	38734	BOT	5/06/80	1219	1319	16450.0	62.2633	.00	.00	.00	.00	.00	.00	**
DITW	38735	BOT	5/06/80	1321	1421	16940.0	64.1179	.00	.00	.00	.00	.00	.00	**
DITCH	38736	BOT	5/06/80	1423	1523	16750.0	63.3988	.00	.00	.00	.00	.00	.00	**
DITCH	38737	BOT	5/06/80	1523	1623	16840.0	63.7394	.00	.00	.00	.00	.00	.00	
DITE	38738	BOT	5/06/80	1626	1726	16680.0	63.1338	.00	.00	.00	.00	.00	.00	**
DITW	38739	BOT	5/06/80	1728	1828	16990.0	64.3072	.00	.00	.00	.00	.00	.00	**
DITW	38740	BOT	5/06/80	1828	1928	16940.0	64.1179	.00	.00	.00	.00	.00	.00	
DITE	38741	BOT	5/06/80	1930	2030	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITCH	38742	BOT	5/06/80	2032	2132	17140.0	64.8749	.00	.00	.00	.00	.00	.00	**
DITE	38743	BOT	5/06/80	2134	2234	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITCH	38744	BOT	5/06/80	2236	2336	17240.0	65.2534	.00	.00	.00	.00	.00	.00	**
DITW	38745	BOT	5/06/80	2337	0037	16490.0	62.4147	16.02	.00	.00	.00	.00	.00	**
DITW	38746	BOT	5/07/80	0037	0137	16630.0	62.9446	.00	.00	.00	.00	.00	.00	
DITE	38747	BOT	5/07/80	0139	0239	16630.0	62.9446	.00	.00	.00	.00	.00	.00	**
DITCH	38748	BOT	5/07/80	0241	0341	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITW	38749	BOT	5/07/80	0344	0444	16770.0	63.4745	.00	.00	.00	.00	.00	.00	**
DITE	38750	BOT	5/07/80	0446	0546	16730.0	63.3231	.00	.00	.00	.00	.00	.00	**
DITCH	38751	BOT	5/07/80	0547	0647	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**
DITE	38752	BOT	5/13/80	0605	0705	16700.0	63.2095	.00	.00	.00	.00	.00	.00	**
DITW	38753	BOT	5/13/80	0707	0807	17030.0	64.4586	.00	.00	.00	.00	.00	.00	**
DITCH	38754	BOT	5/13/80	0809	0909	15930.0	60.2951	16.59	.00	.00	.00	.00	.00	**
DITE	38755	BOT	5/13/80	0910	1010	16870.0	63.8530	.00	.00	.00	.00	.00	.00	**
DITW	38756	BOT	5/13/80	1012	1112	17030.0	64.4586	.00	15.51	15.51	.00	.00	.00	**
DITCH	38757	BOT	5/13/80	1113	1213	16860.0	63.8151	15.67	.00	.00	.00	.00	.00	**
DITCH	38758	BOT	5/13/80	1213	1313	16520.0	62.5282	.00	.00	.00	.00	.00	.00	
DITE	38759	BOT	5/13/80	1314	1414	16590.0	62.7932	47.78	.00	.00	.00	.00	.00	**
DITW	38760	BOT	5/13/80	1415	1515	16590.0	62.7932	15.93	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES STRIPED BASS (MORONE ALLOCATED)

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DITE	38761	BOT	5/13/80	1516	1616	15690.0	59.3867	.00	.00	.00	.00	.00	.00	**
DITW	38762	BOT	5/13/80	1616	1716	16120.0	61.0142	.00	.00	.00	.00	.00	.00	**
DITCH	38763	BOT	5/13/80	1717	1817	16000.0	60.5600	.00	.00	.00	.00	.00	.00	**
DITW	38764	BOT	5/13/80	1819	1919	16980.0	64.2693	.00	.00	.00	.00	.00	.00	**
DITCH	38765	BOT	5/13/80	1921	2021	16890.0	63.9287	.00	.00	.00	.00	.00	.00	**
DITE	38766	BOT	5/13/80	2023	2123	16660.0	63.0581	.00	.00	.00	.00	.00	.00	**
DITCH	38767	BOT	5/13/80	2125	2225	17080.0	64.6478	.00	.00	.00	.00	.00	.00	**
DITE	38768	BOT	5/13/80	2226	2326	16760.0	63.4366	78.82	15.76	15.76	.00	.00	.00	**
DITW	38769	BOT	5/13/80	2328	0028	17260.0	65.3291	15.31	15.31	15.31	.00	.00	.00	**
DITCH	38770	BOT	5/14/80	0029	0129	16960.0	64.1936	.00	15.58	15.58	.00	.00	.00	**
DITE	38771	BOT	5/14/80	0131	0231	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**
DITW	38772	BOT	5/14/80	0232	0332	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	38773	BOT	5/14/80	0333	0433	16780.0	63.5123	15.74	.00	.00	.00	.00	.00	**
DITE	38774	BOT	5/14/80	0434	0534	15860.0	60.0301	.00	.00	.00	.00	.00	.00	**
DITW	38775	BOT	5/14/80	0535	0635	16540.0	62.6039	15.97	.00	.00	.00	.00	.00	**
DITE	38776	BOT	5/20/80	0607	0707	17010.0	64.3829	.00	31.06	31.06	.00	.00	.00	**
DITW	38777	BOT	5/20/80	0709	0809	16860.0	63.8151	.00	31.34	15.67	.00	.00	15.67	**
DITCH	38778	BOT	5/20/80	0810	0910	16860.0	63.8151	.00	15.67	15.67	.00	.00	.00	**
DITE	38779	BOT	5/20/80	0911	1011	16410.0	62.1119	.00	16.10	16.10	.00	.00	.00	**
DITCH	38780	BOT	5/20/80	1012	1112	16700.0	63.2095	.00	.00	.00	.00	.00	.00	**
DITW	38781	BOT	5/20/80	1113	1213	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITE	38782	BOT	5/20/80	1214	1314	16260.0	61.5441	.00	.00	.00	.00	.00	.00	**
DITW	38783	BOT	5/20/80	1315	1415	17040.0	64.4964	.00	.00	.00	.00	.00	.00	**
DITCH	38784	BOT	5/20/80	1416	1516	16370.0	61.9605	.00	16.14	16.14	.00	.00	.00	**
DITCH	38785	BOT	5/20/80	1516	1616	16330.0	61.8091	.00	32.36	32.36	.00	.00	.00	
DITW	38786	BOT	5/20/80	1620	1720	16330.0	61.8091	32.36	145.61	113.25	32.36	.00	.00	**
DITE	38787	BOT	5/20/80	1722	1822	16600.0	62.8310	.00	.00	.00	.00	.00	.00	**
DITCH	38788	BOT	5/20/80	1824	1924	16960.0	64.1936	.00	.00	.00	.00	.00	.00	**
DITW	38789	BOT	5/20/80	1926	2026	16470.0	62.3390	.00	16.04	16.04	.00	.00	.00	**
DITE	38790	BOT	5/20/80	2027	2127	15760.0	59.6516	16.76	67.06	67.06	.00	.00	.00	**
DITE	38791	BOT	5/20/80	2127	2227	16970.0	64.2315	31.14	124.55	124.55	.00	.00	.00	
DITW	38792	BOT	5/20/80	2228	2328	16750.0	63.3988	.00	110.41	110.41	.00	.00	.00	**
DITCH	38793	BOT	5/20/80	2329	0029	16800.0	63.5880	.00	125.81	110.08	.00	.00	15.73	**
DITCH	38794	BOT	5/21/80	0029	0129	17110.0	64.7614	.00	61.77	61.77	.00	.00	.00	
DITE	38795	BOT	5/21/80	0131	0231	17070.0	64.6100	.00	61.91	61.91	.00	.00	.00	**
DITW	38796	BOT	5/21/80	0233	0333	17370.0	65.7455	.00	106.47	106.47	.00	.00	.00	**
DITE	38797	BOT	5/21/80	0335	0435	17060.0	64.5721	15.49	61.95	61.95	.00	.00	.00	**
DITW	38798	BOT	5/21/80	0437	0537	17980.0	68.0543	29.39	44.08	44.08	.00	.00	.00	**
DITCH	38799	BOT	5/21/80	0539	0639	17670.0	66.8810	.00	149.52	149.52	.00	.00	.00	**
DITW	38800	BOT	5/27/80	1556	1656	16500.0	62.4525	.00	32.02	16.01	16.01	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES STRIPED BASS (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITE	38801	BOT	5/27/80	1659	1759	16310.0	61.7334	.00	.00	.00	.00	.00	.00	**
DITCH	38802	BOT	5/27/80	1800	1900	16950.0	64.1558	.00	62.35	15.59	46.76	.00	.00	**
DITCH	38803	BOT	5/27/80	1902	2002	16800.0	63.5880	15.73	235.89	172.99	62.90	.00	.00	
DITE	38804	BOT	5/27/80	2004	2104	16570.0	62.7175	15.94	111.61	31.89	79.72	.00	.00	**
DITW	38805	BOT	5/27/80	2105	2205	17140.0	64.8749	.00	92.49	61.66	15.41	.00	15.41	**
DITW	38806	BOT	5/27/80	2207	2307	17020.0	64.4207	.00	884.81	93.14	776.15	.00	15.52	
DITCH	38807	BOT	5/27/80	2310	0010	16810.0	63.6259	.00	282.90	.00	282.90	.00	.00	**
DITE	38808	BOT	5/28/80	0013	0113	16900.0	63.9665	.00	812.93	46.90	766.03	.00	.00	**
DITCH	38809	BOT	5/28/80	0117	0217	17010.0	64.3829	.00	745.54	450.43	295.11	.00	.00	**
DITE	38810	BOT	5/28/80	0221	0321	16750.0	63.3988	.00	646.70	331.24	189.28	.00	126.19	**
DITW	38811	BOT	5/28/80	0324	0424	16740.0	63.3609	.00	173.61	126.26	47.35	.00	.00	**
DITCH	38812	BOT	5/28/80	0428	0528	16940.0	64.1179	.00	155.96	124.77	15.60	.00	15.60	**
DITE	38813	BOT	5/28/80	0531	0631	16740.0	63.3609	.00	31.57	15.78	15.78	.00	.00	**
DITW	38814	BOT	5/28/80	0634	0734	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITE	38815	BOT	5/28/80	0736	0836	16640.0	62.9824	.00	158.77	79.39	63.51	.00	15.88	**
DITCH	38816	BOT	5/28/80	0837	0937	16640.0	62.9824	.00	365.18	190.53	142.90	.00	31.75	**
DITW	38817	BOT	5/28/80	0939	1039	16940.0	64.1179	15.60	514.68	62.39	421.10	.00	31.19	**
DITCH	38818	BOT	5/28/80	1041	1141	16670.0	63.0960	.00	221.88	158.49	47.55	.00	15.85	**
DITE	38819	BOT	5/28/80	1143	1243	16330.0	61.8091	.00	1634.06	825.12	808.94	.00	.00	**
DITW	38820	BOT	5/28/80	1245	1345	16730.0	63.3231	.00	1215.99	94.75	1121.23	.00	.00	**
DITE	38821	BOT	5/28/80	1346	1446	16860.0	63.8151	.00	642.48	360.42	219.38	.00	62.68	**
DITW	38822	BOT	5/28/80	1448	1548	16650.0	63.0203	.00	158.68	15.87	126.94	.00	15.87	**
DITCH	38823	BOT	5/28/80	1550	1650	16710.0	63.2474	15.81	126.49	15.81	94.87	.00	15.81	**
DITE	38824	BOT	6/03/80	0604	0704	16480.0	62.3768	.00	464.92	.00	464.92	.00	.00	**
DITW	38825	BOT	6/03/80	0705	0805	16060.0	60.7871	16.45	148.06	49.35	98.71	.00	.00	**
DITCH	38826	BOT	6/03/80	0806	0906	16580.0	62.7553	.00	127.48	31.87	95.61	.00	.00	**
DITE	38827	BOT	6/03/80	0907	1007	15410.0	58.3269	.00	34.29	.00	34.29	.00	.00	**
DITW	38828	BOT	6/03/80	1008	1108	16790.0	63.5502	.00	15.74	.00	15.74	.00	.00	**
DITCH	38829	BOT	6/03/80	1109	1209	16320.0	61.7712	.00	80.94	.00	80.94	.00	.00	**
DITE	38830	BOT	6/03/80	1210	1310	16970.0	64.2315	.00	77.84	.00	77.84	.00	.00	**
DITCH	38831	BOT	6/03/80	1312	1412	16870.0	63.8530	.00	172.27	109.63	62.64	.00	.00	**
DITW	38832	BOT	6/03/80	1413	1513	16860.0	63.8151	15.67	1034.24	501.45	501.45	.00	31.34	**
DITCH	38833	BOT	6/03/80	1514	1614	16420.0	62.1497	.00	1512.48	321.80	1190.67	.00	.00	**
DITE	38834	BOT	6/03/80	1616	1716	16790.0	63.5502	.00	1620.77	298.98	1321.79	.00	.00	**
DITW	38835	BOT	6/03/80	1717	1817	16570.0	62.7175	15.94	3699.13	1849.56	1849.56	.00	.00	**
DITE	38836	BOT	6/03/80	1818	1918	15850.0	59.9923	.00	933.45	300.04	633.41	.00	.00	**
DITW	38837	BOT	6/03/80	1920	2020	16060.0	60.7871	.00	213.86	16.45	197.41	.00	.00	**
DITCH	38838	BOT	6/03/80	2022	2122	16020.0	60.6357	.00	148.43	32.98	115.44	.00	.00	**
DITW	38839	BOT	6/03/80	2124	2224	16340.0	61.8469	.00	97.01	.00	80.84	.00	16.17	**
DITCH	38840	BOT	6/03/80	2226	2326	16600.0	62.8310	.00	79.58	.00	79.58	.00	.00	**
DITE	38841	BOT	6/03/80	2329	0029	16700.0	63.2095	.00	126.56	94.92	31.64	.00	.00	**

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SPECIES STRIPED BASS (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	POST YOLK-SAC	YOLK-SAC	JUVENILE	UNID LIP STAGE	
DITE	38842	BOT	6/04/80	0029	0129	16310.0	61.7334	.00	80.99	80.99	.00	.00	.00	
DITW	38843	BOT	6/04/80	0131	0231	16810.0	63.6259	.00	31.43	15.72	15.72	.00	.00	**
DITCH	38844	BOT	6/04/80	0234	0334	16720.0	63.2852	.00	331.83	79.01	252.82	.00	.00	**
DITW	38845	BOT	6/04/80	0337	0437	16720.0	63.2852	15.80	537.25	79.01	458.24	.00	.00	**
DITE	38846	BOT	6/04/80	0440	0540	16360.0	61.9226	.00	2874.56	96.90	2777.66	.00	.00	**
DITCH	38847	BOT	6/04/80	0544	0644	16490.0	62.4147	32.04	3492.77	112.15	3380.61	.00	.00	**
DITW	38848	BOT	6/06/80	0600	0700	16510.0	62.4904	.00	1680.26	192.03	1488.23	.00	.00	**
DITE	38849	BOT	6/06/80	0701	0801	16490.0	62.4147	32.04	1137.55	32.04	1105.51	.00	.00	**
DITCH	38850	BOT	6/06/80	0802	0902	16380.0	61.9983	.00	177.42	16.13	161.29	.00	.00	**
DITCH	38851	BOT	6/06/80	0902	1002	16130.0	61.0521	.00	327.59	65.52	262.07	.00	.00	
DITE	38852	BOT	6/06/80	1003	1103	15940.0	60.3329	.00	248.62	.00	248.62	.00	.00	**
DITW	38853	BOT	6/06/80	1104	1204	16030.0	60.6736	.00	65.93	.00	65.93	.00	.00	**
DITE	38854	BOT	6/06/80	1205	1305	16230.0	61.4306	.00	32.56	.00	32.56	.00	.00	**
DITW	38855	BOT	6/06/80	1306	1406	16380.0	61.9983	.00	64.52	.00	64.52	.00	.00	**
DITCH	38856	BOT	6/06/80	1407	1507	16340.0	61.8469	16.17	129.35	16.17	97.01	.00	16.17	**
DITE	38857	BOT	6/06/80	1508	1608	16820.0	63.6637	15.71	125.66	47.12	62.83	.00	15.71	**
DITCH	38858	BOT	6/06/80	1609	1709	16720.0	63.2852	.00	395.04	205.42	189.62	.00	.00	**
DITW	38859	BOT	6/06/80	1710	1810	17070.0	64.6100	.00	417.89	154.77	232.16	.00	30.95	**
DITE	38860	BOT	6/06/80	1811	1911	16440.0	62.2254	.00	835.67	289.27	466.05	.00	80.35	**
DITW	38861	BOT	6/06/80	1912	2012	16700.0	63.2095	.00	759.38	348.05	363.87	.00	47.46	**
DITCH	38862	BOT	6/06/80	2014	2114	16910.0	64.0044	.00	296.85	.00	249.98	.00	46.87	**
DITCH	38863	BOT	6/06/80	2114	2214	16550.0	62.6418	.00	542.77	31.93	446.99	.00	63.86	
DITW	38864	BOT	6/06/80	2215	2315	16490.0	62.4147	.00	785.07	224.31	496.68	.00	64.09	**
DITE	38865	BOT	6/06/80	2316	0016	15830.0	59.9166	.00	1568.85	684.28	884.56	.00	.00	**
DITE	38866	BOT	6/07/80	0016	0116	16250.0	61.5063	.00	877.96	65.03	812.92	.00	.00	
DITW	38867	BOT	6/07/80	0119	0219	16410.0	62.1119	.00	627.90	241.50	305.90	.00	80.50	**
DITCH	38868	BOT	6/07/80	0221	0321	16490.0	62.4147	.00	400.55	112.15	224.31	.00	64.09	**
DITE	38869	BOT	6/07/80	0323	0423	15760.0	59.6516	.00	603.50	268.22	217.93	.00	117.35	**
DITW	38870	BOT	6/07/80	0428	0528	17050.0	64.5343	.00	185.95	92.97	92.97	.00	.00	**
DITCH	38871	BOT	6/07/80	0531	0631	16920.0	64.0422	.00	749.51	249.84	421.60	.00	78.07	**
DITCH	38872	BOT	6/10/80	0554	0654	17050.0	64.5343	.00	46.49	15.50	30.99	.00	.00	
DITE	38873	BOT	6/10/80	0655	0755	16400.0	62.0740	.00	225.54	16.11	209.43	.00	.00	**
DITW	38874	BOT	6/10/80	0756	0856	16350.0	61.8848	32.32	484.77	96.95	387.82	.00	.00	**
DITE	38875	BOT	6/10/80	0857	0957	16490.0	62.4147	.00	192.26	64.09	128.17	.00	.00	**
DITW	38876	BOT	6/10/80	0958	1058	15900.0	60.1815	.00	930.52	99.70	830.82	.00	.00	**
DITCH	38877	BOT	6/10/80	1059	1159	16420.0	62.1497	.00	691.88	48.27	643.61	.00	.00	**
DITCH	38878	BOT	6/10/80	1159	1259	16400.0	62.0740	.00	741.05	32.22	708.83	.00	.00	
DITE	38879	BOT	6/10/80	1300	1400	16350.0	61.8848	.00	64.64	32.32	32.32	.00	.00	**
DITW	38880	BOT	6/10/80	1401	1501	16720.0	63.2852	.00	79.01	31.60	47.40	.00	.00	**
DITCH	38881	BOT	6/10/80	1502	1602	16970.0	64.2315	.00	.00	.00	.00	.00	.00	**

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DITW	38882	BOT	6/10/80	1603	1703	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITE	38883	BOT	6/10/80	1704	1804	15900.0	60.1815	.00	49.85	.00	49.85	.00	.00	**
DITE	38884	BOT	6/10/80	1805	1905	17290.0	65.4427	.00	30.56	.00	30.56	.00	.00	
DITW	38885	BOT	6/10/80	1906	2006	15310.0	57.9484	.00	69.03	17.26	51.77	.00	.00	**
DITCH	38886	BOT	6/10/80	2007	2107	16660.0	63.0581	.00	126.87	31.72	95.15	.00	.00	**
DITW	38887	BOT	6/10/80	2108	2208	13100.0	49.5835	.00	322.69	60.50	262.18	.00	.00	**
DITE	38888	BOT	6/10/80	2209	2309	16990.0	64.3072	.00	435.41	31.10	404.31	.00	.00	**
DITCH	38889	BOT	6/10/80	2310	0010	16890.0	63.9287	.00	140.78	.00	140.78	.00	.00	**
DITCH	38890	BOT	6/11/80	0010	0110	16860.0	63.8151	.00	297.74	78.35	219.38	.00	.00	
DITE	38891	BOT	6/11/80	0111	0211	16630.0	62.9446	.00	603.71	47.66	556.04	.00	.00	**
DITW	38892	BOT	6/11/80	0212	0312	17140.0	64.8749	.00	231.21	30.83	123.31	77.07	.00	**
DITW	38893	BOT	6/11/80	0312	0412	17100.0	64.7235	.00	200.85	46.35	154.50	.00	.00	
DITCH	38894	BOT	6/11/80	0413	0513	16200.0	61.3170	.00	65.23	32.62	32.62	.00	.00	**
DITE	38895	BOT	6/11/80	0514	0614	17450.0	66.0483	.00	15.14	.00	15.14	.00	.00	**
DITE	38896	BOT	6/13/80	0556	0656	16190.0	61.2792	.00	.00	.00	.00	.00	.00	
DITCH	38897	BOT	6/13/80	0657	0757	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITW	38898	BOT	6/13/80	0758	0858	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITW	38899	BOT	6/13/80	0858	0958	16670.0	63.0960	.00	15.85	15.85	.00	.00	.00	
DITCH	38900	BOT	6/13/80	0959	1059	16470.0	62.3390	.00	16.04	.00	16.04	.00	.00	**
DITE	38901	BOT	6/13/80	1100	1200	16120.0	61.0142	.00	65.56	16.39	32.78	.00	16.39	**
DITE	38902	BOT	6/13/80	1200	1300	16110.0	60.9764	.00	16.40	.00	16.40	.00	.00	
DITCH	38903	BOT	6/13/80	1301	1401	15920.0	60.2572	.00	66.38	.00	66.38	.00	.00	**
DITW	38904	BOT	6/13/80	1402	1502	16280.0	61.6198	.00	113.60	.00	113.60	.00	.00	**
DITW	38905	BOT	6/13/80	1502	1602	16090.0	60.9007	.00	82.10	16.42	16.42	.00	49.26	
DITCH	38906	BOT	6/13/80	1603	1703	16390.0	62.0362	.00	.00	.00	.00	.00	.00	**
DITE	38907	BOT	6/13/80	1704	1804	16220.0	61.3927	.00	32.58	32.58	.00	.00	.00	**
DITE	38908	BOT	6/13/80	1804	1904	16160.0	61.1656	.00	.00	.00	.00	.00	.00	
DITW	38909	BOT	6/13/80	1905	2005	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITCH	38910	BOT	6/13/80	2006	2106	16420.0	62.1497	.00	.00	.00	.00	.00	.00	**
DITCH	38911	BOT	6/13/80	2106	2206	16690.0	63.1717	.00	31.66	.00	31.66	.00	.00	
DITW	38912	BOT	6/13/80	2207	2307	16660.0	63.0581	.00	31.72	15.86	15.86	.00	.00	**
DITE	38913	BOT	6/13/80	2308	0008	14250.0	53.9363	.00	18.54	.00	18.54	.00	.00	**
DITE	38914	BOT	6/14/80	0008	0108	17490.0	66.1997	.00	15.11	.00	15.11	.00	.00	
DITCH	38915	BOT	6/14/80	0109	0209	16970.0	64.2315	.00	62.27	.00	46.71	.00	15.57	**
DITW	38916	BOT	6/14/80	0210	0310	16350.0	61.8848	.00	48.48	16.16	32.32	.00	.00	**
DITCH	38917	BOT	6/14/80	0311	0411	17820.0	67.4487	.00	59.30	.00	59.30	.00	.00	**
DITW	38918	BOT	6/14/80	0412	0512	15860.0	60.0301	.00	16.66	.00	16.66	.00	.00	**
DITE	38919	BOT	6/14/80	0513	0613	17520.0	66.3132	.00	45.24	.00	45.24	.00	.00	**
DITE	38920	BOT	6/17/80	0555	0655	16520.0	62.5282	.00	.00	.00	.00	.00	.00	
DITW	38921	BOT	6/17/80	0656	0756	16370.0	61.9605	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES STRIPED BASS (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO. METER REVS.	VOLUME (CU. M.)	EIN NO./1000 CU. M.: TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITCH	38922	BOT	6/17/80	0757	0857	16280.0	61.6198	.00	.00	.00	.00	.00	.00	**
DITCH	38923	BOT	6/17/80	0857	0957	16390.0	62.0362	.00	.00	.00	.00	.00	.00	
DITE	38924	BOT	6/17/80	0957	1057	16200.0	61.3170	.00	.00	.00	.00	.00	.00	**
DITW	38925	BOT	6/17/80	1058	1158	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITW	38926	BOT	6/17/80	1158	1258	16240.0	61.4684	.00	.00	.00	.00	.00	.00	
DITCH	38927	BOT	6/17/80	1259	1359	16130.0	61.0521	.00	.00	.00	.00	.00	.00	**
DITE	38928	BOT	6/17/80	1400	1500	16410.0	62.1119	.00	.00	.00	.00	.00	.00	**
DITE	38929	BOT	6/17/80	1500	1600	16460.0	62.3011	.00	16.05	16.05	.00	.00	.00	
DITCH	38930	BOT	6/17/80	1602	1702	17090.0	64.6857	.00	.00	.00	.00	.00	.00	**
DITW	38931	BOT	6/17/80	1705	1805	17240.0	65.2534	.00	15.32	.00	15.32	.00	.00	**
DITW	38932	BOT	6/17/80	1805	1905	15720.0	59.5002	.00	.00	.00	.00	.00	.00	
DITCH	38933	BOT	6/17/80	1907	2007	15070.0	57.0400	.00	.00	.00	.00	.00	.00	**
DITE	38934	BOT	6/17/80	2009	2109	16120.0	61.0142	.00	.00	.00	.00	.00	.00	**
DITCH	38935	BOT	6/17/80	2111	2211	16330.0	61.8091	.00	.00	.00	.00	.00	.00	**
DITW	38936	BOT	6/17/80	2213	2313	16270.0	61.5820	.00	146.15	.00	146.15	.00	.00	**
DITE	38937	BOT	6/17/80	2315	0015	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITE	38938	BOT	6/18/80	0016	0116	16650.0	63.0203	.00	.00	.00	.00	.00	.00	
DITW	38939	BOT	6/18/80	0118	0218	16290.0	61.6577	.00	97.31	16.22	81.09	.00	.00	**
DITCH	38940	BOT	6/18/80	0220	0320	16340.0	61.8469	.00	16.17	16.17	.00	.00	.00	**
DITCH	38941	BOT	6/18/80	0320	0420	16170.0	61.2035	.00	49.02	.00	49.02	.00	.00	
DITW	38942	BOT	6/18/80	0422	0522	16610.0	62.8689	.00	47.72	.00	47.72	.00	.00	**
DITE	38943	BOT	6/18/80	0524	0624	16360.0	61.9226	.00	.00	.00	.00	.00	.00	**
DITE	38944	BOT	6/20/80	0557	0657	16650.0	63.0203	.00	47.60	.00	47.60	.00	.00	
DITW	38945	BOT	6/20/80	0658	0758	16500.0	62.4525	.00	.00	.00	.00	.00	.00	**
DITCH	38946	BOT	6/20/80	0759	0859	16080.0	60.8628	.00	.00	.00	.00	.00	.00	**
DITW	38947	BOT	6/20/80	0900	1000	16560.0	62.6796	.00	47.86	.00	47.86	.00	.00	**
DITCH	38948	BOT	6/20/80	1001	1101	16430.0	62.1876	.00	32.16	.00	32.16	.00	.00	**
DITE	38949	BOT	6/20/80	1102	1202	16070.0	60.8250	.00	.00	.00	.00	.00	.00	**
DITCH	38950	BOT	6/20/80	1203	1303	16360.0	61.9226	.00	.00	.00	.00	.00	.00	**
DITW	38951	BOT	6/20/80	1304	1404	16050.0	60.7493	.00	.00	.00	.00	.00	.00	**
DITE	38952	BOT	6/20/80	1405	1505	16310.0	61.7334	.00	.00	.00	.00	.00	.00	**
DITCH	38953	BOT	6/20/80	1506	1606	16260.0	61.5441	.00	.00	.00	.00	.00	.00	**
DITW	38954	BOT	6/20/80	1607	1707	16210.0	61.3549	.00	65.19	.00	65.19	.00	.00	**
DITE	38955	BOT	6/20/80	1708	1808	16550.0	62.6418	.00	255.42	79.82	159.64	.00	15.96	**
DITW	38956	BOT	6/20/80	1809	1909	16450.0	62.2633	.00	642.43	256.97	353.34	.00	32.12	**
DITCH	38957	BOT	6/20/80	1910	2010	15950.0	60.3708	.00	182.21	.00	165.64	.00	16.56	**
DITE	38958	BOT	6/20/80	2011	2111	15760.0	59.6516	.00	67.06	.00	67.06	.00	.00	**
DITCH	38959	BOT	6/20/80	2112	2212	16870.0	63.8530	.00	31.32	15.66	15.66	.00	.00	**
DITE	38960	BOT	6/20/80	2213	2313	16080.0	60.8628	.00	.00	.00	.00	.00	.00	**
DITW	38961	BOT	6/20/80	2314	0014	16310.0	61.7334	.00	48.60	16.20	32.40	.00	.00	**
DITE	38962	BOT	6/21/80	0015	0115	16550.0	62.6418	.00	15.96	.00	15.96	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES STRIPED BASS (MORONE ALLOCATED)

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DITCH	38963	BOT	6/21/80	0116	0216	15680.0	59.3488	.00	33.70	.00	16.85	.00	16.85	**
DITW	38964	BOT	6/21/80	0218	0318	16620.0	62.9067	.00	95.38	.00	95.38	.00	.00	**
DITE	38965	BOT	6/21/80	0319	0419	16610.0	62.8689	.00	159.06	.00	159.06	.00	.00	**
DITW	38966	BOT	6/21/80	0420	0520	16600.0	62.8310	.00	190.99	.00	190.99	.00	.00	**
DITCH	38967	BOT	6/21/80	0521	0621	16320.0	61.7712	.00	97.13	.00	97.13	.00	.00	**
DITE	38968	BOT	6/24/80	0625	0725	16660.0	63.0581	.00	111.01	31.72	63.43	.00	15.86	**
DITCH	38969	BOT	6/24/80	0726	0826	16070.0	60.8250	.00	65.76	.00	65.76	.00	.00	**
DITW	38970	BOT	6/24/80	0828	0928	16320.0	61.7712	.00	80.94	32.38	48.57	.00	.00	**
DITE	38971	BOT	6/24/80	0929	1029	16520.0	62.5282	.00	207.91	31.99	143.94	.00	31.99	**
DITW	38972	BOT	6/24/80	1030	1130	16850.0	63.7773	.00	31.36	.00	31.36	.00	.00	**
DITCH	38973	BOT	6/24/80	1132	1232	16620.0	62.9067	.00	.00	.00	.00	.00	.00	**
DITCH	38974	BOT	6/24/80	1232	1332	16600.0	62.8310	.00	15.92	.00	15.92	.00	.00	
DITW	38975	BOT	6/24/80	1333	1433	16680.0	63.1338	.00	15.84	.00	15.84	.00	.00	**
DITE	38976	BOT	6/24/80	1435	1535	16660.0	63.0581	.00	.00	.00	.00	.00	.00	**
DITE	38977	BOT	6/24/80	1535	1635	16440.0	62.2254	.00	.00	.00	.00	.00	.00	
DITW	38978	BOT	6/24/80	1636	1736	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITCH	38979	BOT	6/24/80	1737	1837	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITE	38980	BOT	6/24/80	1838	1938	16950.0	64.1558	.00	.00	.00	.00	.00	.00	**
DITW	38981	BOT	6/24/80	1940	2040	16550.0	62.6418	.00	15.96	.00	15.96	.00	.00	**
DITCH	38982	BOT	6/24/80	2041	2141	16440.0	62.2254	.00	32.14	.00	32.14	.00	.00	**
DITCH	38983	BOT	6/24/80	2141	2241	16150.0	61.1278	.00	49.08	.00	49.08	.00	.00	
DITE	38984	BOT	6/24/80	2242	2342	16310.0	61.7334	.00	32.40	.00	16.20	.00	16.20	**
DITW	38985	BOT	6/24/80	2343	0043	16330.0	61.8091	.00	16.18	.00	16.18	.00	.00	**
DITE	38986	BOT	6/25/80	0044	0144	16220.0	61.3927	.00	16.29	.00	16.29	.00	.00	**
DITW	38987	BOT	6/25/80	0145	0245	16440.0	62.2254	.00	32.14	.00	32.14	.00	.00	**
DITCH	38988	BOT	6/25/80	0246	0346	15770.0	59.6895	.00	50.26	.00	50.26	.00	.00	**
DITCH	38989	BOT	6/25/80	0346	0446	16410.0	62.1119	.00	128.80	.00	128.80	.00	.00	
DITE	38990	BOT	6/25/80	0447	0547	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITW	38991	BOT	6/25/80	0548	0648	16680.0	63.1338	.00	15.84	.00	15.84	.00	.00	**
DITE	38992	BOT	7/01/80	0612	0712	16260.0	61.5441	.00	.00	.00	.00	.00	.00	**
DITCH	38993	BOT	7/01/80	0715	0815	16580.0	62.7553	.00	15.93	.00	15.93	.00	.00	**
DITW	38994	BOT	7/01/80	0817	0917	15990.0	60.5222	.00	.00	.00	.00	.00	.00	**
DITW	38995	BOT	7/01/80	0917	1017	16210.0	61.3549	.00	.00	.00	.00	.00	.00	
DITCH	38996	BOT	7/01/80	1018	1118	16000.0	60.5600	.00	.00	.00	.00	.00	.00	**
DITE	38997	BOT	7/01/80	1120	1220	16210.0	61.3549	.00	.00	.00	.00	.00	.00	**
DITE	38998	BOT	7/01/80	1220	1320	16590.0	62.7932	.00	.00	.00	.00	.00	.00	
DITW	38999	BOT	7/01/80	1322	1422	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITCH	39000	BOT	7/01/80	1425	1525	16170.0	61.2035	.00	.00	.00	.00	.00	.00	**
DITCH	39001	BOT	7/01/80	1525	1625	15930.0	60.2951	.00	.00	.00	.00	.00	.00	
DITW	39002	BOT	7/01/80	1626	1726	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

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DITE	39003	BOT	7/01/80	1727	1827	15960.0	60.4086	.00	.00	.00	.00	.00	.00	**
DITE	39004	BOT	7/01/80	1827	1927	16400.0	62.0740	.00	.00	.00	.00	.00	.00	
DITCH	39005	BOT	7/01/80	1929	2029	16420.0	62.1497	.00	.00	.00	.00	.00	.00	**
DITW	39006	BOT	7/01/80	2030	2130	16530.0	62.5661	.00	.00	.00	.00	.00	.00	**
DITCH	39007	BOT	7/01/80	2131	2231	16510.0	62.4904	.00	32.00	.00	32.00	.00	.00	**
DITW	39008	BOT	7/01/80	2233	2333	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITE	39009	BOT	7/01/80	2335	0035	16540.0	62.6039	.00	.00	.00	.00	.00	.00	**
DITW	39010	BOT	7/02/80	0037	0137	16480.0	62.3768	.00	112.22	.00	112.22	.00	.00	**
DITE	39011	BOT	7/02/80	0139	0239	17150.0	64.9128	.00	30.81	.00	30.81	.00	.00	**
DITCH	39012	BOT	7/02/80	0241	0341	16690.0	63.1717	.00	47.49	.00	47.49	.00	.00	**
DITW	39013	BOT	7/02/80	0343	0443	16450.0	62.2633	.00	32.12	.00	32.12	.00	.00	**
DITCH	39014	BOT	7/02/80	0445	0545	15950.0	60.3708	.00	.00	.00	.00	.00	.00	**
DITE	39015	BOT	7/02/80	0547	0647	16530.0	62.5661	.00	.00	.00	.00	.00	.00	**
DITE	39016	BOT	7/08/80	0546	0646	16200.0	61.3170	.00	.00	.00	.00	.00	.00	
DITCH	39017	BOT	7/08/80	0648	0748	15990.0	60.5222	.00	.00	.00	.00	.00	.00	**
DITW	39018	BOT	7/08/80	0750	0850	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITE	39019	BOT	7/08/80	0851	0951	15990.0	60.5222	.00	.00	.00	.00	.00	.00	**
DITW	39020	BOT	7/08/80	0953	1053	16010.0	60.5979	.00	.00	.00	.00	.00	.00	**
DITCH	39021	BOT	7/08/80	1055	1155	16360.0	61.9226	.00	.00	.00	.00	.00	.00	**
DITW	39022	BOT	7/08/80	1157	1257	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITCH	39023	BOT	7/08/80	1259	1359	16850.0	63.7773	.00	.00	.00	.00	.00	.00	**
DITE	39024	BOT	7/08/80	1401	1501	16690.0	63.1717	.00	.00	.00	.00	.00	.00	**
DITE	39025	BOT	7/08/80	1501	1601	16500.0	62.4525	.00	.00	.00	.00	.00	.00	
DITW	39026	BOT	7/08/80	1603	1703	17540.0	66.3889	.00	.00	.00	.00	.00	.00	**
DITCH	39027	BOT	7/08/80	1704	1804	17070.0	64.6100	.00	.00	.00	.00	.00	.00	**
DITCH	39028	BOT	7/08/80	1804	1904	16690.0	63.1717	.00	.00	.00	.00	.00	.00	
DITE	39029	BOT	7/08/80	1906	2006	17170.0	64.9885	.00	.00	.00	.00	.00	.00	**
DITW	39030	BOT	7/08/80	2008	2108	17650.0	66.8053	.00	.00	.00	.00	.00	.00	**
DITW	39031	BOT	7/08/80	2108	2208	17250.0	65.2913	.00	15.32	.00	15.32	.00	.00	
DITCH	39032	BOT	7/08/80	2210	2310	17270.0	65.3670	.00	.00	.00	.00	.00	.00	**
DITE	39033	BOT	7/08/80	2312	0012	15930.0	60.2951	.00	.00	.00	.00	.00	.00	**
DITE	39034	BOT	7/09/80	0012	0112	16160.0	61.1656	.00	.00	.00	.00	.00	.00	
DITW	39035	BOT	7/09/80	0113	0213	16620.0	62.9067	.00	.00	.00	.00	.00	.00	**
DITCH	39036	BOT	7/09/80	0214	0314	16270.0	61.5820	.00	.00	.00	.00	.00	.00	**
DITW	39037	BOT	7/09/80	0315	0415	16080.0	60.8628	.00	.00	.00	.00	.00	.00	**
DITCH	39038	BOT	7/09/80	0416	0516	15960.0	60.4086	.00	.00	.00	.00	.00	.00	**
DITE	39039	BOT	7/09/80	0517	0617	17020.0	64.4207	.00	.00	.00	.00	.00	.00	**
DITCH	39040	BOT	7/15/80	0606	0706	16980.0	64.2693	.00	.00	.00	.00	.00	.00	**
DITW	39041	BOT	7/15/80	0714	0814	16710.0	63.2474	.00	.00	.00	.00	.00	.00	**
DITE	39042	BOT	7/15/80	0816	0916	16410.0	62.1119	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
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SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITE	39043	BOT	7/15/80	0916	1016	16200.0	61.3170	.00	.00	.00	.00	.00	.00	
DITW	39044	BOT	7/15/80	1017	1117	17110.0	64.7614	.00	.00	.00	.00	.00	.00	**
DITCH	39045	BOT	7/15/80	1119	1219	17080.0	64.6478	.00	.00	.00	.00	.00	.00	**
DITCH	39046	BOT	7/15/80	1219	1319	17190.0	65.0642	.00	.00	.00	.00	.00	.00	
DITW	39047	BOT	7/15/80	1321	1421	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITE	39048	BOT	7/15/80	1423	1523	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITE	39049	BOT	7/15/80	1523	1623	16110.0	60.9764	.00	.00	.00	.00	.00	.00	
DITW	39050	BOT	7/15/80	1625	1725	16030.0	60.6736	.00	.00	.00	.00	.00	.00	**
DITCH	39051	BOT	7/15/80	1727	1827	16770.0	63.4745	.00	.00	.00	.00	.00	.00	**
DITW	39052	BOT	7/15/80	1829	1929	15830.0	59.9166	.00	.00	.00	.00	.00	.00	**
DITCH	39053	BOT	7/15/80	1930	2030	15660.0	59.2731	.00	.00	.00	.00	.00	.00	**
DITE	39054	BOT	7/15/80	2031	2131	16890.0	63.9287	.00	.00	.00	.00	.00	.00	**
DITCH	39055	BOT	7/15/80	2133	2203	7950.0	30.0908	.00	.00	.00	.00	.00	.00	**
DITW	39056	BOT	7/15/80	2235	2335	16700.0	63.2095	.00	.00	.00	.00	.00	.00	**
DITE	39057	BOT	7/15/80	2336	0036	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**
DITCH	39058	BOT	7/16/80	0038	0138	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITW	39059	BOT	7/16/80	0139	0239	17210.0	65.1399	.00	15.35	.00	15.35	.00	.00	**
DITE	39060	BOT	7/16/80	0240	0340	16020.0	60.6357	.00	.00	.00	.00	.00	.00	**
DITW	39061	BOT	7/16/80	0341	0441	16870.0	63.8530	.00	15.66	.00	.00	15.66	.00	**
DITCH	39062	BOT	7/16/80	0442	0542	16240.0	61.4684	.00	.00	.00	.00	.00	.00	**
DITE	39063	BOT	7/16/80	0543	0643	16100.0	60.9385	.00	.00	.00	.00	.00	.00	**
DITCH	39064	BOT	7/22/80	0600	0700	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITE	39065	BOT	7/22/80	0701	0801	16020.0	60.6357	.00	.00	.00	.00	.00	.00	**
DITW	39066	BOT	7/22/80	0803	0903	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITE	39067	BOT	7/22/80	0904	1004	16230.0	61.4306	.00	.00	.00	.00	.00	.00	**
DITCH	39068	BOT	7/22/80	1005	1105	16310.0	61.7334	.00	.00	.00	.00	.00	.00	**
DITW	39069	BOT	7/22/80	1106	1206	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**
DITCH	39070	BOT	7/22/80	1207	1307	16300.0	61.6955	.00	.00	.00	.00	.00	.00	**
DITW	39071	BOT	7/22/80	1308	1408	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITE	39072	BOT	7/22/80	1409	1509	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITCH	39073	BOT	7/22/80	1511	1611	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**
DITE	39074	BOT	7/22/80	1613	1713	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITW	39075	BOT	7/22/80	1715	1815	16230.0	61.4306	.00	.00	.00	.00	.00	.00	**
DITW	39076	BOT	7/22/80	1815	1915	16210.0	61.3549	.00	.00	.00	.00	.00	.00	
DITCH	39077	BOT	7/22/80	1917	2017	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITE	39078	BOT	7/22/80	2019	2119	16580.0	62.7553	.00	.00	.00	.00	.00	.00	**
DITW	39079	BOT	7/22/80	2121	2221	16120.0	61.0142	.00	.00	.00	.00	.00	.00	**
DITCH	39080	BOT	7/22/80	2223	2323	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITE	39081	BOT	7/22/80	2325	0025	15910.0	60.2194	.00	.00	.00	.00	.00	.00	**
DITE	39082	BOT	7/23/80	0025	0125	17180.0	65.0263	.00	.00	.00	.00	.00	.00	
DITCH	39083	BOT	7/23/80	0148	0248	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES STRIPED BASS (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITW	39084	BOT	7/23/80	0250	0350	16580.0	62.7553	.00	.00	.00	.00	.00	.00	**
DITW	39085	BOT	7/23/80	0350	0450	16220.0	61.3927	.00	.00	.00	.00	.00	.00	
DITE	39086	BOT	7/23/80	0451	0551	15390.0	58.2512	.00	.00	.00	.00	.00	.00	**
DITCH	39087	BOT	7/23/80	0553	0653	16130.0	61.0521	.00	.00	.00	.00	.00	.00	**
DITCH	39088	BOT	7/29/80	0559	0659	16000.0	60.5600	.00	.00	.00	.00	.00	.00	
DITW	39089	BOT	7/29/80	0700	0800	16250.0	61.5063	.00	.00	.00	.00	.00	.00	**
DITE	39090	BOT	7/29/80	0802	0902	16370.0	61.9605	.00	.00	.00	.00	.00	.00	**
DITE	39091	BOT	7/29/80	0902	1002	16510.0	62.4904	.00	.00	.00	.00	.00	.00	
DITW	39092	BOT	7/29/80	1003	1103	17660.0	66.8431	.00	.00	.00	.00	.00	.00	**
DITCH	39093	BOT	7/29/80	1104	1204	16340.0	61.8469	.00	.00	.00	.00	.00	.00	**
DITW	39094	BOT	7/29/80	1205	1305	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITCH	39095	BOT	7/29/80	1307	1407	16750.0	63.3988	.00	.00	.00	.00	.00	.00	**
DITE	39096	BOT	7/29/80	1409	1509	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**
DITCH	39097	BOT	7/29/80	1510	1610	15800.0	59.8030	.00	.00	.00	.00	.00	.00	**
DITE	39098	BOT	7/29/80	1612	1712	15780.0	59.7273	.00	.00	.00	.00	.00	.00	**
DITW	39099	BOT	7/29/80	1713	1813	16590.0	62.7932	.00	.00	.00	.00	.00	.00	**
DITW	39100	BOT	7/29/80	1813	1913	16490.0	62.4147	.00	.00	.00	.00	.00	.00	
DITE	39101	BOT	7/29/80	1916	2016	15710.0	59.4624	.00	.00	.00	.00	.00	.00	**
DITCH	39102	BOT	7/29/80	2017	2117	15760.0	59.6516	.00	.00	.00	.00	.00	.00	**
DITCH	39103	BOT	7/29/80	2117	2217	16000.0	60.5600	.00	.00	.00	.00	.00	.00	
DITE	39104	BOT	7/29/80	2219	2319	16980.0	64.2693	.00	.00	.00	.00	.00	.00	**
DITW	39105	BOT	7/29/80	2321	0021	17000.0	64.3450	.00	15.54	.00	.00	15.54	.00	**
DITW	39106	BOT	7/30/80	0022	0122	16610.0	62.8689	.00	15.91	.00	.00	15.91	.00	
DITE	39107	BOT	7/30/80	0124	0224	14110.0	53.4064	.00	.00	.00	.00	.00	.00	**
DITCH	39108	BOT	7/30/80	0225	0325	15230.0	57.6456	.00	.00	.00	.00	.00	.00	**
DITCH	39109	BOT	7/30/80	0325	0425	16050.0	60.7493	.00	.00	.00	.00	.00	.00	
DITE	39110	BOT	7/30/80	0427	0527	15710.0	59.4624	.00	.00	.00	.00	.00	.00	**
DITW	39111	BOT	7/30/80	0529	0629	17390.0	65.8212	.00	.00	.00	.00	.00	.00	**
DITE	39112	BOT	8/05/80	0613	0713	16260.0	61.5441	.00	.00	.00	.00	.00	.00	**
DITCH	39113	BOT	8/05/80	0714	0814	15560.0	58.8946	.00	.00	.00	.00	.00	.00	**
DITW	39114	BOT	8/05/80	0816	0916	16830.0	63.7016	.00	.00	.00	.00	.00	.00	**
DITCH	39115	BOT	8/05/80	0918	1018	15940.0	60.3329	.00	.00	.00	.00	.00	.00	**
DITW	39116	BOT	8/05/80	1019	1119	16160.0	61.1656	.00	.00	.00	.00	.00	.00	**
DITE	39117	BOT	8/05/80	1120	1220	15690.0	59.3867	.00	.00	.00	.00	.00	.00	**
DITE	39118	BOT	8/05/80	1220	1320	16270.0	61.5820	.00	.00	.00	.00	.00	.00	
DITW	39119	BOT	8/05/80	1322	1422	16380.0	61.9983	.00	.00	.00	.00	.00	.00	**
DITCH	39120	BOT	8/05/80	1424	1524	16570.0	62.7175	.00	.00	.00	.00	.00	.00	**
DITCH	39121	BOT	8/05/80	1524	1624	18260.0	69.1141	.00	.00	.00	.00	.00	.00	
DITE	39122	BOT	8/05/80	1626	1726	17140.0	64.8749	.00	.00	.00	.00	.00	.00	**
DITW	39123	BOT	8/05/80	1728	1828	18890.0	71.4987	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

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SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITW	39124	BOT	8/05/80	1828	1928	16240.0	61.4684	.00	.00	.00	.00	.00	.00	
DITE	39125	BOT	8/05/80	1930	2030	16060.0	60.7871	.00	.00	.00	.00	.00	.00	**
DITCH	39126	BOT	8/05/80	2032	2132	18150.0	68.6978	.00	.00	.00	.00	.00	.00	**
DITCH	39127	BOT	8/05/80	2132	2232	17450.0	66.0483	.00	.00	.00	.00	.00	.00	
DITE	39128	BOT	8/05/80	2234	2334	15180.0	57.4563	.00	.00	.00	.00	.00	.00	**
DITW	39129	BOT	8/05/80	2336	0036	16530.0	62.5661	.00	.00	.00	.00	.00	.00	**
DITE	39130	BOT	8/06/80	0037	0137	16220.0	61.3927	.00	.00	.00	.00	.00	.00	**
DITCH	39131	BOT	8/06/80	0139	0239	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITW	39132	BOT	8/06/80	0240	0340	16150.0	61.1278	.00	.00	.00	.00	.00	.00	**
DITE	39133	BOT	8/06/80	0341	0441	16330.0	61.8091	.00	.00	.00	.00	.00	.00	**
DITW	39134	BOT	8/06/80	0442	0542	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITCH	39135	BOT	8/06/80	0544	0644	16450.0	62.2633	.00	.00	.00	.00	.00	.00	**
DITW	39136	BOT	8/12/80	0605	0705	16130.0	61.0521	.00	.00	.00	.00	.00	.00	**
DITE	39137	BOT	8/12/80	0706	0806	15770.0	59.6895	.00	.00	.00	.00	.00	.00	**
DITCH	39138	BOT	8/12/80	0807	0907	16180.0	61.2413	.00	.00	.00	.00	.00	.00	**
DITCH	39139	BOT	8/12/80	0907	1007	16260.0	61.5441	.00	.00	.00	.00	.00	.00	
DITE	39140	BOT	8/12/80	1009	1109	16800.0	63.5880	.00	.00	.00	.00	.00	.00	**
DITW	39141	BOT	8/12/80	1111	1211	16820.0	63.6637	.00	.00	.00	.00	.00	.00	**
DITE	39142	BOT	8/12/80	1212	1312	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITW	39143	BOT	8/12/80	1314	1414	16760.0	63.4366	.00	.00	.00	.00	.00	.00	**
DITCH	39144	BOT	8/12/80	1416	1516	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITW	39145	BOT	8/12/80	1517	1617	16140.0	61.0899	.00	.00	.00	.00	.00	.00	**
DITCH	39146	BOT	8/12/80	1619	1719	16350.0	61.8848	.00	.00	.00	.00	.00	.00	**
DITE	39147	BOT	8/12/80	1721	1821	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITE	39148	BOT	8/12/80	1821	1921	15830.0	59.9166	.00	.00	.00	.00	.00	.00	
DITCH	39149	BOT	8/12/80	1922	2022	16050.0	60.7493	.00	.00	.00	.00	.00	.00	**
DITW	39150	BOT	8/12/80	2024	2124	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITE	39151	BOT	8/12/80	2126	2226	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITCH	39152	BOT	8/12/80	2228	2328	15610.0	59.0839	.00	.00	.00	.00	.00	.00	**
DITW	39153	BOT	8/12/80	2330	0030	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITE	39154	BOT	8/13/80	0031	0131	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITW	39155	BOT	8/13/80	0132	0232	17140.0	64.8749	.00	.00	.00	.00	.00	.00	**
DITCH	39156	BOT	8/13/80	0233	0333	17610.0	66.6539	.00	.00	.00	.00	.00	.00	**
DITCH	39157	BOT	8/13/80	0333	0433	16560.0	62.6796	.00	.00	.00	.00	.00	.00	
DITW	39158	BOT	8/13/80	0435	0535	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITE	39159	BOT	8/13/80	0536	0636	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITCH	39160	BOT	8/19/80	0601	0701	12300.0	46.5555	.00	.00	.00	.00	.00	.00	**
DITW	39161	BOT	8/19/80	0705	0805	14780.0	55.9423	.00	.00	.00	.00	.00	.00	**
DITE	39162	BOT	8/19/80	0810	0910	16390.0	62.0362	.00	.00	.00	.00	.00	.00	**
DITE	39163	BOT	8/19/80	0910	1010	16420.0	62.1497	.00	.00	.00	.00	.00	.00	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES STRIPED BASS (MORONE ALLOCATED)

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DITW	39164	BOT	8/19/80	1012	1112	16140.0	61.0899	.00	.00	.00	.00	.00	.00	**
DITCH	39165	BOT	8/19/80	1113	1213	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	39166	BOT	8/19/80	1213	1313	16690.0	63.1717	.00	.00	.00	.00	.00	.00	
DITE	39167	BOT	8/19/80	1314	1414	15780.0	59.7273	.00	.00	.00	.00	.00	.00	**
DITW	39168	BOT	8/19/80	1416	1516	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITCH	39169	BOT	8/19/80	1519	1619	16880.0	63.8908	.00	.00	.00	.00	.00	.00	**
DITW	39170	BOT	8/19/80	1620	1720	17110.0	64.7614	.00	.00	.00	.00	.00	.00	**
DITE	39171	BOT	8/19/80	1721	1821	16080.0	60.8628	.00	.00	.00	.00	.00	.00	**
DITW	39172	BOT	8/19/80	1822	1922	16940.0	64.1179	.00	.00	.00	.00	.00	.00	**
DITCH	39173	BOT	8/19/80	1923	2023	16340.0	61.8469	.00	.00	.00	.00	.00	.00	**
DITE	39174	BOT	8/19/80	2024	2124	18490.0	69.9847	.00	.00	.00	.00	.00	.00	**
DITCH	39175	BOT	8/19/80	2125	2225	16410.0	62.1119	.00	.00	.00	.00	.00	.00	**
DITW	39176	BOT	8/19/80	2226	2326	16090.0	60.9007	.00	.00	.00	.00	.00	.00	**
DITE	39177	BOT	8/19/80	2327	0027	15340.0	58.0619	.00	.00	.00	.00	.00	.00	**
DITW	39178	BOT	8/20/80	0029	0129	16280.0	61.6198	.00	.00	.00	.00	.00	.00	**
DITCH	39179	BOT	8/20/80	0130	0230	16890.0	63.9287	.00	.00	.00	.00	.00	.00	**
DITE	39180	BOT	8/20/80	0232	0332	16450.0	62.2633	.00	.00	.00	.00	.00	.00	**
DITW	39181	BOT	8/20/80	0333	0433	17130.0	64.8371	.00	.00	.00	.00	.00	.00	**
DITE	39182	BOT	8/20/80	0434	0534	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	39183	BOT	8/20/80	0536	0636	16750.0	63.3988	.00	.00	.00	.00	.00	.00	**
DITW	39184	BOT	8/26/80	0640	0740	15500.0	58.6675	.00	.00	.00	.00	.00	.00	**
DITCH	39185	BOT	8/26/80	0741	0841	16170.0	61.2035	.00	.00	.00	.00	.00	.00	**
DITE	39186	BOT	8/26/80	0842	0942	16110.0	60.9764	.00	.00	.00	.00	.00	.00	**
DITW	39187	BOT	8/26/80	0944	1044	15520.0	58.7432	.00	.00	.00	.00	.00	.00	**
DITE	39188	BOT	8/26/80	1045	1145	16900.0	63.9665	.00	.00	.00	.00	.00	.00	**
DITCH	39189	BOT	8/26/80	1146	1246	15570.0	58.9325	.00	.00	.00	.00	.00	.00	**
DITE	39190	BOT	8/26/80	1247	1347	16460.0	62.3011	.00	.00	.00	.00	.00	.00	**
DITCH	39191	BOT	8/26/80	1348	1448	15810.0	59.8409	.00	.00	.00	.00	.00	.00	**
DITW	39192	BOT	8/26/80	1449	1549	16500.0	62.4525	.00	.00	.00	.00	.00	.00	**
DITE	39193	BOT	8/26/80	1550	1650	15530.0	58.7811	.00	.00	.00	.00	.00	.00	**
DITW	39194	BOT	8/26/80	1651	1751	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITCH	39195	BOT	8/26/80	1751	1851	16850.0	63.7773	.00	.00	.00	.00	.00	.00	**
DITCH	39196	BOT	8/26/80	1851	1951	17000.0	64.3450	.00	.00	.00	.00	.00	.00	
DITE	39197	BOT	8/26/80	1952	2052	15890.0	60.1437	.00	.00	.00	.00	.00	.00	**
DITW	39198	BOT	8/26/80	2053	2153	16960.0	64.1936	.00	.00	.00	.00	.00	.00	**
DITW	39199	BOT	8/26/80	2153	2253	16630.0	62.9446	.00	.00	.00	.00	.00	.00	
DITCH	39200	BOT	8/26/80	2301	0001	18260.0	69.1141	.00	.00	.00	.00	.00	.00	**
DITE	39201	BOT	8/27/80	0002	0102	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITCH	39202	BOT	8/27/80	0104	0204	17790.0	67.3352	.00	.00	.00	.00	.00	.00	**
DITE	39203	BOT	8/27/80	0210	0310	14030.0	53.1036	.00	.00	.00	.00	.00	.00	**
DITW	39204	BOT	8/27/80	0312	0412	18990.0	71.8772	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES STRIPED BASS (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITE	39205	BOT	8/27/80	0415	0515	12910.0	48.8644	.00	.00	.00	.00	.00	.00	**
DITCH	39206	BOT	8/27/80	0517	0617	19710.0	74.6024	.00	.00	.00	.00	.00	.00	**
DITW	39207	BOT	8/27/80	0618	0718	12840.0	48.5994	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITW	38680	BOT	4/22/80	0559	0659	17270.0	65.3670	.00	.00	.00	.00	.00	.00	**
DITE	38681	BOT	4/22/80	0702	0802	16900.0	63.9665	.00	.00	.00	.00	.00	.00	**
DITCH	38682	BOT	4/22/80	0805	0905	17110.0	64.7614	.00	.00	.00	.00	.00	.00	**
DITE	38683	BOT	4/22/80	0908	1008	16970.0	64.2315	.00	.00	.00	.00	.00	.00	**
DITCH	38684	BOT	4/22/80	1009	1109	17010.0	64.3829	.00	.00	.00	.00	.00	.00	**
DITW	38685	BOT	4/22/80	1110	1210	17120.0	64.7992	.00	.00	.00	.00	.00	.00	**
DITW	38686	BOT	4/22/80	1210	1310	17250.0	65.2913	.00	.00	.00	.00	.00	.00	
DITCH	38687	BOT	4/22/80	1312	1412	16860.0	63.8151	.00	.00	.00	.00	.00	.00	**
DITE	38688	BOT	4/22/80	1415	1515	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	38689	BOT	4/22/80	1517	1617	17380.0	65.7833	.00	.00	.00	.00	.00	.00	**
DITW	38690	BOT	4/22/80	1619	1719	17750.0	67.1838	.00	.00	.00	.00	.00	.00	**
DITE	38691	BOT	4/22/80	1721	1821	16900.0	63.9665	.00	.00	.00	.00	.00	.00	**
DITCH	38692	BOT	4/22/80	1823	1923	16790.0	63.5502	.00	.00	.00	.00	.00	.00	**
DITW	38693	BOT	4/22/80	1925	2025	17070.0	64.6100	.00	.00	.00	.00	.00	.00	**
DITE	38694	BOT	4/22/80	2028	2128	17310.0	65.5184	.00	.00	.00	.00	.00	.00	**
DITE	38695	BOT	4/22/80	2128	2228	16760.0	63.4366	.00	.00	.00	.00	.00	.00	
DITW	38696	BOT	4/22/80	2230	2330	17250.0	65.2913	.00	.00	.00	.00	.00	.00	**
DITCH	38697	BOT	4/22/80	2331	0031	16660.0	63.0581	.00	.00	.00	.00	.00	.00	**
DITW	38698	BOT	4/23/80	0033	0133	16420.0	62.1497	.00	.00	.00	.00	.00	.00	**
DITE	38699	BOT	4/23/80	0135	0235	16350.0	61.8848	.00	.00	.00	.00	.00	.00	**
DITCH	38700	BOT	4/23/80	0237	0337	16820.0	63.6637	.00	.00	.00	.00	.00	.00	**
DITCH	38701	BOT	4/23/80	0337	0437	16980.0	64.2693	.00	.00	.00	.00	.00	.00	
DITE	38702	BOT	4/23/80	0439	0539	17130.0	64.8371	.00	.00	.00	.00	.00	.00	**
DITW	38703	BOT	4/23/80	0540	0640	18240.0	69.0384	.00	.00	.00	.00	.00	.00	**
DITCH	38704	BOT	4/29/80	0600	0700	16590.0	62.7932	111.48	.00	.00	.00	.00	.00	**
DITE	38705	BOT	4/29/80	0702	0802	16870.0	63.8530	62.64	.00	.00	.00	.00	.00	**
DITW	38706	BOT	4/29/80	0804	0904	16470.0	62.3390	16.04	.00	.00	.00	.00	.00	**
DITCH	38707	BOT	4/29/80	0906	1006	16970.0	64.2315	15.57	.00	.00	.00	.00	.00	**
DITE	38708	BOT	4/29/80	1008	1108	16640.0	62.9824	31.75	.00	.00	.00	.00	.00	**
DITW	38709	BOT	4/29/80	1110	1210	17490.0	66.1997	.00	.00	.00	.00	.00	.00	**
DITCH	38710	BOT	4/29/80	1212	1312	16990.0	64.3072	46.65	.00	.00	.00	.00	.00	**
DITW	38711	BOT	4/29/80	1315	1415	17220.0	65.1777	15.34	.00	.00	.00	.00	.00	**
DITE	38712	BOT	4/29/80	1417	1517	16610.0	62.8689	47.72	.00	.00	.00	.00	.00	**
DITCH	38713	BOT	4/29/80	1518	1618	16710.0	63.2474	110.68	.00	.00	.00	.00	.00	**
DITW	38714	BOT	4/29/80	1620	1720	16300.0	61.6955	64.83	.00	.00	.00	.00	.00	**
DITE	38715	BOT	4/29/80	1723	1823	15650.0	59.2353	16.88	.00	.00	.00	.00	.00	**
DITE	38716	BOT	4/29/80	1823	1923	17060.0	64.5721	61.95	.00	.00	.00	.00	.00	
DITW	38717	BOT	4/29/80	1924	2024	16430.0	62.1876	32.16	.00	.00	.00	.00	.00	**
DITCH	38718	BOT	4/29/80	2026	2126	15730.0	59.5381	83.98	.00	.00	.00	.00	.00	**
DITW	38719	BOT	4/29/80	2127	2227	16870.0	63.8530	15.66	.00	.00	.00	.00	.00	**
DITE	38720	BOT	4/29/80	2229	2329	16480.0	62.3768	16.03	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITCH	38721	BOT	4/29/80	2334	0034	16820.0	63.6637	62.83	.00	.00	.00	.00	.00	**
DITCH	38722	BOT	4/30/80	0034	0134	16810.0	63.6259	.00	.00	.00	.00	.00	.00	
DITE	38723	BOT	4/30/80	0137	0237	16470.0	62.3390	16.04	.00	.00	.00	.00	.00	**
DITW	38724	BOT	4/30/80	0240	0340	17390.0	65.8212	15.19	.00	.00	.00	.00	.00	**
DITCH	38725	BOT	4/30/80	0342	0442	16790.0	63.5502	15.74	.00	.00	.00	.00	.00	**
DITE	38726	BOT	4/30/80	0445	0545	17150.0	64.9128	15.41	.00	.00	.00	.00	.00	**
DITW	38727	BOT	4/30/80	0547	0647	17030.0	64.4586	.00	.00	.00	.00	.00	.00	**
DITCH	38728	BOT	5/06/80	0606	0706	16740.0	63.3609	.00	.00	.00	.00	.00	.00	**
DITW	38729	BOT	5/06/80	0709	0809	16670.0	63.0960	158.49	.00	.00	.00	.00	.00	**
DITE	38730	BOT	5/06/80	0811	0911	16680.0	63.1338	15.84	.00	.00	.00	.00	.00	**
DITE	38731	BOT	5/06/80	0911	1011	16770.0	63.4745	94.53	.00	.00	.00	.00	.00	
DITCH	38732	BOT	5/06/80	1014	1114	16720.0	63.2852	474.04	.00	.00	.00	.00	.00	**
DITW	38733	BOT	5/06/80	1116	1216	17240.0	65.2534	45.97	.00	.00	.00	.00	.00	**
DITE	38734	BOT	5/06/80	1219	1319	16450.0	62.2633	48.18	.00	.00	.00	.00	.00	**
DITW	38735	BOT	5/06/80	1321	1421	16940.0	64.1179	.00	.00	.00	.00	.00	.00	**
DITCH	38736	BOT	5/06/80	1423	1523	16750.0	63.3988	157.73	.00	.00	.00	.00	.00	**
DITCH	38737	BOT	5/06/80	1523	1623	16840.0	63.7394	78.44	.00	.00	.00	.00	.00	
DITE	38738	BOT	5/06/80	1626	1726	16680.0	63.1338	95.04	.00	.00	.00	.00	.00	**
DITW	38739	BOT	5/06/80	1728	1828	16990.0	64.3072	31.10	.00	.00	.00	.00	.00	**
DITW	38740	BOT	5/06/80	1828	1928	16940.0	64.1179	15.60	.00	.00	.00	.00	.00	
DITE	38741	BOT	5/06/80	1930	2030	16860.0	63.8151	266.39	.00	.00	.00	.00	.00	**
DITCH	38742	BOT	5/06/80	2032	2132	17140.0	64.8749	801.54	.00	.00	.00	.00	.00	**
DITE	38743	BOT	5/06/80	2134	2234	16740.0	63.3609	236.74	.00	.00	.00	.00	.00	**
DITCH	38744	BOT	5/06/80	2236	2336	17240.0	65.2534	1348.59	.00	.00	.00	.00	.00	**
DITW	38745	BOT	5/06/80	2337	0037	16490.0	62.4147	272.37	.00	.00	.00	.00	.00	**
DITW	38746	BOT	5/07/80	0037	0137	16630.0	62.9446	63.55	.00	.00	.00	.00	.00	
DITE	38747	BOT	5/07/80	0139	0239	16630.0	62.9446	413.06	.00	.00	.00	.00	.00	**
DITCH	38748	BOT	5/07/80	0241	0341	16510.0	62.4904	848.13	.00	.00	.00	.00	.00	**
DITW	38749	BOT	5/07/80	0344	0444	16770.0	63.4745	236.32	15.75	15.75	.00	.00	.00	**
DITE	38750	BOT	5/07/80	0446	0546	16730.0	63.3231	221.09	.00	.00	.00	.00	.00	**
DITCH	38751	BOT	5/07/80	0547	0647	16550.0	62.6418	95.78	.00	.00	.00	.00	.00	**
DITE	38752	BOT	5/13/80	0605	0705	16700.0	63.2095	15.82	.00	.00	.00	.00	.00	**
DITW	38753	BOT	5/13/80	0707	0807	17030.0	64.4586	108.60	15.51	15.51	.00	.00	.00	**
DITCH	38754	BOT	5/13/80	0809	0909	15930.0	60.2951	.00	33.17	33.17	.00	.00	.00	**
DITE	38755	BOT	5/13/80	0910	1010	16870.0	63.8530	93.97	.00	.00	.00	.00	.00	**
DITW	38756	BOT	5/13/80	1012	1112	17030.0	64.4586	108.60	15.51	15.51	.00	.00	.00	**
DITCH	38757	BOT	5/13/80	1113	1213	16860.0	63.8151	62.68	.00	.00	.00	.00	.00	**
DITCH	38758	BOT	5/13/80	1213	1313	16520.0	62.5282	.00	15.99	15.99	.00	.00	.00	
DITE	38759	BOT	5/13/80	1314	1414	16590.0	62.7932	79.63	15.93	15.93	.00	.00	.00	**
DITW	38760	BOT	5/13/80	1415	1515	16590.0	62.7932	302.58	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITE	38761	BOT	5/13/80	1516	1616	15690.0	59.3867	117.87	.00	.00	.00	.00	.00	**
DITW	38762	BOT	5/13/80	1616	1716	16120.0	61.0142	16.39	32.78	32.78	.00	.00	.00	**
DITCH	38763	BOT	5/13/80	1717	1817	16000.0	60.5600	66.05	16.51	16.51	.00	.00	.00	**
DITW	38764	BOT	5/13/80	1819	1919	16980.0	64.2693	140.04	.00	.00	.00	.00	.00	**
DITCH	38765	BOT	5/13/80	1921	2021	16890.0	63.9287	62.57	31.28	31.28	.00	.00	.00	**
DITE	38766	BOT	5/13/80	2023	2123	16660.0	63.0581	47.58	.00	.00	.00	.00	.00	**
DITCH	38767	BOT	5/13/80	2125	2225	17080.0	64.6478	185.62	15.47	15.47	.00	.00	.00	**
DITE	38768	BOT	5/13/80	2226	2326	16760.0	63.4366	78.82	31.53	31.53	.00	.00	.00	**
DITW	38769	BOT	5/13/80	2328	0028	17260.0	65.3291	61.23	.00	.00	.00	.00	.00	**
DITCH	38770	BOT	5/14/80	0029	0129	16960.0	64.1936	.00	.00	.00	.00	.00	.00	**
DITE	38771	BOT	5/14/80	0131	0231	16550.0	62.6418	159.64	15.96	15.96	.00	.00	.00	**
DITW	38772	BOT	5/14/80	0232	0332	16510.0	62.4904	432.07	32.00	32.00	.00	.00	.00	**
DITCH	38773	BOT	5/14/80	0333	0433	16780.0	63.5123	346.39	15.74	15.74	.00	.00	.00	**
DITE	38774	BOT	5/14/80	0434	0534	15860.0	60.0301	216.56	.00	.00	.00	.00	.00	**
DITW	38775	BOT	5/14/80	0535	0635	16540.0	62.6039	15.97	15.97	15.97	.00	.00	.00	**
DITE	38776	BOT	5/20/80	0607	0707	17010.0	64.3829	372.77	108.72	31.06	77.66	.00	.00	**
DITW	38777	BOT	5/20/80	0709	0809	16860.0	63.8151	2334.87	31.34	15.67	.00	.00	15.67	**
DITCH	38778	BOT	5/20/80	0810	0910	16860.0	63.8151	4513.04	78.35	31.34	31.34	.00	15.67	**
DITE	38779	BOT	5/20/80	0911	1011	16410.0	62.1119	837.20	96.60	.00	96.60	.00	.00	**
DITCH	38780	BOT	5/20/80	1012	1112	16700.0	63.2095	965.04	79.10	.00	79.10	.00	.00	**
DITW	38781	BOT	5/20/80	1113	1213	16720.0	63.2852	300.23	110.61	.00	110.61	.00	.00	**
DITE	38782	BOT	5/20/80	1214	1314	16260.0	61.5441	601.19	129.99	.00	129.99	.00	.00	**
DITW	38783	BOT	5/20/80	1315	1415	17040.0	64.4964	325.60	124.04	46.51	77.52	.00	.00	**
DITCH	38784	BOT	5/20/80	1416	1516	16370.0	61.9605	371.20	.00	.00	.00	.00	.00	**
DITCH	38785	BOT	5/20/80	1516	1616	16330.0	61.8091	728.05	.00	.00	.00	.00	.00	
DITW	38786	BOT	5/20/80	1620	1720	16330.0	61.8091	647.15	64.72	64.72	.00	.00	.00	**
DITE	38787	BOT	5/20/80	1722	1822	16600.0	62.8310	1145.93	.00	.00	.00	.00	.00	**
DITCH	38788	BOT	5/20/80	1824	1924	16960.0	64.1936	389.45	15.58	.00	15.58	.00	.00	**
DITW	38789	BOT	5/20/80	1926	2026	16470.0	62.3390	481.24	32.08	.00	32.08	.00	.00	**
DITE	38790	BOT	5/20/80	2027	2127	15760.0	59.6516	67.06	16.76	.00	16.76	.00	.00	**
DITE	38791	BOT	5/20/80	2127	2227	16970.0	64.2315	498.20	108.98	15.57	93.41	.00	.00	
DITW	38792	BOT	5/20/80	2228	2328	16750.0	63.3988	252.37	536.29	47.32	473.20	.00	15.77	**
DITCH	38793	BOT	5/20/80	2329	0029	16800.0	63.5880	676.23	393.16	47.18	345.98	.00	.00	**
DITCH	38794	BOT	5/21/80	0029	0129	17110.0	64.7614	339.71	92.65	.00	92.65	.00	.00	
DITE	38795	BOT	5/21/80	0131	0231	17070.0	64.6100	572.67	294.07	92.86	185.73	.00	15.48	**
DITW	38796	BOT	5/21/80	0233	0333	17370.0	65.7455	958.24	121.68	15.21	106.47	.00	.00	**
DITE	38797	BOT	5/21/80	0335	0435	17060.0	64.5721	696.90	185.84	92.92	92.92	.00	.00	**
DITW	38798	BOT	5/21/80	0437	0537	17980.0	68.0543	999.20	411.44	161.64	220.41	.00	29.39	**
DITCH	38799	BOT	5/21/80	0539	0639	17670.0	66.8810	642.93	448.56	239.23	194.38	.00	14.95	**
DITW	38800	BOT	5/27/80	1556	1656	16500.0	62.4525	752.57	16.01	.00	16.01	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITE	38801	BOT	5/27/80	1659	1759	16310.0	61.7334	291.58	64.79	16.20	48.60	.00	.00	**
DITCH	38802	BOT	5/27/80	1800	1900	16950.0	64.1558	311.74	93.52	.00	93.52	.00	.00	**
DITCH	38803	BOT	5/27/80	1902	2002	16800.0	63.5880	770.59	125.81	.00	125.81	.00	.00	
DITE	38804	BOT	5/27/80	2004	2104	16570.0	62.7175	2423.57	79.72	.00	79.72	.00	.00	**
DITW	38805	BOT	5/27/80	2105	2205	17140.0	64.8749	2435.46	15.41	.00	15.41	.00	.00	**
DITW	38806	BOT	5/27/80	2207	2307	17020.0	64.4207	1195.27	62.09	.00	62.09	.00	.00	
DITCH	38807	BOT	5/27/80	2310	0010	16810.0	63.6259	801.56	330.05	.00	330.05	.00	.00	**
DITE	38808	BOT	5/28/80	0013	0113	16900.0	63.9665	515.90	359.56	.00	359.56	.00	.00	**
DITCH	38809	BOT	5/28/80	0117	0217	17010.0	64.3829	1087.25	186.38	.00	186.38	.00	.00	**
DITE	38810	BOT	5/28/80	0221	0321	16750.0	63.3988	678.25	378.56	47.32	331.24	.00	.00	**
DITW	38811	BOT	5/28/80	0324	0424	16740.0	63.3609	773.35	31.57	15.78	15.78	.00	.00	**
DITCH	38812	BOT	5/28/80	0428	0528	16940.0	64.1179	1294.49	93.58	31.19	62.39	.00	.00	**
DITE	38813	BOT	5/28/80	0531	0631	16740.0	63.3609	710.22	63.13	.00	63.13	.00	.00	**
DITW	38814	BOT	5/28/80	0634	0734	16860.0	63.8151	1002.90	109.69	.00	94.02	.00	15.67	**
DITE	38815	BOT	5/28/80	0736	0836	16640.0	62.9824	698.61	142.90	.00	142.90	.00	.00	**
DITCH	38816	BOT	5/28/80	0837	0937	16640.0	62.9824	1984.68	301.67	47.63	254.04	.00	.00	**
DITW	38817	BOT	5/28/80	0939	1039	16940.0	64.1179	1294.49	15.60	.00	15.60	.00	.00	**
DITCH	38818	BOT	5/28/80	1041	1141	16670.0	63.0960	1204.51	79.24	.00	79.24	.00	.00	**
DITE	38819	BOT	5/28/80	1143	1243	16330.0	61.8091	760.41	48.54	16.18	32.36	.00	.00	**
DITW	38820	BOT	5/28/80	1245	1345	16730.0	63.3231	284.26	205.30	.00	205.30	.00	.00	**
DITE	38821	BOT	5/28/80	1346	1446	16860.0	63.8151	423.10	109.69	15.67	94.02	.00	.00	**
DITW	38822	BOT	5/28/80	1448	1548	16650.0	63.0203	460.17	.00	.00	.00	.00	.00	**
DITCH	38823	BOT	5/28/80	1550	1650	16710.0	63.2474	268.79	31.62	31.62	.00	.00	.00	**
DITE	38824	BOT	6/03/80	0604	0704	16480.0	62.3768	1539.03	32.06	.00	32.06	.00	.00	**
DITW	38825	BOT	6/03/80	0705	0805	16060.0	60.7871	1217.36	98.71	32.90	65.80	.00	.00	**
DITCH	38826	BOT	6/03/80	0806	0906	16580.0	62.7553	844.55	111.54	15.93	95.61	.00	.00	**
DITE	38827	BOT	6/03/80	0907	1007	15410.0	58.3269	582.92	360.04	.00	360.04	.00	.00	**
DITW	38828	BOT	6/03/80	1008	1108	16790.0	63.5502	582.22	267.51	15.74	251.77	.00	.00	**
DITCH	38829	BOT	6/03/80	1109	1209	16320.0	61.7712	534.23	339.96	.00	339.96	.00	.00	**
DITE	38830	BOT	6/03/80	1210	1310	16970.0	64.2315	1946.09	171.26	.00	171.26	.00	.00	**
DITCH	38831	BOT	6/03/80	1312	1412	16870.0	63.8530	1017.96	62.64	15.66	46.98	.00	.00	**
DITW	38832	BOT	6/03/80	1413	1513	16860.0	63.8151	1849.09	47.01	31.34	15.67	.00	.00	**
DITCH	38833	BOT	6/03/80	1514	1614	16420.0	62.1497	1432.03	225.26	16.09	209.17	.00	.00	**
DITE	38834	BOT	6/03/80	1616	1716	16790.0	63.5502	818.25	865.46	31.47	833.99	.00	.00	**
DITW	38835	BOT	6/03/80	1717	1817	16570.0	62.7175	207.28	1179.89	.00	1179.89	.00	.00	**
DITE	38836	BOT	6/03/80	1818	1918	15850.0	59.9923	216.69	116.68	.00	116.68	.00	.00	**
DITW	38837	BOT	6/03/80	1920	2020	16060.0	60.7871	1019.95	49.35	.00	49.35	.00	.00	**
DITCH	38838	BOT	6/03/80	2022	2122	16020.0	60.6357	643.19	148.43	49.48	82.46	.00	16.49	**
DITW	38839	BOT	6/03/80	2124	2224	16340.0	61.8469	646.76	80.84	.00	80.84	.00	.00	**
DITCH	38840	BOT	6/03/80	2226	2326	16600.0	62.8310	843.53	238.74	15.92	222.82	.00	.00	**
DITE	38841	BOT	6/03/80	2329	0029	16700.0	63.2095	189.84	158.20	15.82	126.56	.00	15.82	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
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SPECIES WHITE PERCH (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO:METER REVS:	VOLUME (CU. M:)	(IN NO:/1000 CU. M:) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIFE STAGE	
DITE	38842	BOT	6/04/80	0029	0129	16310.0	61.7334	696.54	161.99	.00	161.99	.00	.00	**
DITW	38843	BOT	6/04/80	0131	0231	16810.0	63.6259	1555.97	47.15	.00	47.15	.00	.00	**
DITCH	38844	BOT	6/04/80	0234	0334	16720.0	63.2852	2085.80	110.61	.00	110.61	.00	.00	**
DITW	38845	BOT	6/04/80	0337	0437	16720.0	63.2852	410.84	221.22	.00	221.22	.00	.00	**
DITE	38846	BOT	6/04/80	0440	0540	16360.0	61.9226	952.80	419.88	64.60	355.28	.00	.00	**
DITCH	38847	BOT	6/04/80	0544	0644	16490.0	62.4147	416.57	240.33	.00	240.33	.00	.00	**
DITW	38848	BOT	6/06/80	0600	0700	16510.0	62.4904	208.03	352.05	48.01	304.05	.00	.00	**
DITE	38849	BOT	6/06/80	0701	0801	16490.0	62.4147	128.17	432.59	.00	432.59	.00	.00	**
DITCH	38850	BOT	6/06/80	0802	0902	16380.0	61.9983	225.81	161.29	.00	161.29	.00	.00	**
DITCH	38851	BOT	6/06/80	0902	1002	16130.0	61.0521	180.17	49.14	.00	49.14	.00	.00	
DITE	38852	BOT	6/06/80	1003	1103	15940.0	60.3329	513.82	116.02	.00	116.02	.00	.00	**
DITW	38853	BOT	6/06/80	1104	1204	16030.0	60.6736	593.34	49.44	16.48	32.96	.00	.00	**
DITE	38854	BOT	6/06/80	1205	1305	16230.0	61.4306	260.46	48.84	.00	48.84	.00	.00	**
DITW	38855	BOT	6/06/80	1306	1406	16380.0	61.9983	322.59	32.26	.00	32.26	.00	.00	**
DITCH	38856	BOT	6/06/80	1407	1507	16340.0	61.8469	113.18	32.34	.00	32.34	.00	.00	**
DITE	38857	BOT	6/06/80	1508	1608	16820.0	63.6637	267.03	94.25	15.71	78.54	.00	.00	**
DITCH	38858	BOT	6/06/80	1609	1709	16720.0	63.2852	647.86	189.62	.00	189.62	.00	.00	**
DITW	38859	BOT	6/06/80	1710	1810	17070.0	64.6100	727.44	61.91	.00	61.91	.00	.00	**
DITE	38860	BOT	6/06/80	1811	1911	16440.0	62.2254	466.05	144.64	.00	144.64	.00	.00	**
DITW	38861	BOT	6/06/80	1912	2012	16700.0	63.2095	142.38	601.18	15.82	585.36	.00	.00	**
DITCH	38862	BOT	6/06/80	2014	2114	16910.0	64.0044	15.62	484.34	.00	484.34	.00	.00	**
DITCH	38863	BOT	6/06/80	2114	2214	16550.0	62.6418	95.78	941.86	31.93	909.94	.00	.00	
DITW	38864	BOT	6/06/80	2215	2315	16490.0	62.4147	160.22	368.50	.00	368.50	.00	.00	**
DITE	38865	BOT	6/06/80	2316	0016	15830.0	59.9166	83.45	300.42	16.69	283.73	.00	.00	**
DITE	38866	BOT	6/07/80	0016	0116	16250.0	61.5063	341.43	97.55	.00	97.55	.00	.00	
DITW	38867	BOT	6/07/80	0119	0219	16410.0	62.1119	128.80	305.90	16.10	289.80	.00	.00	**
DITCH	38868	BOT	6/07/80	0221	0321	16490.0	62.4147	128.17	560.77	16.02	544.74	.00	.00	**
DITE	38869	BOT	6/07/80	0323	0423	15760.0	59.6516	301.75	234.70	.00	234.70	.00	.00	**
DITW	38870	BOT	6/07/80	0428	0528	17050.0	64.5343	402.89	170.45	.00	170.45	.00	.00	**
DITCH	38871	BOT	6/07/80	0531	0631	16920.0	64.0422	733.89	249.84	31.23	218.61	.00	.00	**
DITCH	38872	BOT	6/10/80	0554	0654	17050.0	64.5343	.00	247.93	.00	247.93	.00	.00	
DITE	38873	BOT	6/10/80	0655	0755	16400.0	62.0740	64.44	306.09	.00	306.09	.00	.00	**
DITW	38874	BOT	6/10/80	0756	0856	16350.0	61.8848	96.95	678.68	64.64	614.04	.00	.00	**
DITE	38875	BOT	6/10/80	0857	0957	16490.0	62.4147	272.37	32.04	.00	32.04	.00	.00	**
DITW	38876	BOT	6/10/80	0958	1058	15900.0	60.1815	66.47	299.10	16.62	282.48	.00	.00	**
DITCH	38877	BOT	6/10/80	1059	1159	16420.0	62.1497	16.09	225.26	.00	225.26	.00	.00	**
DITCH	38878	BOT	6/10/80	1159	1259	16400.0	62.0740	.00	144.99	.00	144.99	.00	.00	
DITE	38879	BOT	6/10/80	1300	1400	16350.0	61.8848	.00	80.80	.00	80.80	.00	.00	**
DITW	38880	BOT	6/10/80	1401	1501	16720.0	63.2852	47.40	94.81	.00	94.81	.00	.00	**
DITCH	38881	BOT	6/10/80	1502	1602	16970.0	64.2315	31.14	46.71	15.57	31.14	.00	.00	**

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DITW	38882	BOT	6/10/80	1603	1703	16610.0	62.8689	31.81	95.44	.00	95.44	.00	.00	**
DITE	38883	BOT	6/10/80	1704	1804	15900.0	60.1815	33.23	116.31	.00	116.31	.00	.00	**
DITE	38884	BOT	6/10/80	1805	1905	17290.0	65.4427	.00	61.12	.00	61.12	.00	.00	
DITW	38885	BOT	6/10/80	1906	2006	15310.0	57.9484	120.80	172.57	.00	172.57	.00	.00	**
DITCH	38886	BOT	6/10/80	2007	2107	16660.0	63.0581	190.30	111.01	.00	111.01	.00	.00	**
DITW	38887	BOT	6/10/80	2108	2208	13100.0	49.5835	80.67	40.34	.00	40.34	.00	.00	**
DITE	38888	BOT	6/10/80	2209	2309	16990.0	64.3072	31.10	155.50	15.55	139.95	.00	.00	**
DITCH	38889	BOT	6/10/80	2310	0010	16890.0	63.9287	.00	62.57	.00	62.57	.00	.00	**
DITCH	38890	BOT	6/11/80	0010	0110	16860.0	63.8151	.00	141.03	15.67	125.36	.00	.00	
DITE	38891	BOT	6/11/80	0111	0211	16630.0	62.9446	31.77	127.10	.00	127.10	.00	.00	**
DITW	38892	BOT	6/11/80	0212	0312	17140.0	64.8749	.00	154.14	.00	107.90	46.24	.00	**
DITW	38893	BOT	6/11/80	0312	0412	17100.0	64.7235	.00	77.25	15.45	61.80	.00	.00	
DITCH	38894	BOT	6/11/80	0413	0513	16200.0	61.3170	.00	81.54	.00	81.54	.00	.00	**
DITE	38895	BOT	6/11/80	0514	0614	17450.0	66.0483	30.28	30.28	.00	30.28	.00	.00	**
DITE	38896	BOT	6/13/80	0556	0656	16190.0	61.2792	.00	.00	.00	.00	.00	.00	
DITCH	38897	BOT	6/13/80	0657	0757	16480.0	62.3768	16.03	.00	.00	.00	.00	.00	**
DITW	38898	BOT	6/13/80	0758	0858	16490.0	62.4147	.00	48.07	.00	48.07	.00	.00	**
DITW	38899	BOT	6/13/80	0858	0958	16670.0	63.0960	.00	63.40	.00	63.40	.00	.00	
DITCH	38900	BOT	6/13/80	0959	1059	16470.0	62.3390	80.21	64.17	16.04	48.12	.00	.00	**
DITE	38901	BOT	6/13/80	1100	1200	16120.0	61.0142	16.39	32.78	.00	32.78	.00	.00	**
DITE	38902	BOT	6/13/80	1200	1300	16110.0	60.9764	.00	16.40	.00	16.40	.00	.00	
DITCH	38903	BOT	6/13/80	1301	1401	15920.0	60.2572	149.36	132.76	16.60	116.17	.00	.00	**
DITW	38904	BOT	6/13/80	1402	1502	16280.0	61.6198	.00	64.91	.00	64.91	.00	.00	**
DITW	38905	BOT	6/13/80	1502	1602	16090.0	60.9007	.00	98.52	.00	98.52	.00	.00	
DITCH	38906	BOT	6/13/80	1603	1703	16390.0	62.0362	.00	.00	.00	.00	.00	.00	**
DITE	38907	BOT	6/13/80	1704	1804	16220.0	61.3927	97.73	48.87	.00	48.87	.00	.00	**
DITE	38908	BOT	6/13/80	1804	1904	16160.0	61.1656	.00	.00	.00	.00	.00	.00	
DITW	38909	BOT	6/13/80	1905	2005	16480.0	62.3768	.00	96.19	.00	96.19	.00	.00	**
DITCH	38910	BOT	6/13/80	2006	2106	16420.0	62.1497	.00	64.36	.00	64.36	.00	.00	**
DITCH	38911	BOT	6/13/80	2106	2206	16690.0	63.1717	47.49	110.81	.00	110.81	.00	.00	
DITW	38912	BOT	6/13/80	2207	2307	16660.0	63.0581	63.43	174.44	.00	174.44	.00	.00	**
DITE	38913	BOT	6/13/80	2308	0008	14250.0	53.9363	92.70	166.86	.00	166.86	.00	.00	**
DITE	38914	BOT	6/14/80	0008	0108	17490.0	66.1997	.00	45.32	.00	45.32	.00	.00	
DITCH	38915	BOT	6/14/80	0109	0209	16970.0	64.2315	93.41	31.14	.00	31.14	.00	.00	**
DITW	38916	BOT	6/14/80	0210	0310	16350.0	61.8848	32.32	80.80	.00	80.80	.00	.00	**
DITCH	38917	BOT	6/14/80	0311	0411	17820.0	67.4487	.00	118.61	.00	118.61	.00	.00	**
DITW	38918	BOT	6/14/80	0412	0512	15860.0	60.0301	33.32	16.66	.00	16.66	.00	.00	**
DITE	38919	BOT	6/14/80	0513	0613	17520.0	66.3132	180.96	30.16	.00	30.16	.00	.00	**
DITE	38920	BOT	6/17/80	0555	0655	16520.0	62.5282	303.86	.00	.00	.00	.00	.00	
DITW	38921	BOT	6/17/80	0656	0756	16370.0	61.9605	64.56	.00	.00	.00	.00	.00	**

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DITCH	38922	BOT	6/17/80	0757	0857	16280.0	61.6198	48.69	16.23	.00	16.23	.00	.00	**
DITCH	38923	BOT	6/17/80	0857	0957	16390.0	62.0362	.00	16.12	.00	16.12	.00	.00	
DITE	38924	BOT	6/17/80	0957	1057	16200.0	61.3170	.00	16.31	.00	16.31	.00	.00	**
DITW	38925	BOT	6/17/80	1058	1158	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITW	38926	BOT	6/17/80	1158	1258	16240.0	61.4684	16.27	16.27	.00	16.27	.00	.00	
DITCH	38927	BOT	6/17/80	1259	1359	16130.0	61.0521	.00	.00	.00	.00	.00	.00	**
DITE	38928	BOT	6/17/80	1400	1500	16410.0	62.1119	161.00	112.70	16.10	96.60	.00	.00	**
DITE	38929	BOT	6/17/80	1500	1600	16460.0	62.3011	16.05	48.15	16.05	32.10	.00	.00	
DITCH	38930	BOT	6/17/80	1602	1702	17090.0	64.6857	.00	.00	.00	.00	.00	.00	**
DITW	38931	BOT	6/17/80	1705	1805	17240.0	65.2534	15.32	45.97	.00	45.97	.00	.00	**
DITW	38932	BOT	6/17/80	1805	1905	15720.0	59.5002	.00	201.68	.00	201.68	.00	.00	
DITCH	38933	BOT	6/17/80	1907	2007	15070.0	57.0400	17.53	.00	.00	.00	.00	.00	**
DITE	38934	BOT	6/17/80	2009	2109	16120.0	61.0142	.00	16.39	16.39	.00	.00	.00	**
DITCH	38935	BOT	6/17/80	2111	2211	16330.0	61.8091	.00	48.54	.00	48.54	.00	.00	**
DITW	38936	BOT	6/17/80	2213	2313	16270.0	61.5820	32.48	32.48	.00	32.48	.00	.00	**
DITE	38937	BOT	6/17/80	2315	0015	16440.0	62.2254	16.07	48.21	32.14	16.07	.00	.00	**
DITE	38938	BOT	6/18/80	0016	0116	16650.0	63.0203	.00	15.87	.00	15.87	.00	.00	
DITW	38939	BOT	6/18/80	0118	0218	16290.0	61.6577	64.87	48.66	.00	48.66	.00	.00	**
DITCH	38940	BOT	6/18/80	0220	0320	16340.0	61.8469	226.37	129.35	.00	129.35	.00	.00	**
DITCH	38941	BOT	6/18/80	0320	0420	16170.0	61.2035	.00	130.71	.00	130.71	.00	.00	
DITW	38942	BOT	6/18/80	0422	0522	16610.0	62.8689	15.91	63.62	.00	63.62	.00	.00	**
DITE	38943	BOT	6/18/80	0524	0624	16360.0	61.9226	.00	16.15	.00	16.15	.00	.00	**
DITE	38944	BOT	6/20/80	0557	0657	16650.0	63.0203	63.47	95.21	.00	95.21	.00	.00	
DITW	38945	BOT	6/20/80	0658	0758	16500.0	62.4525	32.02	64.05	.00	64.05	.00	.00	**
DITCH	38946	BOT	6/20/80	0759	0859	16080.0	60.8628	.00	16.43	.00	16.43	.00	.00	**
DITW	38947	BOT	6/20/80	0900	1000	16560.0	62.6796	.00	15.95	.00	15.95	.00	.00	**
DITCH	38948	BOT	6/20/80	1001	1101	16430.0	62.1876	.00	16.08	.00	16.08	.00	.00	**
DITE	38949	BOT	6/20/80	1102	1202	16070.0	60.8250	.00	32.88	.00	32.88	.00	.00	**
DITCH	38950	BOT	6/20/80	1203	1303	16360.0	61.9226	.00	.00	.00	.00	.00	.00	**
DITW	38951	BOT	6/20/80	1304	1404	16050.0	60.7493	.00	16.46	.00	16.46	.00	.00	**
DITE	38952	BOT	6/20/80	1405	1505	16310.0	61.7334	.00	.00	.00	.00	.00	.00	**
DITCH	38953	BOT	6/20/80	1506	1606	16260.0	61.5441	.00	.00	.00	.00	.00	.00	**
DITW	38954	BOT	6/20/80	1607	1707	16210.0	61.3549	.00	146.69	.00	146.69	.00	.00	**
DITE	38955	BOT	6/20/80	1708	1808	16550.0	62.6418	15.96	175.60	.00	175.60	.00	.00	**
DITW	38956	BOT	6/20/80	1809	1909	16450.0	62.2633	32.12	465.76	32.12	433.64	.00	.00	**
DITCH	38957	BOT	6/20/80	1910	2010	15950.0	60.3708	49.69	16.56	.00	16.56	.00	.00	**
DITE	38958	BOT	6/20/80	2011	2111	15760.0	59.6516	.00	.00	.00	.00	.00	.00	**
DITCH	38959	BOT	6/20/80	2112	2212	16870.0	63.8530	.00	46.98	.00	46.98	.00	.00	**
DITE	38960	BOT	6/20/80	2213	2313	16080.0	60.8628	.00	.00	.00	.00	.00	.00	**
DITW	38961	BOT	6/20/80	2314	0014	16310.0	61.7334	.00	16.20	.00	16.20	.00	.00	**
DITE	38962	BOT	6/21/80	0015	0115	16550.0	62.6418	.00	63.86	15.96	47.89	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITCH	38963	BOT	6/21/80	0116	0216	15680.0	59.3488	.00	.00	.00	.00	.00	.00	**
DITW	38964	BOT	6/21/80	0218	0318	16620.0	62.9067	15.90	302.03	15.90	286.14	.00	.00	**
DITE	38965	BOT	6/21/80	0319	0419	16610.0	62.8689	.00	47.72	.00	47.72	.00	.00	**
DITW	38966	BOT	6/21/80	0420	0520	16600.0	62.8310	.00	63.66	.00	63.66	.00	.00	**
DITCH	38967	BOT	6/21/80	0521	0621	16320.0	61.7712	.00	145.70	.00	145.70	.00	.00	**
DITE	38968	BOT	6/24/80	0625	0725	16660.0	63.0581	.00	285.45	.00	285.45	.00	.00	**
DITCH	38969	BOT	6/24/80	0726	0826	16070.0	60.8250	.00	164.41	.00	164.41	.00	.00	**
DITW	38970	BOT	6/24/80	0828	0928	16320.0	61.7712	.00	210.45	.00	210.45	.00	.00	**
DITE	38971	BOT	6/24/80	0929	1029	16520.0	62.5282	.00	367.83	.00	351.84	.00	15.99	**
DITW	38972	BOT	6/24/80	1030	1130	16850.0	63.7773	.00	15.68	.00	15.68	.00	.00	**
DITCH	38973	BOT	6/24/80	1132	1232	16620.0	62.9067	.00	.00	.00	.00	.00	.00	**
DITCH	38974	BOT	6/24/80	1232	1332	16600.0	62.8310	.00	15.92	.00	15.92	.00	.00	
DITW	38975	BOT	6/24/80	1333	1433	16680.0	63.1338	.00	.00	.00	.00	.00	.00	**
DITE	38976	BOT	6/24/80	1435	1535	16660.0	63.0581	.00	.00	.00	.00	.00	.00	**
DITE	38977	BOT	6/24/80	1535	1635	16440.0	62.2254	.00	.00	.00	.00	.00	.00	
DITW	38978	BOT	6/24/80	1636	1736	16480.0	62.3768	.00	16.03	.00	16.03	.00	.00	**
DITCH	38979	BOT	6/24/80	1737	1837	16470.0	62.3390	.00	48.12	.00	48.12	.00	.00	**
DITE	38980	BOT	6/24/80	1838	1938	16950.0	64.1558	.00	31.17	.00	31.17	.00	.00	**
DITW	38981	BOT	6/24/80	1940	2040	16550.0	62.6418	79.82	127.71	.00	127.71	.00	.00	**
DITCH	38982	BOT	6/24/80	2041	2141	16440.0	62.2254	96.42	112.49	.00	112.49	.00	.00	**
DITCH	38983	BOT	6/24/80	2141	2241	16150.0	61.1278	32.72	49.08	.00	49.08	.00	.00	
DITE	38984	BOT	6/24/80	2242	2342	16310.0	61.7334	.00	48.60	.00	48.60	.00	.00	**
DITW	38985	BOT	6/24/80	2343	0043	16330.0	61.8091	.00	64.72	.00	64.72	.00	.00	**
DITE	38986	BOT	6/25/80	0044	0144	16220.0	61.3927	.00	.00	.00	.00	.00	.00	**
DITW	38987	BOT	6/25/80	0145	0245	16440.0	62.2254	.00	64.28	.00	64.28	.00	.00	**
DITCH	38988	BOT	6/25/80	0246	0346	15770.0	59.6895	.00	201.04	.00	201.04	.00	.00	**
DITCH	38989	BOT	6/25/80	0346	0446	16410.0	62.1119	.00	177.10	.00	177.10	.00	.00	
DITE	38990	BOT	6/25/80	0447	0547	16610.0	62.8689	.00	95.44	.00	95.44	.00	.00	**
DITW	38991	BOT	6/25/80	0548	0648	16680.0	63.1338	.00	15.84	.00	15.84	.00	.00	**
DITE	38992	BOT	7/01/80	0612	0712	16260.0	61.5441	.00	.00	.00	.00	.00	.00	**
DITCH	38993	BOT	7/01/80	0715	0815	16580.0	62.7553	.00	.00	.00	.00	.00	.00	**
DITW	38994	BOT	7/01/80	0817	0917	15990.0	60.5222	.00	.00	.00	.00	.00	.00	**
DITW	38995	BOT	7/01/80	0917	1017	16210.0	61.3549	.00	.00	.00	.00	.00	.00	
DITCH	38996	BOT	7/01/80	1018	1118	16000.0	60.5600	.00	.00	.00	.00	.00	.00	**
DITE	38997	BOT	7/01/80	1120	1220	16210.0	61.3549	.00	.00	.00	.00	.00	.00	**
DITE	38998	BOT	7/01/80	1220	1320	16590.0	62.7932	15.93	.00	.00	.00	.00	.00	
DITW	38999	BOT	7/01/80	1322	1422	16740.0	63.3609	.00	15.78	.00	15.78	.00	.00	**
DITCH	39000	BOT	7/01/80	1425	1525	16170.0	61.2035	.00	49.02	.00	49.02	.00	.00	**
DITCH	39001	BOT	7/01/80	1525	1625	15930.0	60.2951	.00	33.17	.00	33.17	.00	.00	
DITW	39002	BOT	7/01/80	1626	1726	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITE	39003	BOT	7/01/80	1727	1827	15960.0	60.4086	.00	.00	.00	.00	.00	.00	**
DITE	39004	BOT	7/01/80	1827	1927	16400.0	62.0740	.00	.00	.00	.00	.00	.00	
DITCH	39005	BOT	7/01/80	1929	2029	16420.0	62.1497	.00	.00	.00	.00	.00	.00	**
DITW	39006	BOT	7/01/80	2030	2130	16530.0	62.5661	.00	15.98	.00	15.98	.00	.00	**
DITCH	39007	BOT	7/01/80	2131	2231	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITW	39008	BOT	7/01/80	2233	2333	16560.0	62.6796	.00	111.68	.00	111.68	.00	.00	**
DITE	39009	BOT	7/01/80	2335	0035	16540.0	62.6039	.00	31.95	.00	31.95	.00	.00	**
DITW	39010	BOT	7/02/80	0037	0137	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITE	39011	BOT	7/02/80	0139	0239	17150.0	64.9128	.00	.00	.00	.00	.00	.00	**
DITCH	39012	BOT	7/02/80	0241	0341	16690.0	63.1717	.00	15.83	.00	15.83	.00	.00	**
DITW	39013	BOT	7/02/80	0343	0443	16450.0	62.2633	.00	80.30	.00	80.30	.00	.00	**
DITCH	39014	BOT	7/02/80	0445	0545	15950.0	60.3708	.00	.00	.00	.00	.00	.00	**
DITE	39015	BOT	7/02/80	0547	0647	16530.0	62.5661	.00	15.98	.00	15.98	.00	.00	**
DITE	39016	BOT	7/08/80	0546	0646	16200.0	61.3170	.00	.00	.00	.00	.00	.00	
DITCH	39017	BOT	7/08/80	0648	0748	15990.0	60.5222	.00	.00	.00	.00	.00	.00	**
DITW	39018	BOT	7/08/80	0750	0850	16440.0	62.2254	.00	16.07	.00	16.07	.00	.00	**
DITE	39019	BOT	7/08/80	0851	0951	15990.0	60.5222	.00	16.52	.00	16.52	.00	.00	**
DITW	39020	BOT	7/08/80	0953	1053	16010.0	60.5979	.00	49.51	.00	49.51	.00	.00	**
DITCH	39021	BOT	7/08/80	1055	1155	16360.0	61.9226	.00	.00	.00	.00	.00	.00	**
DITW	39022	BOT	7/08/80	1157	1257	16490.0	62.4147	.00	16.02	.00	16.02	.00	.00	**
DITCH	39023	BOT	7/08/80	1259	1359	16850.0	63.7773	.00	.00	.00	.00	.00	.00	**
DITE	39024	BOT	7/08/80	1401	1501	16690.0	63.1717	.00	.00	.00	.00	.00	.00	**
DITE	39025	BOT	7/08/80	1501	1601	16500.0	62.4525	.00	.00	.00	.00	.00	.00	
DITW	39026	BOT	7/08/80	1603	1703	17540.0	66.3889	.00	15.06	.00	15.06	.00	.00	**
DITCH	39027	BOT	7/08/80	1704	1804	17070.0	64.6100	.00	15.48	.00	15.48	.00	.00	**
DITCH	39028	BOT	7/08/80	1804	1904	16690.0	63.1717	.00	15.83	.00	15.83	.00	.00	
DITE	39029	BOT	7/08/80	1906	2006	17170.0	64.9885	.00	15.39	.00	15.39	.00	.00	**
DITW	39030	BOT	7/08/80	2008	2108	17650.0	66.8053	.00	74.84	.00	74.84	.00	.00	**
DITW	39031	BOT	7/08/80	2108	2208	17250.0	65.2913	.00	45.95	.00	45.95	.00	.00	
DITCH	39032	BOT	7/08/80	2210	2310	17270.0	65.3670	.00	61.19	.00	61.19	.00	.00	**
DITE	39033	BOT	7/08/80	2312	0012	15930.0	60.2951	.00	16.59	.00	16.59	.00	.00	**
DITE	39034	BOT	7/09/80	0012	0112	16160.0	61.1656	.00	.00	.00	.00	.00	.00	
DITW	39035	BOT	7/09/80	0113	0213	16620.0	62.9067	.00	95.38	.00	79.48	15.90	.00	**
DITCH	39036	BOT	7/09/80	0214	0314	16270.0	61.5820	.00	32.48	.00	32.48	.00	.00	**
DITW	39037	BOT	7/09/80	0315	0415	16080.0	60.8628	.00	16.43	.00	16.43	.00	.00	**
DITCH	39038	BOT	7/09/80	0416	0516	15960.0	60.4086	.00	66.22	.00	49.66	16.55	.00	**
DITE	39039	BOT	7/09/80	0517	0617	17020.0	64.4207	.00	15.52	.00	15.52	.00	.00	**
DITCH	39040	BOT	7/15/80	0606	0706	16980.0	64.2693	.00	.00	.00	.00	.00	.00	**
DITW	39041	BOT	7/15/80	0714	0814	16710.0	63.2474	.00	.00	.00	.00	.00	.00	**
DITE	39042	BOT	7/15/80	0816	0916	16410.0	62.1119	.00	.00	.00	.00	.00	.00	**

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DITE	39043	BOT	7/15/80	0916	1016	16200.0	61.3170	.00	.00	.00	.00	.00	.00	
DITW	39044	BOT	7/15/80	1017	1117	17110.0	64.7614	.00	.00	.00	.00	.00	.00	**
DITCH	39045	BOT	7/15/80	1119	1219	17080.0	64.6478	.00	.00	.00	.00	.00	.00	**
DITCH	39046	BOT	7/15/80	1219	1319	17190.0	65.0642	.00	.00	.00	.00	.00	.00	
DITW	39047	BOT	7/15/80	1321	1421	16860.0	63.8151	.00	31.34	.00	31.34	.00	.00	**
DITE	39048	BOT	7/15/80	1423	1523	16440.0	62.2254	.00	32.14	.00	32.14	.00	.00	**
DITE	39049	BOT	7/15/80	1523	1623	16110.0	60.9764	.00	.00	.00	.00	.00	.00	
DITW	39050	BOT	7/15/80	1625	1725	16030.0	60.6736	.00	49.44	.00	49.44	.00	.00	**
DITCH	39051	BOT	7/15/80	1727	1827	16770.0	63.4745	.00	.00	.00	.00	.00	.00	**
DITW	39052	BOT	7/15/80	1829	1929	15830.0	59.9166	.00	.00	.00	.00	.00	.00	**
DITCH	39053	BOT	7/15/80	1930	2030	15660.0	59.2731	.00	.00	.00	.00	.00	.00	**
DITE	39054	BOT	7/15/80	2031	2131	16890.0	63.9287	.00	.00	.00	.00	.00	.00	**
DITCH	39055	BOT	7/15/80	2133	2203	7950.0	30.0908	.00	.00	.00	.00	.00	.00	**
DITW	39056	BOT	7/15/80	2235	2335	16700.0	63.2095	.00	31.64	.00	15.82	15.82	.00	**
DITE	39057	BOT	7/15/80	2336	0036	16400.0	62.0740	.00	16.11	.00	.00	16.11	.00	**
DITCH	39058	BOT	7/16/80	0038	0138	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITW	39059	BOT	7/16/80	0139	0239	17210.0	65.1399	.00	46.05	.00	15.35	30.70	.00	**
DITE	39060	BOT	7/16/80	0240	0340	16020.0	60.6357	.00	.00	.00	.00	.00	.00	**
DITW	39061	BOT	7/16/80	0341	0441	16870.0	63.8530	.00	31.32	.00	31.32	.00	.00	**
DITCH	39062	BOT	7/16/80	0442	0542	16240.0	61.4684	.00	32.54	.00	32.54	.00	.00	**
DITE	39063	BOT	7/16/80	0543	0643	16100.0	60.9385	.00	.00	.00	.00	.00	.00	**
DITCH	39064	BOT	7/22/80	0600	0700	16480.0	62.3768	.00	.00	.00	.00	.00	.00	**
DITE	39065	BOT	7/22/80	0701	0801	16020.0	60.6357	.00	.00	.00	.00	.00	.00	**
DITW	39066	BOT	7/22/80	0803	0903	16610.0	62.8689	.00	.00	.00	.00	.00	.00	**
DITE	39067	BOT	7/22/80	0904	1004	16230.0	61.4306	.00	16.28	.00	16.28	.00	.00	**
DITCH	39068	BOT	7/22/80	1005	1105	16310.0	61.7334	.00	.00	.00	.00	.00	.00	**
DITW	39069	BOT	7/22/80	1106	1206	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**
DITCH	39070	BOT	7/22/80	1207	1307	16300.0	61.6955	.00	.00	.00	.00	.00	.00	**
DITW	39071	BOT	7/22/80	1308	1408	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITE	39072	BOT	7/22/80	1409	1509	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITCH	39073	BOT	7/22/80	1511	1611	16550.0	62.6418	.00	.00	.00	.00	.00	.00	**
DITE	39074	BOT	7/22/80	1613	1713	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITW	39075	BOT	7/22/80	1715	1815	16230.0	61.4306	.00	.00	.00	.00	.00	.00	**
DITW	39076	BOT	7/22/80	1815	1915	16210.0	61.3549	.00	16.30	.00	16.30	.00	.00	
DITCH	39077	BOT	7/22/80	1917	2017	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITE	39078	BOT	7/22/80	2019	2119	16580.0	62.7553	.00	63.74	.00	63.74	.00	.00	**
DITW	39079	BOT	7/22/80	2121	2221	16120.0	61.0142	.00	49.17	.00	49.17	.00	.00	**
DITCH	39080	BOT	7/22/80	2223	2323	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITE	39081	BOT	7/22/80	2325	0025	15910.0	60.2194	.00	.00	.00	.00	.00	.00	**
DITE	39082	BOT	7/23/80	0025	0125	17180.0	65.0263	.00	.00	.00	.00	.00	.00	
DITCH	39083	BOT	7/23/80	0148	0248	16510.0	62.4904	.00	16.00	.00	16.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITW	39084	BOT	7/23/80	0250	0350	16580.0	62.7553	.00	15.93	.00	15.93	.00	.00	**
DITW	39085	BOT	7/23/80	0350	0450	16220.0	61.3927	.00	48.87	.00	16.29	32.58	.00	
DITE	39086	BOT	7/23/80	0451	0551	15390.0	58.2512	.00	17.17	.00	17.17	.00	.00	**
DITCH	39087	BOT	7/23/80	0553	0653	16130.0	61.0521	.00	.00	.00	.00	.00	.00	**
DITCH	39088	BOT	7/29/80	0559	0659	16000.0	60.5600	.00	.00	.00	.00	.00	.00	
DITW	39089	BOT	7/29/80	0700	0800	16250.0	61.5063	.00	.00	.00	.00	.00	.00	**
DITE	39090	BOT	7/29/80	0802	0902	16370.0	61.9605	.00	.00	.00	.00	.00	.00	**
DITE	39091	BOT	7/29/80	0902	1002	16510.0	62.4904	.00	.00	.00	.00	.00	.00	
DITW	39092	BOT	7/29/80	1003	1103	17660.0	66.8431	.00	.00	.00	.00	.00	.00	**
DITCH	39093	BOT	7/29/80	1104	1204	16340.0	61.8469	.00	.00	.00	.00	.00	.00	**
DITW	39094	BOT	7/29/80	1205	1305	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITCH	39095	BOT	7/29/80	1307	1407	16750.0	63.3988	.00	.00	.00	.00	.00	.00	**
DITE	39096	BOT	7/29/80	1409	1509	16400.0	62.0740	.00	.00	.00	.00	.00	.00	**
DITCH	39097	BOT	7/29/80	1510	1610	15800.0	59.8030	.00	.00	.00	.00	.00	.00	**
DITE	39098	BOT	7/29/80	1612	1712	15780.0	59.7273	.00	.00	.00	.00	.00	.00	**
DITW	39099	BOT	7/29/80	1713	1813	16590.0	62.7932	.00	15.93	.00	.00	15.93	.00	**
DITW	39100	BOT	7/29/80	1813	1913	16490.0	62.4147	.00	.00	.00	.00	.00	.00	
DITE	39101	BOT	7/29/80	1916	2016	15710.0	59.4624	.00	.00	.00	.00	.00	.00	**
DITCH	39102	BOT	7/29/80	2017	2117	15760.0	59.6516	.00	.00	.00	.00	.00	.00	**
DITCH	39103	BOT	7/29/80	2117	2217	16000.0	60.5600	.00	.00	.00	.00	.00	.00	
DITE	39104	BOT	7/29/80	2219	2319	16980.0	64.2693	.00	.00	.00	.00	.00	.00	**
DITW	39105	BOT	7/29/80	2321	0021	17000.0	64.3450	.00	.00	.00	.00	.00	.00	**
DITW	39106	BOT	7/30/80	0022	0122	16610.0	62.8689	.00	63.62	.00	.00	63.62	.00	
DITE	39107	BOT	7/30/80	0124	0224	14110.0	53.4064	.00	18.72	.00	.00	18.72	.00	**
DITCH	39108	BOT	7/30/80	0225	0325	15230.0	57.6456	.00	17.35	.00	.00	17.35	.00	**
DITCH	39109	BOT	7/30/80	0325	0425	16050.0	60.7493	.00	.00	.00	.00	.00	.00	
DITE	39110	BOT	7/30/80	0427	0527	15710.0	59.4624	.00	.00	.00	.00	.00	.00	**
DITW	39111	BOT	7/30/80	0529	0629	17390.0	65.8212	.00	.00	.00	.00	.00	.00	**
DITE	39112	BOT	8/05/80	0613	0713	16260.0	61.5441	.00	.00	.00	.00	.00	.00	**
DITCH	39113	BOT	8/05/80	0714	0814	15560.0	58.8946	.00	.00	.00	.00	.00	.00	**
DITW	39114	BOT	8/05/80	0816	0916	16830.0	63.7016	.00	.00	.00	.00	.00	.00	**
DITCH	39115	BOT	8/05/80	0918	1018	15940.0	60.3329	.00	.00	.00	.00	.00	.00	**
DITW	39116	BOT	8/05/80	1019	1119	16160.0	61.1656	.00	.00	.00	.00	.00	.00	**
DITE	39117	BOT	8/05/80	1120	1220	15690.0	59.3867	.00	.00	.00	.00	.00	.00	**
DITE	39118	BOT	8/05/80	1220	1320	16270.0	61.5820	.00	.00	.00	.00	.00	.00	
DITW	39119	BOT	8/05/80	1322	1422	16380.0	61.9983	.00	.00	.00	.00	.00	.00	**
DITCH	39120	BOT	8/05/80	1424	1524	16570.0	62.7175	.00	.00	.00	.00	.00	.00	**
DITCH	39121	BOT	8/05/80	1524	1624	18260.0	69.1141	.00	.00	.00	.00	.00	.00	
DITE	39122	BOT	8/05/80	1626	1726	17140.0	64.8749	.00	.00	.00	.00	.00	.00	**
DITW	39123	BOT	8/05/80	1728	1828	18890.0	71.4987	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITW	39124	BOT	8/05/80	1828	1928	16240.0	61.4684	.00	.00	.00	.00	.00	.00	
DITE	39125	BOT	8/05/80	1930	2030	16060.0	60.7871	.00	.00	.00	.00	.00	.00	**
DITCH	39126	BOT	8/05/80	2032	2132	18150.0	68.6978	.00	14.56	.00	.00	14.56	.00	**
DITCH	39127	BOT	8/05/80	2132	2232	17450.0	66.0483	.00	.00	.00	.00	.00	.00	
DITE	39128	BOT	8/05/80	2234	2334	15180.0	57.4563	.00	.00	.00	.00	.00	.00	**
DITW	39129	BOT	8/05/80	2336	0036	16530.0	62.5661	.00	.00	.00	.00	.00	.00	**
DITE	39130	BOT	8/06/80	0037	0137	16220.0	61.3927	.00	16.29	.00	.00	16.29	.00	**
DITCH	39131	BOT	8/06/80	0139	0239	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITW	39132	BOT	8/06/80	0240	0340	16150.0	61.1278	.00	.00	.00	.00	.00	.00	**
DITE	39133	BOT	8/06/80	0341	0441	16330.0	61.8091	.00	.00	.00	.00	.00	.00	**
DITW	39134	BOT	8/06/80	0442	0542	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITCH	39135	BOT	8/06/80	0544	0644	16450.0	62.2633	.00	.00	.00	.00	.00	.00	**
DITW	39136	BOT	8/12/80	0605	0705	16130.0	61.0521	.00	.00	.00	.00	.00	.00	**
DITE	39137	BOT	8/12/80	0706	0806	15770.0	59.6895	.00	.00	.00	.00	.00	.00	**
DITCH	39138	BOT	8/12/80	0807	0907	16180.0	61.2413	.00	.00	.00	.00	.00	.00	**
DITCH	39139	BOT	8/12/80	0907	1007	16260.0	61.5441	.00	.00	.00	.00	.00	.00	
DITE	39140	BOT	8/12/80	1009	1109	16800.0	63.5880	.00	.00	.00	.00	.00	.00	**
DITW	39141	BOT	8/12/80	1111	1211	16820.0	63.6637	.00	.00	.00	.00	.00	.00	**
DITE	39142	BOT	8/12/80	1212	1312	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITW	39143	BOT	8/12/80	1314	1414	16760.0	63.4366	.00	.00	.00	.00	.00	.00	**
DITCH	39144	BOT	8/12/80	1416	1516	16670.0	63.0960	.00	.00	.00	.00	.00	.00	**
DITW	39145	BOT	8/12/80	1517	1617	16140.0	61.0899	.00	.00	.00	.00	.00	.00	**
DITCH	39146	BOT	8/12/80	1619	1719	16350.0	61.8848	.00	.00	.00	.00	.00	.00	**
DITE	39147	BOT	8/12/80	1721	1821	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITE	39148	BOT	8/12/80	1821	1921	15830.0	59.9166	.00	.00	.00	.00	.00	.00	
DITCH	39149	BOT	8/12/80	1922	2022	16050.0	60.7493	.00	.00	.00	.00	.00	.00	**
DITW	39150	BOT	8/12/80	2024	2124	16470.0	62.3390	.00	.00	.00	.00	.00	.00	**
DITE	39151	BOT	8/12/80	2126	2226	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITCH	39152	BOT	8/12/80	2228	2328	15610.0	59.0839	.00	.00	.00	.00	.00	.00	**
DITW	39153	BOT	8/12/80	2330	0030	16740.0	63.3609	.00	15.78	.00	.00	15.78	.00	**
DITE	39154	BOT	8/13/80	0031	0131	16490.0	62.4147	.00	.00	.00	.00	.00	.00	**
DITW	39155	BOT	8/13/80	0132	0232	17140.0	64.8749	.00	15.41	.00	.00	15.41	.00	**
DITCH	39156	BOT	8/13/80	0233	0333	17610.0	66.6539	.00	.00	.00	.00	.00	.00	**
DITCH	39157	BOT	8/13/80	0333	0433	16560.0	62.6796	.00	.00	.00	.00	.00	.00	
DITW	39158	BOT	8/13/80	0435	0535	16560.0	62.6796	.00	.00	.00	.00	.00	.00	**
DITE	39159	BOT	8/13/80	0536	0636	16440.0	62.2254	.00	.00	.00	.00	.00	.00	**
DITCH	39160	BOT	8/19/80	0601	0701	12300.0	46.5555	.00	.00	.00	.00	.00	.00	**
DITW	39161	BOT	8/19/80	0705	0805	14780.0	55.9423	.00	.00	.00	.00	.00	.00	**
DITE	39162	BOT	8/19/80	0810	0910	16390.0	62.0362	.00	.00	.00	.00	.00	.00	**
DITE	39163	BOT	8/19/80	0910	1010	16420.0	62.1497	.00	.00	.00	.00	.00	.00	

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITW	39164	BOT	8/19/80	1012	1112	16140.0	61.0899	.00	.00	.00	.00	.00	.00	**
DITCH	39165	BOT	8/19/80	1113	1213	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	39166	BOT	8/19/80	1213	1313	16690.0	63.1717	.00	.00	.00	.00	.00	.00	
DITE	39167	BOT	8/19/80	1314	1414	15780.0	59.7273	.00	.00	.00	.00	.00	.00	**
DITW	39168	BOT	8/19/80	1416	1516	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITCH	39169	BOT	8/19/80	1519	1619	16880.0	63.8908	.00	.00	.00	.00	.00	.00	**
DITW	39170	BOT	8/19/80	1620	1720	17110.0	64.7614	.00	.00	.00	.00	.00	.00	**
DITE	39171	BOT	8/19/80	1721	1821	16080.0	60.8628	.00	.00	.00	.00	.00	.00	**
DITW	39172	BOT	8/19/80	1822	1922	16940.0	64.1179	.00	.00	.00	.00	.00	.00	**
DITCH	39173	BOT	8/19/80	1923	2023	16340.0	61.8469	.00	.00	.00	.00	.00	.00	**
DITE	39174	BOT	8/19/80	2024	2124	18490.0	69.9847	.00	.00	.00	.00	.00	.00	**
DITCH	39175	BOT	8/19/80	2125	2225	16410.0	62.1119	.00	.00	.00	.00	.00	.00	**
DITW	39176	BOT	8/19/80	2226	2326	16090.0	60.9007	.00	.00	.00	.00	.00	.00	**
DITE	39177	BOT	8/19/80	2327	0027	15340.0	58.0619	.00	.00	.00	.00	.00	.00	**
DITW	39178	BOT	8/20/80	0029	0129	16280.0	61.6198	.00	.00	.00	.00	.00	.00	**
DITCH	39179	BOT	8/20/80	0130	0230	16890.0	63.9287	.00	.00	.00	.00	.00	.00	**
DITE	39180	BOT	8/20/80	0232	0332	16450.0	62.2633	.00	.00	.00	.00	.00	.00	**
DITW	39181	BOT	8/20/80	0333	0433	17130.0	64.8371	.00	.00	.00	.00	.00	.00	**
DITE	39182	BOT	8/20/80	0434	0534	16510.0	62.4904	.00	.00	.00	.00	.00	.00	**
DITCH	39183	BOT	8/20/80	0536	0636	16750.0	63.3988	.00	.00	.00	.00	.00	.00	**
DITW	39184	BOT	8/26/80	0640	0740	15500.0	58.6675	.00	.00	.00	.00	.00	.00	**
DITCH	39185	BOT	8/26/80	0741	0841	16170.0	61.2035	.00	.00	.00	.00	.00	.00	**
DITE	39186	BOT	8/26/80	0842	0942	16110.0	60.9764	.00	.00	.00	.00	.00	.00	**
DITW	39187	BOT	8/26/80	0944	1044	15520.0	58.7432	.00	.00	.00	.00	.00	.00	**
DITE	39188	BOT	8/26/80	1045	1145	16900.0	63.9665	.00	.00	.00	.00	.00	.00	**
DITCH	39189	BOT	8/26/80	1146	1246	15570.0	58.9325	.00	.00	.00	.00	.00	.00	**
DITE	39190	BOT	8/26/80	1247	1347	16460.0	62.3011	.00	.00	.00	.00	.00	.00	**
DITCH	39191	BOT	8/26/80	1348	1448	15810.0	59.8409	.00	.00	.00	.00	.00	.00	**
DITW	39192	BOT	8/26/80	1449	1549	16500.0	62.4525	.00	.00	.00	.00	.00	.00	**
DITE	39193	BOT	8/26/80	1550	1650	15530.0	58.7811	.00	.00	.00	.00	.00	.00	**
DITW	39194	BOT	8/26/80	1651	1751	16430.0	62.1876	.00	.00	.00	.00	.00	.00	**
DITCH	39195	BOT	8/26/80	1751	1851	16850.0	63.7773	.00	.00	.00	.00	.00	.00	**
DITCH	39196	BOT	8/26/80	1851	1951	17000.0	64.3450	.00	.00	.00	.00	.00	.00	
DITE	39197	BOT	8/26/80	1952	2052	15890.0	60.1437	.00	.00	.00	.00	.00	.00	**
DITW	39198	BOT	8/26/80	2053	2153	16960.0	64.1936	.00	.00	.00	.00	.00	.00	**
DITW	39199	BOT	8/26/80	2153	2253	16630.0	62.9446	.00	.00	.00	.00	.00	.00	
DITCH	39200	BOT	8/26/80	2301	0001	18260.0	69.1141	.00	.00	.00	.00	.00	.00	**
DITE	39201	BOT	8/27/80	0002	0102	16720.0	63.2852	.00	.00	.00	.00	.00	.00	**
DITCH	39202	BOT	8/27/80	0104	0204	17790.0	67.3352	.00	.00	.00	.00	.00	.00	**
DITE	39203	BOT	8/27/80	0210	0310	14030.0	53.1036	.00	.00	.00	.00	.00	.00	**
DITW	39204	BOT	8/27/80	0312	0412	18990.0	71.8772	.00	.00	.00	.00	.00	.00	**

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ICHTHYOPLANKTON COLLECTION DATA

SPECIES WHITE PERCH (MORONE ALLOCATED)

SAMPLE LOCATION	INVENTORY NUMBER	DEPTH	SAMPLE DATE	START TIME	END TIME	NO.METER REVS.	VOLUME (CU. M.)	(IN NO./1000 CU. M.) TOTAL EGGS	TOTAL LARVAE	YOLK-SAC	POST YOLK-SAC	JUVENILE	UNID LIF STAGE	
DITE	39205	BOT	8/27/80	0415	0515	12910.0	48.8644	.00	.00	.00	.00	.00	.00	**
DITCH	39206	BOT	8/27/80	0517	0617	19710.0	74.6024	.00	.00	.00	.00	.00	.00	**
DITW	39207	BOT	8/27/80	0618	0718	12840.0	48.5994	.00	.00	.00	.00	.00	.00	**

APPENDIX 2 - STATISTICAL ANALYSIS FOR SELECT SPECIES IN ENTRAINMENT COLLECTIONS AT THE ROSETON AND DANSKAMMER POINT GENERATING STATIONS

TABLE A-1

STATISTICAL ANALYSIS FOR ALOSA SPP.
YOLK-SAC LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1980

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F
Date	8	32.893	4.111	9.03*
Site (S)	2	2.274	1.137	2.50
Time Period (T)	7	6.026	0.861	1.89
(S) x (T)	14	5.489	0.392	0.86
Error	184	83.790	0.455	
Total	215	130.472		

*Significant at $\alpha = .05$.
[a]Number of organisms per 1000 m^3; period used was 22 April through 10 June.

TABLE A-2

STATISTICAL ANALYSIS FOR ALOSA SPP.
POST-YOLK-SAC LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1980

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE		DF	SS	MS	F
Date		16	406.265	25.392	87.85*
Site	(S)	2	0.969	0.484	1.68
Time Period	(T)	7	4.198	0.600	2.08*
(S) x (T)		14	3.158	0.226	0.78
Error		368	106.365	0.289	
Total		407	520.955		

Tukey Comparison (α= .05)

Time Period:
Largest: 0600-0900 0300-0600 0900-1200 2100-2400 0000-0300 1500-1800 1200-1500 1800-2100 :Smallest

*Significant at α = .05.
[a]Number of organisms per 1000 m^3; period used was 22 April through 22 July.

TABLE A-3

STATISTICAL ANALYSIS FOR AMERICAN SHAD
POST-YOLK-SAC LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1980

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F
Date	9	32.218	3.580	10.24*
Site (S)	2	1.128	0.564	1.61
Time Period (T)	7	1.140	0.163	0.47
(S) x (T)	14	6.873	0.491	1.40
Error	207	72.354	0.350	
Total	239	113.713		

*Significant at $\alpha = .05$.
[a]Number of organism per 1000 m^3; period used was 13 May through 24 June.

TABLE A-4

STATISTICAL ANALYSIS FOR STRIPED BASS
YOLK-SAC LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1980

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F
Date	9	93.124	10.347	19.46*
Site (S)	2	0.987	0.494	0.94
Time Period (T)	7	5.693	0.813	1.53
(S) x (T)	14	4.309	0.308	0.50
Error	207	110.058	0.532	
Total	239	214.171		

*Significant at $\alpha = .05$.
[a]Number of organism per 1000 m^3; period used was 13 May through 24 June.

TABLE A-5

STATISTICAL ANALYSIS[a] FOR STRIPED BASS
POST-YOLK-SAC LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1980

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F
Date	11	205.991	18.726	43.50*
Site (S)	2	1.709	0.855	1.99
Time Period (T)	7	9.538	1.363	3.16*
(S) x (T)	14	4.252	0.304	0.71
Error	253	108.924	0.431	
Total	287	330.414		

Tukey Comparison (α = .05)

Time Period:
Largest: 0000-0300 0300-0600 2100-2400 0900-1200 1200-1500 1800-2100 0600-0900 1500-1800 :Smallest

*Significant at α = .05.
[a]Number of organisms per 1000 m^3; period used was 20 May through 15 July.

TABLE A-6

STATISTICAL ANALYSIS FOR WHITE PERCH
YOLK-SAC LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1980

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F
Date	9	18.903	2.100	5.63*
Site (S)	2	0.160	0.080	0.21
Time Period (T)	7	2.787	0.398	1.07
(S) x (T)	14	5.910	0.422	1.13
Error	207	77.188	0.373	
Total	239	104.948		

*Significant at $\alpha = .05$.
[a]Number of organisms per 1000 m^3; period used was 6 May through 20 June.

TABLE A-7

STATISTICAL ANALYSIS FOR WHITE PERCH
POST-YOLK-SAC LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1980

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F
Date	12	108.402	9.034	20.37*
Site (S)	2	3.572	1.786	4.03*
Time Period (T)	7	14.851	2.122	4.78*
(S) x (T)	14	6.527	0.466	1.05
Error	276	122.388	0.443	
Total	311	255.740		

Tukey Comparison (α = .05)

I. Site: Largest: DITW DITCH DITE :Smallest

II. Time Period:
Largest: 0300-0600 2100-2400 0000-0300 1800-2100 0900-1200 0600-0900 1200-1500 1500-1800 :Smallest

*Significant at α = .05.
[a]Number of organisms per 1000 m^3; period used was 20 May through 22 July.

TABLE A-8

STATISTICAL ANALYSIS FOR TOTAL
POST-YOLK-SAC LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1980

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F
Date	12	139.599	11.633	23.89*
Site (S)	2	1.991	0.996	2.04
Time Period (T)	7	7.010	1.001	2.06*
(S) x (T)	14	4.431	0.317	0.65
Error	276	134.426	0.487	
Total	311	287.457		

Tukey Comparison (α = .05)

Time Period:
Largest: 1500-1800 0300-0600 2100-2400 0000-0300 1800-2100 0600-0900 0900-1200 1200-1500 :Smallest

*Significant at α = .05.
[a]Number of organisms per 1000 m^3; period used was 22 April through 24 June.

TABLE A-9

STATISTICAL ANALYSIS FOR TOTAL
POST-YOLK-SAC LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1980

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F
Date	16	415.012	25.938	106.73*
Site (S)	2	3.185	1.592	6.55*
Time Period (T)	7	2.370	0.339	1.39
(S) x (T)	14	1.816	0.130	0.53
Error	368	89.437	0.243	
Total	407	511.820		

Tukey Comparison (α = .05)

Site: Largest: DITW DITE DITCH :Smallest

*Significant at α = .05.
[a]Number of organism per 1000 m^3; period used was 22 April through 22 July.

TABLE A-10

STATISTICAL ANALYSIS FOR ALOSA SPP.
YOLK-SAC LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Roseton and Danskammer Point Generating Stations - 1980

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F
Date	7	25.609	3.658	9.03*
Site (S)				
Within Danskammer Point	2	2.816	1.408	3.48*
Between Plants	1	10.681	10.681	26.37*
Time Period (T)	7	5.517	0.788	1.95
(S) x (T)	21	8.934	0.425	1.05
Error	217	87.887	0.405	
Total	255	141.444		

Plant Comparison

Danskammer Point > Roseton

Tukey Comparison ($\alpha = .05$)

Site: Largest: DITW DITCH DITE :Smallest

*Significant at $\alpha = .05$.
[a]Number of organisms per 1000 m^3; period used was 29 April through 10 June.

TABLE A-11

STATISTICAL ANALYSIS FOR ALOSA SPP.
POST-YOLK-SAC LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Roseton and Danskammer Point Generating Stations - 1980

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F	
Date		15	448.875	29.925	91.36*
Site (S)					
Within Danskammer Point		2	0.907	0.454	1.39
Between Plants		1	0.977	0.977	2.98
Time Period (T)		7	6.004	0.858	2.62*
(S) x (T)		21	4.315	0.206	0.63
Error		465	152.313	0.328	
Total		511	613.391		

Tukey Comparison ($\alpha = .05$)

Time Period:
Largest: 0300-0600 0600-0900 2100-2400 0900-1200 0000-0300 1200-1500 1800-2100 1500-1800 :Smallest

*Significant at $\alpha = .05$.
[a]Number of organisms per 1000 m^3; period used was 29 April through 22 July.

TABLE A-12

STATISTICAL ANALYSIS[a] FOR AMERICAN SHAD POST-YOLK-SAC LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Roseton and Danskammer Point Generating Stations - 1980

THREE-WAY ANALYSIS OF VARIANCE (Log Transformed)				
SOURCE	DF	SS	MS	F
Date	9	35.716	3.968	12.49*
Site (S)				
Within Danskammer Point	2	1.128	0.564	1.78
Between Plants	1	0.074	0.074	0.23
Time Period (T)	7	1.672	0.239	0.75
(S) x (T)	21	8.459	0.403	1.27
Error	279	88.637	0.318	
Total	319	135.686		

*Significant at $\alpha = .05$.
[a]Number of organisms per 1000 m^3; period used was 13 May through 24 June.

TABLE A-13

STATISTICAL ANALYSIS FOR STRIPED BASS YOLK-SAC LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Roseton and Danskammer Point Generating Stations - 1980

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F
Date	9	93.897	10.433	21.71*
Site (S)				
Within Danskammer Point	2	0.987	0.494	1.03
Between Plants	1	11.653	11.653	24.25*
Time Period (T)	7	5.604	0.801	1.67
(S) x (T)	21	7.397	0.352	0.73
Error	279	134.072	0.481	
Total	319	253.610		

Plant Comparison

Danskammer > Roseton

*Significant at $\alpha = .05$.
[a]Number of organisms per 1000 m^3; period used was 13 May through 24 June.

TABLE A-14

STATISTICAL ANALYSIS FOR STRIPED BASS POST-YOLK-SAC LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Roseton and Danskammer Point Generating Stations - 1980

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F
Date	11	257.498	23.409	57.59*
Site (S)				
Within Danskammer Point	2	1.709	0.855	2.10
Between Plants	1	0.003	0.003	0.01
Time Period (T)	7	13.773	1.968	4.84*
(S) x (T)	21	8.740	0.416	1.02
Error	341	138.613	0.406	
Total	383	420.336		

Tukey Comparison (α = .05)

Time Period: Largest: 0000-0300 0300-0600 2100-2400 0600-0900 1800-2100 1500-1800 0900-1200 1200-1500 :Smallest

*Significant at α = .05.
[a]Number of organisms per 1000 m^3; period used was 20 May through 5 July.

TABLE A-15

STATISTICAL ANALYSIS FOR WHITE PERCH YOLK-SAC LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Roseton and Danskammer Point Generating Stations - 1980

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F
Date	9	16.970	1.886	6.29*
Site (S)				
Within Danskammer Point	2	0.160	0.080	0.27
Between Plants	1	6.983	6.983	23.28*
Time Period (T)	7	1.540	0.220	0.73
(S) x (T)	21	7.705	0.367	1.22
Error	279	83.694	0.300	
Total	319	117.052		

Plant Comparison

Danskammer > Roseton

*Significant at $\alpha = .05$.
[a]Number of organisms per 1000 m^3; period used was 6 May through 20 June.

TABLE A-16

STATISTICAL ANALYSIS[a] FOR WHITE PERCH POST-YOLK-SAC LARVAL ABUNDANCE[a] IN ENTRAINMENT COLLECTIONS

Roseton and Danskammer Point Generating Stations - 1980

THREE-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F
Date	12	132.981	11.082	26.33*
Site (S)				
Within Danskammer Point	2	3.572	1.786	4.24*
Between Plants	1	0.072	0.072	0.17
Time Period (T)	7	15.397	2.200	5.23*
(S) x (T)	21	8.625	0.411	0.98
Error	372	156.543	0.421	
Total	415	317.190		

Tukey Comparison ($\alpha = .05$)

I. Site: Largest: DITW DITCH DITE :Smallest

II. Time Period:
Largest: 0300-0600 2100-2400 0000-0300 1800-2100 0900-1200 0600-0900 1200-1500 1500-1800 :Smallest

*Significant at $\alpha = .05$.
[a]Number of organisms per 1000 m^3; period used was 20 May through 22 July.

APPENDIX 3 - DANSKAMMER POINT INTAKE VELOCITY STUDY

TABLE A-17 (Page 1 of 5)

VELOCITY[a] MEASUREMENTS TAKEN AT INTAKE CANAL DURING THE ENTRAINMENT ABUNDANCE SURVEY

Danskammer Point Generating Station - 1980

DATE	TIME	TIDE	DEPTH[c](m)	LOCATIONS[b] WEST 1	2	3	4	5	EAST 6
29 Apr	1205-1250	Mid-flood	+4.9	0.0 to (-3.0)	0.0	<-3.0	<-3.0		
			+4.3	0.0 to (-3.0)	<-3.0	<-3.0	<-3.0	<-3.0	<-3.0
			+3.7	0.0 to (-3.0)	<-3.0	0.0	<-3.0	<-3.0	<-3.0
			+3.0	3.0 to (-3.0)	0.0 to 3.0	0.0	0.0 to (-3.0)	<-3.0	<-3.0
			+2.4	0.0 to (-3.0)	0.0 to 6.1	0.0	0.0 to (-3.0)	<-3.0	<-3.0
			+1.8	12.2 to 18.3	9.1 to 12.2	3.0 to 6.1	15.2 to 24.4	0.0 to 6.1	0.0
			+1.2	30.5 to 42.7	45.7 to 51.8	24.4 to 30.5	106.7	15.2 to 21.3	76.2 to 85.3
			+0.6	88.4 to 94.5	73.2 to 79.2	88.3 to 94.5	48.8 to 61.0	73.2 to 82.3	51.8 to 54.9
			+0.0	54.9 to 61.0	21.3 to 30.5	21.3 to 24.4	6.1 to 15.2	54.9 to 61.0	39.62
29 Apr	1420-1450	High slack-ebb	+4.9	<0.0	<0.0	<0.0	<0.0		
			+4.3	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+3.7	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+3.0	<0.0	0.0	<0.0	0.0	<0.0	<0.0
			+2.4	3.0 to 6.1	0.0 to 3.0	0.0	0.0 to 9.1	0.0	0.0
			+1.8	3.0 to 9.1	18.3 to 24.4	21.3 to 30.5	27.4 to 33.5	3.0 to 12.2	0.0 to 3.0
			+1.2	45.7 to 70.1	54.9 to 64.0	73.2 to 79.2	82.3 to 88.4	12.2 to 18.3	9.1 to 15.2
			+0.6	70.1 to 76.2	51.8 to 61.0	67.1 to 79.2	24.4 to 30.5	91.4 to 97.5	42.7 to 48.8
			0.0	39.6 to 45.7	18.3 to 21.3	9.1 to 12.2	0.0 to 9.1	42.7 to 54.9	15.2 to 24.4
29 Apr	1840-1945	Mid-ebb	+3.4	-18.3	-9.1	-12.2	-3.0	0.0	(-6.1) to (-9.1)
			+2.7	- 3.0	(-9.1) to (12.2)	-12.2	(-3.0) to (-6.1)	-3.0	-9.1
			+2.1	3.0 to 6.1	(-12.2) to (-15.2)	- 9.1	-3.0	-6.1	-9.1
			+1.5	6.1 to 12.2	27.4 to 30.5	-12.2	3.0 to 6.1	15.2 to 21.3	-3.0
			+0.9	36.6	106.7	45.7 to 61.0	106.7 to 112.8	42.7 to 45.7	45.7
			+0.3	85.3 to 91.4	91.4 to 94.4	82.3 to 91.4	100.6 to 106.7	15.2 to 21.3	97.5
			0.0	54.9	64.0	82.3 to 91.4	73.2 to 79.2	30.5 to 45.7	82.3

[a]Velocity recorded in centimeters/second.
[b]Station locations from west side to the east side of the river in 1.5 meter increments.
[c]Samples collected in 0.61 meter increments from the bottom.
Note: Low slack survey not completed due to weather and equipment problems.

VELOCITY[a] MEASUREMENTS TAKEN AT INTAKE CANAL DURING THE ENTRAINMENT ABUNDANCE SURVEY

Danskammer Point Generating Station - 1980

DATE	TIME	TIDE	DEPTH[c](m)	WEST LOCATIONS[b] 1	2	3	4	5	EAST 6
13 May	0800-0830	Low slack	+4.3	<0.0	<0.0	<0.0	<0.0		<0.0
			+3.7	0.0	0.0	0.0	<0.0	<0.0	<0.0
			+3.0	6.1 to 9.1	0.0	0.0 to 3.0	<0.0	<0.0	<0.0
			+2.4	3.0 to 9.1	3.0 to 6.1	9.1 to 15.2	<0.0	<0.0	<0.0
			+1.8	45.7 to 51.8	15.2 to 21.3	21.3 to 27.4	3.0 to 9.1	<0.0	0.0
			+1.2	73.2 to 79.2	67.1 to 73.2	42.7 to 61.0	18.3 to 21.3	9.1 to 18.3	15.2 to 24.4
			+0.6	57.9 to 64.0	76.2 to 85.3	39.6 to 57.9	85.3 to 97.5	30.5 to 39.6	73.2 to 79.2
			0.0	33.5 to 39.6	48.8 to 54.8	12.2 to 18.3	0.0 to 12.2	30.5 to 36.6	9.1 to 15.2
13 May	1048-1117	Mid-flood	+4.9	<0.0	<0.0	<0.0	<0.0		0.0
			+4.3	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+3.7	0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+3.0	0.0 to 3.0	0.0	0.0	<0.0	0.0	0.0
			+2.4	6.1 to 12.2	0.0 to 3.0	0.0 to 9.1	0.0	0.0 to 6.1	0.0
			+1.8	9.1 to 15.2	9.1 to 12.2	9.1 to 12.2	9.1 to 12.2	6.1 to 12.2	0.0 to 6.1
			+1.2	51.8 to 61.0	27.4 to 33.5	24.4 to 39.6	27.4 to 36.6	24.4 to 36.6	15.2 to 21.3
			+0.6	54.9 to 61.0	48.8 to 64.0	61.0 to 70.1	27.4 to 33.5	30.5 to 36.6	27.4 to 36.6
			0.0	36.6 to 42.7	45.7 to 51.8	9.1 to 18.3	6.1 to 12.2	6.1 to 12.2	0.0 to 9.1
13 May	1324-1347	Low slack	+4.9	<0.0	<0.0	<0.0	<0.0		<0.0
			+4.3	<0.0	<0.0	0.0	<0.0	<0.0	0.0
			+3.7	0.0	<0.0	0.0	0.0	<0.0	0.0
			+3.0	0.0	0.0	0.0	0.0	0.0	0.0
			+2.4	0.0 to 3.0	6.1 to 15.2	0.0 to 3.0	0.0	0.0	0.0
			+1.8	9.1 to 12.2	9.1 to 15.2	12.2 to 15.2	0.0 to 3.0	0.0 to 3.0	0.0 to 3.0
			+1.2	70.1 to 76.2	45.7 to 51.8	30.5 to 36.6	33.5 to 39.6	15.2 to 21.3	24.4 to 27.4
			+0.6	76.2 to 82.3	79.2 to 85.3	36.6 to 42.7	33.5 to 39.6	39.6 to 48.8	45.7 to 51.8
			0.0	27.4 to 33.5	27.4 to 39.6	12.2 to 27.4	0.0 to 6.1	33.5 to 36.6	24.3 to 27.4
13 May	1620-1640	Mid-ebb	+4.3	0.0	<0.0	<0.0	<0.0		
			+3.7	0.0	0.0	<0.0	<0.0	<0.0	<0.0
			+3.0	0.0 to 3.0	0.0 to 3.0	0.0	0.0	<0.0	<0.0
			+2.4	12.2 to 15.2	0.0 to 3.0	0.0 to 3.0	0.0	0.0	0.0
			+1.8	67.1 to 73.2	12.2 to 15.2	27.4 to 33.5	0.0 to 3.0	0.0 to 6.1	0.0 to 3.0
			+1.2	67.1 to 73.2	30.5 to 36.6	73.2 to 79.2	30.5 to 42.7	30.5 to 33.5	30.5 to 33.5
			+0.6	54.9 to 61.0	30.5 to 36.6	82.3 to 85.3	51.8 to 61.0	39.6 to 51.8	79.2 to 88.4
			0.0	27.4 to 36.6	12.2 to 15.2	12.2 to 15.2	9.1 to 27.4	12.2 to 21.3	9.1 to 18.3

[a]Velocity recorded in centimeters/second.
[b]Station locations from the west side to the east side of the river every 1.5 meter increments.
[c]Samples collected in 0.61 meter increments from the bottom.

TABLE A-17 (Page 3 of 5)

VELOCITY[a] MEASUREMENTS TAKEN AT INTAKE CANAL DURING THE ENTRAINMENT ABUNDANCE SURVEY

Danskammer Point Generating Station - 1980

DATE	TIME	TIDE	DEPTH[c](m)	LOCATIONS[b] WEST 1	2	3	4	5	EAST 6
1 Jul	0840-0915	Mid-ebb	+3.7	<0.0	<0.0	<0.0	<0.0		<0.0
			+3.0	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+2.4	0.0 to 3.0	<0.0	<0.0	0.0 to 12.2	<0.0	<0.0
			+1.8	15.2 to 21.3	0.0	<0.0	<0.0	<0.0	<0.0
			+1.2	118.9 to 128.0	73.2 to 97.5	115.8 to 128.0	85.3 to 115.8	24.4 to 42.7	76.2 to 91.4
			+0.6	137.2	128.0 to 140.2	94.5 to 109.7	100.6 to 121.9	76.2 to 97.5	100.6 to 112.8
			0.0	54.9 to 76.2	64.0 to 70.1	39.6 to 45.7	0.0 to 21.3	70.1 to 82.3	15.2 to 30.5
1 Jul	1200-1230	Low slack	+4.3	<0.0	<0.0	<0.0	<0.0		<0.0
			+3.7	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+3.0	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+2.4	<0.0	<0.0	<0.0 to 3.0	<0.0	<0.0	<0.0
			+1.8	9.1 to 15.2	6.1 to 12.2	9.1 to 21.3	<0.0 to 6.1	6.1 to 12.2	<0.0
			+1.2	94.5 to 100.6	57.9 to 70.1	73.2 to 106.7	121.9 to 146.3	48.8 to 64.0	54.9 to 73.2
			+0.6	134.1 to 146.3	128.0 to 137.2	121.9 to 131.0	45.7 to 54.9	128.0 to 134.1	94.5 to 97.5
			0.0	45.7 to 61.0	27.4 to 36.6	48.8 to 57.9	<0.0	76.2 to 82.3	61.0 to 73.2
1 Jul	1435-1500	Mid-flood	+4.9	<0.0	<0.0	<0.0	<0.0		<0.0
			+4.3	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+3.7	<0.0	0.0 to 3.0	<0.0	<0.0	<0.0	<0.0
			+3.0	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+2.4	0.0 to 3.0	<0.0	3.0 to 9.1	<0.0	<0.0	<0.0
			+1.8	9.1 to 15.2	12.2 to 18.3	30.5 to 36.6	3.0 to 9.1	9.1 to 15.2	<0.0
			+1.2	97.5 to 109.7	100.6 to 109.7	103.6 to 115.8	79.2 to 91.4	76.2 to 88.4	45.7 to 61.0
			+0.6	100.6 to 115.8	91.4 to 109.7	103.6 to 112.8	70.1 to 85.3	134.1 to 143.3	103.6 to 115.8
			0.0	73.2 to 82.3	61.0 to 70.1	61.0 to 73.2	0.0 to 3.0	48.8 to 57.9	85.3 to 97.5
1 Jul	1625-1700	High slack	+4.3	<0.0	<0.0	<0.0	<0.0		<0.0
			+3.7	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+3.0	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+2.4	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+1.8	6.1 to 12.2	0.0 to 9.1	9.1 to 12.2	3.0 to 12.2	3.0 to 12.2	<0.0
			+1.2	76.2 to 79.2	54.9 to 70.1	67.1 to 82.3	131.1 to 140.2	30.5 to 39.6	45.7 to 48.8
			+0.6	112.8 to 121.9	112.8 to 121.9	106.7 to 115.8	61.0 to 70.1	121.9 to 128.0	94.5
			0.0	57.9 to 67.1	45.7 to 51.8	36.6 to 39.6	0.0 to 3.0	73.2 to 85.3	91.4 to 94.5

[a]Velocity recorded in centimeters/second.
[b]Station locations from the west side to the east side of the river every 1.5 meter increments.
[c]Samples collected in 0.61 meter increments from the bottom.

TABLE A-17 (Page 4 of 5)

VELOCITY[a] MEASUREMENTS TAKEN AT INTAKE CANAL DURING THE ENTRAINMENT ABUNDANCE SURVEY

Danskammer Point Generating Station - 1980

DATE	TIME	TIDE	DEPTH[c](m)	WEST LOCATIONS[b] 1	2	3	4	5	EAST 6
22 Jul	0750-0820	Mid-flood	+4.3	<0.0	<0.0	<0.0			
			+3.7	<0.0	<0.0	<0.0	<0.0		<0.0
			+3.0	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+2.4	0.0	<0.0	0.0	<0.0	<0.0	<0.0
			+1.8	0.0 to 9.1	24.4 to 39.6	39.6 to 51.8	0.0	<0.0	<0.0
			+1.2	103.6 to 118.9	176.8 to 195.1	195.1 to 207.3	115.8 to 128.0	39.6 to 48.8	73.2 to 82.3
			+0.6	137.2 to 152.4	158.5 to 176.8	170.7 to 182.9	146.3 to 158.5	91.4 to 106.7	134.1 to 146.3
			0.0	115.8 to 128.0	57.9 to 70.1	103.6 to 109.7	6.1 to 18.3	100.6 to 109.7	115.8 to 121.9
22 Jul	1010-1035	High slack	+4.3	<0.0	<0.0				
			+3.7	<0.0	<0.0	<0.0	<0.0		<0.0
			+3.0	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+2.4	0.0	<0.0	0.0	<0.0	<0.0	<0.0
			+1.8	30.5 to 39.6	70.1 to 79.2	45.7 to 54.9	30.5 to 39.6	<0.0	0.0
			+1.2	97.5 to 106.7	207.3 to 219.5	176.8 to 195.1	134.1 to 146.3	24.4 to 36.6	67.1 to 79.2
			+0.6	173.7 to 189.0	176.8 to 185.9	146.3 to 158.5	146.3 to 176.8	103.6 to 115.8	121.9 to 134.1
			0.0	143.3 to 155.4	85.3 to 100.6	36.6 to 51.8	6.1 to 9.1	73.2 to 85.3	85.3 to 91.4
22 Jul	1325-1400	Mid-ebb	+3.7	<0.0	<0.0	<0.0	<0.0		
			+3.0	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+2.4	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+1.8	<0.0	42.7 to 48.8	33.5 to 42.7	0.0	<0.0	<0.0
			+1.2	115.8 to 128.0	176.8 to 189.0	146.3 to 158.5	73.2 to 85.3	48.8 to 57.9	61.0 to 73.2
			+0.6	176.9 to 195.1	170.7 to 189.0	152.4 to 164.6	146.3 to 158.5	85.3 to 97.5	146.3 to 158.5
			0.0	137.2 to 149.4	61.0 to 73.2	21.3 to 27.4	24.4 to 36.6	106.7 to 128.0	85.3 to 97.5
22 Jul	1625-1650	Low slack	+4.3	<0.0	<0.0	<0.0			
			+3.7	<0.0	<0.0	<0.0	<0.0		<0.0
			+3.0	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+2.4	0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+1.8	54.9 to 70.1	30.5 to 45.7	9.1 to 18.3	0.0	0.0	<0.0
			+1.2	121.9 to 134.1	146.3 to 158.5	128.0 to 134.1	79.2 to 85.3	27.4 to 36.6	54.9 to 67.1
			+0.6	176.8 to 189.0	146.3 to 158.5	176.8 to 182.9	164.6 to 176.8	91.4 to 97.5	176.8 to 152.4
			0.0	97.5 to 109.7	76.2 to 85.3	61.0 to 73.2	6.1 to 12.2	85.3 to 97.5	97.5 to 106.7

[a]Velocity recorded in centimeters/second.
[b]Station locations from the west side to the east side of the river every 1.5 meter increments.
[c]Samples collected in 0.61 meter increments from the bottom.

TABLE A-17 (Page 5 of 5)

VELOCITY[a] MEASUREMENTS TAKEN AT INTAKE CANAL DURING THE ENTRAINMENT ABUNDANCE SURVEY

Danskammer Point Generating Station - 1980

DATE	TIME	TIDE	DEPTH[c] (m)	LOCATIONS[b] WEST 1	2	3	4	5	EAST 6
19 Aug	0615-0645	Mid-flood	+4.3	<0.0	<0.0	<0.0			<0.0
			+3.7	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+3.0	0.0 to 3.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+2.4	15.2 to 18.3	<0.0	<3.0	<0.0	<0.0	<0.0 to 9.1
			+1.8	109.7 to 121.9	6.1 to 8.3	76.2 to 100.6	<0.0	9.1 to 21.3	45.7 to 57.9
			+1.2	125.0 to 140.2	170.7 to 182.9	158.5 to 167.6	39.6 to 61.0	134.1 to 152.4	164.6 to 176.8
			+0.6	82.3 to 91.4	106.7 to 115.8	97.5 to 106.7	213.4 to 225.6	167.6 to 182.9	137.2 to 158.5
			0.0	67.1 to 82.3	39.6 to 42.7	51.8 to 57.9	<0.0 to 33.5	94.4 to 97.5	45.7 to 70.1
19 Aug	0830-0905	High slack	+4.3		<0.0	<0.0			
			+3.7	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+3.0	<0.0	<3.0	<0.0	<0.0	<0.0	<0.0
			+2.4	<0.0	<0.0	<0.0	<0.0 to 3.0	<0.0	3.0 to 6.1
			+1.8	3.0 to 12.2	21.3 to 45.7	91.4 to 112.8	<0.0 to 9.1	9.1 to 21.3	36.6 to 42.7
			+1.2	88.4 to 103.6	106.7 to 125.0	118.9 to 134.1	82.3 to 91.4	103.6 to 121.9	149.4 to 179.8
			+0.6	115.8 to 121.9	115.8 to 125.0	51.8 to 57.9	182.9 to 195.1	97.5 to 112.8	128.0 to 137.2
			0.0	27.4 to 36.6	88.4 to 103.6	9.1 to 12.2	<0.0 to 6.1	<0.0 to 3.0	<0.0 to 9.1
19 Aug	1200-1230	Mid-ebb	+3.7	<0.0	<0.0	<0.0			
			+3.0	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+2.4	<0.0	3.0	<0.0	<0.0	<0.0	<0.0
			+1.8	27.4 to 39.6	18.3 to 27.4	36.6 to 45.7	<0.0	<0.0	9.1 to 27.4
			+1.2	112.8 to 121.9	94.5 to 106.7	146.3 to 158.5	85.3 to 118.9	57.9 to 79.2	76.2 to 85.3
			+0.6	103.6 to 109.7	189.0 to 192.0	152.4 to 164.6	213.4 to 219.5	115.8 to 128.0	131.1 to 152.4
			0.0	57.9 to 64.0	73.2 to 82.3	70.1 to 79.2	<0.0 to 15.2	<0.0 to 15.2	149.4 to 152.4
19 Aug	1530-1600	Low slack	+4.3		<0.0				
			+3.7	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+3.0	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+2.4	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
			+1.8	<0.0	<3.0	<0.0	<0.0	<0.0	<0.0
			+1.2	12.2 to 15.2	<0.0 to 3.0	27.4 to 33.5	61.0 to 82.3	0.0 to 21.3	3.0 to 6.1
			+0.6	106.7 to 115.8	115.8 to 149.4	88.4 to 100.6	176.8 to 189.0	57.9 to 118.9	67.1 to 91.4
			0.0	<0.0 to 12.2	45.7 to 67.1	6.1 to 18.3	<0.0 to 18.3	85.3 to 91.4	54.8 to 88.4

[a] Velocity recorded in centimeters/second.
[b] Station locations from the west side to the east side of the river every 1.5 meter increments.
[c] Samples collected in 0.61 meter increments from the bottom.

APPENDIX 4 - DAILY ESTIMATED ENTRAINMENT RATE FOR SELECT SPECIES COLLECTED AT THE ROSETON AND DANSKAMMER POINT ELECTRIC GENERATING STATIONS

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	2.28	0.
2 JAN	.14	2.28	319.
3 JAN	.28	2.28	638.
4 JAN	.41	2.28	935.
5 JAN	.55	2.28	1254.
6 JAN	.69	2.28	1573.
7 JAN	.83	2.28	1892.
8 JAN	.96	2.28	2189.
9 JAN	1.10	2.28	2508.
10 JAN	1.24	2.28	2827.
11 JAN	1.38	2.28	3146.
12 JAN	1.52	2.28	3466.
13 JAN	1.65	2.28	3762.
14 JAN	1.79	2.28	4081.
15 JAN	1.93	2.28	4400.
16 JAN	2.07	2.28	4720.
17 JAN	2.20	2.28	5016.
18 JAN	2.34	2.28	5335.
19 JAN	2.48	2.28	5654.
20 JAN	2.62	2.28	5974.
21 JAN	2.76	2.28	6293.
22 JAN	2.89	2.28	6589.
23 JAN	3.03	2.28	6908.
24 JAN	3.17	2.28	7228.
25 JAN	3.31	2.28	7547.
26 JAN	3.45	2.28	7866.
27 JAN	3.58	2.28	8162.
28 JAN	3.72	2.28	8482.
29 JAN	3.86	2.28	8801.
30 JAN	4.00	2.28	9120.
31 JAN	4.13	2.28	9416.
1 FEB	4.27	2.28	9736.
2 FEB	4.41	2.28	10055.
3 FEB	4.55	2.28	10374.
4 FEB	4.69	2.28	10693.
5 FEB	4.82	2.28	10990.
6 FEB	4.96	2.28	11309.
7 FEB	5.10	2.28	11628.
8 FEB	5.24	2.28	11947.
9 FEB	5.37	2.28	12244.
10 FEB	5.51	2.28	12563.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	5.65	2.28	12882.
12 FEB	5.79	2.28	13201.
13 FEB	5.93	2.28	13520.
14 FEB	6.06	2.28	13817.
15 FEB	6.20	2.29	14198.
16 FEB	6.34	2.28	14455.
17 FEB	6.48	2.28	14774.
18 FEB	6.61	2.28	15071.
19 FEB	6.75	2.28	15390.
20 FEB	6.89	2.28	15709.
21 FEB	7.03	2.28	16028.
22 FEB	7.17	2.28	16348.
23 FEB	7.30	2.28	16644.
24 FEB	7.44	2.28	16963.
25 FEB	7.58	2.59	19632.
26 FEB	7.72	3.06	23623.
27 FEB	7.85	3.06	24021.
28 FEB	7.99	3.06	24449.
29 FEB	8.13	2.75	22358.
1 MAR	8.27	2.28	18856.
2 MAR	8.41	2.28	19175.
3 MAR	8.54	2.28	19471.
4 MAR	8.68	2.28	19790.
5 MAR	8.82	2.28	20110.
6 MAR	8.96	2.28	20429.
7 MAR	9.10	2.28	20748.
8 MAR	9.23	2.28	21044.
9 MAR	9.37	2.28	21364.
10 MAR	9.51	2.28	21683.
11 MAR	9.65	2.28	22002.
12 MAR	9.78	2.28	22298.
13 MAR	9.92	2.28	22618.
14 MAR	10.06	2.28	22937.
15 MAR	10.20	2.28	23256.
16 MAR	10.34	2.28	23575.
17 MAR	10.47	2.28	23872.
18 MAR	10.61	2.28	24191.
19 MAR	10.75	2.28	24510.
20 MAR	10.89	2.28	24829.
21 MAR	11.02	2.28	25126.
22 MAR	11.16	2.28	25445.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	11.30	2.28	25764.
24 MAR	11.44	2.28	26083.
25 MAR	11.58	2.28	26402.
26 MAR	11.71	2.28	26699.
27 MAR	11.85	2.28	27018.
28 MAR	11.99	2.28	27337.
29 MAR	12.13	2.28	27656.
30 MAR	12.26	2.28	27953.
31 MAR	12.40	2.28	28272.
1 APR	12.54	2.28	28591.
2 APR	12.68	2.28	28910.
3 APR	12.82	2.28	29230.
4 APR	12.95	2.28	29526.
5 APR	13.09	1.99	26049.
6 APR	13.23	1.19	15744.
7 APR	13.37	2.26	30216.
8 APR	13.51	2.28	30803.
9 APR	13.64	2.28	31099.
10 APR	13.78	2.41	33210.
11 APR	13.92	3.06	42595.
12 APR	14.06	3.06	43024.
13 APR	14.19	3.06	43421.
14 APR	14.33	3.06	43850.
15 APR	14.47	3.06	44278.
16 APR	14.61	3.06	44707.
17 APR	14.75	3.06	45135.
18 APR	14.88	2.07	30802.
19 APR	15.02	2.05	30791.
20 APR	15.16	2.05	31078.
21 APR	15.30	2.08	31824.
22 APR	15.43	3.06	47216.
23 APR	15.57	3.06	47644.
24 APR*	15.71	3.06	48073.
25 APR	24.53	3.06	75062.
26 APR	33.35	3.06	102051.
27 APR	42.16	3.06	129010.
28 APR	50.98	3.06	155999.
29 APR*	59.80	3.06	182988.
30 APR	53.55	3.06	163863.
1 MAY	47.29	3.06	144707.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	41.04	3.06	125582.
3 MAY	34.79	3.06	106457.
4 MAY	28.54	2.29	65357.
5 MAY	22.28	2.78	61938.
6 MAY*	16.03	3.06	49052.
7 MAY	57.17	3.06	174940.
8 MAY	98.30	3.06	300798.
9 MAY	139.44	3.06	426686.
10 MAY	180.58	2.58	465896.
11 MAY	221.72	2.05	454526.
12 MAY	262.85	2.05	538842.
13 MAY*	303.99	2.05	623180.
14 MAY	291.45	2.05	597473.
15 MAY	278.90	2.05	571745.
16 MAY	266.36	2.05	546038.
17 MAY	253.82	1.90	482258.
18 MAY	241.28	2.05	494624.
19 MAY	228.73	2.05	468897.
20 MAY*	216.19	2.05	443190.
21 MAY	187.28	2.05	383924.
22 MAY	158.37	2.04	323075.
23 MAY	129.46	2.05	265393.
24 MAY	100.55	2.05	206128.
25 MAY	71.64	2.05	146862.
26 MAY	42.73	2.05	87597.
27 MAY*	13.82	2.05	28331.
28 MAY	13.26	2.05	27183.
29 MAY	12.71	2.05	26056.
30 MAY	12.15	2.05	24908.
31 MAY	11.60	2.05	23780.
1 JUN	11.04	2.05	22632.
2 JUN	10.49	2.05	21505.
3 JUN*	9.93	2.05	20357.
4 JUN	6.75	2.38	16065.
5 JUN	3.58	3.05	10919.
6 JUN*	.40	3.18	1272.
7 JUN	.30	3.06	918.
8 JUN	.20	3.06	612.
9 JUN	.10	3.04	304.
10 JUN*	.00	3.06	0.
11 JUN	7.23	3.06	22124.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	14.46	3.06	44248.
13 JUN*	21.69	3.06	66371.
14 JUN	16.44	3.06	50306.
15 JUN	11.19	3.06	34241.
16 JUN	5.94	3.06	18176.
17 JUN*	.69	3.06	2111.
18 JUN	.69	3.06	2111.
19 JUN	.68	3.06	2081.
20 JUN*	.68	3.01	2047.
21 JUN	.51	3.06	1561.
22 JUN	.34	3.06	1040.
23 JUN	.17	3.06	520.
24 JUN*	.00	3.06	0.
25 JUN	.00	3.06	0.
26 JUN	.00	3.06	0.
27 JUN	.00	3.06	0.
28 JUN	.00	2.59	0.
29 JUN	.00	2.28	0.
30 JUN	.00	3.01	0.
1 JUL*	.00	3.06	0.
2 JUL	.00	3.06	0.
3 JUL	.00	3.06	0.
4 JUL	.00	3.06	0.
5 JUL	.00	3.06	0.
6 JUL	.00	3.06	0.
7 JUL	.00	3.01	0.
8 JUL*	.00	2.96	0.
9 JUL	.00	3.49	0.
10 JUL	.00	3.49	0.
11 JUL	.00	3.49	0.
12 JUL	.00	3.49	0.
13 JUL	.00	3.49	0.
14 JUL	.00	3.49	0.
15 JUL*	.00	3.49	0.
16 JUL	.00	3.49	0.
17 JUL	.00	3.49	0.
18 JUL	.00	3.49	0.
19 JUL	.00	3.49	0.
20 JUL	.00	3.49	0.
21 JUL	.00	3.35	0.
22 JUL*	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./100)C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	3.06	0.
24 JUL	.00	3.06	0.
25 JUL	.00	3.06	0.
26 JUL	.00	3.06	0.
27 JUL	.00	3.06	0.
28 JUL	.00	3.06	0.
29 JUL*	.00	3.06	0.
30 JUL	.00	3.06	0.
31 JUL	.00	3.06	0.
1 AUG	.00	2.38	0.
2 AUG	.00	2.32	0.
3 AUG	.00	3.06	0.
4 AUG	.00	3.06	0.
5 AUG*	.00	3.06	0.
6 AUG	.00	3.06	0.
7 AUG	.00	3.06	0.
8 AUG	.00	3.06	0.
9 AUG	.00	3.06	0.
10 AUG	.00	3.06	0.
11 AUG	.00	3.06	0.
12 AUG*	.00	3.06	0.
13 AUG	.00	3.06	0.
14 AUG	.00	3.06	0.
15 AUG	.00	3.06	0.
16 AUG	.00	3.06	0.
17 AUG	.00	3.06	0.
18 AUG	.00	3.16	0.
19 AUG*	.00	3.49	0.
20 AUG	.00	3.49	0.
21 AUG	.00	3.49	0.
22 AUG	.00	3.49	0.
23 AUG	.00	3.49	0.
24 AUG	.00	3.49	0.
25 AUG	.00	3.48	0.
26 AUG*	.00	3.30	0.
27 AUG	.00	3.49	0.
28 AUG	.00	3.23	0.
29 AUG	.00	3.06	0.
30 AUG	.00	3.06	0.
31 AUG	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	2.28	0.
2 JAN	.00	2.28	0.
3 JAN	.00	2.28	0.
4 JAN	.00	2.28	0.
5 JAN	.00	2.28	0.
6 JAN	.00	2.28	0.
7 JAN	.00	2.28	0.
8 JAN	.00	2.28	0.
9 JAN	.00	2.28	0.
10 JAN	.00	2.28	0.
11 JAN	.00	2.28	0.
12 JAN	.00	2.28	0.
13 JAN	.00	2.28	0.
14 JAN	.00	2.28	0.
15 JAN	.00	2.28	0.
16 JAN	.00	2.28	0.
17 JAN	.00	2.28	0.
18 JAN	.00	2.28	0.
19 JAN	.00	2.28	0.
20 JAN	.00	2.28	0.
21 JAN	.00	2.28	0.
22 JAN	.00	2.28	0.
23 JAN	.00	2.28	0.
24 JAN	.00	2.28	0.
25 JAN	.00	2.28	0.
26 JAN	.00	2.28	0.
27 JAN	.00	2.28	0.
28 JAN	.00	2.28	0.
29 JAN	.00	2.28	0.
30 JAN	.00	2.28	0.
31 JAN	.00	2.28	0.
1 FEB	.00	2.28	0.
2 FEB	.00	2.28	0.
3 FEB	.00	2.28	0.
4 FEB	.00	2.28	0.
5 FEB	.00	2.28	0.
6 FEB	.00	2.28	0.
7 FEB	.00	2.28	0.
8 FEB	.00	2.28	0.
9 FEB	.00	2.28	0.
10 FEB	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	2.28	0.
12 FEB	.00	2.28	0.
13 FEB	.00	2.28	0.
14 FEB	.00	2.28	0.
15 FEB	.00	2.29	0.
16 FEB	.00	2.28	0.
17 FEB	.00	2.28	0.
18 FEB	.00	2.28	0.
19 FEB	.00	2.28	0.
20 FEB	.00	2.28	0.
21 FEB	.00	2.28	0.
22 FEB	.00	2.28	0.
23 FEB	.00	2.28	0.
24 FEB	.00	2.28	0.
25 FEB	.00	2.59	0.
26 FEB	.00	3.06	0.
27 FEB	.00	3.06	0.
28 FEB	.00	3.06	0.
29 FEB	.00	2.75	0.
1 MAR	.00	2.28	0.
2 MAR	.00	2.28	0.
3 MAR	.00	2.28	0.
4 MAR	.00	2.28	0.
5 MAR	.00	2.28	0.
6 MAR	.00	2.28	0.
7 MAR	.00	2.28	0.
8 MAR	.00	2.28	0.
9 MAR	.00	2.28	0.
10 MAR	.00	2.28	0.
11 MAR	.00	2.28	0.
12 MAR	.00	2.28	0.
13 MAR	.00	2.28	0.
14 MAR	.00	2.28	0.
15 MAR	.00	2.28	0.
16 MAR	.00	2.28	0.
17 MAR	.00	2.28	0.
18 MAR	.00	2.28	0.
19 MAR	.00	2.28	0.
20 MAR	.00	2.28	0.
21 MAR	.00	2.28	0.
22 MAR	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	2.28	0.
24 MAR	.00	2.28	0.
25 MAR	.00	2.28	0.
26 MAR	.00	2.28	0.
27 MAR	.00	2.28	0.
28 MAR	.00	2.28	0.
29 MAR	.00	2.28	0.
30 MAR	.00	2.28	0.
31 MAR	.00	2.28	0.
1 APR	.00	2.28	0.
2 APR	.00	2.28	0.
3 APR	.00	2.28	0.
4 APR	.00	2.28	0.
5 APR	.00	1.99	0.
6 APR	.00	1.19	0.
7 APR	.00	2.26	0.
8 APR	.00	2.28	0.
9 APR	.00	2.28	0.
10 APR	.00	2.41	0.
11 APR	.00	3.06	0.
12 APR	.00	3.06	0.
13 APR	.00	3.06	0.
14 APR	.00	3.06	0.
15 APR	.00	3.06	0.
16 APR	.00	3.06	0.
17 APR	.00	3.06	0.
18 APR	.00	2.07	0.
19 APR	.00	2.05	0.
20 APR	.00	2.05	0.
21 APR	.00	2.08	0.
22 APR	.00	3.06	0.
23 APR	.00	3.06	0.
24 APR*	.00	3.06	0.
25 APR	.27	3.06	826.
26 APR	.54	3.06	1652.
27 APR	.81	3.06	2479.
28 APR	1.08	3.06	3305.
29 APR*	1.35	3.06	4131.
30 APR	1.45	3.06	4437.
1 MAY	1.55	3.06	4743.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	1.65	3.06	5049.
3 MAY	1.75	3.06	5355.
4 MAY	1.85	2.29	4237.
5 MAY	1.95	2.78	5421.
6 MAY*	2.05	3.06	6273.
7 MAY	2.13	3.06	6518.
8 MAY	2.22	3.06	6793.
9 MAY	2.30	3.06	7038.
10 MAY	2.38	2.58	6140.
11 MAY	2.46	2.05	5043.
12 MAY	2.55	2.05	5228.
13 MAY*	2.63	2.05	5392.
14 MAY	3.02	2.05	6191.
15 MAY	3.42	2.05	7011.
16 MAY	3.81	2.05	7811.
17 MAY	4.21	1.90	7999.
18 MAY	4.60	2.05	9430.
19 MAY	5.00	2.05	10250.
20 MAY*	5.39	2.05	11050.
21 MAY	4.62	2.05	9471.
22 MAY	3.85	2.04	7854.
23 MAY	3.08	2.05	6314.
24 MAY	2.31	2.05	4736.
25 MAY	1.54	2.05	3157.
26 MAY	.77	2.05	1579.
27 MAY*	.00	2.05	0.
28 MAY	.00	2.05	0.
29 MAY	.00	2.05	0.
30 MAY	.00	2.05	0.
31 MAY	.00	2.05	0.
1 JUN	.00	2.05	0.
2 JUN	.00	2.05	0.
3 JUN*	.00	2.05	0.
4 JUN	.00	2.38	0.
5 JUN	.00	3.05	0.
6 JUN*	.00	3.18	0.
7 JUN	.00	3.06	0.
8 JUN	.00	3.06	0.
9 JUN	.00	3.04	0.
10 JUN*	.00	3.06	0.
11 JUN	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	.00	3.06	0.
13 JUN*	.00	3.06	0.
14 JUN	.00	3.06	0.
15 JUN	.00	3.06	0.
16 JUN	.00	3.06	0.
17 JUN*	.00	3.06	0.
18 JUN	.00	3.06	0.
19 JUN	.00	3.06	0.
20 JUN*	.00	3.01	0.
21 JUN	.00	3.06	0.
22 JUN	.00	3.06	0.
23 JUN	.00	3.06	0.
24 JUN*	.00	3.06	0.
25 JUN	.00	3.06	0.
26 JUN	.00	3.06	0.
27 JUN	.00	3.06	0.
28 JUN	.00	2.59	0.
29 JUN	.00	2.28	0.
30 JUN	.00	3.01	0.
1 JUL*	.00	3.06	0.
2 JUL	.00	3.06	0.
3 JUL	.00	3.06	0.
4 JUL	.00	3.06	0.
5 JUL	.00	3.06	0.
6 JUL	.00	3.06	0.
7 JUL	.00	3.01	0.
8 JUL*	.00	2.96	0.
9 JUL	.00	3.49	0.
10 JUL	.00	3.49	0.
11 JUL	.00	3.49	0.
12 JUL	.00	3.49	0.
13 JUL	.00	3.49	0.
14 JUL	.00	3.49	0.
15 JUL*	.00	3.49	0.
16 JUL	.00	3.49	0.
17 JUL	.00	3.49	0.
18 JUL	.00	3.49	0.
19 JUL	.00	3.49	0.
20 JUL	.00	3.49	0.
21 JUL	.00	3.35	0.
22 JUL*	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	3.06	0.
24 JUL	.00	3.06	0.
25 JUL	.00	3.06	0.
26 JUL	.00	3.06	0.
27 JUL	.00	3.06	0.
28 JUL	.00	3.06	0.
29 JUL*	.00	3.06	0.
30 JUL	.00	3.06	0.
31 JUL	.00	3.06	0.
1 AUG	.00	2.38	0.
2 AUG	.00	2.32	0.
3 AUG	.00	3.06	0.
4 AUG	.00	3.06	0.
5 AUG*	.00	3.06	0.
6 AUG	.00	3.06	0.
7 AUG	.00	3.06	0.
8 AUG	.00	3.06	0.
9 AUG	.00	3.06	0.
10 AUG	.00	3.06	0.
11 AUG	.00	3.06	0.
12 AUG*	.00	3.06	0.
13 AUG	.00	3.06	0.
14 AUG	.00	3.06	0.
15 AUG	.00	3.06	0.
16 AUG	.00	3.06	0.
17 AUG	.00	3.06	0.
18 AUG	.00	3.16	0.
19 AUG*	.00	3.49	0.
20 AUG	.00	3.49	0.
21 AUG	.00	3.49	0.
22 AUG	.00	3.49	0.
23 AUG	.00	3.49	0.
24 AUG	.00	3.49	0.
25 AUG	.00	3.48	0.
26 AUG*	.00	3.30	0.
27 AUG	.00	3.49	0.
28 AUG	.00	3.23	0.
29 AUG	.00	3.06	0.
30 AUG	.00	3.06	0.
31 AUG	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./100OC.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	2.28	0.
2 JAN	.00	2.28	0.
3 JAN	.00	2.28	0.
4 JAN	.00	2.28	0.
5 JAN	.00	2.28	0.
6 JAN	.00	2.28	0.
7 JAN	.00	2.28	0.
8 JAN	.00	2.28	0.
9 JAN	.00	2.28	0.
10 JAN	.00	2.28	0.
11 JAN	.00	2.28	0.
12 JAN	.00	2.28	0.
13 JAN	.00	2.28	0.
14 JAN	.00	2.28	0.
15 JAN	.00	2.28	0.
16 JAN	.00	2.28	0.
17 JAN	.00	2.28	0.
18 JAN	.00	2.28	0.
19 JAN	.00	2.28	0.
20 JAN	.00	2.28	0.
21 JAN	.00	2.28	0.
22 JAN	.00	2.28	0.
23 JAN	.00	2.28	0.
24 JAN	.00	2.28	0.
25 JAN	.00	2.28	0.
26 JAN	.00	2.28	0.
27 JAN	.00	2.28	0.
28 JAN	.00	2.28	0.
29 JAN	.00	2.28	0.
30 JAN	.00	2.28	0.
31 JAN	.00	2.28	0.
1 FEB	.00	2.28	0.
2 FEB	.00	2.28	0.
3 FEB	.00	2.28	0.
4 FEB	.00	2.28	0.
5 FEB	.00	2.28	0.
6 FEB	.00	2.28	0.
7 FEB	.00	2.28	0.
8 FEB	.00	2.28	0.
9 FEB	.00	2.28	0.
10 FEB	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	2.28	0.
12 FEB	.00	2.28	0.
13 FEB	.00	2.28	0.
14 FEB	.00	2.28	0.
15 FEB	.00	2.29	0.
16 FEB	.00	2.28	0.
17 FEB	.00	2.28	0.
18 FEB	.00	2.28	0.
19 FEB	.00	2.28	0.
20 FEB	.00	2.28	0.
21 FEB	.00	2.28	0.
22 FEB	.00	2.28	0.
23 FEB	.00	2.28	0.
24 FEB	.00	2.28	0.
25 FEB	.00	2.59	0.
26 FEB	.00	3.06	0.
27 FEB	.00	3.06	0.
28 FEB	.00	3.06	0.
29 FEB	.00	2.75	0.
1 MAR	.00	2.28	0.
2 MAR	.00	2.28	0.
3 MAR	.00	2.28	0.
4 MAR	.00	2.28	0.
5 MAR	.00	2.28	0.
6 MAR	.00	2.28	0.
7 MAR	.00	2.28	0.
8 MAR	.00	2.28	0.
9 MAR	.00	2.28	0.
10 MAR	.00	2.28	0.
11 MAR	.00	2.28	0.
12 MAR	.00	2.28	0.
13 MAR	.00	2.28	0.
14 MAR	.00	2.28	0.
15 MAR	.00	2.28	0.
16 MAR	.00	2.28	0.
17 MAR	.00	2.28	0.
18 MAR	.00	2.28	0.
19 MAR	.00	2.28	0.
20 MAR	.00	2.28	0.
21 MAR	.00	2.28	0.
22 MAR	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	2.28	0.
24 MAR	.00	2.28	0.
25 MAR	.00	2.28	0.
26 MAR	.00	2.28	0.
27 MAR	.00	2.28	0.
28 MAR	.00	2.28	0.
29 MAR	.00	2.28	0.
30 MAR	.00	2.28	0.
31 MAR	.00	2.28	0.
1 APR	.00	2.28	0.
2 APR	.00	2.28	0.
3 APR	.00	2.28	0.
4 APR	.00	2.28	0.
5 APR	.00	1.99	0.
6 APR	.00	1.19	0.
7 APR	.00	2.26	0.
8 APR	.00	2.28	0.
9 APR	.00	2.28	0.
10 APR	.00	2.41	0.
11 APR	.00	3.06	0.
12 APR	.00	3.06	0.
13 APR	.00	3.06	0.
14 APR	.00	3.06	0.
15 APR	.00	3.06	0.
16 APR	.00	3.06	0.
17 APR	.00	3.06	0.
18 APR	.00	2.07	0.
19 APR	.00	2.05	0.
20 APR	.00	2.05	0.
21 APR	.00	2.08	0.
22 APR	.00	3.06	0.
23 APR	.00	3.06	0.
24 APR*	.00	3.06	0.
25 APR	.13	3.06	398.
26 APR	.27	3.06	826.
27 APR	.40	3.06	1224.
28 APR	.54	3.06	1652.
29 APR*	.67	3.06	2050.
30 APR	1.05	3.06	3213.
1 MAY	1.42	3.06	4345.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	1.80	3.06	5508.
3 MAY	2.18	3.06	6671.
4 MAY	2.56	2.29	5862.
5 MAY	2.93	2.78	8145.
6 MAY*	3.31	3.06	10129.
7 MAY	5.83	3.06	17840.
8 MAY	8.34	3.06	25520.
9 MAY	10.86	3.06	33232.
10 MAY	13.37	2.58	34495.
11 MAY	15.89	2.05	32574.
12 MAY	18.40	2.05	37720.
13 MAY*	20.92	2.05	42886.
14 MAY	25.84	2.05	52972.
15 MAY	30.75	2.05	63038.
16 MAY	35.67	2.05	73124.
17 MAY	40.58	1.90	77102.
18 MAY	45.50	2.05	93275.
19 MAY	50.41	2.05	103341.
20 MAY*	55.33	2.05	113427.
21 MAY	89.44	2.05	183352.
22 MAY	123.55	2.04	252042.
23 MAY	157.66	2.05	323203.
24 MAY	191.76	2.05	393108.
25 MAY	225.87	2.05	463034.
26 MAY	259.98	2.05	532959.
27 MAY*	294.09	2.05	602885.
28 MAY	310.75	2.05	637038.
29 MAY	327.42	2.05	671211.
30 MAY	344.08	2.05	705364.
31 MAY	360.74	2.05	739517.
1 JUN	377.40	2.05	773670.
2 JUN	394.07	2.05	807844.
3 JUN*	410.73	2.05	841996.
4 JUN	410.74	2.38	977561.
5 JUN	410.76	3.05	1252818.
6 JUN*	410.77	3.18	1306249.
7 JUN	442.25	3.06	1353285.
8 JUN	473.72	3.06	1449583.
9 JUN	505.20	3.04	1535808.
10 JUN*	536.67	3.06	1642210.
11 JUN	552.15	3.06	1689579.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	567.64	3.06	1736979.
13 JUN*	583.12	3.06	1784347.
14 JUN	520.03	3.06	1591292.
15 JUN	456.94	3.06	1398237.
16 JUN	393.85	3.06	1205181.
17 JUN*	330.76	3.06	1012126.
18 JUN	272.04	3.06	832442.
19 JUN	213.31	3.06	652729.
20 JUN*	154.59	3.01	465316.
21 JUN	144.01	3.06	440671.
22 JUN	133.44	3.06	408326.
23 JUN	122.86	3.06	375952.
24 JUN*	112.28	3.06	343577.
25 JUN	100.97	3.06	308968.
26 JUN	89.67	3.06	274390.
27 JUN	78.36	3.06	239782.
28 JUN	67.05	2.59	173660.
29 JUN	55.74	2.28	127087.
30 JUN	44.44	3.01	133764.
1 JUL*	33.13	3.06	101378.
2 JUL	28.87	3.06	88342.
3 JUL	24.62	3.06	75337.
4 JUL	20.36	3.06	62302.
5 JUL	16.11	3.06	49297.
6 JUL	11.85	3.06	36261.
7 JUL	7.60	3.01	22876.
8 JUL*	3.34	2.96	9886.
9 JUL	3.04	3.49	10610.
10 JUL	2.75	3.49	9598.
11 JUL	2.45	3.49	8551.
12 JUL	2.15	3.49	7504.
13 JUL	1.85	3.49	6457.
14 JUL	1.56	3.49	5444.
15 JUL*	1.26	3.49	4397.
16 JUL	1.27	3.49	4432.
17 JUL	1.29	3.49	4502.
18 JUL	1.30	3.49	4537.
19 JUL	1.31	3.49	4572.
20 JUL	1.32	3.49	4607.
21 JUL	1.34	3.35	4489.
22 JUL*	1.35	3.06	4131.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	1.25	3.06	3825.
24 JUL	1.15	3.06	3519.
25 JUL	1.05	3.06	3213.
26 JUL	.95	3.06	2907.
27 JUL	.85	3.06	2601.
28 JUL	.75	3.06	2295.
29 JUL*	.65	3.06	1989.
30 JUL	.56	3.06	1714.
31 JUL	.46	3.06	1408.
1 AUG	.37	2.38	881.
2 AUG	.28	2.32	650.
3 AUG	.19	3.06	581.
4 AUG	.09	3.06	275.
5 AUG*	.00	3.06	0.
6 AUG	.00	3.06	0.
7 AUG	.00	3.06	0.
8 AUG	.00	3.06	0.
9 AUG	.00	3.06	0.
10 AUG	.00	3.06	0.
11 AUG	.00	3.06	0.
12 AUG*	.00	3.06	0.
13 AUG	.00	3.06	0.
14 AUG	.00	3.06	0.
15 AUG	.00	3.06	0.
16 AUG	.00	3.06	0.
17 AUG	.00	3.06	0.
18 AUG	.00	3.16	0.
19 AUG*	.00	3.49	0.
20 AUG	.00	3.49	0.
21 AUG	.00	3.49	0.
22 AUG	.00	3.49	0.
23 AUG	.00	3.49	0.
24 AUG	.00	3.49	0.
25 AUG	.00	3.48	0.
26 AUG*	.00	3.30	0.
27 AUG	.00	3.49	0.
28 AUG	.00	3.23	0.
29 AUG	.00	3.06	0.
30 AUG	.00	3.06	0.
31 AUG	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./100OC.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	2.28	0.
2 JAN	.00	2.28	0.
3 JAN	.00	2.28	0.
4 JAN	.00	2.28	0.
5 JAN	.00	2.28	0.
6 JAN	.00	2.28	0.
7 JAN	.00	2.28	0.
8 JAN	.00	2.28	0.
9 JAN	.00	2.28	0.
10 JAN	.00	2.28	0.
11 JAN	.00	2.28	0.
12 JAN	.00	2.28	0.
13 JAN	.00	2.28	0.
14 JAN	.00	2.28	0.
15 JAN	.00	2.28	0.
16 JAN	.00	2.28	0.
17 JAN	.00	2.28	0.
18 JAN	.00	2.28	0.
19 JAN	.00	2.28	0.
20 JAN	.00	2.28	0.
21 JAN	.00	2.28	0.
22 JAN	.00	2.28	0.
23 JAN	.00	2.28	0.
24 JAN	.00	2.28	0.
25 JAN	.00	2.28	0.
26 JAN	.00	2.28	0.
27 JAN	.00	2.28	0.
28 JAN	.00	2.28	0.
29 JAN	.00	2.28	0.
30 JAN	.00	2.28	0.
31 JAN	.00	2.28	0.
1 FEB	.00	2.28	0.
2 FEB	.00	2.28	0.
3 FEB	.00	2.28	0.
4 FEB	.00	2.28	0.
5 FEB	.00	2.28	0.
6 FEB	.00	2.28	0.
7 FEB	.00	2.28	0.
8 FEB	.00	2.28	0.
9 FEB	.00	2.28	0.
10 FEB	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	2.28	0.
12 FEB	.00	2.28	0.
13 FEB	.00	2.28	0.
14 FEB	.00	2.28	0.
15 FEB	.00	2.29	0.
16 FEB	.00	2.28	0.
17 FEB	.00	2.28	0.
18 FEB	.00	2.28	0.
19 FEB	.00	2.28	0.
20 FEB	.00	2.28	0.
21 FEB	.00	2.28	0.
22 FEB	.00	2.28	0.
23 FEB	.00	2.28	0.
24 FEB	.00	2.28	0.
25 FEB	.00	2.59	0.
26 FEB	.00	3.06	0.
27 FEB	.00	3.06	0.
28 FEB	.00	3.06	0.
29 FEB	.00	2.75	0.
1 MAR	.00	2.28	0.
2 MAR	.00	2.28	0.
3 MAR	.00	2.28	0.
4 MAR	.00	2.28	0.
5 MAR	.00	2.28	0.
6 MAR	.00	2.28	0.
7 MAR	.00	2.28	0.
8 MAR	.00	2.28	0.
9 MAR	.00	2.28	0.
10 MAR	.00	2.28	0.
11 MAR	.00	2.28	0.
12 MAR	.00	2.28	0.
13 MAR	.00	2.28	0.
14 MAR	.00	2.28	0.
15 MAR	.00	2.28	0.
16 MAR	.00	2.28	0.
17 MAR	.00	2.28	0.
18 MAR	.00	2.28	0.
19 MAR	.00	2.28	0.
20 MAR	.00	2.28	0.
21 MAR	.00	2.28	0.
22 MAR	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	2.28	0.
24 MAR	.00	2.28	0.
25 MAR	.00	2.28	0.
26 MAR	.00	2.28	0.
27 MAR	.00	2.28	0.
28 MAR	.00	2.28	0.
29 MAR	.00	2.28	0.
30 MAR	.00	2.28	0.
31 MAR	.00	2.28	0.
1 APR	.00	2.28	0.
2 APR	.00	2.28	0.
3 APR	.00	2.28	0.
4 APR	.00	2.28	0.
5 APR	.00	1.99	0.
6 APR	.00	1.19	0.
7 APR	.00	2.26	0.
8 APR	.00	2.28	0.
9 APR	.00	2.28	0.
10 APR	.00	2.41	0.
11 APR	.00	3.06	0.
12 APR	.00	3.06	0.
13 APR	.00	3.06	0.
14 APR	.00	3.06	0.
15 APR	.00	3.06	0.
16 APR	.00	3.06	0.
17 APR	.00	3.06	0.
18 APR	.00	2.07	0.
19 APR	.00	2.05	0.
20 APR	.00	2.05	0.
21 APR	.00	2.08	0.
22 APR	.00	3.06	0.
23 APR	.00	3.06	0.
24 APR*	.00	3.06	0.
25 APR	.00	3.06	0.
26 APR	.00	3.06	0.
27 APR	.00	3.06	0.
28 APR	.00	3.06	0.
29 APR*	.00	3.06	0.
30 APR	.00	3.06	0.
1 MAY	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	3.06	0.
3 MAY	.00	3.06	0.
4 MAY	.00	2.29	0.
5 MAY	.00	2.78	0.
6 MAY*	.00	3.06	0.
7 MAY	.00	3.06	0.
8 MAY	.00	3.06	0.
9 MAY	.00	3.06	0.
10 MAY	.00	2.58	0.
11 MAY	.00	2.35	0.
12 MAY	.00	2.05	0.
13 MAY*	.00	2.05	0.
14 MAY	.00	2.05	0.
15 MAY	.00	2.05	0.
16 MAY	.00	2.05	0.
17 MAY	.00	1.90	0.
18 MAY	.00	2.05	0.
19 MAY	.00	2.05	0.
20 MAY*	.00	2.05	0.
21 MAY	.00	2.05	0.
22 MAY	.00	2.04	0.
23 MAY	.00	2.05	0.
24 MAY	.00	2.05	0.
25 MAY	.00	2.05	0.
26 MAY	.00	2.05	0.
27 MAY*	.00	2.05	0.
28 MAY	.00	2.05	0.
29 MAY	.00	2.05	0.
30 MAY	.00	2.05	0.
31 MAY	.00	2.05	0.
1 JUN	.00	2.05	0.
2 JUN	.00	2.05	0.
3 JUN*	.00	2.05	0.
4 JUN	.00	2.38	0.
5 JUN	.00	3.05	0.
6 JUN*	.00	3.18	0.
7 JUN	.00	3.06	0.
8 JUN	.00	3.06	0.
9 JUN	.00	3.04	0.
10 JUN*	.00	3.06	0.
11 JUN	19.77	3.06	60496.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	39.53	3.06	120962.
13 JUN*	59.30	3.06	181458.
14 JUN	45.65	3.06	139689.
15 JUN	32.00	3.06	97920.
16 JUN	18.34	3.06	56120.
17 JUN*	4.69	3.06	14351.
18 JUN	4.23	3.06	12944.
19 JUN	3.78	3.06	11567.
20 JUN*	3.32	3.01	9993.
21 JUN	5.24	3.06	16034.
22 JUN	7.16	3.06	21910.
23 JUN	9.07	3.06	27754.
24 JUN*	10.99	3.06	33629.
25 JUN	12.15	3.06	37179.
26 JUN	13.31	3.06	40729.
27 JUN	14.47	3.06	44278.
28 JUN	15.64	2.59	40508.
29 JUN	16.80	2.28	38304.
30 JUN	17.96	3.01	54060.
1 JUL*	19.12	3.06	58507.
2 JUL	18.99	3.06	58109.
3 JUL	18.86	3.06	57712.
4 JUL	18.73	3.06	57314.
5 JUL	18.60	3.06	56916.
6 JUL	18.47	3.06	56518.
7 JUL	18.34	3.01	55203.
8 JUL*	18.21	2.96	53902.
9 JUL	16.43	3.49	57341.
10 JUL	14.65	3.49	51129.
11 JUL	12.87	3.49	44916.
12 JUL	11.09	3.49	38704.
13 JUL	9.31	3.49	32492.
14 JUL	7.53	3.49	26280.
15 JUL*	5.75	3.49	20068.
16 JUL	5.70	3.49	19893.
17 JUL	5.65	3.49	19719.
18 JUL	5.60	3.49	19544.
19 JUL	5.54	3.49	19335.
20 JUL	5.49	3.49	19160.
21 JUL	5.44	3.35	18224.
22 JUL*	5.39	3.06	16493.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : ALOSA SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	4.80	3.06	14688.
24 JUL	4.22	3.06	12913.
25 JUL	3.63	3.06	11108.
26 JUL	3.05	3.06	9333.
27 JUL	2.46	3.06	7528.
28 JUL	1.88	3.06	5753.
29 JUL*	1.29	3.06	3947.
30 JUL	1.11	3.06	3397.
31 JUL	.92	3.06	2815.
1 AUG	.74	2.38	1761.
2 AUG	.55	2.32	1276.
3 AUG	.37	3.06	1132.
4 AUG	.18	3.06	551.
5 AUG*	.00	3.06	0.
6 AUG	.00	3.06	0.
7 AUG	.00	3.06	0.
8 AUG	.00	3.06	0.
9 AUG	.00	3.06	0.
10 AUG	.00	3.06	0.
11 AUG	.00	3.06	0.
12 AUG*	.00	3.06	0.
13 AUG	.00	3.06	0.
14 AUG	.00	3.06	0.
15 AUG	.00	3.06	0.
16 AUG	.00	3.06	0.
17 AUG	.00	3.06	0.
18 AUG	.00	3.16	0.
19 AUG*	.00	3.49	0.
20 AUG	.00	3.49	0.
21 AUG	.00	3.49	0.
22 AUG	.00	3.49	0.
23 AUG	.00	3.49	0.
24 AUG	.00	3.49	0.
25 AUG	.00	3.48	0.
26 AUG*	.00	3.30	0.
27 AUG	.00	3.49	0.
28 AUG	.00	3.23	0.
29 AUG	.00	3.06	0.
30 AUG	.00	3.06	0.
31 AUG	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	2.28	0.
2 JAN	.00	2.28	0.
3 JAN	.00	2.28	0.
4 JAN	.00	2.28	0.
5 JAN	.00	2.28	0.
6 JAN	.00	2.28	0.
7 JAN	.00	2.28	0.
8 JAN	.00	2.28	0.
9 JAN	.00	2.28	0.
10 JAN	.00	2.28	0.
11 JAN	.00	2.28	0.
12 JAN	.00	2.28	0.
13 JAN	.00	2.28	0.
14 JAN	.00	2.28	0.
15 JAN	.00	2.28	0.
16 JAN	.00	2.28	0.
17 JAN	.00	2.28	0.
18 JAN	.00	2.28	0.
19 JAN	.00	2.28	0.
20 JAN	.00	2.28	0.
21 JAN	.00	2.28	0.
22 JAN	.00	2.28	0.
23 JAN	.00	2.28	0.
24 JAN	.00	2.28	0.
25 JAN	.00	2.28	0.
26 JAN	.00	2.28	0.
27 JAN	.00	2.28	0.
28 JAN	.00	2.28	0.
29 JAN	.00	2.28	0.
30 JAN	.00	2.28	0.
31 JAN	.00	2.28	0.
1 FEB	.00	2.28	0.
2 FEB	.00	2.28	0.
3 FEB	.00	2.28	0.
4 FEB	.00	2.28	0.
5 FEB	.00	2.28	0.
6 FEB	.00	2.28	0.
7 FEB	.00	2.28	0.
8 FEB	.00	2.28	0.
9 FEB	.00	2.28	0.
10 FEB	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	2.28	0.
12 FEB	.00	2.28	0.
13 FEB	.00	2.28	0.
14 FEB	.00	2.28	0.
15 FEB	.00	2.29	0.
16 FEB	.00	2.28	0.
17 FEB	.00	2.28	0.
18 FEB	.00	2.28	0.
19 FEB	.00	2.28	0.
20 FEB	.00	2.28	0.
21 FEB	.00	2.28	0.
22 FEB	.00	2.28	0.
23 FEB	.00	2.28	0.
24 FEB	.00	2.28	0.
25 FEB	.00	2.59	0.
26 FEB	.00	3.06	0.
27 FEB	.00	3.06	0.
28 FEB	.00	3.06	0.
29 FEB	.00	2.75	0.
1 MAR	.00	2.28	0.
2 MAR	.00	2.28	0.
3 MAR	.00	2.28	0.
4 MAR	.00	2.28	0.
5 MAR	.00	2.28	0.
6 MAR	.00	2.28	0.
7 MAR	.00	2.28	0.
8 MAR	.00	2.28	0.
9 MAR	.00	2.28	0.
10 MAR	.00	2.28	0.
11 MAR	.00	2.28	0.
12 MAR	.00	2.28	0.
13 MAR	.00	2.28	0.
14 MAR	.00	2.28	0.
15 MAR	.00	2.28	0.
16 MAR	.00	2.28	0.
17 MAR	.00	2.28	0.
18 MAR	.00	2.28	0.
19 MAR	.00	2.28	0.
20 MAR	.00	2.28	0.
21 MAR	.00	2.28	0.
22 MAR	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./100OC.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	2.28	0.
24 MAR	.00	2.28	0.
25 MAR	.00	2.28	0.
26 MAR	.00	2.28	0.
27 MAR	.00	2.28	0.
28 MAR	.00	2.28	0.
29 MAR	.00	2.28	0.
30 MAR	.00	2.28	0.
31 MAR	.00	2.28	0.
1 APR	.00	2.28	0.
2 APR	.00	2.28	0.
3 APR	.00	2.28	0.
4 APR	.00	2.28	0.
5 APR	.00	1.99	0.
6 APR	.00	1.19	0.
7 APR	.00	2.26	0.
8 APR	.00	2.28	0.
9 APR	.00	2.28	0.
10 APR	.00	2.41	0.
11 APR	.00	3.06	0.
12 APR	.00	3.06	0.
13 APR	.00	3.06	0.
14 APR	.00	3.06	0.
15 APR	.00	3.06	0.
16 APR	.00	3.06	0.
17 APR	.00	3.06	0.
18 APR	.00	2.07	0.
19 APR	.00	2.05	0.
20 APR	.00	2.05	0.
21 APR	.00	2.08	0.
22 APR	.00	3.06	0.
23 APR	.00	3.06	0.
24 APR*	.00	3.06	0.
25 APR	.00	3.06	0.
26 APR	.00	3.06	0.
27 APR	.00	3.06	0.
28 APR	.00	3.06	0.
29 APR*	.00	3.06	0.
30 APR	.09	3.06	275.
1 MAY	.18	3.06	551.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.27	3.06	826.
3 MAY	.37	3.06	1132.
4 MAY	.46	2.29	1053.
5 MAY	.55	2.78	1529.
6 MAY*	.64	3.06	1958.
7 MAY	.55	3.06	1683.
8 MAY	.46	3.06	1408.
9 MAY	.37	3.06	1132.
10 MAY	.27	2.58	697.
11 MAY	.18	2.05	369.
12 MAY	.09	2.05	185.
13 MAY*	.00	2.05	0.
14 MAY	.00	2.05	0.
15 MAY	.00	2.05	0.
16 MAY	.00	2.05	0.
17 MAY	.00	1.90	0.
18 MAY	.00	2.05	0.
19 MAY	.00	2.05	0.
20 MAY*	.00	2.05	0.
21 MAY	.00	2.05	0.
22 MAY	.00	2.04	0.
23 MAY	.00	2.05	0.
24 MAY	.00	2.05	0.
25 MAY	.00	2.05	0.
26 MAY	.00	2.05	0.
27 MAY*	.00	2.05	0.
28 MAY	.00	2.05	0.
29 MAY	.00	2.05	0.
30 MAY	.00	2.05	0.
31 MAY	.00	2.05	0.
1 JUN	.00	2.05	0.
2 JUN	.00	2.05	0.
3 JUN*	.00	2.05	0.
4 JUN	.00	2.38	0.
5 JUN	.00	3.05	0.
6 JUN*	.00	3.18	0.
7 JUN	.00	3.06	0.
8 JUN	.00	3.06	0.
9 JUN	.00	3.04	0.
10 JUN*	.00	3.06	0.
11 JUN	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	.00	3.06	0.
13 JUN*	.00	3.06	0.
14 JUN	.00	3.06	0.
15 JUN	.00	3.06	0.
16 JUN	.00	3.06	0.
17 JUN*	.00	3.06	0.
18 JUN	.00	3.06	0.
19 JUN	.00	3.06	0.
20 JUN*	.00	3.01	0.
21 JUN	.00	3.06	0.
22 JUN	.00	3.06	0.
23 JUN	.00	3.06	0.
24 JUN*	.00	3.06	0.
25 JUN	.00	3.06	0.
26 JUN	.00	3.06	0.
27 JUN	.00	3.06	0.
28 JUN	.00	2.59	0.
29 JUN	.00	2.28	0.
30 JUN	.00	3.01	0.
1 JUL*	.00	3.06	0.
2 JUL	.00	3.06	0.
3 JUL	.00	3.06	0.
4 JUL	.00	3.06	0.
5 JUL	.00	3.06	0.
6 JUL	.00	3.06	0.
7 JUL	.00	3.01	0.
8 JUL*	.00	2.96	0.
9 JUL	.00	3.49	0.
10 JUL	.00	3.49	0.
11 JUL	.00	3.49	0.
12 JUL	.00	3.49	0.
13 JUL	.00	3.49	0.
14 JUL	.00	3.49	0.
15 JUL*	.00	3.49	0.
16 JUL	.00	3.49	0.
17 JUL	.00	3.49	0.
18 JUL	.00	3.49	0.
19 JUL	.00	3.49	0.
20 JUL	.00	3.49	0.
21 JUL	.00	3.35	0.
22 JUL*	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./100C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	3.06	0.
24 JUL	.00	3.06	0.
25 JUL	.00	3.06	0.
26 JUL	.00	3.06	0.
27 JUL	.00	3.06	0.
28 JUL	.00	3.06	0.
29 JUL*	.00	3.06	0.
30 JUL	.00	3.06	0.
31 JUL	.00	3.06	0.
1 AUG	.00	2.38	0.
2 AUG	.00	2.32	0.
3 AUG	.00	3.06	0.
4 AUG	.00	3.06	0.
5 AUG*	.00	3.06	0.
6 AUG	.00	3.06	0.
7 AUG	.00	3.06	0.
8 AUG	.00	3.06	0.
9 AUG	.00	3.06	0.
10 AUG	.00	3.06	0.
11 AUG	.00	3.06	0.
12 AUG*	.00	3.06	0.
13 AUG	.00	3.06	0.
14 AUG	.00	3.06	0.
15 AUG	.00	3.06	0.
16 AUG	.00	3.06	0.
17 AUG	.00	3.06	0.
18 AUG	.00	3.16	0.
19 AUG*	.00	3.49	0.
20 AUG	.00	3.49	0.
21 AUG	.00	3.49	0.
22 AUG	.00	3.49	0.
23 AUG	.00	3.49	0.
24 AUG	.00	3.49	0.
25 AUG	.00	3.48	0.
26 AUG*	.00	3.30	0.
27 AUG	.00	3.49	0.
28 AUG	.00	3.23	0.
29 AUG	.00	3.06	0.
30 AUG	.00	3.06	0.
31 AUG	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	2.28	0.
2 JAN	.00	2.28	0.
3 JAN	.00	2.28	0.
4 JAN	.00	2.28	0.
5 JAN	.00	2.28	0.
6 JAN	.00	2.28	0.
7 JAN	.00	2.28	0.
8 JAN	.00	2.28	0.
9 JAN	.00	2.28	0.
10 JAN	.00	2.28	0.
11 JAN	.00	2.28	0.
12 JAN	.00	2.28	0.
13 JAN	.00	2.28	0.
14 JAN	.00	2.28	0.
15 JAN	.00	2.28	0.
16 JAN	.00	2.28	0.
17 JAN	.00	2.28	0.
18 JAN	.00	2.28	0.
19 JAN	.00	2.28	0.
20 JAN	.00	2.28	0.
21 JAN	.00	2.28	0.
22 JAN	.00	2.28	0.
23 JAN	.00	2.28	0.
24 JAN	.00	2.28	0.
25 JAN	.00	2.28	0.
26 JAN	.00	2.28	0.
27 JAN	.00	2.28	0.
28 JAN	.00	2.28	0.
29 JAN	.00	2.28	0.
30 JAN	.00	2.28	0.
31 JAN	.00	2.28	0.
1 FEB	.00	2.28	0.
2 FEB	.00	2.28	0.
3 FEB	.00	2.28	0.
4 FEB	.00	2.28	0.
5 FEB	.00	2.28	0.
6 FEB	.00	2.28	0.
7 FEB	.00	2.28	0.
8 FEB	.00	2.28	0.
9 FEB	.00	2.28	0.
10 FEB	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	2.28	0.
12 FEB	.00	2.28	0.
13 FEB	.00	2.28	0.
14 FEB	.00	2.28	0.
15 FEB	.00	2.29	0.
16 FEB	.00	2.28	0.
17 FEB	.00	2.28	0.
18 FEB	.00	2.28	0.
19 FEB	.00	2.28	0.
20 FEB	.00	2.28	0.
21 FEB	.00	2.28	0.
22 FEB	.00	2.28	0.
23 FEB	.00	2.28	0.
24 FEB	.00	2.28	0.
25 FEB	.00	2.59	0.
26 FEB	.00	3.06	0.
27 FEB	.00	3.06	0.
28 FEB	.00	3.06	0.
29 FEB	.00	2.75	0.
1 MAR	.00	2.28	0.
2 MAR	.00	2.28	0.
3 MAR	.00	2.28	0.
4 MAR	.00	2.28	0.
5 MAR	.00	2.28	0.
6 MAR	.00	2.28	0.
7 MAR	.00	2.28	0.
8 MAR	.00	2.28	0.
9 MAR	.00	2.28	0.
10 MAR	.00	2.28	0.
11 MAR	.00	2.28	0.
12 MAR	.00	2.28	0.
13 MAR	.00	2.28	0.
14 MAR	.00	2.28	0.
15 MAR	.00	2.28	0.
16 MAR	.00	2.28	0.
17 MAR	.00	2.28	0.
18 MAR	.00	2.28	0.
19 MAR	.00	2.28	0.
20 MAR	.00	2.28	0.
21 MAR	.00	2.28	0.
22 MAR	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	2.28	0.
24 MAR	.00	2.28	0.
25 MAR	.00	2.28	0.
26 MAR	.00	2.28	0.
27 MAR	.00	2.28	0.
28 MAR	.00	2.28	0.
29 MAR	.00	2.28	0.
30 MAR	.00	2.28	0.
31 MAR	.00	2.28	0.
1 APR	.00	2.28	0.
2 APR	.00	2.28	0.
3 APR	.00	2.28	0.
4 APR	.00	2.28	0.
5 APR	.00	1.99	0.
6 APR	.00	1.19	0.
7 APR	.00	2.26	0.
8 APR	.00	2.28	0.
9 APR	.00	2.28	0.
10 APR	.00	2.41	0.
11 APR	.00	3.06	0.
12 APR	.00	3.06	0.
13 APR	.00	3.06	0.
14 APR	.00	3.06	0.
15 APR	.00	3.06	0.
16 APR	.00	3.06	0.
17 APR	.00	3.06	0.
18 APR	.00	2.07	0.
19 APR	.00	2.05	0.
20 APR	.00	2.05	0.
21 APR	.00	2.08	0.
22 APR	.00	3.06	0.
23 APR	.00	3.06	0.
24 APR*	.00	3.06	0.
25 APR	.00	3.06	0.
26 APR	.00	3.06	0.
27 APR	.00	3.06	0.
28 APR	.00	3.06	0.
29 APR*	.00	3.06	0.
30 APR	.00	3.06	0.
1 MAY	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	3.06	0.
3 MAY	.00	3.06	0.
4 MAY	.00	2.29	0.
5 MAY	.00	2.78	0.
6 MAY*	.00	3.06	0.
7 MAY	.00	3.06	0.
8 MAY	.00	3.06	0.
9 MAY	.00	3.06	0.
10 MAY	.00	2.58	0.
11 MAY	.00	2.05	0.
12 MAY	.00	2.05	0.
13 MAY*	.00	2.05	0.
14 MAY	.00	2.05	0.
15 MAY	.00	2.05	0.
16 MAY	.00	2.05	0.
17 MAY	.00	1.90	0.
18 MAY	.00	2.05	0.
19 MAY	.00	2.05	0.
20 MAY*	.00	2.05	0.
21 MAY	.00	2.05	0.
22 MAY	.00	2.04	0.
23 MAY	.00	2.05	0.
24 MAY	.00	2.05	0.
25 MAY	.00	2.05	0.
26 MAY	.00	2.05	0.
27 MAY*	.00	2.05	0.
28 MAY	.00	2.05	0.
29 MAY	.00	2.05	0.
30 MAY	.00	2.05	0.
31 MAY	.00	2.05	0.
1 JUN	.00	2.05	0.
2 JUN	.00	2.05	0.
3 JUN*	.00	2.05	0.
4 JUN	.00	2.38	0.
5 JUN	.00	3.05	0.
6 JUN*	.00	3.18	0.
7 JUN	.00	3.06	0.
8 JUN	.00	3.06	0.
9 JUN	.00	3.04	0.
10 JUN*	.00	3.06	0.
11 JUN	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	.00	3.06	0.
13 JUN*	.00	3.06	0.
14 JUN	.00	3.06	0.
15 JUN	.00	3.06	0.
16 JUN	.00	3.06	0.
17 JUN*	.00	3.06	0.
18 JUN	.00	3.06	0.
19 JUN	.00	3.06	0.
20 JUN*	.00	3.01	0.
21 JUN	.00	3.06	0.
22 JUN	.00	3.06	0.
23 JUN	.00	3.06	0.
24 JUN*	.00	3.06	0.
25 JUN	.00	3.06	0.
26 JUN	.00	3.06	0.
27 JUN	.00	3.06	0.
28 JUN	.00	2.59	0.
29 JUN	.00	2.28	0.
30 JUN	.00	3.01	0.
1 JUL*	.00	3.06	0.
2 JUL	.00	3.06	0.
3 JUL	.00	3.06	0.
4 JUL	.00	3.06	0.
5 JUL	.00	3.06	0.
6 JUL	.00	3.06	0.
7 JUL	.00	3.01	0.
8 JUL*	.00	2.96	0.
9 JUL	.00	3.49	0.
10 JUL	.00	3.49	0.
11 JUL	.00	3.49	0.
12 JUL	.00	3.49	0.
13 JUL	.00	3.49	0.
14 JUL	.00	3.49	0.
15 JUL*	.00	3.49	0.
16 JUL	.00	3.49	0.
17 JUL	.00	3.49	0.
18 JUL	.00	3.49	0.
19 JUL	.00	3.49	0.
20 JUL	.00	3.49	0.
21 JUL	.00	3.35	0.
22 JUL*	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	3.06	0.
24 JUL	.00	3.06	0.
25 JUL	.00	3.06	0.
26 JUL	.00	3.06	0.
27 JUL	.00	3.06	0.
28 JUL	.00	3.06	0.
29 JUL*	.00	3.06	0.
30 JUL	.00	3.06	0.
31 JUL	.00	3.06	0.
1 AUG	.00	2.38	0.
2 AUG	.00	2.32	0.
3 AUG	.00	3.06	0.
4 AUG	.00	3.06	0.
5 AUG*	.00	3.06	0.
6 AUG	.00	3.06	0.
7 AUG	.00	3.06	0.
8 AUG	.00	3.06	0.
9 AUG	.00	3.06	0.
10 AUG	.00	3.06	0.
11 AUG	.00	3.06	0.
12 AUG*	.00	3.06	0.
13 AUG	.00	3.06	0.
14 AUG	.00	3.06	0.
15 AUG	.00	3.06	0.
16 AUG	.00	3.06	0.
17 AUG	.00	3.06	0.
18 AUG	.00	3.16	0.
19 AUG*	.00	3.49	0.
20 AUG	.00	3.49	0.
21 AUG	.00	3.49	0.
22 AUG	.00	3.49	0.
23 AUG	.00	3.49	0.
24 AUG	.00	3.49	0.
25 AUG	.00	3.48	0.
26 AUG*	.00	3.30	0.
27 AUG	.00	3.49	0.
28 AUG	.00	3.23	0.
29 AUG	.00	3.06	0.
30 AUG	.00	3.06	0.
31 AUG	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	2.28	0.
2 JAN	.00	2.28	0.
3 JAN	.00	2.28	0.
4 JAN	.00	2.28	0.
5 JAN	.00	2.28	0.
6 JAN	.00	2.28	0.
7 JAN	.00	2.28	0.
8 JAN	.00	2.28	0.
9 JAN	.00	2.28	0.
10 JAN	.00	2.28	0.
11 JAN	.00	2.28	0.
12 JAN	.00	2.28	0.
13 JAN	.00	2.28	0.
14 JAN	.00	2.28	0.
15 JAN	.00	2.28	0.
16 JAN	.00	2.28	0.
17 JAN	.00	2.28	0.
18 JAN	.00	2.28	0.
19 JAN	.00	2.28	0.
20 JAN	.00	2.28	0.
21 JAN	.00	2.28	0.
22 JAN	.00	2.28	0.
23 JAN	.00	2.28	0.
24 JAN	.00	2.28	0.
25 JAN	.00	2.28	0.
26 JAN	.00	2.28	0.
27 JAN	.00	2.28	0.
28 JAN	.00	2.28	0.
29 JAN	.00	2.28	0.
30 JAN	.00	2.28	0.
31 JAN	.00	2.28	0.
1 FEB	.00	2.28	0.
2 FEB	.00	2.28	0.
3 FEB	.00	2.28	0.
4 FEB	.00	2.28	0.
5 FEB	.00	2.28	0.
6 FEB	.00	2.28	0.
7 FEB	.00	2.28	0.
8 FEB	.00	2.28	0.
9 FEB	.00	2.28	0.
10 FEB	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	2.28	0.
12 FEB	.00	2.28	0.
13 FEB	.00	2.28	0.
14 FEB	.00	2.28	0.
15 FEB	.00	2.29	0.
16 FEB	.00	2.28	0.
17 FEB	.00	2.28	0.
18 FEB	.00	2.28	0.
19 FEB	.00	2.28	0.
20 FEB	.00	2.28	0.
21 FEB	.00	2.28	0.
22 FEB	.00	2.28	0.
23 FEB	.00	2.28	0.
24 FEB	.00	2.28	0.
25 FEB	.00	2.59	0.
26 FEB	.00	3.06	0.
27 FEB	.00	3.06	0.
28 FEB	.00	3.06	0.
29 FEB	.00	2.75	0.
1 MAR	.00	2.28	0.
2 MAR	.00	2.28	0.
3 MAR	.00	2.28	0.
4 MAR	.00	2.28	0.
5 MAR	.00	2.28	0.
6 MAR	.00	2.28	0.
7 MAR	.00	2.28	0.
8 MAR	.00	2.28	0.
9 MAR	.00	2.28	0.
10 MAR	.00	2.28	0.
11 MAR	.00	2.28	0.
12 MAR	.00	2.28	0.
13 MAR	.00	2.28	0.
14 MAR	.00	2.28	0.
15 MAR	.00	2.28	0.
16 MAR	.00	2.28	0.
17 MAR	.00	2.28	0.
18 MAR	.00	2.28	0.
19 MAR	.00	2.28	0.
20 MAR	.00	2.28	0.
21 MAR	.00	2.28	0.
22 MAR	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	2.28	0.
24 MAR	.00	2.28	0.
25 MAR	.00	2.28	0.
26 MAR	.00	2.28	0.
27 MAR	.00	2.28	0.
28 MAR	.00	2.28	0.
29 MAR	.00	2.28	0.
30 MAR	.00	2.28	0.
31 MAR	.00	2.28	0.
1 APR	.00	2.28	0.
2 APR	.00	2.28	0.
3 APR	.00	2.28	0.
4 APR	.00	2.28	0.
5 APR	.00	1.99	0.
6 APR	.00	1.19	0.
7 APR	.00	2.26	0.
8 APR	.00	2.28	0.
9 APR	.00	2.28	0.
10 APR	.00	2.41	0.
11 APR	.00	3.06	0.
12 APR	.00	3.06	0.
13 APR	.00	3.06	0.
14 APR	.00	3.06	0.
15 APR	.00	3.06	0.
16 APR	.00	3.06	0.
17 APR	.00	3.06	0.
18 APR	.00	2.07	0.
19 APR	.00	2.05	0.
20 APR	.00	2.05	0.
21 APR	.00	2.08	0.
22 APR	.00	3.06	0.
23 APR	.00	3.06	0.
24 APR*	.00	3.06	0.
25 APR	.00	3.06	0.
26 APR	.00	3.06	0.
27 APR	.00	3.06	0.
28 APR	.00	3.06	0.
29 APR*	.00	3.06	0.
30 APR	.00	3.06	0.
1 MAY	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	3.06	0.
3 MAY	.00	3.06	0.
4 MAY	.00	2.29	0.
5 MAY	.00	2.78	0.
6 MAY*	.00	3.06	0.
7 MAY	.10	3.06	306.
8 MAY	.20	3.06	612.
9 MAY	.30	3.06	918.
10 MAY	.39	2.58	1006.
11 MAY	.49	2.05	1005.
12 MAY	.59	2.05	1210.
13 MAY*	.69	2.05	1415.
14 MAY	1.05	2.05	2153.
15 MAY	1.40	2.05	2870.
16 MAY	1.76	2.05	3608.
17 MAY	2.12	1.90	4028.
18 MAY	2.48	2.05	5084.
19 MAY	2.83	2.05	5802.
20 MAY*	3.19	2.05	6540.
21 MAY	3.22	2.05	6601.
22 MAY	3.24	2.04	6610.
23 MAY	3.27	2.05	6704.
24 MAY	3.30	2.05	6765.
25 MAY	3.33	2.05	6827.
26 MAY	3.35	2.05	6868.
27 MAY*	3.38	2.05	6929.
28 MAY	3.72	2.05	7626.
29 MAY	4.06	2.05	8323.
30 MAY	4.40	2.05	9020.
31 MAY	4.74	2.05	9717.
1 JUN	5.08	2.05	10414.
2 JUN	5.42	2.05	11111.
3 JUN*	5.76	2.05	11808.
4 JUN	9.88	2.38	23514.
5 JUN	13.99	3.05	42670.
6 JUN*	18.11	3.18	57590.
7 JUN	17.31	3.06	52969.
8 JUN	16.50	3.06	50490.
9 JUN	15.70	3.04	47728.
10 JUN*	14.89	3.06	45563.
11 JUN	11.44	3.06	35006.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	7.98	3.06	24419.
13 JUN*	4.53	3.06	13862.
14 JUN	3.88	3.06	11873.
15 JUN	3.23	3.06	9884.
16 JUN	2.58	3.06	7895.
17 JUN*	1.93	3.06	5906.
18 JUN	1.96	3.06	5998.
19 JUN	1.99	3.06	6089.
20 JUN*	2.02	3.01	6080.
21 JUN	1.84	3.06	5630.
22 JUN	1.66	3.06	5080.
23 JUN	1.47	3.06	4498.
24 JUN*	1.29	3.06	3947.
25 JUN	1.11	3.06	3397.
26 JUN	.92	3.06	2815.
27 JUN	.74	3.06	2264.
28 JUN	.55	2.59	1424.
29 JUN	.37	2.28	844.
30 JUN	.18	3.01	542.
1 JUL*	.00	3.06	0.
2 JUL	.00	3.06	0.
3 JUL	.00	3.06	0.
4 JUL	.00	3.06	0.
5 JUL	.00	3.06	0.
6 JUL	.00	3.06	0.
7 JUL	.00	3.01	0.
8 JUL*	.00	2.96	0.
9 JUL	.00	3.49	0.
10 JUL	.00	3.49	0.
11 JUL	.00	3.49	0.
12 JUL	.00	3.49	0.
13 JUL	.00	3.49	0.
14 JUL	.00	3.49	0.
15 JUL*	.00	3.49	0.
16 JUL	.00	3.49	0.
17 JUL	.00	3.49	0.
18 JUL	.00	3.49	0.
19 JUL	.00	3.49	0.
20 JUL	.00	3.49	0.
21 JUL	.00	3.35	0.
22 JUL*	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	3.06	0.
24 JUL	.00	3.06	0.
25 JUL	.00	3.06	0.
26 JUL	.00	3.06	0.
27 JUL	.00	3.06	0.
28 JUL	.00	3.06	0.
29 JUL*	.00	3.06	0.
30 JUL	.00	3.06	0.
31 JUL	.00	3.06	0.
1 AUG	.00	2.38	0.
2 AUG	.00	2.32	0.
3 AUG	.00	3.06	0.
4 AUG	.00	3.06	0.
5 AUG*	.00	3.06	0.
6 AUG	.00	3.06	0.
7 AUG	.00	3.06	0.
8 AUG	.00	3.06	0.
9 AUG	.00	3.06	0.
10 AUG	.00	3.06	0.
11 AUG	.00	3.06	0.
12 AUG*	.00	3.06	0.
13 AUG	.00	3.06	0.
14 AUG	.00	3.06	0.
15 AUG	.00	3.06	0.
16 AUG	.00	3.06	0.
17 AUG	.00	3.06	0.
18 AUG	.00	3.16	0.
19 AUG*	.00	3.49	0.
20 AUG	.00	3.49	0.
21 AUG	.00	3.49	0.
22 AUG	.00	3.49	0.
23 AUG	.00	3.49	0.
24 AUG	.00	3.49	0.
25 AUG	.00	3.48	0.
26 AUG*	.00	3.30	0.
27 AUG	.00	3.49	0.
28 AUG	.00	3.23	0.
29 AUG	.00	3.06	0.
30 AUG	.00	3.06	0.
31 AUG	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	2.28	0.
2 JAN	.00	2.28	0.
3 JAN	.00	2.28	0.
4 JAN	.00	2.28	0.
5 JAN	.00	2.28	0.
6 JAN	.00	2.28	0.
7 JAN	.00	2.28	0.
8 JAN	.00	2.28	0.
9 JAN	.00	2.28	0.
10 JAN	.00	2.28	0.
11 JAN	.00	2.28	0.
12 JAN	.00	2.28	0.
13 JAN	.00	2.28	0.
14 JAN	.00	2.28	0.
15 JAN	.00	2.28	0.
16 JAN	.00	2.28	0.
17 JAN	.00	2.28	0.
18 JAN	.00	2.28	0.
19 JAN	.00	2.28	0.
20 JAN	.00	2.28	0.
21 JAN	.00	2.28	0.
22 JAN	.00	2.28	0.
23 JAN	.00	2.28	0.
24 JAN	.00	2.28	0.
25 JAN	.00	2.28	0.
26 JAN	.00	2.28	0.
27 JAN	.00	2.28	0.
28 JAN	.00	2.28	0.
29 JAN	.00	2.28	0.
30 JAN	.00	2.28	0.
31 JAN	.00	2.28	0.
1 FEB	.00	2.28	0.
2 FEB	.00	2.28	0.
3 FEB	.00	2.28	0.
4 FEB	.00	2.28	0.
5 FEB	.00	2.28	0.
6 FEB	.00	2.28	0.
7 FEB	.00	2.28	0.
8 FEB	.00	2.28	0.
9 FEB	.00	2.28	0.
10 FEB	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	2.28	0.
12 FEB	.00	2.28	0.
13 FEB	.00	2.28	0.
14 FEB	.00	2.28	0.
15 FEB	.00	2.29	0.
16 FEB	.00	2.28	0.
17 FEB	.00	2.28	0.
18 FEB	.00	2.28	0.
19 FEB	.00	2.28	0.
20 FEB	.00	2.28	0.
21 FEB	.00	2.28	0.
22 FEB	.00	2.28	0.
23 FEB	.00	2.28	0.
24 FEB	.00	2.28	0.
25 FEB	.00	2.59	0.
26 FEB	.00	3.06	0.
27 FEB	.00	3.06	0.
28 FEB	.00	3.06	0.
29 FEB	.00	2.75	0.
1 MAR	.00	2.28	0.
2 MAR	.00	2.28	0.
3 MAR	.00	2.28	0.
4 MAR	.00	2.28	0.
5 MAR	.00	2.28	0.
6 MAR	.00	2.28	0.
7 MAR	.00	2.28	0.
8 MAR	.00	2.28	0.
9 MAR	.00	2.28	0.
10 MAR	.00	2.28	0.
11 MAR	.00	2.28	0.
12 MAR	.00	2.28	0.
13 MAR	.00	2.28	0.
14 MAR	.00	2.28	0.
15 MAR	.00	2.28	0.
16 MAR	.00	2.28	0.
17 MAR	.00	2.28	0.
18 MAR	.00	2.28	0.
19 MAR	.00	2.28	0.
20 MAR	.00	2.28	0.
21 MAR	.00	2.28	0.
22 MAR	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	2.28	0.
24 MAR	.00	2.28	0.
25 MAR	.00	2.28	0.
26 MAR	.00	2.28	0.
27 MAR	.00	2.28	0.
28 MAR	.00	2.28	0.
29 MAR	.00	2.28	0.
30 MAR	.00	2.28	0.
31 MAR	.00	2.28	0.
1 APR	.00	2.28	0.
2 APR	.00	2.28	0.
3 APR	.00	2.28	0.
4 APR	.00	2.28	0.
5 APR	.00	1.99	0.
6 APR	.00	1.19	0.
7 APR	.00	2.26	0.
8 APR	.00	2.28	0.
9 APR	.00	2.28	0.
10 APR	.00	2.41	0.
11 APR	.00	3.06	0.
12 APR	.00	3.06	0.
13 APR	.00	3.06	0.
14 APR	.00	3.06	0.
15 APR	.00	3.06	0.
16 APR	.00	3.06	0.
17 APR	.00	3.06	0.
18 APR	.00	2.07	0.
19 APR	.00	2.05	0.
20 APR	.00	2.05	0.
21 APR	.00	2.08	0.
22 APR	.00	3.06	0.
23 APR	.00	3.06	0.
24 APR*	.00	3.06	0.
25 APR	.00	3.06	0.
26 APR	.00	3.06	0.
27 APR	.00	3.06	0.
28 APR	.00	3.06	0.
29 APR*	.00	3.06	0.
30 APR	.00	3.06	0.
1 MAY	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	3.06	0.
3 MAY	.00	3.06	0.
4 MAY	.00	2.29	0.
5 MAY	.00	2.78	0.
6 MAY*	.00	3.06	0.
7 MAY	.00	3.06	0.
8 MAY	.00	3.06	0.
9 MAY	.00	3.06	0.
10 MAY	.00	2.58	0.
11 MAY	.00	2.05	0.
12 MAY	.00	2.05	0.
13 MAY*	.00	2.05	0.
14 MAY	.00	2.05	0.
15 MAY	.00	2.05	0.
16 MAY	.00	2.05	0.
17 MAY	.00	1.90	0.
18 MAY	.00	2.05	0.
19 MAY	.00	2.05	0.
20 MAY*	.00	2.05	0.
21 MAY	.00	2.05	0.
22 MAY	.00	2.04	0.
23 MAY	.00	2.05	0.
24 MAY	.00	2.05	0.
25 MAY	.00	2.05	0.
26 MAY	.00	2.05	0.
27 MAY*	.00	2.05	0.
28 MAY	.00	2.05	0.
29 MAY	.00	2.05	0.
30 MAY	.00	2.05	0.
31 MAY	.00	2.05	0.
1 JUN	.00	2.05	0.
2 JUN	.00	2.05	0.
3 JUN*	.00	2.05	0.
4 JUN	.00	2.38	0.
5 JUN	.00	3.05	0.
6 JUN*	.00	3.18	0.
7 JUN	.00	3.06	0.
8 JUN	.00	3.06	0.
9 JUN	.00	3.04	0.
10 JUN*	.00	3.06	0.
11 JUN	1.73	3.06	5294.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	3.47	3.06	10618.
13 JUN*	5.20	3.06	15912.
14 JUN	4.56	3.06	13954.
15 JUN	3.92	3.06	11995.
16 JUN	3.27	3.06	10006.
17 JUN*	2.63	3.06	8048.
18 JUN	1.97	3.06	6028.
19 JUN	1.32	3.06	4039.
20 JUN*	.66	3.01	1987.
21 JUN	.66	3.06	2020.
22 JUN	.66	3.06	2020.
23 JUN	.65	3.06	1989.
24 JUN*	.65	3.06	1989.
25 JUN	.56	3.06	1714.
26 JUN	.46	3.06	1408.
27 JUN	.37	3.06	1132.
28 JUN	.28	2.59	725.
29 JUN	.19	2.28	433.
30 JUN	.09	3.01	271.
1 JUL*	.00	3.06	0.
2 JUL	.20	3.06	612.
3 JUL	.41	3.06	1255.
4 JUL	.61	3.06	1867.
5 JUL	.81	3.06	2479.
6 JUL	1.01	3.06	3091.
7 JUL	1.22	3.01	3672.
8 JUL*	1.42	2.96	4203.
9 JUL	1.31	3.49	4572.
10 JUL	1.20	3.49	4188.
11 JUL	1.09	3.49	3804.
12 JUL	.97	3.49	3385.
13 JUL	.86	3.49	3001.
14 JUL	.75	3.49	2618.
15 JUL*	.64	3.49	2234.
16 JUL	.55	3.49	1919.
17 JUL	.46	3.49	1605.
18 JUL	.37	3.49	1291.
19 JUL	.27	3.49	942.
20 JUL	.18	3.49	628.
21 JUL	.09	3.35	302.
22 JUL*	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : AMERICAN SHAD
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	3.06	0.
24 JUL	.00	3.06	0.
25 JUL	.00	3.06	0.
26 JUL	.00	3.06	0.
27 JUL	.00	3.06	0.
28 JUL	.00	3.06	0.
29 JUL*	.00	3.06	0.
30 JUL	.00	3.06	0.
31 JUL	.00	3.06	0.
1 AUG	.00	2.38	0.
2 AUG	.00	2.32	0.
3 AUG	.00	3.06	0.
4 AUG	.00	3.06	0.
5 AUG*	.00	3.06	0.
6 AUG	.00	3.06	0.
7 AUG	.00	3.06	0.
8 AUG	.00	3.06	0.
9 AUG	.00	3.06	0.
10 AUG	.00	3.06	0.
11 AUG	.00	3.06	0.
12 AUG*	.00	3.06	0.
13 AUG	.00	3.06	0.
14 AUG	.00	3.06	0.
15 AUG	.00	3.06	0.
16 AUG	.00	3.06	0.
17 AUG	.00	3.06	0.
18 AUG	.00	3.16	0.
19 AUG*	.00	3.49	0.
20 AUG	.00	3.49	0.
21 AUG	.00	3.49	0.
22 AUG	.00	3.49	0.
23 AUG	.00	3.49	0.
24 AUG	.00	3.49	0.
25 AUG	.00	3.48	0.
26 AUG*	.00	3.30	0.
27 AUG	.00	3.49	0.
28 AUG	.00	3.23	0.
29 AUG	.00	3.06	0.
30 AUG	.00	3.06	0.
31 AUG	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	2.28	0.
2 JAN	.00	2.28	0.
3 JAN	.00	2.28	0.
4 JAN	.00	2.28	0.
5 JAN	.00	2.28	0.
6 JAN	.00	2.28	0.
7 JAN	.00	2.28	0.
8 JAN	.00	2.28	0.
9 JAN	.00	2.28	0.
10 JAN	.00	2.28	0.
11 JAN	.00	2.28	0.
12 JAN	.00	2.28	0.
13 JAN	.00	2.28	0.
14 JAN	.00	2.28	0.
15 JAN	.00	2.28	0.
16 JAN	.00	2.28	0.
17 JAN	.00	2.28	0.
18 JAN	.00	2.28	0.
19 JAN	.00	2.28	0.
20 JAN	.00	2.28	0.
21 JAN	.00	2.28	0.
22 JAN	.00	2.28	0.
23 JAN	.00	2.28	0.
24 JAN	.00	2.28	0.
25 JAN	.00	2.28	0.
26 JAN	.00	2.28	0.
27 JAN	.00	2.28	0.
28 JAN	.00	2.28	0.
29 JAN	.00	2.28	0.
30 JAN	.00	2.28	0.
31 JAN	.00	2.28	0.
1 FEB	.00	2.28	0.
2 FEB	.00	2.28	0.
3 FEB	.00	2.28	0.
4 FEB	.00	2.28	0.
5 FEB	.00	2.28	0.
6 FEB	.00	2.28	0.
7 FEB	.00	2.28	0.
8 FEB	.00	2.28	0.
9 FEB	.00	2.28	0.
10 FEB	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	2.28	0.
12 FEB	.00	2.28	0.
13 FEB	.00	2.28	0.
14 FEB	.00	2.28	0.
15 FEB	.00	2.29	0.
16 FEB	.00	2.28	0.
17 FEB	.00	2.28	0.
18 FEB	.00	2.28	0.
19 FEB	.00	2.28	0.
20 FEB	.00	2.28	0.
21 FEB	.00	2.28	0.
22 FEB	.00	2.28	0.
23 FEB	.00	2.28	0.
24 FEB	.00	2.28	0.
25 FEB	.00	2.59	0.
26 FEB	.00	3.06	0.
27 FEB	.00	3.06	0.
28 FEB	.00	3.06	0.
29 FEB	.00	2.75	0.
1 MAR	.00	2.28	0.
2 MAR	.00	2.28	0.
3 MAR	.00	2.28	0.
4 MAR	.00	2.28	0.
5 MAR	.00	2.28	0.
6 MAR	.00	2.28	0.
7 MAR	.00	2.28	0.
8 MAR	.00	2.28	0.
9 MAR	.00	2.28	0.
10 MAR	.00	2.28	0.
11 MAR	.00	2.28	0.
12 MAR	.00	2.28	0.
13 MAR	.00	2.28	0.
14 MAR	.00	2.28	0.
15 MAR	.00	2.28	0.
16 MAR	.00	2.28	0.
17 MAR	.00	2.28	0.
18 MAR	.00	2.28	0.
19 MAR	.00	2.28	0.
20 MAR	.00	2.28	0.
21 MAR	.00	2.28	0.
22 MAR	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	2.28	0.
24 MAR	.00	2.28	0.
25 MAR	.00	2.28	0.
26 MAR	.00	2.28	0.
27 MAR	.00	2.28	0.
28 MAR	.00	2.28	0.
29 MAR	.00	2.28	0.
30 MAR	.00	2.28	0.
31 MAR	.00	2.28	0.
1 APR	.00	2.28	0.
2 APR	.00	2.28	0.
3 APR	.00	2.28	0.
4 APR	.00	2.28	0.
5 APR	.00	1.99	0.
6 APR	.00	1.19	0.
7 APR	.00	2.26	0.
8 APR	.00	2.28	0.
9 APR	.00	2.28	0.
10 APR	.00	2.41	0.
11 APR	.00	3.06	0.
12 APR	.00	3.06	0.
13 APR	.00	3.06	0.
14 APR	.00	3.06	0.
15 APR	.00	3.06	0.
16 APR	.00	3.06	0.
17 APR	.00	3.06	0.
18 APR	.00	2.07	0.
19 APR	.00	2.05	0.
20 APR	.00	2.05	0.
21 APR	.00	2.08	0.
22 APR	.00	3.06	0.
23 APR	.00	3.06	0.
24 APR*	.00	3.06	0.
25 APR	.00	3.06	0.
26 APR	.00	3.06	0.
27 APR	.00	3.06	0.
28 APR	.00	3.06	0.
29 APR*	.00	3.06	0.
30 APR	.00	3.06	0.
1 MAY	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	3.06	0.
3 MAY	.00	3.06	0.
4 MAY	.00	2.29	0.
5 MAY	.00	2.78	0.
6 MAY*	.00	3.06	0.
7 MAY	.00	3.06	0.
8 MAY	.00	3.06	0.
9 MAY	.00	3.06	0.
10 MAY	.00	2.58	0.
11 MAY	.00	2.05	0.
12 MAY	.00	2.05	0.
13 MAY*	.00	2.05	0.
14 MAY	.00	2.05	0.
15 MAY	.00	2.05	0.
16 MAY	.00	2.05	0.
17 MAY	.00	1.90	0.
18 MAY	.00	2.05	0.
19 MAY	.00	2.05	0.
20 MAY*	.00	2.05	0.
21 MAY	.00	2.05	0.
22 MAY	.00	2.04	0.
23 MAY	.00	2.05	0.
24 MAY	.00	2.05	0.
25 MAY	.00	2.05	0.
26 MAY	.00	2.05	0.
27 MAY*	.00	2.05	0.
28 MAY	.00	2.05	0.
29 MAY	.00	2.05	0.
30 MAY	.00	2.05	0.
31 MAY	.00	2.05	0.
1 JUN	.00	2.05	0.
2 JUN	.00	2.05	0.
3 JUN*	.00	2.05	0.
4 JUN	.00	2.38	0.
5 JUN	.00	3.05	0.
6 JUN*	.00	3.18	0.
7 JUN	.00	3.06	0.
8 JUN	.00	3.06	0.
9 JUN	.00	3.04	0.
10 JUN*	.00	3.06	0.
11 JUN	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	.00	3.06	0.
13 JUN*	.00	3.06	0.
14 JUN	.00	3.06	0.
15 JUN	.00	3.06	0.
16 JUN	.00	3.06	0.
17 JUN*	.00	3.06	0.
18 JUN	.00	3.06	0.
19 JUN	.00	3.06	0.
20 JUN*	.00	3.01	0.
21 JUN	.00	3.06	0.
22 JUN	.00	3.06	0.
23 JUN	.00	3.06	0.
24 JUN*	.00	3.06	0.
25 JUN	.00	3.06	0.
26 JUN	.00	3.06	0.
27 JUN	.00	3.06	0.
28 JUN	.00	2.59	0.
29 JUN	.00	2.28	0.
30 JUN	.00	3.01	0.
1 JUL*	.00	3.06	0.
2 JUL	.00	3.06	0.
3 JUL	.00	3.06	0.
4 JUL	.00	3.06	0.
5 JUL	.00	3.06	0.
6 JUL	.00	3.06	0.
7 JUL	.00	3.01	0.
8 JUL*	.00	2.96	0.
9 JUL	.00	3.49	0.
10 JUL	.00	3.49	0.
11 JUL	.00	3.49	0.
12 JUL	.00	3.49	0.
13 JUL	.00	3.49	0.
14 JUL	.00	3.49	0.
15 JUL*	.00	3.49	0.
16 JUL	.00	3.49	0.
17 JUL	.00	3.49	0.
18 JUL	.00	3.49	0.
19 JUL	.00	3.49	0.
20 JUL	.00	3.49	0.
21 JUL	.00	3.35	0.
22 JUL*	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	3.06	0.
24 JUL	.00	3.06	0.
25 JUL	.00	3.06	0.
26 JUL	.00	3.06	0.
27 JUL	.00	3.06	0.
28 JUL	.00	3.06	0.
29 JUL*	.00	3.06	0.
30 JUL	.00	3.06	0.
31 JUL	.00	3.06	0.
1 AUG	.00	2.38	0.
2 AUG	.00	2.32	0.
3 AUG	.00	3.06	0.
4 AUG	.00	3.06	0.
5 AUG*	.00	3.06	0.
6 AUG	.00	3.06	0.
7 AUG	.00	3.06	0.
8 AUG	.00	3.06	0.
9 AUG	.00	3.06	0.
10 AUG	.00	3.06	0.
11 AUG	.00	3.06	0.
12 AUG*	.00	3.06	0.
13 AUG	.00	3.06	0.
14 AUG	.00	3.06	0.
15 AUG	.00	3.06	0.
16 AUG	.00	3.06	0.
17 AUG	.00	3.06	0.
18 AUG	.00	3.16	0.
19 AUG*	.00	3.49	0.
20 AUG	.00	3.49	0.
21 AUG	.00	3.49	0.
22 AUG	.00	3.49	0.
23 AUG	.00	3.49	0.
24 AUG	.00	3.49	0.
25 AUG	.00	3.48	0.
26 AUG*	.00	3.30	0.
27 AUG	.00	3.49	0.
28 AUG	.00	3.23	0.
29 AUG	.00	3.06	0.
30 AUG	.00	3.06	0.
31 AUG	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	2.28	0.
2 JAN	.00	2.28	0.
3 JAN	.00	2.28	0.
4 JAN	.00	2.28	0.
5 JAN	.00	2.28	0.
6 JAN	.00	2.28	0.
7 JAN	.00	2.28	0.
8 JAN	.00	2.28	0.
9 JAN	.00	2.28	0.
10 JAN	.00	2.28	0.
11 JAN	.00	2.28	0.
12 JAN	.00	2.28	0.
13 JAN	.00	2.28	0.
14 JAN	.00	2.28	0.
15 JAN	.00	2.28	0.
16 JAN	.00	2.28	0.
17 JAN	.00	2.28	0.
18 JAN	.00	2.28	0.
19 JAN	.00	2.28	0.
20 JAN	.00	2.28	0.
21 JAN	.00	2.28	0.
22 JAN	.00	2.28	0.
23 JAN	.00	2.28	0.
24 JAN	.00	2.28	0.
25 JAN	.00	2.28	0.
26 JAN	.00	2.28	0.
27 JAN	.00	2.28	0.
28 JAN	.00	2.28	0.
29 JAN	.00	2.28	0.
30 JAN	.00	2.28	0.
31 JAN	.00	2.28	0.
1 FEB	.00	2.28	0.
2 FEB	.00	2.28	0.
3 FEB	.00	2.28	0.
4 FEB	.00	2.28	0.
5 FEB	.00	2.28	0.
6 FEB	.00	2.28	0.
7 FEB	.00	2.28	0.
8 FEB	.00	2.28	0.
9 FEB	.00	2.28	0.
10 FEB	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	2.28	0.
12 FEB	.00	2.28	0.
13 FEB	.00	2.28	0.
14 FEB	.00	2.28	0.
15 FEB	.00	2.29	0.
16 FEB	.00	2.28	0.
17 FEB	.00	2.28	0.
18 FEB	.00	2.28	0.
19 FEB	.00	2.28	0.
20 FEB	.00	2.28	0.
21 FEB	.00	2.28	0.
22 FEB	.00	2.28	0.
23 FEB	.00	2.28	0.
24 FEB	.00	2.28	0.
25 FEB	.00	2.59	0.
26 FEB	.00	3.06	0.
27 FEB	.00	3.06	0.
28 FEB	.00	3.06	0.
29 FEB	.00	2.75	0.
1 MAR	.00	2.28	0.
2 MAR	.00	2.28	0.
3 MAR	.00	2.28	0.
4 MAR	.00	2.28	0.
5 MAR	.00	2.28	0.
6 MAR	.00	2.28	0.
7 MAR	.00	2.28	0.
8 MAR	.00	2.28	0.
9 MAR	.00	2.28	0.
10 MAR	.00	2.28	0.
11 MAR	.00	2.28	0.
12 MAR	.00	2.28	0.
13 MAR	.00	2.28	0.
14 MAR	.00	2.28	0.
15 MAR	.00	2.28	0.
16 MAR	.00	2.28	0.
17 MAR	.00	2.28	0.
18 MAR	.00	2.28	0.
19 MAR	.00	2.28	0.
20 MAR	.00	2.28	0.
21 MAR	.00	2.28	0.
22 MAR	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	2.28	0.
24 MAR	.00	2.28	0.
25 MAR	.00	2.28	0.
26 MAR	.00	2.28	0.
27 MAR	.00	2.28	0.
28 MAR	.00	2.28	0.
29 MAR	.00	2.28	0.
30 MAR	.00	2.28	0.
31 MAR	.00	2.28	0.
1 APR	.00	2.28	0.
2 APR	.00	2.28	0.
3 APR	.00	2.28	0.
4 APR	.00	2.28	0.
5 APR	.00	1.99	0.
6 APR	.00	1.19	0.
7 APR	.00	2.26	0.
8 APR	.00	2.28	0.
9 APR	.00	2.28	0.
10 APR	.00	2.41	0.
11 APR	.00	3.06	0.
12 APR	.00	3.06	0.
13 APR	.00	3.06	0.
14 APR	.00	3.06	0.
15 APR	.00	3.06	0.
16 APR	.00	3.06	0.
17 APR	.00	3.06	0.
18 APR	.00	2.07	0.
19 APR	.00	2.05	0.
20 APR	.00	2.05	0.
21 APR	.00	2.08	0.
22 APR	.00	3.06	0.
23 APR	.00	3.06	0.
24 APR*	.00	3.06	0.
25 APR	.00	3.06	0.
26 APR	.00	3.06	0.
27 APR	.00	3.06	0.
28 APR	.00	3.06	0.
29 APR*	.00	3.06	0.
30 APR	.00	3.06	0.
1 MAY	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	3.06	0.
3 MAY	.00	3.06	0.
4 MAY	.00	2.29	0.
5 MAY	.00	2.78	0.
6 MAY*	.00	3.06	0.
7 MAY	.00	3.06	0.
8 MAY	.00	3.06	0.
9 MAY	.00	3.06	0.
10 MAY	.00	2.58	0.
11 MAY	.00	2.05	0.
12 MAY	.00	2.05	0.
13 MAY*	.00	2.05	0.
14 MAY	.00	2.05	0.
15 MAY	.00	2.05	0.
16 MAY	.00	2.05	0.
17 MAY	.00	1.90	0.
18 MAY	.00	2.05	0.
19 MAY	.00	2.05	0.
20 MAY*	.00	2.05	0.
21 MAY	.00	2.05	0.
22 MAY	.00	2.04	0.
23 MAY	.00	2.05	0.
24 MAY	.00	2.05	0.
25 MAY	.00	2.05	0.
26 MAY	.00	2.05	0.
27 MAY*	.00	2.05	0.
28 MAY	.00	2.05	0.
29 MAY	.00	2.05	0.
30 MAY	.00	2.05	0.
31 MAY	.00	2.05	0.
1 JUN	.00	2.05	0.
2 JUN	.00	2.05	0.
3 JUN*	.00	2.05	0.
4 JUN	.00	2.38	0.
5 JUN	.00	3.05	0.
6 JUN*	.00	3.18	0.
7 JUN	.00	3.06	0.
8 JUN	.00	3.06	0.
9 JUN	.00	3.04	0.
10 JUN*	.00	3.06	0.
11 JUN	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	.00	3.06	0.
13 JUN*	.00	3.06	0.
14 JUN	.00	3.06	0.
15 JUN	.00	3.06	0.
16 JUN	.00	3.06	0.
17 JUN*	.00	3.06	0.
18 JUN	.00	3.06	0.
19 JUN	.00	3.06	0.
20 JUN*	.00	3.01	0.
21 JUN	.00	3.06	0.
22 JUN	.00	3.06	0.
23 JUN	.00	3.06	0.
24 JUN*	.00	3.06	0.
25 JUN	.00	3.06	0.
26 JUN	.00	3.06	0.
27 JUN	.00	3.06	0.
28 JUN	.00	2.59	0.
29 JUN	.00	2.28	0.
30 JUN	.00	3.01	0.
1 JUL*	.00	3.06	0.
2 JUL	.00	3.06	0.
3 JUL	.00	3.06	0.
4 JUL	.00	3.06	0.
5 JUL	.00	3.06	0.
6 JUL	.00	3.06	0.
7 JUL	.00	3.01	0.
8 JUL*	.00	2.96	0.
9 JUL	.00	3.49	0.
10 JUL	.00	3.49	0.
11 JUL	.00	3.49	0.
12 JUL	.00	3.49	0.
13 JUL	.00	3.49	0.
14 JUL	.00	3.49	0.
15 JUL*	.00	3.49	0.
16 JUL	.00	3.49	0.
17 JUL	.00	3.49	0.
18 JUL	.00	3.49	0.
19 JUL	.00	3.49	0.
20 JUL	.00	3.49	0.
21 JUL	.00	3.35	0.
22 JUL*	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	3.06	0.
24 JUL	.00	3.06	0.
25 JUL	.00	3.06	0.
26 JUL	.00	3.06	0.
27 JUL	.00	3.06	0.
28 JUL	.00	3.06	0.
29 JUL*	.00	3.06	0.
30 JUL	.00	3.06	0.
31 JUL	.00	3.06	0.
1 AUG	.00	2.38	0.
2 AUG	.00	2.32	0.
3 AUG	.00	3.06	0.
4 AUG	.00	3.06	0.
5 AUG*	.00	3.06	0.
6 AUG	.00	3.06	0.
7 AUG	.00	3.06	0.
8 AUG	.00	3.06	0.
9 AUG	.00	3.06	0.
10 AUG	.00	3.06	0.
11 AUG	.00	3.06	0.
12 AUG*	.00	3.06	0.
13 AUG	.00	3.06	0.
14 AUG	.00	3.06	0.
15 AUG	.00	3.06	0.
16 AUG	.00	3.06	0.
17 AUG	.00	3.06	0.
18 AUG	.00	3.16	0.
19 AUG*	.00	3.49	0.
20 AUG	.00	3.49	0.
21 AUG	.00	3.49	0.
22 AUG	.00	3.49	0.
23 AUG	.00	3.49	0.
24 AUG	.00	3.49	0.
25 AUG	.00	3.48	0.
26 AUG*	.00	3.30	0.
27 AUG	.00	3.49	0.
28 AUG	.00	3.23	0.
29 AUG	.00	3.06	0.
30 AUG	.00	3.06	0.
31 AUG	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	2.28	0.
2 JAN	.00	2.28	0.
3 JAN	.00	2.28	0.
4 JAN	.00	2.28	0.
5 JAN	.00	2.28	0.
6 JAN	.00	2.28	0.
7 JAN	.00	2.28	0.
8 JAN	.00	2.28	0.
9 JAN	.00	2.28	0.
10 JAN	.00	2.28	0.
11 JAN	.00	2.28	0.
12 JAN	.00	2.28	0.
13 JAN	.00	2.28	0.
14 JAN	.00	2.28	0.
15 JAN	.00	2.28	0.
16 JAN	.00	2.28	0.
17 JAN	.00	2.28	0.
18 JAN	.00	2.28	0.
19 JAN	.00	2.28	0.
20 JAN	.00	2.28	0.
21 JAN	.00	2.28	0.
22 JAN	.00	2.28	0.
23 JAN	.00	2.28	0.
24 JAN	.00	2.28	0.
25 JAN	.00	2.28	0.
26 JAN	.00	2.28	0.
27 JAN	.00	2.28	0.
28 JAN	.00	2.28	0.
29 JAN	.00	2.28	0.
30 JAN	.00	2.28	0.
31 JAN	.00	2.28	0.
1 FEB	.00	2.28	0.
2 FEB	.00	2.28	0.
3 FEB	.00	2.28	0.
4 FEB	.00	2.28	0.
5 FEB	.00	2.28	0.
6 FEB	.00	2.28	0.
7 FEB	.00	2.28	0.
8 FEB	.00	2.28	0.
9 FEB	.00	2.28	0.
10 FEB	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	2.28	0.
12 FEB	.00	2.28	0.
13 FEB	.00	2.28	0.
14 FEB	.00	2.28	0.
15 FEB	.00	2.29	0.
16 FEB	.00	2.28	0.
17 FEB	.00	2.28	0.
18 FEB	.00	2.28	0.
19 FEB	.00	2.28	0.
20 FEB	.00	2.28	0.
21 FEB	.00	2.28	0.
22 FEB	.00	2.28	0.
23 FEB	.00	2.28	0.
24 FEB	.00	2.28	0.
25 FEB	.00	2.59	0.
26 FEB	.00	3.06	0.
27 FEB	.00	3.06	0.
28 FEB	.00	3.06	0.
29 FEB	.00	2.75	0.
1 MAR	.00	2.28	0.
2 MAR	.00	2.28	0.
3 MAR	.00	2.28	0.
4 MAR	.00	2.28	0.
5 MAR	.00	2.28	0.
6 MAR	.00	2.28	0.
7 MAR	.00	2.28	0.
8 MAR	.00	2.28	0.
9 MAR	.00	2.28	0.
10 MAR	.00	2.28	0.
11 MAR	.00	2.28	0.
12 MAR	.00	2.28	0.
13 MAR	.00	2.28	0.
14 MAR	.00	2.28	0.
15 MAR	.00	2.28	0.
16 MAR	.00	2.28	0.
17 MAR	.00	2.28	0.
18 MAR	.00	2.28	0.
19 MAR	.00	2.28	0.
20 MAR	.00	2.28	0.
21 MAR	.00	2.28	0.
22 MAR	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	2.28	0.
24 MAR	.00	2.28	0.
25 MAR	.00	2.28	0.
26 MAR	.00	2.28	0.
27 MAR	.00	2.28	0.
28 MAR	.00	2.28	0.
29 MAR	.00	2.28	0.
30 MAR	.00	2.28	0.
31 MAR	.00	2.28	0.
1 APR	.00	2.28	0.
2 APR	.00	2.28	0.
3 APR	.00	2.28	0.
4 APR	.00	2.28	0.
5 APR	.00	1.99	0.
6 APR	.00	1.19	0.
7 APR	.00	2.26	0.
8 APR	.00	2.28	0.
9 APR	.00	2.28	0.
10 APR	.00	2.41	0.
11 APR	.00	3.06	0.
12 APR	.00	3.06	0.
13 APR	.00	3.06	0.
14 APR	.00	3.06	0.
15 APR	.00	3.06	0.
16 APR	.00	3.06	0.
17 APR	.00	3.06	0.
18 APR	.00	2.07	0.
19 APR	.00	2.05	0.
20 APR	.00	2.05	0.
21 APR	.00	2.08	0.
22 APR	.00	3.06	0.
23 APR	.00	3.06	0.
24 APR*	.00	3.06	0.
25 APR	.00	3.06	0.
26 APR	.00	3.06	0.
27 APR	.00	3.06	0.
28 APR	.00	3.06	0.
29 APR*	.00	3.06	0.
30 APR	.00	3.06	0.
1 MAY	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	3.06	0.
3 MAY	.00	3.06	0.
4 MAY	.00	2.29	0.
5 MAY	.00	2.78	0.
6 MAY*	.00	3.06	0.
7 MAY	.00	3.06	0.
8 MAY	.00	3.06	0.
9 MAY	.00	3.06	0.
10 MAY	.00	2.58	0.
11 MAY	.00	2.05	0.
12 MAY	.00	2.05	0.
13 MAY*	.00	2.05	0.
14 MAY	.00	2.05	0.
15 MAY	.00	2.05	0.
16 MAY	.00	2.05	0.
17 MAY	.00	1.90	0.
18 MAY	.00	2.05	0.
19 MAY	.00	2.05	0.
20 MAY*	.00	2.05	0.
21 MAY	.00	2.05	0.
22 MAY	.00	2.04	0.
23 MAY	.00	2.05	0.
24 MAY	.00	2.05	0.
25 MAY	.00	2.05	0.
26 MAY	.00	2.05	0.
27 MAY*	.00	2.05	0.
28 MAY	.00	2.05	0.
29 MAY	.00	2.05	0.
30 MAY	.00	2.05	0.
31 MAY	.00	2.05	0.
1 JUN	.00	2.05	0.
2 JUN	.00	2.05	0.
3 JUN*	.00	2.05	0.
4 JUN	.00	2.38	0.
5 JUN	.00	3.05	0.
6 JUN*	.00	3.18	0.
7 JUN	.00	3.06	0.
8 JUN	.00	3.06	0.
9 JUN	.00	3.04	0.
10 JUN*	.00	3.06	0.
11 JUN	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	.00	3.06	0.
13 JUN*	.00	3.06	0.
14 JUN	.00	3.06	0.
15 JUN	.00	3.06	0.
16 JUN	.00	3.06	0.
17 JUN*	.00	3.06	0.
18 JUN	.00	3.06	0.
19 JUN	.00	3.06	0.
20 JUN*	.00	3.01	0.
21 JUN	.00	3.06	0.
22 JUN	.00	3.06	0.
23 JUN	.00	3.06	0.
24 JUN*	.00	3.06	0.
25 JUN	.00	3.06	0.
26 JUN	.00	3.06	0.
27 JUN	.00	3.06	0.
28 JUN	.00	2.59	0.
29 JUN	.00	2.28	0.
30 JUN	.00	3.01	0.
1 JUL*	.00	3.06	0.
2 JUL	.00	3.06	0.
3 JUL	.00	3.06	0.
4 JUL	.00	3.06	0.
5 JUL	.00	3.06	0.
6 JUL	.00	3.06	0.
7 JUL	.00	3.01	0.
8 JUL*	.00	2.96	0.
9 JUL	.00	3.49	0.
10 JUL	.00	3.49	0.
11 JUL	.00	3.49	0.
12 JUL	.00	3.49	0.
13 JUL	.00	3.49	0.
14 JUL	.00	3.49	0.
15 JUL*	.00	3.49	0.
16 JUL	.00	3.49	0.
17 JUL	.00	3.49	0.
18 JUL	.00	3.49	0.
19 JUL	.00	3.49	0.
20 JUL	.00	3.49	0.
21 JUL	.00	3.35	0.
22 JUL*	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	3.06	0.
24 JUL	.00	3.06	0.
25 JUL	.00	3.06	0.
26 JUL	.00	3.06	0.
27 JUL	.00	3.06	0.
28 JUL	.00	3.06	0.
29 JUL*	.00	3.06	0.
30 JUL	.00	3.06	0.
31 JUL	.00	3.06	0.
1 AUG	.00	2.38	0.
2 AUG	.00	2.32	0.
3 AUG	.00	3.06	0.
4 AUG	.00	3.06	0.
5 AUG*	.00	3.06	0.
6 AUG	.00	3.06	0.
7 AUG	.00	3.06	0.
8 AUG	.00	3.06	0.
9 AUG	.00	3.06	0.
10 AUG	.00	3.06	0.
11 AUG	.00	3.06	0.
12 AUG*	.00	3.06	0.
13 AUG	.00	3.06	0.
14 AUG	.00	3.06	0.
15 AUG	.00	3.06	0.
16 AUG	.00	3.06	0.
17 AUG	.00	3.06	0.
18 AUG	.00	3.16	0.
19 AUG*	.00	3.49	0.
20 AUG	.00	3.49	0.
21 AUG	.00	3.49	0.
22 AUG	.00	3.49	0.
23 AUG	.00	3.49	0.
24 AUG	.00	3.49	0.
25 AUG	.00	3.48	0.
26 AUG*	.00	3.30	0.
27 AUG	.00	3.49	0.
28 AUG	.00	3.23	0.
29 AUG	.00	3.06	0.
30 AUG	.00	3.06	0.
31 AUG	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	2.28	0.
2 JAN	.00	2.28	0.
3 JAN	.00	2.28	0.
4 JAN	.00	2.28	0.
5 JAN	.00	2.28	0.
6 JAN	.00	2.28	0.
7 JAN	.00	2.28	0.
8 JAN	.00	2.28	0.
9 JAN	.00	2.28	0.
10 JAN	.00	2.28	0.
11 JAN	.00	2.28	0.
12 JAN	.00	2.28	0.
13 JAN	.00	2.28	0.
14 JAN	.00	2.28	0.
15 JAN	.00	2.28	0.
16 JAN	.00	2.28	0.
17 JAN	.00	2.28	0.
18 JAN	.00	2.28	0.
19 JAN	.00	2.28	0.
20 JAN	.00	2.28	0.
21 JAN	.00	2.28	0.
22 JAN	.00	2.28	0.
23 JAN	.00	2.28	0.
24 JAN	.00	2.28	0.
25 JAN	.00	2.28	0.
26 JAN	.00	2.28	0.
27 JAN	.00	2.28	0.
28 JAN	.00	2.28	0.
29 JAN	.00	2.28	0.
30 JAN	.00	2.28	0.
31 JAN	.00	2.28	0.
1 FEB	.00	2.28	0.
2 FEB	.00	2.28	0.
3 FEB	.00	2.28	0.
4 FEB	.00	2.28	0.
5 FEB	.00	2.28	0.
6 FEB	.00	2.28	0.
7 FEB	.00	2.28	0.
8 FEB	.00	2.28	0.
9 FEB	.00	2.28	0.
10 FEB	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	2.28	0.
12 FEB	.00	2.28	0.
13 FEB	.00	2.28	0.
14 FEB	.00	2.28	0.
15 FEB	.00	2.29	0.
16 FEB	.00	2.28	0.
17 FEB	.00	2.28	0.
18 FEB	.00	2.28	0.
19 FEB	.00	2.28	0.
20 FEB	.00	2.28	0.
21 FEB	.00	2.28	0.
22 FEB	.00	2.28	0.
23 FEB	.00	2.28	0.
24 FEB	.00	2.28	0.
25 FEB	.00	2.59	0.
26 FEB	.00	3.06	0.
27 FEB	.00	3.06	0.
28 FEB	.00	3.06	0.
29 FEB	.00	2.75	0.
1 MAR	.00	2.28	0.
2 MAR	.00	2.28	0.
3 MAR	.00	2.28	0.
4 MAR	.00	2.28	0.
5 MAR	.00	2.28	0.
6 MAR	.00	2.28	0.
7 MAR	.00	2.28	0.
8 MAR	.00	2.28	0.
9 MAR	.00	2.28	0.
10 MAR	.00	2.28	0.
11 MAR	.00	2.28	0.
12 MAR	.00	2.28	0.
13 MAR	.00	2.28	0.
14 MAR	.00	2.28	0.
15 MAR	.00	2.28	0.
16 MAR	.00	2.28	0.
17 MAR	.00	2.28	0.
18 MAR	.00	2.28	0.
19 MAR	.00	2.28	0.
20 MAR	.00	2.28	0.
21 MAR	.00	2.28	0.
22 MAR	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	2.28	0.
24 MAR	.00	2.28	0.
25 MAR	.00	2.28	0.
26 MAR	.00	2.28	0.
27 MAR	.00	2.28	0.
28 MAR	.00	2.28	0.
29 MAR	.00	2.28	0.
30 MAR	.00	2.28	0.
31 MAR	.00	2.28	0.
1 APR	.00	2.28	0.
2 APR	.00	2.28	0.
3 APR	.00	2.28	0.
4 APR	.00	2.28	0.
5 APR	.00	1.99	0.
6 APR	.00	1.19	0.
7 APR	.00	2.26	0.
8 APR	.00	2.28	0.
9 APR	.00	2.28	0.
10 APR	.00	2.41	0.
11 APR	.00	3.06	0.
12 APR	.00	3.06	0.
13 APR	.00	3.06	0.
14 APR	.00	3.06	0.
15 APR	.00	3.06	0.
16 APR	.00	3.06	0.
17 APR	.00	3.06	0.
18 APR	.00	2.07	0.
19 APR	.00	2.05	0.
20 APR	.00	2.05	0.
21 APR	.00	2.08	0.
22 APR	.00	3.06	0.
23 APR	.00	3.06	0.
24 APR*	.00	3.06	0.
25 APR	.00	3.06	0.
26 APR	.00	3.06	0.
27 APR	.00	3.06	0.
28 APR	.00	3.06	0.
29 APR*	.00	3.06	0.
30 APR	.00	3.06	0.
1 MAY	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	3.06	0.
3 MAY	.00	3.06	0.
4 MAY	.00	2.29	0.
5 MAY	.00	2.78	0.
6 MAY*	.00	3.06	0.
7 MAY	.00	3.06	0.
8 MAY	.00	3.06	0.
9 MAY	.00	3.06	0.
10 MAY	.00	2.58	0.
11 MAY	.00	2.05	0.
12 MAY	.00	2.05	0.
13 MAY*	.00	2.05	0.
14 MAY	.00	2.05	0.
15 MAY	.00	2.05	0.
16 MAY	.00	2.05	0.
17 MAY	.00	1.90	0.
18 MAY	.00	2.05	0.
19 MAY	.00	2.05	0.
20 MAY*	.00	2.05	0.
21 MAY	.00	2.05	0.
22 MAY	.00	2.04	0.
23 MAY	.00	2.05	0.
24 MAY	.00	2.05	0.
25 MAY	.00	2.05	0.
26 MAY	.00	2.05	0.
27 MAY*	.00	2.05	0.
28 MAY	.00	2.05	0.
29 MAY	.00	2.05	0.
30 MAY	.00	2.05	0.
31 MAY	.00	2.05	0.
1 JUN	.00	2.05	0.
2 JUN	.00	2.05	0.
3 JUN*	.00	2.05	0.
4 JUN	.00	2.38	0.
5 JUN	.00	3.05	0.
6 JUN*	.00	3.18	0.
7 JUN	.00	3.06	0.
8 JUN	.00	3.06	0.
9 JUN	.00	3.04	0.
10 JUN*	.00	3.06	0.
11 JUN	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	.00	3.06	0.
13 JUN*	.00	3.06	0.
14 JUN	.00	3.06	0.
15 JUN	.00	3.06	0.
16 JUN	.00	3.06	0.
17 JUN*	.00	3.06	0.
18 JUN	.00	3.06	0.
19 JUN	.00	3.06	0.
20 JUN*	.00	3.01	0.
21 JUN	.00	3.06	0.
22 JUN	.00	3.06	0.
23 JUN	.00	3.06	0.
24 JUN*	.00	3.06	0.
25 JUN	.00	3.06	0.
26 JUN	.00	3.06	0.
27 JUN	.00	3.06	0.
28 JUN	.00	2.59	0.
29 JUN	.00	2.28	0.
30 JUN	.00	3.01	0.
1 JUL*	.00	3.06	0.
2 JUL	.00	3.06	0.
3 JUL	.00	3.06	0.
4 JUL	.00	3.06	0.
5 JUL	.00	3.06	0.
6 JUL	.00	3.06	0.
7 JUL	.00	3.01	0.
8 JUL*	.00	2.96	0.
9 JUL	.00	3.49	0.
10 JUL	.00	3.49	0.
11 JUL	.00	3.49	0.
12 JUL	.00	3.49	0.
13 JUL	.00	3.49	0.
14 JUL	.00	3.49	0.
15 JUL*	.00	3.49	0.
16 JUL	.00	3.49	0.
17 JUL	.00	3.49	0.
18 JUL	.00	3.49	0.
19 JUL	.00	3.49	0.
20 JUL	.00	3.49	0.
21 JUL	.00	3.35	0.
22 JUL*	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : MORONE SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	3.06	0.
24 JUL	.00	3.06	0.
25 JUL	.00	3.06	0.
26 JUL	.00	3.06	0.
27 JUL	.00	3.06	0.
28 JUL	.00	3.06	0.
29 JUL*	.00	3.06	0.
30 JUL	.00	3.06	0.
31 JUL	.00	3.06	0.
1 AUG	.00	2.38	0.
2 AUG	.00	2.32	0.
3 AUG	.00	3.06	0.
4 AUG	.00	3.06	0.
5 AUG*	.00	3.06	0.
6 AUG	.00	3.06	0.
7 AUG	.00	3.06	0.
8 AUG	.00	3.06	0.
9 AUG	.00	3.06	0.
10 AUG	.00	3.06	0.
11 AUG	.00	3.06	0.
12 AUG*	.00	3.06	0.
13 AUG	.00	3.06	0.
14 AUG	.00	3.06	0.
15 AUG	.00	3.06	0.
16 AUG	.00	3.06	0.
17 AUG	.00	3.06	0.
18 AUG	.00	3.16	0.
19 AUG*	.00	3.49	0.
20 AUG	.00	3.49	0.
21 AUG	.00	3.49	0.
22 AUG	.00	3.49	0.
23 AUG	.00	3.49	0.
24 AUG	.00	3.49	0.
25 AUG	.00	3.48	0.
26 AUG*	.00	3.30	0.
27 AUG	.00	3.49	0.
28 AUG	.00	3.23	0.
29 AUG	.00	3.06	0.
30 AUG	.00	3.06	0.
31 AUG	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	2.28	0.
2 JAN	.00	2.28	0.
3 JAN	.00	2.28	0.
4 JAN	.00	2.28	0.
5 JAN	.00	2.28	0.
6 JAN	.00	2.28	0.
7 JAN	.00	2.28	0.
8 JAN	.00	2.28	0.
9 JAN	.00	2.28	0.
10 JAN	.00	2.28	0.
11 JAN	.00	2.28	0.
12 JAN	.00	2.28	0.
13 JAN	.00	2.28	0.
14 JAN	.00	2.28	0.
15 JAN	.00	2.28	0.
16 JAN	.00	2.28	0.
17 JAN	.00	2.28	0.
18 JAN	.00	2.28	0.
19 JAN	.00	2.28	0.
20 JAN	.00	2.28	0.
21 JAN	.00	2.28	0.
22 JAN	.00	2.28	0.
23 JAN	.00	2.28	0.
24 JAN	.00	2.28	0.
25 JAN	.00	2.28	0.
26 JAN	.00	2.28	0.
27 JAN	.00	2.28	0.
28 JAN	.00	2.28	0.
29 JAN	.00	2.28	0.
30 JAN	.00	2.28	0.
31 JAN	.00	2.28	0.
1 FEB	.00	2.28	0.
2 FEB	.00	2.28	0.
3 FEB	.00	2.28	0.
4 FEB	.00	2.28	0.
5 FEB	.00	2.28	0.
6 FEB	.00	2.28	0.
7 FEB	.00	2.28	0.
8 FEB	.00	2.28	0.
9 FEB	.00	2.28	0.
10 FEB	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	2.28	0.
12 FEB	.00	2.28	0.
13 FEB	.00	2.28	0.
14 FEB	.00	2.28	0.
15 FEB	.00	2.29	0.
16 FEB	.00	2.28	0.
17 FEB	.00	2.28	0.
18 FEB	.00	2.28	0.
19 FEB	.00	2.28	0.
20 FEB	.00	2.28	0.
21 FEB	.00	2.28	0.
22 FEB	.00	2.28	0.
23 FEB	.00	2.28	0.
24 FEB	.00	2.28	0.
25 FEB	.00	2.59	0.
26 FEB	.00	3.06	0.
27 FEB	.00	3.06	0.
28 FEB	.00	3.06	0.
29 FEB	.00	2.75	0.
1 MAR	.00	2.28	0.
2 MAR	.00	2.28	0.
3 MAR	.00	2.28	0.
4 MAR	.00	2.28	0.
5 MAR	.00	2.28	0.
6 MAR	.00	2.28	0.
7 MAR	.00	2.28	0.
8 MAR	.00	2.28	0.
9 MAR	.00	2.28	0.
10 MAR	.00	2.28	0.
11 MAR	.00	2.28	0.
12 MAR	.00	2.28	0.
13 MAR	.00	2.28	0.
14 MAR	.00	2.28	0.
15 MAR	.00	2.28	0.
16 MAR	.00	2.28	0.
17 MAR	.00	2.28	0.
18 MAR	.00	2.28	0.
19 MAR	.00	2.28	0.
20 MAR	.00	2.28	0.
21 MAR	.00	2.28	0.
22 MAR	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	2.28	0.
24 MAR	.00	2.28	0.
25 MAR	.00	2.28	0.
26 MAR	.00	2.28	0.
27 MAR	.00	2.28	0.
28 MAR	.00	2.28	0.
29 MAR	.00	2.28	0.
30 MAR	.00	2.28	0.
31 MAR	.00	2.28	0.
1 APR	.00	2.28	0.
2 APR	.00	2.28	0.
3 APR	.00	2.28	0.
4 APR	.00	2.28	0.
5 APR	.00	1.99	0.
6 APR	.00	1.19	0.
7 APR	.00	2.26	0.
8 APR	.00	2.28	0.
9 APR	.00	2.28	0.
10 APR	.00	2.41	0.
11 APR	.00	3.06	0.
12 APR	.00	3.06	0.
13 APR	.00	3.06	0.
14 APR	.00	3.06	0.
15 APR	.00	3.06	0.
16 APR	.00	3.06	0.
17 APR	.00	3.06	0.
18 APR	.00	2.07	0.
19 APR	.00	2.05	0.
20 APR	.00	2.05	0.
21 APR	.00	2.08	0.
22 APR	.00	3.06	0.
23 APR	.00	3.06	0.
24 APR*	.00	3.06	0.
25 APR	.00	3.06	0.
26 APR	.00	3.06	0.
27 APR	.00	3.06	0.
28 APR	.00	3.06	0.
29 APR*	.00	3.06	0.
30 APR	.00	3.06	0.
1 MAY	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	3.06	0.
3 MAY	.00	3.06	0.
4 MAY	.00	2.29	0.
5 MAY	.00	2.78	0.
6 MAY*	.00	3.06	0.
7 MAY	.00	3.06	0.
8 MAY	.00	3.06	0.
9 MAY	.00	3.06	0.
10 MAY	.00	2.58	0.
11 MAY	.00	2.05	0.
12 MAY	.00	2.05	0.
13 MAY*	.00	2.05	0.
14 MAY	.00	2.05	0.
15 MAY	.00	2.05	0.
16 MAY	.00	2.05	0.
17 MAY	.00	1.90	0.
18 MAY	.00	2.05	0.
19 MAY	.00	2.05	0.
20 MAY*	.00	2.05	0.
21 MAY	.00	2.05	0.
22 MAY	.00	2.04	0.
23 MAY	.00	2.05	0.
24 MAY	.00	2.05	0.
25 MAY	.00	2.05	0.
26 MAY	.00	2.05	0.
27 MAY*	.00	2.05	0.
28 MAY	.00	2.05	0.
29 MAY	.00	2.05	0.
30 MAY	.00	2.05	0.
31 MAY	.00	2.05	0.
1 JUN	.00	2.05	0.
2 JUN	.00	2.05	0.
3 JUN*	.00	2.05	0.
4 JUN	.00	2.38	0.
5 JUN	.00	3.05	0.
6 JUN*	.00	3.18	0.
7 JUN	.00	3.06	0.
8 JUN	.00	3.06	0.
9 JUN	.00	3.04	0.
10 JUN*	.00	3.06	0.
11 JUN	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./100CU.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	.00	3.06	0.
13 JUN*	.00	3.06	0.
14 JUN	.00	3.06	0.
15 JUN	.00	3.06	0.
16 JUN	.00	3.06	0.
17 JUN*	.00	3.06	0.
18 JUN	.00	3.06	0.
19 JUN	.00	3.06	0.
20 JUN*	.00	3.01	0.
21 JUN	.00	3.06	0.
22 JUN	.00	3.06	0.
23 JUN	.00	3.06	0.
24 JUN*	.00	3.06	0.
25 JUN	.00	3.06	0.
26 JUN	.00	3.06	0.
27 JUN	.00	3.06	0.
28 JUN	.00	2.59	0.
29 JUN	.00	2.28	0.
30 JUN	.00	3.01	0.
1 JUL*	.00	3.06	0.
2 JUL	.00	3.06	0.
3 JUL	.00	3.06	0.
4 JUL	.00	3.06	0.
5 JUL	.00	3.06	0.
6 JUL	.00	3.06	0.
7 JUL	.00	3.01	0.
8 JUL*	.00	2.96	0.
9 JUL	.00	3.49	0.
10 JUL	.00	3.49	0.
11 JUL	.00	3.49	0.
12 JUL	.00	3.49	0.
13 JUL	.00	3.49	0.
14 JUL	.00	3.49	0.
15 JUL*	.00	3.49	0.
16 JUL	.00	3.49	0.
17 JUL	.00	3.49	0.
18 JUL	.00	3.49	0.
19 JUL	.00	3.49	0.
20 JUL	.00	3.49	0.
21 JUL	.00	3.35	0.
22 JUL*	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL*D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	3.06	0.
24 JUL	.00	3.06	0.
25 JUL	.00	3.06	0.
26 JUL	.00	3.06	0.
27 JUL	.00	3.06	0.
28 JUL	.00	3.06	0.
29 JUL*	.00	3.06	0.
30 JUL	.00	3.06	0.
31 JUL	.00	3.06	0.
1 AUG	.00	2.38	0.
2 AUG	.00	2.32	0.
3 AUG	.00	3.06	0.
4 AUG	.00	3.06	0.
5 AUG*	.00	3.06	0.
6 AUG	.00	3.06	0.
7 AUG	.00	3.06	0.
8 AUG	.00	3.06	0.
9 AUG	.00	3.06	0.
10 AUG	.00	3.06	0.
11 AUG	.00	3.06	0.
12 AUG*	.00	3.06	0.
13 AUG	.00	3.06	0.
14 AUG	.00	3.06	0.
15 AUG	.00	3.06	0.
16 AUG	.00	3.06	0.
17 AUG	.00	3.06	0.
18 AUG	.00	3.16	0.
19 AUG*	.00	3.49	0.
20 AUG	.00	3.49	0.
21 AUG	.00	3.49	0.
22 AUG	.00	3.49	0.
23 AUG	.00	3.49	0.
24 AUG	.00	3.49	0.
25 AUG	.00	3.48	0.
26 AUG*	.00	3.30	0.
27 AUG	.00	3.49	0.
28 AUG	.00	3.23	0.
29 AUG	.00	3.06	0.
30 AUG	.00	3.06	0.
31 AUG	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	2.28	0.
2 JAN	.00	2.28	0.
3 JAN	.00	2.28	0.
4 JAN	.00	2.28	0.
5 JAN	.00	2.28	0.
6 JAN	.00	2.28	0.
7 JAN	.00	2.28	0.
8 JAN	.00	2.28	0.
9 JAN	.00	2.28	0.
10 JAN	.00	2.28	0.
11 JAN	.00	2.28	0.
12 JAN	.00	2.28	0.
13 JAN	.00	2.28	0.
14 JAN	.00	2.28	0.
15 JAN	.00	2.28	0.
16 JAN	.00	2.28	0.
17 JAN	.00	2.28	0.
18 JAN	.00	2.28	0.
19 JAN	.00	2.28	0.
20 JAN	.00	2.28	0.
21 JAN	.00	2.28	0.
22 JAN	.00	2.28	0.
23 JAN	.00	2.28	0.
24 JAN	.00	2.28	0.
25 JAN	.00	2.28	0.
26 JAN	.00	2.28	0.
27 JAN	.00	2.28	0.
28 JAN	.00	2.28	0.
29 JAN	.00	2.28	0.
30 JAN	.00	2.28	0.
31 JAN	.00	2.28	0.
1 FEB	.00	2.28	0.
2 FEB	.00	2.28	0.
3 FEB	.00	2.28	0.
4 FEB	.00	2.28	0.
5 FEB	.00	2.28	0.
6 FEB	.00	2.28	0.
7 FEB	.00	2.28	0.
8 FEB	.00	2.28	0.
9 FEB	.00	2.28	0.
10 FEB	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	2.28	0.
12 FEB	.00	2.28	0.
13 FEB	.00	2.28	0.
14 FEB	.00	2.28	0.
15 FEB	.00	2.29	0.
16 FEB	.00	2.28	0.
17 FEB	.00	2.28	0.
18 FEB	.00	2.28	0.
19 FEB	.00	2.28	0.
20 FEB	.00	2.28	0.
21 FEB	.00	2.28	0.
22 FEB	.00	2.28	0.
23 FEB	.00	2.28	0.
24 FEB	.00	2.28	0.
25 FEB	.00	2.59	0.
26 FEB	.00	3.06	0.
27 FEB	.00	3.06	0.
28 FEB	.00	3.06	0.
29 FEB	.00	2.75	0.
1 MAR	.00	2.28	0.
2 MAR	.00	2.28	0.
3 MAR	.00	2.28	0.
4 MAR	.00	2.28	0.
5 MAR	.00	2.28	0.
6 MAR	.00	2.28	0.
7 MAR	.00	2.28	0.
8 MAR	.00	2.28	0.
9 MAR	.00	2.28	0.
10 MAR	.00	2.28	0.
11 MAR	.00	2.28	0.
12 MAR	.00	2.28	0.
13 MAR	.00	2.28	0.
14 MAR	.00	2.28	0.
15 MAR	.00	2.28	0.
16 MAR	.00	2.28	0.
17 MAR	.00	2.28	0.
18 MAR	.00	2.28	0.
19 MAR	.00	2.28	0.
20 MAR	.00	2.28	0.
21 MAR	.00	2.28	0.
22 MAR	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	2.28	0.
24 MAR	.00	2.28	0.
25 MAR	.00	2.28	0.
26 MAR	.00	2.28	0.
27 MAR	.00	2.28	0.
28 MAR	.00	2.28	0.
29 MAR	.00	2.28	0.
30 MAR	.00	2.28	0.
31 MAR	.00	2.28	0.
1 APR	.00	2.28	0.
2 APR	.00	2.28	0.
3 APR	.00	2.28	0.
4 APR	.00	2.28	0.
5 APR	.00	1.99	0.
6 APR	.00	1.19	0.
7 APR	.00	2.26	0.
8 APR	.00	2.28	0.
9 APR	.00	2.28	0.
10 APR	.00	2.41	0.
11 APR	.00	3.06	0.
12 APR	.00	3.06	0.
13 APR	.00	3.06	0.
14 APR	.00	3.06	0.
15 APR	.00	3.06	0.
16 APR	.00	3.06	0.
17 APR	.00	3.06	0.
18 APR	.00	2.07	0.
19 APR	.00	2.05	0.
20 APR	.00	2.05	0.
21 APR	.00	2.08	0.
22 APR	.00	3.06	0.
23 APR	.00	3.06	0.
24 APR*	.00	3.06	0.
25 APR	.00	3.06	0.
26 APR	.00	3.06	0.
27 APR	.00	3.06	0.
28 APR	.00	3.06	0.
29 APR*	.00	3.06	0.
30 APR	.00	3.06	0.
1 MAY	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	3.06	0.
3 MAY	.00	3.06	0.
4 MAY	.00	2.29	0.
5 MAY	.00	2.78	0.
6 MAY*	.00	3.06	0.
7 MAY	.19	3.06	581.
8 MAY	.38	3.06	1163.
9 MAY	.57	3.06	1744.
10 MAY	.77	2.58	1987.
11 MAY	.96	2.05	1968.
12 MAY	1.15	2.05	2358.
13 MAY*	1.34	2.05	2747.
14 MAY	1.24	2.05	2542.
15 MAY	1.15	2.05	2358.
16 MAY	1.05	2.05	2153.
17 MAY	.95	1.90	1805.
18 MAY	.85	2.05	1743.
19 MAY	.76	2.05	1558.
20 MAY*	.66	2.05	1353.
21 MAY	3.14	2.05	6437.
22 MAY	5.61	2.04	11444.
23 MAY	8.09	2.05	16585.
24 MAY	10.57	2.05	21669.
25 MAY	13.05	2.05	26753.
26 MAY	15.52	2.05	31816.
27 MAY*	18.00	2.05	36900.
28 MAY	18.01	2.05	36921.
29 MAY	18.01	2.05	36921.
30 MAY	18.02	2.05	36941.
31 MAY	18.02	2.05	36941.
1 JUN	18.03	2.05	36962.
2 JUN	18.03	2.05	36962.
3 JUN*	18.04	2.05	36982.
4 JUN	15.47	2.38	36819.
5 JUN	12.89	3.05	39315.
6 JUN*	10.32	3.18	32818.
7 JUN	11.94	3.06	36536.
8 JUN	13.57	3.06	41524.
9 JUN	15.19	3.04	46178.
10 JUN*	16.81	3.06	51439.
11 JUN	12.48	3.06	38189.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	8.14	3.06	24908.
13 JUN*	3.81	3.06	11659.
14 JUN	2.86	3.06	8752.
15 JUN	1.91	3.06	5845.
16 JUN	.95	3.06	2907.
17 JUN*	.00	3.06	0.
18 JUN	.22	3.06	673.
19 JUN	.45	3.06	1377.
20 JUN*	.67	3.01	2017.
21 JUN	.50	3.06	1530.
22 JUN	.34	3.06	1040.
23 JUN	.17	3.06	520.
24 JUN*	.00	3.06	0.
25 JUN	.00	3.06	0.
26 JUN	.00	3.06	0.
27 JUN	.00	3.06	0.
28 JUN	.00	2.59	0.
29 JUN	.00	2.28	0.
30 JUN	.00	3.01	0.
1 JUL*	.00	3.06	0.
2 JUL	.00	3.06	0.
3 JUL	.00	3.06	0.
4 JUL	.00	3.06	0.
5 JUL	.00	3.06	0.
6 JUL	.00	3.06	0.
7 JUL	.00	3.01	0.
8 JUL*	.00	2.96	0.
9 JUL	.00	3.49	0.
10 JUL	.00	3.49	0.
11 JUL	.00	3.49	0.
12 JUL	.00	3.49	0.
13 JUL	.00	3.49	0.
14 JUL	.00	3.49	0.
15 JUL*	.00	3.49	0.
16 JUL	.00	3.49	0.
17 JUL	.00	3.49	0.
18 JUL	.00	3.49	0.
19 JUL	.00	3.49	0.
20 JUL	.00	3.49	0.
21 JUL	.00	3.35	0.
22 JUL*	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	3.06	0.
24 JUL	.00	3.06	0.
25 JUL	.00	3.06	0.
26 JUL	.00	3.06	0.
27 JUL	.00	3.06	0.
28 JUL	.00	3.06	0.
29 JUL*	.00	3.06	0.
30 JUL	.00	3.06	0.
31 JUL	.00	3.06	0.
1 AUG	.00	2.38	0.
2 AUG	.00	2.32	0.
3 AUG	.00	3.06	0.
4 AUG	.00	3.06	0.
5 AUG*	.00	3.06	0.
6 AUG	.00	3.06	0.
7 AUG	.00	3.06	0.
8 AUG	.00	3.06	0.
9 AUG	.00	3.06	0.
10 AUG	.00	3.06	0.
11 AUG	.00	3.06	0.
12 AUG*	.00	3.06	0.
13 AUG	.00	3.06	0.
14 AUG	.00	3.06	0.
15 AUG	.00	3.06	0.
16 AUG	.00	3.06	0.
17 AUG	.00	3.06	0.
18 AUG	.00	3.16	0.
19 AUG*	.00	3.49	0.
20 AUG	.00	3.49	0.
21 AUG	.00	3.49	0.
22 AUG	.00	3.49	0.
23 AUG	.00	3.49	0.
24 AUG	.00	3.49	0.
25 AUG	.00	3.48	0.
26 AUG*	.00	3.30	0.
27 AUG	.00	3.49	0.
28 AUG	.00	3.23	0.
29 AUG	.00	3.06	0.
30 AUG	.00	3.06	0.
31 AUG	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL*D)
LIFE STAGE : PY-S.C
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	2.28	0.
2 JAN	.00	2.28	0.
3 JAN	.00	2.28	0.
4 JAN	.00	2.28	0.
5 JAN	.00	2.28	0.
6 JAN	.00	2.28	0.
7 JAN	.00	2.28	0.
8 JAN	.00	2.28	0.
9 JAN	.00	2.28	0.
10 JAN	.00	2.28	0.
11 JAN	.00	2.28	0.
12 JAN	.00	2.28	0.
13 JAN	.00	2.28	0.
14 JAN	.00	2.28	0.
15 JAN	.00	2.28	0.
16 JAN	.00	2.28	0.
17 JAN	.00	2.28	0.
18 JAN	.00	2.28	0.
19 JAN	.00	2.28	0.
20 JAN	.00	2.28	0.
21 JAN	.00	2.28	0.
22 JAN	.00	2.28	0.
23 JAN	.00	2.28	0.
24 JAN	.00	2.28	0.
25 JAN	.00	2.28	0.
26 JAN	.00	2.28	0.
27 JAN	.00	2.28	0.
28 JAN	.00	2.28	0.
29 JAN	.00	2.28	0.
30 JAN	.00	2.28	0.
31 JAN	.00	2.28	0.
1 FEB	.00	2.28	0.
2 FEB	.00	2.28	0.
3 FEB	.00	2.28	0.
4 FEB	.00	2.28	0.
5 FEB	.00	2.28	0.
6 FEB	.00	2.28	0.
7 FEB	.00	2.28	0.
8 FEB	.00	2.28	0.
9 FEB	.00	2.28	0.
10 FEB	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	2.28	0.
12 FEB	.00	2.28	0.
13 FEB	.00	2.28	0.
14 FEB	.00	2.28	0.
15 FEB	.00	2.29	0.
16 FEB	.00	2.28	0.
17 FEB	.00	2.28	0.
18 FEB	.00	2.28	0.
19 FEB	.00	2.28	0.
20 FEB	.00	2.28	0.
21 FEB	.00	2.28	0.
22 FEB	.00	2.28	0.
23 FEB	.00	2.28	0.
24 FEB	.00	2.28	0.
25 FEB	.00	2.59	0.
26 FEB	.00	3.06	0.
27 FEB	.00	3.06	0.
28 FEB	.00	3.06	0.
29 FEB	.00	2.75	0.
1 MAR	.00	2.28	0.
2 MAR	.00	2.28	0.
3 MAR	.00	2.28	0.
4 MAR	.00	2.28	0.
5 MAR	.00	2.28	0.
6 MAR	.00	2.28	0.
7 MAR	.00	2.28	0.
8 MAR	.00	2.28	0.
9 MAR	.00	2.28	0.
10 MAR	.00	2.28	0.
11 MAR	.00	2.28	0.
12 MAR	.00	2.28	0.
13 MAR	.00	2.28	0.
14 MAR	.00	2.28	0.
15 MAR	.00	2.28	0.
16 MAR	.00	2.28	0.
17 MAR	.00	2.28	0.
18 MAR	.00	2.28	0.
19 MAR	.00	2.28	0.
20 MAR	.00	2.28	0.
21 MAR	.00	2.28	0.
22 MAR	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	2.28	0.
24 MAR	.00	2.28	0.
25 MAR	.00	2.28	0.
26 MAR	.00	2.28	0.
27 MAR	.00	2.28	0.
28 MAR	.00	2.28	0.
29 MAR	.00	2.28	0.
30 MAR	.00	2.28	0.
31 MAR	.00	2.28	0.
1 APR	.00	2.28	0.
2 APR	.00	2.28	0.
3 APR	.00	2.28	0.
4 APR	.00	2.28	0.
5 APR	.00	1.99	0.
6 APR	.00	1.19	0.
7 APR	.00	2.26	0.
8 APR	.00	2.28	0.
9 APR	.00	2.28	0.
10 APR	.00	2.41	0.
11 APR	.00	3.06	0.
12 APR	.00	3.06	0.
13 APR	.00	3.06	0.
14 APR	.00	3.06	0.
15 APR	.00	3.06	0.
16 APR	.00	3.06	0.
17 APR	.00	3.06	0.
18 APR	.00	2.07	0.
19 APR	.00	2.05	0.
20 APR	.00	2.05	0.
21 APR	.00	2.08	0.
22 APR	.00	3.06	0.
23 APR	.00	3.06	0.
24 APR*	.00	3.06	0.
25 APR	.00	3.06	0.
26 APR	.00	3.06	0.
27 APR	.00	3.06	0.
28 APR	.00	3.06	0.
29 APR*	.00	3.06	0.
30 APR	.00	3.06	0.
1 MAY	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	3.06	0.
3 MAY	.00	3.06	0.
4 MAY	.00	2.29	0.
5 MAY	.00	2.78	0.
6 MAY*	.00	3.06	0.
7 MAY	.00	3.06	0.
8 MAY	.00	3.06	0.
9 MAY	.00	3.06	0.
10 MAY	.00	2.58	0.
11 MAY	.00	2.05	0.
12 MAY	.00	2.05	0.
13 MAY*	.00	2.05	0.
14 MAY	.28	2.05	574.
15 MAY	.56	2.05	1148.
16 MAY	.84	2.05	1722.
17 MAY	1.11	1.90	2109.
18 MAY	1.39	2.05	2850.
19 MAY	1.67	2.05	3424.
20 MAY*	1.95	2.05	3998.
21 MAY	10.34	2.05	21197.
22 MAY	18.72	2.04	38189.
23 MAY	27.11	2.05	55576.
24 MAY	35.50	2.05	72775.
25 MAY	43.89	2.05	89975.
26 MAY	52.27	2.05	107154.
27 MAY*	60.66	2.05	124353.
28 MAY	129.46	2.05	265393.
29 MAY	198.25	2.05	406413.
30 MAY	267.05	2.05	547453.
31 MAY	335.85	2.05	688493.
1 JUN	404.65	2.05	829533.
2 JUN	473.44	2.05	970552.
3 JUN*	542.24	2.05	1111592.
4 JUN	474.10	2.38	1128358.
5 JUN	405.96	3.05	1238178.
6 JUN*	337.82	3.18	1074268.
7 JUN	282.17	3.06	863440.
8 JUN	226.53	3.06	693182.
9 JUN	170.88	3.04	519475.
10 JUN*	115.25	3.06	352604.
11 JUN	96.36	3.06	294862.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MGH)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	77.48	3.06	237089.
13 JUN*	58.61	3.06	179347.
14 JUN	46.82	3.06	143269.
15 JUN	35.03	3.06	107192.
16 JUN	23.23	3.06	71084.
17 JUN*	11.44	3.06	35006.
18 JUN	19.42	3.06	59425.
19 JUN	27.41	3.06	83875.
20 JUN*	35.39	3.01	106524.
21 JUN	32.85	3.06	100521.
22 JUN	30.31	3.06	92749.
23 JUN	27.76	3.06	84946.
24 JUN*	25.22	3.06	77173.
25 JUN	21.90	3.06	67014.
26 JUN	18.59	3.06	56885.
27 JUN	15.27	3.06	46726.
28 JUN	11.95	2.59	30951.
29 JUN	8.63	2.28	19676.
30 JUN	5.32	3.01	16013.
1 JUL*	2.00	3.06	6120.
2 JUL	1.81	3.06	5539.
3 JUL	1.62	3.06	4957.
4 JUL	1.43	3.06	4376.
5 JUL	1.24	3.06	3794.
6 JUL	1.05	3.06	3213.
7 JUL	.86	3.01	2589.
8 JUL*	.67	2.96	1983.
9 JUL	.66	3.49	2303.
10 JUL	.66	3.49	2303.
11 JUL	.65	3.49	2269.
12 JUL	.65	3.49	2269.
13 JUL	.64	3.49	2234.
14 JUL	.64	3.49	2234.
15 JUL*	.63	3.49	2199.
16 JUL	.63	3.49	2199.
17 JUL	.63	3.49	2199.
18 JUL	.63	3.49	2199.
19 JUL	.64	3.49	2234.
20 JUL	.64	3.49	2234.
21 JUL	.64	3.35	2144.
22 JUL*	.64	3.06	1958.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.55	3.06	1683.
24 JUL	.46	3.06	1408.
25 JUL	.37	3.06	1132.
26 JUL	.27	3.06	826.
27 JUL	.18	3.06	551.
28 JUL	.09	3.06	275.
29 JUL*	.00	3.06	0.
30 JUL	.00	3.06	0.
31 JUL	.00	3.06	0.
1 AUG	.00	2.38	0.
2 AUG	.00	2.32	0.
3 AUG	.00	3.06	0.
4 AUG	.00	3.06	0.
5 AUG*	.00	3.06	0.
6 AUG	.00	3.06	0.
7 AUG	.00	3.06	0.
8 AUG	.00	3.06	0.
9 AUG	.00	3.06	0.
10 AUG	.00	3.06	0.
11 AUG	.00	3.06	0.
12 AUG*	.00	3.06	0.
13 AUG	.00	3.06	0.
14 AUG	.00	3.06	0.
15 AUG	.00	3.06	0.
16 AUG	.00	3.06	0.
17 AUG	.00	3.06	0.
18 AUG	.00	3.16	0.
19 AUG*	.00	3.49	0.
20 AUG	.00	3.49	0.
21 AUG	.00	3.49	0.
22 AUG	.00	3.49	0.
23 AUG	.00	3.49	0.
24 AUG	.00	3.49	0.
25 AUG	.00	3.48	0.
26 AUG*	.00	3.30	0.
27 AUG	.00	3.49	0.
28 AUG	.00	3.23	0.
29 AUG	.00	3.06	0.
30 AUG	.00	3.06	0.
31 AUG	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	2.28	0.
2 JAN	.00	2.28	0.
3 JAN	.00	2.28	0.
4 JAN	.00	2.28	0.
5 JAN	.00	2.28	0.
6 JAN	.00	2.28	0.
7 JAN	.00	2.28	0.
8 JAN	.00	2.28	0.
9 JAN	.00	2.28	0.
10 JAN	.00	2.28	0.
11 JAN	.00	2.28	0.
12 JAN	.00	2.28	0.
13 JAN	.00	2.28	0.
14 JAN	.00	2.28	0.
15 JAN	.00	2.28	0.
16 JAN	.00	2.28	0.
17 JAN	.00	2.28	0.
18 JAN	.00	2.28	0.
19 JAN	.00	2.28	0.
20 JAN	.00	2.28	0.
21 JAN	.00	2.28	0.
22 JAN	.00	2.28	0.
23 JAN	.00	2.28	0.
24 JAN	.00	2.28	0.
25 JAN	.00	2.28	0.
26 JAN	.00	2.28	0.
27 JAN	.00	2.28	0.
28 JAN	.00	2.28	0.
29 JAN	.00	2.28	0.
30 JAN	.00	2.28	0.
31 JAN	.00	2.28	0.
1 FEB	.00	2.28	0.
2 FEB	.00	2.28	0.
3 FEB	.00	2.28	0.
4 FEB	.00	2.28	0.
5 FEB	.00	2.28	0.
6 FEB	.00	2.28	0.
7 FEB	.00	2.28	0.
8 FEB	.00	2.28	0.
9 FEB	.00	2.28	0.
10 FEB	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL*D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	2.28	0.
12 FEB	.00	2.28	0.
13 FEB	.00	2.28	0.
14 FEB	.00	2.28	0.
15 FEB	.00	2.29	0.
16 FEB	.00	2.28	0.
17 FEB	.00	2.28	0.
18 FEB	.00	2.28	0.
19 FEB	.00	2.28	0.
20 FEB	.00	2.28	0.
21 FEB	.00	2.28	0.
22 FEB	.00	2.28	0.
23 FEB	.00	2.28	0.
24 FEB	.00	2.28	0.
25 FEB	.00	2.59	0.
26 FEB	.00	3.06	0.
27 FEB	.00	3.06	0.
28 FEB	.00	3.06	0.
29 FEB	.00	2.75	0.
1 MAR	.00	2.28	0.
2 MAR	.00	2.28	0.
3 MAR	.00	2.28	0.
4 MAR	.00	2.28	0.
5 MAR	.00	2.28	0.
6 MAR	.00	2.28	0.
7 MAR	.00	2.28	0.
8 MAR	.00	2.28	0.
9 MAR	.00	2.28	0.
10 MAR	.00	2.28	0.
11 MAR	.00	2.28	0.
12 MAR	.00	2.28	0.
13 MAR	.00	2.28	0.
14 MAR	.00	2.28	0.
15 MAR	.00	2.28	0.
16 MAR	.00	2.28	0.
17 MAR	.00	2.28	0.
18 MAR	.00	2.28	0.
19 MAR	.00	2.28	0.
20 MAR	.00	2.28	0.
21 MAR	.00	2.28	0.
22 MAR	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	2.28	0.
24 MAR	.00	2.28	0.
25 MAR	.00	2.28	0.
26 MAR	.00	2.28	0.
27 MAR	.00	2.28	0.
28 MAR	.00	2.28	0.
29 MAR	.00	2.28	0.
30 MAR	.00	2.28	0.
31 MAR	.00	2.28	0.
1 APR	.00	2.28	0.
2 APR	.00	2.28	0.
3 APR	.00	2.28	0.
4 APR	.00	2.28	0.
5 APR	.00	1.99	0.
6 APR	.00	1.19	0.
7 APR	.00	2.26	0.
8 APR	.00	2.28	0.
9 APR	.00	2.28	0.
10 APR	.00	2.41	0.
11 APR	.00	3.06	0.
12 APR	.00	3.06	0.
13 APR	.00	3.06	0.
14 APR	.00	3.06	0.
15 APR	.00	3.06	0.
16 APR	.00	3.06	0.
17 APR	.00	3.06	0.
18 APR	.00	2.07	0.
19 APR	.00	2.05	0.
20 APR	.00	2.05	0.
21 APR	.00	2.08	0.
22 APR	.00	3.06	0.
23 APR	.00	3.06	0.
24 APR*	.00	3.06	0.
25 APR	.00	3.06	0.
26 APR	.00	3.06	0.
27 APR	.00	3.06	0.
28 APR	.00	3.06	0.
29 APR*	.00	3.06	0.
30 APR	.00	3.06	0.
1 MAY	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	3.06	0.
3 MAY	.00	3.06	0.
4 MAY	.00	2.29	0.
5 MAY	.00	2.78	0.
6 MAY*	.00	3.06	0.
7 MAY	.00	3.06	0.
8 MAY	.00	3.06	0.
9 MAY	.00	3.06	0.
10 MAY	.00	2.58	0.
11 MAY	.00	2.05	0.
12 MAY	.00	2.05	0.
13 MAY*	.00	2.05	0.
14 MAY	.00	2.05	0.
15 MAY	.00	2.05	0.
16 MAY	.00	2.05	0.
17 MAY	.00	1.90	0.
18 MAY	.00	2.05	0.
19 MAY	.00	2.05	0.
20 MAY*	.00	2.05	0.
21 MAY	.00	2.05	0.
22 MAY	.00	2.04	0.
23 MAY	.00	2.05	0.
24 MAY	.00	2.05	0.
25 MAY	.00	2.05	0.
26 MAY	.00	2.05	0.
27 MAY*	.00	2.05	0.
28 MAY	.00	2.05	0.
29 MAY	.00	2.05	0.
30 MAY	.00	2.05	0.
31 MAY	.00	2.05	0.
1 JUN	.00	2.05	0.
2 JUN	.00	2.05	0.
3 JUN*	.00	2.05	0.
4 JUN	.00	2.38	0.
5 JUN	.00	3.05	0.
6 JUN*	.00	3.18	0.
7 JUN	.00	3.06	0.
8 JUN	.00	3.06	0.
9 JUN	.00	3.04	0.
10 JUN*	.00	3.06	0.
11 JUN	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	.00	3.06	0.
13 JUN*	.00	3.06	0.
14 JUN	.32	3.06	979.
15 JUN	.65	3.06	1989.
16 JUN	.97	3.06	2968.
17 JUN*	1.29	3.06	3947.
18 JUN	1.08	3.06	3305.
19 JUN	.87	3.06	2662.
20 JUN*	.66	3.01	1987.
21 JUN	.50	3.06	1530.
22 JUN	.33	3.06	1010.
23 JUN	.17	3.06	520.
24 JUN*	.00	3.06	0.
25 JUN	.19	3.06	581.
26 JUN	.38	3.06	1163.
27 JUN	.57	3.06	1744.
28 JUN	.75	2.59	1943.
29 JUN	.94	2.28	2143.
30 JUN	1.13	3.01	3401.
1 JUL*	1.32	3.06	4039.
2 JUL	1.13	3.06	3458.
3 JUL	.94	3.06	2876.
4 JUL	.75	3.06	2295.
5 JUL	.57	3.06	1744.
6 JUL	.38	3.06	1163.
7 JUL	.19	3.01	572.
8 JUL*	.00	2.96	0.
9 JUL	.18	3.49	628.
10 JUL	.36	3.49	1256.
11 JUL	.54	3.49	1885.
12 JUL	.72	3.49	2513.
13 JUL	.90	3.49	3141.
14 JUL	1.08	3.49	3769.
15 JUL*	1.26	3.49	4397.
16 JUL	1.18	3.49	4118.
17 JUL	1.10	3.49	3839.
18 JUL	1.02	3.49	3560.
19 JUL	.94	3.49	3281.
20 JUL	.86	3.49	3001.
21 JUL	.78	3.35	2613.
22 JUL*	.70	3.06	2142.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : STRIPED BASS (MORONE INCL*D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.60	3.06	1836.
24 JUL	.50	3.06	1530.
25 JUL	.40	3.06	1224.
26 JUL	.30	3.06	918.
27 JUL	.20	3.06	612.
28 JUL	.10	3.06	306.
29 JUL*	.00	3.06	0.
30 JUL	.09	3.06	275.
31 JUL	.19	3.06	581.
1 AUG	.28	2.38	666.
2 AUG	.37	2.32	858.
3 AUG	.46	3.06	1408.
4 AUG	.56	3.06	1714.
5 AUG*	.65	3.06	1989.
6 AUG	.56	3.06	1714.
7 AUG	.46	3.06	1408.
8 AUG	.37	3.06	1132.
9 AUG	.28	3.06	857.
10 AUG	.19	3.06	581.
11 AUG	.09	3.06	275.
12 AUG*	.00	3.06	0.
13 AUG	.00	3.06	0.
14 AUG	.00	3.06	0.
15 AUG	.00	3.06	0.
16 AUG	.00	3.06	0.
17 AUG	.00	3.06	0.
18 AUG	.00	3.16	0.
19 AUG*	.00	3.49	0.
20 AUG	.00	3.49	0.
21 AUG	.00	3.49	0.
22 AUG	.00	3.49	0.
23 AUG	.00	3.49	0.
24 AUG	.00	3.49	0.
25 AUG	.00	3.48	0.
26 AUG*	.00	3.30	0.
27 AUG	.00	3.49	0.
28 AUG	.00	3.23	0.
29 AUG	.00	3.06	0.
30 AUG	.00	3.06	0.
31 AUG	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	2.28	0.
2 JAN	.00	2.28	0.
3 JAN	.00	2.28	0.
4 JAN	.00	2.28	0.
5 JAN	.00	2.28	0.
6 JAN	.00	2.28	0.
7 JAN	.00	2.28	0.
8 JAN	.00	2.28	0.
9 JAN	.00	2.28	0.
10 JAN	.00	2.28	0.
11 JAN	.00	2.28	0.
12 JAN	.00	2.28	0.
13 JAN	.00	2.28	0.
14 JAN	.00	2.28	0.
15 JAN	.00	2.28	0.
16 JAN	.00	2.28	0.
17 JAN	.00	2.28	0.
18 JAN	.00	2.28	0.
19 JAN	.00	2.28	0.
20 JAN	.00	2.28	0.
21 JAN	.00	2.28	0.
22 JAN	.00	2.28	0.
23 JAN	.00	2.28	0.
24 JAN	.00	2.28	0.
25 JAN	.00	2.28	0.
26 JAN	.00	2.28	0.
27 JAN	.00	2.28	0.
28 JAN	.00	2.28	0.
29 JAN	.00	2.28	0.
30 JAN	.00	2.28	0.
31 JAN	.00	2.28	0.
1 FEB	.00	2.28	0.
2 FEB	.00	2.28	0.
3 FEB	.00	2.28	0.
4 FEB	.00	2.28	0.
5 FEB	.00	2.28	0.
6 FEB	.00	2.28	0.
7 FEB	.00	2.28	0.
8 FEB	.00	2.28	0.
9 FEB	.00	2.28	0.
10 FEB	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	2.28	0.
12 FEB	.00	2.28	0.
13 FEB	.00	2.28	0.
14 FEB	.00	2.28	0.
15 FEB	.00	2.29	0.
16 FEB	.00	2.28	0.
17 FEB	.00	2.28	0.
18 FEB	.00	2.28	0.
19 FEB	.00	2.28	0.
20 FEB	.00	2.28	0.
21 FEB	.00	2.28	0.
22 FEB	.00	2.28	0.
23 FEB	.00	2.28	0.
24 FEB	.00	2.28	0.
25 FEB	.00	2.59	0.
26 FEB	.00	3.06	0.
27 FEB	.00	3.06	0.
28 FEB	.00	3.06	0.
29 FEB	.00	2.75	0.
1 MAR	.00	2.28	0.
2 MAR	.00	2.28	0.
3 MAR	.00	2.28	0.
4 MAR	.00	2.28	0.
5 MAR	.00	2.28	0.
6 MAR	.00	2.28	0.
7 MAR	.00	2.28	0.
8 MAR	.00	2.28	0.
9 MAR	.00	2.28	0.
10 MAR	.00	2.28	0.
11 MAR	.00	2.28	0.
12 MAR	.00	2.28	0.
13 MAR	.00	2.28	0.
14 MAR	.00	2.28	0.
15 MAR	.00	2.28	0.
16 MAR	.00	2.28	0.
17 MAR	.00	2.28	0.
18 MAR	.00	2.28	0.
19 MAR	.00	2.28	0.
20 MAR	.00	2.28	0.
21 MAR	.00	2.28	0.
22 MAR	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./100C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	2.28	0.
24 MAR	.00	2.28	0.
25 MAR	.00	2.28	0.
26 MAR	.00	2.28	0.
27 MAR	.00	2.28	0.
28 MAR	.00	2.28	0.
29 MAR	.00	2.28	0.
30 MAR	.00	2.28	0.
31 MAR	.00	2.28	0.
1 APR	.00	2.28	0.
2 APR	.00	2.28	0.
3 APR	.00	2.28	0.
4 APR	.00	2.28	0.
5 APR	.00	1.99	0.
6 APR	.00	1.19	0.
7 APR	.00	2.26	0.
8 APR	.00	2.28	0.
9 APR	.00	2.28	0.
10 APR	.00	2.41	0.
11 APR	.00	3.06	0.
12 APR	.00	3.06	0.
13 APR	.00	3.06	0.
14 APR	.00	3.06	0.
15 APR	.00	3.06	0.
16 APR	.00	3.06	0.
17 APR	.00	3.06	0.
18 APR	.00	2.07	0.
19 APR	.00	2.05	0.
20 APR	.00	2.05	0.
21 APR	.00	2.08	0.
22 APR	.00	3.06	0.
23 APR	.00	3.06	0.
24 APR*	.00	3.06	0.
25 APR	1.23	3.06	3764.
26 APR	2.46	3.06	7528.
27 APR	3.68	3.06	11261.
28 APR	4.91	3.06	15025.
29 APR*	6.14	3.06	18788.
30 APR	8.29	3.06	25367.
1 MAY	10.44	3.06	31946.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	12.59	3.06	38525.
3 MAY	14.75	3.06	45135.
4 MAY	16.90	2.29	38701.
5 MAY	19.05	2.78	52959.
6 MAY*	21.20	3.06	64872.
7 MAY	23.21	3.06	71023.
8 MAY	25.22	3.06	77173.
9 MAY	27.23	3.06	83324.
10 MAY	29.24	2.58	75439.
11 MAY	31.25	2.05	64063.
12 MAY	33.26	2.05	68183.
13 MAY*	35.27	2.05	72304.
14 MAY	41.50	2.05	85075.
15 MAY	47.72	2.05	97826.
16 MAY	53.95	2.05	110598.
17 MAY	60.17	1.90	114323.
18 MAY	66.40	2.05	136120.
19 MAY	72.62	2.05	148871.
20 MAY*	78.85	2.05	161643.
21 MAY	84.74	2.05	173717.
22 MAY	90.63	2.04	184885.
23 MAY	96.52	2.05	197866.
24 MAY	102.41	2.05	209941.
25 MAY	108.30	2.05	222015.
26 MAY	114.19	2.05	234090.
27 MAY*	120.08	2.05	246164.
28 MAY	152.73	2.05	313097.
29 MAY	185.37	2.05	380009.
30 MAY	218.02	2.05	446941.
31 MAY	250.67	2.05	513874.
1 JUN	283.32	2.05	580806.
2 JUN	315.96	2.05	647718.
3 JUN*	348.61	2.05	714651.
4 JUN	307.20	2.38	731136.
5 JUN	265.80	3.05	810690.
6 JUN*	224.39	3.18	713560.
7 JUN	178.08	3.06	544925.
8 JUN	131.77	3.06	403216.
9 JUN	85.46	3.04	259798.
10 JUN*	39.15	3.06	119799.
11 JUN	40.24	3.06	123134.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL*D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	41.34	3.06	126500.
13 JUN*	42.43	3.06	129836.
14 JUN	39.16	3.06	119830.
15 JUN	35.88	3.06	109793.
16 JUN	32.60	3.06	99756.
17 JUN*	29.33	3.06	89750.
18 JUN	25.61	3.06	78367.
19 JUN	21.89	3.06	66983.
20 JUN*	18.17	3.01	54692.
21 JUN	16.37	3.06	50092.
22 JUN	14.57	3.06	44584.
23 JUN	12.77	3.06	39076.
24 JUN*	10.97	3.06	33568.
25 JUN	9.40	3.06	28764.
26 JUN	7.84	3.06	23990.
27 JUN	6.27	3.06	19186.
28 JUN	4.70	2.59	12173.
29 JUN	3.13	2.28	7136.
30 JUN	1.57	3.01	4726.
1 JUL*	.00	3.06	0.
2 JUL	.00	3.06	0.
3 JUL	.00	3.06	0.
4 JUL	.00	3.06	0.
5 JUL	.00	3.06	0.
6 JUL	.00	3.06	0.
7 JUL	.00	3.01	0.
8 JUL*	.00	2.96	0.
9 JUL	.00	3.49	0.
10 JUL	.00	3.49	0.
11 JUL	.00	3.49	0.
12 JUL	.00	3.49	0.
13 JUL	.00	3.49	0.
14 JUL	.00	3.49	0.
15 JUL*	.00	3.49	0.
16 JUL	.00	3.49	0.
17 JUL	.00	3.49	0.
18 JUL	.00	3.49	0.
19 JUL	.00	3.49	0.
20 JUL	.00	3.49	0.
21 JUL	.00	3.35	0.
22 JUL*	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL*D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	3.06	0.
24 JUL	.00	3.06	0.
25 JUL	.00	3.06	0.
26 JUL	.00	3.06	0.
27 JUL	.00	3.06	0.
28 JUL	.00	3.06	0.
29 JUL*	.00	3.06	0.
30 JUL	.00	3.06	0.
31 JUL	.00	3.06	0.
1 AUG	.00	2.38	0.
2 AUG	.00	2.32	0.
3 AUG	.00	3.06	0.
4 AUG	.00	3.06	0.
5 AUG*	.00	3.06	0.
6 AUG	.00	3.06	0.
7 AUG	.00	3.06	0.
8 AUG	.00	3.06	0.
9 AUG	.00	3.06	0.
10 AUG	.00	3.06	0.
11 AUG	.00	3.06	0.
12 AUG*	.00	3.06	0.
13 AUG	.00	3.06	0.
14 AUG	.00	3.06	0.
15 AUG	.00	3.06	0.
16 AUG	.00	3.06	0.
17 AUG	.00	3.06	0.
18 AUG	.00	3.16	0.
19 AUG*	.00	3.49	0.
20 AUG	.00	3.49	0.
21 AUG	.00	3.49	0.
22 AUG	.00	3.49	0.
23 AUG	.00	3.49	0.
24 AUG	.00	3.49	0.
25 AUG	.00	3.48	0.
26 AUG*	.00	3.30	0.
27 AUG	.00	3.49	0.
28 AUG	.00	3.23	0.
29 AUG	.00	3.06	0.
30 AUG	.00	3.06	0.
31 AUG	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	2.28	0.
2 JAN	.00	2.28	0.
3 JAN	.00	2.28	0.
4 JAN	.00	2.28	0.
5 JAN	.00	2.28	0.
6 JAN	.00	2.28	0.
7 JAN	.00	2.28	0.
8 JAN	.00	2.28	0.
9 JAN	.00	2.28	0.
10 JAN	.00	2.28	0.
11 JAN	.00	2.28	0.
12 JAN	.00	2.28	0.
13 JAN	.00	2.28	0.
14 JAN	.00	2.28	0.
15 JAN	.00	2.28	0.
16 JAN	.00	2.28	0.
17 JAN	.00	2.28	0.
18 JAN	.00	2.28	0.
19 JAN	.00	2.28	0.
20 JAN	.00	2.28	0.
21 JAN	.00	2.28	0.
22 JAN	.00	2.28	0.
23 JAN	.00	2.28	0.
24 JAN	.00	2.28	0.
25 JAN	.00	2.28	0.
26 JAN	.00	2.28	0.
27 JAN	.00	2.28	0.
28 JAN	.00	2.28	0.
29 JAN	.00	2.28	0.
30 JAN	.00	2.28	0.
31 JAN	.00	2.28	0.
1 FEB	.00	2.28	0.
2 FEB	.00	2.28	0.
3 FEB	.00	2.28	0.
4 FEB	.00	2.28	0.
5 FEB	.00	2.28	0.
6 FEB	.00	2.28	0.
7 FEB	.00	2.28	0.
8 FEB	.00	2.28	0.
9 FEB	.00	2.28	0.
10 FEB	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL*D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./100C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	2.28	0.
12 FEB	.00	2.28	0.
13 FEB	.00	2.28	0.
14 FEB	.00	2.28	0.
15 FEB	.00	2.29	0.
16 FEB	.00	2.28	0.
17 FEB	.00	2.28	0.
18 FEB	.00	2.28	0.
19 FEB	.00	2.28	0.
20 FEB	.00	2.28	0.
21 FEB	.00	2.28	0.
22 FEB	.00	2.28	0.
23 FEB	.00	2.28	0.
24 FEB	.00	2.28	0.
25 FEB	.00	2.59	0.
26 FEB	.00	3.06	0.
27 FEB	.00	3.06	0.
28 FEB	.00	3.06	0.
29 FEB	.00	2.75	0.
1 MAR	.00	2.28	0.
2 MAR	.00	2.28	0.
3 MAR	.00	2.28	0.
4 MAR	.00	2.28	0.
5 MAR	.00	2.28	0.
6 MAR	.00	2.28	0.
7 MAR	.00	2.28	0.
8 MAR	.00	2.28	0.
9 MAR	.00	2.28	0.
10 MAR	.00	2.28	0.
11 MAR	.00	2.28	0.
12 MAR	.00	2.28	0.
13 MAR	.00	2.28	0.
14 MAR	.00	2.28	0.
15 MAR	.00	2.28	0.
16 MAR	.00	2.28	0.
17 MAR	.00	2.28	0.
18 MAR	.00	2.28	0.
19 MAR	.00	2.28	0.
20 MAR	.00	2.28	0.
21 MAR	.00	2.28	0.
22 MAR	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./100CC.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	2.28	0.
24 MAR	.00	2.28	0.
25 MAR	.00	2.28	0.
26 MAR	.00	2.28	0.
27 MAR	.00	2.28	0.
28 MAR	.00	2.28	0.
29 MAR	.00	2.28	0.
30 MAR	.00	2.28	0.
31 MAR	.00	2.28	0.
1 APR	.00	2.28	0.
2 APR	.00	2.28	0.
3 APR	.00	2.28	0.
4 APR	.00	2.28	0.
5 APR	.00	1.99	0.
6 APR	.00	1.19	0.
7 APR	.00	2.26	0.
8 APR	.00	2.28	0.
9 APR	.00	2.28	0.
10 APR	.00	2.41	0.
11 APR	.00	3.06	0.
12 APR	.00	3.06	0.
13 APR	.00	3.06	0.
14 APR	.00	3.06	0.
15 APR	.00	3.06	0.
16 APR	.00	3.06	0.
17 APR	.00	3.06	0.
18 APR	.00	2.07	0.
19 APR	.00	2.05	0.
20 APR	.00	2.05	0.
21 APR	.00	2.08	0.
22 APR	.00	3.06	0.
23 APR	.00	3.06	0.
24 APR*	.00	3.06	0.
25 APR	.00	3.06	0.
26 APR	.00	3.06	0.
27 APR	.00	3.06	0.
28 APR	.00	3.06	0.
29 APR*	.00	3.06	0.
30 APR	.00	3.06	0.
1 MAY	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	3.06	0.
3 MAY	.00	3.06	0.
4 MAY	.00	2.29	0.
5 MAY	.00	2.78	0.
6 MAY*	.00	3.06	0.
7 MAY	.10	3.06	306.
8 MAY	.20	3.06	612.
9 MAY	.30	3.06	918.
10 MAY	.39	2.58	1006.
11 MAY	.49	2.05	1005.
12 MAY	.59	2.05	1210.
13 MAY*	.69	2.05	1415.
14 MAY	.97	2.05	1989.
15 MAY	1.26	2.05	2583.
16 MAY	1.54	2.05	3157.
17 MAY	1.82	1.90	3458.
18 MAY	2.10	2.05	4305.
19 MAY	2.39	2.05	4900.
20 MAY*	2.67	2.05	5474.
21 MAY	2.39	2.05	4900.
22 MAY	2.11	2.04	4304.
23 MAY	1.83	2.05	3751.
24 MAY	1.55	2.05	3178.
25 MAY	1.27	2.05	2604.
26 MAY	.99	2.05	2030.
27 MAY*	.71	2.05	1456.
28 MAY	.61	2.05	1251.
29 MAY	.51	2.05	1046.
30 MAY	.41	2.05	841.
31 MAY	.30	2.05	615.
1 JUN	.20	2.05	410.
2 JUN	.10	2.05	205.
3 JUN*	.00	2.05	0.
4 JUN	.27	2.38	643.
5 JUN	.53	3.05	1617.
6 JUN*	.80	3.18	2544.
7 JUN	.77	3.06	2356.
8 JUN	.73	3.06	2234.
9 JUN	.70	3.04	2128.
10 JUN*	.66	3.06	2020.
11 JUN	.44	3.06	1346.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./100C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	.22	3.06	673.
13 JUN*	.00	3.06	0.
14 JUN	.00	3.06	0.
15 JUN	.00	3.06	0.
16 JUN	.00	3.06	0.
17 JUN*	.00	3.06	0.
18 JUN	.00	3.06	0.
19 JUN	.00	3.06	0.
20 JUN*	.00	3.01	0.
21 JUN	.00	3.06	0.
22 JUN	.00	3.06	0.
23 JUN	.00	3.06	0.
24 JUN*	.00	3.06	0.
25 JUN	.00	3.06	0.
26 JUN	.00	3.06	0.
27 JUN	.00	3.06	0.
28 JUN	.00	2.59	0.
29 JUN	.00	2.28	0.
30 JUN	.00	3.01	0.
1 JUL*	.00	3.06	0.
2 JUL	.00	3.06	0.
3 JUL	.00	3.06	0.
4 JUL	.00	3.06	0.
5 JUL	.00	3.06	0.
6 JUL	.00	3.06	0.
7 JUL	.00	3.01	0.
8 JUL*	.00	2.96	0.
9 JUL	.00	3.49	0.
10 JUL	.00	3.49	0.
11 JUL	.00	3.49	0.
12 JUL	.00	3.49	0.
13 JUL	.00	3.49	0.
14 JUL	.00	3.49	0.
15 JUL*	.00	3.49	0.
16 JUL	.00	3.49	0.
17 JUL	.00	3.49	0.
18 JUL	.00	3.49	0.
19 JUL	.00	3.49	0.
20 JUL	.00	3.49	0.
21 JUL	.00	3.35	0.
22 JUL*	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	3.06	0.
24 JUL	.00	3.06	0.
25 JUL	.00	3.06	0.
26 JUL	.00	3.06	0.
27 JUL	.00	3.06	0.
28 JUL	.00	3.06	0.
29 JUL*	.00	3.06	0.
30 JUL	.00	3.06	0.
31 JUL	.00	3.06	0.
1 AUG	.00	2.38	0.
2 AUG	.00	2.32	0.
3 AUG	.00	3.06	0.
4 AUG	.00	3.06	0.
5 AUG*	.00	3.06	0.
6 AUG	.00	3.06	0.
7 AUG	.00	3.06	0.
8 AUG	.00	3.06	0.
9 AUG	.00	3.06	0.
10 AUG	.00	3.06	0.
11 AUG	.00	3.06	0.
12 AUG*	.00	3.06	0.
13 AUG	.00	3.06	0.
14 AUG	.00	3.06	0.
15 AUG	.00	3.06	0.
16 AUG	.00	3.06	0.
17 AUG	.00	3.06	0.
18 AUG	.00	3.16	0.
19 AUG*	.00	3.49	0.
20 AUG	.00	3.49	0.
21 AUG	.00	3.49	0.
22 AUG	.00	3.49	0.
23 AUG	.00	3.49	0.
24 AUG	.00	3.49	0.
25 AUG	.00	3.48	0.
26 AUG*	.00	3.30	0.
27 AUG	.00	3.49	0.
28 AUG	.00	3.23	0.
29 AUG	.00	3.06	0.
30 AUG	.00	3.06	0.
31 AUG	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : PY-S.C
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	2.28	0.
2 JAN	.00	2.28	0.
3 JAN	.00	2.28	0.
4 JAN	.00	2.28	0.
5 JAN	.00	2.28	0.
6 JAN	.00	2.28	0.
7 JAN	.00	2.28	0.
8 JAN	.00	2.28	0.
9 JAN	.00	2.28	0.
10 JAN	.00	2.28	0.
11 JAN	.00	2.28	0.
12 JAN	.00	2.28	0.
13 JAN	.00	2.28	0.
14 JAN	.00	2.28	0.
15 JAN	.00	2.28	0.
16 JAN	.00	2.28	0.
17 JAN	.00	2.28	0.
18 JAN	.00	2.28	0.
19 JAN	.00	2.28	0.
20 JAN	.00	2.28	0.
21 JAN	.00	2.28	0.
22 JAN	.00	2.28	0.
23 JAN	.00	2.28	0.
24 JAN	.00	2.28	0.
25 JAN	.00	2.28	0.
26 JAN	.00	2.28	0.
27 JAN	.00	2.28	0.
28 JAN	.00	2.28	0.
29 JAN	.00	2.28	0.
30 JAN	.00	2.28	0.
31 JAN	.00	2.28	0.
1 FEB	.00	2.28	0.
2 FEB	.00	2.28	0.
3 FEB	.00	2.28	0.
4 FEB	.00	2.28	0.
5 FEB	.00	2.28	0.
6 FEB	.00	2.28	0.
7 FEB	.00	2.28	0.
8 FEB	.00	2.28	0.
9 FEB	.00	2.28	0.
10 FEB	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL*D)
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	2.28	0.
12 FEB	.00	2.28	0.
13 FEB	.00	2.28	0.
14 FEB	.00	2.28	0.
15 FEB	.00	2.29	0.
16 FEB	.00	2.28	0.
17 FEB	.00	2.28	0.
18 FEB	.00	2.28	0.
19 FEB	.00	2.28	0.
20 FEB	.00	2.28	0.
21 FEB	.00	2.28	0.
22 FEB	.00	2.28	0.
23 FEB	.00	2.28	0.
24 FEB	.00	2.28	0.
25 FEB	.00	2.59	0.
26 FEB	.00	3.06	0.
27 FEB	.00	3.06	0.
28 FEB	.00	3.06	0.
29 FEB	.00	2.75	0.
1 MAR	.00	2.28	0.
2 MAR	.00	2.28	0.
3 MAR	.00	2.28	0.
4 MAR	.00	2.28	0.
5 MAR	.00	2.28	0.
6 MAR	.00	2.28	0.
7 MAR	.00	2.28	0.
8 MAR	.00	2.28	0.
9 MAR	.00	2.28	0.
10 MAR	.00	2.28	0.
11 MAR	.00	2.28	0.
12 MAR	.00	2.28	0.
13 MAR	.00	2.28	0.
14 MAR	.00	2.28	0.
15 MAR	.00	2.28	0.
16 MAR	.00	2.28	0.
17 MAR	.00	2.28	0.
18 MAR	.00	2.28	0.
19 MAR	.00	2.28	0.
20 MAR	.00	2.28	0.
21 MAR	.00	2.28	0.
22 MAR	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	2.28	0.
24 MAR	.00	2.28	0.
25 MAR	.00	2.28	0.
26 MAR	.00	2.28	0.
27 MAR	.00	2.28	0.
28 MAR	.00	2.28	0.
29 MAR	.00	2.28	0.
30 MAR	.00	2.28	0.
31 MAR	.00	2.28	0.
1 APR	.00	2.28	0.
2 APR	.00	2.28	0.
3 APR	.00	2.28	0.
4 APR	.00	2.28	0.
5 APR	.00	1.99	0.
6 APR	.00	1.19	0.
7 APR	.00	2.26	0.
8 APR	.00	2.28	0.
9 APR	.00	2.28	0.
10 APR	.00	2.41	0.
11 APR	.00	3.06	0.
12 APR	.00	3.06	0.
13 APR	.00	3.06	0.
14 APR	.00	3.06	0.
15 APR	.00	3.06	0.
16 APR	.00	3.06	0.
17 APR	.00	3.06	0.
18 APR	.00	2.07	0.
19 APR	.00	2.05	0.
20 APR	.00	2.05	0.
21 APR	.00	2.08	0.
22 APR	.00	3.06	0.
23 APR	.00	3.06	0.
24 APR*	.00	3.06	0.
25 APR	.00	3.06	0.
26 APR	.00	3.06	0.
27 APR	.00	3.06	0.
28 APR	.00	3.06	0.
29 APR*	.00	3.06	0.
30 APR	.00	3.06	0.
1 MAY	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL*D)
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	3.06	0.
3 MAY	.00	3.06	0.
4 MAY	.00	2.29	0.
5 MAY	.00	2.78	0.
6 MAY*	.00	3.06	0.
7 MAY	.00	3.06	0.
8 MAY	.00	3.06	0.
9 MAY	.00	3.06	0.
10 MAY	.00	2.58	0.
11 MAY	.00	2.05	0.
12 MAY	.00	2.05	0.
13 MAY*	.00	2.05	0.
14 MAY	4.36	2.05	8938.
15 MAY	8.73	2.05	17897.
16 MAY	13.09	2.05	26835.
17 MAY	17.45	1.90	33155.
18 MAY	21.81	2.05	44711.
19 MAY	26.18	2.05	53669.
20 MAY*	30.54	2.05	62607.
21 MAY	36.45	2.05	74722.
22 MAY	42.36	2.04	86414.
23 MAY	48.27	2.05	98954.
24 MAY	54.19	2.05	111090.
25 MAY	60.10	2.05	123205.
26 MAY	66.01	2.05	135321.
27 MAY*	71.92	2.05	147436.
28 MAY	71.78	2.05	147149.
29 MAY	71.64	2.05	146862.
30 MAY	71.50	2.05	146575.
31 MAY	71.35	2.05	146268.
1 JUN	71.21	2.05	145981.
2 JUN	71.07	2.05	145694.
3 JUN*	70.93	2.05	145407.
4 JUN	103.51	2.38	246354.
5 JUN	136.10	3.05	415105.
6 JUN*	168.68	3.18	536402.
7 JUN	151.74	3.06	464324.
8 JUN	134.81	3.06	412519.
9 JUN	117.87	3.04	358325.
10 JUN*	100.93	3.06	308846.
11 JUN	97.93	3.06	299666.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	94.94	3.06	290516.
13 JUN*	91.94	3.06	281336.
14 JUN	83.94	3.06	256856.
15 JUN	75.93	3.06	232346.
16 JUN	67.92	3.06	207835.
17 JUN*	59.92	3.06	183355.
18 JUN	75.77	3.06	231856.
19 JUN	91.62	3.06	280357.
20 JUN*	107.47	3.01	323485.
21 JUN	98.86	3.06	302512.
22 JUN	90.26	3.06	276196.
23 JUN	81.65	3.06	249849.
24 JUN*	73.04	3.06	223502.
25 JUN	65.84	3.06	201470.
26 JUN	58.65	3.06	179469.
27 JUN	51.45	3.06	157437.
28 JUN	44.26	2.59	114633.
29 JUN	37.06	2.28	84497.
30 JUN	29.87	3.01	89909.
1 JUL*	22.67	3.06	69370.
2 JUL	20.52	3.06	62791.
3 JUL	18.36	3.06	56182.
4 JUL	16.21	3.06	49603.
5 JUL	14.05	3.06	42993.
6 JUL	11.90	3.06	36414.
7 JUL	9.74	3.01	29317.
8 JUL*	7.59	2.96	22466.
9 JUL	6.87	3.49	23976.
10 JUL	6.15	3.49	21464.
11 JUL	5.43	3.49	18951.
12 JUL	4.70	3.49	16403.
13 JUL	3.98	3.49	13890.
14 JUL	3.26	3.49	11377.
15 JUL*	2.54	3.49	8865.
16 JUL	2.69	3.49	9249.
17 JUL	2.76	3.49	9632.
18 JUL	2.87	3.49	10016.
19 JUL	2.99	3.49	10435.
20 JUL	3.10	3.49	10819.
21 JUL	3.21	3.35	10754.
22 JUL*	3.32	3.06	10159.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL*D)
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	3.21	3.06	9823.
24 JUL	3.11	3.06	9517.
25 JUL	3.00	3.06	9180.
26 JUL	2.89	3.06	8843.
27 JUL	2.78	3.06	8507.
28 JUL	2.68	3.06	8201.
29 JUL*	2.57	3.06	7864.
30 JUL	2.20	3.06	6732.
31 JUL	1.84	3.06	5630.
1 AUG	1.47	2.38	3499.
2 AUG	1.10	2.32	2552.
3 AUG	.73	3.06	2234.
4 AUG	.37	3.06	1132.
5 AUG*	.00	3.06	0.
6 AUG	.00	3.06	0.
7 AUG	.00	3.06	0.
8 AUG	.00	3.06	0.
9 AUG	.00	3.06	0.
10 AUG	.00	3.06	0.
11 AUG	.00	3.06	0.
12 AUG*	.00	3.06	0.
13 AUG	.00	3.06	0.
14 AUG	.00	3.06	0.
15 AUG	.00	3.06	0.
16 AUG	.00	3.06	0.
17 AUG	.00	3.06	0.
18 AUG	.00	3.16	0.
19 AUG*	.00	3.49	0.
20 AUG	.00	3.49	0.
21 AUG	.00	3.49	0.
22 AUG	.00	3.49	0.
23 AUG	.00	3.49	0.
24 AUG	.00	3.49	0.
25 AUG	.00	3.48	0.
26 AUG*	.00	3.30	0.
27 AUG	.00	3.49	0.
28 AUG	.00	3.23	0.
29 AUG	.00	3.06	0.
30 AUG	.00	3.06	0.
31 AUG	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./100)C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	2.28	0.
2 JAN	.00	2.28	0.
3 JAN	.00	2.28	0.
4 JAN	.00	2.28	0.
5 JAN	.00	2.28	0.
6 JAN	.00	2.28	0.
7 JAN	.00	2.28	0.
8 JAN	.00	2.28	0.
9 JAN	.00	2.28	0.
10 JAN	.00	2.28	0.
11 JAN	.00	2.28	0.
12 JAN	.00	2.28	0.
13 JAN	.00	2.28	0.
14 JAN	.00	2.28	0.
15 JAN	.00	2.28	0.
16 JAN	.00	2.28	0.
17 JAN	.00	2.28	0.
18 JAN	.00	2.28	0.
19 JAN	.00	2.28	0.
20 JAN	.00	2.28	0.
21 JAN	.00	2.28	0.
22 JAN	.00	2.28	0.
23 JAN	.00	2.28	0.
24 JAN	.00	2.28	0.
25 JAN	.00	2.28	0.
26 JAN	.00	2.28	0.
27 JAN	.00	2.28	0.
28 JAN	.00	2.28	0.
29 JAN	.00	2.28	0.
30 JAN	.00	2.28	0.
31 JAN	.00	2.28	0.
1 FEB	.00	2.28	0.
2 FEB	.00	2.28	0.
3 FEB	.00	2.28	0.
4 FEB	.00	2.28	0.
5 FEB	.00	2.28	0.
6 FEB	.00	2.28	0.
7 FEB	.00	2.28	0.
8 FEB	.00	2.28	0.
9 FEB	.00	2.28	0.
10 FEB	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	2.28	0.
12 FEB	.00	2.28	0.
13 FEB	.00	2.28	0.
14 FEB	.00	2.28	0.
15 FEB	.00	2.29	0.
16 FEB	.00	2.28	0.
17 FEB	.00	2.28	0.
18 FEB	.00	2.28	0.
19 FEB	.00	2.28	0.
20 FEB	.00	2.28	0.
21 FEB	.00	2.28	0.
22 FEB	.00	2.28	0.
23 FEB	.00	2.28	0.
24 FEB	.00	2.28	0.
25 FEB	.00	2.59	0.
26 FEB	.00	3.06	0.
27 FEB	.00	3.06	0.
28 FEB	.00	3.06	0.
29 FEB	.00	2.75	0.
1 MAR	.00	2.28	0.
2 MAR	.00	2.28	0.
3 MAR	.00	2.28	0.
4 MAR	.00	2.28	0.
5 MAR	.00	2.28	0.
6 MAR	.00	2.28	0.
7 MAR	.00	2.28	0.
8 MAR	.00	2.28	0.
9 MAR	.00	2.28	0.
10 MAR	.00	2.28	0.
11 MAR	.00	2.28	0.
12 MAR	.00	2.28	0.
13 MAR	.00	2.28	0.
14 MAR	.00	2.28	0.
15 MAR	.00	2.28	0.
16 MAR	.00	2.28	0.
17 MAR	.00	2.28	0.
18 MAR	.00	2.28	0.
19 MAR	.00	2.28	0.
20 MAR	.00	2.28	0.
21 MAR	.00	2.28	0.
22 MAR	.00	2.28	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	2.28	0.
24 MAR	.00	2.28	0.
25 MAR	.00	2.28	0.
26 MAR	.00	2.28	0.
27 MAR	.00	2.28	0.
28 MAR	.00	2.28	0.
29 MAR	.00	2.28	0.
30 MAR	.00	2.28	0.
31 MAR	.00	2.28	0.
1 APR	.00	2.28	0.
2 APR	.00	2.28	0.
3 APR	.00	2.28	0.
4 APR	.00	2.28	0.
5 APR	.00	1.99	0.
6 APR	.00	1.19	0.
7 APR	.00	2.26	0.
8 APR	.00	2.28	0.
9 APR	.00	2.28	0.
10 APR	.00	2.41	0.
11 APR	.00	3.06	0.
12 APR	.00	3.06	0.
13 APR	.00	3.06	0.
14 APR	.00	3.06	0.
15 APR	.00	3.06	0.
16 APR	.00	3.06	0.
17 APR	.00	3.06	0.
18 APR	.00	2.07	0.
19 APR	.00	2.05	0.
20 APR	.00	2.05	0.
21 APR	.00	2.08	0.
22 APR	.00	3.06	0.
23 APR	.00	3.06	0.
24 APR*	.00	3.06	0.
25 APR	.00	3.06	0.
26 APR	.00	3.06	0.
27 APR	.00	3.06	0.
28 APR	.00	3.06	0.
29 APR*	.00	3.06	0.
30 APR	.00	3.06	0.
1 MAY	.00	3.06	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL*D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	3.06	0.
3 MAY	.00	3.06	0.
4 MAY	.00	2.29	0.
5 MAY	.00	2.78	0.
6 MAY*	.00	3.06	0.
7 MAY	.00	3.06	0.
8 MAY	.00	3.06	0.
9 MAY	.00	3.06	0.
10 MAY	.00	2.58	0.
11 MAY	.00	2.05	0.
12 MAY	.00	2.05	0.
13 MAY*	.00	2.05	0.
14 MAY	.00	2.05	0.
15 MAY	.00	2.05	0.
16 MAY	.00	2.05	0.
17 MAY	.00	1.90	0.
18 MAY	.00	2.05	0.
19 MAY	.00	2.05	0.
20 MAY*	.00	2.05	0.
21 MAY	.00	2.05	0.
22 MAY	.00	2.04	0.
23 MAY	.00	2.05	0.
24 MAY	.00	2.05	0.
25 MAY	.00	2.05	0.
26 MAY	.00	2.05	0.
27 MAY*	.00	2.05	0.
28 MAY	.00	2.05	0.
29 MAY	.00	2.05	0.
30 MAY	.00	2.05	0.
31 MAY	.00	2.05	0.
1 JUN	.00	2.05	0.
2 JUN	.00	2.05	0.
3 JUN*	.00	2.05	0.
4 JUN	.00	2.38	0.
5 JUN	.00	3.05	0.
6 JUN*	.00	3.18	0.
7 JUN	.00	3.06	0.
8 JUN	.00	3.06	0.
9 JUN	.00	3.04	0.
10 JUN*	.00	3.06	0.
11 JUN	1.05	3.06	3213.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	2.10	3.06	6426.
13 JUN*	3.15	3.06	9639.
14 JUN	2.36	3.06	7222.
15 JUN	1.58	3.06	4835.
16 JUN	.79	3.06	2417.
17 JUN*	.00	3.06	0.
18 JUN	.22	3.06	673.
19 JUN	.44	3.06	1346.
20 JUN*	.66	3.01	1987.
21 JUN	.50	3.06	1530.
22 JUN	.33	3.06	1010.
23 JUN	.17	3.06	520.
24 JUN*	.00	3.06	0.
25 JUN	.19	3.06	581.
26 JUN	.39	3.06	1193.
27 JUN	.58	3.06	1775.
28 JUN	.78	2.59	2020.
29 JUN	.97	2.28	2212.
30 JUN	1.17	3.01	3522.
1 JUL*	1.36	3.06	4162.
2 JUL	1.17	3.06	3580.
3 JUL	.97	3.06	2968.
4 JUL	.78	3.06	2387.
5 JUL	.58	3.06	1775.
6 JUL	.39	3.06	1193.
7 JUL	.19	3.01	572.
8 JUL*	.00	2.96	0.
9 JUL	.18	3.49	628.
10 JUL	.36	3.49	1256.
11 JUL	.54	3.49	1885.
12 JUL	.71	3.49	2478.
13 JUL	.89	3.49	3106.
14 JUL	1.07	3.49	3734.
15 JUL*	1.25	3.49	4363.
16 JUL	1.56	3.49	5444.
17 JUL	1.86	3.49	6491.
18 JUL	2.17	3.49	7573.
19 JUL	2.48	3.49	8655.
20 JUL	2.79	3.49	9737.
21 JUL	3.09	3.35	10352.
22 JUL*	3.40	3.06	10404.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: ROSETON DISCHARGE SEAL WELL
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	3.20	3.06	9792.
24 JUL	2.99	3.06	9149.
25 JUL	2.79	3.06	8537.
26 JUL	2.58	3.06	7895.
27 JUL	2.38	3.06	7283.
28 JUL	2.17	3.06	6640.
29 JUL*	1.97	3.06	6028.
30 JUL	2.06	3.06	6304.
31 JUL	2.16	3.06	6610.
1 AUG	2.25	2.38	5355.
2 AUG	2.34	2.32	5429.
3 AUG	2.43	3.06	7436.
4 AUG	2.53	3.06	7742.
5 AUG*	2.62	3.06	8017.
6 AUG	2.43	3.06	7436.
7 AUG	2.25	3.06	6885.
8 AUG	2.06	3.06	6304.
9 AUG	1.87	3.06	5722.
10 AUG	1.68	3.06	5141.
11 AUG	1.50	3.06	4590.
12 AUG*	1.31	3.06	4009.
13 AUG	1.22	3.06	3733.
14 AUG	1.12	3.06	3427.
15 AUG	1.03	3.06	3152.
16 AUG	.93	3.06	2846.
17 AUG	.84	3.06	2570.
18 AUG	.74	3.16	2338.
19 AUG*	.65	3.49	2269.
20 AUG	.73	3.49	2548.
21 AUG	.81	3.49	2827.
22 AUG	.89	3.49	3106.
23 AUG	.98	3.49	3420.
24 AUG	1.06	3.49	3699.
25 AUG	1.14	3.48	3967.
26 AUG*	1.22	3.30	4026.
27 AUG	1.21	3.49	4223.
28 AUG	1.20	3.23	3876.
29 AUG	1.19	3.06	3641.
30 AUG	1.18	3.06	3611.
31 AUG	1.17	3.06	3580.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	.50	0.
2 JAN	.48	.50	240.
3 JAN	.96	.32	307.
4 JAN	1.44	.23	331.
5 JAN	1.92	.23	442.
6 JAN	2.40	.23	552.
7 JAN	2.88	.25	720.
8 JAN	3.37	.34	1146.
9 JAN	3.85	.34	1309.
10 JAN	4.33	.34	1472.
11 JAN	4.81	.34	1635.
12 JAN	5.29	.34	1799.
13 JAN	5.77	.52	3000.
14 JAN	6.25	.89	5563.
15 JAN	6.73	.89	5990.
16 JAN	7.21	.58	4182.
17 JAN	7.69	.23	1769.
18 JAN	8.17	.23	1879.
19 JAN	8.65	.23	1989.
20 JAN	9.13	.37	3378.
21 JAN	9.61	.58	5574.
22 JAN	10.09	.34	3431.
23 JAN	10.58	.24	2539.
24 JAN	11.06	.23	2544.
25 JAN	11.54	.43	4962.
26 JAN	12.02	.23	2765.
27 JAN	12.50	.44	5500.
28 JAN	12.98	.47	6101.
29 JAN	13.46	.40	5384.
30 JAN	13.94	.32	4461.
31 JAN	14.42	.45	6489.
1 FEB	14.90	.45	6705.
2 FEB	15.38	.45	6921.
3 FEB	15.86	.59	9357.
4 FEB	16.34	.55	8987.
5 FEB	16.83	.58	9761.
6 FEB	17.31	.47	8136.
7 FEB	17.79	.45	8006.
8 FEB	18.27	.45	8222.
9 FEB	18.75	.45	8438.
10 FEB	19.23	.52	10000.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	19.71	.72	14191.
12 FEB	20.19	.79	15950.
13 FEB	20.67	.64	13229.
14 FEB	21.15	.45	9518.
15 FEB	21.63	.45	9734.
16 FEB	22.11	.45	9950.
17 FEB	22.59	.45	10166.
18 FEB	23.07	.45	10382.
19 FEB	23.55	.45	10598.
20 FEB	24.04	.45	10818.
21 FEB	24.52	.47	11524.
22 FEB	25.00	.46	11500.
23 FEB	25.48	.45	11466.
24 FEB	25.96	.45	11682.
25 FEB	26.44	.49	12956.
26 FEB	26.92	.57	15344.
27 FEB	27.40	.54	14796.
28 FEB	27.88	.55	15334.
29 FEB	28.36	.53	15031.
1 MAR	28.84	.51	14708.
2 MAR	29.32	.67	19644.
3 MAR	29.80	.62	18476.
4 MAR	30.28	.66	19985.
5 MAR	30.77	.68	20924.
6 MAR	31.25	.59	18438.
7 MAR	31.73	.57	18086.
8 MAR	32.21	.45	14495.
9 MAR	32.69	.45	14711.
10 MAR	33.17	.45	14927.
11 MAR	33.65	.46	15479.
12 MAR	34.13	.45	15358.
13 MAR	34.61	.38	13152.
14 MAR	35.09	.34	11931.
15 MAR	35.57	.34	12094.
16 MAR	36.05	.34	12257.
17 MAR	36.53	.34	12420.
18 MAR	37.01	.34	12583.
19 MAR	37.50	.34	12750.
20 MAR	37.98	.34	12913.
21 MAR	38.46	.34	13076.
22 MAR	38.94	.34	13240.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	39.42	.34	13403.
24 MAR	39.90	.34	13566.
25 MAR	40.38	.34	13729.
26 MAR	40.86	.34	13892.
27 MAR	41.34	.34	14056.
28 MAR	41.82	.34	14219.
29 MAR	42.30	.34	14382.
30 MAR	42.78	.34	14545.
31 MAR	43.26	.34	14708.
1 APR	43.74	.34	14872.
2 APR	44.23	.34	15038.
3 APR	44.71	.34	15201.
4 APR	45.19	.34	15365.
5 APR	45.67	.34	15528.
6 APR	46.15	.54	24921.
7 APR	46.63	.61	28444.
8 APR	47.11	.41	19315.
9 APR	47.59	.34	16181.
10 APR	48.07	.34	16344.
11 APR	48.55	.35	16993.
12 APR	49.03	.34	16670.
13 APR	49.51	.48	23765.
14 APR	49.99	.65	32494.
15 APR	50.47	.45	22712.
16 APR	50.96	.45	22932.
17 APR	51.44	.43	22119.
18 APR	51.92	.63	32710.
19 APR	52.40	.78	40872.
20 APR	52.88	.79	41775.
21 APR	53.36	.87	46423.
22 APR*	53.84	.94	50610.
23 APR	124.48	1.12	139418.
24 APR	195.12	.95	185364.
25 APR	265.76	.98	260445.
26 APR	336.41	1.06	356595.
27 APR	407.05	.84	341922.
28 APR	477.69	.84	401260.
29 APR*	548.33	.92	504464.
30 APR	485.12	1.00	485120.
1 MAY	421.91	.49	206736.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	358.70	.34	121958.
3 MAY	295.50	.35	103425.
4 MAY	232.29	.46	106853.
5 MAY	169.08	.45	76086.
6 MAY*	105.87	.29	30702.
7 MAY	293.00	.34	99620.
8 MAY	480.14	.34	163248.
9 MAY	667.27	.34	226872.
10 MAY	854.40	.40	341760.
11 MAY	1041.53	.79	822809.
12 MAY	1228.67	.96	1179523.
13 MAY*	1415.80	1.02	1444116.
14 MAY	1503.26	1.15	1728749.
15 MAY	1590.71	1.15	1829317.
16 MAY	1678.17	1.15	1929895.
17 MAY	1765.63	1.06	1871568.
18 MAY	1853.09	1.06	1964276.
19 MAY	1940.54	1.10	2134594.
20 MAY*	2028.00	1.23	2494440.
21 MAY	1778.34	1.34	2382976.
22 MAY	1528.68	1.40	2140152.
23 MAY	1279.02	1.34	1713887.
24 MAY	1029.36	1.17	1204351.
25 MAY	779.70	1.03	803091.
26 MAY	530.04	1.11	588345.
27 MAY*	280.38	1.35	378513.
28 MAY	243.95	1.31	319575.
29 MAY	207.51	1.19	246937.
30 MAY	171.08	1.43	244644.
31 MAY	134.65	1.15	154848.
1 JUN	98.22	1.11	109024.
2 JUN	61.78	1.23	75989.
3 JUN*	25.35	1.60	40560.
4 JUN	19.38	1.57	30427.
5 JUN	13.41	1.55	20786.
6 JUN*	7.44	1.61	11978.
7 JUN	5.58	1.12	6250.
8 JUN	3.72	.97	3608.
9 JUN	1.86	1.20	2232.
10 JUN*	.00	1.24	0.
11 JUN	.00	1.38	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	.00	1.38	0.
13 JUN*	.00	1.18	0.
14 JUN	.69	1.05	725.
15 JUN	1.38	1.05	1449.
16 JUN	2.07	.93	1925.
17 JUN*	2.76	.61	1684.
18 JUN	1.84	.70	1288.
19 JUN	.92	1.02	938.
20 JUN*	.00	.86	0.
21 JUN	.00	.96	0.
22 JUN	.00	.82	0.
23 JUN	.00	1.04	0.
24 JUN*	.00	1.06	0.
25 JUN	.00	1.34	0.
26 JUN	.00	1.43	0.
27 JUN	.00	1.27	0.
28 JUN	.00	1.28	0.
29 JUN	.00	1.25	0.
30 JUN	.00	1.14	0.
1 JUL*	.00	1.16	0.
2 JUL	.00	1.16	0.
3 JUL	.00	1.16	0.
4 JUL	.00	.73	0.
5 JUL	.00	.62	0.
6 JUL	.00	.62	0.
7 JUL	.00	1.08	0.
8 JUL*	.00	1.27	0.
9 JUL	.00	1.57	0.
10 JUL	.00	1.61	0.
11 JUL	.00	1.70	0.
12 JUL	.00	1.39	0.
13 JUL	.00	1.35	0.
14 JUL	.00	1.60	0.
15 JUL*	.00	1.72	0.
16 JUL	.00	1.70	0.
17 JUL	.00	1.69	0.
18 JUL	.00	1.72	0.
19 JUL	.00	1.72	0.
20 JUL	.00	1.72	0.
21 JUL	.00	1.72	0.
22 JUL*	.00	1.67	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	1.72	0.
24 JUL	.00	1.72	0.
25 JUL	.00	1.68	0.
26 JUL	.00	1.69	0.
27 JUL	.00	1.72	0.
28 JUL	.00	1.72	0.
29 JUL*	.00	1.70	0.
30 JUL	.00	1.53	0.
31 JUL	.00	1.60	0.
1 AUG	.00	1.68	0.
2 AUG	.00	1.70	0.
3 AUG	.00	1.66	0.
4 AUG	.00	1.71	0.
5 AUG*	.00	1.67	0.
6 AUG	.00	1.72	0.
7 AUG	.00	1.72	0.
8 AUG	.00	1.72	0.
9 AUG	.00	1.72	0.
10 AUG	.00	1.67	0.
11 AUG	.00	1.70	0.
12 AUG*	.00	1.72	0.
13 AUG	.00	1.72	0.
14 AUG	.00	1.70	0.
15 AUG	.00	1.72	0.
16 AUG	.00	1.56	0.
17 AUG	.00	1.30	0.
18 AUG	.00	1.37	0.
19 AUG*	.00	1.63	0.
20 AUG	.00	1.72	0.
21 AUG	.00	1.35	0.
22 AUG	.00	1.28	0.
23 AUG	.00	.86	0.
24 AUG	.00	.84	0.
25 AUG	.00	1.16	0.
26 AUG*	.00	1.56	0.
27 AUG	.00	1.48	0.
28 AUG	.00	1.48	0.
29 AUG	.00	1.58	0.
30 AUG	.00	.85	0.
31 AUG	.00	.88	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	.50	0.
2 JAN	.01	.50	5.
3 JAN	.01	.32	3.
4 JAN	.02	.23	5.
5 JAN	.02	.23	5.
6 JAN	.03	.23	7.
7 JAN	.03	.25	8.
8 JAN	.04	.34	14.
9 JAN	.05	.34	17.
10 JAN	.05	.34	17.
11 JAN	.06	.34	20.
12 JAN	.06	.34	20.
13 JAN	.07	.52	36.
14 JAN	.07	.89	62.
15 JAN	.08	.89	71.
16 JAN	.09	.58	52.
17 JAN	.09	.23	21.
18 JAN	.10	.23	23.
19 JAN	.10	.23	23.
20 JAN	.11	.37	41.
21 JAN	.11	.58	64.
22 JAN	.12	.34	41.
23 JAN	.13	.24	31.
24 JAN	.13	.23	30.
25 JAN	.14	.43	60.
26 JAN	.14	.23	32.
27 JAN	.15	.44	66.
28 JAN	.15	.47	71.
29 JAN	.16	.40	64.
30 JAN	.17	.32	54.
31 JAN	.17	.45	77.
1 FEB	.18	.45	81.
2 FEB	.18	.45	81.
3 FEB	.19	.59	112.
4 FEB	.19	.55	105.
5 FEB	.20	.58	116.
6 FEB	.21	.47	99.
7 FEB	.21	.45	95.
8 FEB	.22	.45	99.
9 FEB	.22	.45	99.
10 FEB	.23	.52	120.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.23	.72	166.
12 FEB	.24	.79	190.
13 FEB	.25	.64	160.
14 FEB	.25	.45	113.
15 FEB	.26	.45	117.
16 FEB	.26	.45	117.
17 FEB	.27	.45	122.
18 FEB	.27	.45	122.
19 FEB	.28	.45	126.
20 FEB	.29	.45	131.
21 FEB	.29	.47	136.
22 FEB	.30	.46	138.
23 FEB	.30	.45	135.
24 FEB	.31	.45	140.
25 FEB	.31	.49	152.
26 FEB	.32	.57	182.
27 FEB	.33	.54	178.
28 FEB	.33	.55	181.
29 FEB	.34	.53	180.
1 MAR	.34	.51	173.
2 MAR	.35	.67	235.
3 MAR	.35	.62	217.
4 MAR	.36	.66	238.
5 MAR	.37	.68	252.
6 MAR	.37	.59	218.
7 MAR	.38	.57	217.
8 MAR	.38	.45	171.
9 MAR	.39	.45	176.
10 MAR	.39	.45	176.
11 MAR	.40	.46	184.
12 MAR	.41	.45	185.
13 MAR	.41	.38	156.
14 MAR	.42	.34	143.
15 MAR	.42	.34	143.
16 MAR	.43	.34	146.
17 MAR	.43	.34	146.
18 MAR	.44	.34	150.
19 MAR	.45	.34	153.
20 MAR	.45	.34	153.
21 MAR	.46	.34	156.
22 MAR	.46	.34	156.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.47	.34	160.
24 MAR	.47	.34	160.
25 MAR	.48	.34	163.
26 MAR	.49	.34	167.
27 MAR	.49	.34	167.
28 MAR	.50	.34	170.
29 MAR	.50	.34	170.
30 MAR	.51	.34	173.
31 MAR	.51	.34	173.
1 APR	.52	.34	177.
2 APR	.53	.34	180.
3 APR	.53	.34	180.
4 APR	.54	.34	184.
5 APR	.54	.34	184.
6 APR	.55	.54	297.
7 APR	.55	.61	335.
8 APR	.56	.41	230.
9 APR	.57	.34	194.
10 APR	.57	.34	194.
11 APR	.58	.35	203.
12 APR	.58	.34	197.
13 APR	.59	.48	283.
14 APR	.59	.65	384.
15 APR	.60	.45	270.
16 APR	.61	.45	275.
17 APR	.61	.43	262.
18 APR	.62	.63	391.
19 APR	.62	.78	484.
20 APR	.63	.79	498.
21 APR	.63	.87	548.
22 APR*	.64	.94	602.
23 APR	2.42	1.12	2710.
24 APR	4.20	.95	3990.
25 APR	5.98	.98	5860.
26 APR	7.77	1.06	8236.
27 APR	9.55	.84	8022.
28 APR	11.33	.84	9517.
29 APR*	13.11	.92	12061.
30 APR	12.65	1.00	12650.
1 MAY	12.18	.49	5968.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	11.72	.34	3985.
3 MAY	11.25	.35	3938.
4 MAY	10.79	.46	4963.
5 MAY	10.32	.45	4644.
6 MAY*	9.86	.29	2859.
7 MAY	10.53	.34	3580.
8 MAY	11.21	.34	3811.
9 MAY	11.88	.34	4039.
10 MAY	12.56	.40	5024.
11 MAY	13.23	.79	10452.
12 MAY	13.91	.96	13354.
13 MAY*	14.58	1.02	14872.
14 MAY	25.30	1.15	29095.
15 MAY	36.01	1.15	41412.
16 MAY	46.73	1.15	53740.
17 MAY	57.45	1.06	60897.
18 MAY	68.17	1.06	72260.
19 MAY	78.88	1.10	86768.
20 MAY*	89.60	1.23	110208.
21 MAY	78.30	1.34	104922.
22 MAY	67.01	1.40	93814.
23 MAY	55.71	1.34	74651.
24 MAY	44.42	1.17	51971.
25 MAY	33.12	1.03	34114.
26 MAY	21.83	1.11	24231.
27 MAY*	10.53	1.35	14216.
28 MAY	11.80	1.31	15458.
29 MAY	13.07	1.19	15553.
30 MAY	14.34	1.43	20506.
31 MAY	15.62	1.15	17963.
1 JUN	16.89	1.11	18748.
2 JUN	18.16	1.23	22337.
3 JUN*	19.43	1.60	31088.
4 JUN	15.16	1.57	23801.
5 JUN	10.90	1.55	16895.
6 JUN*	6.63	1.61	10674.
7 JUN	5.82	1.12	6518.
8 JUN	5.00	.97	4850.
9 JUN	4.19	1.20	5028.
10 JUN*	3.37	1.24	4179.
11 JUN	2.25	1.38	3105.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	1.12	1.38	1546.
13 JUN*	.00	1.18	0.
14 JUN	.00	1.05	0.
15 JUN	.00	1.05	0.
16 JUN	.00	.93	0.
17 JUN*	.00	.61	0.
18 JUN	.00	.70	0.
19 JUN	.00	1.02	0.
20 JUN*	.00	.86	0.
21 JUN	.00	.96	0.
22 JUN	.00	.82	0.
23 JUN	.00	1.04	0.
24 JUN*	.00	1.06	0.
25 JUN	.00	1.34	0.
26 JUN	.00	1.43	0.
27 JUN	.00	1.27	0.
28 JUN	.00	1.28	0.
29 JUN	.00	1.25	0.
30 JUN	.00	1.14	0.
1 JUL*	.00	1.16	0.
2 JUL	.00	1.16	0.
3 JUL	.00	1.16	0.
4 JUL	.00	.73	0.
5 JUL	.00	.62	0.
6 JUL	.00	.62	0.
7 JUL	.00	1.08	0.
8 JUL*	.00	1.27	0.
9 JUL	.00	1.57	0.
10 JUL	.00	1.61	0.
11 JUL	.00	1.70	0.
12 JUL	.00	1.39	0.
13 JUL	.00	1.35	0.
14 JUL	.00	1.60	0.
15 JUL*	.00	1.72	0.
16 JUL	.00	1.70	0.
17 JUL	.00	1.69	0.
18 JUL	.00	1.72	0.
19 JUL	.00	1.72	0.
20 JUL	.00	1.72	0.
21 JUL	.00	1.72	0.
22 JUL*	.00	1.67	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	1.72	0.
24 JUL	.00	1.72	0.
25 JUL	.00	1.68	0.
26 JUL	.00	1.69	0.
27 JUL	.00	1.72	0.
28 JUL	.00	1.72	0.
29 JUL*	.00	1.70	0.
30 JUL	.00	1.53	0.
31 JUL	.00	1.60	0.
1 AUG	.00	1.68	0.
2 AUG	.00	1.70	0.
3 AUG	.00	1.66	0.
4 AUG	.00	1.71	0.
5 AUG*	.00	1.67	0.
6 AUG	.00	1.72	0.
7 AUG	.00	1.72	0.
8 AUG	.00	1.72	0.
9 AUG	.00	1.72	0.
10 AUG	.00	1.67	0.
11 AUG	.00	1.70	0.
12 AUG*	.00	1.72	0.
13 AUG	.00	1.72	0.
14 AUG	.00	1.70	0.
15 AUG	.00	1.72	0.
16 AUG	.00	1.56	0.
17 AUG	.00	1.30	0.
18 AUG	.00	1.37	0.
19 AUG*	.00	1.63	0.
20 AUG	.00	1.72	0.
21 AUG	.00	1.35	0.
22 AUG	.00	1.28	0.
23 AUG	.00	.86	0.
24 AUG	.00	.84	0.
25 AUG	.00	1.16	0.
26 AUG*	.00	1.56	0.
27 AUG	.00	1.48	0.
28 AUG	.00	1.48	0.
29 AUG	.00	1.58	0.
30 AUG	.00	.85	0.
31 AUG	.00	.88	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	.50	0.
2 JAN	.01	.50	5.
3 JAN	.01	.32	3.
4 JAN	.02	.23	5.
5 JAN	.02	.23	5.
6 JAN	.03	.23	7.
7 JAN	.03	.25	8.
8 JAN	.04	.34	14.
9 JAN	.04	.34	14.
10 JAN	.05	.34	17.
11 JAN	.06	.34	20.
12 JAN	.06	.34	20.
13 JAN	.07	.52	36.
14 JAN	.07	.89	62.
15 JAN	.08	.89	71.
16 JAN	.08	.58	46.
17 JAN	.09	.23	21.
18 JAN	.09	.23	21.
19 JAN	.10	.23	23.
20 JAN	.11	.37	41.
21 JAN	.11	.58	64.
22 JAN	.12	.34	41.
23 JAN	.12	.24	29.
24 JAN	.13	.23	30.
25 JAN	.13	.43	56.
26 JAN	.14	.23	32.
27 JAN	.14	.44	62.
28 JAN	.15	.47	71.
29 JAN	.16	.40	64.
30 JAN	.16	.32	51.
31 JAN	.17	.45	77.
1 FEB	.17	.45	77.
2 FEB	.18	.45	81.
3 FEB	.18	.59	106.
4 FEB	.19	.55	105.
5 FEB	.19	.58	110.
6 FEB	.20	.47	94.
7 FEB	.20	.45	90.
8 FEB	.21	.45	95.
9 FEB	.22	.45	99.
10 FEB	.22	.52	114.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.23	.72	166.
12 FEB	.23	.79	182.
13 FEB	.24	.64	154.
14 FEB	.24	.45	108.
15 FEB	.25	.45	113.
16 FEB	.25	.45	113.
17 FEB	.26	.45	117.
18 FEB	.27	.45	122.
19 FEB	.27	.45	122.
20 FEB	.28	.45	126.
21 FEB	.28	.47	132.
22 FEB	.29	.46	133.
23 FEB	.29	.45	131.
24 FEB	.30	.45	135.
25 FEB	.30	.49	147.
26 FEB	.31	.57	177.
27 FEB	.32	.54	173.
28 FEB	.32	.55	176.
29 FEB	.33	.53	175.
1 MAR	.33	.51	168.
2 MAR	.34	.67	228.
3 MAR	.34	.62	211.
4 MAR	.35	.66	231.
5 MAR	.35	.68	238.
6 MAR	.36	.59	212.
7 MAR	.37	.57	211.
8 MAR	.37	.45	167.
9 MAR	.38	.45	171.
10 MAR	.38	.45	171.
11 MAR	.39	.46	179.
12 MAR	.39	.45	176.
13 MAR	.40	.38	152.
14 MAR	.40	.34	136.
15 MAR	.41	.34	139.
16 MAR	.42	.34	143.
17 MAR	.42	.34	143.
18 MAR	.43	.34	146.
19 MAR	.43	.34	146.
20 MAR	.44	.34	150.
21 MAR	.44	.34	150.
22 MAR	.45	.34	153.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.45	.34	153.
24 MAR	.46	.34	156.
25 MAR	.47	.34	160.
26 MAR	.47	.34	160.
27 MAR	.48	.34	163.
28 MAR	.48	.34	163.
29 MAR	.49	.34	167.
30 MAR	.49	.34	167.
31 MAR	.50	.34	170.
1 APR	.50	.34	170.
2 APR	.51	.34	173.
3 APR	.51	.34	173.
4 APR	.52	.34	177.
5 APR	.53	.34	180.
6 APR	.53	.54	286.
7 APR	.54	.61	329.
8 APR	.54	.41	221.
9 APR	.55	.34	187.
10 APR	.55	.34	187.
11 APR	.56	.35	196.
12 APR	.56	.34	190.
13 APR	.57	.48	274.
14 APR	.58	.65	377.
15 APR	.58	.45	261.
16 APR	.59	.45	266.
17 APR	.59	.43	254.
18 APR	.60	.63	378.
19 APR	.60	.78	468.
20 APR	.61	.79	482.
21 APR	.61	.87	531.
22 APR*	.62	.94	583.
23 APR	.63	1.12	706.
24 APR	.63	.95	599.
25 APR	.64	.98	627.
26 APR	.64	1.06	678.
27 APR	.65	.84	546.
28 APR	.65	.84	546.
29 APR*	.66	.92	607.
30 APR	4.88	1.00	4880.
1 MAY	9.09	.49	4454.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	13.31	.34	4525.
3 MAY	17.52	.35	6132.
4 MAY	21.74	.46	10000.
5 MAY	25.95	.45	11678.
6 MAY*	30.17	.29	8749.
7 MAY	39.23	.34	13338.
8 MAY	48.29	.34	16419.
9 MAY	57.35	.34	19499.
10 MAY	66.41	.40	26564.
11 MAY	75.47	.79	59621.
12 MAY	84.53	.96	81149.
13 MAY*	93.59	1.02	95462
14 MAY	105.64	1.15	121486.
15 MAY	117.68	1.15	135332.
16 MAY	129.73	1.15	149190.
17 MAY	141.77	1.06	150276.
18 MAY	153.82	1.06	163049.
19 MAY	165.86	1.10	182446.
20 MAY*	177.91	1.23	218829.
21 MAY	216.88	1.34	290619.
22 MAY	255.84	1.40	358176.
23 MAY	294.81	1.34	395045.
24 MAY	333.77	1.17	390511.
25 MAY	372.74	1.03	383922.
26 MAY	411.70	1.11	456987.
27 MAY*	450.67	1.35	608405.
28 MAY	528.94	1.31	692911.
29 MAY	607.20	1.19	722568.
30 MAY	685.47	1.43	980222.
31 MAY	763.74	1.15	878301.
1 JUN	842.01	1.11	934631.
2 JUN	920.27	1.23	1131932.
3 JUN*	998.54	1.60	1597664.
4 JUN	869.21	1.57	1364660.
5 JUN	739.88	1.55	1146814.
6 JUN*	610.55	1.61	982986.
7 JUN	644.51	1.12	721851.
8 JUN	678.47	.97	658116.
9 JUN	712.43	1.20	854916.
10 JUN*	746.39	1.24	925524.
11 JUN	671.16	1.38	926201.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	595.94	1.38	822397.
13 JUN*	520.71	1.18	614438.
14 JUN	438.32	1.05	460236.
15 JUN	355.94	1.05	373737.
16 JUN	273.55	.93	254402.
17 JUN*	191.17	.61	116614.
18 JUN	158.46	.70	110922.
19 JUN	125.75	1.02	128265.
20 JUN*	93.04	.86	80014.
21 JUN	83.47	.96	80131.
22 JUN	73.89	.82	60590.
23 JUN	64.32	1.04	66893.
24 JUN*	54.74	1.06	58024.
25 JUN	52.37	1.34	70176.
26 JUN	49.99	1.43	71486.
27 JUN	47.62	1.27	60477.
28 JUN	45.25	1.28	57920.
29 JUN	42.88	1.25	53600.
30 JUN	40.50	1.14	46170.
1 JUL*	38.13	1.16	44231.
2 JUL	33.15	1.16	38454.
3 JUL	28.16	1.16	32666.
4 JUL	23.18	.73	16921.
5 JUL	18.20	.62	11284.
6 JUL	13.22	.62	8196.
7 JUL	8.23	1.08	8888.
8 JUL*	3.25	1.27	4128.
9 JUL	3.36	1.57	5275.
10 JUL	3.46	1.61	5571.
11 JUL	3.57	1.70	6069.
12 JUL	3.67	1.39	5101.
13 JUL	3.78	1.35	5103.
14 JUL	3.88	1.60	6208.
15 JUL*	3.99	1.72	6863.
16 JUL	3.62	1.70	6154.
17 JUL	3.24	1.69	5476.
18 JUL	2.87	1.72	4936.
19 JUL	2.50	1.72	4300.
20 JUL	2.13	1.72	3664.
21 JUL	1.75	1.72	3010.
22 JUL*	1.38	1.67	2305.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	1.18	1.72	2030.
24 JUL	.99	1.72	1703.
25 JUL	.79	1.68	1327.
26 JUL	.59	1.69	997.
27 JUL	.39	1.72	671.
28 JUL	.20	1.72	344.
29 JUL*	.00	1.70	0.
30 JUL	.00	1.53	0.
31 JUL	.00	1.60	0.
1 AUG	.00	1.68	0.
2 AUG	.00	1.70	0.
3 AUG	.00	1.66	0.
4 AUG	.00	1.71	0.
5 AUG*	.00	1.67	0.
6 AUG	.00	1.72	0.
7 AUG	.00	1.72	0.
8 AUG	.00	1.72	0.
9 AUG	.00	1.72	0.
10 AUG	.00	1.67	0.
11 AUG	.00	1.70	0.
12 AUG*	.00	1.72	0.
13 AUG	.00	1.72	0.
14 AUG	.00	1.70	0.
15 AUG	.00	1.72	0.
16 AUG	.00	1.56	0.
17 AUG	.00	1.30	0.
18 AUG	.00	1.37	0.
19 AUG*	.00	1.63	0.
20 AUG	.00	1.72	0.
21 AUG	.00	1.35	0.
22 AUG	.00	1.28	0.
23 AUG	.00	.86	0.
24 AUG	.00	.84	0.
25 AUG	.00	1.16	0.
26 AUG*	.00	1.56	0.
27 AUG	.00	1.48	0.
28 AUG	.00	1.48	0.
29 AUG	.00	1.58	0.
30 AUG	.00	.85	0.
31 AUG	.00	.88	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	.50	0.
2 JAN	.00	.50	0.
3 JAN	.00	.32	0.
4 JAN	.00	.23	0.
5 JAN	.00	.23	0.
6 JAN	.00	.23	0.
7 JAN	.00	.25	0.
8 JAN	.00	.34	0.
9 JAN	.00	.34	0.
10 JAN	.00	.34	0.
11 JAN	.00	.34	0.
12 JAN	.00	.34	0.
13 JAN	.00	.52	0.
14 JAN	.00	.89	0.
15 JAN	.00	.89	0.
16 JAN	.00	.58	0.
17 JAN	.00	.23	0.
18 JAN	.00	.23	0.
19 JAN	.00	.23	0.
20 JAN	.00	.37	0.
21 JAN	.00	.58	0.
22 JAN	.00	.34	0.
23 JAN	.00	.24	0.
24 JAN	.00	.23	0.
25 JAN	.00	.43	0.
26 JAN	.00	.23	0.
27 JAN	.00	.44	0.
28 JAN	.00	.47	0.
29 JAN	.00	.40	0.
30 JAN	.00	.32	0.
31 JAN	.00	.45	0.
1 FEB	.00	.45	0.
2 FEB	.00	.45	0.
3 FEB	.00	.59	0.
4 FEB	.00	.55	0.
5 FEB	.00	.58	0.
6 FEB	.00	.47	0.
7 FEB	.00	.45	0.
8 FEB	.00	.45	0.
9 FEB	.00	.45	0.
10 FEB	.00	.52	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	.72	0.
12 FEB	.00	.79	0.
13 FEB	.00	.64	0.
14 FEB	.00	.45	0.
15 FEB	.00	.45	0.
16 FEB	.00	.45	0.
17 FEB	.00	.45	0.
18 FEB	.00	.45	0.
19 FEB	.00	.45	0.
20 FEB	.00	.45	0.
21 FEB	.00	.47	0.
22 FEB	.00	.46	0.
23 FEB	.00	.45	0.
24 FEB	.00	.45	0.
25 FEB	.00	.49	0.
26 FEB	.00	.57	0.
27 FEB	.00	.54	0.
28 FEB	.00	.55	0.
29 FEB	.00	.53	0.
1 MAR	.00	.51	0.
2 MAR	.00	.67	0.
3 MAR	.00	.62	0.
4 MAR	.00	.66	0.
5 MAR	.00	.68	0.
6 MAR	.00	.59	0.
7 MAR	.00	.57	0.
8 MAR	.00	.45	0.
9 MAR	.00	.45	0.
10 MAR	.00	.45	0.
11 MAR	.00	.46	0.
12 MAR	.00	.45	0.
13 MAR	.00	.38	0.
14 MAR	.00	.34	0.
15 MAR	.00	.34	0.
16 MAR	.00	.34	0.
17 MAR	.00	.34	0.
18 MAR	.00	.34	0.
19 MAR	.00	.34	0.
20 MAR	.00	.34	0.
21 MAR	.00	.34	0.
22 MAR	.00	.34	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	.34	0.
24 MAR	.00	.34	0.
25 MAR	.00	.34	0.
26 MAR	.00	.34	0.
27 MAR	.00	.34	0.
28 MAR	.00	.34	0.
29 MAR	.00	.34	0.
30 MAR	.00	.34	0.
31 MAR	.00	.34	0.
1 APR	.00	.34	0.
2 APR	.00	.34	0.
3 APR	.00	.34	0.
4 APR	.00	.34	0.
5 APR	.00	.34	0.
6 APR	.00	.54	0.
7 APR	.00	.61	0.
8 APR	.00	.41	0.
9 APR	.00	.34	0.
10 APR	.00	.34	0.
11 APR	.00	.35	0.
12 APR	.00	.34	0.
13 APR	.00	.48	0.
14 APR	.00	.65	0.
15 APR	.00	.45	0.
16 APR	.00	.45	0.
17 APR	.00	.43	0.
18 APR	.00	.63	0.
19 APR	.00	.78	0.
20 APR	.00	.79	0.
21 APR	.00	.87	0.
22 APR*	.00	.94	0.
23 APR	.00	1.12	0.
24 APR	.00	.95	0.
25 APR	.00	.98	0.
26 APR	.00	1.06	0.
27 APR	.00	.84	0.
28 APR	.00	.84	0.
29 APR*	.00	.92	0.
30 APR	.00	1.00	0.
1 MAY	.00	.49	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	.34	0.
3 MAY	.00	.35	0.
4 MAY	.00	.46	0.
5 MAY	.00	.45	0.
6 MAY*	.00	.29	0.
7 MAY	.00	.34	0.
8 MAY	.00	.34	0.
9 MAY	.00	.34	0.
10 MAY	.00	.40	0.
11 MAY	.00	.79	0.
12 MAY	.00	.96	0.
13 MAY*	.00	1.02	0.
14 MAY	.00	1.15	0.
15 MAY	.00	1.15	0.
16 MAY	.00	1.15	0.
17 MAY	.00	1.06	0.
18 MAY	.00	1.06	0.
19 MAY	.00	1.10	0.
20 MAY*	.00	1.23	0.
21 MAY	.00	1.34	0.
22 MAY	.00	1.40	0.
23 MAY	.00	1.34	0.
24 MAY	.00	1.17	0.
25 MAY	.00	1.03	0.
26 MAY	.00	1.11	0.
27 MAY*	.00	1.35	0.
28 MAY	.00	1.31	0.
29 MAY	.00	1.19	0.
30 MAY	.00	1.43	0.
31 MAY	.00	1.15	0.
1 JUN	.00	1.11	0.
2 JUN	.00	1.23	0.
3 JUN*	.00	1.60	0.
4 JUN	.00	1.57	0.
5 JUN	.00	1.55	0.
6 JUN*	.00	1.61	0.
7 JUN	2.57	1.12	2878.
8 JUN	5.14	.97	4986.
9 JUN	7.71	1.20	9252.
10 JUN*	10.28	1.24	12747.
11 JUN	6.85	1.38	9453.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	3.43	1.38	4733.
13 JUN*	.00	1.18	0.
14 JUN	.00	1.05	0.
15 JUN	.00	1.05	0.
16 JUN	.00	.93	0.
17 JUN*	.00	.61	0.
18 JUN	.44	.70	308.
19 JUN	.88	1.02	898.
20 JUV*	1.32	.86	1135.
21 JUN	1.49	.96	1430.
22 JUV	1.67	.82	1369.
23 JUV	1.84	1.04	1914.
24 JUN*	2.01	1.06	2131.
25 JUN	4.17	1.34	5588.
26 JUV	6.32	1.43	9038.
27 JUV	8.48	1.27	10770.
28 JUV	10.64	1.28	13619.
29 JUV	12.80	1.25	16000.
30 JUV	14.95	1.14	17043.
1 JUL*	17.11	1.16	19848.
2 JUL	14.76	1.16	17122.
3 JUL	12.41	1.16	14396.
4 JUL	10.06	.73	7344.
5 JUL	7.70	.62	4774.
6 JUL	5.35	.62	3317.
7 JUL	3.00	1.08	3240.
8 JUL*	.65	1.27	826.
9 JUL	.93	1.57	1460.
10 JUL	1.21	1.61	1948.
11 JUL	1.49	1.70	2533.
12 JUL	1.76	1.39	2446.
13 JUL	2.04	1.35	2754.
14 JUL	2.32	1.60	3712.
15 JUL*	2.60	1.72	4472.
16 JUL	2.33	1.70	3961.
17 JUL	2.06	1.69	3481.
18 JUL	1.79	1.72	3079.
19 JUL	1.53	1.72	2632.
20 JUL	1.26	1.72	2167.
21 JUL	.99	1.72	1703.
22 JUL*	.72	1.67	1202.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : ALOSA SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.62	1.72	1066.
24 JUL	.51	1.72	877.
25 JUL	.41	1.68	689.
26 JUL	.31	1.69	524.
27 JUL	.21	1.72	361.
28 JUL	.10	1.72	172.
29 JUL*	.00	1.70	0.
30 JUL	.00	1.53	0.
31 JUL	.00	1.60	0.
1 AUG	.00	1.68	0.
2 AUG	.00	1.70	0.
3 AUG	.00	1.66	0.
4 AUG	.00	1.71	0.
5 AUG*	.00	1.67	0.
6 AUG	.00	1.72	0.
7 AUG	.00	1.72	0.
8 AUG	.00	1.72	0.
9 AUG	.00	1.72	0.
10 AUG	.00	1.67	0.
11 AUG	.00	1.70	0.
12 AUG*	.00	1.72	0.
13 AUG	.00	1.72	0.
14 AUG	.00	1.70	0.
15 AUG	.00	1.72	0.
16 AUG	.00	1.56	0.
17 AUG	.00	1.30	0.
18 AUG	.00	1.37	0.
19 AUG*	.00	1.63	0.
20 AUG	.00	1.72	0.
21 AUG	.00	1.35	0.
22 AUG	.00	1.28	0.
23 AUG	.00	.86	0.
24 AUG	.00	.84	0.
25 AUG	.00	1.16	0.
26 AUG*	.00	1.56	0.
27 AUG	.00	1.48	0.
28 AUG	.00	1.48	0.
29 AUG	.00	1.58	0.
30 AUG	.00	.85	0.
31 AUG	.00	.88	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./100C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	.50	0.
2 JAN	.00	.50	0.
3 JAN	.00	.32	0.
4 JAN	.00	.23	0.
5 JAN	.00	.23	0.
6 JAN	.00	.23	0.
7 JAN	.00	.25	0.
8 JAN	.00	.34	0.
9 JAN	.00	.34	0.
10 JAN	.00	.34	0.
11 JAN	.00	.34	0.
12 JAN	.00	.34	0.
13 JAN	.00	.52	0.
14 JAN	.00	.89	0.
15 JAN	.00	.89	0.
16 JAN	.00	.58	0.
17 JAN	.00	.23	0.
18 JAN	.00	.23	0.
19 JAN	.00	.23	0.
20 JAN	.00	.37	0.
21 JAN	.00	.58	0.
22 JAN	.00	.34	0.
23 JAN	.00	.24	0.
24 JAN	.00	.23	0.
25 JAN	.00	.43	0.
26 JAN	.00	.23	0.
27 JAN	.00	.44	0.
28 JAN	.00	.47	0.
29 JAN	.00	.40	0.
30 JAN	.00	.32	0.
31 JAN	.00	.45	0.
1 FEB	.00	.45	0.
2 FEB	.00	.45	0.
3 FEB	.00	.59	0.
4 FEB	.00	.55	0.
5 FEB	.00	.58	0.
6 FEB	.00	.47	0.
7 FEB	.00	.45	0.
8 FEB	.00	.45	0.
9 FEB	.00	.45	0.
10 FEB	.00	.52	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	.72	0.
12 FEB	.00	.79	0.
13 FEB	.00	.64	0.
14 FEB	.00	.45	0.
15 FEB	.00	.45	0.
16 FEB	.00	.45	0.
17 FEB	.00	.45	0.
18 FEB	.00	.45	0.
19 FEB	.00	.45	0.
20 FEB	.00	.45	0.
21 FEB	.00	.47	0.
22 FEB	.00	.46	0.
23 FEB	.00	.45	0.
24 FEB	.00	.45	0.
25 FEB	.00	.49	0.
26 FEB	.00	.57	0.
27 FEB	.00	.54	0.
28 FEB	.00	.55	0.
29 FEB	.00	.53	0.
1 MAR	.00	.51	0.
2 MAR	.00	.67	0.
3 MAR	.00	.62	0.
4 MAR	.00	.66	0.
5 MAR	.00	.68	0.
6 MAR	.00	.59	0.
7 MAR	.00	.57	0.
8 MAR	.00	.45	0.
9 MAR	.00	.45	0.
10 MAR	.00	.45	0.
11 MAR	.00	.46	0.
12 MAR	.00	.45	0.
13 MAR	.00	.38	0.
14 MAR	.00	.34	0.
15 MAR	.00	.34	0.
16 MAR	.00	.34	0.
17 MAR	.00	.34	0.
18 MAR	.00	.34	0.
19 MAR	.00	.34	0.
20 MAR	.00	.34	0.
21 MAR	.00	.34	0.
22 MAR	.00	.34	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	.34	0.
24 MAR	.00	.34	0.
25 MAR	.00	.34	0.
26 MAR	.00	.34	0.
27 MAR	.00	.34	0.
28 MAR	.00	.34	0.
29 MAR	.00	.34	0.
30 MAR	.00	.34	0.
31 MAR	.00	.34	0.
1 APR	.00	.34	0.
2 APR	.00	.34	0.
3 APR	.00	.34	0.
4 APR	.00	.34	0.
5 APR	.00	.34	0.
6 APR	.00	.54	0.
7 APR	.00	.61	0.
8 APR	.00	.41	0.
9 APR	.00	.34	0.
10 APR	.00	.34	0.
11 APR	.00	.35	0.
12 APR	.00	.34	0.
13 APR	.00	.48	0.
14 APR	.00	.65	0.
15 APR	.00	.45	0.
16 APR	.00	.45	0.
17 APR	.00	.43	0.
18 APR	.00	.63	0.
19 APR	.00	.78	0.
20 APR	.00	.79	0.
21 APR	.00	.87	0.
22 APR*	.00	.94	0.
23 APR	.19	1.12	213.
24 APR	.37	.95	352.
25 APR	.56	.98	549.
26 APR	.75	1.06	795.
27 APR	.94	.84	790.
28 APR	1.12	.84	941.
29 APR*	1.31	.92	1205.
30 APR	1.12	1.00	1120.
1 MAY	.94	.49	461.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.75	.34	255.
3 MAY	.56	.35	196.
4 MAY	.37	.46	170.
5 MAY	.19	.45	86.
6 MAY*	.00	.29	0.
7 MAY	.09	.34	31.
8 MAY	.19	.34	65.
9 MAY	.28	.34	95.
10 MAY	.38	.40	152.
11 MAY	.47	.79	371.
12 MAY	.57	.96	547.
13 MAY*	.66	1.02	673.
14 MAY	.57	1.15	656.
15 MAY	.47	1.15	541.
16 MAY	.38	1.15	437.
17 MAY	.28	1.06	297.
18 MAY	.19	1.06	201.
19 MAY	.09	1.10	99.
20 MAY*	.00	1.23	0.
21 MAY	.09	1.34	121.
22 MAY	.19	1.40	266.
23 MAY	.28	1.34	375.
24 MAY	.38	1.17	445.
25 MAY	.47	1.03	484.
26 MAY	.57	1.11	633.
27 MAY*	.66	1.35	891.
28 MAY	.57	1.31	747.
29 MAY	.47	1.19	559.
30 MAY	.38	1.43	543.
31 MAY	.28	1.15	322.
1 JUN	.19	1.11	211.
2 JUN	.09	1.23	111.
3 JUN*	.00	1.60	0.
4 JUN	.00	1.57	0.
5 JUN	.00	1.55	0.
6 JUN*	.00	1.61	0.
7 JUN	.00	1.12	0.
8 JUN	.00	.97	0.
9 JUN	.00	1.20	0.
10 JUN*	.00	1.24	0.
11 JUN	.00	1.38	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	.00	1.38	0.
13 JUN*	.00	1.18	0.
14 JUN	.00	1.05	0.
15 JUN	.00	1.05	0.
16 JUN	.00	.93	0.
17 JUN*	.00	.61	0.
18 JUN	.00	.70	0.
19 JUN	.00	1.02	0.
20 JUN*	.00	.86	0.
21 JUN	.00	.96	0.
22 JUN	.00	.82	0.
23 JUN	.00	1.04	0.
24 JUN*	.00	1.06	0.
25 JUN	.00	1.34	0.
26 JUN	.00	1.43	0.
27 JUN	.00	1.27	0.
28 JUN	.00	1.28	0.
29 JUN	.00	1.25	0.
30 JUN	.00	1.14	0.
1 JUL*	.00	1.16	0.
2 JUL	.00	1.16	0.
3 JUL	.00	1.16	0.
4 JUL	.00	.73	0.
5 JUL	.00	.62	0.
6 JUL	.00	.62	0.
7 JUL	.00	1.08	0.
8 JUL*	.00	1.27	0.
9 JUL	.00	1.57	0.
10 JUL	.00	1.61	0.
11 JUL	.00	1.70	0.
12 JUL	.00	1.39	0.
13 JUL	.00	1.35	0.
14 JUL	.00	1.60	0.
15 JUL*	.00	1.72	0.
16 JUL	.00	1.70	0.
17 JUL	.00	1.69	0.
18 JUL	.00	1.72	0.
19 JUL	.00	1.72	0.
20 JUL	.00	1.72	0.
21 JUL	.00	1.72	0.
22 JUL*	.00	1.67	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	1.72	0.
24 JUL	.00	1.72	0.
25 JUL	.00	1.68	0.
26 JUL	.00	1.69	0.
27 JUL	.00	1.72	0.
28 JUL	.00	1.72	0.
29 JUL*	.00	1.70	0.
30 JUL	.00	1.53	0.
31 JUL	.00	1.60	0.
1 AUG	.00	1.68	0.
2 AUG	.00	1.70	0.
3 AUG	.00	1.66	0.
4 AUG	.00	1.71	0.
5 AUG*	.00	1.67	0.
6 AUG	.00	1.72	0.
7 AUG	.00	1.72	0.
8 AUG	.00	1.72	0.
9 AUG	.00	1.72	0.
10 AUG	.00	1.67	0.
11 AUG	.00	1.70	0.
12 AUG*	.00	1.72	0.
13 AUG	.00	1.72	0.
14 AUG	.00	1.70	0.
15 AUG	.00	1.72	0.
16 AUG	.00	1.56	0.
17 AUG	.00	1.30	0.
18 AUG	.00	1.37	0.
19 AUG*	.00	1.63	0.
20 AUG	.00	1.72	0.
21 AUG	.00	1.35	0.
22 AUG	.00	1.28	0.
23 AUG	.00	.86	0.
24 AUG	.00	.84	0.
25 AUG	.00	1.16	0.
26 AUG*	.00	1.56	0.
27 AUG	.00	1.48	0.
28 AUG	.00	1.48	0.
29 AUG	.00	1.58	0.
30 AUG	.00	.85	0.
31 AUG	.00	.88	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	.50	0.
2 JAN	.00	.50	0.
3 JAN	.00	.32	0.
4 JAN	.00	.23	0.
5 JAN	.00	.23	0.
6 JAN	.00	.23	0.
7 JAN	.00	.25	0.
8 JAN	.00	.34	0.
9 JAN	.00	.34	0.
10 JAN	.00	.34	0.
11 JAN	.00	.34	0.
12 JAN	.00	.34	0.
13 JAN	.00	.52	0.
14 JAN	.00	.89	0.
15 JAN	.00	.89	0.
16 JAN	.00	.58	0.
17 JAN	.00	.23	0.
18 JAN	.00	.23	0.
19 JAN	.00	.23	0.
20 JAN	.00	.37	0.
21 JAN	.00	.58	0.
22 JAN	.00	.34	0.
23 JAN	.00	.24	0.
24 JAN	.00	.23	0.
25 JAN	.00	.43	0.
26 JAN	.00	.23	0.
27 JAN	.00	.44	0.
28 JAN	.00	.47	0.
29 JAN	.00	.40	0.
30 JAN	.00	.32	0.
31 JAN	.00	.45	0.
1 FEB	.00	.45	0.
2 FEB	.00	.45	0.
3 FEB	.00	.59	0.
4 FEB	.00	.55	0.
5 FEB	.00	.58	0.
6 FEB	.00	.47	0.
7 FEB	.00	.45	0.
8 FEB	.00	.45	0.
9 FEB	.00	.45	0.
10 FEB	.00	.52	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	.72	0.
12 FEB	.00	.79	0.
13 FEB	.00	.64	0.
14 FEB	.00	.45	0.
15 FEB	.00	.45	0.
16 FEB	.00	.45	0.
17 FEB	.00	.45	0.
18 FEB	.00	.45	0.
19 FEB	.00	.45	0.
20 FEB	.00	.45	0.
21 FEB	.00	.47	0.
22 FEB	.00	.46	0.
23 FEB	.00	.45	0.
24 FEB	.00	.45	0.
25 FEB	.00	.49	0.
26 FEB	.00	.57	0.
27 FEB	.00	.54	0.
28 FEB	.00	.55	0.
29 FEB	.00	.53	0.
1 MAR	.00	.51	0.
2 MAR	.00	.67	0.
3 MAR	.00	.62	0.
4 MAR	.00	.66	0.
5 MAR	.00	.68	0.
6 MAR	.00	.59	0.
7 MAR	.00	.57	0.
8 MAR	.00	.45	0.
9 MAR	.00	.45	0.
10 MAR	.00	.45	0.
11 MAR	.00	.46	0.
12 MAR	.00	.45	0.
13 MAR	.00	.38	0.
14 MAR	.00	.34	0.
15 MAR	.00	.34	0.
16 MAR	.00	.34	0.
17 MAR	.00	.34	0.
18 MAR	.00	.34	0.
19 MAR	.00	.34	0.
20 MAR	.00	.34	0.
21 MAR	.00	.34	0.
22 MAR	.00	.34	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	.34	0.
24 MAR	.00	.34	0.
25 MAR	.00	.34	0.
26 MAR	.00	.34	0.
27 MAR	.00	.34	0.
28 MAR	.00	.34	0.
29 MAR	.00	.34	0.
30 MAR	.00	.34	0.
31 MAR	.00	.34	0.
1 APR	.00	.34	0.
2 APR	.00	.34	0.
3 APR	.00	.34	0.
4 APR	.00	.34	0.
5 APR	.00	.34	0.
6 APR	.00	.54	0.
7 APR	.00	.61	0.
8 APR	.00	.41	0.
9 APR	.00	.34	0.
10 APR	.00	.34	0.
11 APR	.00	.35	0.
12 APR	.00	.34	0.
13 APR	.00	.48	0.
14 APR	.00	.65	0.
15 APR	.00	.45	0.
16 APR	.00	.45	0.
17 APR	.00	.43	0.
18 APR	.00	.63	0.
19 APR	.00	.78	0.
20 APR	.00	.79	0.
21 APR	.00	.87	0.
22 APR*	.00	.94	0.
23 APR	.00	1.12	0.
24 APR	.00	.95	0.
25 APR	.00	.98	0.
26 APR	.00	1.06	0.
27 APR	.00	.84	0.
28 APR	.00	.84	0.
29 APR*	.00	.92	0.
30 APR	.00	1.00	0.
1 MAY	.00	.49	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	.34	0.
3 MAY	.00	.35	0.
4 MAY	.00	.46	0.
5 MAY	.00	.45	0.
6 MAY*	.00	.29	0.
7 MAY	.10	.34	34.
8 MAY	.19	.34	65.
9 MAY	.29	.34	99.
10 MAY	.38	.40	152.
11 MAY	.48	.79	379.
12 MAY	.57	.96	547.
13 MAY*	.67	1.02	683.
14 MAY	.57	1.15	656.
15 MAY	.48	1.15	552.
16 MAY	.38	1.15	437.
17 MAY	.29	1.06	307.
18 MAY	.19	1.06	201.
19 MAY	.10	1.10	110.
20 MAY*	.00	1.23	0.
21 MAY	.00	1.34	0.
22 MAY	.00	1.40	0.
23 MAY	.00	1.34	0.
24 MAY	.00	1.17	0.
25 MAY	.00	1.03	0.
26 MAY	.00	1.11	0.
27 MAY*	.00	1.35	0.
28 MAY	.00	1.31	0.
29 MAY	.00	1.19	0.
30 MAY	.00	1.43	0.
31 MAY	.00	1.15	0.
1 JUN	.00	1.11	0.
2 JUN	.00	1.23	0.
3 JUN*	.00	1.60	0.
4 JUN	.00	1.57	0.
5 JUN	.00	1.55	0.
6 JUN*	.00	1.61	0.
7 JUN	.00	1.12	0.
8 JUN	.00	.97	0.
9 JUN	.00	1.20	0.
10 JUN*	.00	1.24	0.
11 JUN	.00	1.38	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	.00	1.38	0.
13 JUN*	.00	1.18	0.
14 JUN	.00	1.05	0.
15 JUN	.00	1.05	0.
16 JUN	.00	.93	0.
17 JUN*	.00	.61	0.
18 JUN	.00	.70	0.
19 JUN	.00	1.02	0.
20 JUN*	.00	.86	0.
21 JUN	.00	.96	0.
22 JUN	.00	.82	0.
23 JUN	.00	1.04	0.
24 JUN*	.00	1.06	0.
25 JUN	.00	1.34	0.
26 JUN	.00	1.43	0.
27 JUN	.00	1.27	0.
28 JUN	.00	1.28	0.
29 JUN	.00	1.25	0.
30 JUN	.00	1.14	0.
1 JUL*	.00	1.16	0.
2 JUL	.00	1.16	0.
3 JUL	.00	1.16	0.
4 JUL	.00	.73	0.
5 JUL	.00	.62	0.
6 JUL	.00	.62	0.
7 JUL	.00	1.08	0.
8 JUL*	.00	1.27	0.
9 JUL	.00	1.57	0.
10 JUL	.00	1.61	0.
11 JUL	.00	1.70	0.
12 JUL	.00	1.39	0.
13 JUL	.00	1.35	0.
14 JUL	.00	1.60	0.
15 JUL*	.00	1.72	0.
16 JUL	.00	1.70	0.
17 JUL	.00	1.69	0.
18 JUL	.00	1.72	0.
19 JUL	.00	1.72	0.
20 JUL	.00	1.72	0.
21 JUL	.00	1.72	0.
22 JUL*	.00	1.67	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	1.72	0.
24 JUL	.00	1.72	0.
25 JUL	.00	1.68	0.
26 JUL	.00	1.69	0.
27 JUL	.00	1.72	0.
28 JUL	.00	1.72	0.
29 JUL*	.00	1.70	0.
30 JUL	.00	1.53	0.
31 JUL	.00	1.60	0.
1 AUG	.00	1.68	0.
2 AUG	.00	1.70	0.
3 AUG	.00	1.66	0.
4 AUG	.00	1.71	0.
5 AUG*	.00	1.67	0.
6 AUG	.00	1.72	0.
7 AUG	.00	1.72	0.
8 AUG	.00	1.72	0.
9 AUG	.00	1.72	0.
10 AUG	.00	1.67	0.
11 AUG	.00	1.70	0.
12 AUG*	.00	1.72	0.
13 AUG	.00	1.72	0.
14 AUG	.00	1.70	0.
15 AUG	.00	1.72	0.
16 AUG	.00	1.56	0.
17 AUG	.00	1.30	0.
18 AUG	.00	1.37	0.
19 AUG*	.00	1.63	0.
20 AUG	.00	1.72	0.
21 AUG	.00	1.35	0.
22 AUG	.00	1.28	0.
23 AUG	.00	.86	0.
24 AUG	.00	.84	0.
25 AUG	.00	1.16	0.
26 AUG*	.00	1.56	0.
27 AUG	.00	1.48	0.
28 AUG	.00	1.48	0.
29 AUG	.00	1.58	0.
30 AUG	.00	.85	0.
31 AUG	.00	.88	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	.50	0.
2 JAN	.00	.50	0.
3 JAN	.00	.32	0.
4 JAN	.00	.23	0.
5 JAN	.00	.23	0.
6 JAN	.00	.23	0.
7 JAN	.00	.25	0.
8 JAN	.00	.34	0.
9 JAN	.00	.34	0.
10 JAN	.00	.34	0.
11 JAN	.00	.34	0.
12 JAN	.00	.34	0.
13 JAN	.00	.52	0.
14 JAN	.00	.89	0.
15 JAN	.00	.89	0.
16 JAN	.00	.58	0.
17 JAN	.00	.23	0.
18 JAN	.00	.23	0.
19 JAN	.00	.23	0.
20 JAN	.00	.37	0.
21 JAN	.00	.58	0.
22 JAN	.00	.34	0.
23 JAN	.00	.24	0.
24 JAN	.00	.23	0.
25 JAN	.00	.43	0.
26 JAN	.00	.23	0.
27 JAN	.00	.44	0.
28 JAN	.00	.47	0.
29 JAN	.00	.40	0.
30 JAN	.00	.32	0.
31 JAN	.00	.45	0.
1 FEB	.00	.45	0.
2 FEB	.00	.45	0.
3 FEB	.00	.59	0.
4 FEB	.00	.55	0.
5 FEB	.00	.58	0.
6 FEB	.00	.47	0.
7 FEB	.00	.45	0.
8 FEB	.00	.45	0.
9 FEB	.00	.45	0.
10 FEB	.00	.52	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	.72	0.
12 FEB	.00	.79	0.
13 FEB	.00	.64	0.
14 FEB	.00	.45	0.
15 FEB	.00	.45	0.
16 FEB	.00	.45	0.
17 FEB	.00	.45	0.
18 FEB	.00	.45	0.
19 FEB	.00	.45	0.
20 FEB	.00	.45	0.
21 FEB	.00	.47	0.
22 FEB	.00	.46	0.
23 FEB	.00	.45	0.
24 FEB	.00	.45	0.
25 FEB	.00	.49	0.
26 FEB	.00	.57	0.
27 FEB	.00	.54	0.
28 FEB	.00	.55	0.
29 FEB	.00	.53	0.
1 MAR	.00	.51	0.
2 MAR	.00	.67	0.
3 MAR	.00	.62	0.
4 MAR	.00	.66	0.
5 MAR	.00	.68	0.
6 MAR	.00	.59	0.
7 MAR	.00	.57	0.
8 MAR	.00	.45	0.
9 MAR	.00	.45	0.
10 MAR	.00	.45	0.
11 MAR	.00	.46	0.
12 MAR	.00	.45	0.
13 MAR	.00	.38	0.
14 MAR	.00	.34	0.
15 MAR	.00	.34	0.
16 MAR	.00	.34	0.
17 MAR	.00	.34	0.
18 MAR	.00	.34	0.
19 MAR	.00	.34	0.
20 MAR	.00	.34	0.
21 MAR	.00	.34	0.
22 MAR	.00	.34	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : PY-S'C
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	.34	0.
24 MAR	.00	.34	0.
25 MAR	.00	.34	0.
26 MAR	.00	.34	0.
27 MAR	.00	.34	0.
28 MAR	.00	.34	0.
29 MAR	.00	.34	0.
30 MAR	.00	.34	0.
31 MAR	.00	.34	0.
1 APR	.00	.34	0.
2 APR	.00	.34	0.
3 APR	.00	.34	0.
4 APR	.00	.34	0.
5 APR	.00	.34	0.
6 APR	.00	.54	0.
7 APR	.00	.61	0.
8 APR	.00	.41	0.
9 APR	.00	.34	0.
10 APR	.00	.34	0.
11 APR	.00	.35	0.
12 APR	.00	.34	0.
13 APR	.00	.48	0.
14 APR	.00	.65	0.
15 APR	.00	.45	0.
16 APR	.00	.45	0.
17 APR	.00	.43	0.
18 APR	.00	.63	0.
19 APR	.00	.78	0.
20 APR	.00	.79	0.
21 APR	.00	.87	0.
22 APR*	.00	.94	0.
23 APR	.00	1.12	0.
24 APR	.00	.95	0.
25 APR	.00	.98	0.
26 APR	.00	1.06	0.
27 APR	.00	.84	0.
28 APR	.00	.84	0.
29 APR*	.00	.92	0.
30 APR	.00	1.00	0.
1 MAY	.00	.49	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : PY-S.C
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	.34	0.
3 MAY	.00	.35	0.
4 MAY	.00	.46	0.
5 MAY	.00	.45	0.
6 MAY*	.00	.29	0.
7 MAY	.29	.34	99.
8 MAY	.57	.34	194.
9 MAY	.86	.34	292.
10 MAY	1.14	.40	456.
11 MAY	1.43	.79	1130.
12 MAY	1.71	.96	1642.
13 MAY*	2.00	1.02	2040.
14 MAY	3.10	1.15	3565.
15 MAY	4.20	1.15	4830.
16 MAY	5.30	1.15	6095.
17 MAY	6.41	1.06	6795.
18 MAY	7.51	1.06	7961.
19 MAY	8.61	1.10	9471.
20 MAY*	9.71	1.23	11943.
21 MAY	8.70	1.34	11658.
22 MAY	7.69	1.40	10766.
23 MAY	6.68	1.34	8951.
24 MAY	5.67	1.17	6634.
25 MAY	4.66	1.03	4800.
26 MAY	3.65	1.11	4052.
27 MAY*	2.64	1.35	3564.
28 MAY	3.78	1.31	4952.
29 MAY	4.91	1.19	5843.
30 MAY	6.05	1.43	8652.
31 MAY	7.18	1.15	8257.
1 JUN	8.32	1.11	9235.
2 JUN	9.45	1.23	11624.
3 JUN*	10.59	1.60	16944.
4 JUN	18.51	1.57	29061.
5 JUN	26.44	1.55	40982.
6 JUN*	34.36	1.61	55320.
7 JUN	31.78	1.12	35594.
8 JUN	29.20	.97	28324.
9 JUN	26.62	1.20	31944.
10 JUN*	24.04	1.24	29810.
11 JUN	23.70	1.38	32706.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	23.37	1.38	32251.
13 JUN*	23.03	1.18	27175.
14 JUN	17.61	1.05	18491.
15 JUN	12.20	1.05	12810.
16 JUN	6.78	.93	6305.
17 JUN*	1.36	.61	830.
18 JUN	1.13	.70	791.
19 JUN	.90	1.02	918.
20 JUN*	.67	.86	576.
21 JUN	.67	.96	643.
22 JUN	.67	.82	549.
23 JUN	.67	1.04	697.
24 JUN*	.67	1.06	710.
25 JUN	.57	1.34	764.
26 JUN	.48	1.43	686.
27 JUN	.38	1.27	483.
28 JUN	.29	1.28	371.
29 JUN	.19	1.25	238.
30 JUN	.10	1.14	114.
1 JUL*	.00	1.16	0.
2 JUL	.00	1.16	0.
3 JUL	.00	1.16	0.
4 JUL	.00	.73	0.
5 JUL	.00	.62	0.
6 JUL	.00	.62	0.
7 JUL	.00	1.08	0.
8 JUL*	.00	1.27	0.
9 JUL	.00	1.57	0.
10 JUL	.00	1.61	0.
11 JUL	.00	1.70	0.
12 JUL	.00	1.39	0.
13 JUL	.00	1.35	0.
14 JUL	.00	1.60	0.
15 JUL*	.00	1.72	0.
16 JUL	.00	1.70	0.
17 JUL	.00	1.69	0.
18 JUL	.00	1.72	0.
19 JUL	.00	1.72	0.
20 JUL	.00	1.72	0.
21 JUL	.00	1.72	0.
22 JUL*	.00	1.67	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : PY-S C
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	1.72	0.
24 JUL	.00	1.72	0.
25 JUL	.00	1.68	0.
26 JUL	.00	1.69	0.
27 JUL	.00	1.72	0.
28 JUL	.00	1.72	0.
29 JUL*	.00	1.70	0.
30 JUL	.00	1.53	0.
31 JUL	.00	1.60	0.
1 AUG	.00	1.68	0.
2 AUG	.00	1.70	0.
3 AUG	.00	1.66	0.
4 AUG	.00	1.71	0.
5 AUG*	.00	1.67	0.
6 AUG	.00	1.72	0.
7 AUG	.00	1.72	0.
8 AUG	.00	1.72	0.
9 AUG	.00	1.72	0.
10 AUG	.00	1.67	0.
11 AUG	.00	1.70	0.
12 AUG*	.00	1.72	0.
13 AUG	.00	1.72	0.
14 AUG	.00	1.70	0.
15 AUG	.00	1.72	0.
16 AUG	.00	1.56	0.
17 AUG	.00	1.30	0.
18 AUG	.00	1.37	0.
19 AUG*	.00	1.63	0.
20 AUG	.00	1.72	0.
21 AUG	.00	1.35	0.
22 AUG	.00	1.28	0.
23 AUG	.00	.86	0.
24 AUG	.00	.84	0.
25 AUG	.00	1.16	0.
26 AUG*	.00	1.56	0.
27 AUG	.00	1.48	0.
28 AUG	.00	1.48	0.
29 AUG	.00	1.58	0.
30 AUG	.00	.85	0.
31 AUG	.00	.88	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	.50	0.
2 JAN	.00	.50	0.
3 JAN	.00	.32	0.
4 JAN	.00	.23	0.
5 JAN	.00	.23	0.
6 JAN	.00	.23	0.
7 JAN	.00	.25	0.
8 JAN	.00	.34	0.
9 JAN	.00	.34	0.
10 JAN	.00	.34	0.
11 JAN	.00	.34	0.
12 JAN	.00	.34	0.
13 JAN	.00	.52	0.
14 JAN	.00	.89	0.
15 JAN	.00	.89	0.
16 JAN	.00	.58	0.
17 JAN	.00	.23	0.
18 JAN	.00	.23	0.
19 JAN	.00	.23	0.
20 JAN	.00	.37	0.
21 JAN	.00	.58	0.
22 JAN	.00	.34	0.
23 JAN	.00	.24	0.
24 JAN	.00	.23	0.
25 JAN	.00	.43	0.
26 JAN	.00	.23	0.
27 JAN	.00	.44	0.
28 JAN	.00	.47	0.
29 JAN	.00	.40	0.
30 JAN	.00	.32	0.
31 JAN	.00	.45	0.
1 FEB	.00	.45	0.
2 FEB	.00	.45	0.
3 FEB	.00	.59	0.
4 FEB	.00	.55	0.
5 FEB	.00	.58	0.
6 FEB	.00	.47	0.
7 FEB	.00	.45	0.
8 FEB	.00	.45	0.
9 FEB	.00	.45	0.
10 FEB	.00	.52	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	.72	0.
12 FEB	.00	.79	0.
13 FEB	.00	.64	0.
14 FEB	.00	.45	0.
15 FEB	.00	.45	0.
16 FEB	.00	.45	0.
17 FEB	.00	.45	0.
18 FEB	.00	.45	0.
19 FEB	.00	.45	0.
20 FEB	.00	.45	0.
21 FEB	.00	.47	0.
22 FEB	.00	.46	0.
23 FEB	.00	.45	0.
24 FEB	.00	.45	0.
25 FEB	.00	.49	0.
26 FEB	.00	.57	0.
27 FEB	.00	.54	0.
28 FEB	.00	.55	0.
29 FEB	.00	.53	0.
1 MAR	.00	.51	0.
2 MAR	.00	.67	0.
3 MAR	.00	.62	0.
4 MAR	.00	.66	0.
5 MAR	.00	.68	0.
6 MAR	.00	.59	0.
7 MAR	.00	.57	0.
8 MAR	.00	.45	0.
9 MAR	.00	.45	0.
10 MAR	.00	.45	0.
11 MAR	.00	.46	0.
12 MAR	.00	.45	0.
13 MAR	.00	.38	0.
14 MAR	.00	.34	0.
15 MAR	.00	.34	0.
16 MAR	.00	.34	0.
17 MAR	.00	.34	0.
18 MAR	.00	.34	0.
19 MAR	.00	.34	0.
20 MAR	.00	.34	0.
21 MAR	.00	.34	0.
22 MAR	.00	.34	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	.34	0.
24 MAR	.00	.34	0.
25 MAR	.00	.34	0.
26 MAR	.00	.34	0.
27 MAR	.00	.34	0.
28 MAR	.00	.34	0.
29 MAR	.00	.34	0.
30 MAR	.00	.34	0.
31 MAR	.00	.34	0.
1 APR	.00	.34	0.
2 APR	.00	.34	0.
3 APR	.00	.34	0.
4 APR	.00	.34	0.
5 APR	.00	.34	0.
6 APR	.00	.54	0.
7 APR	.00	.61	0.
8 APR	.00	.41	0.
9 APR	.00	.34	0.
10 APR	.00	.34	0.
11 APR	.00	.35	0.
12 APR	.00	.34	0.
13 APR	.00	.48	0.
14 APR	.00	.65	0.
15 APR	.00	.45	0.
16 APR	.00	.45	0.
17 APR	.00	.43	0.
18 APR	.00	.63	0.
19 APR	.00	.78	0.
20 APR	.00	.79	0.
21 APR	.00	.87	0.
22 APR*	.00	.94	0.
23 APR	.00	1.12	0.
24 APR	.00	.95	0.
25 APR	.00	.98	0.
26 APR	.00	1.06	0.
27 APR	.00	.84	0.
28 APR	.00	.84	0.
29 APR*	.00	.92	0.
30 APR	.00	1.00	0.
1 MAY	.00	.49	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	.34	0.
3 MAY	.00	.35	0.
4 MAY	.00	.46	0.
5 MAY	.00	.45	0.
6 MAY*	.00	.29	0.
7 MAY	.00	.34	0.
8 MAY	.00	.34	0.
9 MAY	.00	.34	0.
10 MAY	.00	.40	0.
11 MAY	.00	.79	0.
12 MAY	.00	.96	0.
13 MAY*	.00	1.02	0.
14 MAY	.00	1.15	0.
15 MAY	.00	1.15	0.
16 MAY	.00	1.15	0.
17 MAY	.00	1.06	0.
18 MAY	.00	1.06	0.
19 MAY	.00	1.10	0.
20 MAY*	.00	1.23	0.
21 MAY	.00	1.34	0.
22 MAY	.00	1.40	0.
23 MAY	.00	1.34	0.
24 MAY	.00	1.17	0.
25 MAY	.00	1.03	0.
26 MAY	.00	1.11	0.
27 MAY*	.00	1.35	0.
28 MAY	.00	1.31	0.
29 MAY	.00	1.19	0.
30 MAY	.00	1.43	0.
31 MAY	.00	1.15	0.
1 JUN	.00	1.11	0.
2 JUN	.00	1.23	0.
3 JUN*	.00	1.60	0.
4 JUN	.00	1.57	0.
5 JUN	.00	1.55	0.
6 JUN*	.00	1.61	0.
7 JUN	.49	1.12	549.
8 JUN	.98	.97	951.
9 JUN	1.46	1.20	1752.
10 JUN*	1.95	1.24	2418.
11 JUN	2.44	1.38	3367.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	2.92	1.38	4030.
13 JUN*	3.41	1.18	4024.
14 JUN	3.06	1.05	3213.
15 JUN	2.72	1.05	2856.
16 JUN	2.37	.93	2204.
17 JUN*	2.02	.61	1232.
18 JUN	1.81	.70	1267.
19 JUN	1.59	1.02	1622.
20 JUN*	1.38	.86	1187.
21 JUN	1.04	.96	998.
22 JUN	.69	.82	566.
23 JUN	.35	1.04	364.
24 JUN*	.00	1.06	0.
25 JUN	.28	1.34	375.
26 JUN	.56	1.43	801.
27 JUN	.84	1.27	1067.
28 JUN	1.13	1.28	1446.
29 JUN	1.41	1.25	1763.
30 JUN	1.69	1.14	1927.
1 JUL*	1.97	1.16	2285.
2 JUL	2.14	1.16	2482.
3 JUL	2.32	1.16	2691.
4 JUL	2.49	.73	1818.
5 JUL	2.67	.62	1655.
6 JUL	2.84	.62	1761.
7 JUL	3.02	1.08	3262.
8 JUL*	3.19	1.27	4051.
9 JUL	3.01	1.57	4726.
10 JUL	2.83	1.61	4556.
11 JUL	2.65	1.70	4505.
12 JUL	2.48	1.39	3447.
13 JUL	2.30	1.35	3105.
14 JUL	2.12	1.60	3392.
15 JUL*	1.94	1.72	3337.
16 JUL	1.66	1.70	2822.
17 JUL	1.39	1.69	2349.
18 JUL	1.11	1.72	1909.
19 JUL	.83	1.72	1428.
20 JUL	.55	1.72	946.
21 JUL	.28	1.72	482.
22 JUL*	.00	1.67	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : AMERICAN SHAD
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	1.72	0.
24 JUL	.00	1.72	0.
25 JUL	.00	1.68	0.
26 JUL	.00	1.69	0.
27 JUL	.00	1.72	0.
28 JUL	.00	1.72	0.
29 JUL*	.00	1.70	0.
30 JUL	.10	1.53	153.
31 JUL	.20	1.60	320.
1 AUG	.30	1.68	504.
2 AUG	.39	1.70	663.
3 AUG	.49	1.66	813.
4 AUG	.59	1.71	1009.
5 AUG*	.69	1.67	1152.
6 AUG	.59	1.72	1015.
7 AUG	.49	1.72	843.
8 AUG	.39	1.72	671.
9 AUG	.30	1.72	516.
10 AUG	.20	1.67	334.
11 AUG	.10	1.70	170.
12 AUG*	.00	1.72	0.
13 AUG	.00	1.72	0.
14 AUG	.00	1.70	0.
15 AUG	.00	1.72	0.
16 AUG	.00	1.56	0.
17 AUG	.00	1.30	0.
18 AUG	.00	1.37	0.
19 AUG*	.00	1.63	0.
20 AUG	.00	1.72	0.
21 AUG	.00	1.35	0.
22 AUG	.00	1.28	0.
23 AUG	.00	.86	0.
24 AUG	.00	.84	0.
25 AUG	.00	1.16	0.
26 AUG*	.00	1.56	0.
27 AUG	.00	1.48	0.
28 AUG	.00	1.48	0.
29 AUG	.00	1.58	0.
30 AUG	.00	.85	0.
31 AUG	.00	.88	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	.50	0.
2 JAN	.00	.50	0.
3 JAN	.00	.32	0.
4 JAN	.00	.23	0.
5 JAN	.00	.23	0.
6 JAN	.00	.23	0.
7 JAN	.00	.25	0.
8 JAN	.00	.34	0.
9 JAN	.00	.34	0.
10 JAN	.00	.34	0.
11 JAN	.00	.34	0.
12 JAN	.00	.34	0.
13 JAN	.00	.52	0.
14 JAN	.00	.89	0.
15 JAN	.00	.89	0.
16 JAN	.00	.58	0.
17 JAN	.00	.23	0.
18 JAN	.00	.23	0.
19 JAN	.00	.23	0.
20 JAN	.00	.37	0.
21 JAN	.00	.58	0.
22 JAN	.00	.34	0.
23 JAN	.00	.24	0.
24 JAN	.00	.23	0.
25 JAN	.00	.43	0.
26 JAN	.00	.23	0.
27 JAN	.00	.44	0.
28 JAN	.00	.47	0.
29 JAN	.00	.40	0.
30 JAN	.00	.32	0.
31 JAN	.00	.45	0.
1 FEB	.00	.45	0.
2 FEB	.00	.45	0.
3 FEB	.00	.59	0.
4 FEB	.00	.55	0.
5 FEB	.00	.58	0.
6 FEB	.00	.47	0.
7 FEB	.00	.45	0.
8 FEB	.00	.45	0.
9 FEB	.00	.45	0.
10 FEB	.00	.52	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	.72	0.
12 FEB	.00	.79	0.
13 FEB	.00	.64	0.
14 FEB	.00	.45	0.
15 FEB	.00	.45	0.
16 FEB	.00	.45	0.
17 FEB	.00	.45	0.
18 FEB	.00	.45	0.
19 FEB	.00	.45	0.
20 FEB	.00	.45	0.
21 FEB	.00	.47	0.
22 FEB	.00	.46	0.
23 FEB	.00	.45	0.
24 FEB	.00	.45	0.
25 FEB	.00	.49	0.
26 FEB	.00	.57	0.
27 FEB	.00	.54	0.
28 FEB	.00	.55	0.
29 FEB	.00	.53	0.
1 MAR	.00	.51	0.
2 MAR	.00	.67	0.
3 MAR	.00	.62	0.
4 MAR	.00	.66	0.
5 MAR	.00	.68	0.
6 MAR	.00	.59	0.
7 MAR	.00	.57	0.
8 MAR	.00	.45	0.
9 MAR	.00	.45	0.
10 MAR	.00	.45	0.
11 MAR	.00	.46	0.
12 MAR	.00	.45	0.
13 MAR	.00	.38	0.
14 MAR	.00	.34	0.
15 MAR	.00	.34	0.
16 MAR	.00	.34	0.
17 MAR	.00	.34	0.
18 MAR	.00	.34	0.
19 MAR	.00	.34	0.
20 MAR	.00	.34	0.
21 MAR	.00	.34	0.
22 MAR	.00	.34	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	.34	0.
24 MAR	.00	.34	0.
25 MAR	.00	.34	0.
26 MAR	.00	.34	0.
27 MAR	.00	.34	0.
28 MAR	.00	.34	0.
29 MAR	.00	.34	0.
30 MAR	.00	.34	0.
31 MAR	.00	.34	0.
1 APR	.00	.34	0.
2 APR	.00	.34	0.
3 APR	.00	.34	0.
4 APR	.00	.34	0.
5 APR	.00	.34	0.
6 APR	.00	.54	0.
7 APR	.00	.61	0.
8 APR	.00	.41	0.
9 APR	.00	.34	0.
10 APR	.00	.34	0.
11 APR	.00	.35	0.
12 APR	.00	.34	0.
13 APR	.00	.48	0.
14 APR	.00	.65	0.
15 APR	.00	.45	0.
16 APR	.00	.45	0.
17 APR	.00	.43	0.
18 APR	.00	.63	0.
19 APR	.00	.78	0.
20 APR	.00	.79	0.
21 APR	.00	.87	0.
22 APR*	.00	.94	0.
23 APR	.00	1.12	0.
24 APR	.00	.95	0.
25 APR	.00	.98	0.
26 APR	.00	1.06	0.
27 APR	.00	.84	0.
28 APR	.00	.84	0.
29 APR*	.00	.92	0.
30 APR	.00	1.00	0.
1 MAY	.00	.49	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	.34	0.
3 MAY	.00	.35	0.
4 MAY	.00	.46	0.
5 MAY	.00	.45	0.
6 MAY*	.00	.29	0.
7 MAY	.00	.34	0.
8 MAY	.00	.34	0.
9 MAY	.00	.34	0.
10 MAY	.00	.40	0.
11 MAY	.00	.79	0.
12 MAY	.00	.96	0.
13 MAY*	.00	1.02	0.
14 MAY	.00	1.15	0.
15 MAY	.00	1.15	0.
16 MAY	.00	1.15	0.
17 MAY	.00	1.06	0.
18 MAY	.00	1.06	0.
19 MAY	.00	1.10	0.
20 MAY*	.00	1.23	0.
21 MAY	.00	1.34	0.
22 MAY	.00	1.40	0.
23 MAY	.00	1.34	0.
24 MAY	.00	1.17	0.
25 MAY	.00	1.03	0.
26 MAY	.00	1.11	0.
27 MAY*	.00	1.35	0.
28 MAY	.00	1.31	0.
29 MAY	.00	1.19	0.
30 MAY	.00	1.43	0.
31 MAY	.00	1.15	0.
1 JUN	.00	1.11	0.
2 JUN	.00	1.23	0.
3 JUN*	.00	1.60	0.
4 JUN	.00	1.57	0.
5 JUN	.00	1.55	0.
6 JUN*	.00	1.61	0.
7 JUN	.00	1.12	0.
8 JUN	.00	.97	0.
9 JUN	.00	1.20	0.
10 JUN*	.00	1.24	0.
11 JUN	.00	1.38	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./100)C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	.00	1.38	0.
13 JUN*	.00	1.18	0.
14 JUN	.00	1.05	0.
15 JUN	.00	1.05	0.
16 JUN	.00	.93	0.
17 JUN*	.00	.61	0.
18 JUN	.00	.70	0.
19 JUN	.00	1.02	0.
20 JUN*	.00	.86	0.
21 JUN	.00	.96	0.
22 JUN	.00	.82	0.
23 JUN	.00	1.04	0.
24 JUN*	.00	1.06	0.
25 JUN	.00	1.34	0.
26 JUN	.00	1.43	0.
27 JUN	.00	1.27	0.
28 JUN	.00	1.28	0.
29 JUN	.00	1.25	0.
30 JUN	.00	1.14	0.
1 JUL*	.00	1.16	0.
2 JUL	.00	1.16	0.
3 JUL	.00	1.16	0.
4 JUL	.00	.73	0.
5 JUL	.00	.62	0.
6 JUL	.00	.62	0.
7 JUL	.00	1.08	0.
8 JUL*	.00	1.27	0.
9 JUL	.00	1.57	0.
10 JUL	.00	1.61	0.
11 JUL	.00	1.70	0.
12 JUL	.00	1.39	0.
13 JUL	.00	1.35	0.
14 JUL	.00	1.60	0.
15 JUL*	.00	1.72	0.
16 JUL	.00	1.70	0.
17 JUL	.00	1.69	0.
18 JUL	.00	1.72	0.
19 JUL	.00	1.72	0.
20 JUL	.00	1.72	0.
21 JUL	.00	1.72	0.
22 JUL*	.00	1.67	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	1.72	0.
24 JUL	.00	1.72	0.
25 JUL	.00	1.68	0.
26 JUL	.00	1.69	0.
27 JUL	.00	1.72	0.
28 JUL	.00	1.72	0.
29 JUL*	.00	1.70	0.
30 JUL	.00	1.53	0.
31 JUL	.00	1.60	0.
1 AUG	.00	1.68	0.
2 AUG	.00	1.70	0.
3 AUG	.00	1.66	0.
4 AUG	.00	1.71	0.
5 AUG*	.00	1.67	0.
6 AUG	.00	1.72	0.
7 AUG	.00	1.72	0.
8 AUG	.00	1.72	0.
9 AUG	.00	1.72	0.
10 AUG	.00	1.67	0.
11 AUG	.00	1.70	0.
12 AUG*	.00	1.72	0.
13 AUG	.00	1.72	0.
14 AUG	.00	1.70	0.
15 AUG	.00	1.72	0.
16 AUG	.00	1.56	0.
17 AUG	.00	1.30	0.
18 AUG	.00	1.37	0.
19 AUG*	.00	1.63	0.
20 AUG	.00	1.72	0.
21 AUG	.00	1.35	0.
22 AUG	.00	1.28	0.
23 AUG	.00	.86	0.
24 AUG	.00	.84	0.
25 AUG	.00	1.16	0.
26 AUG*	.00	1.56	0.
27 AUG	.00	1.48	0.
28 AUG	.00	1.48	0.
29 AUG	.00	1.58	0.
30 AUG	.00	.85	0.
31 AUG	.00	.88	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	.50	0.
2 JAN	.00	.50	0.
3 JAN	.00	.32	0.
4 JAN	.00	.23	0.
5 JAN	.00	.23	0.
6 JAN	.00	.23	0.
7 JAN	.00	.25	0.
8 JAN	.00	.34	0.
9 JAN	.00	.34	0.
10 JAN	.00	.34	0.
11 JAN	.00	.34	0.
12 JAN	.00	.34	0.
13 JAN	.00	.52	0.
14 JAN	.00	.89	0.
15 JAN	.00	.89	0.
16 JAN	.00	.58	0.
17 JAN	.00	.23	0.
18 JAN	.00	.23	0.
19 JAN	.00	.23	0.
20 JAN	.00	.37	0.
21 JAN	.00	.58	0.
22 JAN	.00	.34	0.
23 JAN	.00	.24	0.
24 JAN	.00	.23	0.
25 JAN	.00	.43	0.
26 JAN	.00	.23	0.
27 JAN	.00	.44	0.
28 JAN	.00	.47	0.
29 JAN	.00	.40	0.
30 JAN	.00	.32	0.
31 JAN	.00	.45	0.
1 FEB	.00	.45	0.
2 FEB	.00	.45	0.
3 FEB	.00	.59	0.
4 FEB	.00	.55	0.
5 FEB	.00	.58	0.
6 FEB	.00	.47	0.
7 FEB	.00	.45	0.
8 FEB	.00	.45	0.
9 FEB	.00	.45	0.
10 FEB	.00	.52	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	.72	0.
12 FEB	.00	.79	0.
13 FEB	.00	.64	0.
14 FEB	.00	.45	0.
15 FEB	.00	.45	0.
16 FEB	.00	.45	0.
17 FEB	.00	.45	0.
18 FEB	.00	.45	0.
19 FEB	.00	.45	0.
20 FEB	.00	.45	0.
21 FEB	.00	.47	0.
22 FEB	.00	.46	0.
23 FEB	.00	.45	0.
24 FEB	.00	.45	0.
25 FEB	.00	.49	0.
26 FEB	.00	.57	0.
27 FEB	.00	.54	0.
28 FEB	.00	.55	0.
29 FEB	.00	.53	0.
1 MAR	.00	.51	0.
2 MAR	.00	.67	0.
3 MAR	.00	.62	0.
4 MAR	.00	.66	0.
5 MAR	.00	.68	0.
6 MAR	.00	.59	0.
7 MAR	.00	.57	0.
8 MAR	.00	.45	0.
9 MAR	.00	.45	0.
10 MAR	.00	.45	0.
11 MAR	.00	.46	0.
12 MAR	.00	.45	0.
13 MAR	.00	.38	0.
14 MAR	.00	.34	0.
15 MAR	.00	.34	0.
16 MAR	.00	.34	0.
17 MAR	.00	.34	0.
18 MAR	.00	.34	0.
19 MAR	.00	.34	0.
20 MAR	.00	.34	0.
21 MAR	.00	.34	0.
22 MAR	.00	.34	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	.34	0.
24 MAR	.00	.34	0.
25 MAR	.00	.34	0.
26 MAR	.00	.34	0.
27 MAR	.00	.34	0.
28 MAR	.00	.34	0.
29 MAR	.00	.34	0.
30 MAR	.00	.34	0.
31 MAR	.00	.34	0.
1 APR	.00	.34	0.
2 APR	.00	.34	0.
3 APR	.00	.34	0.
4 APR	.00	.34	0.
5 APR	.00	.34	0.
6 APR	.00	.54	0.
7 APR	.00	.61	0.
8 APR	.00	.41	0.
9 APR	.00	.34	0.
10 APR	.00	.34	0.
11 APR	.00	.35	0.
12 APR	.00	.34	0.
13 APR	.00	.48	0.
14 APR	.00	.65	0.
15 APR	.00	.45	0.
16 APR	.00	.45	0.
17 APR	.00	.43	0.
18 APR	.00	.63	0.
19 APR	.00	.78	0.
20 APR	.00	.79	0.
21 APR	.00	.87	0.
22 APR*	.00	.94	0.
23 APR	.00	1.12	0.
24 APR	.00	.95	0.
25 APR	.00	.98	0.
26 APR	.00	1.06	0.
27 APR	.00	.84	0.
28 APR	.00	.84	0.
29 APR*	.00	.92	0.
30 APR	.00	1.00	0.
1 MAY	.00	.49	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	.34	0.
3 MAY	.00	.35	0.
4 MAY	.00	.46	0.
5 MAY	.00	.45	0.
6 MAY*	.00	.29	0.
7 MAY	.00	.34	0.
8 MAY	.00	.34	0.
9 MAY	.00	.34	0.
10 MAY	.00	.40	0.
11 MAY	.00	.79	0.
12 MAY	.00	.96	0.
13 MAY*	.00	1.02	0.
14 MAY	.00	1.15	0.
15 MAY	.00	1.15	0.
16 MAY	.00	1.15	0.
17 MAY	.00	1.06	0.
18 MAY	.00	1.06	0.
19 MAY	.00	1.10	0.
20 MAY*	.00	1.23	0.
21 MAY	.00	1.34	0.
22 MAY	.00	1.40	0.
23 MAY	.00	1.34	0.
24 MAY	.00	1.17	0.
25 MAY	.00	1.03	0.
26 MAY	.00	1.11	0.
27 MAY*	.00	1.35	0.
28 MAY	.00	1.31	0.
29 MAY	.00	1.19	0.
30 MAY	.00	1.43	0.
31 MAY	.00	1.15	0.
1 JUN	.00	1.11	0.
2 JUN	.00	1.23	0.
3 JUN*	.00	1.60	0.
4 JUN	.00	1.57	0.
5 JUN	.00	1.55	0.
6 JUN*	.00	1.61	0.
7 JUN	.00	1.12	0.
8 JUN	.00	.97	0.
9 JUN	.00	1.20	0.
10 JUN*	.00	1.24	0.
11 JUN	.00	1.38	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,NIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	.00	1.38	0.
13 JUN*	.00	1.18	0.
14 JUN	.00	1.05	0.
15 JUN	.00	1.05	0.
16 JUN	.00	.93	0.
17 JUN*	.00	.61	0.
18 JUN	.00	.70	0.
19 JUN	.00	1.02	0.
20 JUN*	.00	.86	0.
21 JUN	.00	.96	0.
22 JUN	.00	.82	0.
23 JUN	.00	1.04	0.
24 JUN*	.00	1.06	0.
25 JUN	.00	1.34	0.
26 JUN	.00	1.43	0.
27 JUN	.00	1.27	0.
28 JUN	.00	1.28	0.
29 JUN	.00	1.25	0.
30 JUN	.00	1.14	0.
1 JUL*	.00	1.16	0.
2 JUL	.00	1.16	0.
3 JUL	.00	1.16	0.
4 JUL	.00	.73	0.
5 JUL	.00	.62	0.
6 JUL	.00	.62	0.
7 JUL	.00	1.08	0.
8 JUL*	.00	1.27	0.
9 JUL	.00	1.57	0.
10 JUL	.00	1.61	0.
11 JUL	.00	1.70	0.
12 JUL	.00	1.39	0.
13 JUL	.00	1.35	0.
14 JUL	.00	1.60	0.
15 JUL*	.00	1.72	0.
16 JUL	.00	1.70	0.
17 JUL	.00	1.69	0.
18 JUL	.00	1.72	0.
19 JUL	.00	1.72	0.
20 JUL	.00	1.72	0.
21 JUL	.00	1.72	0.
22 JUL*	.00	1.67	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	1.72	0.
24 JUL	.00	1.72	0.
25 JUL	.00	1.68	0.
26 JUL	.00	1.69	0.
27 JUL	.00	1.72	0.
28 JUL	.00	1.72	0.
29 JUL*	.00	1.70	0.
30 JUL	.00	1.53	0.
31 JUL	.00	1.60	0.
1 AUG	.00	1.68	0.
2 AUG	.00	1.70	0.
3 AUG	.00	1.66	0.
4 AUG	.00	1.71	0.
5 AUG*	.00	1.67	0.
6 AUG	.00	1.72	0.
7 AUG	.00	1.72	0.
8 AUG	.00	1.72	0.
9 AUG	.00	1.72	0.
10 AUG	.00	1.67	0.
11 AUG	.00	1.70	0.
12 AUG*	.00	1.72	0.
13 AUG	.00	1.72	0.
14 AUG	.00	1.70	0.
15 AUG	.00	1.72	0.
16 AUG	.00	1.56	0.
17 AUG	.00	1.30	0.
18 AUG	.00	1.37	0.
19 AUG*	.00	1.63	0.
20 AUG	.00	1.72	0.
21 AUG	.00	1.35	0.
22 AUG	.00	1.28	0.
23 AUG	.00	.86	0.
24 AUG	.00	.84	0.
25 AUG	.00	1.16	0.
26 AUG*	.00	1.56	0.
27 AUG	.00	1.48	0.
28 AUG	.00	1.48	0.
29 AUG	.00	1.58	0.
30 AUG	.00	.85	0.
31 AUG	.00	.88	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	.50	0.
2 JAN	.00	.50	0.
3 JAN	.00	.32	0.
4 JAN	.00	.23	0.
5 JAN	.00	.23	0.
6 JAN	.00	.23	0.
7 JAN	.00	.25	0.
8 JAN	.00	.34	0.
9 JAN	.00	.34	0.
10 JAN	.00	.34	0.
11 JAN	.00	.34	0.
12 JAN	.00	.34	0.
13 JAN	.00	.52	0.
14 JAN	.00	.89	0.
15 JAN	.00	.89	0.
16 JAN	.00	.58	0.
17 JAN	.00	.23	0.
18 JAN	.00	.23	0.
19 JAN	.00	.23	0.
20 JAN	.00	.37	0.
21 JAN	.00	.58	0.
22 JAN	.00	.34	0.
23 JAN	.00	.24	0.
24 JAN	.00	.23	0.
25 JAN	.00	.43	0.
26 JAN	.00	.23	0.
27 JAN	.00	.44	0.
28 JAN	.00	.47	0.
29 JAN	.00	.40	0.
30 JAN	.00	.32	0.
31 JAN	.00	.45	0.
1 FEB	.00	.45	0.
2 FEB	.00	.45	0.
3 FEB	.00	.59	0.
4 FEB	.00	.55	0.
5 FEB	.00	.58	0.
6 FEB	.00	.47	0.
7 FEB	.00	.45	0.
8 FEB	.00	.45	0.
9 FEB	.00	.45	0.
10 FEB	.00	.52	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	.72	0.
12 FEB	.00	.79	0.
13 FEB	.00	.64	0.
14 FEB	.00	.45	0.
15 FEB	.00	.45	0.
16 FEB	.00	.45	0.
17 FEB	.00	.45	0.
18 FEB	.00	.45	0.
19 FEB	.00	.45	0.
20 FEB	.00	.45	0.
21 FEB	.00	.47	0.
22 FEB	.00	.46	0.
23 FEB	.00	.45	0.
24 FEB	.00	.45	0.
25 FEB	.00	.49	0.
26 FEB	.00	.57	0.
27 FEB	.00	.54	0.
28 FEB	.00	.55	0.
29 FEB	.00	.53	0.
1 MAR	.00	.51	0.
2 MAR	.00	.67	0.
3 MAR	.00	.62	0.
4 MAR	.00	.66	0.
5 MAR	.00	.68	0.
6 MAR	.00	.59	0.
7 MAR	.00	.57	0.
8 MAR	.00	.45	0.
9 MAR	.00	.45	0.
10 MAR	.00	.45	0.
11 MAR	.00	.46	0.
12 MAR	.00	.45	0.
13 MAR	.00	.38	0.
14 MAR	.00	.34	0.
15 MAR	.00	.34	0.
16 MAR	.00	.34	0.
17 MAR	.00	.34	0.
18 MAR	.00	.34	0.
19 MAR	.00	.34	0.
20 MAR	.00	.34	0.
21 MAR	.00	.34	0.
22 MAR	.00	.34	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	.34	0.
24 MAR	.00	.34	0.
25 MAR	.00	.34	0.
26 MAR	.00	.34	0.
27 MAR	.00	.34	0.
28 MAR	.00	.34	0.
29 MAR	.00	.34	0.
30 MAR	.00	.34	0.
31 MAR	.00	.34	0.
1 APR	.00	.34	0.
2 APR	.00	.34	0.
3 APR	.00	.34	0.
4 APR	.00	.34	0.
5 APR	.00	.34	0.
6 APR	.00	.54	0.
7 APR	.00	.61	0.
8 APR	.00	.41	0.
9 APR	.00	.34	0.
10 APR	.00	.34	0.
11 APR	.00	.35	0.
12 APR	.00	.34	0.
13 APR	.00	.48	0.
14 APR	.00	.65	0.
15 APR	.00	.45	0.
16 APR	.00	.45	0.
17 APR	.00	.43	0.
18 APR	.00	.63	0.
19 APR	.00	.78	0.
20 APR	.00	.79	0.
21 APR	.00	.87	0.
22 APR*	.00	.94	0.
23 APR	.00	1.12	0.
24 APR	.00	.95	0.
25 APR	.00	.98	0.
26 APR	.00	1.06	0.
27 APR	.00	.84	0.
28 APR	.00	.84	0.
29 APR*	.00	.92	0.
30 APR	.00	1.00	0.
1 MAY	.00	.49	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	.34	0.
3 MAY	.00	.35	0.
4 MAY	.00	.46	0.
5 MAY	.00	.45	0.
6 MAY*	.00	.29	0.
7 MAY	.00	.34	0.
8 MAY	.00	.34	0.
9 MAY	.00	.34	0.
10 MAY	.00	.40	0.
11 MAY	.00	.79	0.
12 MAY	.00	.96	0.
13 MAY*	.00	1.02	0.
14 MAY	.00	1.15	0.
15 MAY	.00	1.15	0.
16 MAY	.00	1.15	0.
17 MAY	.00	1.06	0.
18 MAY	.00	1.06	0.
19 MAY	.00	1.10	0.
20 MAY*	.00	1.23	0.
21 MAY	.00	1.34	0.
22 MAY	.00	1.40	0.
23 MAY	.00	1.34	0.
24 MAY	.00	1.17	0.
25 MAY	.00	1.03	0.
26 MAY	.00	1.11	0.
27 MAY*	.00	1.35	0.
28 MAY	.00	1.31	0.
29 MAY	.00	1.19	0.
30 MAY	.00	1.43	0.
31 MAY	.00	1.15	0.
1 JUN	.00	1.11	0.
2 JUN	.00	1.23	0.
3 JUN*	.00	1.60	0.
4 JUN	.00	1.57	0.
5 JUN	.00	1.55	0.
6 JUN*	.00	1.61	0.
7 JUN	.00	1.12	0.
8 JUN	.00	.97	0.
9 JUN	.00	1.20	0.
10 JUN*	.00	1.24	0.
11 JUN	.00	1.38	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	.00	1.38	0.
13 JUN*	.00	1.18	0.
14 JUN	.00	1.05	0.
15 JUN	.00	1.05	0.
16 JUN	.00	.93	0.
17 JUN*	.00	.61	0.
18 JUN	.00	.70	0.
19 JUN	.00	1.02	0.
20 JUN*	.00	.86	0.
21 JUN	.00	.96	0.
22 JUN	.00	.82	0.
23 JUN	.00	1.04	0.
24 JUN*	.00	1.06	0.
25 JUN	.00	1.34	0.
26 JUN	.00	1.43	0.
27 JUN	.00	1.27	0.
28 JUN	.00	1.28	0.
29 JUN	.00	1.25	0.
30 JUN	.00	1.14	0.
1 JUL*	.00	1.16	0.
2 JUL	.00	1.16	0.
3 JUL	.00	1.16	0.
4 JUL	.00	.73	0.
5 JUL	.00	.62	0.
6 JUL	.00	.62	0.
7 JUL	.00	1.08	0.
8 JUL*	.00	1.27	0.
9 JUL	.00	1.57	0.
10 JUL	.00	1.61	0.
11 JUL	.00	1.70	0.
12 JUL	.00	1.39	0.
13 JUL	.00	1.35	0.
14 JUL	.00	1.60	0.
15 JUL*	.00	1.72	0.
16 JUL	.00	1.70	0.
17 JUL	.00	1.69	0.
18 JUL	.00	1.72	0.
19 JUL	.00	1.72	0.
20 JUL	.00	1.72	0.
21 JUL	.00	1.72	0.
22 JUL*	.00	1.67	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	1.72	0.
24 JUL	.00	1.72	0.
25 JUL	.00	1.68	0.
26 JUL	.00	1.69	0.
27 JUL	.00	1.72	0.
28 JUL	.00	1.72	0.
29 JUL*	.00	1.70	0.
30 JUL	.00	1.53	0.
31 JUL	.00	1.60	0.
1 AUG	.00	1.68	0.
2 AUG	.00	1.70	0.
3 AUG	.00	1.66	0.
4 AUG	.00	1.71	0.
5 AUG*	.00	1.67	0.
6 AUG	.00	1.72	0.
7 AUG	.00	1.72	0.
8 AUG	.00	1.72	0.
9 AUG	.00	1.72	0.
10 AUG	.00	1.67	0.
11 AUG	.00	1.70	0.
12 AUG*	.00	1.72	0.
13 AUG	.00	1.72	0.
14 AUG	.00	1.70	0.
15 AUG	.00	1.72	0.
16 AUG	.00	1.56	0.
17 AUG	.00	1.30	0.
18 AUG	.00	1.37	0.
19 AUG*	.00	1.63	0.
20 AUG	.00	1.72	0.
21 AUG	.00	1.35	0.
22 AUG	.00	1.28	0.
23 AUG	.00	.86	0.
24 AUG	.00	.84	0.
25 AUG	.00	1.16	0.
26 AUG*	.00	1.56	0.
27 AUG	.00	1.48	0.
28 AUG	.00	1.48	0.
29 AUG	.00	1.58	0.
30 AUG	.00	.85	0.
31 AUG	.00	.88	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	.50	0.
2 JAN	.00	.50	0.
3 JAN	.00	.32	0.
4 JAN	.00	.23	0.
5 JAN	.00	.23	0.
6 JAN	.00	.23	0.
7 JAN	.00	.25	0.
8 JAN	.00	.34	0.
9 JAN	.00	.34	0.
10 JAN	.00	.34	0.
11 JAN	.00	.34	0.
12 JAN	.00	.34	0.
13 JAN	.00	.52	0.
14 JAN	.00	.89	0.
15 JAN	.00	.89	0.
16 JAN	.00	.58	0.
17 JAN	.00	.23	0.
18 JAN	.00	.23	0.
19 JAN	.00	.23	0.
20 JAN	.00	.37	0.
21 JAN	.00	.58	0.
22 JAN	.00	.34	0.
23 JAN	.00	.24	0.
24 JAN	.00	.23	0.
25 JAN	.00	.43	0.
26 JAN	.00	.23	0.
27 JAN	.00	.44	0.
28 JAN	.00	.47	0.
29 JAN	.00	.40	0.
30 JAN	.00	.32	0.
31 JAN	.00	.45	0.
1 FEB	.00	.45	0.
2 FEB	.00	.45	0.
3 FEB	.00	.59	0.
4 FEB	.00	.55	0.
5 FEB	.00	.58	0.
6 FEB	.00	.47	0.
7 FEB	.00	.45	0.
8 FEB	.00	.45	0.
9 FEB	.00	.45	0.
10 FEB	.00	.52	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	.72	0.
12 FEB	.00	.79	0.
13 FEB	.00	.64	0.
14 FEB	.00	.45	0.
15 FEB	.00	.45	0.
16 FEB	.00	.45	0.
17 FEB	.00	.45	0.
18 FEB	.00	.45	0.
19 FEB	.00	.45	0.
20 FEB	.00	.45	0.
21 FEB	.00	.47	0.
22 FEB	.00	.46	0.
23 FEB	.00	.45	0.
24 FEB	.00	.45	0.
25 FEB	.00	.49	0.
26 FEB	.00	.57	0.
27 FEB	.00	.54	0.
28 FEB	.00	.55	0.
29 FEB	.00	.53	0.
1 MAR	.00	.51	0.
2 MAR	.00	.67	0.
3 MAR	.00	.62	0.
4 MAR	.00	.66	0.
5 MAR	.00	.68	0.
6 MAR	.00	.59	0.
7 MAR	.00	.57	0.
8 MAR	.00	.45	0.
9 MAR	.00	.45	0.
10 MAR	.00	.45	0.
11 MAR	.00	.46	0.
12 MAR	.00	.45	0.
13 MAR	.00	.38	0.
14 MAR	.00	.34	0.
15 MAR	.00	.34	0.
16 MAR	.00	.34	0.
17 MAR	.00	.34	0.
18 MAR	.00	.34	0.
19 MAR	.00	.34	0.
20 MAR	.00	.34	0.
21 MAR	.00	.34	0.
22 MAR	.00	.34	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	.34	0.
24 MAR	.00	.34	0.
25 MAR	.00	.34	0.
26 MAR	.00	.34	0.
27 MAR	.00	.34	0.
28 MAR	.00	.34	0.
29 MAR	.00	.34	0.
30 MAR	.00	.34	0.
31 MAR	.00	.34	0.
1 APR	.00	.34	0.
2 APR	.00	.34	0.
3 APR	.00	.34	0.
4 APR	.00	.34	0.
5 APR	.00	.34	0.
6 APR	.00	.54	0.
7 APR	.00	.61	0.
8 APR	.00	.41	0.
9 APR	.00	.34	0.
10 APR	.00	.34	0.
11 APR	.00	.35	0.
12 APR	.00	.34	0.
13 APR	.00	.48	0.
14 APR	.00	.65	0.
15 APR	.00	.45	0.
16 APR	.00	.45	0.
17 APR	.00	.43	0.
18 APR	.00	.63	0.
19 APR	.00	.78	0.
20 APR	.00	.79	0.
21 APR	.00	.87	0.
22 APR*	.00	.94	0.
23 APR	.00	1.12	0.
24 APR	.00	.95	0.
25 APR	.00	.98	0.
26 APR	.00	1.06	0.
27 APR	.00	.84	0.
28 APR	.00	.84	0.
29 APR*	.00	.92	0.
30 APR	.00	1.00	0.
1 MAY	.00	.49	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	.34	0.
3 MAY	.00	.35	0.
4 MAY	.00	.46	0.
5 MAY	.00	.45	0.
6 MAY*	.00	.29	0.
7 MAY	.00	.34	0.
8 MAY	.00	.34	0.
9 MAY	.00	.34	0.
10 MAY	.00	.40	0.
11 MAY	.00	.79	0.
12 MAY	.00	.96	0.
13 MAY*	.00	1.02	0.
14 MAY	.00	1.15	0.
15 MAY	.00	1.15	0.
16 MAY	.00	1.15	0.
17 MAY	.00	1.06	0.
18 MAY	.00	1.06	0.
19 MAY	.00	1.10	0.
20 MAY*	.00	1.23	0.
21 MAY	.00	1.34	0.
22 MAY	.00	1.40	0.
23 MAY	.00	1.34	0.
24 MAY	.00	1.17	0.
25 MAY	.00	1.03	0.
26 MAY	.00	1.11	0.
27 MAY*	.00	1.35	0.
28 MAY	.00	1.31	0.
29 MAY	.00	1.19	0.
30 MAY	.00	1.43	0.
31 MAY	.00	1.15	0.
1 JUN	.00	1.11	0.
2 JUN	.00	1.23	0.
3 JUN*	.00	1.60	0.
4 JUN	.00	1.57	0.
5 JUN	.00	1.55	0.
6 JUN*	.00	1.61	0.
7 JUN	.00	1.12	0.
8 JUN	.00	.97	0.
9 JUN	.00	1.20	0.
10 JUN*	.00	1.24	0.
11 JUN	.00	1.38	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	.00	1.38	0.
13 JUN*	.00	1.18	0.
14 JUN	.00	1.05	0.
15 JUN	.00	1.05	0.
16 JUN	.00	.93	0.
17 JUN*	.00	.61	0.
18 JUN	.00	.70	0.
19 JUN	.00	1.02	0.
20 JUN*	.00	.86	0.
21 JUN	.00	.96	0.
22 JUN	.00	.82	0.
23 JUN	.00	1.04	0.
24 JUN*	.00	1.06	0.
25 JUN	.00	1.34	0.
26 JUN	.00	1.43	0.
27 JUN	.00	1.27	0.
28 JUN	.00	1.28	0.
29 JUN	.00	1.25	0.
30 JUN	.00	1.14	0.
1 JUL*	.00	1.16	0.
2 JUL	.00	1.16	0.
3 JUL	.00	1.16	0.
4 JUL	.00	.73	0.
5 JUL	.00	.62	0.
6 JUL	.00	.62	0.
7 JUL	.00	1.08	0.
8 JUL*	.00	1.27	0.
9 JUL	.00	1.57	0.
10 JUL	.00	1.61	0.
11 JUL	.00	1.70	0.
12 JUL	.00	1.39	0.
13 JUL	.00	1.35	0.
14 JUL	.00	1.60	0.
15 JUL*	.00	1.72	0.
16 JUL	.00	1.70	0.
17 JUL	.00	1.69	0.
18 JUL	.00	1.72	0.
19 JUL	.00	1.72	0.
20 JUL	.00	1.72	0.
21 JUL	.00	1.72	0.
22 JUL*	.00	1.67	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : MORONE SPECIES
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	1.72	0.
24 JUL	.00	1.72	0.
25 JUL	.00	1.68	0.
26 JUL	.00	1.69	0.
27 JUL	.00	1.72	0.
28 JUL	.00	1.72	0.
29 JUL*	.00	1.70	0.
30 JUL	.00	1.53	0.
31 JUL	.00	1.60	0.
1 AUG	.00	1.68	0.
2 AUG	.00	1.70	0.
3 AUG	.00	1.66	0.
4 AUG	.00	1.71	0.
5 AUG*	.00	1.67	0.
6 AUG	.00	1.72	0.
7 AUG	.00	1.72	0.
8 AUG	.00	1.72	0.
9 AUG	.00	1.72	0.
10 AUG	.00	1.67	0.
11 AUG	.00	1.70	0.
12 AUG*	.00	1.72	0.
13 AUG	.00	1.72	0.
14 AUG	.00	1.70	0.
15 AUG	.00	1.72	0.
16 AUG	.00	1.56	0.
17 AUG	.00	1.30	0.
18 AUG	.00	1.37	0.
19 AUG*	.00	1.63	0.
20 AUG	.00	1.72	0.
21 AUG	.00	1.35	0.
22 AUG	.00	1.28	0.
23 AUG	.00	.86	0.
24 AUG	.00	.84	0.
25 AUG	.00	1.16	0.
26 AUG*	.00	1.56	0.
27 AUG	.00	1.48	0.
28 AUG	.00	1.48	0.
29 AUG	.00	1.58	0.
30 AUG	.00	.85	0.
31 AUG	.00	.88	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	.72	0.
12 FEB	.00	.79	0.
13 FEB	.00	.64	0.
14 FEB	.00	.45	0.
15 FEB	.00	.45	0.
16 FEB	.00	.45	0.
17 FEB	.00	.45	0.
18 FEB	.00	.45	0.
19 FEB	.00	.45	0.
20 FEB	.00	.45	0.
21 FEB	.00	.47	0.
22 FEB	.00	.46	0.
23 FEB	.00	.45	0.
24 FEB	.00	.45	0.
25 FEB	.00	.49	0.
26 FEB	.00	.57	0.
27 FEB	.00	.54	0.
28 FEB	.00	.55	0.
29 FEB	.00	.53	0.
1 MAR	.00	.51	0.
2 MAR	.00	.67	0.
3 MAR	.00	.62	0.
4 MAR	.00	.66	0.
5 MAR	.00	.68	0.
6 MAR	.00	.59	0.
7 MAR	.00	.57	0.
8 MAR	.00	.45	0.
9 MAR	.00	.45	0.
10 MAR	.00	.45	0.
11 MAR	.00	.46	0.
12 MAR	.00	.45	0.
13 MAR	.00	.38	0.
14 MAR	.00	.34	0.
15 MAR	.00	.34	0.
16 MAR	.00	.34	0.
17 MAR	.00	.34	0.
18 MAR	.00	.34	0.
19 MAR	.00	.34	0.
20 MAR	.00	.34	0.
21 MAR	.00	.34	0.
22 MAR	.00	.34	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	.50	0.
2 JAN	.00	.50	0.
3 JAN	.00	.32	0.
4 JAN	.00	.23	0.
5 JAN	.00	.23	0.
6 JAN	.00	.23	0.
7 JAN	.00	.25	0.
8 JAN	.00	.34	0.
9 JAN	.00	.34	0.
10 JAN	.00	.34	0.
11 JAN	.00	.34	0.
12 JAN	.00	.34	0.
13 JAN	.00	.52	0.
14 JAN	.00	.89	0.
15 JAN	.00	.89	0.
16 JAN	.00	.58	0.
17 JAN	.00	.23	0.
18 JAN	.00	.23	0.
19 JAN	.00	.23	0.
20 JAN	.00	.37	0.
21 JAN	.00	.58	0.
22 JAN	.00	.34	0.
23 JAN	.00	.24	0.
24 JAN	.00	.23	0.
25 JAN	.00	.43	0.
26 JAN	.00	.23	0.
27 JAN	.00	.44	0.
28 JAN	.00	.47	0.
29 JAN	.00	.40	0.
30 JAN	.00	.32	0.
31 JAN	.00	.45	0.
1 FEB	.00	.45	0.
2 FEB	.00	.45	0.
3 FEB	.00	.59	0.
4 FEB	.00	.55	0.
5 FEB	.00	.58	0.
6 FEB	.00	.47	0.
7 FEB	.00	.45	0.
8 FEB	.00	.45	0.
9 FEB	.00	.45	0.
10 FEB	.00	.52	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	.34	0.
24 MAR	.00	.34	0.
25 MAR	.00	.34	0.
26 MAR	.00	.34	0.
27 MAR	.00	.34	0.
28 MAR	.00	.34	0.
29 MAR	.00	.34	0.
30 MAR	.00	.34	0.
31 MAR	.00	.34	0.
1 APR	.00	.34	0.
2 APR	.00	.34	0.
3 APR	.00	.34	0.
4 APR	.00	.34	0.
5 APR	.00	.34	0.
6 APR	.00	.54	0.
7 APR	.00	.61	0.
8 APR	.00	.41	0.
9 APR	.00	.34	0.
10 APR	.00	.34	0.
11 APR	.00	.35	0.
12 APR	.00	.34	0.
13 APR	.00	.48	0.
14 APR	.00	.65	0.
15 APR	.00	.45	0.
16 APR	.00	.45	0.
17 APR	.00	.43	0.
18 APR	.00	.63	0.
19 APR	.00	.78	0.
20 APR	.00	.79	0.
21 APR	.00	.87	0.
22 APR*	.00	.94	0.
23 APR	.00	1.12	0.
24 APR	.00	.95	0.
25 APR	.00	.98	0.
26 APR	.00	1.06	0.
27 APR	.00	.84	0.
28 APR	.00	.84	0.
29 APR*	.00	.92	0.
30 APR	.10	1.00	100.
1 MAY	.19	.49	93.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.29	.34	99.
3 MAY	.38	.35	133.
4 MAY	.48	.46	221.
5 MAY	.57	.45	257.
6 MAY*	.67	.29	194.
7 MAY	1.89	.34	643.
8 MAY	3.12	.34	1061.
9 MAY	4.34	.34	1476.
10 MAY	5.57	.40	2228.
11 MAY	6.79	.79	5364.
12 MAY	8.02	.96	7699.
13 MAY*	9.24	1.02	9425.
14 MAY	8.66	1.15	9959.
15 MAY	8.09	1.15	9304.
16 MAY	7.51	1.15	8637.
17 MAY	6.94	1.06	7356.
18 MAY	6.36	1.06	6742.
19 MAY	5.79	1.10	6369.
20 MAY*	5.21	1.23	6408.
21 MAY	4.84	1.34	6486.
22 MAY	4.47	1.40	6258.
23 MAY	4.10	1.34	5494.
24 MAY	3.74	1.17	4376.
25 MAY	3.37	1.03	3471.
26 MAY	3.00	1.11	3330.
27 MAY*	2.63	1.35	3551.
28 MAY	2.83	1.31	3707.
29 MAY	3.02	1.19	3594.
30 MAY	3.22	1.43	4605.
31 MAY	3.41	1.15	3921.
1 JUN	3.61	1.11	4007.
2 JUN	3.80	1.23	4674.
3 JUN*	4.00	1.60	6400.
4 JUN	3.55	1.57	5574.
5 JUN	3.11	1.55	4821.
6 JUN*	2.66	1.61	4283.
7 JUN	2.33	1.12	2610.
8 JUN	2.01	.97	1950.
9 JUN	1.68	1.20	2016.
10 JUN*	1.35	1.24	1674.
11 JUN	.90	1.38	1242.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	.45	1.38	621.
13 JUN*	.00	1.18	0.
14 JUN	.00	1.05	0.
15 JUN	.00	1.05	0.
16 JUN	.00	.93	0.
17 JUN*	.00	.61	0.
18 JUN	.00	.70	0.
19 JUN	.00	1.02	0.
20 JUN*	.00	.86	0.
21 JUN	.00	.96	0.
22 JUN	.00	.82	0.
23 JUN	.00	1.04	0.
24 JUN*	.00	1.06	0.
25 JUN	.00	1.34	0.
26 JUN	.00	1.43	0.
27 JUN	.00	1.27	0.
28 JUN	.00	1.28	0.
29 JUN	.00	1.25	0.
30 JUN	.00	1.14	0.
1 JUL*	.00	1.16	0.
2 JUL	.00	1.16	0.
3 JUL	.00	1.16	0.
4 JUL	.00	.73	0.
5 JUL	.00	.62	0.
6 JUL	.00	.62	0.
7 JUL	.00	1.08	0.
8 JUL*	.00	1.27	0.
9 JUL	.00	1.57	0.
10 JUL	.00	1.61	0.
11 JUL	.00	1.70	0.
12 JUL	.00	1.39	0.
13 JUL	.00	1.35	0.
14 JUL	.00	1.60	0.
15 JUL*	.00	1.72	0.
16 JUL	.00	1.70	0.
17 JUL	.00	1.69	0.
18 JUL	.00	1.72	0.
19 JUL	.00	1.72	0.
20 JUL	.00	1.72	0.
21 JUL	.00	1.72	0.
22 JUL*	.00	1.67	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	1.72	0.
24 JUL	.00	1.72	0.
25 JUL	.00	1.68	0.
26 JUL	.00	1.69	0.
27 JUL	.00	1.72	0.
28 JUL	.00	1.72	0.
29 JUL*	.00	1.70	0.
30 JUL	.00	1.53	0.
31 JUL	.00	1.60	0.
1 AUG	.00	1.68	0.
2 AUG	.00	1.70	0.
3 AUG	.00	1.66	0.
4 AUG	.00	1.71	0.
5 AUG*	.00	1.67	0.
6 AUG	.00	1.72	0.
7 AUG	.00	1.72	0.
8 AUG	.00	1.72	0.
9 AUG	.00	1.72	0.
10 AUG	.00	1.67	0.
11 AUG	.00	1.70	0.
12 AUG*	.00	1.72	0.
13 AUG	.00	1.72	0.
14 AUG	.00	1.70	0.
15 AUG	.00	1.72	0.
16 AUG	.00	1.56	0.
17 AUG	.00	1.30	0.
18 AUG	.00	1.37	0.
19 AUG*	.00	1.63	0.
20 AUG	.00	1.72	0.
21 AUG	.00	1.35	0.
22 AUG	.00	1.28	0.
23 AUG	.00	.86	0.
24 AUG	.00	.84	0.
25 AUG	.00	1.16	0.
26 AUG*	.00	1.56	0.
27 AUG	.00	1.48	0.
28 AUG	.00	1.48	0.
29 AUG	.00	1.58	0.
30 AUG	.00	.85	0.
31 AUG	.00	.88	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	.50	0.
2 JAN	.00	.50	0.
3 JAN	.00	.32	0.
4 JAN	.00	.23	0.
5 JAN	.00	.23	0.
6 JAN	.00	.23	0.
7 JAN	.00	.25	0.
8 JAN	.00	.34	0.
9 JAN	.00	.34	0.
10 JAN	.00	.34	0.
11 JAN	.00	.34	0.
12 JAN	.00	.34	0.
13 JAN	.00	.52	0.
14 JAN	.00	.89	0.
15 JAN	.00	.89	0.
16 JAN	.00	.58	0.
17 JAN	.00	.23	0.
18 JAN	.00	.23	0.
19 JAN	.00	.23	0.
20 JAN	.00	.37	0.
21 JAN	.00	.58	0.
22 JAN	.00	.34	0.
23 JAN	.00	.24	0.
24 JAN	.00	.23	0.
25 JAN	.00	.43	0.
26 JAN	.00	.23	0.
27 JAN	.00	.44	0.
28 JAN	.00	.47	0.
29 JAN	.00	.40	0.
30 JAN	.00	.32	0.
31 JAN	.00	.45	0.
1 FEB	.00	.45	0.
2 FEB	.00	.45	0.
3 FEB	.00	.59	0.
4 FEB	.00	.55	0.
5 FEB	.00	.58	0.
6 FEB	.00	.47	0.
7 FEB	.00	.45	0.
8 FEB	.00	.45	0.
9 FEB	.00	.45	0.
10 FEB	.00	.52	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	.72	0.
12 FEB	.00	.79	0.
13 FEB	.00	.64	0.
14 FEB	.00	.45	0.
15 FEB	.00	.45	0.
16 FEB	.00	.45	0.
17 FEB	.00	.45	0.
18 FEB	.00	.45	0.
19 FEB	.00	.45	0.
20 FEB	.00	.45	0.
21 FEB	.00	.47	0.
22 FEB	.00	.46	0.
23 FEB	.00	.45	0.
24 FEB	.00	.45	0.
25 FEB	.00	.49	0.
26 FEB	.00	.57	0.
27 FEB	.00	.54	0.
28 FEB	.00	.55	0.
29 FEB	.00	.53	0.
1 MAR	.00	.51	0.
2 MAR	.00	.67	0.
3 MAR	.00	.62	0.
4 MAR	.00	.66	0.
5 MAR	.00	.68	0.
6 MAR	.00	.59	0.
7 MAR	.00	.57	0.
8 MAR	.00	.45	0.
9 MAR	.00	.45	0.
10 MAR	.00	.45	0.
11 MAR	.00	.46	0.
12 MAR	.00	.45	0.
13 MAR	.00	.38	0.
14 MAR	.00	.34	0.
15 MAR	.00	.34	0.
16 MAR	.00	.34	0.
17 MAR	.00	.34	0.
18 MAR	.00	.34	0.
19 MAR	.00	.34	0.
20 MAR	.00	.34	0.
21 MAR	.00	.34	0.
22 MAR	.00	.34	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	.34	0.
24 MAR	.00	.34	0.
25 MAR	.00	.34	0.
26 MAR	.00	.34	0.
27 MAR	.00	.34	0.
28 MAR	.00	.34	0.
29 MAR	.00	.34	0.
30 MAR	.00	.34	0.
31 MAR	.00	.34	0.
1 APR	.00	.34	0.
2 APR	.00	.34	0.
3 APR	.00	.34	0.
4 APR	.00	.34	0.
5 APR	.00	.34	0.
6 APR	.00	.54	0.
7 APR	.00	.61	0.
8 APR	.00	.41	0.
9 APR	.00	.34	0.
10 APR	.00	.34	0.
11 APR	.00	.35	0.
12 APR	.00	.34	0.
13 APR	.00	.48	0.
14 APR	.00	.65	0.
15 APR	.00	.45	0.
16 APR	.00	.45	0.
17 APR	.00	.43	0.
18 APR	.00	.63	0.
19 APR	.00	.78	0.
20 APR	.00	.79	0.
21 APR	.00	.87	0.
22 APR*	.00	.94	0.
23 APR	.00	1.12	0.
24 APR	.00	.95	0.
25 APR	.00	.98	0.
26 APR	.00	1.06	0.
27 APR	.00	.84	0.
28 APR	.00	.84	0.
29 APR*	.00	.92	0.
30 APR	.00	1.00	0.
1 MAY	.00	.49	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL*D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	.34	0.
3 MAY	.00	.35	0.
4 MAY	.00	.46	0.
5 MAY	.00	.45	0.
6 MAY*	.00	.29	0.
7 MAY	.37	.34	126.
8 MAY	.74	.34	252.
9 MAY	1.11	.34	377.
10 MAY	1.48	.40	592.
11 MAY	1.85	.79	1462.
12 MAY	2.22	.96	2131.
13 MAY*	2.59	1.02	2642.
14 MAY	9.09	1.15	10454.
15 MAY	15.59	1.15	17929.
16 MAY	22.09	1.15	25404.
17 MAY	28.59	1.06	30305.
18 MAY	35.09	1.06	37195.
19 MAY	41.59	1.10	45749.
20 MAY*	48.09	1.23	59151.
21 MAY	60.80	1.34	81472.
22 MAY	73.51	1.40	102914.
23 MAY	86.22	1.34	115535.
24 MAY	98.93	1.17	115748.
25 MAY	111.64	1.03	114989.
26 MAY	124.35	1.11	138029.
27 MAY*	137.06	1.35	185031.
28 MAY	141.71	1.31	185640.
29 MAY	146.36	1.19	174168.
30 MAY	151.01	1.43	215944.
31 MAY	155.67	1.15	179021.
1 JUN	160.32	1.11	177955.
2 JUN	164.97	1.23	202913.
3 JUN*	169.62	1.60	271392.
4 JUN	159.42	1.57	250289.
5 JUN	149.23	1.55	231307.
6 JUN*	139.03	1.61	223838.
7 JUN	112.74	1.12	126269.
8 JUN	86.45	.97	83857.
9 JUN	60.17	1.20	72204.
10 JUN*	33.88	1.24	42011.
11 JUN	24.16	1.38	33341.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL*D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	14.44	1.38	19927.
13 JUN*	4.72	1.18	5570.
14 JUN	4.05	1.05	4253.
15 JUN	3.37	1.05	3539.
16 JUN	2.70	.93	2511.
17 JUN*	2.02	.61	1232.
18 JUN	6.47	.70	4529.
19 JUN	10.91	1.02	11128.
20 JUN*	15.36	.86	13210.
21 JUN	12.52	.96	12019.
22 JUN	9.68	.82	7938.
23 JUN	6.84	1.04	7114.
24 JUN*	4.00	1.06	4240.
25 JUN	3.43	1.34	4596.
26 JUN	2.86	1.43	4090.
27 JUN	2.29	1.27	2908.
28 JUN	1.71	1.28	2189.
29 JUN	1.14	1.25	1425.
30 JUN	.57	1.14	650.
1 JUL*	.00	1.16	0.
2 JUL	.00	1.16	0.
3 JUL	.00	1.16	0.
4 JUL	.00	.73	0.
5 JUL	.00	.62	0.
6 JUL	.00	.62	0.
7 JUL	.00	1.08	0.
8 JUL*	.00	1.27	0.
9 JUL	.00	1.57	0.
10 JUL	.00	1.61	0.
11 JUL	.00	1.70	0.
12 JUL	.00	1.39	0.
13 JUL	.00	1.35	0.
14 JUL	.00	1.60	0.
15 JUL*	.00	1.72	0.
16 JUL	.00	1.70	0.
17 JUL	.00	1.69	0.
18 JUL	.00	1.72	0.
19 JUL	.00	1.72	0.
20 JUL	.00	1.72	0.
21 JUL	.00	1.72	0.
22 JUL*	.00	1.67	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	1.72	0.
24 JUL	.00	1.72	0.
25 JUL	.00	1.68	0.
26 JUL	.00	1.69	0.
27 JUL	.00	1.72	0.
28 JUL	.00	1.72	0.
29 JUL*	.00	1.70	0.
30 JUL	.00	1.53	0.
31 JUL	.00	1.60	0.
1 AUG	.00	1.68	0.
2 AUG	.00	1.70	0.
3 AUG	.00	1.66	0.
4 AUG	.00	1.71	0.
5 AUG*	.00	1.67	0.
6 AUG	.00	1.72	0.
7 AUG	.00	1.72	0.
8 AUG	.00	1.72	0.
9 AUG	.00	1.72	0.
10 AUG	.00	1.67	0.
11 AUG	.00	1.70	0.
12 AUG*	.00	1.72	0.
13 AUG	.00	1.72	0.
14 AUG	.00	1.70	0.
15 AUG	.00	1.72	0.
16 AUG	.00	1.56	0.
17 AUG	.00	1.30	0.
18 AUG	.00	1.37	0.
19 AUG*	.00	1.63	0.
20 AUG	.00	1.72	0.
21 AUG	.00	1.35	0.
22 AUG	.00	1.28	0.
23 AUG	.00	.86	0.
24 AUG	.00	.84	0.
25 AUG	.00	1.16	0.
26 AUG*	.00	1.56	0.
27 AUG	.00	1.48	0.
28 AUG	.00	1.48	0.
29 AUG	.00	1.58	0.
30 AUG	.00	.85	0.
31 AUG	.00	.88	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	.50	0.
2 JAN	.00	.50	0.
3 JAN	.00	.32	0.
4 JAN	.00	.23	0.
5 JAN	.00	.23	0.
6 JAN	.00	.23	0.
7 JAN	.00	.25	0.
8 JAN	.00	.34	0.
9 JAN	.00	.34	0.
10 JAN	.00	.34	0.
11 JAN	.00	.34	0.
12 JAN	.00	.34	0.
13 JAN	.00	.52	0.
14 JAN	.00	.89	0.
15 JAN	.00	.89	0.
16 JAN	.00	.58	0.
17 JAN	.00	.23	0.
18 JAN	.00	.23	0.
19 JAN	.00	.23	0.
20 JAN	.00	.37	0.
21 JAN	.00	.58	0.
22 JAN	.00	.34	0.
23 JAN	.00	.24	0.
24 JAN	.00	.23	0.
25 JAN	.00	.43	0.
26 JAN	.00	.23	0.
27 JAN	.00	.44	0.
28 JAN	.00	.47	0.
29 JAN	.00	.40	0.
30 JAN	.00	.32	0.
31 JAN	.00	.45	0.
1 FEB	.00	.45	0.
2 FEB	.00	.45	0.
3 FEB	.00	.59	0.
4 FEB	.00	.55	0.
5 FEB	.00	.58	0.
6 FEB	.00	.47	0.
7 FEB	.00	.45	0.
8 FEB	.00	.45	0.
9 FEB	.00	.45	0.
10 FEB	.00	.52	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	.72	0.
12 FEB	.00	.79	0.
13 FEB	.00	.64	0.
14 FEB	.00	.45	0.
15 FEB	.00	.45	0.
16 FEB	.00	.45	0.
17 FEB	.00	.45	0.
18 FEB	.00	.45	0.
19 FEB	.00	.45	0.
20 FEB	.00	.45	0.
21 FEB	.00	.47	0.
22 FEB	.00	.46	0.
23 FEB	.00	.45	0.
24 FEB	.00	.45	0.
25 FEB	.00	.49	0.
26 FEB	.00	.57	0.
27 FEB	.00	.54	0.
28 FEB	.00	.55	0.
29 FEB	.00	.53	0.
1 MAR	.00	.51	0.
2 MAR	.00	.67	0.
3 MAR	.00	.62	0.
4 MAR	.00	.66	0.
5 MAR	.00	.68	0.
6 MAR	.00	.59	0.
7 MAR	.00	.57	0.
8 MAR	.00	.45	0.
9 MAR	.00	.45	0.
10 MAR	.00	.45	0.
11 MAR	.00	.46	0.
12 MAR	.00	.45	0.
13 MAR	.00	.38	0.
14 MAR	.00	.34	0.
15 MAR	.00	.34	0.
16 MAR	.00	.34	0.
17 MAR	.00	.34	0.
18 MAR	.00	.34	0.
19 MAR	.00	.34	0.
20 MAR	.00	.34	0.
21 MAR	.00	.34	0.
22 MAR	.00	.34	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	.34	0.
24 MAR	.00	.34	0.
25 MAR	.00	.34	0.
26 MAR	.00	.34	0.
27 MAR	.00	.34	0.
28 MAR	.00	.34	0.
29 MAR	.00	.34	0.
30 MAR	.00	.34	0.
31 MAR	.00	.34	0.
1 APR	.00	.34	0.
2 APR	.00	.34	0.
3 APR	.00	.34	0.
4 APR	.00	.34	0.
5 APR	.00	.34	0.
6 APR	.00	.54	0.
7 APR	.00	.61	0.
8 APR	.00	.41	0.
9 APR	.00	.34	0.
10 APR	.00	.34	0.
11 APR	.00	.35	0.
12 APR	.00	.34	0.
13 APR	.00	.48	0.
14 APR	.00	.65	0.
15 APR	.00	.45	0.
16 APR	.00	.45	0.
17 APR	.00	.43	0.
18 APR	.00	.63	0.
19 APR	.00	.78	0.
20 APR	.00	.79	0.
21 APR	.00	.87	0.
22 APR*	.00	.94	0.
23 APR	.00	1.12	0.
24 APR	.00	.95	0.
25 APR	.00	.98	0.
26 APR	.00	1.06	0.
27 APR	.00	.84	0.
28 APR	.00	.84	0.
29 APR*	.00	.92	0.
30 APR	.00	1.00	0.
1 MAY	.00	.49	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	.34	0.
3 MAY	.00	.35	0.
4 MAY	.00	.46	0.
5 MAY	.00	.45	0.
6 MAY*	.00	.29	0.
7 MAY	.00	.34	0.
8 MAY	.00	.34	0.
9 MAY	.00	.34	0.
10 MAY	.00	.40	0.
11 MAY	.00	.79	0.
12 MAY	.00	.96	0.
13 MAY*	.00	1.02	0.
14 MAY	.19	1.15	219.
15 MAY	.39	1.15	449.
16 MAY	.58	1.15	667.
17 MAY	.77	1.06	816.
18 MAY	.96	1.06	1018.
19 MAY	1.16	1.10	1276.
20 MAY*	1.35	1.23	1661.
21 MAY	34.82	1.34	46659.
22 MAY	68.29	1.40	95606.
23 MAY	101.76	1.34	136358.
24 MAY	135.23	1.17	158219.
25 MAY	168.70	1.03	173761.
26 MAY	202.17	1.11	224409.
27 MAY*	235.64	1.35	318114.
28 MAY	284.22	1.31	372328.
29 MAY	332.81	1.19	396044.
30 MAY	381.39	1.43	545388.
31 MAY	429.98	1.15	494477.
1 JUN	478.56	1.11	531202.
2 JUN	527.15	1.23	648395.
3 JUN*	575.73	1.60	921168.
4 JUN	508.74	1.57	798722.
5 JUN	441.74	1.55	684697.
6 JUN*	374.75	1.61	603348.
7 JUN	334.76	1.12	374931.
8 JUN	294.77	.97	285927.
9 JUN	254.78	1.20	305736.
10 JUN*	214.79	1.24	266340.
11 JUN	150.74	1.38	208021.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL*D)
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MGM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	86.68	1.38	119618.
13 JUN*	22.63	1.18	26703.
14 JUN	20.51	1.05	21536.
15 JUN	18.38	1.05	19299.
16 JUN	16.26	.93	15122.
17 JUN*	14.14	.61	8625.
18 JUN	31.12	.70	21784.
19 JUN	48.10	1.02	49062.
20 JUN*	65.08	.86	55969.
21 JUN	56.70	.96	54432.
22 JUN	48.33	.82	39631.
23 JUN	39.95	1.04	41548.
24 JUN*	31.57	1.06	33464.
25 JUN	28.67	1.34	38418.
26 JUN	25.77	1.43	36851.
27 JUN	22.87	1.27	29045.
28 JUN	19.97	1.28	25562.
29 JUN	17.07	1.25	21338.
30 JUN	14.17	1.14	16154.
1 JUL*	11.27	1.16	13073.
2 JUL	9.75	1.16	11310.
3 JUL	8.23	1.16	9547.
4 JUL	6.71	.73	4898.
5 JUL	5.20	.62	3224.
6 JUL	3.68	.62	2282.
7 JUL	2.16	1.08	2333.
8 JUL*	.64	1.27	813.
9 JUL	.64	1.57	1005.
10 JUL	.64	1.61	1030.
11 JUL	.64	1.70	1088.
12 JUL	.64	1.39	890.
13 JUL	.64	1.35	864.
14 JUL	.64	1.60	1024.
15 JUL*	.64	1.72	1101.
16 JUL	.55	1.70	935.
17 JUL	.46	1.69	777.
18 JUL	.37	1.72	636.
19 JUL	.27	1.72	464.
20 JUL	.18	1.72	310.
21 JUL	.09	1.72	155.
22 JUL*	.00	1.67	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL*D)
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	1.72	0.
24 JUL	.00	1.72	0.
25 JUL	.00	1.68	0.
26 JUL	.00	1.69	0.
27 JUL	.00	1.72	0.
28 JUL	.00	1.72	0.
29 JUL*	.00	1.70	0.
30 JUL	.00	1.53	0.
31 JUL	.00	1.60	0.
1 AUG	.00	1.68	0.
2 AUG	.00	1.70	0.
3 AUG	.00	1.66	0.
4 AUG	.00	1.71	0.
5 AUG*	.00	1.67	0.
6 AUG	.00	1.72	0.
7 AUG	.00	1.72	0.
8 AUG	.00	1.72	0.
9 AUG	.00	1.72	0.
10 AUG	.00	1.67	0.
11 AUG	.00	1.70	0.
12 AUG*	.00	1.72	0.
13 AUG	.00	1.72	0.
14 AUG	.00	1.70	0.
15 AUG	.00	1.72	0.
16 AUG	.00	1.56	0.
17 AUG	.00	1.30	0.
18 AUG	.00	1.37	0.
19 AUG*	.00	1.63	0.
20 AUG	.00	1.72	0.
21 AUG	.00	1.35	0.
22 AUG	.00	1.28	0.
23 AUG	.00	.86	0.
24 AUG	.00	.84	0.
25 AUG	.00	1.16	0.
26 AUG*	.00	1.56	0.
27 AUG	.00	1.48	0.
28 AUG	.00	1.48	0.
29 AUG	.00	1.58	0.
30 AUG	.00	.85	0.
31 AUG	.00	.88	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL*D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	.50	0.
2 JAN	.00	.50	0.
3 JAN	.00	.32	0.
4 JAN	.00	.23	0.
5 JAN	.00	.23	0.
6 JAN	.00	.23	0.
7 JAN	.00	.25	0.
8 JAN	.00	.34	0.
9 JAN	.00	.34	0.
10 JAN	.00	.34	0.
11 JAN	.00	.34	0.
12 JAN	.00	.34	0.
13 JAN	.00	.52	0.
14 JAN	.00	.89	0.
15 JAN	.00	.89	0.
16 JAN	.00	.58	0.
17 JAN	.00	.23	0.
18 JAN	.00	.23	0.
19 JAN	.00	.23	0.
20 JAN	.00	.37	0.
21 JAN	.00	.58	0.
22 JAN	.00	.34	0.
23 JAN	.00	.24	0.
24 JAN	.00	.23	0.
25 JAN	.00	.43	0.
26 JAN	.00	.23	0.
27 JAN	.00	.44	0.
28 JAN	.00	.47	0.
29 JAN	.00	.40	0.
30 JAN	.00	.32	0.
31 JAN	.00	.45	0.
1 FEB	.00	.45	0.
2 FEB	.00	.45	0.
3 FEB	.00	.59	0.
4 FEB	.00	.55	0.
5 FEB	.00	.58	0.
6 FEB	.00	.47	0.
7 FEB	.00	.45	0.
8 FEB	.00	.45	0.
9 FEB	.00	.45	0.
10 FEB	.00	.52	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL*D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	.72	0.
12 FEB	.00	.79	0.
13 FEB	.00	.64	0.
14 FEB	.00	.45	0.
15 FEB	.00	.45	0.
16 FEB	.00	.45	0.
17 FEB	.00	.45	0.
18 FEB	.00	.45	0.
19 FEB	.00	.45	0.
20 FEB	.00	.45	0.
21 FEB	.00	.47	0.
22 FEB	.00	.46	0.
23 FEB	.00	.45	0.
24 FEB	.00	.45	0.
25 FEB	.00	.49	0.
26 FEB	.00	.57	0.
27 FEB	.00	.54	0.
28 FEB	.00	.55	0.
29 FEB	.00	.53	0.
1 MAR	.00	.51	0.
2 MAR	.00	.67	0.
3 MAR	.00	.62	0.
4 MAR	.00	.66	0.
5 MAR	.00	.68	0.
6 MAR	.00	.59	0.
7 MAR	.00	.57	0.
8 MAR	.00	.45	0.
9 MAR	.00	.45	0.
10 MAR	.00	.45	0.
11 MAR	.00	.46	0.
12 MAR	.00	.45	0.
13 MAR	.00	.38	0.
14 MAR	.00	.34	0.
15 MAR	.00	.34	0.
16 MAR	.00	.34	0.
17 MAR	.00	.34	0.
18 MAR	.00	.34	0.
19 MAR	.00	.34	0.
20 MAR	.00	.34	0.
21 MAR	.00	.34	0.
22 MAR	.00	.34	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL*D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	.34	0.
24 MAR	.00	.34	0.
25 MAR	.00	.34	0.
26 MAR	.00	.34	0.
27 MAR	.00	.34	0.
28 MAR	.00	.34	0.
29 MAR	.00	.34	0.
30 MAR	.00	.34	0.
31 MAR	.00	.34	0.
1 APR	.00	.34	0.
2 APR	.00	.34	0.
3 APR	.00	.34	0.
4 APR	.00	.34	0.
5 APR	.00	.34	0.
6 APR	.00	.54	0.
7 APR	.00	.61	0.
8 APR	.00	.41	0.
9 APR	.00	.34	0.
10 APR	.00	.34	0.
11 APR	.00	.35	0.
12 APR	.00	.34	0.
13 APR	.00	.48	0.
14 APR	.00	.65	0.
15 APR	.00	.45	0.
16 APR	.00	.45	0.
17 APR	.00	.43	0.
18 APR	.00	.63	0.
19 APR	.00	.78	0.
20 APR	.00	.79	0.
21 APR	.00	.87	0.
22 APR*	.00	.94	0.
23 APR	.00	1.12	0.
24 APR	.00	.95	0.
25 APR	.00	.98	0.
26 APR	.00	1.06	0.
27 APR	.00	.84	0.
28 APR	.00	.84	0.
29 APR*	.00	.92	0.
30 APR	.00	1.00	0.
1 MAY	.00	.49	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL*D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./100OC.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	.34	0.
3 MAY	.00	.35	0.
4 MAY	.00	.46	0.
5 MAY	.00	.45	0.
6 MAY*	.00	.29	0.
7 MAY	.00	.34	0.
8 MAY	.00	.34	0.
9 MAY	.00	.34	0.
10 MAY	.00	.40	0.
11 MAY	.00	.79	0.
12 MAY	.00	.96	0.
13 MAY*	.00	1.02	0.
14 MAY	.00	1.15	0.
15 MAY	.00	1.15	0.
16 MAY	.00	1.15	0.
17 MAY	.00	1.06	0.
18 MAY	.00	1.06	0.
19 MAY	.00	1.10	0.
20 MAY*	.00	1.23	0.
21 MAY	.00	1.34	0.
22 MAY	.00	1.40	0.
23 MAY	.00	1.34	0.
24 MAY	.00	1.17	0.
25 MAY	.00	1.03	0.
26 MAY	.00	1.11	0.
27 MAY*	.00	1.35	0.
28 MAY	.00	1.31	0.
29 MAY	.00	1.19	0.
30 MAY	.00	1.43	0.
31 MAY	.00	1.15	0.
1 JUN	.00	1.11	0.
2 JUN	.00	1.23	0.
3 JUN*	.00	1.60	0.
4 JUN	.00	1.57	0.
5 JUN	.00	1.55	0.
6 JUN*	.00	1.61	0.
7 JUN	.80	1.12	896.
8 JUN	1.61	.97	1562.
9 JUN	2.41	1.20	2892.
10 JUN*	3.21	1.24	3980.
11 JUN	2.14	1.38	2953.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL*D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	1.07	1.38	1477.
13 JUN*	.00	1.18	0.
14 JUN	.00	1.05	0.
15 JUN	.00	1.05	0.
16 JUN	.00	.93	0.
17 JUN*	.00	.61	0.
18 JUN	.00	.70	0.
19 JUN	.00	1.02	0.
20 JUN*	.00	.86	0.
21 JUN	.00	.96	0.
22 JUN	.00	.82	0.
23 JUN	.00	1.04	0.
24 JUN*	.00	1.06	0.
25 JUN	.00	1.34	0.
26 JUN	.00	1.43	0.
27 JUN	.00	1.27	0.
28 JUN	.00	1.28	0.
29 JUN	.00	1.25	0.
30 JUN	.00	1.14	0.
1 JUL*	.00	1.16	0.
2 JUL	.00	1.16	0.
3 JUL	.00	1.16	0.
4 JUL	.00	.73	0.
5 JUL	.00	.62	0.
6 JUL	.00	.62	0.
7 JUL	.00	1.08	0.
8 JUL*	.00	1.27	0.
9 JUL	.09	1.57	141.
10 JUL	.19	1.61	306.
11 JUL	.28	1.70	476.
12 JUL	.37	1.39	514.
13 JUL	.46	1.35	621.
14 JUL	.56	1.60	896.
15 JUL*	.65	1.72	1118.
16 JUL	.56	1.70	952.
17 JUL	.46	1.69	777.
18 JUL	.37	1.72	636.
19 JUL	.28	1.72	482.
20 JUL	.19	1.72	327.
21 JUL	.09	1.72	155.
22 JUL*	.00	1.67	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : STRIPED BASS (MORONE INCL'D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.19	1.72	327.
24 JUL	.37	1.72	636.
25 JUL	.56	1.68	941.
26 JUL	.75	1.69	1268.
27 JUL	.94	1.72	1617.
28 JUL	1.12	1.72	1926.
29 JUL*	1.31	1.70	2227.
30 JUL	1.12	1.53	1714.
31 JUL	.94	1.60	1504.
1 AUG	.75	1.68	1260.
2 AUG	.56	1.70	952.
3 AUG	.37	1.66	614.
4 AUG	.19	1.71	325.
5 AUG*	.00	1.67	0.
6 AUG	.00	1.72	0.
7 AUG	.00	1.72	0.
8 AUG	.00	1.72	0.
9 AUG	.00	1.72	0.
10 AUG	.00	1.67	0.
11 AUG	.00	1.70	0.
12 AUG*	.00	1.72	0.
13 AUG	.00	1.72	0.
14 AUG	.00	1.70	0.
15 AUG	.00	1.72	0.
16 AUG	.00	1.56	0.
17 AUG	.00	1.30	0.
18 AUG	.00	1.37	0.
19 AUG*	.00	1.63	0.
20 AUG	.00	1.72	0.
21 AUG	.00	1.35	0.
22 AUG	.00	1.28	0.
23 AUG	.00	.86	0.
24 AUG	.00	.84	0.
25 AUG	.00	1.16	0.
26 AUG*	.00	1.56	0.
27 AUG	.00	1.48	0.
28 AUG	.00	1.48	0.
29 AUG	.00	1.58	0.
30 AUG	.00	.85	0.
31 AUG	.00	.88	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL*D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	.50	0.
2 JAN	.00	.50	0.
3 JAN	.00	.32	0.
4 JAN	.00	.23	0.
5 JAN	.00	.23	0.
6 JAN	.00	.23	0.
7 JAN	.00	.25	0.
8 JAN	.00	.34	0.
9 JAN	.00	.34	0.
10 JAN	.00	.34	0.
11 JAN	.00	.34	0.
12 JAN	.00	.34	0.
13 JAN	.00	.52	0.
14 JAN	.00	.89	0.
15 JAN	.00	.89	0.
16 JAN	.00	.58	0.
17 JAN	.00	.23	0.
18 JAN	.00	.23	0.
19 JAN	.00	.23	0.
20 JAN	.00	.37	0.
21 JAN	.00	.58	0.
22 JAN	.00	.34	0.
23 JAN	.00	.24	0.
24 JAN	.00	.23	0.
25 JAN	.00	.43	0.
26 JAN	.00	.23	0.
27 JAN	.00	.44	0.
28 JAN	.00	.47	0.
29 JAN	.00	.40	0.
30 JAN	.00	.32	0.
31 JAN	.00	.45	0.
1 FEB	.00	.45	0.
2 FEB	.00	.45	0.
3 FEB	.00	.59	0.
4 FEB	.00	.55	0.
5 FEB	.00	.58	0.
6 FEB	.00	.47	0.
7 FEB	.00	.45	0.
8 FEB	.00	.45	0.
9 FEB	.00	.45	0.
10 FEB	.00	.52	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL*D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	.72	0.
12 FEB	.00	.79	0.
13 FEB	.00	.64	0.
14 FEB	.00	.45	0.
15 FEB	.00	.45	0.
16 FEB	.00	.45	0.
17 FEB	.00	.45	0.
18 FEB	.00	.45	0.
19 FEB	.00	.45	0.
20 FEB	.00	.45	0.
21 FEB	.00	.47	0.
22 FEB	.00	.46	0.
23 FEB	.00	.45	0.
24 FEB	.00	.45	0.
25 FEB	.00	.49	0.
26 FEB	.00	.57	0.
27 FEB	.00	.54	0.
28 FEB	.00	.55	0.
29 FEB	.00	.53	0.
1 MAR	.00	.51	0.
2 MAR	.00	.67	0.
3 MAR	.00	.62	0.
4 MAR	.00	.66	0.
5 MAR	.00	.68	0.
6 MAR	.00	.59	0.
7 MAR	.00	.57	0.
8 MAR	.00	.45	0.
9 MAR	.00	.45	0.
10 MAR	.00	.45	0.
11 MAR	.00	.46	0.
12 MAR	.00	.45	0.
13 MAR	.00	.38	0.
14 MAR	.00	.34	0.
15 MAR	.00	.34	0.
16 MAR	.00	.34	0.
17 MAR	.00	.34	0.
18 MAR	.00	.34	0.
19 MAR	.00	.34	0.
20 MAR	.00	.34	0.
21 MAR	.00	.34	0.
22 MAR	.00	.34	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL*D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	.34	0.
24 MAR	.00	.34	0.
25 MAR	.00	.34	0.
26 MAR	.00	.34	0.
27 MAR	.00	.34	0.
28 MAR	.00	.34	0.
29 MAR	.00	.34	0.
30 MAR	.00	.34	0.
31 MAR	.00	.34	0.
1 APR	.00	.34	0.
2 APR	.00	.34	0.
3 APR	.00	.34	0.
4 APR	.00	.34	0.
5 APR	.00	.34	0.
6 APR	.00	.54	0.
7 APR	.00	.61	0.
8 APR	.00	.41	0.
9 APR	.00	.34	0.
10 APR	.00	.34	0.
11 APR	.00	.35	0.
12 APR	.00	.34	0.
13 APR	.00	.48	0.
14 APR	.00	.65	0.
15 APR	.00	.45	0.
16 APR	.00	.45	0.
17 APR	.00	.43	0.
18 APR	.00	.63	0.
19 APR	.00	.78	0.
20 APR	.00	.79	0.
21 APR	.00	.87	0.
22 APR*	.00	.94	0.
23 APR	5.21	1.12	5835.
24 APR	10.41	.95	9890.
25 APR	15.62	.98	15308.
26 APR	20.82	1.06	22069.
27 APR	26.03	.84	21865.
28 APR	31.23	.84	26233.
29 APR*	36.44	.92	33525.
30 APR	67.06	1.00	67060.
1 MAY	97.68	.49	47863.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	128.30	.34	43622.
3 MAY	158.91	.35	55619.
4 MAY	189.53	.46	87184.
5 MAY	220.15	.45	99068.
6 MAY*	250.77	.29	72723.
7 MAY	231.13	.34	78584.
8 MAY	211.49	.34	71907.
9 MAY	191.85	.34	65229.
10 MAY	172.20	.40	68880.
11 MAY	152.56	.79	120522.
12 MAY	132.92	.96	127603.
13 MAY*	113.28	1.02	115546.
14 MAY	214.46	1.15	246629.
15 MAY	315.63	1.15	362975.
16 MAY	416.81	1.15	479332.
17 MAY	517.99	1.06	549069.
18 MAY	619.17	1.06	656320.
19 MAY	720.34	1.10	792374.
20 MAY*	821.52	1.23	1010470.
21 MAY	837.63	1.34	1122424.
22 MAY	853.75	1.40	1195250.
23 MAY	869.86	1.34	1165612.
24 MAY	885.98	1.17	1036597.
25 MAY	902.09	1.03	929153.
26 MAY	918.21	1.11	1019213.
27 MAY*	934.32	1.35	1261332.
28 MAY	933.28	1.31	1222597.
29 MAY	932.25	1.19	1109378.
30 MAY	931.21	1.43	1331630.
31 MAY	930.17	1.15	1069696.
1 JUN	929.13	1.11	1031334.
2 JUN	928.10	1.23	1141563.
3 JUN*	927.06	1.60	1483296.
4 JUN	717.88	1.57	1127072.
5 JUN	508.69	1.55	788470.
6 JUN*	299.51	1.61	482211.
7 JUN	236.56	1.12	264947.
8 JUN	173.61	.97	168402.
9 JUN	110.65	1.20	132780.
10 JUN*	47.70	1.24	59148.
11 JUN	44.35	1.38	61203.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	40.99	1.38	56566.
13 JUN*	37.64	1.18	44415.
14 JUN	38.64	1.05	40572.
15 JUN	39.63	1.05	41611.
16 JUN	40.63	.93	37786.
17 JUN*	41.62	.61	25388.
18 JUN	30.65	.70	21455.
19 JUN	19.69	1.02	20084.
20 JUN*	8.72	.86	7499.
21 JUN	8.72	.96	8371.
22 JUN	8.71	.82	7142.
23 JUN	8.71	1.04	9058.
24 JUN*	8.71	1.06	9233.
25 JUN	7.56	1.34	10130.
26 JUN	6.41	1.43	9166.
27 JUN	5.26	1.27	6680.
28 JUN	4.11	1.28	5261.
29 JUN	2.96	1.25	3700.
30 JUN	1.81	1.14	2063.
1 JUL*	.66	1.16	766.
2 JUL	.57	1.16	661.
3 JUL	.47	1.16	545.
4 JUL	.38	.73	277.
5 JUL	.28	.62	174.
6 JUL	.19	.62	118.
7 JUL	.09	1.08	97.
8 JUL*	.00	1.27	0.
9 JUL	.00	1.57	0.
10 JUL	.00	1.61	0.
11 JUL	.00	1.70	0.
12 JUL	.00	1.39	0.
13 JUL	.00	1.35	0.
14 JUL	.00	1.60	0.
15 JUL*	.00	1.72	0.
16 JUL	.00	1.70	0.
17 JUL	.00	1.69	0.
18 JUL	.00	1.72	0.
19 JUL	.00	1.72	0.
20 JUL	.00	1.72	0.
21 JUL	.00	1.72	0.
22 JUL*	.00	1.67	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : EGG
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	1.72	0.
24 JUL	.00	1.72	0.
25 JUL	.00	1.68	0.
26 JUL	.00	1.69	0.
27 JUL	.00	1.72	0.
28 JUL	.00	1.72	0.
29 JUL*	.00	1.70	0.
30 JUL	.00	1.53	0.
31 JUL	.00	1.60	0.
1 AUG	.00	1.68	0.
2 AUG	.00	1.70	0.
3 AUG	.00	1.66	0.
4 AUG	.00	1.71	0.
5 AUG*	.00	1.67	0.
6 AUG	.00	1.72	0.
7 AUG	.00	1.72	0.
8 AUG	.00	1.72	0.
9 AUG	.00	1.72	0.
10 AUG	.00	1.67	0.
11 AUG	.00	1.70	0.
12 AUG*	.00	1.72	0.
13 AUG	.00	1.72	0.
14 AUG	.00	1.70	0.
15 AUG	.00	1.72	0.
16 AUG	.00	1.56	0.
17 AUG	.00	1.30	0.
18 AUG	.00	1.37	0.
19 AUG*	.00	1.63	0.
20 AUG	.00	1.72	0.
21 AUG	.00	1.35	0.
22 AUG	.00	1.28	0.
23 AUG	.00	.86	0.
24 AUG	.00	.84	0.
25 AUG	.00	1.16	0.
26 AUG*	.00	1.56	0.
27 AUG	.00	1.48	0.
28 AUG	.00	1.48	0.
29 AUG	.00	1.58	0.
30 AUG	.00	.85	0.
31 AUG	.00	.88	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	.50	0.
2 JAN	.00	.50	0.
3 JAN	.00	.32	0.
4 JAN	.00	.23	0.
5 JAN	.00	.23	0.
6 JAN	.00	.23	0.
7 JAN	.00	.25	0.
8 JAN	.00	.34	0.
9 JAN	.00	.34	0.
10 JAN	.00	.34	0.
11 JAN	.00	.34	0.
12 JAN	.00	.34	0.
13 JAN	.00	.52	0.
14 JAN	.00	.89	0.
15 JAN	.00	.89	0.
16 JAN	.00	.58	0.
17 JAN	.00	.23	0.
18 JAN	.00	.23	0.
19 JAN	.00	.23	0.
20 JAN	.00	.37	0.
21 JAN	.00	.58	0.
22 JAN	.00	.34	0.
23 JAN	.00	.24	0.
24 JAN	.00	.23	0.
25 JAN	.00	.43	0.
26 JAN	.00	.23	0.
27 JAN	.00	.44	0.
28 JAN	.00	.47	0.
29 JAN	.00	.40	0.
30 JAN	.00	.32	0.
31 JAN	.00	.45	0.
1 FEB	.00	.45	0.
2 FEB	.00	.45	0.
3 FEB	.00	.59	0.
4 FEB	.00	.55	0.
5 FEB	.00	.58	0.
6 FEB	.00	.47	0.
7 FEB	.00	.45	0.
8 FEB	.00	.45	0.
9 FEB	.00	.45	0.
10 FEB	.00	.52	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL*D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	.72	0.
12 FEB	.00	.79	0.
13 FEB	.00	.64	0.
14 FEB	.00	.45	0.
15 FEB	.00	.45	0.
16 FEB	.00	.45	0.
17 FEB	.00	.45	0.
18 FEB	.00	.45	0.
19 FEB	.00	.45	0.
20 FEB	.00	.45	0.
21 FEB	.00	.47	0.
22 FEB	.00	.46	0.
23 FEB	.00	.45	0.
24 FEB	.00	.45	0.
25 FEB	.00	.49	0.
26 FEB	.00	.57	0.
27 FEB	.00	.54	0.
28 FEB	.00	.55	0.
29 FEB	.00	.53	0.
1 MAR	.00	.51	0.
2 MAR	.00	.67	0.
3 MAR	.00	.62	0.
4 MAR	.00	.66	0.
5 MAR	.00	.68	0.
6 MAR	.00	.59	0.
7 MAR	.00	.57	0.
8 MAR	.00	.45	0.
9 MAR	.00	.45	0.
10 MAR	.00	.45	0.
11 MAR	.00	.46	0.
12 MAR	.00	.45	0.
13 MAR	.00	.38	0.
14 MAR	.00	.34	0.
15 MAR	.00	.34	0.
16 MAR	.00	.34	0.
17 MAR	.00	.34	0.
18 MAR	.00	.34	0.
19 MAR	.00	.34	0.
20 MAR	.00	.34	0.
21 MAR	.00	.34	0.
22 MAR	.00	.34	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MGM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	.34	0.
24 MAR	.00	.34	0.
25 MAR	.00	.34	0.
26 MAR	.00	.34	0.
27 MAR	.00	.34	0.
28 MAR	.00	.34	0.
29 MAR	.00	.34	0.
30 MAR	.00	.34	0.
31 MAR	.00	.34	0.
1 APR	.00	.34	0.
2 APR	.00	.34	0.
3 APR	.00	.34	0.
4 APR	.00	.34	0.
5 APR	.00	.34	0.
6 APR	.00	.54	0.
7 APR	.00	.61	0.
8 APR	.00	.41	0.
9 APR	.00	.34	0.
10 APR	.00	.34	0.
11 APR	.00	.35	0.
12 APR	.00	.34	0.
13 APR	.00	.48	0.
14 APR	.00	.65	0.
15 APR	.00	.45	0.
16 APR	.00	.45	0.
17 APR	.00	.43	0.
18 APR	.00	.63	0.
19 APR	.00	.78	0.
20 APR	.00	.79	0.
21 APR	.00	.87	0.
22 APR*	.00	.94	0.
23 APR	.00	1.12	0.
24 APR	.00	.95	0.
25 APR	.00	.98	0.
26 APR	.00	1.06	0.
27 APR	.00	.84	0.
28 APR	.00	.84	0.
29 APR*	.00	.92	0.
30 APR	.09	1.00	90.
1 MAY	.19	.49	93.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL*D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.28	.34	95.
3 MAY	.38	.35	133.
4 MAY	.47	.46	216.
5 MAY	.57	.45	257.
6 MAY*	.66	.29	191.
7 MAY	2.37	.34	806.
8 MAY	4.08	.34	1387.
9 MAY	5.79	.34	1969.
10 MAY	7.51	.40	3004.
11 MAY	9.22	.79	7284.
12 MAY	10.93	.96	10493.
13 MAY*	12.64	1.02	12893.
14 MAY	16.20	1.15	18630.
15 MAY	19.76	1.15	22724.
16 MAY	23.32	1.15	26818.
17 MAY	26.87	1.06	28482.
18 MAY	30.43	1.06	32256.
19 MAY	33.99	1.10	37389.
20 MAY*	37.55	1.23	46187.
21 MAY	33.50	1.34	44890.
22 MAY	29.46	1.40	41244.
23 MAY	25.41	1.34	34049.
24 MAY	21.37	1.17	25003.
25 MAY	17.32	1.03	17840.
26 MAY	13.28	1.11	14741.
27 MAY*	9.23	1.35	12461.
28 MAY	9.73	1.31	12746.
29 MAY	10.22	1.19	12162.
30 MAY	10.72	1.43	15330.
31 MAY	11.22	1.15	12903.
1 JUN	11.72	1.11	13009.
2 JUN	12.21	1.23	15018.
3 JUN*	12.71	1.60	20336.
4 JUN	11.36	1.57	17835.
5 JUN	10.02	1.55	15531.
6 JUN*	8.67	1.61	13959.
7 JUN	8.00	1.12	8960.
8 JUN	7.33	.97	7110.
9 JUN	6.65	1.20	7980.
10 JUN*	5.98	1.24	7415.
11 JUN	4.44	1.38	6127.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	2.90	1.38	4002.
13 JUN*	1.36	1.18	1605.
14 JUN	1.86	1.05	1953.
15 JUN	2.36	1.05	2478.
16 JUN	2.86	.93	2660.
17 JUN*	3.36	.61	2050.
18 JUN	3.13	.70	2191.
19 JUN	2.90	1.02	2958.
20 JUN*	2.67	.86	2296.
21 JUN	2.00	.96	1920.
22 JUN	1.34	.82	1099.
23 JUN	.67	1.04	697.
24 JUN*	.00	1.06	0.
25 JUN	.00	1.34	0.
26 JUN	.00	1.43	0.
27 JUN	.00	1.27	0.
28 JUN	.00	1.28	0.
29 JUN	.00	1.25	0.
30 JUN	.00	1.14	0.
1 JUL*	.00	1.16	0.
2 JUL	.00	1.16	0.
3 JUL	.00	1.16	0.
4 JUL	.00	.73	0.
5 JUL	.00	.62	0.
6 JUL	.00	.62	0.
7 JUL	.00	1.08	0.
8 JUL*	.00	1.27	0.
9 JUL	.00	1.57	0.
10 JUL	.00	1.61	0.
11 JUL	.00	1.70	0.
12 JUL	.00	1.39	0.
13 JUL	.00	1.35	0.
14 JUL	.00	1.60	0.
15 JUL*	.00	1.72	0.
16 JUL	.00	1.70	0.
17 JUL	.00	1.69	0.
18 JUL	.00	1.72	0.
19 JUL	.00	1.72	0.
20 JUL	.00	1.72	0.
21 JUL	.00	1.72	0.
22 JUL*	.00	1.67	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL*D)
LIFE STAGE : Y-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	.00	1.72	0.
24 JUL	.00	1.72	0.
25 JUL	.00	1.68	0.
26 JUL	.00	1.69	0.
27 JUL	.00	1.72	0.
28 JUL	.00	1.72	0.
29 JUL*	.00	1.70	0.
30 JUL	.00	1.53	0.
31 JUL	.00	1.60	0.
1 AUG	.00	1.68	0.
2 AUG	.00	1.70	0.
3 AUG	.00	1.66	0.
4 AUG	.00	1.71	0.
5 AUG*	.00	1.67	0.
6 AUG	.00	1.72	0.
7 AUG	.00	1.72	0.
8 AUG	.00	1.72	0.
9 AUG	.00	1.72	0.
10 AUG	.00	1.67	0.
11 AUG	.00	1.70	0.
12 AUG*	.00	1.72	0.
13 AUG	.00	1.72	0.
14 AUG	.00	1.70	0.
15 AUG	.00	1.72	0.
16 AUG	.00	1.56	0.
17 AUG	.00	1.30	0.
18 AUG	.00	1.37	0.
19 AUG*	.00	1.63	0.
20 AUG	.00	1.72	0.
21 AUG	.00	1.35	0.
22 AUG	.00	1.28	0.
23 AUG	.00	.86	0.
24 AUG	.00	.84	0.
25 AUG	.00	1.16	0.
26 AUG*	.00	1.56	0.
27 AUG	.00	1.48	0.
28 AUG	.00	1.48	0.
29 AUG	.00	1.58	0.
30 AUG	.00	.85	0.
31 AUG	.00	.88	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : PY-S.C
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	.50	0.
2 JAN	.00	.50	0.
3 JAN	.00	.32	0.
4 JAN	.00	.23	0.
5 JAN	.00	.23	0.
6 JAN	.00	.23	0.
7 JAN	.00	.25	0.
8 JAN	.00	.34	0.
9 JAN	.00	.34	0.
10 JAN	.00	.34	0.
11 JAN	.00	.34	0.
12 JAN	.00	.34	0.
13 JAN	.00	.52	0.
14 JAN	.00	.89	0.
15 JAN	.00	.89	0.
16 JAN	.00	.58	0.
17 JAN	.00	.23	0.
18 JAN	.00	.23	0.
19 JAN	.00	.23	0.
20 JAN	.00	.37	0.
21 JAN	.00	.58	0.
22 JAN	.00	.34	0.
23 JAN	.00	.24	0.
24 JAN	.00	.23	0.
25 JAN	.00	.43	0.
26 JAN	.00	.23	0.
27 JAN	.00	.44	0.
28 JAN	.00	.47	0.
29 JAN	.00	.40	0.
30 JAN	.00	.32	0.
31 JAN	.00	.45	0.
1 FEB	.00	.45	0.
2 FEB	.00	.45	0.
3 FEB	.00	.59	0.
4 FEB	.00	.55	0.
5 FEB	.00	.58	0.
6 FEB	.00	.47	0.
7 FEB	.00	.45	0.
8 FEB	.00	.45	0.
9 FEB	.00	.45	0.
10 FEB	.00	.52	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	.72	0.
12 FEB	.00	.79	0.
13 FEB	.00	.64	0.
14 FEB	.00	.45	0.
15 FEB	.00	.45	0.
16 FEB	.00	.45	0.
17 FEB	.00	.45	0.
18 FEB	.00	.45	0.
19 FEB	.00	.45	0.
20 FEB	.00	.45	0.
21 FEB	.00	.47	0.
22 FEB	.00	.46	0.
23 FEB	.00	.45	0.
24 FEB	.00	.45	0.
25 FEB	.00	.49	0.
26 FEB	.00	.57	0.
27 FEB	.00	.54	0.
28 FEB	.00	.55	0.
29 FEB	.00	.53	0.
1 MAR	.00	.51	0.
2 MAR	.00	.67	0.
3 MAR	.00	.62	0.
4 MAR	.00	.66	0.
5 MAR	.00	.68	0.
6 MAR	.00	.59	0.
7 MAR	.00	.57	0.
8 MAR	.00	.45	0.
9 MAR	.00	.45	0.
10 MAR	.00	.45	0.
11 MAR	.00	.46	0.
12 MAR	.00	.45	0.
13 MAR	.00	.38	0.
14 MAR	.00	.34	0.
15 MAR	.00	.34	0.
16 MAR	.00	.34	0.
17 MAR	.00	.34	0.
18 MAR	.00	.34	0.
19 MAR	.00	.34	0.
20 MAR	.00	.34	0.
21 MAR	.00	.34	0.
22 MAR	.00	.34	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL*D)
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	.34	0.
24 MAR	.00	.34	0.
25 MAR	.00	.34	0.
26 MAR	.00	.34	0.
27 MAR	.00	.34	0.
28 MAR	.00	.34	0.
29 MAR	.00	.34	0.
30 MAR	.00	.34	0.
31 MAR	.00	.34	0.
1 APR	.00	.34	0.
2 APR	.00	.34	0.
3 APR	.00	.34	0.
4 APR	.00	.34	0.
5 APR	.00	.34	0.
6 APR	.00	.54	0.
7 APR	.00	.61	0.
8 APR	.00	.41	0.
9 APR	.00	.34	0.
10 APR	.00	.34	0.
11 APR	.00	.35	0.
12 APR	.00	.34	0.
13 APR	.00	.48	0.
14 APR	.00	.65	0.
15 APR	.00	.45	0.
16 APR	.00	.45	0.
17 APR	.00	.43	0.
18 APR	.00	.63	0.
19 APR	.00	.78	0.
20 APR	.00	.79	0.
21 APR	.00	.87	0.
22 APR*	.00	.94	0.
23 APR	.00	1.12	0.
24 APR	.00	.95	0.
25 APR	.00	.98	0.
26 APR	.00	1.06	0.
27 APR	.00	.84	0.
28 APR	.00	.84	0.
29 APR*	.00	.92	0.
30 APR	.00	1.00	0.
1 MAY	.00	.49	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : PY-SAC
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./100CC.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	.34	0.
3 MAY	.00	.35	0.
4 MAY	.00	.46	0.
5 MAY	.00	.45	0.
6 MAY*	.00	.29	0.
7 MAY	.00	.34	0.
8 MAY	.00	.34	0.
9 MAY	.00	.34	0.
10 MAY	.00	.40	0.
11 MAY	.00	.79	0.
12 MAY	.00	.96	0.
13 MAY*	.00	1.02	0.
14 MAY	14.72	1.15	16928.
15 MAY	29.43	1.15	33845.
16 MAY	44.15	1.15	50773.
17 MAY	58.87	1.06	62402.
18 MAY	73.59	1.06	78005.
19 MAY	88.30	1.10	97130.
20 MAY*	103.02	1.23	126715.
21 MAY	104.42	1.34	139923.
22 MAY	105.81	1.40	148134.
23 MAY	107.21	1.34	143661.
24 MAY	108.61	1.17	127074.
25 MAY	110.01	1.03	113310.
26 MAY	111.40	1.11	123654.
27 MAY*	112.80	1.35	152280.
28 MAY	128.93	1.31	168898.
29 MAY	145.07	1.19	172633.
30 MAY	161.20	1.43	230516.
31 MAY	177.33	1.15	203930.
1 JUN	193.46	1.11	214741.
2 JUN	209.60	1.23	257808.
3 JUN*	225.73	1.60	361168.
4 JUN	232.04	1.57	364303.
5 JUN	238.35	1.55	369443.
6 JUN*	244.66	1.61	393903.
7 JUN	218.84	1.12	245101.
8 JUN	193.02	.97	187229.
9 JUN	167.19	1.20	200628.
10 JUN*	141.37	1.24	175299.
11 JUN	114.70	1.38	158286.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : PY-S,C
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	88.03	1.38	121481.
13 JUN*	61.36	1.18	72405.
14 JUN	55.84	1.05	58632.
15 JUN	50.32	1.05	52836.
16 JUN	44.80	.93	41664.
17 JUN*	39.28	.61	23961.
18 JUN	49.57	.70	34699.
19 JUN	59.87	1.02	61067.
20 JUN*	70.16	.86	60338.
21 JUN	74.45	.96	71472.
22 JUN	78.74	.82	64567.
23 JUN	83.02	1.04	86341.
24 JUN*	87.31	1.06	92549.
25 JUN	77.04	1.34	103234.
26 JUN	66.76	1.43	95467.
27 JUN	56.49	1.27	71742.
28 JUN	46.22	1.28	59162.
29 JUN	35.95	1.25	44938.
30 JUN	25.67	1.14	29264.
1 JUL*	15.40	1.16	17864.
2 JUL	16.49	1.16	19128.
3 JUL	17.57	1.16	20381.
4 JUL	18.66	.73	13622.
5 JUL	19.74	.62	12239.
6 JUL	20.83	.62	12915.
7 JUL	21.91	1.08	23663.
8 JUL*	23.00	1.27	29210.
9 JUL	20.95	1.57	32892.
10 JUL	18.90	1.61	30429.
11 JUL	16.85	1.70	28645.
12 JUL	14.81	1.39	20586.
13 JUL	12.76	1.35	17226.
14 JUL	10.71	1.60	17136.
15 JUL*	8.66	1.72	14895.
16 JUL	8.68	1.70	14756.
17 JUL	8.70	1.69	14703.
18 JUL	8.72	1.72	14998.
19 JUL	8.73	1.72	15016.
20 JUL	8.75	1.72	15050.
21 JUL	8.77	1.72	15084.
22 JUL*	8.79	1.67	14679.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL*D)
LIFE STAGE : PY-S.C
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	7.53	1.72	12952.
24 JUL	6.28	1.72	10802.
25 JUL	5.02	1.68	8434.
26 JUL	3.77	1.69	6371.
27 JUL	2.51	1.72	4317.
28 JUL	1.26	1.72	2167.
29 JUL*	.00	1.70	0.
30 JUL	.00	1.53	0.
31 JUL	.00	1.60	0.
1 AUG	.00	1.68	0.
2 AUG	.00	1.70	0.
3 AUG	.00	1.66	0.
4 AUG	.00	1.71	0.
5 AUG*	.00	1.67	0.
6 AUG	.00	1.72	0.
7 AUG	.00	1.72	0.
8 AUG	.00	1.72	0.
9 AUG	.00	1.72	0.
10 AUG	.00	1.67	0.
11 AUG	.00	1.70	0.
12 AUG*	.00	1.72	0.
13 AUG	.00	1.72	0.
14 AUG	.00	1.70	0.
15 AUG	.00	1.72	0.
16 AUG	.00	1.56	0.
17 AUG	.00	1.30	0.
18 AUG	.00	1.37	0.
19 AUG*	.00	1.63	0.
20 AUG	.00	1.72	0.
21 AUG	.00	1.35	0.
22 AUG	.00	1.28	0.
23 AUG	.00	.86	0.
24 AUG	.00	.84	0.
25 AUG	.00	1.16	0.
26 AUG*	.00	1.56	0.
27 AUG	.00	1.48	0.
28 AUG	.00	1.48	0.
29 AUG	.00	1.58	0.
30 AUG	.00	.85	0.
31 AUG	.00	.88	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
1 JAN	.00	.50	0.
2 JAN	.00	.50	0.
3 JAN	.00	.32	0.
4 JAN	.00	.23	0.
5 JAN	.00	.23	0.
6 JAN	.00	.23	0.
7 JAN	.00	.25	0.
8 JAN	.00	.34	0.
9 JAN	.00	.34	0.
10 JAN	.00	.34	0.
11 JAN	.00	.34	0.
12 JAN	.00	.34	0.
13 JAN	.00	.52	0.
14 JAN	.00	.89	0.
15 JAN	.00	.89	0.
16 JAN	.00	.58	0.
17 JAN	.00	.23	0.
18 JAN	.00	.23	0.
19 JAN	.00	.23	0.
20 JAN	.00	.37	0.
21 JAN	.00	.58	0.
22 JAN	.00	.34	0.
23 JAN	.00	.24	0.
24 JAN	.00	.23	0.
25 JAN	.00	.43	0.
26 JAN	.00	.23	0.
27 JAN	.00	.44	0.
28 JAN	.00	.47	0.
29 JAN	.00	.40	0.
30 JAN	.00	.32	0.
31 JAN	.00	.45	0.
1 FEB	.00	.45	0.
2 FEB	.00	.45	0.
3 FEB	.00	.59	0.
4 FEB	.00	.55	0.
5 FEB	.00	.58	0.
6 FEB	.00	.47	0.
7 FEB	.00	.45	0.
8 FEB	.00	.45	0.
9 FEB	.00	.45	0.
10 FEB	.00	.52	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL*D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
11 FEB	.00	.72	0.
12 FEB	.00	.79	0.
13 FEB	.00	.64	0.
14 FEB	.00	.45	0.
15 FEB	.00	.45	0.
16 FEB	.00	.45	0.
17 FEB	.00	.45	0.
18 FEB	.00	.45	0.
19 FEB	.00	.45	0.
20 FEB	.00	.45	0.
21 FEB	.00	.47	0.
22 FEB	.00	.46	0.
23 FEB	.00	.45	0.
24 FEB	.00	.45	0.
25 FEB	.00	.49	0.
26 FEB	.00	.57	0.
27 FEB	.00	.54	0.
28 FEB	.00	.55	0.
29 FEB	.00	.53	0.
1 MAR	.00	.51	0.
2 MAR	.00	.67	0.
3 MAR	.00	.62	0.
4 MAR	.00	.66	0.
5 MAR	.00	.68	0.
6 MAR	.00	.59	0.
7 MAR	.00	.57	0.
8 MAR	.00	.45	0.
9 MAR	.00	.45	0.
10 MAR	.00	.45	0.
11 MAR	.00	.46	0.
12 MAR	.00	.45	0.
13 MAR	.00	.38	0.
14 MAR	.00	.34	0.
15 MAR	.00	.34	0.
16 MAR	.00	.34	0.
17 MAR	.00	.34	0.
18 MAR	.00	.34	0.
19 MAR	.00	.34	0.
20 MAR	.00	.34	0.
21 MAR	.00	.34	0.
22 MAR	.00	.34	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MION

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 MAR	.00	.34	0.
24 MAR	.00	.34	0.
25 MAR	.00	.34	0.
26 MAR	.00	.34	0.
27 MAR	.00	.34	0.
28 MAR	.00	.34	0.
29 MAR	.00	.34	0.
30 MAR	.00	.34	0.
31 MAR	.00	.34	0.
1 APR	.00	.34	0.
2 APR	.00	.34	0.
3 APR	.00	.34	0.
4 APR	.00	.34	0.
5 APR	.00	.34	0.
6 APR	.00	.54	0.
7 APR	.00	.61	0.
8 APR	.00	.41	0.
9 APR	.00	.34	0.
10 APR	.00	.34	0.
11 APR	.00	.35	0.
12 APR	.00	.34	0.
13 APR	.00	.48	0.
14 APR	.00	.65	0.
15 APR	.00	.45	0.
16 APR	.00	.45	0.
17 APR	.00	.43	0.
18 APR	.00	.63	0.
19 APR	.00	.78	0.
20 APR	.00	.79	0.
21 APR	.00	.87	0.
22 APR*	.00	.94	0.
23 APR	.00	1.12	0.
24 APR	.00	.95	0.
25 APR	.00	.98	0.
26 APR	.00	1.06	0.
27 APR	.00	.84	0.
28 APR	.00	.84	0.
29 APR*	.00	.92	0.
30 APR	.00	1.00	0.
1 MAY	.00	.49	0.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL*D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
2 MAY	.00	.34	0.
3 MAY	.00	.35	0.
4 MAY	.00	.46	0.
5 MAY	.00	.45	0.
6 MAY*	.00	.29	0.
7 MAY	.00	.34	0.
8 MAY	.00	.34	0.
9 MAY	.00	.34	0.
10 MAY	.00	.40	0.
11 MAY	.00	.79	0.
12 MAY	.00	.96	0.
13 MAY*	.00	1.02	0.
14 MAY	.00	1.15	0.
15 MAY	.00	1.15	0.
16 MAY	.00	1.15	0.
17 MAY	.00	1.06	0.
18 MAY	.00	1.06	0.
19 MAY	.00	1.10	0.
20 MAY*	.00	1.23	0.
21 MAY	.00	1.34	0.
22 MAY	.00	1.40	0.
23 MAY	.00	1.34	0.
24 MAY	.00	1.17	0.
25 MAY	.00	1.03	0.
26 MAY	.00	1.11	0.
27 MAY*	.00	1.35	0.
28 MAY	.00	1.31	0.
29 MAY	.00	1.19	0.
30 MAY	.00	1.43	0.
31 MAY	.00	1.15	0.
1 JUN	.00	1.11	0.
2 JUN	.00	1.23	0.
3 JUN*	.00	1.60	0.
4 JUN	.00	1.57	0.
5 JUN	.00	1.55	0.
6 JUN*	.00	1.61	0.
7 JUN	.48	1.12	538.
8 JUN	.97	.97	941.
9 JUN	1.45	1.20	1740.
10 JUN*	1.93	1.24	2393.
11 JUN	1.29	1.38	1780.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL'D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
12 JUN	.64	1.38	883.
13 JUN*	.00	1.18	0.
14 JUN	.00	1.05	0.
15 JUN	.00	1.05	0.
16 JUN	.00	.93	0.
17 JUN*	.00	.61	0.
18 JUN	.00	.70	0.
19 JUN	.00	1.02	0.
20 JUN*	.00	.86	0.
21 JUN	.00	.96	0.
22 JUN	.00	.82	0.
23 JUN	.00	1.04	0.
24 JUN*	.00	1.06	0.
25 JUN	.00	1.34	0.
26 JUN	.00	1.43	0.
27 JUN	.00	1.27	0.
28 JUN	.00	1.28	0.
29 JUN	.00	1.25	0.
30 JUN	.00	1.14	0.
1 JUL*	.00	1.16	0.
2 JUL	.19	1.16	220.
3 JUL	.39	1.16	452.
4 JUL	.58	.73	423.
5 JUL	.77	.62	477.
6 JUL	.96	.62	595.
7 JUL	1.16	1.08	1253.
8 JUL*	1.35	1.27	1714.
9 JUL	1.53	1.57	2402.
10 JUL	1.71	1.61	2753.
11 JUL	1.89	1.70	3213.
12 JUL	2.07	1.39	2877.
13 JUL	2.25	1.35	3038.
14 JUL	2.43	1.60	3888.
15 JUL*	2.61	1.72	4489.
16 JUL	2.43	1.70	4131.
17 JUL	2.25	1.69	3803.
18 JUL	2.07	1.72	3560.
19 JUL	1.90	1.72	3268.
20 JUL	1.72	1.72	2958.
21 JUL	1.54	1.72	2649.
22 JUL*	1.36	1.67	2271.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION
1980 ENTRAINMENT STUDY

SAMPLE LOCATION: DANSKAMMER INTAKE TRASH RACKS
SPECIES : WHITE PERCH (MORONE INCL*D)
LIFE STAGE : JUV
TIME PERIOD : DAWN,NOON,DUSK,MIDN

DATE	NUMBER OF ORGANISMS COLLECTED(NO./1000C.M)	DAILY PLANT FLOW (MCM)	ESTIMATED NUMBER ORGANISMS ENTRAINED
23 JUL	1.85	1.72	3182.
24 JUL	2.35	1.72	4042.
25 JUL	2.84	1.68	4771.
26 JUL	3.34	1.69	5645.
27 JUL	3.83	1.72	6588.
28 JUL	4.33	1.72	7448.
29 JUL*	4.82	1.70	8194.
30 JUL	4.32	1.53	6610.
31 JUL	3.81	1.60	6096.
1 AUG	3.31	1.68	5561.
2 AUG	2.80	1.70	4760.
3 AUG	2.30	1.66	3818.
4 AUG	1.79	1.71	3061.
5 AUG*	1.29	1.67	2154.
6 AUG	1.29	1.72	2219.
7 AUG	1.29	1.72	2219.
8 AUG	1.29	1.72	2219.
9 AUG	1.30	1.72	2236.
10 AUG	1.30	1.67	2171.
11 AUG	1.30	1.70	2210.
12 AUG*	1.30	1.72	2236.
13 AUG	1.11	1.72	1909.
14 AUG	.93	1.70	1581.
15 AUG	.74	1.72	1273.
16 AUG	.56	1.56	874.
17 AUG	.37	1.30	481.
18 AUG	.19	1.37	260.
19 AUG*	.00	1.63	0.
20 AUG	.00	1.72	0.
21 AUG	.00	1.35	0.
22 AUG	.00	1.28	0.
23 AUG	.00	.86	0.
24 AUG	.00	.84	0.
25 AUG	.00	1.16	0.
26 AUG*	.00	1.56	0.
27 AUG	.00	1.48	0.
28 AUG	.00	1.48	0.
29 AUG	.00	1.58	0.
30 AUG	.00	.85	0.
31 AUG	.00	.88	0.

APPENDIX 5 - WEEKLY ESTIMATED IMPINGEMENT RATE FOR SELECT SPECIES COLLECTED AT THE ROSETON AND DANSKAMMER POINT ELECTRIC GENERATING STATIONS

CENTRAL HUDSON GAS & ELEC[illegible]C CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	282	589.3800	.4785	4213.7200	2016	
	2	211	595.6500	.3542	4213.4400	1492	
	3	186	602.3484	.3088	4213.8700	1301	
	4	482	1197.5700	.4025	6019.2000	2423	
			MONTH EST.RATE	.3860	18660.2300		7203
FEB	1	119	601.9200	.1977	4213.4400	833	
	2	606	550.2388	1.1013	4214.3000	4641	
	3	342	558.0300	.6129	4216.0200	2584	
	4	1257	726.4889	1.7302	5641.5500	9761	
			MONTH EST.RATE	.9105	18285.3100		16649
MARCH	1	688	1001.1100	.6872	4215.7300	2897	
	2	298	532.9500	.5592	4215.1700	2357	
	3	178	595.6500	.2988	4213.4400	1259	
	4	342	601.9200	.5682	6019.2000	3420	
			MONTH EST.RATE	.5284	18663.5400		9862
APRIL	1	404	589.8084	.6850	3844.7600	2634	
	2	92	691.7184	.1330	5071.1500	674	
	3	939	723.0087	1.2987	4602.6200	5977	
	4	3157	1596.4480	1.9775	7271.9200	14380	
			MONTH EST.RATE	1.0236	20790.4500		21281
MAY	1	1779	1548.3600	1.1490	5379.7500	6181	
	2	470	808.5600	.5813	4463.3200	2595	
	3	576	541.4400	1.0638	3749.4700	3989	
	4	214	1052.7794	.2033	5413.6100	1101	
			MONTH EST.RATE	.7494	19006.1500		14243
JUNE	1	218	600.2474	.3632	4708.9300	1710	
	2	511	782.5885	.6530	5651.4800	3690	
	3	77	805.0387	.0957	5642.3000	540	
	4	73	799.5872	.0913	6928.2400	633	
			MONTH EST.RATE	.3008	22930.9500		6898
JULY	1	72	799.4144	.0901	5641.9500	508	
	2	626	923.8797	.6776	6320.1900	4283	
	3	89	807.6600	.1102	6424.5600	708	
	4	1530	1584.2802	.9657	8079.5200	7802	
			MONTH EST.RATE	.4609	26466.2200		12198

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	2025	808.4010	2.5049	5283.8400	13235	
		2	3543	1615.1190	2.1937	5654.8800	12405	
		3	4393	1790.0799	2.4541	6028.4800	14794	
		4	5552	1591.7395	3.4880	8760.8800	30558	
				MONTH EST.RATE	2.6602	25728.0800		68442
	SEPT	1	7397	1615.6873	4.5782	5274.6500	24148	
		2	772	1081.0000	.7142	3783.4400	2702	
		3	381	541.4400	.7037	3790.4500	2667	
		4	406	541.4400	.7499	4872.9600	3654	
				MONTH EST.RATE	1.6865	17721.5000		29887
	OCT	1	815	541.4400	1.5053	4119.0000	6200	
		2	7012	1607.2581	4.3627	5654.8800	24671	
		3	10450	1615.6800	6.4679	5648.7300	36535	
		4	7863	1740.0108	4.5189	5817.9200	26291	
				MONTH EST.RATE	4.2137	21240.5300		89501
	NOV	1	4775	1202.6100	3.9705	4326.2700	17177	
		2	919	1188.1172	.7735	4216.1700	3261	
		3	378	601.9200	.6280	4213.4400	2646	
		4	372	595.9398	.6242	5419.0000	3383	
				MONTH EST.RATE	1.4991	18174.8800		27246
	DEC	1	781	513.6096	1.5206	4226.1700	6426	
		2	349	452.0088	.7721	4217.4600	3256	
		3	158	564.3000	.2800	4217.7400	1181	
		4	400	601.9200	.6645	6019.3400	4000	
				MONTH EST.RATE	.8093	18680.7100		15118
				ANNUAL EST.RATE	1.2690			318528

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELEC[illegible]C CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	3241.8	589.3800	5.5004	4213.7200	23177.1	
	2	4242.1	595.6500	7.1218	4213.4400	30007.3	
	3	4033.3	602.3484	6.6960	4213.8700	28216.1	
	4	13373.6	1197.5700	11.1673	6019.2000	67218.2	
			MONTH EST.RATE	7.6214	18660.2300		142217.1
FEB	1	1335.8	601.9200	2.2192	4213.4400	9350.5	
	2	5460.9	550.2388	9.9246	4214.3000	41825.2	
	3	2738.7	558.0300	4.9078	4216.0200	20691.4	
	4	10240.8	726.4889	14.0963	5641.5500	79525.0	
			MONTH EST.RATE	7.7870	18285.3100		142387.7
MARCH	1	9008.0	1001.1100	8.9980	4215.7300	37933.1	
	2	4982.3	532.9500	9.3485	4215.1700	39405.5	
	3	3849.6	595.6500	6.4629	4213.4400	27231.0	
	4	6541.7	601.9200	10.8681	6019.2000	65417.3	
			MONTH EST.RATE	8.9194	18663.5400		166467.6
APRIL	1	8248.9	589.8084	13.9857	3844.7600	53771.7	
	2	908.4	691.7184	1.3133	5071.1500	6659.9	
	3	7728.2	723.0087	10.6889	4602.6200	49196.9	
	4	19549.1	1596.4480	12.2454	7271.9200	89047.6	
			MONTH EST.RATE	9.5583	20790.4500		198721.4
MAY	1	12049.3	1548.3600	7.7820	5379.7500	41865.2	
	2	4504.8	808.5600	5.5714	4463.3200	24866.9	
	3	3959.6	541.4400	7.3131	3749.4700	27420.2	
	4	5229.3	1052.7794	4.9671	5413.6100	26889.9	
			MONTH EST.RATE	6.4084	19006.1500		121799.0
JUNE	1	4342.8	600.2474	7.2350	4708.9300	34069.1	
	2	7304.0	782.5885	9.3331	5651.4800	52745.8	
	3	2950.2	805.0387	3.6647	5642.3000	20677.3	
	4	2105.9	799.5872	2.6337	6928.2400	18246.9	
			MONTH EST.RATE	5.7166	22930.9500		131087.1
JULY	1	480.3	799.4144	.6008	5641.9500	3389.7	
	2	2762.8	923.8797	2.9904	6320.1900	18899.9	
	3	500.0	807.6600	.6191	6424.5600	3977.4	
	4	6318.1	1584.2802	3.9880	8079.5200	32221.1	
			MONTH EST.RATE	2.0496	26466.2200		54245.2

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	8774.0	808.4010	10.8535	5283.8400	57348.2	
		2	11359.6	1615.1190	7.0333	5654.8800	39772.5	
		3	13581.7	1790.0799	7.5872	6028.4800	45739.3	
		4	22074.4	1591.7395	13.8681	8760.8800	121496.8	
				MONTH EST.RATE	9.8355	25728.0800		253048.5
	SEPT	1	25834.5	1615.6873	15.9898	5274.6500	84340.6	
		2	3242.0	1081.0000	2.9991	3783.4400	11346.9	
		3	791.2	541.4400	1.4613	3790.4500	5539.0	
		4	2089.0	541.4400	3.8582	4872.9600	18800.9	
				MONTH EST.RATE	6.0771	17721.5000		107695.3
	OCT	1	4936.7	541.4400	9.1177	4119.0000	37555.8	
		2	20122.7	1607.2581	12.5199	5654.8800	70798.5	
		3	23217.7	1615.6800	14.3702	5648.7300	81173.4	
		4	24746.1	1740.0108	14.2218	5817.9200	82741.3	
				MONTH EST.RATE	12.5574	21240.5300		266725.8
	NOV	1	18565.0	1202.6100	15.4373	4326.2700	66785.9	
		2	6727.9	1188.1172	5.6627	4216.1700	23874.9	
		3	2754.9	601.9200	4.5769	4213.4400	19284.5	
		4	3838.9	595.9398	6.4418	5419.0000	34908.1	
				MONTH EST.RATE	8.0297	18174.8800		145938.8
	DEC	1	9540.2	513.6096	18.5748	4226.1700	78500.3	
		2	7414.5	452.0088	16.4034	4217.4600	69180.7	
		3	3607.1	564.3000	6.3922	4217.7400	26960.6	
		4	10291.2	601.9200	17.0973	6019.3400	102914.5	
				MONTH EST.RATE	14.6169	18680.7100		273054.1
				ANNUAL EST.RATE	8.2648			2003387.6

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELEC[illegible]C CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	589.3800	.0000	4213.7200	0	
	2	0	595.6500	.0000	4213.4400	0	
	3	0	602.3484	.0000	4213.8700	0	
	4	0	1197.5700	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18660.2300		0
FEB	1	0	601.9200	.0000	4213.4400	0	
	2	0	550.2388	.0000	4214.3000	0	
	3	0	558.0300	.0000	4216.0200	0	
	4	0	726.4889	.0000	5641.5500	0	
			MONTH EST.RATE	.0000	18285.3100		0
MARCH	1	0	1001.1100	.0000	4215.7300	0	
	2	0	532.9500	.0000	4215.1700	0	
	3	0	595.6500	.0000	4213.4400	0	
	4	0	601.9200	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18663.5400		0
APRIL	1	0	589.8084	.0000	3844.7600	0	
	2	0	691.7184	.0000	5071.1500	0	
	3	0	723.0087	.0000	4602.6200	0	
	4	0	1596.4480	.0000	7271.9200	0	
			MONTH EST.RATE	.0000	20790.4500		0
MAY	1	0	1548.3600	.0000	5379.7500	0	
	2	0	808.5600	.0000	4463.3200	0	
	3	0	541.4400	.0000	3749.4700	0	
	4	0	1052.7794	.0000	5413.6100	0	
			MONTH EST.RATE	.0000	19006.1500		0
JUNE	1	0	600.2474	.0000	4708.9300	0	
	2	0	782.5885	.0000	5651.4800	0	
	3	0	805.0387	.0000	5642.3000	0	
	4	1	799.5872	.0013	6928.2400	9	
			MONTH EST.RATE	.0003	22930.9500		7
JULY	1	15	799.4144	.0188	5641.9500	106	
	2	244	923.8797	.2641	6320.1900	1669	
	3	18	807.6600	.0223	6424.5600	143	
	4	113	1584.2802	.0713	8079.5200	576	
			MONTH EST.RATE	.0941	26466.2200		2490

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	102	808.4010	.1262	5283.8400	667	
		2	91	1615.1190	.0563	5654.8800	318	
		3	65	1790.0799	.0363	6028.4800	219	
		4	92	1591.7395	.0578	8760.8800	506	
				MONTH EST.RATE	.0692	25728.0800		1780
	SEPT	1	117	1615.6873	.0724	5274.6500	382	
		2	12	1081.0000	.0111	3783.4400	42	
		3	6	541.4400	.0111	3790.4500	42	
		4	5	541.4400	.0092	4872.9600	45	
				MONTH EST.RATE	.0260	17721.5000		461
	OCT	1	12	541.4400	.0222	4119.0000	91	
		2	145	1607.2581	.0902	5654.8800	510	
		3	188	1615.6800	.1164	5648.7300	658	
		4	111	1740.0108	.0638	5817.9200	371	
				MONTH EST.RATE	.0732	21240.5300		1555
	NOV	1	22	1202.6100	.0183	4326.2700	79	
		2	11	1188.1172	.0093	4216.1700	39	
		3	1	601.9200	.0017	4213.4400	7	
		4	0	595.9398	.0000	5419.0000	0	
				MONTH EST.RATE	.0073	18174.8800		133
	DEC	1	1	513.6096	.0020	4226.1700	8	
		2	0	452.0088	.0000	4217.4600	0	
		3	0	564.3000	.0000	4217.7400	0	
		4	0	601.9200	.0000	6019.3400	0	
				MONTH EST.RATE	.0005	18680.7100		9
				ANNUAL EST.RATE	.0226			6435

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	589.3800	.0000	4213.7200	.0	
	2	.0	595.6500	.0000	4213.4400	.0	
	3	.0	602.3484	.0000	4213.8700	.0	
	4	.0	1197.5700	.0000	6019.2000	.0	
			MONTH EST.RATE	.0000	18660.2300		.0
FEB	1	.0	601.9200	.0000	4213.4400	.0	
	2	.0	550.2388	.0000	4214.3000	.0	
	3	.0	558.0300	.0000	4216.0200	.0	
	4	.0	726.4889	.0000	5641.5500	.0	
			MONTH EST.RATE	.0000	18285.3100		.0
MARCH	1	.0	1001.1100	.0000	4215.7300	.0	
	2	.0	532.9500	.0000	4215.1700	.0	
	3	.0	595.6500	.0000	4213.4400	.0	
	4	.0	601.9200	.0000	6019.2000	.0	
			MONTH EST.RATE	.0000	18663.5400		.0
APRIL	1	.0	589.8084	.0000	3844.7600	.0	
	2	.0	691.7184	.0000	5071.1500	.0	
	3	.0	723.0087	.0000	4602.6200	.0	
	4	.0	1596.4480	.0000	7271.9200	.0	
			MONTH EST.RATE	.0000	20790.4500		.0
MAY	1	.0	1548.3600	.0000	5379.7500	.0	
	2	.0	808.5600	.0000	4463.3200	.0	
	3	.0	541.4400	.0000	3749.4700	.0	
	4	.0	1052.7794	.0000	5413.6100	.0	
			MONTH EST.RATE	.0000	19006.1500		.0
JUNE	1	.0	600.2474	.0000	4708.9300	.0	
	2	.0	782.5885	.0000	5651.4800	.0	
	3	.0	805.0387	.0000	5642.3000	.0	
	4	.5	799.5872	.0006	6928.2400	4.2	
			MONTH EST.RATE	.0002	22930.9500		4.6
JULY	1	11.6	799.4144	.0145	5641.9500	81.8	
	2	236.9	923.8797	.2564	6320.1900	1620.5	
	3	28.0	807.6600	.0347	6424.5600	222.9	
	4	304.8	1584.2802	.1924	8079.5200	1554.5	
			MONTH EST.RATE	.1245	26466.2200		3295.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	259.5	808.4010	.3210	5283.8400	1696.1	
		2	237.4	1615.1190	.1470	5654.8800	831.3	
		3	213.5	1790.0799	.1193	6028.4800	719.2	
		4	260.3	1591.7395	.1635	8760.8800	1432.4	
				MONTH EST.RATE	.1877	25728.0800		4829.2
	SEPT	1	369.7	1615.6873	.2288	5274.6500	1206.8	
		2	39.3	1081.0000	.0364	3783.4400	137.7	
		3	21.6	541.4400	.0399	3790.4500	151.2	
		4	19.4	541.4400	.0358	4872.9600	174.5	
				MONTH EST.RATE	.0852	17721.5000		1509.9
	OCT	1	52.1	541.4400	.0962	4119.0000	396.2	
		2	616.9	1607.2581	.3838	5654.8800	2170.3	
		3	696.2	1615.6800	.4309	5648.7300	2434.0	
		4	564.2	1740.0108	.3243	5817.9200	1886.8	
				MONTH EST.RATE	.3088	21240.5300		6559.1
	NOV	1	125.2	1202.6100	.1041	4326.2700	450.4	
		2	74.7	1188.1172	.0629	4216.1700	265.2	
		3	5.7	601.9200	.0095	4213.4400	40.0	
		4	.0	595.9398	.0000	5419.0000	.0	
				MONTH EST.RATE	.0441	18174.8800		801.5
	DEC	1	*	513.6096	**	4226.1700	**	
		2	.0	452.0088	.0000	4217.4600	.0	
		3	.0	564.3000	.0000	4217.7400	.0	
		4	.0	601.9200	.0000	6019.3400	.0	
				MONTH EST.RATE	.0000	18680.7100		.0
				ANNUAL EST.RATE	.0625			16999.3

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELEC...C CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC TOMCOD
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	65	589.3800	.1103	4213.7200	465	
	2	29	595.6500	.0487	4213.4400	205	
	3	28	602.3484	.0465	4213.8700	196	
	4	14	1197.5700	.0117	6019.2000	70	
			MONTH EST.RATE	.0543	18660.2300		1013
FEB	1	1	601.9200	.0017	4213.4400	7	
	2	2	550.2388	.0036	4214.3000	15	
	3	1	558.0300	.0018	4216.0200	8	
	4	1	726.4889	.0014	5641.5500	8	
			MONTH EST.RATE	.0021	18285.3100		38
MARCH	1	1	1001.1100	.0010	4215.7300	4	
	2	0	532.9500	.0000	4215.1700	0	
	3	0	595.6500	.0000	4213.4400	0	
	4	0	601.9200	.0000	6019.2000	0	
			MONTH EST.RATE	.0003	18663.5400		6
APRIL	1	1	589.8084	.0017	3844.7600	7	
	2	0	691.7184	.0000	5071.1500	0	
	3	0	723.0087	.0000	4602.6200	0	
	4	0	1596.4480	.0000	7271.9200	0	
			MONTH EST.RATE	.0004	20790.4500		8
MAY	1	0	1548.3600	.0000	5379.7500	0	
	2	0	808.5600	.0000	4463.3200	0	
	3	2	541.4400	.0037	3749.4700	14	
	4	44	1052.7794	.0418	5413.6100	226	
			MONTH EST.RATE	.0114	19006.1500		217
JUNE	1	25	600.2474	.0417	4708.9300	196	
	2	108	782.5885	.1380	5651.4800	780	
	3	11	805.0387	.0137	5642.3000	77	
	4	4	799.5872	.0050	6928.2400	35	
			MONTH EST.RATE	.0496	22930.9500		1137
JULY	1	1	799.4144	.0013	5641.9500	7	
	2	4	923.8797	.0043	6320.1900	27	
	3	0	807.6600	.0000	6424.5600	0	
	4	21	1584.2802	.0133	8079.5200	107	
			MONTH EST.RATE	.0047	26466.2200		124

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC TOMCOD
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	4	808.4010	.0050	5283.8400	26	
		2	1	1615.1190	.0006	5654.8800	3	
		3	0	1790.0799	.0000	6028.4800	0	
		4	21	1591.7395	.0132	8760.8800	116	
				MONTH EST.RATE	.0047	25728.0800		121
	SEPT	1	143	1615.6873	.0885	5274.6500	467	
		2	11	1081.0000	.0102	3783.4400	39	
		3	1	541.4400	.0019	3790.4500	7	
		4	0	541.4400	.0000	4872.9600	0	
				MONTH EST.RATE	.0252	17721.5000		447
	OCT	1	3	541.4400	.0055	4119.0000	23	
		2	1	1607.2581	.0006	5654.8800	3	
		3	0	1615.6800	.0000	5648.7300	0	
		4	4	1740.0108	.0023	5817.9200	13	
				MONTH EST.RATE	.0021	21240.5300		45
	NOV	1	1	1202.6100	.0008	4326.2700	3	
		2	1	1188.1172	.0008	4216.1700	3	
		3	0	601.9200	.0000	4213.4400	0	
		4	0	595.9398	.0000	5419.0000	0	
				MONTH EST.RATE	.0004	18174.8800		7
	DEC	1	3	513.6096	.0058	4226.1700	25	
		2	41	452.0088	.0907	4217.4600	383	
		3	2	564.3000	.0035	4217.7400	15	
		4	1	601.9200	.0017	6019.3400	10	
				MONTH EST.RATE	.0254	18680.7100		474
				ANNUAL EST.RATE	.0151			3637

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELEC[illegible].C CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC TOMCOD
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	1615.4	589.3800	2.7409	4213.7200	11549.4	
	2	954.9	595.6500	1.6031	4213.4400	6754.6	
	3	1075.4	602.3484	1.7854	4213.8700	7523.4	
	4	558.1	1197.5700	.4660	6019.2000	2804.9	
			MONTH EST.RATE	1.6489	18660.2300		30768.9
FEB	1	36.3	601.9200	.0603	4213.4400	254.1	
	2	72.5	550.2388	.1318	4214.3000	555.4	
	3	42.5	558.0300	.0762	4216.0200	321.3	
	4	20.8	726.4889	.0286	5641.5500	161.3	
			MONTH EST.RATE	.0742	18285.3100		1356.8
MARCH	1	34.5	1001.1100	.0345	4215.7300	145.4	
	2	.0	532.9500	.0000	4215.1700	.0	
	3	.0	595.6500	.0000	4213.4400	.0	
	4	.0	601.9200	.0000	6019.2000	.0	
			MONTH EST.RATE	.0086	18663.5400		160.5
APRIL	1	30.2	589.8084	.0512	3844.7600	196.9	
	2	.0	691.7184	.0000	5071.1500	.0	
	3	.0	723.0087	.0000	4602.6200	.0	
	4	.0	1596.4480	.0000	7271.9200	.0	
			MONTH EST.RATE	.0128	20790.4500		266.1
MAY	1	.0	1548.3600	.0000	5379.7500	.0	
	2	.0	808.5600	.0000	4463.3200	.0	
	3	1.3	541.4400	.0024	3749.4700	9.0	
	4	65.8	1052.7794	.0625	5413.6100	338.4	
			MONTH EST.RATE	.0162	19006.1500		307.9
JUNE	1	45.4	600.2474	.0756	4708.9300	356.0	
	2	323.5	782.5885	.4134	5651.4800	2336.3	
	3	29.3	805.0387	.0364	5642.3000	205.4	
	4	14.1	799.5872	.0176	6928.2400	121.9	
			MONTH EST.RATE	.1358	22930.9500		3114.0
JULY	1	2.6	799.4144	.0033	5641.9500	18.6	
	2	13.3	923.8797	.0144	6320.1900	91.0	
	3	.0	807.6600	.0000	6424.5600	.0	
	4	91.7	1584.2802	.0579	8079.5200	467.8	
			MONTH EST.RATE	.0189	26466.2200		500.2

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC TOMCOD
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	14.6	808.4010	.0181	5283.8400	95.6	
		2	3.8	1615.1190	.0024	5654.8800	13.6	
		3	.0	1790.0799	.0000	6028.4800	.0	
		4	124.1	1591.7395	.0780	8760.8800	683.3	
				MONTH EST.RATE	.0246	25728.0800		632.9
	SEPT	1	926.0	1615.6873	.5731	5274.6500	3022.9	
		2	72.8	1081.0000	.0674	3783.4400	255.0	
		3	6.0	541.4400	.0111	3790.4500	42.1	
		4	.0	541.4400	.0000	4872.9600	.0	
				MONTH EST.RATE	.1629	17721.5000		2886.8
	OCT	1	18.5	541.4400	.0342	4119.0000	140.9	
		2	*	1607.2581	**	5654.8800	**	
		3	.0	1615.6800	.0000	5648.7300	.0	
		4	105.9	1740.0108	.0609	5817.9200	354.3	
				MONTH EST.RATE	.0317	21240.5300		673.3
	NOV	1	20.6	1202.6100	.0171	4326.2700	74.0	
		2	33.9	1188.1172	.0285	4216.1700	120.2	
		3	.0	601.9200	.0000	4213.4400	.0	
		4	.0	595.9398	.0000	5419.0000	.0	
				MONTH EST.RATE	.0114	18174.8800		207.2
	DEC	1	120.1	513.6096	.2338	4226.1700	988.1	
		2	1428.6	452.0088	3.1606	4217.4600	13329.7	
		3	26.9	564.3000	.0477	4217.7400	201.2	
		4	30.9	601.9200	.0513	6019.3400	308.8	
				MONTH EST.RATE	.8734	18680.7100		16315.7
				ANNUAL EST.RATE	.2516			57190.3

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELEC[illegible]C CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	589.3800	.0000	4213.7200	0	
	2	0	595.6500	.0000	4213.4400	0	
	3	0	602.3484	.0000	4213.8700	0	
	4	0	1197.5700	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18660.2300		0
FEB	1	0	601.9200	.0000	4213.4400	0	
	2	0	550.2388	.0000	4214.3000	0	
	3	0	558.0300	.0000	4216.0200	0	
	4	0	726.4889	.0000	5641.5500	0	
			MONTH EST.RATE	.0000	18285.3100		0
MARCH	1	0	1001.1100	.0000	4215.7300	0	
	2	1	532.9500	.0019	4215.1700	8	
	3	0	595.6500	.0000	4213.4400	0	
	4	0	601.9200	.0000	6019.2000	0	
			MONTH EST.RATE	.0005	18663.5400		9
APRIL	1	0	589.8084	.0000	3844.7600	0	
	2	0	691.7184	.0000	5071.1500	0	
	3	1	723.0087	.0014	4602.6200	6	
	4	1	1596.4480	.0006	7271.9200	4	
			MONTH EST.RATE	.0005	20790.4500		10
MAY	1	5	1548.3600	.0032	5379.7500	17	
	2	4	808.5600	.0050	4463.3200	22	
	3	3	541.4400	.0055	3749.4700	21	
	4	3	1052.7794	.0029	5413.6100	16	
			MONTH EST.RATE	.0042	19006.1500		80
JUNE	1	0	600.2474	.0000	4708.9300	0	
	2	3	782.5885	.0038	5651.4800	21	
	3	0	805.0387	.0000	5642.3000	0	
	4	0	799.5872	.0000	6928.2400	0	
			MONTH EST.RATE	.0010	22930.9500		23
JULY	1	4	799.4144	.0050	5641.9500	28	
	2	123	923.8797	.1331	6320.1900	841	
	3	30	807.6600	.0371	6424.5600	238	
	4	156	1584.2802	.0985	8079.5200	796	
			MONTH EST.RATE	.0684	26466.2200		1810

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	226	808.4010	.2796	5283.8400	1477	
		2	167	1615.1190	.1034	5654.8800	585	
		3	94	1790.0799	.0525	6028.4800	316	
		4	341	1591.7395	.2142	8760.8800	1877	
				MONTH EST.RATE	.1624	25728.0800		4178
	SEPT	1	446	1615.6873	.2760	5274.6500	1456	
		2	33	1081.0000	.0305	3783.4400	115	
		3	8	541.4400	.0148	3790.4500	56	
		4	7	541.4400	.0129	4872.9600	63	
				MONTH EST.RATE	.0836	17721.5000		1482
	OCT	1	26	541.4400	.0480	4119.0000	198	
		2	144	1607.2581	.0896	5654.8800	507	
		3	106	1615.6800	.0656	5648.7300	371	
		4	149	1740.0108	.0856	5817.9200	498	
				MONTH EST.RATE	.0722	21240.5300		1534
	NOV	1	26	1202.6100	.0216	4326.2700	93	
		2	16	1188.1172	.0135	4216.1700	57	
		3	2	601.9200	.0033	4213.4400	14	
		4	0	595.9398	.0000	5419.0000	0	
				MONTH EST.RATE	.0096	18174.8800		174
	DEC	1	0	513.6096	.0000	4226.1700	0	
		2	0	452.0088	.0000	4217.4600	0	
		3	0	564.3000	.0000	4217.7400	0	
		4	0	601.9200	.0000	6019.3400	0	
				MONTH EST.RATE	.0000	18680.7100		0
				ANNUAL EST.RATE	.0335			9300

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELEC. /C CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	589.3800	.0000	4213.7200	.0	
	2	.0	595.6500	.0000	4213.4400	.0	
	3	.0	602.3484	.0000	4213.8700	.0	
	4	.0	1197.5700	.0000	6019.2000	.0	
			MONTH EST.RATE	.0000	18660.2300		.0
FEB	1	.0	601.9200	.0000	4213.4400	.0	
	2	.0	550.2388	.0000	4214.3000	.0	
	3	.0	558.0300	.0000	4216.0200	.0	
	4	.0	726.4889	.0000	5641.5500	.0	
			MONTH EST.RATE	.0000	18285.3100		.0
MARCH	1	.0	1001.1100	.0000	4215.7300	.0	
	2	10.4	532.9500	.0195	4215.1700	82.2	
	3	.0	595.6500	.0000	4213.4400	.0	
	4	.0	601.9200	.0000	6019.2000	.0	
			MONTH EST.RATE	.0049	18663.5400		91.5
APRIL	1	.0	589.8084	.0000	3844.7600	.0	
	2	.0	691.7184	.0000	5071.1500	.0	
	3	288.4	723.0087	.3989	4602.6200	1836.0	
	4	243.0	1596.4480	.1522	7271.9200	1106.8	
			MONTH EST.RATE	.1378	20790.4500		2864.9
MAY	1	811.6	1548.3600	.5242	5379.7500	2820.1	
	2	1048.2	808.5600	1.2964	4463.3200	5786.2	
	3	612.5	541.4400	1.1312	3749.4700	4241.4	
	4	402.2	1052.7794	.3820	5413.6100	2068.0	
			MONTH EST.RATE	.8335	19006.1500		15841.6
JUNE	1	.0	600.2474	.0000	4708.9300	.0	
	2	11.0	782.5885	.0141	5651.4800	79.7	
	3	.0	805.0387	.0000	5642.3000	.0	
	4	.0	799.5872	.0000	6928.2400	.0	
			MONTH EST.RATE	.0035	22930.9500		80.3
JULY	1	2.7	799.4144	.0034	5641.9500	19.2	
	2	180.5	923.8797	.1954	6320.1900	1235.0	
	3	49.6	807.6600	.0614	6424.5600	394.5	
	4	391.4	1584.2802	.2471	8079.5200	1996.4	
			MONTH EST.RATE	.1268	26466.2200		3355.9

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	777.3	808.4010	.9615	5283.8400	5080.4	
		2	621.5	1615.1190	.3848	5654.8800	2176.0	
		3	474.7	1790.0799	.2652	6028.4800	1598.8	
		4	1771.6	1591.7395	1.1130	8760.8800	9750.9	
				MONTH EST.RATE	.6811	25728.0800		17523.4
	SEPT	1	2323.5	1615.6873	1.4381	5274.6500	7585.5	
		2	327.6	1081.0000	.3031	3783.4400	1146.8	
		3	34.0	541.4400	.0628	3790.4500	238.0	
		4	31.8	541.4400	.0587	4872.9600	286.0	
				MONTH EST.RATE	.4657	17721.5000		8252.9
	OCT	1	160.6	541.4400	.2966	4119.0000	1221.7	
		2	631.0	1607.2581	.3926	5654.8800	2220.1	
		3	542.4	1615.6800	.3357	5648.7300	1896.3	
		4	732.5	1740.0108	.4210	5817.9200	2449.3	
				MONTH EST.RATE	.3615	21240.5300		7678.5
	NOV	1	145.9	1202.6100	.1213	4326.2700	524.8	
		2	74.2	1188.1172	.0625	4216.1700	263.5	
		3	4.7	601.9200	.0078	4213.4400	32.9	
		4	.0	595.9398	.0000	5419.0000	.0	
				MONTH EST.RATE	.0479	18174.8800		870.6
	DEC	1	.0	513.6096	.0000	4226.1700	.0	
		2	.0	452.0088	.0000	4217.4600	.0	
		3	.0	564.3000	.0000	4217.7400	.0	
		4	.0	601.9200	.0000	6019.3400	.0	
				MONTH EST.RATE	.0000	18680.7100		.0
				ANNUAL EST.RATE	.2219			56559.6

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

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CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BAY ANCHOVY
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	589.3800	.0000	4213.7200	0	
	2	0	595.6500	.0000	4213.4400	0	
	3	0	602.3484	.0000	4213.8700	0	
	4	0	1197.5700	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18660.2300		0
FEB	1	0	601.9200	.0000	4213.4400	0	
	2	0	550.2388	.0000	4214.3000	0	
	3	0	558.0300	.0000	4216.0200	0	
	4	0	726.4889	.0000	5641.5500	0	
			MONTH EST.RATE	.0000	18285.3100		0
MARCH	1	0	1001.1100	.0000	4215.7300	0	
	2	0	532.9500	.0000	4215.1700	0	
	3	0	595.6500	.0000	4213.4400	0	
	4	0	601.9200	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18663.5400		0
APRIL	1	0	589.8084	.0000	3844.7600	0	
	2	0	691.7184	.0000	5071.1500	0	
	3	0	723.0087	.0000	4602.6200	0	
	4	0	1596.4480	.0000	7271.9200	0	
			MONTH EST.RATE	.0000	20790.4500		0
MAY	1	0	1548.3600	.0000	5379.7500	0	
	2	0	808.5600	.0000	4463.3200	0	
	3	0	541.4400	.0000	3749.4700	0	
	4	0	1052.7794	.0000	5413.6100	0	
			MONTH EST.RATE	.0000	19006.1500		0
JUNE	1	0	600.2474	.0000	4708.9300	0	
	2	0	782.5885	.0000	5651.4800	0	
	3	0	805.0387	.0000	5642.3000	0	
	4	0	799.5872	.0000	6928.2400	0	
			MONTH EST.RATE	.0000	22930.9500		0
JULY	1	0	799.4144	.0000	5641.9500	0	
	2	1	923.8797	.0011	6320.1900	7	
	3	16	807.6600	.0198	6424.5600	127	
	4	89	1584.2802	.0562	8079.5200	454	
			MONTH EST.RATE	.0193	26466.2200		511

NOTE: * LESS THAN 0.0001
* LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BAY ANCHOVY
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	357	808.4010	.4416	5283.8400	2333	
		2	454	1615.1190	.2811	5654.8800	1590	
		3	2871	1790.0799	1.6038	6028.4800	9668	
		4	1442	1591.7395	.9059	8760.8800	7936	
				MONTH EST.RATE	.8081	25728.0800		20791
	SEPT	1	2535	1615.6873	1.5690	5274.6500	8276	
		2	325	1081.0000	.3007	3783.4400	1138	
		3	270	541.4400	.4987	3790.4500	1890	
		4	244	541.4400	.4507	4872.9600	2196	
				MONTH EST.RATE	.7048	17721.5000		12490
	OCT	1	158	541.4400	.2918	4119.0000	1202	
		2	2049	1607.2581	1.2748	5654.8800	7209	
		3	805	1615.6800	.4982	5648.7300	2814	
		4	59	1740.0108	.0339	5817.9200	197	
				MONTH EST.RATE	.5247	21240.5300		11145
	NOV	1	0	1202.6100	.0000	4326.2700	0	
		2	0	1188.1172	.0000	4216.1700	0	
		3	0	601.9200	.0000	4213.4400	0	
		4	0	595.9398	.0000	5419.0000	0	
				MONTH EST.RATE	.0000	18174.8800		0
	DEC	1	0	513.6096	.0000	4226.1700	0	
		2	0	452.0088	.0000	4217.4600	0	
		3	0	564.3000	.0000	4217.7400	0	
		4	0	601.9200	.0000	6019.3400	0	
				MONTH EST.RATE	.0000	18680.7100		0
				ANNUAL EST.RATE	.1714			44937

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BAY ANCHOVY
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	589.3800	.0000	4213.7200	.0	
	2	.0	595.6500	.0000	4213.4400	.0	
	3	.0	602.3484	.0000	4213.8700	.0	
	4	.0	1197.5700	.0000	6019.2000	.0	
			MONTH EST.RATE	.0000	18660.2300		.0
FEB	1	.0	601.9200	.0000	4213.4400	.0	
	2	.0	550.2388	.0000	4214.3000	.0	
	3	.0	558.0300	.0000	4216.0200	.0	
	4	.0	726.4889	.0000	5641.5500	.0	
			MONTH EST.RATE	.0000	18285.3100		.0
MARCH	1	.0	1001.1100	.0000	4215.7300	.0	
	2	.0	532.9500	.0000	4215.1700	.0	
	3	.0	595.6500	.0000	4213.4400	.0	
	4	.0	601.9200	.0000	6019.2000	.0	
			MONTH EST.RATE	.0000	18663.5400		.0
APRIL	1	.0	589.8084	.0000	3844.7600	.0	
	2	.0	691.7184	.0000	5071.1500	.0	
	3	.0	723.0087	.0000	4602.6200	.0	
	4	.0	1596.4480	.0000	7271.9200	.0	
			MONTH EST.RATE	.0000	20790.4500		.0
MAY	1	.0	1548.3600	.0000	5379.7500	.0	
	2	.0	808.5600	.0000	4463.3200	.0	
	3	.0	541.4400	.0000	3749.4700	.0	
	4	.0	1052.7794	.0000	5413.6100	.0	
			MONTH EST.RATE	.0000	19006.1500		.0
JUNE	1	.0	600.2474	.0000	4708.9300	.0	
	2	.0	782.5885	.0000	5651.4800	.0	
	3	.0	805.0387	.0000	5642.3000	.0	
	4	.0	799.5872	.0000	6928.2400	.0	
			MONTH EST.RATE	.0000	22930.9500		.0
JULY	1	.0	799.4144	.0000	5641.9500	.0	
	2	4.1	923.8797	.0044	6320.1900	27.8	
	3	46.0	807.6600	.0570	6424.5600	366.2	
	4	269.7	1584.2802	.1702	8079.5200	1375.1	
			MONTH EST.RATE	.0579	26466.2200		1532.4

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED INPINGEMENT RATE FOR BAY ANCHOVY
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	874.3	808.4010	1.0815	5283.8400	5714.5	
		2	878.5	1615.1190	.5439	5654.8800	3075.7	
		3	7039.7	1790.0799	3.9326	6028.4800	23707.6	
		4	3323.8	1591.7395	2.0882	8760.8800	18294.5	
				MONTH EST.RATE	1.9116	25728.0800		49181.8
	SEPT	1	4145.9	1615.6873	2.5660	5274.6500	13534.8	
		2	582.3	1081.0000	.5387	3783.4400	2038.1	
		3	239.6	541.4400	.4425	3790.4500	1677.3	
		4	419.4	541.4400	.7746	4872.9600	3774.6	
				MONTH EST.RATE	1.0805	17721.5000		19148.1
	OCT	1	115.4	541.4400	.2131	4119.0000	877.8	
		2	1008.1	1607.2581	.6272	5654.8800	3546.7	
		3	407.4	1615.6800	.2522	5648.7300	1424.6	
		4	43.7	1740.0108	.0251	5817.9200	146.0	
				MONTH EST.RATE	.2794	21240.5300		5934.6
	NOV	1	.0	1202.6100	.0000	4326.2700	.0	
		2	.0	1188.1172	.0000	4216.1700	.0	
		3	.0	601.9200	.0000	4213.4400	.0	
		4	.0	595.9398	.0000	5419.0000	.0	
				MONTH EST.RATE	.0000	18174.8800		.0
	DEC	1	.0	513.6096	.0000	4226.1700	.0	
		2	.0	452.0088	.0000	4217.4600	.0	
		3	.0	564.3000	.0000	4217.7400	.0	
		4	.0	601.9200	.0000	6019.3400	.0	
				MONTH EST.RATE	.0000	18680.7100		.0
				ANNUAL EST.RATE	.2775			75796.9

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	589.3800	.0000	4213.7200	0	
	2	0	595.6500	.0000	4213.4400	0	
	3	0	602.3484	.0000	4213.8700	0	
	4	0	1197.5700	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18660.2300		0
FEB	1	0	601.9200	.0000	4213.4400	0	
	2	0	550.2388	.0000	4214.3000	0	
	3	0	558.0300	.0000	4216.0200	0	
	4	0	726.4889	.0000	5641.5500	0	
			MONTH EST.RATE	.0000	18285.3100		0
MARCH	1	0	1001.1100	.0000	4215.7300	0	
	2	0	532.9500	.0000	4215.1700	0	
	3	0	595.6500	.0000	4213.4400	0	
	4	0	601.9200	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18663.5400		0
APRIL	1	0	589.8084	.0000	3844.7600	0	
	2	0	691.7184	.0000	5071.1500	0	
	3	0	723.0087	.0000	4602.6200	0	
	4	11	1596.4480	.0069	7271.9200	50	
			MONTH EST.RATE	.0017	20790.4500		35
MAY	1	39	1548.3600	.0252	5379.7500	136	
	2	56	808.5600	.0693	4463.3200	309	
	3	10	541.4400	.0185	3749.4700	69	
	4	8	1052.7794	.0076	5413.6100	41	
			MONTH EST.RATE	.0302	19006.1500		574
JUNE	1	5	600.2474	.0083	4708.9300	39	
	2	13	782.5885	.0166	5651.4800	94	
	3	11	805.0387	.0137	5642.3000	77	
	4	5	799.5872	.0063	6928.2400	44	
			MONTH EST.RATE	.0112	22930.9500		257
JULY	1	2	799.4144	.0025	5641.9500	14	
	2	171	923.8797	.1851	6320.1900	1170	
	3	7	807.6600	.0087	6424.5600	56	
	4	631	1584.2802	.3983	8079.5200	3218	
			MONTH EST.RATE	.1487	26466.2200		3936

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELEC C CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	132	808.4010	.1633	5283.8400	863	
		2	650	1615.1190	.4025	5654.8800	2276	
		3	251	1790.0799	.1402	6028.4800	845	
		4	425	1591.7395	.2670	8760.8800	2339	
				MONTH EST.RATE	.2433	25728.0800		6260
	SEPT	1	520	1615.6873	.3218	5274.6500	1697	
		2	91	1081.0000	.0842	3783.4400	319	
		3	14	541.4400	.0259	3790.4500	98	
		4	22	541.4400	.0406	4872.9600	198	
				MONTH EST.RATE	.1181	17721.5000		2093
	OCT	1	22	541.4400	.0406	4119.0000	167	
		2	2523	1607.2581	1.5698	5654.8800	8877	
		3	6794	1615.6800	4.2050	5648.7300	23753	
		4	3817	1740.0108	2.1937	5817.9200	12763	
				MONTH EST.RATE	2.0023	21240.5300		42530
	NOV	1	1680	1202.6100	1.3970	4326.2700	6044	
		2	141	1188.1172	.1187	4216.1700	500	
		3	26	601.9200	.0432	4213.4400	182	
		4	12	595.9398	.0201	5419.0000	109	
				MONTH EST.RATE	.3948	18174.8800		7175
	DEC	1	3	513.6096	.0058	4226.1700	25	
		2	2	452.0088	.0044	4217.4600	19	
		3	0	564.3000	.0000	4217.7400	0	
		4	0	601.9200	.0000	6019.3400	0	
				MONTH EST.RATE	.0026	18680.7100		49
				ANNUAL EST.RATE	.2461			62909

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	589.3800	.0000	4213.7200	.0	
	2	.0	595.6500	.0000	4213.4400	.0	
	3	.0	602.3484	.0000	4213.8700	.0	
	4	.0	1197.5700	.0000	6019.2000	.0	
			MONTH EST.RATE	.0000	18660.2300		.0
FEB	1	.0	601.9200	.0000	4213.4400	.0	
	2	.0	550.2388	.0000	4214.3000	.0	
	3	.0	558.0300	.0000	4216.0200	.0	
	4	.0	726.4889	.0000	5641.5500	.0	
			MONTH EST.RATE	.0000	18285.3100		.0
MARCH	1	.0	1001.1100	.0000	4215.7300	.0	
	2	.0	532.9500	.0000	4215.1700	.0	
	3	.0	595.6500	.0000	4213.4400	.0	
	4	.0	601.9200	.0000	6019.2000	.0	
			MONTH EST.RATE	.0000	18663.5400		.0
APRIL	1	.0	589.8084	.0000	3844.7600	.0	
	2	.0	691.7184	.0000	5071.1500	.0	
	3	.0	723.0087	.0000	4602.6200	.0	
	4	326.5	1596.4480	.2045	7271.9200	1487.1	
			MONTH EST.RATE	.0511	20790.4500		1062.4
MAY	1	150.7	1548.3600	.0973	5379.7500	523.4	
	2	509.2	808.5600	.6298	4463.3200	2811.0	
	3	242.3	541.4400	.4475	3749.4700	1677.9	
	4	1513.2	1052.7794	1.4373	5413.6100	7781.0	
			MONTH EST.RATE	.6530	19006.1500		12411.0
JUNE	1	536.9	600.2474	.8945	4708.9300	4212.1	
	2	972.4	782.5885	1.2425	5651.4800	7022.0	
	3	1503.5	805.0387	1.8676	5642.3000	10537.6	
	4	501.9	799.5872	.6277	6928.2400	4348.9	
			MONTH EST.RATE	1.1581	22930.9500		26556.3
JULY	1	.4	799.4144	.0005	5641.9500	2.8	
	2	112.6	923.8797	.1219	6320.1900	770.4	
	3	5.3	807.6600	.0066	6424.5600	42.4	
	4	596.6	1584.2802	.3766	8079.5200	3042.7	
			MONTH EST.RATE	.1264	26466.2200		3345.3

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	208.0	808.4010	.2573	5283.8400	1359.5	
		2	1080.0	1615.1190	.6687	5654.8800	3781.4	
		3	701.0	1790.0799	.3916	6028.4800	2360.8	
		4	1179.5	1591.7395	.7410	8760.8800	6491.8	
				MONTH EST.RATE	.5147	25728.0800		13242.2
	SEPT	1	1302.4	1615.6873	.8061	5274.6500	4251.9	
		2	232.5	1081.0000	.2151	3783.4400	813.8	
		3	31.6	541.4400	.0584	3790.4500	221.4	
		4	105.4	541.4400	.1947	4872.9600	948.8	
				MONTH EST.RATE	.3186	17721.5000		5646.1
	OCT	1	120.9	541.4400	.2233	4119.0000	919.8	
		2	4770.8	1607.2581	2.9683	5654.8800	16785.4	
		3	7931.0	1615.6800	4.9088	5648.7300	27728.5	
		4	6446.4	1740.0108	3.7048	5817.9200	21554.2	
				MONTH EST.RATE	2.9513	21240.5300		62687.2
	NOV	1	2739.3	1202.6100	2.2778	4326.2700	9854.4	
		2	272.2	1188.1172	.2291	4216.1700	965.9	
		3	41.1	601.9200	.0683	4213.4400	287.8	
		4	23.7	595.9398	.0398	5419.0000	215.7	
				MONTH EST.RATE	.6538	18174.8800		11882.7
	DEC	1	4.5	513.6096	.0088	4226.1700	37.2	
		2	3.0	452.0088	.0066	4217.4600	27.8	
		3	.0	564.3000	.0000	4217.7400	.0	
		4	.0	601.9200	.0000	6019.3400	.0	
				MONTH EST.RATE	.0039	18680.7100		72.9
				ANNUAL EST.RATE	.5359			136906.1

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GIZZARD SHAD
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	21	589.3800	.0356	4213.7200	150	
	2	5	595.6500	.0084	4213.4400	35	
	3	0	602.3484	.0000	4213.8700	0	
	4	2	1197.5700	.0017	6019.2000	10	
			MONTH EST.RATE	.0114	18660.2300		213
FEB	1	0	601.9200	.0000	4213.4400	0	
	2	0	550.2388	.0000	4214.3000	0	
	3	0	558.0300	.0000	4216.0200	0	
	4	0	726.4889	.0000	5641.5500	0	
			MONTH EST.RATE	.0000	18285.3100		0
MARCH	1	0	1001.1100	.0000	4215.7300	0	
	2	0	532.9500	.0000	4215.1700	0	
	3	0	595.6500	.0000	4213.4400	0	
	4	0	601.9200	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18663.5400		0
APRIL	1	0	589.8084	.0000	3844.7600	0	
	2	0	691.7184	.0000	5071.1500	0	
	3	0	723.0087	.0000	4602.6200	0	
	4	0	1596.4480	.0000	7271.9200	0	
			MONTH EST.RATE	.0000	20790.4500		0
MAY	1	0	1548.3600	.0000	5379.7500	0	
	2	0	808.5600	.0000	4463.3200	0	
	3	0	541.4400	.0000	3749.4700	0	
	4	0	1052.7794	.0000	5413.6100	0	
			MONTH EST.RATE	.0000	19006.1500		0
JUNE	1	0	600.2474	.0000	4708.9300	0	
	2	0	782.5885	.0000	5651.4800	0	
	3	0	805.0387	.0000	5642.3000	0	
	4	0	799.5872	.0000	6928.2400	0	
			MONTH EST.RATE	.0000	22930.9500		0
JULY	1	0	799.4144	.0000	5641.9500	0	
	2	0	923.8797	.0000	6320.1900	0	
	3	0	807.6600	.0000	6424.5600	0	
	4	0	1584.2802	.0000	8079.5200	0	
			MONTH EST.RATE	.0000	26466.2200		0

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELE(IC CORP.
1980 AQUATIC ECOLOGY ,UDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GIZZARD SHAD
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	0	808.4010	.0000	5283.8400	0	
		2	0	1615.1190	.0000	5654.8800	0	
		3	0	1790.0799	.0000	6028.4800	0	
		4	0	1591.7395	.0000	8760.8800	0	
				MONTH EST.RATE	.0000	25728.0800		0
	SEPT	1	0	1615.6873	.0000	5274.6500	0	
		2	0	1081.0000	.0000	3783.4400	0	
		3	0	541.4400	.0000	3790.4500	0	
		4	0	541.4400	.0000	4872.9600	0	
				MONTH EST.RATE	.0000	17721.5000		0
	OCT	1	0	541.4400	.0000	4119.0000	0	
		2	0	1607.2581	.0000	5654.8800	0	
		3	0	1615.6800	.0000	5648.7300	0	
		4	0	1740.0108	.0000	5817.9200	0	
				MONTH EST.RATE	.0000	21240.5300		0
	NOV	1	7	1202.6100	.0058	4326.2700	25	
		2	22	1188.1172	.0185	4216.1700	78	
		3	112	601.9200	.1861	4213.4400	784	
		4	107	595.9398	.1796	5419.0000	973	
				MONTH EST.RATE	.0975	18174.8800		1772
	DEC	1	132	513.6096	.2570	4226.1700	1086	
		2	102	452.0088	.2257	4217.4600	952	
		3	77	564.3000	.1365	4217.7400	576	
		4	127	601.9200	.2110	6019.3400	1270	
				MONTH EST.RATE	.2076	18680.7100		3878
				ANNUAL EST.RATE	.0264			5863

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GIZZARD SHAD
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	106.4	589.3800	.1805	4213.7200	760.6	
	2	52.6	595.6500	.0883	4213.4400	372.0	
	3	.0	602.3484	.0000	4213.8700	.0	
	4	43.5	1197.5700	.0363	6019.2000	218.5	
			MONTH EST.RATE	.0763	18660.2300		1423.8
FEB	1	.0	601.9200	.0000	4213.4400	.0	
	2	.0	550.2388	.0000	4214.3000	.0	
	3	.0	558.0300	.0000	4216.0200	.0	
	4	.0	726.4889	.0000	5641.5500	.0	
			MONTH EST.RATE	.0000	18285.3100		.0
MARCH	1	.0	1001.1100	.0000	4215.7300	.0	
	2	.0	532.9500	.0000	4215.1700	.0	
	3	.0	595.6500	.0000	4213.4400	.0	
	4	.0	601.9200	.0000	6019.2000	.0	
			MONTH EST.RATE	.0000	18663.5400		.0
APRIL	1	.0	589.8084	.0000	3844.7600	.0	
	2	.0	691.7184	.0000	5071.1500	.0	
	3	.0	723.0087	.0000	4602.6200	.0	
	4	.0	1596.4480	.0000	7271.9200	.0	
			MONTH EST.RATE	.0000	20790.4500		.0
MAY	1	.0	1548.3600	.0000	5379.7500	.0	
	2	.0	808.5600	.0000	4463.3200	.0	
	3	.0	541.4400	.0000	3749.4700	.0	
	4	.0	1052.7794	.0000	5413.6100	.0	
			MONTH EST.RATE	.0000	19006.1500		.0
JUNE	1	.0	600.2474	.0000	4708.9300	.0	
	2	.0	782.5885	.0000	5651.4800	.0	
	3	.0	805.0387	.0000	5642.3000	.0	
	4	.0	799.5872	.0000	6928.2400	.0	
			MONTH EST.RATE	.0000	22930.9500		.0
JULY	1	.0	799.4144	.0000	5641.9500	.0	
	2	.0	923.8797	.0000	6320.1900	.0	
	3	.0	807.6600	.0000	6424.5600	.0	
	4	.0	1584.2802	.0000	8079.5200	.0	
			MONTH EST.RATE	.0000	26466.2200		.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GIZZARD SHAD
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	.0	808.4010	.0000	5283.8400	.0	
		2	.0	1615.1190	.0000	5654.8800	.0	
		3	.0	1790.0799	.0000	6028.4800	.0	
		4	.0	1591.7395	.0000	8760.8800	.0	
				MONTH EST.RATE	.0000	25728.0800		.0
	SEPT	1	.0	1615.6873	.0000	5274.6500	.0	
		2	.0	1081.0000	.0000	3783.4400	.0	
		3	.0	541.4400	.0000	3790.4500	.0	
		4	.0	541.4400	.0000	4872.9600	.0	
				MONTH EST.RATE	.0000	17721.5000		.0
	OCT	1	.0	541.4400	.0000	4119.0000	.0	
		2	.0	1607.2581	.0000	5654.8800	.0	
		3	.0	1615.6800	.0000	5648.7300	.0	
		4	.0	1740.0108	.0000	5817.9200	.0	
				MONTH EST.RATE	.0000	21240.5300		.0
	NOV	1	72.5	1202.6100	.0603	4326.2700	260.9	
		2	134.9	1188.1172	.1135	4216.1700	478.5	
		3	800.1	601.9200	1.3293	4213.4400	5600.9	
		4	992.0	595.9398	1.6646	5419.0000	9020.5	
				MONTH EST.RATE	.7919	18174.8800		14392.7
	DEC	1	1509.0	513.6096	2.9380	4226.1700	12416.5	
		2	1556.0	452.0088	3.4424	4217.4600	14518.2	
		3	1541.8	564.3000	2.7322	4217.7400	11523.7	
		4	2877.5	601.9200	4.7805	6019.3400	28775.5	
				MONTH EST.RATE	3.4733	18680.7100		64883.7
				ANNUAL EST.RATE	.3618			80700.2

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GOLDFISH
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	6	589.3800	.0102	4213.7200	43	
	2	0	595.6500	.0000	4213.4400	0	
	3	1	602.3484	.0017	4213.8700	7	
	4	8	1197.5700	.0067	6019.2000	40	
			MONTH EST.RATE	.0047	18660.2300		88
FEB	1	1	601.9200	.0017	4213.4400	7	
	2	1	550.2388	.0018	4214.3000	8	
	3	1	558.0300	.0018	4216.0200	8	
	4	3	726.4889	.0041	5641.5500	23	
			MONTH EST.RATE	.0024	18285.3100		44
MARCH	1	2	1001.1100	.0020	4215.7300	8	
	2	2	532.9500	.0038	4215.1700	16	
	3	3	595.6500	.0050	4213.4400	21	
	4	3	601.9200	.0050	6019.2000	30	
			MONTH EST.RATE	.0040	18663.5400		75
APRIL	1	2	589.8084	.0034	3844.7600	13	
	2	0	691.7184	.0000	5071.1500	0	
	3	3	723.0087	.0042	4602.6200	19	
	4	3	1596.4480	.0019	7271.9200	14	
			MONTH EST.RATE	.0024	20790.4500		50
MAY	1	4	1548.3600	.0026	5379.7500	14	
	2	1	808.5600	.0012	4463.3200	5	
	3	1	541.4400	.0019	3749.4700	7	
	4	2	1052.7794	.0019	5413.6100	10	
			MONTH EST.RATE	.0019	19006.1500		36
JUNE	1	0	600.2474	.0000	4708.9300	0	
	2	1	782.5885	.0013	5651.4800	7	
	3	0	805.0387	.0000	5642.3000	0	
	4	1	799.5872	.0013	6928.2400	9	
			MONTH EST.RATE	.0007	22930.9500		16
JULY	1	0	799.4144	.0000	5641.9500	0	
	2	0	923.8797	.0000	6320.1900	0	
	3	0	807.6600	.0000	6424.5600	0	
	4	0	1584.2802	.0000	8079.5200	0	
			MONTH EST.RATE	.0000	26466.2200		0

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GOLDFISH
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	1	808.4010	.0012	5283.8400	6	
		2	1	1615.1190	.0006	5654.8800	3	
		3	0	1790.0799	.0000	6028.4800	0	
		4	2	1591.7395	.0013	8760.8800	11	
				MONTH EST.RATE	.0008	25728.0800		21
	SEPT	1	0	1615.6873	.0000	5274.6500	0	
		2	0	1081.0000	.0000	3783.4400	0	
		3	0	541.4400	.0000	3790.4500	0	
		4	0	541.4400	.0000	4872.9600	0	
				MONTH EST.RATE	.0000	17721.5000		0
	OCT	1	0	541.4400	.0000	4119.0000	0	
		2	0	1607.2581	.0000	5654.8800	0	
		3	0	1615.6800	.0000	5648.7300	0	
		4	0	1740.0108	.0000	5817.9200	0	
				MONTH EST.RATE	.0000	21240.5300		0
	NOV	1	0	1202.6100	.0000	4326.2700	0	
		2	0	1188.1172	.0000	4216.1700	0	
		3	0	601.9200	.0000	4213.4400	0	
		4	1	595.9398	.0017	5419.0000	9	
				MONTH EST.RATE	.0004	18174.8800		7
	DEC	1	0	513.6096	.0000	4226.1700	0	
		2	1	452.0088	.0022	4217.4600	9	
		3	3	564.3000	.0053	4217.7400	22	
		4	5	601.9200	.0083	6019.3400	50	
				MONTH EST.RATE	.0040	18680.7100		75
				ANNUAL EST.RATE	.0018			412

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GOLDFISH
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	83.7	589.3800	.1420	4213.7200	598.3	
	2	.0	595.6500	.0000	4213.4400	.0	
	3	6.3	602.3484	.0105	4213.8700	44.2	
	4	767.8	1197.5700	.6411	6019.2000	3858.9	
			MONTH EST.RATE	.1984	18660.2300		3702.2
FEB	1	251.6	601.9200	.4180	4213.4400	1761.2	
	2	277.6	550.2388	.5045	4214.3000	2126.1	
	3	20.5	558.0300	.0367	4216.0200	154.7	
	4	348.6	726.4889	.4798	5641.5500	2706.8	
			MONTH EST.RATE	.3598	18285.3100		6579.1
MARCH	1	65.0	1001.1103	.0649	4215.7300	273.6	
	2	616.8	532.9500	1.1573	4215.1700	4878.2	
	3	91.0	595.6500	.1528	4213.4400	643.8	
	4	427.4	601.9200	.7101	6019.2000	4274.2	
			MONTH EST.RATE	.5213	18663.5400		9729.3
APRIL	1	489.6	589.8084	.8301	3844.7600	3191.5	
	2	.0	691.7184	.0000	5071.1500	.0	
	3	928.5	723.0087	1.2842	4602.6200	5910.7	
	4	29.0	1596.4480	.0182	7271.9200	132.3	
			MONTH EST.RATE	.5331	20790.4500		11083.4
MAY	1	443.0	1548.3600	.2861	5379.7500	1539.1	
	2	9.0	808.5600	.0111	4463.3200	49.5	
	3	228.3	541.4400	.4217	3749.4700	1581.2	
	4	784.6	1052.7794	.7453	5413.6100	4034.8	
			MONTH EST.RATE	.3661	19006.1500		6958.2
JUNE	1	.0	600.2474	.0000	4708.9300	.0	
	2	563.0	782.5885	.7194	5651.4800	4065.7	
	3	.0	805.0387	.0000	5642.3000	.0	
	4	*	799.5872	**	6928.2400	**	
			MONTH EST.RATE	.2398	22930.9500		5498.8
JULY	1	.0	799.4144	.0000	5641.9500	.0	
	2	.0	923.8797	.0000	6320.1900	.0	
	3	.0	807.6600	.0000	6424.5600	.0	
	4	.0	1584.2802	.0000	8079.5200	.0	
			MONTH EST.RATE	.0000	26466.2200		.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECT...C CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GOLDFISH
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	303.3	808.4010	.3752	5283.8400	1982.5	
		2	2.2	1615.1190	.0014	5654.8800	7.9	
		3	.0	1790.0799	.0000	6028.4800	.0	
		4	549.3	1591.7395	.3451	8760.8800	3023.4	
				MONTH EST.RATE	.1804	25728.0800		4641.3
	SEPT	1	.0	1615.6873	.0000	5274.6500	.0	
		2	.0	1081.0000	.0000	3783.4400	.0	
		3	.0	541.4400	.0000	3790.4500	.0	
		4	.0	541.4400	.0000	4872.9600	.0	
				MONTH EST.RATE	.0000	17721.5000		.0
	OCT	1	.0	541.4400	.0000	4119.0000	.0	
		2	.0	1607.2581	.0000	5654.8800	.0	
		3	.0	1615.6800	.0000	5648.7300	.0	
		4	.0	1740.0108	.0000	5817.9200	.0	
				MONTH EST.RATE	.0000	21240.5300		.0
	NOV	1	.0	1202.6100	.0000	4326.2700	.0	
		2	.0	1188.1172	.0000	4216.1700	.0	
		3	.0	601.9200	.0000	4213.4400	.0	
		4	7.6	595.9398	.0128	5419.0000	69.4	
				MONTH EST.RATE	.0032	18174.8800		58.2
	DEC	1	.0	513.6096	.0000	4226.1700	.0	
		2	80.2	452.0088	.1774	4217.4600	748.2	
		3	397.7	564.3000	.7048	4217.7400	2972.7	
		4	504.1	601.9200	.8375	6019.3400	5041.2	
				MONTH EST.RATE	.4299	18680.7100		8030.8
				ANNUAL EST.RATE	.2360			56281.3

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR HOGCHOKER
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	589.3800	.0000	4213.7200	0	
	2	0	595.6500	.0000	4213.4400	0	
	3	0	602.3484	.0000	4213.8700	0	
	4	0	1197.5700	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18660.2300		0
FEB	1	0	601.9200	.0000	4213.4400	0	
	2	0	550.2388	.0000	4214.3000	0	
	3	0	558.0300	.0000	4216.0200	0	
	4	0	726.4889	.0000	5641.5500	0	
			MONTH EST.RATE	.0000	18285.3100		0
MARCH	1	0	1001.1100	.0000	4215.7300	0	
	2	0	532.9500	.0000	4215.1700	0	
	3	0	595.6500	.0000	4213.4400	0	
	4	0	601.9200	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18663.5400		0
APRIL	1	0	589.8084	.0000	3844.7600	0	
	2	0	691.7184	.0000	5071.1500	0	
	3	5	723.0087	.0069	4602.6200	32	
	4	9	1596.4480	.0056	7271.9200	41	
			MONTH EST.RATE	.0031	20790.4500		64
MAY	1	15	1548.3600	.0097	5379.7500	52	
	2	14	808.5600	.0173	4463.3200	77	
	3	5	541.4400	.0092	3749.4700	34	
	4	1	1052.7794	.0010	5413.6100	5	
			MONTH EST.RATE	.0093	19006.1500		177
JUNE	1	0	600.2474	.0000	4708.9300	0	
	2	3	782.5885	.0038	5651.4800	21	
	3	1	805.0387	.0012	5642.3000	7	
	4	0	799.5872	.0000	6928.2400	0	
			MONTH EST.RATE	.0013	22930.9500		30
JULY	1	0	799.4144	.0000	5641.9500	0	
	2	2	923.8797	.0022	6320.1900	14	
	3	3	807.6600	.0037	6424.5600	24	
	4	10	1584.2802	.0063	8079.5200	51	
			MONTH EST.RATE	.0031	26466.2200		82

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELEC[illegible]C CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR HOGCHOKER
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	4	808.4010	.0050	5283.8400	26	
		2	7	1615.1190	.0043	5654.8800	24	
		3	3	1790.0799	.0017	6028.4800	10	
		4	16	1591.7395	.0101	8760.8800	88	
				MONTH EST.RATE	.0053	25728.0800		136
	SEPT	1	20	1615.6873	.0124	5274.6500	65	
		2	14	1081.0000	.0130	3783.4400	49	
		3	5	541.4400	.0092	3790.4500	35	
		4	14	541.4400	.0259	4872.9600	126	
				MONTH EST.RATE	.0151	17721.5000		268
	OCT	1	109	541.4400	.2013	4119.0000	829	
		2	247	1607.2581	.1537	5654.8800	869	
		3	101	1615.6800	.0625	5648.7300	353	
		4	52	1740.0108	.0299	5817.9200	174	
				MONTH EST.RATE	.1119	21240.5300		2377
	NOV	1	14	1202.6100	.0116	4326.2700	50	
		2	17	1188.1172	.0143	4216.1700	60	
		3	10	601.9200	.0166	4213.4400	70	
		4	13	595.9398	.0218	5419.0000	118	
				MONTH EST.RATE	.0161	18174.8800		293
	DEC	1	4	513.6096	.0078	4226.1700	33	
		2	1	452.0088	.0022	4217.4600	9	
		3	0	564.3000	.0000	4217.7400	0	
		4	0	601.9200	.0000	6019.3400	0	
				MONTH EST.RATE	.0025	18680.7100		47
				ANNUAL EST.RATE	.0140			3474

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR HOGCHOKER
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	589.3800	.0000	4213.7200	.0	
	2	.0	595.6500	.0000	4213.4400	.0	
	3	.0	602.3484	.0000	4213.8700	.0	
	4	.0	1197.5700	.0000	6019.2000	.0	
			MONTH EST.RATE	.0000	18660.2300		.0
FEB	1	.0	601.9200	.0000	4213.4400	.0	
	2	.0	550.2388	.0000	4214.3000	.0	
	3	.0	558.0300	.0000	4216.0200	.0	
	4	.0	726.4889	.0000	5641.5500	.0	
			MONTH EST.RATE	.0000	18285.3100		.0
MARCH	1	.0	1001.1100	.0000	4215.7300	.0	
	2	.0	532.9500	.0000	4215.1700	.0	
	3	.0	595.6500	.0000	4213.4400	.0	
	4	.0	601.9200	.0000	6019.2000	.0	
			MONTH EST.RATE	.0000	18663.5400		.0
APRIL	1	.0	589.8084	.0000	3844.7600	.0	
	2	.0	691.7184	.0000	5071.1500	.0	
	3	95.0	723.0087	.1314	4602.6200	604.8	
	4	246.2	1596.4480	.1542	7271.9200	1121.3	
			MONTH EST.RATE	.0714	20790.4500		1484.4
MAY	1	295.6	1548.3600	.1909	5379.7500	1027.0	
	2	186.0	808.5600	.2300	4463.3200	1026.6	
	3	60.7	541.4400	.1121	3749.4700	420.3	
	4	1.0	1052.7794	.0010	5413.6100	5.4	
			MONTH EST.RATE	.1335	19006.1500		2537.3
JUNE	1	.0	600.2474	.0000	4708.9300	.0	
	2	18.2	782.5885	.0233	5651.4800	131.7	
	3	8.0	805.0387	.0099	5642.3000	55.9	
	4	.0	799.5872	.0000	6928.2400	.0	
			MONTH EST.RATE	.0083	22930.9500		190.3
JULY	1	.0	799.4144	.0000	5641.9500	.0	
	2	3.5	923.8797	.0038	6320.1900	24.0	
	3	3.7	807.6600	.0046	6424.5600	29.6	
	4	19.2	1584.2802	.0121	8079.5200	97.8	
			MONTH EST.RATE	.0051	26466.2200		135.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR HOGCHOKER
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	10.1	808.4010	.0125	5283.8400	66.0	
		2	19.5	1615.1190	.0121	5654.8800	68.4	
		3	25.6	1790.0799	.0143	6028.4800	86.2	
		4	220.4	1591.7395	.1385	8760.8800	1213.4	
				MONTH EST.RATE	.0444	25728.0800		1142.3
	SEPT	1	217.9	1615.6873	.1349	5274.6500	711.6	
		2	81.6	1081.0000	.0755	3783.4400	285.6	
		3	66.8	541.4400	.1234	3790.4500	467.7	
		4	79.5	541.4400	.1468	4872.9600	715.4	
				MONTH EST.RATE	.1202	17721.5000		2130.1
	OCT	1	1389.0	541.4400	2.5654	4119.0000	10566.9	
		2	3371.1	1607.2581	2.0974	5654.8800	11860.5	
		3	1427.2	1615.6800	.8833	5648.7300	4989.5	
		4	683.6	1740.0108	.3929	5817.9200	2285.9	
				MONTH EST.RATE	1.4848	21240.5300		31537.9
	NOV	1	224.3	1202.6100	.1865	4326.2700	806.8	
		2	177.9	1188.1172	.1497	4216.1700	631.2	
		3	122.6	601.9200	.2037	4213.4400	858.3	
		4	103.3	595.9398	.1733	5419.0000	939.1	
				MONTH EST.RATE	.1783	18174.8800		3240.6
	DEC	1	102.1	513.6096	.1988	4226.1700	840.2	
		2	17.0	452.0088	.0376	4217.4600	158.6	
		3	.0	564.3000	.0000	4217.7400	.0	
		4	.0	601.9200	.0000	6019.3400	.0	
				MONTH EST.RATE	.0591	18680.7100		1104.0
				ANNUAL EST.RATE	.1754			43501.9

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	2	589.3800	.0034	4213.7200	14	
	2	21	595.6500	.0353	4213.4400	149	
	3	15	602.3484	.0249	4213.8700	105	
	4	75	1197.5700	.0626	6019.2000	377	
			MONTH EST.RATE	.0316	18660.2300		590
FEB	1	3	601.9200	.0050	4213.4400	21	
	2	5	550.2388	.0091	4214.3000	38	
	3	6	558.0300	.0108	4216.0200	46	
	4	29	726.4889	.0399	5641.5500	225	
			MONTH EST.RATE	.0162	18285.3100		296
MARCH	1	11	1001.1100	.0110	4215.7300	46	
	2	12	532.9500	.0225	4215.1700	95	
	3	7	595.6500	.0118	4213.4400	50	
	4	6	601.9200	.0100	6019.2000	60	
			MONTH EST.RATE	.0138	18663.5400		258
APRIL	1	5	589.8084	.0085	3844.7600	33	
	2	4	691.7184	.0058	5071.1500	29	
	3	17	723.0087	.0235	4602.6200	108	
	4	32	1596.4480	.0200	7271.9200	145	
			MONTH EST.RATE	.0145	20790.4500		301
MAY	1	11	1548.3600	.0071	5379.7500	38	
	2	5	808.5600	.0062	4463.3200	28	
	3	8	541.4400	.0148	3749.4700	55	
	4	3	1052.7794	.0029	5413.6100	16	
			MONTH EST.RATE	.0078	19006.1500		148
JUNE	1	2	600.2474	.0033	4708.9300	16	
	2	2	782.5885	.0026	5651.4800	15	
	3	0	805.0387	.0000	5642.3000	0	
	4	1	799.5872	.0013	6928.2400	9	
			MONTH EST.RATE	.0018	22930.9500		41
JULY	1	0	799.4144	.0000	5641.9500	0	
	2	1	923.8797	.0011	6320.1900	7	
	3	2	807.6600	.0025	6424.5600	16	
	4	2	1584.2802	.0013	8079.5200	11	
			MONTH EST.RATE	.0012	26466.2200		32

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELEC[illegible]IC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	7	808.4010	.0087	5283.8400	46	
		2	4	1615.1190	.0025	5654.8800	14	
		3	8	1790.0799	.0045	6028.4800	27	
		4	14	1591.7395	.0088	8760.8800	77	
				MONTH EST.RATE	.0061	25728.0800		157
	SEPT	1	95	1615.6873	.0588	5274.6500	310	
		2	9	1081.0000	.0083	3783.4400	31	
		3	4	541.4400	.0074	3790.4500	28	
		4	4	541.4400	.0074	4872.9600	36	
				MONTH EST.RATE	.0205	17721.5000		363
	OCT	1	5	541.4400	.0092	4119.0000	38	
		2	50	1607.2581	.0311	5654.8800	176	
		3	280	1615.6800	.1733	5648.7300	979	
		4	2212	1740.0108	1.2713	5817.9200	7396	
				MONTH EST.RATE	.3712	21240.5300		7884
	NOV	1	1806	1202.6100	1.5017	4326.2700	6497	
		2	88	1188.1172	.0741	4216.1700	312	
		3	31	601.9200	.0515	4213.4400	217	
		4	15	595.9398	.0252	5419.0000	137	
				MONTH EST.RATE	.4131	18174.8800		7508
	DEC	1	71	513.6096	.1382	4226.1700	584	
		2	1	452.0088	.0022	4217.4600	9	
		3	15	564.3000	.0266	4217.7400	112	
		4	140	601.9200	.2326	6019.3400	1400	
				MONTH EST.RATE	.0999	18680.7100		1866
				ANNUAL EST.RATE	.0831			19444

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	117.7	589.3800	.1997	4213.7200	841.5	
	2	1696.1	595.6500	2.8475	4213.4400	11997.8	
	3	1082.5	602.3484	1.7971	4213.8700	7572.7	
	4	5904.5	1197.5700	4.9304	6019.2000	29677.1	
			MONTH EST.RATE	2.4437	18660.2300		45600.0
FEB	1	117.5	601.9200	.1952	4213.4400	822.5	
	2	450.9	550.2388	.8195	4214.3000	3453.6	
	3	221.2	558.0300	.3964	4216.0200	1671.2	
	4	1174.1	726.4889	1.6161	5641.5500	9117.3	
			MONTH EST.RATE	.7568	18285.3100		13838.3
MARCH	1	892.7	1001.1100	.8917	4215.7300	3759.2	
	2	544.1	532.9500	1.0209	4215.1700	4303.3	
	3	432.5	595.6500	.7261	4213.4400	3059.4	
	4	410.5	601.9200	.6820	6019.2000	4105.1	
			MONTH EST.RATE	.8302	18663.5400		15494.5
APRIL	1	199.7	589.8084	.3386	3844.7600	1301.8	
	2	103.9	691.7184	.1502	5071.1500	761.7	
	3	67.7	723.0087	.0936	4602.6200	430.8	
	4	1076.2	1596.4480	.6741	7271.9200	4902.0	
			MONTH EST.RATE	.3141	20790.4500		6530.3
MAY	1	663.8	1548.3600	.4287	5379.7500	2306.3	
	2	260.7	808.5600	.3224	4463.3200	1439.0	
	3	228.2	541.4400	.4215	3749.4700	1580.4	
	4	177.1	1052.7794	.1682	5413.6100	910.6	
			MONTH EST.RATE	.3352	19006.1500		6370.9
JUNE	1	134.3	600.2474	.2237	4708.9300	1053.4	
	2	131.5	782.5885	.1680	5651.4800	949.4	
	3	.0	805.0387	.0000	5642.3000	.0	
	4	39.4	799.5872	.0493	6928.2400	341.6	
			MONTH EST.RATE	.1103	22930.9500		2529.3
JULY	1	.0	799.4144	.0000	5641.9500	.0	
	2	35.1	923.8797	.0380	6320.1900	240.2	
	3	119.8	807.6600	.1483	6424.5600	952.8	
	4	176.3	1584.2802	.1113	8079.5200	899.3	
			MONTH EST.RATE	.0744	26466.2200		1969.1

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	214.8	808.4010	.2657	5283.8400	1403.9	
		2	275.5	1615.1190	.1706	5654.8800	964.7	
		3	126.9	1790.0799	.0709	6028.4800	427.4	
		4	151.1	1591.7395	.0949	8760.8800	831.4	
				MONTH EST.RATE	.1505	25728.0800		3872.1
	SEPT	1	358.9	1615.6873	.2221	5274.6500	1171.5	
		2	15.0	1081.0000	.0139	3783.4400	52.6	
		3	10.8	541.4400	.0200	3790.4500	75.8	
		4	127.3	541.4400	.2351	4872.9600	1145.6	
				MONTH EST.RATE	.1228	17721.5000		2176.2
	OCT	1	185.8	541.4400	.3432	4119.0000	1413.6	
		2	247.5	1607.2581	.1540	5654.8800	870.9	
		3	929.0	1615.6800	.5750	5648.7300	3248.0	
		4	7897.6	1740.0108	4.5388	5817.9200	26406.4	
				MONTH EST.RATE	1.4028	21240.5300		29796.2
	NOV	1	5975.0	1202.6100	4.9684	4326.2700	21494.6	
		2	545.2	1188.1172	.4589	4216.1700	1934.8	
		3	125.8	601.9200	.2090	4213.4400	880.6	
		4	128.7	595.9398	.2160	5419.0000	1170.5	
				MONTH EST.RATE	1.4631	18174.8800		26591.7
	DEC	1	438.5	513.6096	.8538	4226.1700	3608.3	
		2	1.0	452.0088	.0022	4217.4600	9.3	
		3	374.8	564.3000	.6642	4217.7400	2801.4	
		4	3434.0	601.9200	5.7051	6019.3400	34340.9	
				MONTH EST.RATE	1.8063	18680.7100		33743.0
				ANNUAL EST.RATE	.8175			188511.6

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR STRIPED BASS
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	5	589.3800	.0085	4213.7200	36	
	2	0	595.6500	.0000	4213.4400	0	
	3	1	602.3484	.0017	4213.8700	7	
	4	2	1197.5700	.0017	6019.2000	10	
			MONTH EST.RATE	.0030	18660.2300		56
FEB	1	1	601.9200	.0017	4213.4400	7	
	2	14	550.2388	.0254	4214.3000	107	
	3	14	558.0300	.0251	4216.0200	106	
	4	29	726.4889	.0399	5641.5500	225	
			MONTH EST.RATE	.0230	18285.3100		421
MARCH	1	21	1001.1100	.0210	4215.7300	89	
	2	25	532.9500	.0469	4215.1700	198	
	3	5	595.6500	.0084	4213.4400	35	
	4	0	601.9200	.0000	6019.2000	0	
			MONTH EST.RATE	.0191	18663.5400		356
APRIL	1	0	589.8084	.0000	3844.7600	0	
	2	0	691.7184	.0000	5071.1500	0	
	3	1	723.0087	.0014	4602.6200	6	
	4	1	1596.4480	.0006	7271.9200	4	
			MONTH EST.RATE	.0005	20790.4500		10
MAY	1	3	1548.3600	.0019	5379.7500	10	
	2	0	808.5600	.0000	4463.3200	0	
	3	1	541.4400	.0019	3749.4700	7	
	4	0	1052.7794	.0000	5413.6100	0	
			MONTH EST.RATE	.0010	19006.1500		19
JUNE	1	1	600.2474	.0017	4708.9300	8	
	2	1	782.5885	.0013	5651.4800	7	
	3	0	805.0387	.0000	5642.3000	0	
	4	1	799.5872	.0013	6928.2400	9	
			MONTH EST.RATE	.0011	22930.9500		25
JULY	1	0	799.4144	.0000	5641.9500	0	
	2	7	923.8797	.0076	6320.1900	48	
	3	3	807.6600	.0037	6424.5600	24	
	4	61	1584.2802	.0385	8079.5200	311	
			MONTH EST.RATE	.0125	26466.2200		331

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR STRIPED BASS
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	61	808.4010	.0755	5283.8400	399	
		2	33	1615.1190	.0204	5654.8800	115	
		3	18	1790.0799	.0101	6028.4800	61	
		4	68	1591.7395	.0427	8760.8800	374	
				MONTH EST.RATE	.0372	25728.0800		957
	SEPT	1	154	1615.6873	.0953	5274.6500	503	
		2	8	1081.0000	.0074	3783.4400	28	
		3	1	541.4400	.0019	3790.4500	7	
		4	2	541.4400	.0037	4872.9600	18	
				MONTH EST.RATE	.0271	17721.5000		480
	OCT	1	21	541.4400	.0388	4119.0000	160	
		2	115	1607.2581	.0716	5654.8800	405	
		3	242	1615.6800	.1498	5648.7300	846	
		4	21	1740.0108	.0121	5817.9200	70	
				MONTH EST.RATE	.0681	21240.5300		1446
	NOV	1	12	1202.6100	.0100	4326.2700	43	
		2	16	1188.1172	.0135	4216.1700	57	
		3	4	601.9200	.0067	4213.4400	28	
		4	17	595.9398	.0285	5419.0000	154	
				MONTH EST.RATE	.0147	18174.8800		267
	DEC	1	70	513.6096	.1363	4226.1700	576	
		2	47	452.0088	.1040	4217.4600	439	
		3	6	564.3000	.0106	4217.7400	45	
		4	15	601.9200	.0249	6019.3400	150	
				MONTH EST.RATE	.0690	18680.7100		1289
				ANNUAL EST.RATE	.0230			5657

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR STRIPED BASS
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	15.6	589.3800	.0265	4213.7200	111.7	
	2	.0	595.6500	.0000	4213.4400	.0	
	3	7.4	602.3484	.0123	4213.8700	51.8	
	4	16.4	1197.5700	.0137	6019.2000	82.5	
			MONTH EST.RATE	.0131	18660.2300		244.4
FEB	1	4.8	601.9200	.0080	4213.4400	33.7	
	2	101.4	550.2388	.1843	4214.3000	776.7	
	3	180.4	558.0300	.3233	4216.0200	1363.0	
	4	214.8	726.4889	.2957	5641.5500	1668.2	
			MONTH EST.RATE	.2028	18285.3100		3708.3
MARCH	1	1194.4	1001.1100	1.1931	4215.7300	5029.8	
	2	183.1	532.9500	.3436	4215.1700	1448.3	
	3	56.2	595.6500	.0944	4213.4400	397.7	
	4	.0	601.9200	.0000	6019.2000	.0	
			MONTH EST.RATE	.4078	18663.5400		7611.0
APRIL	1	.0	589.8084	.0000	3844.7600	.0	
	2	.0	691.7184	.0000	5071.1500	.0	
	3	10.1	723.0087	.0140	4602.6200	64.4	
	4	10.7	1596.4480	.0067	7271.9200	48.7	
			MONTH EST.RATE	.0052	20790.4500		108.1
MAY	1	15.6	1548.3600	.0101	5379.7500	54.3	
	2	.0	808.5600	.0000	4463.3200	.0	
	3	5.6	541.4400	.0103	3749.4700	38.6	
	4	.0	1052.7794	.0000	5413.6100	.0	
			MONTH EST.RATE	.0051	19006.1500		96.9
JUNE	1	3.8	600.2474	.0063	4708.9300	29.7	
	2	9.6	782.5885	.0123	5651.4800	69.5	
	3	.0	805.0387	.0000	5642.3000	.0	
	4	260.3	799.5872	.3255	6928.2400	2255.1	
			MONTH EST.RATE	.0860	22930.9500		1972.1
JULY	1	.0	799.4144	.0000	5641.9500	.0	
	2	4.1	923.8797	.0044	6320.1900	27.8	
	3	3.6	807.6600	.0045	6424.5600	28.9	
	4	787.0	1584.2802	.4968	8079.5200	4013.9	
			MONTH EST.RATE	.1264	26466.2200		3345.3

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR STRIPED BASS
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	141.0	808.4010	.1744	5283.8400	921.5	
		2	61.8	1615.1190	.0383	5654.8800	216.6	
		3	41.7	1790.0799	.0233	6028.4800	140.5	
		4	239.8	1591.7395	.1507	8760.8800	1320.3	
				MONTH EST.RATE	.0967	25728.0800		2487.9
	SEPT	1	545.6	1615.6873	.3377	5274.6500	1781.2	
		2	20.0	1081.0000	.0185	3783.4400	70.0	
		3	1.4	541.4400	.0026	3790.4500	9.9	
		4	7.3	541.4400	.0135	4872.9600	65.8	
				MONTH EST.RATE	.0931	17721.5000		1649.9
	OCT	1	61.5	541.4400	.1136	4119.0000	467.9	
		2	439.1	1607.2581	.2732	5654.8800	1544.9	
		3	1156.4	1615.6800	.7157	5648.7300	4042.8	
		4	106.9	1740.0108	.0614	5817.9200	357.2	
				MONTH EST.RATE	.2910	21240.5300		6181.0
	NOV	1	59.4	1202.6100	.0494	4326.2700	213.7	
		2	89.2	1188.1172	.0751	4216.1700	316.6	
		3	23.1	601.9200	.0384	4213.4400	161.8	
		4	113.0	595.9398	.1896	5419.0000	1027.4	
				MONTH EST.RATE	.0881	18174.8800		1601.2
	DEC	1	473.4	513.6096	.9217	4226.1700	3895.3	
		2	326.5	452.0088	.7223	4217.4600	3046.3	
		3	35.1	564.3000	.0622	4217.7400	262.3	
		4	81.0	601.9200	.1346	6019.3400	810.2	
				MONTH EST.RATE	.4602	18680.7100		8596.9
				ANNUAL EST.RATE	.1563			37603.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SPOTTAIL SHINER
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	11	589.3800	.0187	4213.7200	79	
	2	7	595.6500	.0118	4213.4400	50	
	3	11	602.3484	.0183	4213.8700	77	
	4	36	1197.5700	.0301	6019.2000	181	
			MONTH EST.RATE	.0197	18660.2300		368
FEB	1	5	601.9200	.0083	4213.4400	35	
	2	51	550.2388	.0927	4214.3000	391	
	3	37	558.0300	.0663	4216.0200	280	
	4	57	726.4889	.0785	5641.5500	443	
			MONTH EST.RATE	.0615	18285.3100		1125
MARCH	1	72	1001.1100	.0719	4215.7300	303	
	2	18	532.9500	.0338	4215.1700	142	
	3	30	595.6500	.0504	4213.4400	212	
	4	105	601.9200	.1744	6019.2000	1050	
			MONTH EST.RATE	.0826	18663.5400		1542
APRIL	1	190	589.8084	.3221	3844.7600	1238	
	2	16	691.7184	.0231	5071.1500	117	
	3	159	723.0087	.2199	4602.6200	1012	
	4	161	1596.4480	.1009	7271.9200	734	
			MONTH EST.RATE	.1665	20790.4500		3462
MAY	1	39	1548.3600	.0252	5379.7500	136	
	2	9	808.5600	.0111	4463.3200	50	
	3	17	541.4400	.0314	3749.4700	118	
	4	11	1052.7794	.0105	5413.6100	57	
			MONTH EST.RATE	.0196	19006.1500		373
JUNE	1	4	600.2474	.0067	4708.9300	32	
	2	24	782.5885	.0307	5651.4800	174	
	3	2	805.0387	.0025	5642.3000	14	
	4	2	799.5872	.0025	6928.2400	17	
			MONTH EST.RATE	.0106	22930.9500		243
JULY	1	0	799.4144	.0000	5641.9500	0	
	2	1	923.8797	.0011	6320.1900	7	
	3	1	807.6600	.0012	6424.5600	8	
	4	9	1584.2802	.0057	8079.5200	46	
			MONTH EST.RATE	.0020	26466.2200		53

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SPOTTAIL SHINER
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	23	808.4010	.0285	5283.8400	151	
		2	16	1615.1190	.0099	5654.8800	56	
		3	8	1790.0799	.0045	6028.4800	27	
		4	24	1591.7395	.0151	8760.8800	132	
				MONTH EST.RATE	.0145	25728.0800		373
	SEPT	1	166	1615.6873	.1027	5274.6500	542	
		2	8	1081.0000	.0074	3783.4400	28	
		3	2	541.4400	.0037	3790.4500	14	
		4	0	541.4400	.0000	4872.9600	0	
				MONTH EST.RATE	.0285	17721.5000		505
	OCT	1	11	541.4400	.0203	4119.0000	84	
		2	27	1607.2581	.0168	5654.8800	95	
		3	34	1615.6800	.0210	5648.7300	119	
		4	57	1740.0108	.0328	5817.9200	191	
				MONTH EST.RATE	.0227	21240.5300		482
	NOV	1	57	1202.6100	.0474	4326.2700	205	
		2	15	1188.1172	.0126	4216.1700	53	
		3	10	601.9200	.0166	4213.4400	70	
		4	5	595.9398	.0084	5419.0000	46	
				MONTH EST.RATE	.0213	18174.8800		387
	DEC	1	42	513.6096	.0818	4226.1700	346	
		2	36	452.0088	.0796	4217.4600	336	
		3	8	564.3000	.0142	4217.7400	60	
		4	18	601.9200	.0299	6019.3400	180	
				MONTH EST.RATE	.0514	18680.7100		960
				ANNUAL EST.RATE	.0417			9873

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SPOTTAIL SHINER
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	32.9	589.3800	.0558	4213.7200	235.1	
	2	33.9	595.6500	.0569	4213.4400	239.7	
	3	73.6	602.3484	.1222	4213.8700	514.9	
	4	326.1	1197.5700	.2723	6019.2000	1639.0	
			MONTH EST.RATE	.1268	18660.2300		2366.1
FEB	1	37.1	601.9200	.0616	4213.4400	259.5	
	2	548.6	550.2388	.9970	4214.3000	4201.7	
	3	319.8	558.0300	.5731	4216.0200	2416.2	
	4	403.8	726.4889	.5558	5641.5500	3135.6	
			MONTH EST.RATE	.5469	18285.3100		10000.2
MARCH	1	630.0	1001.1100	.6293	4215.7300	2653.0	
	2	136.2	532.9500	.2556	4215.1700	1077.4	
	3	219.1	595.6500	.3678	4213.4400	1549.7	
	4	703.8	601.9200	1.1693	6019.2000	7038.3	
			MONTH EST.RATE	.6055	18663.5400		11300.8
APRIL	1	1184.0	589.8084	2.0074	3844.7600	7718.0	
	2	50.9	691.7184	.0736	5071.1500	373.2	
	3	513.6	723.0087	.7104	4602.6200	3269.7	
	4	598.6	1596.4480	.3750	7271.9200	2727.0	
			MONTH EST.RATE	.7916	20790.4500		16457.7
MAY	1	179.1	1548.3600	.1157	5379.7500	622.4	
	2	29.7	808.5600	.0367	4463.3200	163.8	
	3	79.6	541.4400	.1470	3749.4700	551.2	
	4	100.5	1052.7794	.0955	5413.6100	517.0	
			MONTH EST.RATE	.0987	19006.1500		1875.9
JUNE	1	34.8	600.2474	.0580	4708.9300	273.1	
	2	171.7	782.5885	.2194	5651.4800	1239.9	
	3	16.0	805.0387	.0199	5642.3000	112.3	
	4	12.0	799.5872	.0150	6928.2400	103.9	
			MONTH EST.RATE	.0781	22930.9500		1790.9
JULY	1	.0	799.4144	.0000	5641.9500	.0	
	2	6.8	923.8797	.0074	6320.1900	46.8	
	3	7.5	807.6600	.0093	6424.5600	59.7	
	4	66.5	1584.2802	.0420	8079.5200	339.3	
			MONTH EST.RATE	.0147	26466.2200		389.1

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SPOTTAIL SHINER
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	120.5	808.4010	.1491	5283.8400	787.8	
		2	66.1	1615.1190	.0409	5654.8800	231.3	
		3	48.1	1790.0799	.0269	6028.4800	162.2	
		4	144.4	1591.7395	.0907	8760.8800	794.6	
				MONTH EST.RATE	.0769	25728.0800		1978.5
	SEPT	1	959.6	1615.6873	.5939	5274.6500	3132.6	
		2	29.6	1081.0000	.0274	3783.4400	103.7	
		3	2.4	541.4400	.0044	3790.4500	16.7	
		4	.0	541.4400	.0000	4872.9600	.0	
				MONTH EST.RATE	.1564	17721.5000		2771.6
	OCT	1	21.8	541.4400	.0403	4119.0000	166.0	
		2	116.2	1607.2581	.0723	5654.8800	408.8	
		3	118.2	1615.6800	.0732	5648.7300	413.5	
		4	229.2	1740.0108	.1317	5817.9200	766.2	
				MONTH EST.RATE	.0794	21240.5300		1686.5
	NOV	1	231.9	1202.6100	.1928	4326.2700	834.1	
		2	67.4	1188.1172	.0567	4216.1700	239.1	
		3	45.3	601.9200	.0753	4213.4400	317.3	
		4	45.6	595.9398	.0765	5419.0000	414.6	
				MONTH EST.RATE	.1003	18174.8800		1822.9
	DEC	1	245.4	513.6096	.4778	4226.1700	2019.3	
		2	324.5	452.0088	.7179	4217.4600	3027.7	
		3	57.7	564.3000	.1023	4217.7400	431.5	
		4	133.5	601.9200	.2218	6019.3400	1335.1	
				MONTH EST.RATE	.3800	18680.7100		7098.7
				ANNUAL EST.RATE	.2546			59538.9

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE CATFISH
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	1	589.3800	.0017	4213.7200	7	
	2	0	595.6500	.0000	4213.4400	0	
	3	1	602.3484	.0017	4213.8700	7	
	4	0	1197.5700	.0000	6019.2000	0	
			MONTH EST.RATE	.0009	18660.2300		17
FEB	1	0	601.9200	.0000	4213.4400	0	
	2	3	550.2388	.0055	4214.3000	23	
	3	4	558.0300	.0072	4216.0200	30	
	4	5	726.4889	.0069	5641.5500	39	
			MONTH EST.RATE	.0049	18285.3100		90
MARCH	1	4	1001.1100	.0040	4215.7300	17	
	2	2	532.9500	.0038	4215.1700	16	
	3	2	595.6500	.0034	4213.4400	14	
	4	0	601.9200	.0000	6019.2000	0	
			MONTH EST.RATE	.0028	18663.5400		52
APRIL	1	1	589.8084	.0017	3844.7600	7	
	2	2	691.7184	.0029	5071.1500	15	
	3	3	723.0087	.0042	4602.6200	19	
	4	2	1596.4480	.0013	7271.9200	9	
			MONTH EST.RATE	.0025	20790.4500		52
MAY	1	5	1548.3600	.0032	5379.7500	17	
	2	2	808.5600	.0025	4463.3200	11	
	3	1	541.4400	.0019	3749.4700	7	
	4	1	1052.7794	.0010	5413.6100	5	
			MONTH EST.RATE	.0022	19006.1500		42
JUNE	1	2	600.2474	.0033	4708.9300	16	
	2	3	782.5885	.0038	5651.4800	21	
	3	0	805.0387	.0000	5642.3000	0	
	4	0	799.5872	.0000	6928.2400	0	
			MONTH EST.RATE	.0018	22930.9500		41
JULY	1	0	799.4144	.0000	5641.9500	0	
	2	2	923.8797	.0022	6320.1900	14	
	3	1	807.6600	.0012	6424.5600	8	
	4	3	1584.2802	.0019	8079.5200	15	
			MONTH EST.RATE	.0013	26466.2200		34

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE CATFISH
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	1	808.4010	.0012	5283.8400	6	
		2	4	1615.1190	.0025	5654.8800	14	
		3	0	1790.0799	.0000	6028.4800	0	
		4	6	1591.7395	.0038	8760.8800	33	
				MONTH EST.RATE	.0019	25728.0800		49
	SEPT	1	3	1615.6873	.0019	5274.6500	10	
		2	0	1081.0000	.0000	3783.4400	0	
		3	0	541.4400	.0000	3790.4500	0	
		4	1	541.4400	.0019	4872.9600	9	
				MONTH EST.RATE	.0010	17721.5000		18
	OCT	1	1	541.4400	.0019	4119.0000	8	
		2	10	1607.2581	.0062	5654.8800	35	
		3	2	1615.6800	.0012	5648.7300	7	
		4	29	1740.0108	.0167	5817.9200	97	
				MONTH EST.RATE	.0065	21240.5300		138
	NOV	1	26	1202.6100	.0216	4326.2700	93	
		2	10	1188.1172	.0084	4216.1700	35	
		3	4	601.9200	.0067	4213.4400	28	
		4	0	595.9398	.0000	5419.0000	0	
				MONTH EST.RATE	.0092	18174.8800		167
	DEC	1	1	513.6096	.0020	4226.1700	8	
		2	1	452.0088	.0022	4217.4600	9	
		3	0	564.3000	.0000	4217.7400	0	
		4	0	601.9200	.0000	6019.3400	0	
				MONTH EST.RATE	.0011	18680.7100		21
				ANNUAL EST.RATE	.0030			721

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE CATFISH
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	*	589.3800	**	4213.7200	**	
	2	.0	595.6500	.0000	4213.4400	.0	
	3	400.2	602.3484	.6644	4213.8700	2799.7	
	4	.0	1197.5700	.0000	6019.2000	.0	
			MONTH EST.RATE	.2215	18660.2300		4133.2
FEB	1	.0	601.9200	.0000	4213.4400	.0	
	2	19.5	550.2388	.0354	4214.3000	149.2	
	3	102.2	558.0300	.1831	4216.0200	772.0	
	4	235.7	726.4889	.3244	5641.5500	1830.1	
			MONTH EST.RATE	.1357	18285.3100		2481.3
MARCH	1	1358.1	1001.1100	1.3566	4215.7300	5719.1	
	2	473.4	532.9500	.8883	4215.1700	3744.3	
	3	993.7	595.6500	1.6683	4213.4400	7029.3	
	4	.0	601.9200	.0000	6019.2000	.0	
			MONTH EST.RATE	.9783	18663.5400		18258.5
APRIL	1	2.6	589.8084	.0044	3844.7600	16.9	
	2	9.3	691.7184	.0134	5071.1500	68.0	
	3	9.2	723.0087	.0127	4602.6200	58.5	
	4	16.5	1596.4480	.0103	7271.9200	74.9	
			MONTH EST.RATE	.0102	20790.4500		212.1
MAY	1	1116.3	1548.3600	.7210	5379.7500	3878.8	
	2	11.7	808.5600	.0145	4463.3200	64.7	
	3	3.4	541.4400	.0063	3749.4700	23.6	
	4	42.1	1052.7794	.0400	5413.6100	216.5	
			MONTH EST.RATE	.1955	19006.1500		3715.7
JUNE	1	19.3	600.2474	.0322	4708.9300	151.6	
	2	65.2	782.5885	.0833	5651.4800	470.8	
	3	.0	805.0387	.0000	5642.3000	.0	
	4	.0	799.5872	.0000	6928.2400	.0	
			MONTH EST.RATE	.0289	22930.9500		662.7
JULY	1	.0	799.4144	.0000	5641.9500	.0	
	2	594.6	923.8797	.6436	6320.1900	4067.7	
	3	21.3	807.6600	.0264	6424.5600	169.6	
	4	718.0	1584.2802	.4532	8079.5200	3661.6	
			MONTH EST.RATE	.2808	26466.2200		7431.7

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE CATFISH
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	755.0	808.4010	.9339	5283.8400	4934.6	
		2	1526.2	1615.1190	.9450	5654.8800	5343.9	
		3	.0	1790.0799	.0000	6028.4800	.0	
		4	13.9	1591.7395	.0087	8760.8800	76.2	
				MONTH EST.RATE	.4719	25728.0800		12141.1
	SEPT	1	653.1	1615.6873	.4042	5274.6500	2132.0	
		2	.0	1081.0000	.0000	3783.4400	.0	
		3	.0	541.4400	.0000	3790.4500	.0	
		4	533.0	541.4400	.9844	4872.9600	4796.9	
				MONTH EST.RATE	.3472	17721.5000		6152.9
	OCT	1	546.9	541.4400	1.0101	4119.0000	4160.6	
		2	475.7	1607.2581	.2960	5654.8800	1673.8	
		3	516.5	1615.6800	.3197	5648.7300	1805.9	
		4	384.4	1740.0108	.2209	5817.9200	1285.2	
				MONTH EST.RATE	.4617	21240.5300		9806.8
	NOV	1	1081.9	1202.6100	.8996	4326.2700	3891.9	
		2	795.4	1188.1172	.6695	4216.1700	2822.7	
		3	19.8	601.9200	.0329	4213.4400	138.6	
		4	.0	595.9398	.0000	5419.0000	.0	
				MONTH EST.RATE	.4005	18174.8800		7279.0
	DEC	1	1424.5	513.6096	2.7735	4226.1700	11721.3	
		2	3.5	452.0088	.0077	4217.4600	32.5	
		3	.0	564.3000	.0000	4217.7400	.0	
		4	.0	601.9200	.0000	6019.3400	.0	
				MONTH EST.RATE	.6953	18680.7100		12988.7
				ANNUAL EST.RATE	.3523			85263.7

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	160	589.3800	.2715	4213.7200	1144	
	2	132	595.6500	.2216	4213.4400	934	
	3	121	602.3484	.2009	4213.8700	847	
	4	321	1197.5700	.2680	6019.2000	1613	
			MONTH EST.RATE	.2405	18660.2300		4488
FEB	1	105	601.9200	.1744	4213.4400	735	
	2	480	550.2388	.8724	4214.3000	3677	
	3	169	558.0300	.3029	4216.0200	1277	
	4	1078	726.4889	1.4839	5641.5500	8371	
			MONTH EST.RATE	.7084	18285.3100		12953
MARCH	1	465	1001.1100	.4645	4215.7300	1958	
	2	199	532.9500	.3734	4215.1700	1574	
	3	121	595.6500	.2031	4213.4400	856	
	4	179	601.9200	.2974	6019.2000	1790	
			MONTH EST.RATE	.3346	18663.5400		6245
APRIL	1	149	589.8084	.2526	3844.7600	971	
	2	48	691.7184	.0694	5071.1500	352	
	3	623	723.0087	.8617	4602.6200	3966	
	4	2793	1596.4480	1.7495	7271.9200	12722	
			MONTH EST.RATE	.7333	20790.4500		15246
MAY	1	1537	1548.3600	.9927	5379.7500	5340	
	2	353	808.5600	.4366	4463.3200	1949	
	3	519	541.4400	.9586	3749.4700	3594	
	4	133	1052.7794	.1263	5413.6100	684	
			MONTH EST.RATE	.6286	19006.1500		11947
JUNE	1	176	600.2474	.2932	4708.9300	1381	
	2	350	782.5885	.4472	5651.4800	2527	
	3	46	805.0387	.0571	5642.3000	322	
	4	43	799.5872	.0538	6928.2400	373	
			MONTH EST.RATE	.2128	22930.9500		4880
JULY	1	7	799.4144	.0088	5641.9500	50	
	2	25	923.8797	.0271	6320.1900	171	
	3	5	807.6600	.0062	6424.5600	40	
	4	413	1584.2802	.2607	8079.5200	2106	
			MONTH EST.RATE	.0757	26466.2200		2003

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	1082	808.4010	1.3384	5283.8400	7072	
		2	2075	1615.1190	1.2847	5654.8800	7265	
		3	1051	1790.0799	.5871	6028.4800	3539	
		4	2908	1591.7395	1.8269	8760.8800	16005	
				MONTH EST.RATE	1.2593	25728.0800		32399
	SEPT	1	2561	1615.6873	1.5851	5274.6500	8361	
		2	207	1081.0000	.1915	3783.4400	725	
		3	50	541.4400	.0924	3790.4500	350	
		4	72	541.4400	.1330	4872.9600	648	
				MONTH EST.RATE	.5005	17721.5000		8870
	OCT	1	396	541.4400	.7314	4119.0000	3013	
		2	1634	1607.2581	1.0166	5654.8800	5749	
		3	1832	1615.6800	1.1339	5648.7300	6405	
		4	1087	1740.0108	.6247	5817.9200	3634	
				MONTH EST.RATE	.8767	21240.5300		18622
	NOV	1	908	1202.6100	.7550	4326.2700	3266	
		2	562	1188.1172	.4730	4216.1700	1994	
		3	167	601.9200	.2775	4213.4400	1169	
		4	177	595.9398	.2970	5419.0000	1609	
				MONTH EST.RATE	.4506	18174.8800		8190
	DEC	1	422	513.6096	.8216	4226.1700	3472	
		2	91	452.0088	.2013	4217.4600	849	
		3	34	564.3000	.0603	4217.7400	254	
		4	46	601.9200	.0764	6019.3400	460	
				MONTH EST.RATE	.2899	18680.7100		5416
				ANNUAL EST.RATE	.5259			131259

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	508.7	589.3800	.8631	4213.7200	3636.9	
	2	730.2	595.6500	1.2259	4213.4400	5165.3	
	3	861.0	602.3484	1.4294	4213.8700	6023.3	
	4	4146.5	1197.5700	3.4624	6019.2000	20840.9	
			MONTH EST.RATE	1.7452	18660.2300		32565.8
FEB	1	733.0	601.9200	1.2178	4213.4400	5131.1	
	2	2595.0	550.2388	4.7161	4214.3000	19875.1	
	3	1227.0	558.0300	2.1988	4216.0200	9270.2	
	4	6710.0	726.4889	9.2362	5641.5500	52106.5	
			MONTH EST.RATE	4.3422	18285.3100		79398.5
MARCH	1	4233.4	1001.1100	4.2287	4215.7300	17827.1	
	2	2054.0	532.9500	3.8540	4215.1700	16245.3	
	3	1531.0	595.6500	2.5703	4213.4400	10829.8	
	4	2772.0	601.9200	4.6053	6019.2000	27720.2	
			MONTH EST.RATE	3.8146	18663.5400		71193.9
APRIL	1	4322.0	589.8084	7.3278	3844.7600	28173.6	
	2	416.7	691.7184	.6024	5071.1500	3054.9	
	3	5064.0	723.0087	7.0041	4602.6200	32237.2	
	4	15621.0	1596.4483	9.7849	7271.9200	71155.0	
			MONTH EST.RATE	6.1798	20790.4500		128480.8
MAY	1	7743.8	1548.3600	5.0013	5379.7500	26905.7	
	2	1836.4	808.5600	2.2712	4463.3200	10137.1	
	3	2420.0	541.4400	4.4696	3749.4700	16758.6	
	4	1568.6	1052.7794	1.4900	5413.6100	8066.3	
			MONTH EST.RATE	3.3080	19006.1500		62872.3
JUNE	1	3273.0	600.2474	5.4528	4708.9300	25676.9	
	2	4972.4	782.5885	6.3538	5651.4800	35908.4	
	3	1348.4	805.0387	1.6750	5642.3000	9450.9	
	4	900.1	799.5872	1.1257	6928.2400	7799.1	
			MONTH EST.RATE	3.6518	22930.9500		83739.2
JULY	1	344.9	799.4144	.4314	5641.9500	2433.9	
	2	448.0	923.8797	.4849	6320.1900	3064.7	
	3	210.9	807.6600	.2611	6424.5600	1677.5	
	4	2170.2	1584.2802	1.3698	8079.5200	11067.3	
			MONTH EST.RATE	.6368	26466.2200		16853.7

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELEC .IC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	4683.1	808.4010	5.7930	5283.8400	30609.3	
		2	6170.7	1615.1190	3.8206	5654.8800	21605.0	
		3	4784.1	1790.0799	2.6726	6028.4800	16111.7	
		4	13148.4	1591.7395	8.2604	8760.8800	72368.4	
				MONTH EST.RATE	5.1367	25728.0800		132157.4
	SEPT	1	11212.0	1615.6873	6.9395	5274.6500	36603.4	
		2	1553.9	1081.0000	1.4375	3783.4400	5438.7	
		3	290.1	541.4400	.5358	3790.4500	2030.9	
		4	562.5	541.4400	1.0389	4872.9600	5062.5	
				MONTH EST.RATE	2.4879	17721.5000		44089.3
	OCT	1	1553.9	541.4400	2.8699	4119.0000	11821.1	
		2	7412.8	1607.2581	4.6121	5654.8800	26080.9	
		3	8983.4	1615.6800	5.5601	5648.7300	31407.5	
		4	6058.9	1740.0108	3.4821	5817.9200	20258.6	
				MONTH EST.RATE	4.1311	21240.5300		87746.8
	NOV	1	6584.1	1202.6100	5.4748	4326.2700	23685.5	
		2	4121.9	1188.1172	3.4693	4216.1700	14627.2	
		3	1238.7	601.9200	2.0579	4213.4400	8670.8	
		4	1609.0	595.9398	2.6999	5419.0000	14630.8	
				MONTH EST.RATE	3.4255	18174.8800		62258.1
	DEC	1	4248.9	513.6096	8.2726	4226.1700	34961.4	
		2	1138.0	452.0088	2.5177	4217.4600	10618.3	
		3	213.3	564.3000	.3780	4217.7400	1594.3	
		4	257.6	601.9200	.4280	6019.3400	2576.3	
				MONTH EST.RATE	2.8991	18680.7100		54157.2
				ANNUAL EST.RATE	3.4799			855513.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUE CRAB
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	589.3800	.0000	4213.7200		
	2	0	595.6500	.0000	4213.4400	0	
	3	0	602.3484	.0000	4213.8700	0	
	4	0	1197.5700	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18660.2300		
FEB	1	0	601.9200	.0000	4213.4400	0	
	2	0	550.2388	.0000	4214.3000	0	
	3	0	558.0300	.0000	4216.0200	0	
	4	0	726.4889	.0000	5641.5500	0	
			MONTH EST.RATE	.0000	18285.3100		0
MARCH	1	0	1001.1100	.0000	4215.7300	0	
	2	0	532.9500	.0000	4215.1700	0	
	3	0	595.6500	.0000	4213.4400	0	
	4	0	601.9200	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18663.5400		0
APRIL	1	0	589.8084	.0000	3844.7600	0	
	2	0	691.7184	.0000	5071.1500	0	
	3	0	723.0087	.0000	4602.6200	0	
	4	0	1596.4480	.0000	7271.9200	0	
			MONTH EST.RATE	.0000	20790.4500		0
MAY	1	0	1548.3600	.0000	5379.7500	0	
	2	0	808.5600	.0000	4463.3200	0	
	3	0	541.4400	.0000	3749.4700	0	
	4	0	1052.7794	.0000	5413.6100	0	
			MONTH EST.RATE	.0000	19006.1500		0
JUNE	1	1	600.2474	.0017	4708.9300	8	
	2	1	782.5885	.0013	5651.4800	7	
	3	0	805.0387	.0000	5642.3000	0	
	4	0	799.5872	.0000	6928.2400	0	
			MONTH EST.RATE	.0008	22930.9500		18
JULY	1	0	799.4144	.0000	5641.9500	0	
	2	0	923.8797	.0000	6320.1900	0	
	3	2	807.6600	.0025	6424.5600	16	
	4	14	1584.2802	.0088	8079.5200	71	
			MONTH EST.RATE	.0028	26466.2200		74

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUE CRAB
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	22	808.4010	.0272	5283.8400	144	
		2	25	1615.1190	.0155	5654.8800	88	
		3	15	1790.0799	.0084	6028.4800	51	
		4	95	1591.7395	.0597	8760.8800	523	
				MONTH EST.RATE	.0277	25728.0800		713
	SEPT	1	213	1615.6873	.1318	5274.6500	695	
		2	67	1081.0000	.0620	3783.4400	235	
		3	13	541.4400	.0240	3790.4500	91	
		4	17	541.4400	.0314	4872.9600	153	
				MONTH EST.RATE	.0623	17721.5000		1104
	OCT	1	26	541.4400	.0480	4119.0000	198	
		2	84	1607.2581	.0523	5654.8800	296	
		3	78	1615.6800	.0483	5648.7300	273	
		4	83	1740.0108	.0477	5817.9200	278	
				MONTH EST.RATE	.0491	21240.5300		1043
	NOV	1	90	1202.6100	.0748	4326.2700	324	
		2	56	1188.1172	.0471	4216.1700	199	
		3	26	601.9200	.0432	4213.4400	182	
		4	5	595.9398	.0084	5419.0000	46	
				MONTH EST.RATE	.0434	18174.8800		789
	DEC	1	0	513.6096	.0000	4226.1700	0	
		2	0	452.0088	.0000	4217.4600	0	
		3	0	564.3000	.0000	4217.7400	0	
		4	0	601.9200	.0000	6019.3400	0	
				MONTH EST.RATE	.0000	18680.7100		0
				ANNUAL EST.RATE	.0155			3741

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR CRAYFISH
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	589.3800	.0000	4213.7200	0	
	2	0	595.6500	.0000	4213.4400	0	
	3	0	602.3484	.0000	4213.8700	0	
	4	0	1197.5700	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18660.2300		0
FEB	1	0	601.9200	.0000	4213.4400	0	
	2	0	550.2388	.0000	4214.3000	0	
	3	0	558.0300	.0000	4216.0200	0	
	4	0	726.4889	.0000	5641.5500	0	
			MONTH EST.RATE	.0000	18285.3100		0
MARCH	1	0	1001.1100	.0000	4215.7300	0	
	2	0	532.9500	.0000	4215.1700	0	
	3	0	595.6500	.0000	4213.4400	0	
	4	0	601.9200	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18663.5400		0
APRIL	1	1	589.8084	.0017	3844.7600	7	
	2	0	691.7184	.0000	5071.1500	0	
	3	1	723.0087	.0014	4602.6200	6	
	4	2	1596.4480	.0013	7271.9200	9	
			MONTH EST.RATE	.0011	20790.4500		23
MAY	1	0	1548.3600	.0000	5379.7500	0	
	2	0	808.5600	.0000	4463.3200	0	
	3	0	541.4400	.0000	3749.4700	0	
	4	2	1052.7794	.0019	5413.6100	10	
			MONTH EST.RATE	.0005	19006.1500		10
JUNE	1	0	600.2474	.0000	4708.9300	0	
	2	3	782.5885	.0038	5651.4800	21	
	3	1	805.0387	.0012	5642.3000	7	
	4	0	799.5872	.0000	6928.2400	0	
			MONTH EST.RATE	.0013	22930.9500		30
JULY	1	0	799.4144	.0000	5641.9500	0	
	2	4	923.8797	.0043	6320.1900	27	
	3	12	807.6600	.0149	6424.5600	96	
	4	4	1584.2802	.0025	8079.5200	20	
			MONTH EST.RATE	.0054	26466.2200		143

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELEC .IC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR CRAYFISH
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONT).)	AUG	1	9	808.4010	.0111	5283.8400	59	
		2	18	1615.1190	.0111	5654.8800	63	
		3	17	1790.0799	.0095	6028.4800	57	
		4	14	1591.7395	.0088	8760.8800	77	
				MONTH EST.RATE	.0101	25728.0600		260
	SEPT	1	12	1615.6873	.0074	5274.6500	39	
		2	4	1081.0000	.0037	3783.4400	14	
		3	0	541.4400	.0000	3790.4500	0	
		4	0	541.4400	.0000	4872.9600	0	
				MONTH EST.RATE	.0028	17721.5000		50
	OCT	1	1	541.4400	.0019	4119.0000	8	
		2	1	1607.2581	.0006	5654.8800	3	
		3	1	1615.6800	.0006	5648.7300	3	
		4	0	1740.0108	.0000	5817.9200	0	
				MONTH EST.RATE	.0008	21240.5300		17
	NOV	1	0	1202.6100	.0000	4326.2700	0	
		2	0	1188.1172	.0000	4216.1700	0	
		3	0	601.9200	.0000	4213.4400	0	
		4	0	595.9398	.0000	5419.0000	0	
				MONTH EST.RATE	.0000	18174.8800		0
	DEC	1	0	513.6096	.0000	4226.1700	0	
		2	0	452.0088	.0000	4217.4600	0	
		3	0	564.3000	.0000	4217.7400	0	
		4	0	601.9200	.0000	6019.3400	0	
				MONTH EST.RATE	.0000	18680.7100		0
				ANNUAL EST.RATE	.0018			533

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR MUD CRAB
ROSETON GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	589.3800	.0000	4213.7200	0	
	2	0	595.6500	.0000	4213.4400	0	
	3	0	602.3484	.0000	4213.8700	0	
	4	0	1197.5700	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18660.2300		0
FEB	1	0	601.9200	.0000	4213.4400	0	
	2	0	550.2388	.0000	4214.3000	0	
	3	0	558.0300	.0000	4216.0200	0	
	4	0	726.4889	.0000	5641.5500	0	
			MONTH EST.RATE	.0000	18285.3100		0
MARCH	1	0	1001.1100	.0000	4215.7300	0	
	2	0	532.9500	.0000	4215.1700	0	
	3	0	595.6500	.0000	4213.4400	0	
	4	0	601.9200	.0000	6019.2000	0	
			MONTH EST.RATE	.0000	18663.5400		0
APRIL	1	0	589.8084	.0000	3844.7600	0	
	2	0	691.7184	.0000	5071.1500	0	
	3	0	723.0087	.0000	4602.6200	0	
	4	0	1596.4480	.0000	7271.9200	0	
			MONTH EST.RATE	.0000	20790.4500		0
MAY	1	0	1548.3600	.0000	5379.7500	0	
	2	0	808.5600	.0000	4463.3200	0	
	3	0	541.4400	.0000	3749.4700	0	
	4	0	1052.7794	.0000	5413.6100	0	
			MONTH EST.RATE	.0000	19006.1500		0
JUNE	1	0	600.2474	.0000	4708.9300	0	
	2	0	782.5885	.0000	5651.4800	0	
	3	0	805.0387	.0000	5642.3000	0	
	4	0	799.5872	.0000	6928.2400	0	
			MONTH EST.RATE	.0000	22930.9500		0
JULY	1	0	799.4144	.0000	5641.9500	0	
	2	0	923.8797	.0000	6320.1900	0	
	3	0	807.6600	.0000	6424.5600	0	
	4	0	1584.2802	.0000	8079.5200	0	
			MONTH EST.RATE	.0000	26466.2200		0

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR MUD CRAB
ROSETON GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	0	808.4010	.0000	5283.8400	0	
		2	0	1615.1190	.0000	5654.8800	0	
		3	0	1790.0799	.0000	6028.4800	0	
		4	0	1591.7395	.0000	8760.8800	0	
				MONTH EST.RATE	.0000	25728.0800		0
	SEPT	1	1	1615.6873	.0006	5274.6500	3	
		2	1	1081.0000	.0009	3783.4400	3	
		3	1	541.4400	.0019	3790.4500	7	
		4	0	541.4400	.0000	4872.9600	0	
				MONTH EST.RATE	.0009	17721.5000		16
	OCT	1	0	541.4400	.0000	4119.0000	0	
		2	3	1607.2581	.0019	5654.8800	11	
		3	2	1615.6800	.0012	5648.7300	7	
		4	12	1740.0108	.0069	5817.9200	40	
				MONTH EST.RATE	.0025	21240.5300		53
	NOV	1	20	1202.6100	.0166	4326.2700	72	
		2	21	1188.1172	.0177	4216.1700	75	
		3	9	601.9200	.0150	4213.4400	63	
		4	7	595.9398	.0118	5419.0000	64	
				MONTH EST.RATE	.0153	18174.8800		278
	DEC	1	0	513.6096	.0000	4226.1700	0	
		2	1	452.0088	.0022	4217.4600	9	
		3	0	564.3000	.0000	4217.7400	0	
		4	0	601.9200	.0000	6019.3400	0	
				MONTH EST.RATE	.0006	18680.7100		11
				ANNUAL EST.RATE	.0016			358

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	27	65.6300	.4114	598.4600	246	
	2	94	90.7200	1.0362	825.7700	856	
	3	86	60.4800	1.4220	823.5700	1171	
	4	232	164.6250	1.4093	935.9500	1319	
			MONTH EST.RATE	1.0697	3183.7500		3406
FEB	1	107	120.1467	.8906	935.0900	833	
	2	90	119.1100	.7556	1066.9900	806	
	3	271	124.1175	2.1834	840.2100	1835	
	4	189	140.5784	1.3445	1066.2900	1434	
			MONTH EST.RATE	1.2935	3908.5800		5056
MARCH	1	82	116.1971	.7057	1134.0100	800	
	2	56	77.8938	.7189	788.5700	567	
	3	19	88.1379	.2156	624.9600	135	
	4	164	88.8700	1.8454	892.8000	1648	
			MONTH EST.RATE	.8714	3440.3400		2998
APRIL	1	659	89.0859	7.3974	749.6600	5546	
	2	190	88.1385	2.1557	771.7000	1664	
	3	5352	302.0244	17.7204	1164.7500	20640	
	4	5340	439.8567	12.1403	2283.6800	27725	
			MONTH EST.RATE	9.8535	4969.7900		48970
MAY	1	869	94.5669	9.1893	719.0100	6607	
	2	61	90.7200	.6724	1322.0100	889	
	3	4523	591.0690	7.6522	2135.8300	16344	
	4	4901	1006.8292	4.8678	3294.4400	16037	
			MONTH EST.RATE	5.5954	7471.2900		41805
JUNE	1	4003	757.9787	5.2812	2586.3800	13659	
	2	4116	669.6120	6.1468	2223.4100	13667	
	3	599	446.4264	1.3418	1617.2500	2170	
	4	290	365.0085	.7945	2808.0900	2231	
			MONTH EST.RATE	3.3911	9235.1300		31317
JULY	1	162	264.7371	.6119	1722.6400	1054	
	2	1626	841.8007	1.9316	2772.1500	5355	
	3	281	455.7396	.6166	3172.1000	1956	
	4	1248	590.9593	2.1118	4428.4600	9352	
			MONTH EST.RATE	1.3180	12095.3500		15942

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONT.)	AUG	1	1064	368.4480	2.8878	3136.7100	9058	
		2	1269	877.4840	1.4462	3159.2900	4569	
		3	244	349.5960	.6980	2817.0700	1966	
		4	1023	297.1896	3.4423	3165.0300	10895	
				MONTH EST.RATE	2.1186	12278.1000		26012
	SEPT	1	3886	776.9956	5.0013	2536.5800	12686	
		2	2301	849.7479	2.7079	2669.3900	7228	
		3	520	349.0710	1.4897	2505.1900	3732	
		4	3258	729.8119	4.4642	3460.6900	15449	
				MONTH EST.RATE	3.4158	11171.8500		38161
	OCT	1	2225	530.1185	4.1972	1910.0400	8017	
		2	174	136.8936	1.2711	1544.6800	1963	
		3	939	194.2892	4.8330	2014.2700	9735	
		4	9840	1185.7895	8.2983	3975.7600	32992	
				MONTH EST.RATE	4.6499	9444.7500		43917
	NOV	1	4929	786.0867	6.2703	2839.8100	17806	
		2	3404	778.3204	4.3735	2662.1300	11643	
		3	3433	834.2172	4.1152	2747.7600	11308	
		4	2528	651.7349	3.8789	3042.0300	11800	
				MONTH EST.RATE	4.6595	11291.7300		52614
	DEC	1	426	186.6693	2.2821	2617.1200	5973	
		2	818	254.6984	3.2116	1986.7100	6381	
		3	1338	259.2900	5.1603	1851.1500	9552	
		4	2749	794.8141	3.4587	2658.8500	9196	
				MONTH EST.RATE	3.5282	9113.8300		32155
				ANNUAL EST.RATE	3.4804			342353

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	371.1	65.6300	5.6544	598.4600	3383.9	
	2	4128.6	90.7200	45.5093	825.7700	37580.2	
	3	3335.7	60.4800	55.1538	823.5700	45423.0	
	4	8311.2	164.6250	48.6633	935.9500	45546.4	
			MONTH EST.RATE	38.7452	3183.7500		123355.0
FEB	1	3257.1	120.1467	27.1094	935.0900	25349.7	
	2	4749.4	119.1100	39.8741	1066.9900	42545.3	
	3	9018.5	124.1175	72.6610	840.2100	61050.5	
	4	6860.9	140.5784	48.8048	1066.2900	52040.1	
			MONTH EST.RATE	47.1123	3908.5800		184142.2
MARCH	1	5850.2	116.1971	50.3472	1134.0100	57094.2	
	2	3186.1	77.8938	40.9031	788.5700	32255.0	
	3	533.8	88.1379	6.0564	624.9600	3785.0	
	4	3155.2	88.8700	35.5035	892.8000	31697.5	
			MONTH EST.RATE	33.2026	3440.3400		114228.2
APRIL	1	30365.7	89.0859	340.8587	749.6600	255528.1	
	2	7113.9	88.1385	80.7127	771.7000	62286.0	
	3	181806.1	302.0244	601.9583	1164.7500	701130.9	
	4	135711.6	439.8567	308.5359	2283.6800	704597.3	
			MONTH EST.RATE	333.0164	4969.7900		1655021.6
MAY	1	57067.3	94.5669	603.4564	719.0100	433891.2	
	2	2493.8	90.7200	27.4890	1322.0100	36340.7	
	3	314345.5	591.0690	531.8254	2135.8300	1135888.6	
	4	263374.0	1006.8292	261.5876	3294.4400	861784.7	
			MONTH EST.RATE	356.0896	7471.2900		2660448.7
JUNE	1	146957.5	757.9787	193.8808	2586.3800	501449.4	
	2	122179.5	669.6120	182.4631	2223.4100	405690.3	
	3	17967.9	446.4264	40.2483	1617.2500	65091.6	
	4	13322.9	365.0085	36.5003	2808.0900	102496.1	
			MONTH EST.RATE	113.2731	9235.1300		1046091.8
JULY	1	2938.5	264.7371	11.0997	1722.6400	19120.8	
	2	23519.9	841.8007	27.9400	2772.1500	77453.9	
	3	3885.6	455.7396	8.5259	3172.1000	27045.0	
	4	26646.0	590.9593	45.0894	4428.4600	199676.6	
			MONTH EST.RATE	23.1638	12095.3500		280174.3

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONT.)	AUG	1	30340.7	368.4480	82.3473	3136.7100	258299.6	
		2	21228.4	877.4840	24.1924	3159.2900	76430.8	
		3	8416.4	349.5960	24.0747	2817.0700	67820.1	
		4	18646.3	297.1896	62.7421	3165.0300	198580.6	
				MONTH EST.RATE	48.3391	12278.1000		593512.3
	SEPT	1	47828.8	776.9956	61.5561	2536.5800	156142.0	
		2	38600.0	849.7479	45.4252	2669.3900	121257.6	
		3	10713.2	349.0710	30.6906	2505.1900	76885.8	
		4	77392.9	729.8119	106.0450	3460.6900	366988.9	
				MONTH EST.RATE	60.9292	11171.8500		680691.9
	OCT	1	56112.6	530.1185	105.8492	1910.0400	202176.2	
		2	7109.2	136.8936	51.9323	1544.6800	80218.8	
		3	9081.1	194.2892	46.7401	2014.2700	94147.2	
		4	124396.7	1185.7895	104.9062	3975.7600	417081.9	
				MONTH EST.RATE	77.3570	9444.7500		730617.5
	NOV	1	64167.0	786.0867	81.6284	2839.8100	231809.1	
		2	70141.4	778.3204	90.1189	2662.1300	239908.2	
		3	79036.7	834.2172	94.7436	2747.7600	260332.7	
		4	57805.8	651.7349	88.6953	3042.0300	269813.8	
				MONTH EST.RATE	88.7966	11291.7300		1002667.2
	DEC	1	11692.1	186.6693	62.6354	2617.1200	163924.4	
		2	22888.4	254.6984	89.8647	1986.7100	178535.1	
		3	43394.4	259.2900	167.3586	1851.1500	309805.9	
		4	122419.8	794.8141	154.0232	2658.8500	409524.6	
				MONTH EST.RATE	118.4705	9113.8300		1079720.0
				ANNUAL EST.RATE	111.5413			10150670.7

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	65.6300	.0000	598.4600	0	
	2	0	90.7200	.0000	825.7700	0	
	3	0	60.4800	.0000	823.5700	0	
	4	0	164.6250	.0000	935.9500	0	
			MONTH EST.RATE	.0000	3183.7500		0
FEB	1	0	120.1467	.0000	935.0900	0	
	2	0	119.1100	.0000	1066.9900	0	
	3	0	124.1175	.0000	840.2100	0	
	4	0	140.5784	.0000	1066.2900	0	
			MONTH EST.RATE	.0000	3908.5800		0
MARCH	1	0	116.1971	.0000	1134.0100	0	
	2	0	77.8938	.0000	788.5700	0	
	3	0	88.1379	.0000	624.9600	0	
	4	0	88.8700	.0000	892.8000	0	
			MONTH EST.RATE	.0000	3440.3400		0
APRIL	1	0	89.0859	.0000	749.6600	0	
	2	0	88.1385	.0000	771.7000	0	
	3	0	302.0244	.0000	1164.7500	0	
	4	0	439.8567	.0000	2283.6800	0	
			MONTH EST.RATE	.0000	4969.7900		0
MAY	1	0	94.5669	.0000	719.0100	0	
	2	0	90.7200	.0000	1322.0100	0	
	3	1	591.0690	.0017	2135.8300	4	
	4	1	1006.8292	.0010	3294.4400	3	
			MONTH EST.RATE	.0007	7471.2900		5
JUNE	1	6	757.9787	.0079	2586.3800	20	
	2	3	669.6120	.0045	2223.4100	10	
	3	0	446.4264	.0000	1617.2500	0	
	4	0	365.0085	.0000	2808.0900	0	
			MONTH EST.RATE	.0031	9235.1300		29
JULY	1	9	264.7371	.0340	1722.6400	59	
	2	656	841.8007	.7793	2772.1500	2160	
	3	85	455.7396	.1865	3172.1000	592	
	4	339	590.9593	.5736	4428.4600	2540	
			MONTH EST.RATE	.3934	12095.3500		4758

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	51	368.4480	.1384	3136.7100	434	
		2	62	877.4840	.0707	3159.2900	223	
		3	3	349.5960	.0086	2817.0700	24	
		4	23	297.1896	.0774	3165.0300	245	
				MONTH EST.RATE	.0738	12278.1000		906
	SEPT	1	72	776.9956	.0927	2536.5800	235	
		2	44	849.7479	.0518	2669.3900	138	
		3	19	349.0710	.0544	2505.1900	136	
		4	168	729.8119	.2302	3460.6900	797	
				MONTH EST.RATE	.1073	11171.8500		1199
	OCT	1	77	530.1185	.1453	1910.0400	278	
		2	2	136.8936	.0146	1544.6800	23	
		3	63	194.2892	.3243	2014.2700	653	
		4	644	1185.7895	.5431	3975.7600	2159	
				MONTH EST.RATE	.2568	9444.7500		2425
	NOV	1	456	786.0867	.5801	2839.8100	1647	
		2	80	778.3204	.1028	2662.1300	274	
		3	72	834.2172	.0863	2747.7600	237	
		4	2	651.7349	.0031	3042.0300	9	
				MONTH EST.RATE	.1931	11291.7300		2180
	DEC	1	0	186.6693	.0000	2617.1200	0	
		2	0	254.6984	.0000	1986.7100	0	
		3	0	259.2900	.0000	1851.1500	0	
		4	0	794.8141	.0000	2658.8500	0	
				MONTH EST.RATE	.0000	9113.8300		0
				ANNUAL EST.RATE	.0857			11502

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	65.6300	.0000	598.4600	.0	
	2	.0	90.7200	.0000	825.7700	.0	
	3	.0	60.4800	.0000	823.5700	.0	
	4	.0	164.6250	.0000	935.9500	.0	
			MONTH EST.RATE	.0000	3183.7500		.0
FEB	1	.0	120.1467	.0000	935.0900	.0	
	2	.0	119.1100	.0000	1066.9900	.0	
	3	.0	124.1175	.0000	840.2100	.0	
	4	.0	140.5784	.0000	1066.2900	.0	
			MONTH EST.RATE	.0000	3908.5800		.0
MARCH	1	.0	116.1971	.0000	1134.0100	.0	
	2	.0	77.8938	.0000	788.5700	.0	
	3	.0	88.1379	.0000	624.9600	.0	
	4	.0	88.8700	.0000	892.8000	.0	
			MONTH EST.RATE	.0000	3440.3400		.0
APRIL	1	.0	89.0859	.0000	749.6600	.0	
	2	.0	88.1385	.0000	771.7000	.0	
	3	.0	302.0244	.0000	1164.7500	.0	
	4	.0	439.8567	.0000	2283.6800	.0	
			MONTH EST.RATE	.0000	4969.7900		.0
MAY	1	.0	94.5669	.0000	719.0100	.0	
	2	.0	90.7200	.0000	1322.0100	.0	
	3	15.1	591.0690	.0256	2135.8300	54.7	
	4	15.3	1006.8292	.0152	3294.4400	50.1	
			MONTH EST.RATE	.0102	7471.2900		76.2
JUNE	1	151.0	757.9787	.1992	2586.3800	515.2	
	2	74.5	669.6123	.1113	2223.4100	247.5	
	3	.0	446.4264	.0000	1617.2500	.0	
	4	.0	365.0085	.0000	2808.0900	.0	
			MONTH EST.RATE	.0776	9235.1300		716.6
JULY	1	6.1	264.7371	.0230	1722.6400	39.6	
	2	306.0	841.8007	.3635	2772.1500	1007.7	
	3	75.1	455.7396	.1648	3172.1000	522.8	
	4	748.1	590.9593	1.2659	4428.4600	5606.0	
			MONTH EST.RATE	.4543	12095.3500		5494.9

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONT.)	AUG	1	75.6	368.4480	.2052	3136.7100	643.7	
		2	202.2	877.4840	.2304	3159.2900	727.9	
		3	7.9	349.5960	.0226	2817.0700	63.7	
		4	356.0	297.1896	1.1979	3165.0300	3791.4	
				MONTH EST.RATE	.4140	12278.1000		5083.1
	SEPT	1	402.5	776.9956	.5180	2536.5800	1313.9	
		2	236.6	849.7479	.2784	2669.3900	743.2	
		3	79.1	349.0710	.2266	2505.1900	567.7	
		4	1065.6	729.8119	1.4601	3460.6900	5053.0	
				MONTH EST.RATE	.6208	11171.8500		6935.5
	OCT	1	447.1	530.1185	.8434	1910.0400	1610.9	
		2	10.9	136.8936	.0796	1544.6800	123.0	
		3	401.0	194.2892	2.0639	2014.2700	4157.3	
		4	3813.0	1185.7895	3.2156	3975.7600	12784.5	
				MONTH EST.RATE	1.5506	9444.7500		14645.0
	NOV	1	2345.8	786.0867	2.9842	2839.8100	8474.6	
		2	575.8	778.3204	.7398	2662.1300	1969.4	
		3	502.4	834.2172	.6022	2747.7600	1654.7	
		4	17.9	651.7349	.0275	3042.0300	83.7	
				MONTH EST.RATE	1.0884	11291.7300		12289.9
	DEC	1	.0	186.6693	.0000	2617.1200	.0	
		2	.0	254.6984	.0000	1986.7100	.0	
		3	.0	259.2900	.0000	1851.1500	.0	
		4	.0	794.8141	.0000	2658.8500	.0	
				MONTH EST.RATE	.0000	9113.8300		.0
				ANNUAL EST.RATE	.3513			45241.2

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1981 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC TOMCOD
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	4	65.6300	.0610	598.4600	37	
	2	31	90.7200	.3417	825.7700	282	
	3	45	60.4800	.7441	823.5700	613	
	4	56	164.6250	.3402	935.9500	318	
			MONTH EST.RATE	.3718	3183.7500		1184
FEB	1	35	120.1467	.2913	935.0900	272	
	2	25	119.1100	.2099	1066.9900	224	
	3	77	124.1175	.6204	840.2100	521	
	4	14	140.5784	.0996	1066.2900	106	
			MONTH EST.RATE	.3053	3908.5800		1193
MARCH	1	0	116.1971	.0000	1134.0100	0	
	2	0	77.8938	.0000	788.5700	0	
	3	0	88.1379	.0000	624.9600	0	
	4	0	88.8700	.0000	892.8000	0	
			MONTH EST.RATE	.0000	3440.3400		0
APRIL	1	0	89.0859	.0000	749.6600	0	
	2	0	88.1385	.0000	771.7000	0	
	3	1	302.0244	.0033	1164.7500	4	
	4	0	439.8567	.0000	2283.6800	0	
			MONTH EST.RATE	.0008	4969.7900		4
MAY	1	0	94.5669	.0000	719.0100	0	
	2	0	90.7200	.0000	1322.0100	0	
	3	3	591.0690	.0051	2135.8300	11	
	4	445	1006.8292	.4420	3294.4400	1456	
			MONTH EST.RATE	.1118	7471.2900		835
JUNE	1	102	757.9787	.1346	2586.3800	348	
	2	604	669.6120	.9020	2223.4100	2006	
	3	47	446.4264	.1053	1617.2500	170	
	4	20	365.0085	.0548	2808.0900	154	
			MONTH EST.RATE	.2992	9235.1300		2763
JULY	1	0	264.7371	.0000	1722.6400	0	
	2	2	841.8007	.0024	2772.1500	7	
	3	0	455.7396	.0000	3172.1000	0	
	4	3	590.9593	.0051	4428.4600	23	
			MONTH EST.RATE	.0019	12095.3500		23

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC TOMCOD
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONT.)	AUG	1	3	368.4480	.0081	3136.7100	25	
		2	0	877.4840	.0000	3159.2900	0	
		3	0	349.5960	.0000	2817.0700	0	
		4	5	297.1896	.0168	3165.0300	53	
				MONTH EST.RATE	.0062	12278.1000		76
	SEPT	1	73	776.9956	.0940	2536.5800	238	
		2	25	849.7479	.0294	2669.3900	78	
		3	0	349.0710	.0000	2505.1900	0	
		4	9	729.8119	.0123	3460.6900	43	
				MONTH EST.RATE	.0339	11171.8500		379
	OCT	1	3	530.1185	.0057	1910.0400	11	
		2	0	136.8936	.0000	1544.6800	0	
		3	0	194.2892	.0000	2014.2700	0	
		4	4	1185.7895	.0034	3975.7600	14	
				MONTH EST.RATE	.0023	9444.7500		22
	NOV	1	3	786.0867	.0038	2839.8100	11	
		2	1	778.3204	.0013	2662.1300	3	
		3	30	834.2172	.0360	2747.7600	99	
		4	20	651.7349	.0307	3042.0300	93	
				MONTH EST.RATE	.0180	11291.7300		203
	DEC	1	2	186.6693	.0107	2617.1200	28	
		2	76	254.6984	.2984	1986.7100	593	
		3	76	259.2900	.2931	1851.1500	543	
		4	155	794.8141	.1950	2658.8500	518	
				MONTH EST.RATE	.1993	9113.8300		1816
				ANNUAL EST.RATE	.1125			8498

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC TOMCOD
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	155.7	65.6300	2.3724	598.4600	1419.8	
	2	1213.2	90.7200	13.3730	825.7700	11043.0	
	3	1466.3	60.4800	24.2444	823.5700	19967.0	
	4	1621.1	164.6250	9.8472	935.9500	9216.5	
			MONTH EST.RATE	12.4593	3183.7500		39667.3
FEB	1	901.1	120.1467	7.5000	935.0900	7013.2	
	2	744.0	119.1100	6.2463	1066.9900	6664.7	
	3	2168.5	124.1175	17.4714	840.2100	14679.6	
	4	403.1	140.5784	2.8674	1066.2900	3057.5	
			MONTH EST.RATE	8.5213	3908.5800		33306.2
MARCH	1	.0	116.1971	.0000	1134.0100	.0	
	2	.0	77.8938	.0000	788.5700	.0	
	3	.0	88.1379	.0000	624.9600	.0	
	4	.0	88.8700	.0000	892.8000	.0	
			MONTH EST.RATE	.0000	3440.3400		.0
APRIL	1	.0	89.0859	.0000	749.6600	.0	
	2	.0	88.1385	.0000	771.7000	.0	
	3	32.1	302.0244	.1063	1164.7500	123.8	
	4	.0	439.8567	.0000	2283.6800	.0	
			MONTH EST.RATE	.0266	4969.7900		132.2
MAY	1	.0	94.5669	.0000	719.0100	.0	
	2	.0	90.7200	.0000	1322.0100	.0	
	3	1.4	591.0690	.0024	2135.8300	5.1	
	4	824.5	1006.8292	.8189	3294.4400	2697.8	
			MONTH EST.RATE	.2053	7471.2900		1533.9
JUNE	1	209.6	757.9787	.2765	2586.3800	715.1	
	2	1980.6	669.6120	2.9578	2223.4100	6576.4	
	3	199.0	446.4264	.4458	1617.2500	721.0	
	4	35.7	365.0085	.0978	2808.0900	274.6	
			MONTH EST.RATE	.9445	9235.1300		8722.6
JULY	1	.0	264.7371	.0000	1722.6400	.0	
	2	8.9	841.8007	.0106	2772.1500	29.4	
	3	.0	455.7396	.0000	3172.1000	.0	
	4	14.1	590.9593	.0239	4428.4600	105.8	
			MONTH EST.RATE	.0086	12095.3500		104.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC TOMCOD
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONT.)	AUG	1	13.9	368.4480	.0377	3136.7100	118.3	
		2	.1	877.4840	.0000	3159.2900	.0	
		3	.1	349.5960	.0000	2817.0700	.0	
		4	26.9	297.1896	.0905	3165.0300	286.4	
				MONTH EST.RATE	.0321	12278.1000		394.1
	SEPT	1	467.4	776.9956	.6016	2536.5800	1526.0	
		2	167.3	849.7479	.1969	2669.3900	525.6	
		3	.0	349.0710	.0000	2505.1900	.0	
		4	63.4	729.8119	.0869	3460.6900	300.7	
				MONTH EST.RATE	.2214	11171.8500		2473.4
	OCT	1	27.2	530.1185	.0513	1910.0400	98.0	
		2	.0	136.8936	.0000	1544.6800	.0	
		3	.0	194.2892	.0000	2014.2700	.0	
		4	61.5	1185.7895	.0519	3975.7600	206.3	
				MONTH EST.RATE	.0258	9444.7500		243.7
	NOV	1	62.7	786.0867	.0798	2839.8100	226.6	
		2	32.0	778.3204	.0411	2662.1300	109.4	
		3	822.7	834.2172	.9862	2747.7600	2709.8	
		4	690.5	651.7349	1.0595	3042.0300	3223.0	
				MONTH EST.RATE	.5417	11291.7300		6116.7
	DEC	1	95.1	186.6693	.5095	2617.1200	1333.4	
		2	3157.9	254.6984	12.3986	1986.7100	24632.4	
		3	3860.2	259.2900	14.8876	1851.1500	27559.2	
		4	6789.5	794.8141	8.5423	2658.8500	22712.7	
				MONTH EST.RATE	9.0845	9113.8300		82794.6
				ANNUAL EST.RATE	2.6726			175488.7

NOTE: * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	65.6300	.0000	598.4600	0	
	2	0	90.7200	.0000	825.7700	0	
	3	0	60.4800	.0000	823.5700	0	
	4	0	164.6250	.0000	935.9500	0	
			MONTH EST.RATE	.0000	3183.7500		0
FEB	1	0	120.1467	.0000	935.0900	0	
	2	0	119.1100	.0000	1066.9900	0	
	3	0	124.1175	.0000	840.2100	0	
	4	0	140.5784	.0000	1066.2900	0	
			MONTH EST.RATE	.0000	3908.5800		0
MARCH	1	0	116.1971	.0000	1134.0100	0	
	2	0	77.8938	.0000	788.5700	0	
	3	0	88.1379	.0000	624.9600	0	
	4	0	88.8700	.0000	892.8000	0	
			MONTH EST.RATE	.0000	3440.3400		0
APRIL	1	1	89.0859	.0112	749.6600	8	
	2	2	88.1385	.0227	771.7000	18	
	3	46	302.0244	.1523	1164.7500	177	
	4	136	439.8567	.3092	2283.6800	706	
			MONTH EST.RATE	.1239	4969.7900		616
MAY	1	84	94.5669	.8883	719.0100	639	
	2	9	90.7200	.0992	1322.0100	131	
	3	923	591.0690	1.5616	2135.8300	3335	
	4	574	1006.8292	.5701	3294.4400	1878	
			MONTH EST.RATE	.7798	7471.2900		5826
JUNE	1	158	757.9787	.2085	2586.3800	539	
	2	133	669.6120	.1986	2223.4100	442	
	3	10	446.4264	.0224	1617.2500	36	
	4	5	365.0085	.0137	2808.0900	38	
			MONTH EST.RATE	.1108	9235.1300		1023
JULY	1	4	264.7371	.0151	1722.6400	26	
	2	287	841.8007	.3409	2772.1500	945	
	3	117	455.7396	.2567	3172.1000	814	
	4	244	590.9593	.4129	4428.4600	1829	
			MONTH EST.RATE	.2564	12095.3500		3101

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONT.)	AUG	1	283	368.4480	.7681	3136.7100	2409	
		2	179	877.4840	.2040	3159.2900	644	
		3	28	349.5960	.0801	2817.0700	226	
		4	144	297.1896	.4845	3165.0300	1533	
				MONTH EST.RATE	.3842	12278.1000		4717
	SEPT	1	828	776.9956	1.0656	2536.5800	2703	
		2	337	849.7479	.3966	2669.3900	1059	
		3	175	349.0710	.5013	2505.1900	1256	
		4	394	729.8119	.5399	3460.6900	1868	
				MONTH EST.RATE	.6259	11171.8500		6992
	OCT	1	519	530.1185	.9790	1910.0400	1870	
		2	39	136.8936	.2849	1544.6800	440	
		3	64	194.2892	.3294	2014.2700	664	
		4	1530	1185.7895	1.2903	3975.7600	5130	
				MONTH EST.RATE	.7209	9444.7500		6809
	NOV	1	460	786.0867	.5852	2839.8100	1662	
		2	757	778.3204	.9726	2662.1300	2589	
		3	61	834.2172	.0731	2747.7600	201	
		4	12	651.7349	.0184	3042.0300	56	
				MONTH EST.RATE	.4123	11291.7300		4656
	DEC	1	0	186.6693	.0000	2617.1200	0	
		2	0	254.6984	.0000	1986.7100	0	
		3	0	259.2900	.0000	1851.1500	0	
		4	0	794.8141	.0000	2658.8500	0	
				MONTH EST.RATE	.0000	9113.8300		0
				ANNUAL EST.RATE	.2845			33740

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	65.6300	.0000	598.4600	.0	
	2	.0	90.7200	.0000	825.7700	.0	
	3	.0	60.4800	.0000	823.5700	.0	
	4	.0	164.6250	.0000	935.9500	.0	
			MONTH EST.RATE	.0000	3183.7500		.0
FEB	1	.0	120.1467	.0000	935.0900	.0	
	2	.0	119.1100	.0000	1066.9900	.0	
	3	.0	124.1175	.0000	840.2100	.0	
	4	.0	140.5784	.0000	1066.2900	.0	
			MONTH EST.RATE	.0000	3908.5800		.0
MARCH	1	.0	116.1971	.0000	1134.0100	.0	
	2	.0	77.8938	.0000	788.5700	.0	
	3	.0	88.1379	.0000	624.9600	.0	
	4	.0	88.8700	.0000	892.8000	.0	
			MONTH EST.RATE	.0000	3440.3400		.0
APRIL	1	273.4	89.0859	3.0690	749.6600	2300.7	
	2	583.7	88.1385	6.6225	771.7000	5110.6	
	3	11778.0	302.0244	38.9969	1164.7500	45421.6	
	4	35320.0	439.8567	80.2989	2283.6800	183377.0	
			MONTH EST.RATE	32.2468	4969.7900		160259.8
MAY	1	19890.0	94.5669	210.3273	719.0100	151227.4	
	2	946.6	90.7200	10.4343	1322.0100	13794.2	
	3	183294.0	591.0690	310.1059	2135.8300	662333.5	
	4	82779.4	1006.8292	82.2179	3294.4400	270861.9	
			MONTH EST.RATE	153.2714	7471.2900		1145135.1
JUNE	1	13833.8	757.9787	18.2509	2586.3800	47203.8	
	2	4935.5	669.6120	7.3707	2223.4100	16388.1	
	3	368.4	446.4264	.8252	1617.2500	1334.6	
	4	233.9	365.0085	.6408	2838.0900	1799.4	
			MONTH EST.RATE	6.7719	9235.1300		62539.4
JULY	1	360.6	264.7371	1.3621	1722.6400	2346.4	
	2	6245.4	841.8007	7.4191	2772.1500	20566.9	
	3	1157.2	455.7396	2.5392	3172.1000	8054.6	
	4	5318.4	590.9593	8.9996	4428.4600	39854.4	
			MONTH EST.RATE	5.0800	12095.3500		61444.4

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONT.)	AUG	1	5787.1	368.4480	15.7067	3136.7100	49267.4	
		2	3456.0	877.4840	3.9385	3159.2900	12442.9	
		3	1541.1	349.5960	4.4082	2817.0700	12418.2	
		4	1849.6	297.1896	6.2236	3165.0300	19697.9	
				MONTH EST.RATE	7.5693	12278.1000		92936.6
	SEPT	1	11602.6	776.9956	14.9327	2536.5800	37878.0	
		2	5543.3	849.7479	6.5235	2669.3900	17413.8	
		3	2734.6	349.0710	7.8339	2505.1900	19625.4	
		4	6693.0	729.8119	9.1709	3460.6900	31737.6	
				MONTH EST.RATE	9.6153	11171.8500		107420.7
	OCT	1	7006.3	530.1185	13.2165	1910.0400	25244.0	
		2	1746.5	136.8936	12.7581	1544.6800	19707.2	
		3	1113.9	194.2892	5.7332	2014.2700	11548.2	
		4	14190.6	1185.7895	11.9672	3975.7600	47578.7	
				MONTH EST.RATE	10.9188	9444.7500		103125.3
	NOV	1	5534.6	786.0867	7.0407	2839.8100	19994.3	
		2	12231.7	778.3204	15.7155	2662.1300	41836.7	
		3	1063.2	834.2172	1.2745	2747.7600	3502.0	
		4	477.1	651.7349	.7321	3042.0300	2227.1	
				MONTH EST.RATE	6.1907	11291.7300		69903.7
	DEC	1	.0	186.6693	.0000	2617.1200	.0	
		2	.0	254.6984	.0000	1986.7100	.0	
		3	.0	259.2900	.0000	1851.1500	.0	
		4	.0	794.8141	.0000	2658.8500	.0	
				MONTH EST.RATE	.0000	9113.8300		.0
				ANNUAL EST.RATE	19.3054			1802765.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BAY ANCHOVY
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	65.6300	.0000	598.4600	0	
	2	0	90.7200	.0000	825.7700	0	
	3	0	60.4800	.0000	823.5700	0	
	4	0	164.6250	.0000	935.9500	0	
			MONTH EST.RATE	.0000	3183.7500		0
FEB	1	0	120.1467	.0000	935.0900	0	
	2	0	119.1100	.0000	1066.9900	0	
	3	0	124.1175	.0000	840.2100	0	
	4	0	140.5784	.0000	1066.2900	0	
			MONTH EST.RATE	.0000	3908.5800		0
MARCH	1	0	116.1971	.0000	1134.0100	0	
	2	0	77.8938	.0000	788.5700	0	
	3	0	88.1379	.0000	624.9600	0	
	4	0	88.8700	.0000	892.8000	0	
			MONTH EST.RATE	.0000	3440.3400		0
APRIL	1	0	89.0859	.0000	749.6600	0	
	2	0	88.1385	.0000	771.7000	0	
	3	0	302.0244	.0000	1164.7500	0	
	4	0	439.8567	.0000	2283.6800	0	
			MONTH EST.RATE	.0000	4969.7900		0
MAY	1	0	94.5669	.0000	719.0100	0	
	2	0	90.7200	.0000	1322.0100	0	
	3	0	591.0690	.0000	2135.8300	0	
	4	3	1006.8292	.0030	3294.4400	10	
			MONTH EST.RATE	.0008	7471.2900		6
JUNE	1	0	757.9787	.0000	2586.3800	0	
	2	1	669.6120	.0015	2223.4100	3	
	3	0	446.4264	.0000	1617.2500	0	
	4	0	365.0085	.0000	2808.0900	0	
			MONTH EST.RATE	.0004	9235.1300		4
JULY	1	0	264.7371	.0000	1722.6400	0	
	2	6	841.8007	.0071	2772.1500	20	
	3	7	455.7396	.0154	3172.1000	49	
	4	35	590.9593	.0592	4428.4600	262	
			MONTH EST.RATE	.0204	12095.3500		247

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BAY ANCHOVY
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	26	368.4480	.0706	3136.7100	221	
		2	118	877.4840	.1345	3159.2900	425	
		3	6	349.5960	.0172	2817.0700	48	
		4	186	297.1896	.6259	3165.0300	1981	
				MONTH EST.RATE	.2121	12278.1000		2604
	SEPT	1	672	776.9956	.8649	2536.5800	2194	
		2	281	849.7479	.3307	2669.3900	883	
		3	99	349.0710	.2836	2505.1900	710	
		4	444	729.8119	.6084	3460.6900	2105	
				MONTH EST.RATE	.5219	11171.8500		5831
	OCT	1	112	530.1185	.2113	1910.0400	404	
		2	0	136.8936	.0000	1544.6800	0	
		3	43	194.2892	.2213	2014.2700	446	
		4	51	1185.7895	.0430	3975.7600	171	
				MONTH EST.RATE	.1189	9444.7500		1123
	NOV	1	5	786.0867	.0064	2839.8100	18	
		2	0	778.3204	.0000	2662.1300	0	
		3	0	834.2172	.0000	2747.7600	0	
		4	0	651.7349	.0000	3042.0300	0	
				MONTH EST.RATE	.0016	11291.7300		18
	DEC	1	0	186.6693	.0000	2617.1200	0	
		2	0	254.6984	.0000	1986.7100	0	
		3	0	259.2900	.0000	1851.1500	0	
		4	0	794.8141	.0000	2658.8500	0	
				MONTH EST.RATE	.0000	9113.8300		0
				ANNUAL EST.RATE	.0730			9833

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BAY ANCHOVY
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	65.6300	.0000	598.4600	.0	
	2	.0	90.7200	.0000	825.7700	.0	
	3	.0	60.4800	.0000	823.5700	.0	
	4	.0	164.6250	.0000	935.9500	.0	
			MONTH EST.RATE	.0000	3183.7500		.0
FEB	1	.0	120.1467	.0000	935.0900	.0	
	2	.0	119.1100	.0000	1066.9900	.0	
	3	.0	124.1175	.0000	840.2100	.0	
	4	.0	140.5784	.0000	1066.2900	.0	
			MONTH EST.RATE	.0000	3908.5800		.0
MARCH	1	.0	116.1971	.0000	1134.0100	.0	
	2	.0	77.8938	.0000	788.5700	.0	
	3	.0	88.1379	.0000	624.9600	.0	
	4	.0	88.8700	.0000	892.8000	.0	
			MONTH EST.RATE	.0000	3440.3400		.0
APRIL	1	.0	89.0859	.0000	749.6600	.0	
	2	.0	88.1385	.0000	771.7000	.0	
	3	.0	302.0244	.0000	1164.7500	.0	
	4	.0	439.8567	.0000	2283.6800	.0	
			MONTH EST.RATE	.0000	4969.7900		.0
MAY	1	.0	94.5669	.0000	719.0100	.0	
	2	.0	90.7200	.0000	1322.0100	.0	
	3	.0	591.0690	.0000	2135.8300	.0	
	4	12.4	1006.8292	.0123	3294.4400	40.5	
			MONTH EST.RATE	.0031	7471.2900		23.2
JUNE	1	.0	757.9787	.0000	2586.3800	.0	
	2	2.6	669.6120	.0039	2223.4100	8.7	
	3	.0	446.4264	.0000	1617.2500	.0	
	4	.0	365.0085	.0000	2808.0900	.0	
			MONTH EST.RATE	.0010	9235.1300		9.2
JULY	1	.0	264.7371	.0000	1722.6400	.0	
	2	14.1	841.8007	.0168	2772.1500	46.6	
	3	20.3	455.7396	.0445	3172.1000	141.2	
	4	114.8	590.9593	.1943	4428.4600	860.4	
			MONTH EST.RATE	.0639	12095.3500		772.9

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BAY ANCHOVY
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	52.9	368.4480	.1436	3136.7100	450.4	
		2	138.1	877.4840	.1574	3159.2900	497.3	
		3	8.0	349.5960	.0229	2817.0700	64.5	
		4	459.6	297.1896	1.5465	3165.0300	4894.7	
				MONTH EST.RATE	.4676	12278.1000		5741.2
	SEPT	1	1280.5	776.9956	1.6480	2536.5800	4180.3	
		2	433.8	849.7479	.5105	2669.3900	1362.7	
		3	110.5	349.0713	.3166	2505.1900	793.1	
		4	861.5	729.8119	1.1804	3460.6900	4085.0	
				MONTH EST.RATE	.9139	11171.8500		10210.0
	OCT	1	185.2	530.1185	.3494	1910.0400	667.4	
		2	.0	136.8936	.0000	1544.6800	.0	
		3	55.5	194.2892	.2857	2014.2700	575.5	
		4	83.1	1185.7895	.0701	3975.7600	278.7	
				MONTH EST.RATE	.1763	9444.7500		1665.1
	NOV	1	6.4	786.0867	.0081	2839.8100	23.0	
		2	.0	778.3204	.0000	2662.1300	.0	
		3	.0	834.2172	.0000	2747.7600	.0	
		4	.0	651.7349	.0000	3042.0300	.0	
				MONTH EST.RATE	.0020	11291.7300		22.6
	DEC	1	.0	186.6693	.0000	2617.1200	.0	
		2	.0	254.6984	.0000	1986.7100	.0	
		3	.0	259.2900	.0000	1851.1500	.0	
		4	.0	794.8141	.0000	2658.8500	.0	
				MONTH EST.RATE	.0000	9113.8300		.0
				ANNUAL EST.RATE	.1357			18444.2

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	65.6300	.0000	598.4600	0	
	2	0	90.7200	.0000	825.7700	0	
	3	0	60.4800	.0000	823.5700	0	
	4	0	164.6250	.0000	935.9500	0	
			MONTH EST.RATE	.0000	3183.7500		0
FEB	1	0	120.1467	.0000	935.0900	0	
	2	0	119.1100	.0000	1066.9900	0	
	3	0	124.1175	.0000	840.2100	0	
	4	0	140.5784	.0000	1066.2900	0	
			MONTH EST.RATE	.0000	3908.5800		0
MARCH	1	0	116.1971	.0000	1134.0100	0	
	2	0	77.8938	.0000	788.5700	0	
	3	0	88.1379	.0000	624.9600	0	
	4	0	88.8700	.0000	892.8000	0	
			MONTH EST.RATE	.0000	3440.3400		0
APRIL	1	0	89.0859	.0000	749.6600	0	
	2	0	88.1385	.0000	771.7000	0	
	3	4	302.0244	.0132	1164.7500	15	
	4	48	439.8567	.1091	2283.6800	249	
			MONTH EST.RATE	.0306	4969.7900		152
MAY	1	14	94.5669	.1480	719.0100	106	
	2	1	90.7200	.0110	1322.0100	15	
	3	93	591.0690	.1573	2135.8300	336	
	4	120	1006.8292	.1192	3294.4400	393	
			MONTH EST.RATE	.1089	7471.2900		814
JUNE	1	287	757.9787	.3786	2586.3800	979	
	2	127	669.6120	.1897	2223.4100	422	
	3	35	446.4264	.0784	1617.2500	127	
	4	32	365.0085	.0877	2808.0900	246	
			MONTH EST.RATE	.1836	9235.1300		1696
JULY	1	4	264.7371	.0151	1722.6400	26	
	2	271	841.8007	.3219	2772.1500	892	
	3	21	455.7396	.0461	3172.1000	146	
	4	118	590.9593	.1997	4428.4600	884	
			MONTH EST.RATE	.1457	12095.3500		1762

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONT.)	AUG	1	22	368.4480	.0597	3136.7100	187	
		2	156	877.4840	.1778	3159.2900	562	
		3	8	349.5960	.0229	2817.0700	65	
		4	22	297.1896	.0740	3165.0300	234	
				MONTH EST.RATE	.0836	12278.1000		1026
	SEPT	1	88	776.9956	.1133	2536.5800	287	
		2	76	849.7479	.0894	2669.3900	239	
		3	9	349.0710	.0258	2505.1900	65	
		4	76	729.8119	.1041	3460.6900	360	
				MONTH EST.RATE	.0832	11171.8500		929
	OCT	1	31	530.1185	.0585	1910.0400	112	
		2	2	136.8936	.0146	1544.6800	23	
		3	464	194.2892	2.3882	2014.2700	4810	
		4	2010	1185.7895	1.6951	3975.7600	6739	
				MONTH EST.RATE	1.0391	9444.7500		9814
	NOV	1	665	786.0867	.8460	2839.8100	2402	
		2	218	778.3204	.2801	2662.1300	746	
		3	54	834.2172	.0647	2747.7600	178	
		4	12	651.7349	.0184	3042.0300	56	
				MONTH EST.RATE	.3023	11291.7300		3413
	DEC	1	0	186.6693	.0000	2617.1200	0	
		2	1	254.6984	.0039	1986.7100	8	
		3	0	259.2900	.0000	1851.1500	0	
		4	0	794.8141	.0000	2658.8500	0	
				MONTH EST.RATE	.0010	9113.8300		9
				ANNUAL EST.RATE	.1648			19615

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
198- AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	65.6300	.0000	598.4600	.0	
	2	.0	90.7200	.0000	825.7700	.0	
	3	.0	60.4800	.0000	823.5700	.0	
	4	.0	164.6250	.0000	935.9500	.0	
			MONTH EST.RATE	.0000	3183.7500		.0
FEB	1	.0	120.1467	.0000	935.0900	.0	
	2	.0	119.1100	.0000	1066.9900	.0	
	3	.0	124.1175	.0000	840.2100	.0	
	4	.0	140.5784	.0000	1066.2900	.0	
			MONTH EST.RATE	.0000	3908.5800		.0
MARCH	1	.0	116.1971	.0000	1134.0100	.0	
	2	.0	77.8938	.0000	788.5700	.0	
	3	.0	88.1379	.0000	624.9600	.0	
	4	.0	88.8700	.0000	892.8000	.0	
			MONTH EST.RATE	.0000	3440.3400		.0
APRIL	1	.0	89.0859	.0000	749.6600	.0	
	2	.0	88.1385	.0000	771.7000	.0	
	3	864.2	302.0244	2.8614	1164.7500	3332.8	
	4	11666.5	439.8567	26.5234	2283.6800	60571.0	
			MONTH EST.RATE	7.3462	4969.7900		36509.1
MAY	1	3221.7	94.5669	34.0680	719.0100	24495.2	
	2	6.6	90.7200	.0728	1322.0100	96.2	
	3	14228.1	591.0693	24.0718	2135.8300	51413.3	
	4	17507.2	1006.8292	17.3885	3294.4400	57285.4	
			MONTH EST.RATE	18.9003	7471.2900		141209.6
JUNE	1	38954.0	757.9787	51.3920	2586.3800	132919.2	
	2	10889.7	669.6120	16.2627	2223.4100	36158.6	
	3	4423.6	446.4264	9.9089	1617.2500	16025.2	
	4	3577.1	365.0085	9.8001	2808.0900	27519.6	
			MONTH EST.RATE	21.8409	9235.1300		201703.6
JULY	1	298.7	264.7371	1.1283	1722.6400	1943.7	
	2	1663.8	841.8007	1.9765	2772.1500	5479.2	
	3	214.2	455.7396	.4700	3172.1000	1490.9	
	4	244.9	590.9593	.4144	4428.4600	1835.2	
			MONTH EST.RATE	.9973	12095.3500		12062.7

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1981 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	34.6	368.4480	.0939	3136.7100	294.5	
		2	137.3	877.4840	.1565	3159.2900	494.4	
		3	12.9	349.5960	.0369	2817.0700	103.9	
		4	87.1	297.1896	.2931	3165.0300	927.7	
				MONTH EST.RATE	.1451	12278.1000		1781.6
	SEPT	1	457.7	776.9956	.5891	2536.5800	1494.3	
		2	392.9	849.7479	.4624	2669.3900	1234.3	
		3	239.0	349.0710	.6847	2505.1900	1715.3	
		4	968.3	729.8119	1.3268	3460.6900	4591.6	
				MONTH EST.RATE	.7658	11171.8500		8555.4
	OCT	1	278.1	530.1185	.5246	1910.0400	1002.0	
		2	4.0	136.8936	.0292	1544.6800	45.1	
		3	1162.3	194.2892	5.9823	2014.2700	12050.0	
		4	4963.7	1185.7895	4.1835	3975.7600	16632.6	
				MONTH EST.RATE	2.6799	9444.7500		25311.0
	NOV	1	772.1	786.0867	.9822	2839.8100	2789.3	
		2	349.9	778.3204	.4496	2662.1300	1196.9	
		3	126.7	834.2172	.1519	2747.7600	417.4	
		4	22.9	651.7349	.0351	3042.0300	106.8	
				MONTH EST.RATE	.4047	11291.7300		4569.8
	DEC	1	.0	186.6693	.0000	2617.1200	.0	
		2	106.4	254.6984	.4178	1986.7100	830.0	
		3	.0	259.2900	.0000	1851.1500	.0	
		4	.0	794.8141	.0000	2658.8500	.0	
				MONTH EST.RATE	.1045	9113.8300		952.4
				ANNUAL EST.RATE	4.4321			432655.2

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1983 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GIZZARD SHAD
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	4	65.6300	.0610	598.4600	37	
	2	4	90.7200	.0441	825.7700	36	
	3	3	60.4800	.0496	823.5700	41	
	4	4	164.6250	.0243	935.9500	23	
			MONTH EST.RATE	.0448	3183.7500		143
FEB	1	0	120.1467	.0000	935.0900	0	
	2	4	119.1100	.0336	1066.9900	36	
	3	4	124.1175	.0322	840.2100	27	
	4	2	140.5784	.0142	1066.2900	15	
			MONTH EST.RATE	.0200	3908.5800		78
MARCH	1	1	116.1971	.0086	1134.0100	10	
	2	0	77.8938	.0000	788.5700	0	
	3	0	88.1379	.0000	624.9600	0	
	4	0	88.8700	.0000	892.8000	0	
			MONTH EST.RATE	.0022	3440.3400		8
APRIL	1	0	89.0859	.0000	749.6600	0	
	2	0	88.1385	.0000	771.7000	0	
	3	0	302.0244	.0000	1164.7500	0	
	4	0	439.8567	.0000	2283.6800	0	
			MONTH EST.RATE	.0000	4969.7900		0
MAY	1	0	94.5669	.0000	719.0100	0	
	2	0	90.7200	.0000	1322.0100	0	
	3	0	591.0690	.0000	2135.8300	0	
	4	0	1006.8292	.0000	3294.4400	0	
			MONTH EST.RATE	.0000	7471.2900		0
JUNE	1	0	757.9787	.0000	2586.3800	0	
	2	0	669.6120	.0000	2223.4100	0	
	3	0	446.4264	.0000	1617.2500	0	
	4	0	365.0985	.0000	2808.0900	0	
			MONTH EST.RATE	.0000	9235.1300		0
JULY	1	0	264.7371	.0000	1722.6400	0	
	2	0	841.8007	.0000	2772.1500	0	
	3	0	455.7396	.0000	3172.1000	0	
	4	0	590.9593	.0000	4428.4600	0	
			MONTH EST.RATE	.0000	12095.3500		0

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GIZZARD SHAD
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONT.)	AUG	1	0	368.4483	.0000	3136.7100	0	
		2	0	877.4840	.0000	3159.2900	0	
		3	0	349.5960	.0000	2817.0700	0	
		4	0	297.1896	.0000	3165.0300	0	
				MONTH EST.RATE	.0000	12278.1000		0
	SEPT	1	0	776.9956	.0000	2536.5800	0	
		2	0	849.7479	.0000	2669.3900	0	
		3	0	349.0710	.0000	2505.1900	0	
		4	0	729.8119	.0000	3460.6900	0	
				MONTH EST.RATE	.0000	11171.8500		0
	OCT	1	0	530.1185	.0000	1910.0400	0	
		2	0	136.8936	.0000	1544.6800	0	
		3	0	194.2892	.0000	2014.2700	0	
		4	44	1185.7895	.0371	3975.7600	148	
				MONTH EST.RATE	.0093	9444.7500		88
	NOV	1	185	786.0867	.2353	2839.8100	668	
		2	395	778.3204	.5075	2662.1300	1351	
		3	545	834.2172	.6533	2747.7600	1795	
		4	593	651.7349	.9099	3042.0300	2768	
				MONTH EST.RATE	.5765	11291.7300		6510
	DEC	1	129	186.6693	.6911	2617.1200	1809	
		2	502	254.6984	1.9710	1986.7100	3916	
		3	1021	259.2903	3.9377	1851.1500	7289	
		4	1541	794.8141	1.9388	2658.8500	5155	
				MONTH EST.RATE	2.1347	9113.8300		19455
				ANNUAL EST.RATE	.2323			26282

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GIZZARD SHAD
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	63.3	65.6300	.9645	598.4600	577.2	
	2	33.3	90.7200	.3671	825.7700	303.1	
	3	68.9	60.4800	1.1392	823.5700	938.2	
	4	411.3	164.6250	2.4984	935.9500	2338.4	
			MONTH EST.RATE	1.2423	3183.7500		3955.2
FEB	1	.0	120.1467	.0000	935.0900	.0	
	2	1646.6	119.1100	13.8242	1066.9900	14750.3	
	3	1259.7	124.1175	10.1493	840.2100	8527.5	
	4	777.6	140.5784	5.5314	1066.2900	5898.1	
			MONTH EST.RATE	7.3762	3908.5800		28830.5
MARCH	1	412.3	116.1971	3.5483	1134.0100	4023.8	
	2	.0	77.8938	.0000	788.5700	.0	
	3	.0	88.1379	.0000	624.9600	.0	
	4	.0	88.8700	.0000	892.8000	.0	
			MONTH EST.RATE	.8871	3440.3400		3051.9
APRIL	1	.0	89.0859	.0000	749.6600	.0	
	2	.0	88.1385	.0000	771.7000	.0	
	3	.0	302.0244	.0000	1164.7500	.0	
	4	.0	439.8567	.0000	2283.6800	.0	
			MONTH EST.RATE	.0000	4969.7900		.0
MAY	1	.0	94.5669	.0000	719.0100	.0	
	2	.0	90.7200	.0000	1322.0100	.0	
	3	.0	591.0690	.0000	2135.8300	.0	
	4	.0	1006.8292	.0000	3294.4400	.0	
			MONTH EST.RATE	.0000	7471.2900		.0
JUNE	1	.0	757.9787	.0000	2586.3800	.0	
	2	.0	669.6120	.0000	2223.4100	.0	
	3	.0	446.4264	.0000	1617.2500	.0	
	4	.0	365.0085	.0000	2808.0900	.0	
			MONTH EST.RATE	.0000	9235.1300		.0
JULY	1	.0	264.7371	.0000	1722.6400	.0	
	2	.0	841.8007	.0000	2772.1500	.0	
	3	.0	455.7396	.0000	3172.1000	.0	
	4	.0	590.9593	.0000	4428.4600	.0	
			MONTH EST.RATE	.0000	12095.3500		.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GIZZARD SHAD
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONT.)	AUG	1	.0	368.4480	.0000	3136.7100	.0	
		2	.0	877.4890	.0000	3159.2900	.0	
		3	.0	349.5960	.0000	2817.0700	.0	
		4	.0	297.1896	.0000	3165.0300	.0	
				MONTH EST.RATE	.0000	12278.1000		.0
	SEPT	1	.0	776.9956	.0000	2536.5800	.0	
		2	.0	849.7479	.0000	2669.3900	.0	
		3	.0	349.0710	.0000	2505.1900	.0	
		4	.0	729.8119	.0000	3460.6900	.0	
				MONTH EST.RATE	.0000	11171.8500		.0
	OCT	1	.0	530.1185	.0000	1910.0400	.0	
		2	.0	136.8936	.0000	1544.6800	.0	
		3	.0	194.2892	.0000	2014.2700	.0	
		4	1811.2	1185.7895	1.5274	3975.7600	6072.6	
				MONTH EST.RATE	.3819	9444.7500		3607.0
	NOV	1	6262.6	786.0867	7.9668	2839.8100	22624.2	
		2	11560.1	778.3204	14.8526	2662.1300	39539.6	
		3	13420.5	834.2172	16.0875	2747.7600	44204.6	
		4	12427.2	651.7349	19.0679	3042.0300	58005.1	
				MONTH EST.RATE	14.4937	11291.7300		163658.9
	DEC	1	2467.8	186.6693	13.2202	2617.1200	34598.8	
		2	13864.0	254.6984	54.4330	1986.7100	108142.6	
		3	29120.7	259.2900	112.3094	1851.1500	207901.5	
		4	51555.0	794.8141	64.8642	2658.8500	172464.2	
				MONTH EST.RATE	61.2067	9113.8300		557827.5
				ANNUAL EST.RATE	7.1323			760931.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GOLDFISH
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	65.6300	.0000	598.4600	0	
	2	4	90.7200	.0441	825.7700	36	
	3	4	60.4800	.0661	823.5700	54	
	4	11	164.6250	.0668	935.9500	63	
			MONTH EST.RATE	.0443	3183.7500		141
FEB	1	3	120.1467	.0250	935.0900	23	
	2	4	119.1100	.0336	1066.9900	36	
	3	2	124.1175	.0161	840.2100	14	
	4	5	140.5784	.0356	1066.2900	38	
			MONTH EST.RATE	.0276	3908.5800		108
MARCH	1	3	116.1971	.0258	1134.0100	29	
	2	2	77.8938	.0257	788.5700	20	
	3	0	88.1379	.0000	624.9600	0	
	4	0	88.8700	.0000	892.8000	0	
			MONTH EST.RATE	.0129	3440.3400		44
APRIL	1	2	89.0859	.0225	749.6600	17	
	2	1	88.1385	.0114	771.7000	9	
	3	9	302.0244	.0298	1164.7500	35	
	4	10	439.8567	.0227	2283.6800	52	
			MONTH EST.RATE	.0216	4969.7900		107
MAY	1	1	94.5669	.0106	719.0100	8	
	2	0	90.7200	.0000	1322.0100	0	
	3	14	591.0693	.0237	2135.8300	51	
	4	5	1006.8292	.0050	3294.4400	16	
			MONTH EST.RATE	.0098	7471.2900		73
JUNE	1	5	757.9787	.0066	2586.3800	17	
	2	4	669.6120	.0060	2223.4100	13	
	3	0	446.4264	.0000	1617.2500	0	
	4	1	365.0085	.0027	2808.0900	8	
			MONTH EST.RATE	.0038	9235.1300		35
JULY	1	0	264.7371	.0000	1722.6400	0	
	2	0	841.8007	.0000	2772.1500	0	
	3	0	455.7396	.0000	3172.1000	0	
	4	2	590.9593	.0034	4428.4600	15	
			MONTH EST.RATE	.0009	12095.3500		11

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GOLDFISH
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	1	368.4480	.0027	3136.7100	8	
		2	0	877.4840	.0000	3159.2900	0	
		3	1	349.5960	.0029	2817.0700	8	
		4	0	297.1896	.0000	3165.0300	0	
				MONTH EST.RATE	.0014	12278.1000		17
	SEPT	1	0	776.9956	.0000	2536.5800	0	
		2	0	849.7479	.0000	2669.3900	0	
		3	1	349.0710	.0029	2505.1900	7	
		4	1	729.8119	.0014	3460.6900	5	
				MONTH EST.RATE	.0011	11171.8500		12
	OCT	1	0	530.1185	.0000	1910.0400	0	
		2	0	136.8936	.0000	1544.6800	0	
		3	0	194.2892	.0000	2014.2700	0	
		4	1	1185.7895	.0008	3975.7600	3	
				MONTH EST.RATE	.0002	9444.7500		2
	NOV	1	1	786.0867	.0013	2839.8100	4	
		2	4	778.3204	.0051	2662.1300	14	
		3	4	834.2172	.0048	2747.7600	13	
		4	2	651.7349	.0031	3042.0300	9	
				MONTH EST.RATE	.0036	11291.7300		41
	DEC	1	6	186.6693	.0321	2617.1200	84	
		2	4	254.6984	.0157	1986.7100	31	
		3	15	259.2900	.0579	1851.1500	107	
		4	65	794.8141	.0818	2658.8500	217	
				MONTH EST.RATE	.0469	9113.8300		427
				ANNUAL EST.RATE	.0145			1018

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GOLDFISH
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	65.6300	.0000	598.4600	.0	
	2	329.7	90.7200	3.6343	825.7700	3001.1	
	3	564.9	60.4800	9.3403	823.5700	7692.4	
	4	488.6	164.6250	2.9680	935.9500	2777.9	
			MONTH EST.RATE	3.9857	3183.7500		12689.5
FEB	1	403.3	120.1467	3.3567	935.0900	3138.8	
	2	831.0	119.1100	6.9767	1066.9900	7444.1	
	3	397.1	124.1175	3.1994	840.2100	2688.2	
	4	97.5	140.5784	.6936	1066.2900	739.6	
			MONTH EST.RATE	3.5566	3908.5800		13901.3
MARCH	1	918.0	116.1971	7.9004	1134.0100	8959.1	
	2	731.7	77.8938	9.3936	788.5700	7407.5	
	3	.0	88.1379	.0000	624.9600	.0	
	4	.0	88.8700	.0000	892.8000	.0	
			MONTH EST.RATE	4.3235	3440.3400		14874.3
APRIL	1	29.4	89.0859	.3300	749.6600	247.4	
	2	21.4	88.1385	.2428	771.7000	187.4	
	3	1605.2	302.0244	5.3148	1164.7500	6190.4	
	4	1366.6	439.8567	3.1069	2283.6800	7095.2	
			MONTH EST.RATE	2.2486	4969.7900		11175.1
MAY	1	349.5	94.5669	3.6958	719.0100	2657.3	
	2	.0	90.7200	.0000	1322.0100	.0	
	3	1489.7	591.0690	2.5204	2135.8300	5383.1	
	4	1197.3	1006.8292	1.1892	3294.4400	3917.7	
			MONTH EST.RATE	1.8514	7471.2900		13832.3
JUNE	1	1001.7	757.9787	1.3215	2586.3800	3417.9	
	2	615.4	669.6120	.9190	2223.4100	2043.3	
	3	.0	446.4264	.0000	1617.2500	.0	
	4	*	365.0085	**	2808.0900	**	
			MONTH EST.RATE	.7468	9235.1300		6896.8
JULY	1	.0	264.7371	.0000	1722.6400	.0	
	2	.0	841.8007	.0000	2772.1500	.0	
	3	.0	455.7396	.0000	3172.1000	.0	
	4	754.7	590.9593	1.2771	4428.4600	5655.6	
			MONTH EST.RATE	.3193	12095.3500		3862.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GOLDFISH
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	490.3	368.4480	1.3299	3136.7100	4171.5	
		2	.0	877.4840	.0000	3159.2900	.0	
		3	42.6	349.5960	.1219	2817.0700	343.4	
		4	.0	297.1896	.0000	3165.0300	.0	
				MONTH EST.RATE	.3630	12278.1000		4457.0
	SEPT	1	.0	776.9956	.0000	2536.5800	.0	
		2	.0	849.7479	.0000	2669.3900	.0	
		3	109.7	349.0710	.3143	2505.1900	787.4	
		4	217.6	729.8119	.2982	3460.6900	1032.0	
				MONTH EST.RATE	.1531	11171.8500		1710.4
	OCT	1	.0	530.1185	.0000	1910.0400	.0	
		2	.0	136.8936	.0000	1544.6800	.0	
		3	.0	194.2892	.0000	2014.2700	.0	
		4	165.9	1185.7895	.1399	3975.7600	556.2	
				MONTH EST.RATE	.0350	9444.7500		330.6
	NOV	1	405.0	786.0867	.5152	2839.8100	1463.1	
		2	1054.5	778.3204	1.3548	2662.1300	3606.7	
		3	859.0	834.2172	1.0297	2747.7600	2829.4	
		4	208.7	651.7349	.3202	3042.0300	974.1	
				MONTH EST.RATE	.8050	11291.7300		9089.8
	DEC	1	1501.9	186.6693	8.0458	2617.1200	21056.8	
		2	390.0	254.6984	1.5312	1986.7100	3042.1	
		3	1439.3	259.2900	5.5509	1851.1500	10275.5	
		4	9944.5	794.8141	12.5117	2658.8500	33266.7	
				MONTH EST.RATE	6.9099	9113.8300		62975.7
				ANNUAL EST.RATE	2.1082			155794.8

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	65.6300	.0000	598.4600	0	
	2	17	90.7200	.1874	825.7700	155	
	3	13	60.4800	.2150	823.5700	177	
	4	31	164.6250	.1883	935.9500	176	
			MONTH EST.RATE	.1477	3183.7500		470
FEB	1	13	120.1467	.1082	935.0900	101	
	2	8	119.1100	.0672	1066.9900	72	
	3	16	124.1175	.1289	840.2100	108	
	4	10	140.5784	.0711	1066.2900	76	
			MONTH EST.RATE	.0939	3908.5800		367
MARCH	1	7	116.1971	.0602	1134.0100	68	
	2	10	77.8938	.1284	788.5700	101	
	3	6	88.1379	.0681	624.9600	43	
	4	15	88.8700	.1688	892.8000	151	
			MONTH EST.RATE	.1064	3440.3400		366
APRIL	1	24	89.0859	.2694	749.6600	202	
	2	10	88.1385	.1135	771.7000	88	
	3	74	302.0244	.2450	1164.7500	285	
	4	74	439.8567	.1682	2283.6800	384	
			MONTH EST.RATE	.1990	4969.7900		989
MAY	1	28	94.5669	.2961	719.0100	213	
	2	3	90.7200	.0331	1322.0100	44	
	3	120	591.0690	.2030	2135.8300	434	
	4	153	1006.8292	.1520	3294.4400	501	
			MONTH EST.RATE	.1711	7471.2900		1278
JUNE	1	41	757.9787	.0541	2586.3800	140	
	2	45	669.6120	.0672	2223.4100	149	
	3	9	446.4264	.0202	1617.2500	33	
	4	5	365.0085	.0137	2808.0900	38	
			MONTH EST.RATE	.0388	9235.1300		358
JULY	1	5	264.7371	.0189	1722.6400	33	
	2	12	841.8007	.0143	2772.1500	40	
	3	2	455.7396	.0044	3172.1000	14	
	4	7	590.9593	.0119	4428.4600	53	
			MONTH EST.RATE	.0124	12095.3500		150

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
198? AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
JANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	2	368.4480	.0054	3136.7100	17	
		2	13	877.4840	.0148	3159.2900	47	
		3	5	349.5960	.0143	2817.0700	40	
		4	13	297.1896	.0437	3165.0300	138	
				MONTH EST.RATE	.0196	12278.1000		241
	SEPT	1	80	776.9956	.1030	2536.5800	261	
		2	61	849.7479	.0718	2669.3900	192	
		3	2	349.0710	.0057	2505.1900	14	
		4	29	729.8119	.0397	3460.6900	137	
				MONTH EST.RATE	.0551	11171.8500		616
	OCT	1	27	530.1185	.0509	1910.0400	97	
		2	10	136.8936	.0731	1544.6800	113	
		3	27	194.2892	.1390	2014.2700	280	
		4	1253	1185.7895	1.0567	3975.7600	4201	
				MONTH EST.RATE	.3299	9444.7500		3116
	NOV	1	320	786.0867	.4071	2839.8100	1156	
		2	91	778.3204	.1169	2662.1300	311	
		3	70	834.2172	.0839	2747.7600	231	
		4	10	651.7349	.0153	3042.0300	47	
				MONTH EST.RATE	.1558	11291.7300		1759
	DEC	1	32	186.6693	.1714	2617.1200	449	
		2	26	254.6984	.1021	1986.7100	203	
		3	20	259.2900	.0771	1851.1500	143	
		4	378	794.8141	.4756	2658.8500	1265	
				MONTH EST.RATE	.2066	9113.8300		1883
				ANNUAL EST.RATE	.1280			11593

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	65.6300	.0000	598.4600	.0	
	2	1336.7	90.7200	14.7344	825.7700	12167.2	
	3	773.9	60.4800	12.7960	823.5700	10538.4	
	4	2039.5	164.6250	12.3888	935.9500	11595.3	
			MONTH EST.RATE	9.9798	3183.7500		31773.2
FEB	1	902.3	120.1467	7.5100	935.0900	7022.5	
	2	619.8	119.1100	5.1196	1066.9900	5462.6	
	3	713.5	124.1175	5.7486	840.2100	4830.0	
	4	735.6	140.5784	5.2327	1066.2900	5579.6	
			MONTH EST.RATE	5.9027	3908.5800		23071.2
MARCH	1	522.5	116.1971	4.4967	1134.0100	5099.3	
	2	642.3	77.8938	8.2458	788.5700	6502.4	
	3	252.3	88.1379	2.8626	624.9600	1789.0	
	4	448.3	88.8700	5.0445	892.8000	4503.7	
			MONTH EST.RATE	5.1624	3440.3400		17760.4
APRIL	1	1327.5	89.0859	14.9014	749.6600	11171.0	
	2	147.6	88.1385	1.6746	771.7000	1292.3	
	3	3648.9	302.0244	12.0815	1164.7500	14071.9	
	4	4605.0	439.8567	10.4693	2283.6800	23908.5	
			MONTH EST.RATE	9.7817	4969.7900		48613.0
MAY	1	2014.9	94.5669	21.3066	719.0100	15319.7	
	2	183.1	90.7200	2.0183	1322.0100	2668.2	
	3	8466.4	591.0690	14.3239	2135.8300	30593.4	
	4	10956.0	1006.8292	10.8817	3294.4400	35849.1	
			MONTH EST.RATE	12.1326	7471.2900		90646.2
JUNE	1	2231.4	757.9787	2.9439	2586.3800	7614.0	
	2	2737.2	669.6120	4.0877	2223.4100	9088.6	
	3	662.7	446.4264	1.4845	1617.2500	2400.8	
	4	443.4	365.0085	1.2148	2808.0900	3411.3	
			MONTH EST.RATE	2.4327	9235.1300		22466.3
JULY	1	392.5	264.7371	1.4826	1722.6400	2554.0	
	2	863.7	841.8007	1.0260	2772.1500	2844.2	
	3	190.3	455.7396	.4176	3172.1000	1324.7	
	4	511.0	590.9593	.8647	4428.4600	3829.3	
			MONTH EST.RATE	.9477	12095.3500		11462.8

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR PUMPKINSEED
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONT.)	AUG	1	187.3	368.4480	.5084	3136.7100	1594.7	
		2	1145.9	877.4840	1.3059	3159.2900	4125.7	
		3	453.9	349.5960	1.2984	2817.0700	3657.7	
		4	511.6	297.1896	1.7215	3165.0300	5448.6	
				MONTH EST.RATE	1.2086	12278.1000		14839.3
	SEPT	1	3041.4	776.9956	3.9143	2536.5800	9928.9	
		2	1944.7	849.7479	2.2886	2669.3900	6109.2	
		3	87.2	349.0713	.2498	2505.1900	625.8	
		4	1601.2	729.8119	2.1940	3460.6900	7592.8	
				MONTH EST.RATE	2.1617	11171.8500		24150.2
	OCT	1	621.6	530.1185	1.1726	1910.0400	2239.7	
		2	112.7	136.8936	.8233	1544.6800	1271.7	
		3	547.1	194.2892	2.8159	2014.2700	5672.0	
		4	15276.2	1185.7895	12.8827	3975.7600	51218.5	
				MONTH EST.RATE	4.4236	9444.7500		41779.8
	NOV	1	5357.6	786.0867	6.8155	2839.8100	19354.7	
		2	2989.3	778.3204	3.8407	2662.1300	10224.4	
		3	2700.4	834.2172	3.2371	2747.7600	8894.8	
		4	460.6	651.7349	.7067	3042.0300	2149.8	
				MONTH EST.RATE	3.6500	11291.7300		41214.8
	DEC	1	1069.8	186.6693	5.7310	2617.1200	14998.7	
		2	876.2	254.6984	3.4402	1986.7100	6834.7	
		3	1049.7	259.2900	4.0484	1851.1500	7494.2	
		4	16031.0	794.8141	20.1695	2658.8500	53627.7	
				MONTH EST.RATE	8.3473	9113.8300		76075.9
				ANNUAL EST.RATE	5.5109			443853.1

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR STRIPED BASS
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	1	65.6300	.0152	598.4600	9	
	2	6	90.7200	.0661	825.7700	55	
	3	0	60.4800	.0000	823.5700	0	
	4	5	164.6250	.0304	935.9500	28	
			MONTH EST.RATE	.0279	3183.7500		89
FEB	1	1	120.1467	.0083	935.0900	8	
	2	2	119.1100	.0168	1066.9900	18	
	3	9	124.1175	.0725	840.2100	61	
	4	4	140.5784	.0285	1066.2900	30	
			MONTH EST.RATE	.0315	3908.5800		123
MARCH	1	5	116.1971	.0430	1134.0100	49	
	2	5	77.8938	.0642	788.5700	51	
	3	1	88.1379	.0114	624.9600	7	
	4	0	88.8700	.0000	892.8000	0	
			MONTH EST.RATE	.0297	3440.3400		102
APRIL	1	2	89.0859	.0225	749.6600	17	
	2	1	88.1385	.0114	771.7000	9	
	3	5	302.0244	.0166	1164.7500	19	
	4	16	439.8567	.0364	2283.6800	83	
			MONTH EST.RATE	.0217	4969.7900		108
MAY	1	1	94.5669	.0106	719.0100	8	
	2	0	90.7200	.0000	1322.0100	0	
	3	14	591.0690	.0237	2135.8300	51	
	4	15	1006.8292	.0149	3294.4400	49	
			MONTH EST.RATE	.0123	7471.2900		92
JUNE	1	31	757.9787	.0409	2586.3800	106	
	2	33	669.6120	.0493	2223.4100	110	
	3	4	446.4264	.0090	1617.2500	15	
	4	3	365.0085	.0082	2808.0900	23	
			MONTH EST.RATE	.0269	9235.1300		248
JULY	1	0	264.7371	.0000	1722.6400	0	
	2	16	841.8007	.0190	2772.1500	53	
	3	1	455.7396	.0022	3172.1000	7	
	4	16	590.9593	.0271	4428.4600	120	
			MONTH EST.RATE	.0121	12095.3500		146

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1981 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR STRIPED BASS
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONT'D.)	AUG	1	19	368.4480	.0516	3136.7100	162	
		2	28	877.4840	.0319	3159.2900	101	
		3	8	349.5960	.0229	2817.0700	65	
		4	32	297.1896	.1077	3165.0300	341	
				MONTH EST.RATE	.0535	12278.1000		657
	SEPT	1	84	776.9956	.1081	2536.5800	274	
		2	95	849.7479	.1118	2669.3900	298	
		3	13	349.0710	.0372	2505.1900	93	
		4	130	729.8119	.1781	3460.6900	616	
				MONTH EST.RATE	.1088	11171.8500		1215
	OCT	1	90	530.1185	.1698	1910.0400	324	
		2	16	136.8936	.1169	1544.6800	181	
		3	15	194.2892	.0772	2014.2700	156	
		4	123	1185.7895	.1037	3975.7600	412	
				MONTH EST.RATE	.1169	9444.7500		1104
	NOV	1	56	786.0867	.0712	2839.8100	202	
		2	65	778.3204	.0835	2662.1300	222	
		3	116	834.2172	.1391	2747.7600	382	
		4	104	651.7349	.1596	3042.0300	486	
				MONTH EST.RATE	.1134	11291.7300		1280
	DEC	1	31	186.6693	.1661	2617.1200	435	
		2	46	254.6984	.1806	1986.7100	359	
		3	29	259.2900	.1118	1851.1500	207	
		4	67	794.8141	.0843	2658.8500	224	
				MONTH EST.RATE	.1357	9113.8300		1237
				ANNUAL EST.RATE	.0575			6401

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR STRIPED BASS
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	7.1	65.6300	.1082	598.4600	64.8	
	2	468.3	90.7200	5.1620	825.7700	4262.6	
	3	.0	60.4800	.0000	823.5700	.0	
	4	391.9	164.6250	2.3806	935.9500	2228.1	
			MONTH EST.RATE	1.9127	3183.7500		6089.6
FEB	1	7.0	120.1467	.0583	935.0900	54.5	
	2	16.7	119.1100	.1402	1066.9900	149.6	
	3	170.0	124.1175	1.3697	840.2100	1150.8	
	4	149.5	140.5784	1.0635	1066.2900	1134.0	
			MONTH EST.RATE	.6579	3908.5800		2571.5
MARCH	1	33.1	116.1971	.2849	1134.0100	323.1	
	2	110.5	77.8938	1.4186	788.5700	1118.7	
	3	5.3	88.1379	.0601	624.9600	37.6	
	4	.0	88.8700	.0000	892.8000	.0	
			MONTH EST.RATE	.4409	3440.3400		1516.8
APRIL	1	225.0	89.0859	2.5257	749.6600	1893.4	
	2	7.7	88.1385	.0874	771.7000	67.4	
	3	323.9	302.0244	1.0724	1164.7500	1249.1	
	4	1840.0	439.8567	4.1832	2283.6800	9553.1	
			MONTH EST.RATE	1.9672	4969.7900		9776.6
MAY	1	57.8	94.5669	.6112	719.0100	439.5	
	2	.0	90.7200	.0000	1322.0100	.0	
	3	351.0	591.0690	.5938	2135.8300	1268.3	
	4	524.8	1006.8292	.5212	3294.4400	1717.1	
			MONTH EST.RATE	.4316	7471.2900		3224.6
JUNE	1	1489.9	757.9787	1.9656	2586.3800	5083.8	
	2	999.6	669.6120	1.4928	2223.4100	3319.1	
	3	162.8	446.4264	.3647	1617.2500	589.8	
	4	206.5	365.0085	.5657	2808.0900	1588.5	
			MONTH EST.RATE	1.0972	9235.1300		10132.8
JULY	1	.0	264.7371	.0000	1722.6400	.0	
	2	1076.3	841.8007	1.2786	2772.1500	3544.5	
	3	72.1	455.7395	.1582	3172.1000	501.8	
	4	872.8	590.9593	1.4769	4428.4600	6540.4	
			MONTH EST.RATE	.7284	12095.3500		8810.3

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELEC .IC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR STRIPED BASS
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	952.3	368.4480	2.5846	3136.7100	8107.1	
		2	1076.0	877.4840	1.2262	3159.2900	3873.9	
		3	609.3	349.5960	1.7429	2817.0700	4909.9	
		4	730.5	297.1896	2.4580	3165.0300	7779.6	
				MONTH EST.RATE	2.0029	12278.1000		24591.8
	SEPT	1	1896.0	776.9956	2.4402	2536.5800	6189.8	
		2	3431.5	849.7479	4.0383	2669.3900	10779.8	
		3	810.3	349.0710	2.3213	2505.1900	5815.3	
		4	2347.1	729.8119	3.2160	3460.6900	11129.6	
				MONTH EST.RATE	3.0040	11171.8500		33560.2
	OCT	1	1223.9	530.1185	2.3087	1910.0400	4409.7	
		2	291.9	136.8936	2.1323	1544.6800	3293.7	
		3	358.4	194.2892	1.8447	2014.2700	3715.7	
		4	3780.6	1185.7895	3.1883	3975.7600	12675.9	
				MONTH EST.RATE	2.3685	9444.7500		22369.9
	NOV	1	1985.9	786.0867	2.5263	2839.8100	7174.2	
		2	3029.3	778.3204	3.8921	2662.1300	10361.3	
		3	4451.8	834.2172	5.3365	2747.7600	14663.4	
		4	3408.6	651.7349	5.2300	3042.0300	15909.8	
				MONTH EST.RATE	4.2462	11291.7300		47946.9
	DEC	1	514.6	186.6693	2.7568	2617.1200	7214.9	
		2	505.7	254.6984	1.9855	1986.7100	3944.6	
		3	773.0	259.2900	2.9812	1851.1500	5518.6	
		4	4957.5	794.8141	6.2373	2658.8500	16584.0	
				MONTH EST.RATE	3.4902	9113.8300		31809.1
				ANNUAL EST.RATE	1.8623			202400.1

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1981 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SPOTTAIL SHINER
DANSKAMMER POINT GENERATING STATION.

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	4	65.6300	.0610	598.4600	37	
	2	5	90.7200	.0551	825.7700	45	
	3	6	60.4800	.0992	823.5700	82	
	4	19	164.6250	.1154	935.9500	108	
			MONTH EST.RATE	.0827	3183.7500		263
FEB	1	16	120.1467	.1332	935.0900	125	
	2	15	119.1100	.1259	1066.9900	134	
	3	97	124.1175	.7815	840.2100	657	
	4	55	140.5784	.3912	1066.2900	417	
			MONTH EST.RATE	.3580	3908.5800		1399
MARCH	1	15	116.1971	.1291	1134.0100	146	
	2	6	77.8938	.0770	788.5700	61	
	3	2	88.1379	.0227	624.9600	14	
	4	4	88.8700	.0450	892.8000	40	
			MONTH EST.RATE	.0685	3440.3400		236
APRIL	1	103	89.0859	1.1562	749.6600	867	
	2	11	88.1385	.1248	771.7000	96	
	3	451	302.0244	1.4933	1164.7500	1739	
	4	415	439.8567	.9435	2283.6800	2155	
			MONTH EST.RATE	.9295	4969.7900		4619
MAY	1	71	94.5669	.7508	719.0100	540	
	2	1	90.7200	.0110	1322.0100	15	
	3	522	591.0690	.8832	2135.8300	1886	
	4	364	1006.8292	.3615	3294.4400	1191	
			MONTH EST.RATE	.5016	7471.2900		3748
JUNE	1	491	757.9787	.6478	2586.3800	1675	
	2	156	669.6120	.2330	2223.4100	518	
	3	20	446.4264	.0448	1617.2500	72	
	4	18	365.0085	.0493	2808.0900	138	
			MONTH EST.RATE	.2437	9235.1300		2251
JULY	1	8	264.7371	.0302	1722.6400	52	
	2	17	841.8007	.0202	2772.1500	56	
	3	2	455.7396	.0044	3172.1000	14	
	4	7	590.9593	.0119	4428.4600	53	
			MONTH EST.RATE	.0167	12095.3500		202

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SPOTTAIL SHINER
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	7	368.4480	.0190	3136.7100	60	
		2	7	877.4843	.0080	3159.2900	25	
		3	0	349.5960	.0000	2817.0700	0	
		4	16	297.1896	.0538	3165.0300	170	
				MONTH EST.RATE	.0202	12278.1000		248
	SEPT	1	111	776.9956	.1429	2536.5800	362	
		2	58	849.7479	.0683	2669.3900	182	
		3	9	349.0710	.0258	2505.1900	65	
		4	18	729.8119	.0247	3460.6900	85	
				MONTH EST.RATE	.0654	11171.8500		731
	OCT	1	23	530.1185	.0434	1910.0400	83	
		2	1	136.8936	.0073	1544.6800	11	
		3	2	194.2892	.0103	2014.2700	21	
		4	58	1185.7895	.0489	3975.7600	194	
				MONTH EST.RATE	.0275	9444.7500		260
	NOV	1	91	786.0867	.1158	2839.8100	329	
		2	23	778.3204	.0296	2662.1300	79	
		3	31	834.2172	.0372	2747.7600	102	
		4	53	651.7349	.0813	3042.0300	247	
				MONTH EST.RATE	.0660	11291.7300		745
	DEC	1	21	186.6693	.1125	2617.1200	294	
		2	23	254.6984	.0903	1986.7100	179	
		3	25	259.2900	.0964	1851.1500	178	
		4	130	794.8141	.1636	2658.8500	435	
				MONTH EST.RATE	.1157	9113.8300		1054
				ANNUAL EST.RATE	.2080			15756

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SPOTTAIL SHINER
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	32.7	65.6300	.4983	598.4600	298.2	
	2	52.4	90.7200	.5776	825.7700	477.0	
	3	59.1	60.4800	.9772	823.5700	804.8	
	4	154.6	164.6250	.9391	935.9500	879.0	
			MONTH EST.RATE	.7481	3183.7500		2381.8
FEB	1	133.2	120.1467	1.1086	935.0900	1036.6	
	2	125.8	119.1100	1.0562	1066.9900	1127.0	
	3	1025.7	124.1175	8.2639	840.2100	6943.4	
	4	585.6	140.5784	4.1657	1066.2900	4441.8	
			MONTH EST.RATE	3.6486	3908.5800		14260.8
MARCH	1	161.6	116.1971	1.3907	1134.0100	1577.1	
	2	38.4	77.8938	.4930	788.5700	388.8	
	3	12.7	88.1379	.1441	624.9600	90.1	
	4	21.1	88.8700	.2374	892.8000	212.0	
			MONTH EST.RATE	.5663	3440.3400		1948.3
APRIL	1	956.2	89.0859	10.7335	749.6600	8046.5	
	2	56.2	88.1385	.6376	771.7000	492.0	
	3	4411.0	302.0244	14.6048	1164.7500	17010.9	
	4	4240.9	439.8567	9.6416	2283.6800	22018.3	
			MONTH EST.RATE	8.9044	4969.7900		44253.0
MAY	1	702.6	94.5669	7.4297	719.0100	5342.0	
	2	7.8	90.7200	.0860	1322.0100	113.7	
	3	4797.5	591.0690	8.1167	2135.8300	17335.9	
	4	3657.8	1006.8292	3.6330	3294.4400	11968.7	
			MONTH EST.RATE	4.8164	7471.2900		35984.7
JUNE	1	4737.3	757.9787	6.2499	2586.3800	16164.6	
	2	1440.2	669.6120	2.1508	2223.4100	4782.1	
	3	163.5	446.4264	.3662	1617.2500	592.2	
	4	92.2	365.0085	.2526	2808.0900	709.3	
			MONTH EST.RATE	2.2549	9235.1300		20824.3
JULY	1	66.3	264.7371	.2504	1722.6400	431.3	
	2	147.4	841.8007	.1751	2772.1500	485.4	
	3	20.2	455.7396	.0443	3172.1000	140.5	
	4	56.7	590.9593	.0960	4428.4600	425.1	
			MONTH EST.RATE	.1415	12095.3500		1711.5

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR SPOTTAIL SHINER
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONT.)	AUG	1	35.2	368.4480	.0955	3136.7100	299.6	
		2	44.1	877.4840	.0503	3159.2900	158.9	
		3	.0	349.5960	.0000	2817.0700	.0	
		4	101.7	297.1896	.3422	3165.0300	1083.1	
				MONTH EST.RATE	.1220	12278.1000		1497.9
	SEPT	1	924.7	776.9956	1.1901	2536.5800	3018.8	
		2	469.7	849.7479	.5528	2669.3900	1475.6	
		3	82.8	349.0710	.2372	2505.1900	594.2	
		4	171.8	729.8119	.2354	3460.6900	814.6	
				MONTH EST.RATE	.5539	11171.8500		6188.1
	OCT	1	204.6	530.1185	.3860	1910.0400	737.3	
		2	9.1	136.8936	.0665	1544.6800	102.7	
		3	17.9	194.2892	.0921	2014.2700	185.5	
		4	431.6	1185.7895	.3640	3975.7600	1447.2	
				MONTH EST.RATE	.2272	9444.7500		2145.8
	NOV	1	577.6	786.0867	.7348	2839.8100	2086.7	
		2	183.5	778.3204	.2358	2662.1300	627.7	
		3	291.6	834.2172	.3496	2747.7600	960.6	
		4	564.2	651.7349	.8657	3042.0300	2633.5	
				MONTH EST.RATE	.5465	11291.7300		6170.9
	DEC	1	188.5	186.6693	1.0098	2617.1200	2642.8	
		2	224.6	254.6984	.8818	1986.7100	1751.9	
		3	262.7	259.2900	1.0132	1851.1500	1875.6	
		4	1161.5	794.8141	1.4614	2658.8500	3885.6	
				MONTH EST.RATE	1.0916	9113.8300		9948.7
				ANNUAL EST.RATE	1.9685			147315.8

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
OANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	92.6	65.6300	1.4109	598.4600	844.4	
	2	285.9	90.7200	3.1515	825.7700	2602.4	
	3	59.3	60.4800	.9755	823.5700	803.4	
	4	1971.1	164.6250	11.9733	935.9500	11206.4	
			MONTH EST.RATE	4.3778	3183.7500		13937.8
FEB	1	432.0	120.1467	3.5956	935.0900	3362.2	
	2	97.5	119.1100	.8186	1066.9900	873.4	
	3	1580.9	124.1175	12.7371	840.2100	10701.8	
	4	1586.8	140.5784	11.2877	1066.2900	12036.0	
			MONTH EST.RATE	7.1098	3908.5800		27789.2
MARCH	1	1377.6	116.1971	11.8557	1134.0100	13444.5	
	2	976.5	77.8938	12.5363	788.5700	9885.8	
	3	263.5	88.1379	2.9896	624.9600	1868.4	
	4	2519.0	88.8700	28.3448	892.8000	25306.2	
			MONTH EST.RATE	13.9316	3440.3400		47929.4
APRIL	1	26129.0	89.0859	293.3012	749.6600	219876.2	
	2	6129.6	88.1385	69.5451	771.7000	53668.0	
	3	143736.0	302.0244	475.9086	1164.7500	554314.5	
	4	69133.6	439.8567	157.1730	2283.6800	358932.8	
			MONTH EST.RATE	248.9820	4969.7900		1237388.3
MAY	1	28560.8	94.5669	302.0169	719.0100	217153.2	
	2	890.3	90.7200	9.8137	1322.0100	12973.8	
	3	94821.3	591.0690	160.4234	2135.8300	342637.1	
	4	138033.0	1006.8292	137.0967	3294.4400	451656.9	
			MONTH EST.RATE	152.3377	7471.2900		1138159.1
JUNE	1	80550.0	757.9787	106.2695	2586.3800	274853.3	
	2	94729.0	669.6120	141.4685	2223.4100	314542.5	
	3	9657.4	446.4264	21.6327	1617.2500	34985.5	
	4	7774.6	365.0085	21.2998	2808.0900	59811.8	
			MONTH EST.RATE	72.6676	9235.1300		671094.7
JULY	1	1434.5	264.7371	5.4186	1722.6400	9334.3	
	2	10979.7	841.8007	13.0431	2772.1500	36157.4	
	3	1123.2	455.7396	2.4646	3172.1000	7818.0	
	4	14800.3	590.9593	25.0445	4428.4600	110908.6	
			MONTH EST.RATE	11.4927	12095.3500		139008.2

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	20948.0	368.4480	56.8547	3136.7100	178336.7	
		2	10205.9	877.4840	11.6309	3159.2900	36745.4	
		3	4760.3	349.5960	13.6166	2817.0700	38358.9	
		4	10194.4	297.1896	34.3027	3165.0300	108569.1	
				MONTH EST.RATE	29.1012	12278.1000		357307.4
	SEPT	1	16010.3	776.9956	20.6054	2536.5800	52267.2	
		2	14113.8	849.7479	16.6094	2669.3900	44337.0	
		3	2969.2	349.0710	8.5060	2505.1900	21309.1	
		4	49546.1	729.8119	67.8889	3460.6900	234942.4	
				MONTH EST.RATE	28.4024	11171.8500		317307.4
	OCT	1	37613.9	530.1185	70.9538	1910.0400	135524.6	
		2	4671.2	136.8936	34.1229	1544.6800	52709.0	
		3	4650.2	194.2892	23.9344	2014.2700	48210.3	
		4	58936.7	1185.7895	49.7025	3975.7600	197605.2	
				MONTH EST.RATE	44.6784	9444.7500		421976.3
	NOV	1	26686.4	786.0867	33.9484	2839.8100	96407.0	
		2	27027.6	778.3204	34.7255	2662.1300	92443.8	
		3	40326.7	834.2172	48.3408	2747.7600	132828.9	
		4	33594.9	651.7349	51.5469	3042.0300	156807.2	
				MONTH EST.RATE	42.1404	11291.7300		475838.0
	DEC	1	2747.0	186.6693	14.7159	2617.1200	38513.3	
		2	1778.2	254.6984	6.9816	1986.7100	13870.4	
		3	1048.1	259.2900	4.0422	1851.1500	7482.7	
		4	2799.1	794.8141	3.5217	2658.8500	9363.7	
				MONTH EST.RATE	7.3154	9113.8300		66671.3
				ANNUAL EST.RATE	55.2114			4914407.1

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	12	65.6300	.1828	598.4600	109	
	2	17	90.7200	.1874	825.7700	155	
	3	9	60.4800	.1323	823.5700	109	
	4	83	164.6250	.5042	935.9500	472	
			MONTH EST.RATE	.2517	3183.7500		801
FEB	1	33	120.1467	.2747	935.0900	257	
	2	21	119.1100	.1763	1066.9900	188	
	3	35	124.1175	.2820	840.2100	237	
	4	72	140.5784	.5122	1066.2900	546	
			MONTH EST.RATE	.3113	3908.5800		1217
MARCH	1	37	116.1971	.3184	1134.0100	361	
	2	26	77.8938	.3338	788.5700	263	
	3	9	88.1379	.1021	624.9600	64	
	4	137	88.8700	1.5416	892.8000	1376	
			MONTH EST.RATE	.5740	3440.3400		1975
APRIL	1	469	89.0859	5.2646	749.6600	3947	
	2	158	88.1385	1.7926	771.7000	1383	
	3	4535	302.0244	15.0153	1164.7500	17489	
	4	4521	439.8567	10.2784	2283.6800	23473	
			MONTH EST.RATE	8.0877	4969.7900		40194
MAY	1	640	94.5669	6.7677	719.0100	4866	
	2	42	90.7200	.4630	1322.0100	612	
	3	2719	591.0690	4.6001	2135.8300	9825	
	4	3112	1006.8292	3.0909	3294.4400	10183	
			MONTH EST.RATE	3.7304	7471.2900		27871
JUNE	1	2817	757.9787	3.7165	2586.3800	9612	
	2	2945	669.6120	4.3981	2223.4100	9779	
	3	452	446.4264	1.0125	1617.2500	1637	
	4	193	365.0085	.5288	2808.0900	1485	
			MONTH EST.RATE	2.4140	9235.1300		22294
JULY	1	43	264.7371	.1624	1722.6400	280	
	2	305	841.8007	.3623	2772.1500	1004	
	3	34	455.7396	.0746	3172.1000	237	
	4	448	590.9593	.7581	4428.4600	3357	
			MONTH EST.RATE	.3394	12095.3500		4105

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
198[illegible] AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONT.)	AUG	1	622	368.4480	1.6882	3136.7100	5295	
		2	659	877.4840	.7499	3159.2900	2369	
		3	162	349.5960	.4634	2817.0700	1305	
		4	386	297.1896	1.2988	3165.0300	4111	
				MONTH EST.RATE	1.0501	12278.1000		12893
	SEPT	1	1351	776.9956	1.7388	2536.5800	4411	
		2	837	849.7479	.9850	2669.3900	2629	
		3	72	349.0710	.2063	2505.1900	517	
		4	1438	729.8119	1.9704	3460.6900	6819	
				MONTH EST.RATE	1.2251	11171.8500		13687
	OCT	1	1123	530.1185	2.1184	1910.0400	4046	
		2	94	136.8936	.6867	1544.6800	1061	
		3	238	194.2892	1.2250	2014.2700	2467	
		4	3687	1185.7895	3.1093	3975.7600	12362	
				MONTH EST.RATE	1.7849	9444.7500		16858
	NOV	1	2419	786.0867	3.0773	2839.8100	8739	
		2	1620	778.3204	2.0814	2662.1300	5541	
		3	2242	834.2172	2.6876	2747.7600	7385	
		4	1620	651.7349	2.4857	3042.0300	7562	
				MONTH EST.RATE	2.5830	11291.7300		29167
	DEC	1	165	186.6693	.8839	2617.1200	2313	
		2	110	254.6984	.4319	1986.7100	858	
		3	74	259.2900	.2854	1851.1500	528	
		4	120	794.8141	.1510	2658.8500	401	
				MONTH EST.RATE	.4381	9113.8300		3993
				ANNUAL EST.RATE	1.8991			175055

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE CATFISH
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	65.6300	.0000	598.4600	0	
	2	0	90.7200	.0000	825.7700	0	
	3	0	60.4800	.0000	823.5700	0	
	4	0	164.6250	.0000	935.9500	0	
			MONTH EST.RATE	.0000	3183.7500		0
FEB	1	1	120.1467	.0083	935.0900	8	
	2	3	119.1100	.0252	1066.9900	27	
	3	4	124.1175	.0322	840.2100	27	
	4	1	140.5784	.0071	1066.2900	8	
			MONTH EST.RATE	.0182	3908.5800		71
MARCH	1	2	116.1971	.0172	1134.0100	20	
	2	1	77.8938	.0128	788.5700	10	
	3	0	88.1379	.0000	624.9600	0	
	4	0	88.8700	.0000	892.8000	0	
			MONTH EST.RATE	.0075	3440.3400		26
APRIL	1	0	89.0859	.0000	749.6600	0	
	2	0	88.1385	.0000	771.7000	0	
	3	8	302.0244	.0265	1164.7500	31	
	4	5	439.8567	.0114	2283.6800	26	
			MONTH EST.RATE	.0095	4969.7900		47
MAY	1	1	94.5669	.0106	719.0100	8	
	2	0	90.7200	.0000	1322.0100	0	
	3	2	591.0690	.0034	2135.8300	7	
	4	4	1006.8292	.0040	3294.4400	13	
			MONTH EST.RATE	.0045	7471.2900		34
JUNE	1	6	757.9787	.0079	2586.3800	20	
	2	40	669.6120	.0597	2223.4100	133	
	3	3	446.4264	.0067	1617.2500	11	
	4	2	365.0085	.0055	2808.0900	15	
			MONTH EST.RATE	.0200	9235.1300		185
JULY	1	0	264.7371	.0000	1722.6400	0	
	2	18	841.8007	.0214	2772.1500	59	
	3	8	455.7396	.0176	3172.1000	56	
	4	11	590.9593	.0186	4428.4600	82	
			MONTH EST.RATE	.0144	12095.3500		174

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE CATFISH
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONT).)	AUG	1	8	368.4480	.0217	3136.7100	68	
		2	11	877.4840	.0125	3159.2900	39	
		3	9	349.5960	.0257	2817.0700	72	
		4	3	297.1896	.0101	3165.0300	32	
				MONTH EST.RATE	.0175	12278.1000		215
	SEPT	1	17	776.9956	.0219	2536.5800	56	
		2	25	849.7479	.0294	2669.3900	78	
		3	8	349.0710	.0229	2505.1900	57	
		4	28	729.8119	.0384	3460.6900	133	
				MONTH EST.RATE	.0282	11171.8500		315
	OCT	1	22	530.1185	.0415	1910.0400	79	
		2	6	136.8936	.0438	1544.6800	68	
		3	1	194.2892	.0052	2014.2700	10	
		4	214	1185.7895	.1805	3975.7600	718	
				MONTH EST.RATE	.0678	9444.7500		640
	NOV	1	119	786.0867	.1514	2839.8100	430	
		2	32	778.3204	.0411	2662.1300	109	
		3	26	834.2172	.0312	2747.7600	86	
		4	17	651.7349	.0261	3042.0300	79	
				MONTH EST.RATE	.0625	11291.7300		706
	DEC	1	5	186.6693	.0268	2617.1200	70	
		2	3	254.6984	.0118	1986.7100	23	
		3	2	259.2900	.0077	1851.1500	14	
		4	11	794.8141	.0138	2658.8500	37	
				MONTH EST.RATE	.0150	9113.8300		137
				ANNUAL EST.RATE	.0221			2550

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE CATFISH
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	65.6300	.0000	598.4600	.0	
	2	.0	90.7200	.0000	825.7700	.0	
	3	.0	60.4800	.0000	823.5700	.0	
	4	.0	164.6250	.0000	935.9500	.0	
			MONTH EST.RATE	.0000	3183.7500		.0
FEB	1	379.3	120.1467	3.1570	935.0900	2952.1	
	2	259.4	119.1100	2.1778	1066.9900	2323.7	
	3	401.9	124.1175	3.2381	840.2100	2720.7	
	4	51.4	140.5784	.3656	1066.2900	389.8	
			MONTH EST.RATE	2.2346	3908.5800		8734.1
MARCH	1	1281.8	116.1971	11.0313	1134.0100	12509.6	
	2	5.0	77.8938	.0642	788.5700	50.6	
	3	.0	88.1379	.0000	624.9600	.0	
	4	.0	88.8700	.0000	892.8000	.0	
			MONTH EST.RATE	2.7739	3440.3400		9543.2
APRIL	1	.0	89.0859	.0000	749.6600	.0	
	2	.0	88.1385	.0000	771.7000	.0	
	3	615.0	302.0244	2.0363	1164.7500	2371.8	
	4	244.2	439.8567	.5552	2283.6800	1267.9	
			MONTH EST.RATE	.6479	4969.7900		3219.9
MAY	1	7.1	94.5669	.0751	719.0100	54.0	
	2	.0	90.7200	.0000	1322.0100	.0	
	3	264.9	591.0690	.4482	2135.8300	957.3	
	4	398.4	1006.8292	.3957	3294.4400	1303.6	
			MONTH EST.RATE	.2298	7471.2900		1716.9
JUNE	1	556.5	757.9787	.7342	2586.3800	1898.9	
	2	1704.0	669.6120	2.5448	2223.4100	5658.1	
	3	1619.3	446.4264	3.6273	1617.2500	5866.3	
	4	31.9	365.0085	.0874	2808.0900	245.4	
			MONTH EST.RATE	1.7484	9235.1300		16146.7
JULY	1	.3	264.7371	.0000	1722.6400	.0	
	2	813.8	841.8007	.9667	2772.1500	2679.8	
	3	880.4	455.7396	1.9318	3172.1000	6127.9	
	4	1904.6	590.9593	3.2229	4428.4600	14272.5	
			MONTH EST.RATE	1.5304	12095.3500		18510.7

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE CATFISH
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONT.)	AUG	1	1097.8	368.4480	2.9795	3136.7100	9345.8	
		2	3423.3	877.4840	3.9013	3159.2900	12325.3	
		3	305.3	349.5960	.8733	2817.0700	2460.1	
		4	516.9	297.1896	1.7393	3165.0300	5504.9	
				MONTH EST.RATE	2.3734	12278.1000		29140.8
	SEPT	1	1763.5	776.9956	2.2696	2536.5800	5757.0	
		2	1874.5	849.7479	2.2060	2669.3900	5888.7	
		3	487.5	349.0713	1.3966	2505.1900	3498.7	
		4	5078.6	729.8119	6.9588	3460.6900	24082.2	
				MONTH EST.RATE	3.2078	11171.8500		35837.1
	OCT	1	2835.2	530.1185	5.3482	1910.0400	10215.3	
		2	211.3	136.8936	1.5435	1544.6800	2384.2	
		3	19.0	194.2892	.0515	2014.2700	103.7	
		4	7902.9	1185.7895	6.6647	3975.7600	26497.2	
				MONTH EST.RATE	3.4020	9444.7500		32131.0
	NOV	1	7444.2	786.0867	9.4700	2839.8100	26893.0	
		2	3347.0	778.3204	4.3003	2662.1300	11448.0	
		3	1145.8	834.2172	1.3735	2747.7600	3774.0	
		4	1443.5	651.7349	2.2149	3042.0300	6737.8	
				MONTH EST.RATE	4.3397	11291.7300		49002.7
	DEC	1	1023.8	186.6693	5.4846	2617.1200	14353.9	
		2	148.6	254.6984	.5834	1986.7100	1159.0	
		3	467.6	259.2900	1.8034	1851.1500	3338.4	
		4	3298.7	794.8141	4.1503	2658.8500	11035.0	
				MONTH EST.RATE	3.0054	9113.8300		27390.7
				ANNUAL EST.RATE	2.1244			231373.8

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR YELLOW PERCH
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
JAN	1	.0	65.6300	.0000	598.4600	.0	
	2	.0	90.7200	.0000	825.7700	.0	
	3	.0	60.4800	.0000	823.5700	.0	
	4	45.7	164.6250	.2776	935.9500	259.8	
			MONTH EST.RATE	.0694	3183.7500		221.0
FEB	1	.0	120.1467	.0000	935.0900	.0	
	2	20.3	119.1100	.1704	1066.9900	181.8	
	3	82.8	124.1175	.6671	840.2100	560.5	
	4	393.0	140.5784	2.7956	1066.2900	2980.9	
			MONTH EST.RATE	.9083	3908.5800		3550.2
MARCH	1	.0	116.1971	.0000	1134.0100	.0	
	2	.0	77.8938	.0000	788.5700	.0	
	3	.0	88.1379	.0000	624.9600	.0	
	4	79.8	88.8700	.8979	892.8000	801.6	
			MONTH EST.RATE	.2245	3440.3400		772.4
APRIL	1	35.2	89.0859	.3951	749.6600	296.2	
	2	.0	88.1385	.0000	771.7000	.0	
	3	9413.7	302.0244	31.1687	1164.7500	36303.7	
	4	2981.7	439.8567	6.7788	2283.6800	15480.6	
			MONTH EST.RATE	9.5857	4969.7900		47638.9
MAY	1	1412.7	94.5669	14.9386	719.0100	10741.0	
	2	159.0	90.7200	1.7527	1322.0100	2317.1	
	3	1989.8	591.0690	3.3664	2135.8300	7190.1	
	4	1000.1	1006.8292	.9933	3294.4400	3272.4	
			MONTH EST.RATE	5.2628	7471.2900		39319.9
JUNE	1	180.2	757.9787	.2377	2586.3800	614.8	
	2	121.0	669.6120	.1807	2223.4100	401.8	
	3	.0	446.4264	.0000	1617.2500	.0	
	4	.0	365.0085	.0000	2808.0900	.0	
			MONTH EST.RATE	.1046	9235.1300		966.0
JULY	1	.0	264.7371	.0000	1722.6400	.0	
	2	.0	841.8007	.0000	2772.1500	.0	
	3	.0	455.7396	.0000	3172.1000	.0	
	4	.0	590.9593	.0000	4428.4600	.0	
			MONTH EST.RATE	.0000	12095.3500		.0

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELEC .C CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR YELLOW PERCH
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	WGT(GM) OF FISH COLLECTED	FLOW(MG) SAMPLED	RATE GMS/MG	WEEKLY FLOW(MG)	EST.WGT(GM) (RATEXFLOW)	MONTHLY EST.WGT(GM)
(CONTD.)	AUG	1	.0	368.4480	.0000	3136.7100	.0	
		2	.0	877.4840	.0000	3159.2900	.0	
		3	.0	349.5960	.0000	2817.0700	.0	
		4	.0	297.1896	.0000	3165.0300	.0	
				MONTH EST.RATE	.0000	12278.1000		.0
	SEPT	1	.0	776.9956	.0000	2536.5800	.0	
		2	.0	849.7479	.0000	2669.3900	.0	
		3	.0	349.0710	.0000	2505.1900	.0	
		4	.0	729.8119	.0000	3460.6900	.0	
				MONTH EST.RATE	.0000	11171.8500		.0
	OCT	1	.0	530.1185	.0000	1910.0400	.0	
		2	.0	136.8936	.0000	1544.6800	.0	
		3	.0	194.2892	.0000	2014.2700	.0	
		4	.0	1185.7895	.0000	3975.7600	.0	
				MONTH EST.RATE	.0000	9444.7500		.0
	NOV	1	.0	786.0867	.0000	2839.8100	.0	
		2	509.3	778.3204	.6544	2662.1300	1742.1	
		3	822.2	834.2172	.9856	2747.7600	2708.2	
		4	406.0	651.7349	.6230	3042.0300	1895.2	
				MONTH EST.RATE	.5658	11291.7300		6388.9
	DEC	1	669.5	186.6693	3.5866	2617.1200	9386.6	
		2	999.7	254.6984	3.9250	1986.7100	7797.8	
		3	1375.5	259.2900	5.3049	1851.1500	9820.2	
		4	7631.8	794.8141	9.6020	2658.8500	25530.3	
				MONTH EST.RATE	5.6046	9113.8300		51079.4
				ANNUAL EST.RATE	1.8605			149936.7

NOTE. * FISH COLLECTED BUT MUTILATED CONDITION PRECLUDED ANALYSIS
** NO ESTIMATE AVAILABLE

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR YELLOW PERCH
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	65.6300	.0000	598.4600	0	
	2	0	90.7200	.0000	825.7700	0	
	3	0	60.4800	.0000	823.5700	0	
	4	2	164.6250	.0122	935.9500	11	
			MONTH EST.RATE	.0031	3183.7500		10
FEB	1	0	120.1467	.0000	935.0900	0	
	2	1	119.1100	.0084	1066.9900	9	
	3	1	124.1175	.0081	840.2100	7	
	4	2	140.5784	.0142	1066.2900	15	
			MONTH EST.RATE	.0077	3908.5800		30
MARCH	1	0	116.1971	.0000	1134.0100	0	
	2	0	77.8938	.0000	788.5700	0	
	3	0	88.1379	.0000	624.9600	0	
	4	1	88.8700	.0113	892.8000	10	
			MONTH EST.RATE	.0028	3440.3400		10
APRIL	1	1	89.0859	.0112	749.6600	8	
	2	0	88.1385	.0000	771.7000	0	
	3	87	302.0244	.2881	1164.7500	336	
	4	35	439.8567	.0796	2283.6800	182	
			MONTH EST.RATE	.0947	4969.7900		471
MAY	1	10	94.5669	.1058	719.0100	76	
	2	1	90.7200	.0110	1322.0100	15	
	3	20	591.0690	.0338	2135.8300	72	
	4	10	1006.8292	.0099	3294.4400	33	
			MONTH EST.RATE	.0401	7471.2900		300
JUNE	1	2	757.9787	.0026	2586.3800	7	
	2	1	669.6120	.0015	2223.4100	3	
	3	0	446.4264	.0000	1617.2500	0	
	4	0	365.0085	.0000	2808.0900	0	
			MONTH EST.RATE	.0010	9235.1300		9
JULY	1	0	264.7371	.0000	1722.6400	0	
	2	0	841.8007	.0000	2772.1500	0	
	3	0	455.7396	.0000	3172.1000	0	
	4	0	590.9593	.0000	4428.4600	0	
			MONTH EST.RATE	.0000	12095.3500		0

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELEC...C CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR YELLOW PERCH
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	0	368.4480	.0000	3136.7100	0	
		2	0	877.4840	.0000	3159.2900	0	
		3	0	349.5960	.0000	2817.0700	0	
		4	0	297.1896	.0000	3165.0300	0	
				MONTH EST.RATE	.0000	12278.1000		0
	SEPT	1	0	776.9956	.0000	2536.5800	0	
		2	0	849.7479	.0000	2669.3900	0	
		3	0	349.0710	.0000	2505.1900	0	
		4	0	729.8119	.0000	3460.6900	0	
				MONTH EST.RATE	.0000	11171.8500		0
	OCT	1	0	530.1185	.0000	1910.0400	0	
		2	0	136.8936	.0000	1544.6800	0	
		3	0	194.2892	.0000	2014.2700	0	
		4	0	1185.7895	.0000	3975.7600	0	
				MONTH EST.RATE	.0000	9444.7500		0
	NOV	1	0	786.0867	.0000	2839.8100	0	
		2	12	778.3204	.0154	2662.1300	41	
		3	8	834.2172	.0096	2747.7600	26	
		4	5	651.7349	.0077	3042.0300	23	
				MONTH EST.RATE	.0082	11291.7300		93
	DEC	1	6	186.6693	.0321	2617.1200	84	
		2	10	254.6984	.0393	1986.7100	78	
		3	17	259.2900	.0656	1851.1500	121	
		4	74	794.8141	.0931	2658.8500	248	
				MONTH EST.RATE	.0575	9113.8300		524
				ANNUAL EST.RATE	.0179			1447

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUE CRAB
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	65.6300	.0000	598.4600	0	
	2	0	90.7200	.0000	825.7700	0	
	3	0	60.4800	.0000	823.5700	0	
	4	0	164.6250	.0000	935.9500	0	
			MONTH EST.RATE	.0000	3183.7500		0
FEB	1	0	120.1467	.0000	935.0910	0	
	2	0	119.1100	.0000	1066.9900	0	
	3	0	124.1175	.0000	840.2100	0	
	4	0	140.5784	.0000	1066.2900	0	
			MONTH EST.RATE	.0000	3908.5800		0
MARCH	1	0	116.1971	.0000	1134.0100	0	
	2	0	77.8938	.0000	788.5700	0	
	3	0	88.1379	.0000	624.9600	0	
	4	0	88.8700	.0000	892.8000	0	
			MONTH EST.RATE	.0000	3440.3400		0
APRIL	1	0	89.0859	.0000	749.6600	0	
	2	0	88.1385	.0000	771.7000	0	
	3	0	302.0244	.0000	1164.7500	0	
	4	0	439.8567	.0000	2283.6800	0	
			MONTH EST.RATE	.0000	4969.7900		
MAY	1	0	94.5669	.0000	719.0100	0	
	2	0	90.7200	.0000	1322.0100	0	
	3	0	591.0690	.0000	2135.8300	0	
	4	0	1006.8292	.0000	3294.4400	0	
			MONTH EST.RATE	.0000	7471.2900		0
JUNE	1	0	757.9787	.0000	2586.3800	0	
	2	1	669.6120	.0015	2223.4100	3	
	3	0	446.4264	.0000	1617.2500	0	
	4	0	365.0085	.0000	2808.0900	0	
			MONTH EST.RATE	.0004	9235.1300		4
JULY	1	0	264.7371	.0000	1722.6400	0	
	2	1	841.8007	.0012	2772.1500	3	
	3	0	455.7396	.0000	3172.1000	0	
	4	6	590.9593	.0102	4428.4600	45	
			MONTH EST.RATE	.0029	12095.3500		35

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELE[illegible]IC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUE CRAB
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONT.)	AUG	1	13	368.4480	.0353	3136.7100	111	
		2	44	877.4840	.0501	3159.2900	158	
		3	23	349.5960	.0658	2817.0700	185	
		4	26	297.1896	.0875	3165.0300	277	
				MONTH EST.RATE	.0597	12278.1000		733
	SEPT	1	136	776.9956	.1750	2536.5800	444	
		2	147	849.7479	.1730	2669.3900	462	
		3	44	349.0710	.1261	2505.1900	316	
		4	124	729.8119	.1699	3460.6900	588	
				MONTH EST.RATE	.1610	11171.8500		1799
	OCT	1	95	530.1185	.1792	1910.0400	342	
		2	10	136.8936	.0731	1544.6800	113	
		3	15	194.2892	.0772	2014.2700	156	
		4	149	1185.7895	.1257	3975.7600	500	
				MONTH EST.RATE	.1138	9444.7500		1075
	NOV	1	126	786.0867	.1603	2839.8100	455	
		2	58	778.3204	.0745	2662.1300	198	
		3	33	834.2172	.0396	2747.7600	109	
		4	9	651.7349	.0138	3042.0300	42	
				MONTH EST.RATE	.0721	11291.7300		814
	DEC	1	0	186.6693	.0000	2617.1200	0	
		2	0	254.6984	.0000	1986.7100	0	
		3	0	259.2900	.0000	1851.1500	0	
		4	0	794.8141	.0000	2658.8500		
				MONTH EST.RATE	.0000	9113.8300		0
				ANNUAL EST.RATE	.0342			4460

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR CRAYFISH
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	65.6300	.0000	598.4600	0	
	2	0	90.7200	.0000	825.7700	0	
	3	0	60.4800	.0000	823.5700	0	
	4	0	164.6250	.0000	935.9500	0	
			MONTH EST.RATE	.0000	3183.7500		0
FEB	1	0	120.1467	.0000	935.0900	0	
	2	0	119.1100	.0000	1066.9900	0	
	3	0	124.1175	.0000	840.2100	0	
	4	1	140.5784	.0071	1066.2900	8	
			MONTH EST.RATE	.0018	3908.5800		7
MARCH	1	0	116.1971	.0000	1134.0100	0	
	2	0	77.8938	.0000	788.5700	0	
	3	1	88.1379	.0114	624.9600	7	
	4	0	88.8700	.0000	892.8000	0	
			MONTH EST.RATE	.0029	3440.3400		10
APRIL	1	2	89.0859	.0225	749.6600	17	
	2	2	88.1385	.0227	771.7000	18	
	3	22	302.0244	.0728	1164.7500	85	
	4	11	439.8567	.0250	2283.6800	57	
			MONTH EST.RATE	.0358	4969.7900		178
MAY	1	2	94.5669	.0212	719.0100	15	
	2	1	90.7200	.0110	1322.0100	15	
	3	12	591.0690	.0203	2135.8300	43	
	4	5	1006.8292	.0050	3294.4400	16	
			MONTH EST.RATE	.0144	7471.2900		108
JUNE	1	5	757.9787	.0066	2586.3800	17	
	2	4	669.6120	.0060	2223.4100	13	
	3	12	446.4264	.0269	1617.2500	44	
	4	8	365.0085	.0219	2808.0900	61	
			MONTH EST.RATE	.0154	9235.1300		142
JULY	1	0	264.7371	.0000	1722.6400	0	
	2	31	841.8007	.0368	2772.1500	102	
	3	7	455.7396	.0154	3172.1000	49	
	4	13	590.9593	.0220	4428.4600	97	
			MONTH EST.RATE	.0186	12095.3500		225

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELEC. .C CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR CRAYFISH
DANSKAMMER POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	1	6	368.4480	.0163	3136.7100	51	
		2	17	877.4840	.0194	3159.2900	61	
		3	23	349.5960	.0658	2817.0700	185	
		4	24	297.1896	.0808	3165.0300	256	
				MONTH EST.RATE	.0456	12278.1000		560
	SEPT	1	97	776.9956	.1248	2536.5800	317	
		2	36	849.7479	.0424	2669.3900	113	
		3	8	349.0710	.0229	2505.1900	57	
		4	14	729.8119	.0192	3460.6900	66	
				MONTH EST.RATE	.0523	11171.8500		584
	OCT	1	4	530.1185	.0076	1910.0400	15	
		2	0	136.8936	.0000	1544.6800	0	
		3	1	194.2892	.0052	2014.2700	10	
		4	1	1185.7895	.0008	3975.7600	3	
				MONTH EST.RATE	.0034	9444.7500		32
	NOV	1	0	786.0867	.0000	2839.8100	0	
		2	1	778.3204	.0013	2662.1300	3	
		3	0	834.2172	.0000	2747.7600	0	
		4	2	651.7349	.0031	3042.0300	9	
				MONTH EST.RATE	.0011	11291.7300		12
	DEC	1	0	186.6693	.0000	2617.1200	0	
		2	0	254.6984	.0000	1986.7100	0	
		3	0	259.2900	.0000	1851.1500	0	
		4	0	794.8141	.0000	2658.8500	0	
				MONTH EST.RATE	.0000	9113.8300		0
				ANNUAL EST.RATE	.0159			1858

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELECTRIC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR MUD CRAB
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	0	65.6300	.0000	598.4600	0	
	2	0	90.7200	.0000	825.7700	0	
	3	0	60.4800	.0000	823.5700	0	
	4	0	164.6250	.0000	935.9500	0	
			MONTH EST.RATE	.0000	3183.7500		0
FEB	1	0	120.1467	.0000	935.0900	0	
	2	0	119.1100	.0000	1066.9900	0	
	3	0	124.1175	.0000	840.2100	0	
	4	0	140.5784	.0000	1066.2900	0	
			MONTH EST.RATE	.0000	3908.5800		0
MARCH	1	0	116.1971	.0000	1134.0100	0	
	2	0	77.8938	.0000	788.5700	0	
	3	0	88.1379	.0000	624.9600	0	
	4	0	88.8700	.0000	892.8000	0	
			MONTH EST.RATE	.0000	3440.3400		0
APRIL	1	0	89.0859	.0000	749.6600	0	
	2	0	88.1385	.0000	771.7000	0	
	3	1	302.0244	.0033	1164.7500	4	
	4	0	439.8567	.0000	2283.6800	0	
			MONTH EST.RATE	.0008	4969.7900		4
MAY	1	0	94.5669	.0000	719.0100	0	
	2	0	90.7200	.0000	1322.0100	0	
	3	0	591.0690	.0000	2135.8300	0	
	4	0	1006.8292	.0000	3294.4400	0	
			MONTH EST.RATE	.0000	7471.2900		0
JUNE	1	0	757.9787	.0000	2586.3800	0	
	2	0	669.6120	.0000	2223.4100	0	
	3	0	446.4264	.0000	1617.2500	0	
	4	0	365.0085	.0000	2808.0900	0	
			MONTH EST.RATE	.0000	9235.1300		0
JULY	1	0	264.7371	.0000	1722.6400	0	
	2	0	841.8007	.0000	2772.1500	0	
	3	0	455.7396	.0000	3172.1000	0	
	4	0	590.9593	.0000	4428.4600	0	
			MONTH EST.RATE	.0000	12095.3500		0

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

CENTRAL HUDSON GAS & ELE(IC CORP.
1980 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR MUD CRAB
DANSKAMMER POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO. FISH COLLECTED	FLOW(MG) SAMPLED	RATE NO./MG	WEEKLY FLOW(MG)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
	1	0	368.4480	.0000	3136.7100	0	
	2	1	877.4840	.0000	3159.2900	0	
	3	0	349.5960	.0000	2817.0700	0	
	4	0	297.1896	.0000	3165.0300	0	
			MONTH EST.RATE	.0000	12278.1000		
AUG	1	0	776.9956	.0000	2536.5800	0	
	2	1	849.7479	.0012	2669.3900	3	
	3	0	349.0710	.0000	2505.1900	0	
	4	3	729.8119	.0041	3460.6900	14	15
			MONTH EST.RATE	.0013	11171.8500		
SEPT	1	2	530.1185	.0038	1910.0400	7	
	2	0	136.8936	.0000	1544.6800	0	
	3	5	194.2892	.0257	2014.2700	52	
	4	47	1185.7895	.0396	3975.7600	157	163
			MONTH EST.RATE	.0173	9444.7500		
OCT	1	80	786.0867	.1018	2839.8100	289	
	2	90	778.3204	.1156	2662.1300	308	
	3	61	834.2172	.0731	2747.7600	201	
	4	14	651.7349	.0215	3042.0300	65	881
			MONTH EST.RATE	.0780	11291.7300		
NOV	1	1	186.6693	.0054	2617.1200	14	
	2	1	254.6984	.0039	1986.7100	8	
	3	0	259.2900	.0000	1851.1500	0	
	4	0	794.8141	.0000	2658.8500	0	21
			MONTH EST.RATE	.0023	9113.8300		
DEC	1						1084
	2						
	3						
	4						
			ANNUAL EST.RATE	.0083			

NOTE: * LESS THAN 0.0001
** LESS THAN 1 FISH

APPENDIX 6 - WATER QUALITY DATA - WEEKLY PARAMETERS

TABLE A-18

WEEKLY WATER QUALITY VALUES - TEMPERATURE[a]

Roseton and Danskammer Point Vicinity - 1980

DATE	NORTH CONTROL (CH-1)			EAST REFERENCE (CH-4)			SOUTH CONTROL (CH-6)		
	SURFACE	MID	BOTTOM	SURFACE	MID	BOTTOM	SURFACE	MID	BOTTOM
26 Mar	3.0	2.5	2.5	3.0	2.5	2.5	3.0	2.5	2.5
2 Apr	5.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
10 Apr	7.5	7.0	7.0	8.0	7.5	8.0	7.0	7.0	8.0
16 Apr	9.5	9.5	9.5	9.0	9.0	9.0	10.1	10.0	9.8
23 Apr	10.0	10.0	9.5	10.0	10.0	10.0	10.0	10.0	10.0
1 May	11.0	10.5	10.0	11.0	10.5	10.0	11.0	10.5	10.0
7 May	14.0	13.5	13.0	14.0	13.5	13.5	14.0	13.0	13.0
14 May	15.0	15.0	15.0	14.5	14.5	14.5	15.0	15.0	15.0
21 May	16.0	16.5	17.0	16.0	16.0	16.0	16.5	16.5	16.5
28 May	18.0	18.0	18.0	18.0	17.5	17.5	18.5	18.0	18.0
4 Jun	19.0	19.0	19.0	21.0	20.0	19.0	20.5	20.0	20.0
11 Jun	19.0	19.0	19.0	18.0	19.0	19.0	18.0	18.5	19.0
18 Jun	21.0	20.5	20.5	21.5	21.0	21.0	22.0	21.5	21.0
25 Jun	22.0	21.5	21.5	22.0	22.0	22.0	22.5	22.0	22.0
2 Jul	23.0	22.0	22.0	22.5	22.0	22.0	22.5	23.0	23.0
9 Jul	23.0	23.0	23.0	23.5	23.0	23.0	23.0	23.0	23.0
16 Jul	25.0	24.5	24.5	26.5	25.0	24.5	26.5	25.0	25.0
23 Jul	25.0	25.0	25.0	26.0	26.0	26.5	26.0	26.5	26.5
31 Jul	27.5	26.5	26.5	28.5	27.0	26.5	28.0	27.5	27.5
6 Aug	26.0	26.5	26.5	26.0	26.0	26.0	27.0	27.0	27.0
13 Aug	27.0	27.0	27.5	28.5	28.0	28.0	29.0	28.0	28.0
20 Aug	26.5	27.0	27.0	28.0	27.5	27.5	27.5	27.5	27.0
27 Aug	26.0	26.0	26.0	27.5	27.0	26.5	27.0	27.0	26.5
4 Sep	26.5	26.0	26.0	26.5	26.0	26.0	27.5	27.0	27.0
10 Sep	25.0	25.0	25.0	24.5	25.0	25.5	25.5	26.5	26.0
17 Sep	24.0	23.5	23.5	23.5	23.5	24.0	23.5	23.5	23.5
24 Sep	22.0	22.5	22.5	22.0	23.0	23.0	22.5	23.0	23.0
1 Oct	21.5	21.0	21.0	22.0	21.5	21.5	22.0	21.5	21.5
8 Oct	19.0	19.5	19.5	19.5	20.0	20.0	19.5	20.0	20.0
15 Oct	17.0	17.5	18.0	18.5	18.0	18.5	18.0	18.0	18.0
23 Oct	15.0	15.5	16.0	16.5	16.5	16.5	16.0	16.0	17.0
29 Oct	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
5 Nov	11.0	12.0	12.0	12.0	12.0	12.0	12.0	12.5	13.0
12 Nov	9.5	9.5	9.5	11.5	10.5	10.5	11.0	11.0	11.0
19 Nov	7.0	7.5	8.0	7.0	8.0	8.0	8.0	8.5	8.5
3 Dec	3.0	4.0	4.0	4.0	4.0	4.5	4.0	4.5	5.0
11 Dec	2.0	2.0	2.5	2.0	2.5	3.0	2.0	3.0	3.0
17 Dec	1.5	1.5	1.0	2.0	2.0	2.0	2.0	2.0	2.0

[a]Temperature recorded in degrees centigrade.

TABLE A-19

WEEKLY WATER QUALITY VALUES - SPECIFIC CONDUCTANCE[a]

Roseton and Danskammer Point Vicinity - 1980

DATE	NORTH CONTROL (CH-1)			EAST REFERENCE (CH-4)			SOUTH CONTROL (CH-6)		
	SURFACE	MID	BOTTOM	SURFACE	MID	BOTTOM	SURFACE	MID	BOTTOM
26 Mar	150	160	160	160	170	170	160	170	170
2 Apr	140	170	170	160	170	170	160	160	170
10 Apr	170	180	180	120	120	120	190	190	180
16 Apr	160	160	160	160	160	160	160	160	160
23 Apr	140	140	140	140	140	140	140	140	140
1 May	150	160	170	150	160	170	150	160	170
7 May	160	160	160	160	160	160	160	170	170
14 May	170	170	170	190	190	190	180	180	180
21 May	170	170	180	170	190	190	180	180	190
28 May	190	200	200	190	200	200	190	200	200
4 Jun	180	180	180	170	180	180	220	240	240
11 Jun	180	190	200	180	190	190	200	200	200
18 Jun	180	200	200	190	190	190	190	190	200
25 Jun	180	200	200	190	200	200	190	200	200
2 Jul	190	200	200	190	200	200	200	210	210
9 Jul	190	190	190	210	210	210	210	220	230
16 Jul	200	200	200	190	200	200	200	200	210
23 Jul	200	210	220	200	200	210	210	210	210
31 Jul	190	200	200	200	210	210	270	300	300
6 Aug	200	200	210	220	220	220	340	340	340
13 Aug	240	220	190	240	200	230	280	310	340
20 Aug	220	220	230	240	240	230	270	290	300
27 Aug	360	380	380	1330	1550	1560	2140	2180	2300
4 Sep	630	780	830	1020	1320	1570	1620	1870	2020
10 Sep	600	650	700	960	1100	2080	1630	1860	2060
17 Sep	660	720	720	1080	1390	1780	1750	1900	2270
24 Sep	320	340	330	750	800	950	1680	1980	2290
1 Oct	460	470	460	1150	1140	2000	1200	1210	1220
8 Oct	380	380	370	830	880	820	890	990	990
15 Oct	320	330	330	860	800	910	1090	1260	1960
23 Oct	290	290	290	380	390	390	1200	1200	1230
29 Oct	240	240	240	260	290	300	360	400	410
5 Nov	260	260	260	240	250	250	300	310	320
12 Nov	230	240	240	230	240	250	240	250	260
19 Nov	240	240	240	240	240	250	240	240	240
3 Dec	240	240	240	230	240	240	240	250	240
11 Dec	230	230	230	230	230	240	240	240	240
17 Dec	230	230	230	230	230	230	230	230	230

[a]Specific conductance measured in μhmos/cm @ 25 C.

TABLE A-20

WEEKLY WATER QUALITY VALUES - pH

Roseton and Danskammer Point Vicinity - 1980

DATE	NORTH CONTROL (CH-1)			EAST REFERENCE (CH-4)			SOUTH CONTROL (CH-6)		
	SURFACE	MID	BOTTOM	SURFACE	MID	BOTTOM	SURFACE	MID	BOTTOM
26 Mar	7.6	7.6	7.6	7.7	7.6	7.6	7.5	7.5	7.5
2 Apr	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
10 Apr	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
16 Apr	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
23 Apr	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
1 May	7.5	7.5	7.5	7.4	7.4	7.3	7.3	7.4	7.4
7 May	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
14 May	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
21 May	7.4	7.4	7.4	7.3	7.3	7.3	7.4	7.4	7.4
28 May	7.7	7.7	7.5	7.5	7.5	7.5	7.4	7.5	7.5
4 Jun	7.4	7.4	7.3	7.3	7.4	7.3	7.4	7.4	7.5
11 Jun	7.1	7.2	7.2	7.3	7.3	7.3	7.3	7.3	7.3
18 Jun	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
25 Jun	7.2	7.3	7.2	7.3	7.2	7.2	7.4	7.3	7.3
2 Jul	7.4	7.4	7.4	7.4	7.4	7.4	7.5	7.5	7.4
9 Jul	7.5	7.4	7.5	7.5	7.5	7.5	7.4	7.5	7.4
16 Jul	7.4	7.4	7.3	7.4	7.4	7.4	7.5	7.5	7.5
23 Jul	7.5	7.5	7.5	7.6	7.6	7.5	7.6	7.6	7.6
31 Jul	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
6 Aug	7.3	7.3	7.3	7.4	7.4	7.4	7.4	7.4	7.4
13 Aug	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
20 Aug	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
27 Aug	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
4 Sep	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
10 Sep	7.5	7.5	7.4	7.4	7.4	7.4	7.4	7.4	7.4
17 Sep	7.4	7.4	7.4	7.6	7.6	7.6	7.6	7.6	7.6
24 Sep	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
1 Oct	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
8 Oct	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
15 Oct	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
23 Oct	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
29 Oct	7.4	7.4	7.4	7.4	7.4	7.4	7.5	7.5	7.5
5 Nov	7.5	7.4	7.5	7.5	7.4	7.5	7.4	7.4	7.4
12 Nov	7.4	7.4	7.4	7.3	7.2	7.2	7.3	7.3	7.2
19 Nov	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
3 Dec	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
11 Dec	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
17 Dec	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5

TABLE A-21

WEEKLY WATER QUALITY VALUES - TURBIDITY[a]

Roseton and Danskammer Point Vicinity - 1980

DATE	NORTH CONTROL (CH-1) SURFACE	MID	BOTTOM	EAST REFERENCE (CH-4) SURFACE	MID	BOTTOM	SOUTH CONTROL (CH-6) SURFACE	MID	BOTTOM
26 Mar	220	260	260	220	220	220	280	220	220
2 Apr	66	74	90	78	84	102	90	100	116
10 Apr	32	46	56	36	42	48	40	42	58
16 Apr	40	58	76	52	64	68	50	64	68
23 Apr	16	20	28	14	16	32	14	14	32
1 May	10	12	24	38	14	24	10	10	38
7 May	6	12	16	6	8	16	6	8	18
14 May	8	12	42	6	8	20	8	12	34
21 May	8	8	16	8	10	12	8	8	12
28 May	4	4	6	4	6	6	4	6	16
4 Jun	7	8	80	8	9	10	7	9	11
11 Jun	6	12	30	8	8	12	6	8	10
18 Jun	5	9	22	6	9	14	7	11	11
25 Jun	7	7	12	5	5	11	6	7	8
2 Jul	4	10	36	5	5	18	7	8	10
9 Jul	5	6	10	9	12	12	6	7	10
16 Jul	5	6	10	12	11	8	6	8	120
23 Jul	2	4	12	2	4	4	4	4	8
31 Jul	3	4	6	7	8	24	6	8	14
6 Aug	6	4	4	4	6	6	6	6	8
13 Aug	4	4	4	6	4	4	2	4	14
20 Aug	4	4	4	6	4	4	4	4	6
27 Aug	4	6	36	6	8	8	4	4	6
4 Sep	4	6	48	4	6	6	4	6	8
10 Sep	4	10	22	4	8	14	6	4	10
17 Sep	4	4	12	4	4	22	4	4	8
24 Sep	6	8	8	6	8	16	6	12	12
1 Oct	6	12	30	10	10	8	8	8	10
8 Oct	8	8	8	12	12	10	6	6	24
15 Oct	6	8	54	8	8	8	4	6	22
23 Oct	8	10	64	8	12	16	12	40	48
29 Oct	6	10	18	6	8	10	8	10	8
5 Nov	6	6	22	7	7	12	8	8	14
12 Nov	8	8	10	6	6	38	6	10	160
19 Nov	6	8	16	6	6	12	6	8	32
3 Dec	10	10	12	10	10	10	10	12	12
11 Dec	28	20	54	12	14	28	10	14	24
17 Dec	18	28	48	14	24	24	16	24	46

[a]Turbidity measurded in FTU.

TABLE A-22

WEEKLY WATER QUALITY VALUES - DISSOLVED OXYGEN[a]

Roseton and Danskammer Point Vicinity - 1980

DATE	NORTH CONTROL (CH-1)			EAST REFERENCE (CH-4)			SOUTH CONTROL (CH-6)		
	SURFACE	MID	BOTTOM	SURFACE	MID	BOTTOM	SURFACE	MID	BOTTOM
26 Mar	12.0	12.0	12.0	12.4	12.3	12.2	11.5	12.0	12.0
2 Apr	11.4	11.7	11.7	11.6	11.6	11.6	11.8	11.6	11.6
10 Apr	10.9	10.7	10.9	10.7	10.5	10.6	10.8	10.9	10.8
16 Apr	10.0	9.9	9.9	10.0	10.0	9.8	10.1	10.0	9.8
23 Apr	10.3	10.1	10.2	10.2	10.2	10.0	10.3	10.3	10.2
1 May	10.0	10.0	10.2	10.2	10.1	9.9	10.2	10.2	10.0
7 May	9.5	9.4	9.5	9.6	9.5	9.4	9.6	9.6	9.5
14 May	8.8	8.7	8.7	8.9	8.7	8.6	9.0	8.9	9.0
21 May	7.7	7.8	7.7	7.8	7.8	7.8	8.0	7.9	7.9
28 May	8.0	7.6	7.7	7.9	7.9	7.8	8.1	8.0	8.0
4 Jun	7.4	7.2	7.0	7.5	7.3	7.3	7.8	7.4	7.6
11 Jun	7.0	6.9	6.9	7.0	7.0	7.1	7.3	7.2	7.2
18 Jun	7.1	6.5	6.4	7.1	6.6	6.6	7.4	6.9	6.8
25 Jun	6.7	6.5	6.8	6.9	6.7	7.1	7.2	7.2	7.1
2 Jul	7.0	6.8	6.6	7.2	7.0	7.0	7.2	7.0	7.0
9 Jul	6.5	6.9	6.3	6.4	6.5	6.3	6.8	6.5	6.5
16 Jul	6.8	6.5	6.5	6.6	6.5	6.4	6.8	6.6	6.5
23 Jul	7.4	7.4	7.3	7.6	7.6	7.5	7.6	7.6	7.6
31 Jul	7.5	7.5	7.4	7.5	7.3	7.3	7.2	7.2	7.1
6 Aug	5.8	5.6	5.7	6.1	5.8	6.1	6.2	6.0	6.0
13 Aug	5.9	5.7	5.7	6.3	5.9	6.2	7.2	6.2	6.4
20 Aug	5.9	5.7	5.8	5.9	5.9	5.7	6.4	6.3	6.2
27 Aug	6.3	6.0	6.0	5.9	5.9	6.0	6.4	6.1	5.9
4 Sep	7.6	6.2	6.2	7.2	6.0	5.9	7.2	6.3	6.3
10 Sep	6.5	6.3	6.4	6.5	6.5	6.2	6.8	6.4	6.5
17 Sep	6.9	6.7	6.6	7.3	7.1	7.0	7.0	6.7	6.8
24 Sep	6.8	6.6	6.7	7.0	6.8	6.7	7.0	6.9	7.0
1 Oct	7.4	6.9	6.8	7.4	7.1	6.9	7.5	7.4	7.4
8 Oct	7.3	7.2	7.1	7.3	7.3	7.4	7.9	7.5	7.5
15 Oct	7.9	7.9	7.8	8.1	8.1	8.0	8.4	8.1	8.1
23 Oct	8.6	8.5	8.5	8.5	8.4	8.4	8.7	8.5	8.4
29 Oct	9.2	9.1	9.0	9.2	9.0	9.0	9.4	9.2	9.0
5 Nov	10.0	9.8	9.8	9.8	9.9	9.6	9.9	9.8	9.8
12 Nov	10.1	9.6	9.8	9.6	9.7	9.6	10.0	9.7	9.4
19 Nov	10.3	10.3	10.2	10.3	10.3	10.2	10.1	10.0	10.1
3 Dec	11.2	11.1	11.2	11.2	11.3	11.1	11.2	11.2	11.2
11 Dec	13.6	13.4	13.5	13.5	13.6	13.5	13.5	13.4	13.5
17 Dec	14.0	13.8	13.9	14.1	14.0	14.0	14.0	13.9	13.8

[a]Dissolved oxygen measured in milligrams per liter.

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One Blue Hill Plaza
Pearl River, New York 10965

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Environmental Science & Engineering Consultants

CENTRAL HUDSON GAS & ELECTRIC CORPORATION

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1980

NOVEMBER 1981

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TABLE OF CONTENTS

	Page No.
LIST OF FIGURES	iii
LIST OF TABLES	v
1.0 REPORT SUMMARY	1.0-1
2.0 INTRODUCTION	2.0-1
3.0 STATION AND SITE DESCRIPTION	3.0-1
3.1 Geographic Location	3.0-1
3.2 Description of Study Area	3.0-1
3.3 Descriptions of the Generating Stations	3.0-4
3.3.1 Roseton Electric Generating Station	3.0-4
3.3.2 Danskammer Point Electric Generating Station	3.0-4
4.0 ENTRAINMENT ABUNDANCE	4.0-1
4.1 Materials and Methods	4.0-1
4.1.1 Danskammer Point and Roseton	4.0-1
4.2 Results	4.0-8
4.2.1 Species Inventory/Percent Composition	4.0-8
4.2.2 Daily Concentrations for Total Larvae and Select Species	4.0-11
4.2.3 Comparison Among Danskammer Point Sampling Locations	4.0-58
4.2.4 Danskammer Point Intake Velocity Study	4.0-58
4.2.5 Comparison Between Plants	4.0-62
4.2.6 Comparison with Previous Years	4.0-70
4.2.7 Conclusions	4.0-77
5.0 IMPINGEMENT	5.0-1
5.1 Materials and Methods	5.0-1
5.1.1 Danskammer Point and Roseton	5.0-1
5.2 Results	5.0-8

TABLE OF CONTENTS
(continued)

		Page No.
5.2.1	Species Inventory	5.0-8
5.2.2	Sample Parameters	5.0-11
5.2.3	Abundance, Biomass, and Percent Composition	5.0-11
5.2.4	Monthly and Annual Impingement	5.0-17
5.2.5	Diel Abundance	5.0-24
5.2.6	Seasonal Impingement Patterns and Length Frequency of Selected Species	5.0-33
5.2.7	Comparison With Previous Years	5.0-54
6.0 HUDSON RIVER WATER QUALITY		6.0-1
6.1	Materials and Methods	6.0-1
6.1.1	Field Collection	6.0-1
6.1.2	Laboratory Analysis	6.0-4
6.2	Results	6.0-4
6.2.1	Physicochemical Program	6.0-4
6.2.2	Climatology	6.0-11
6.2.3	Water Quality Parameters	6.0-14
REFERENCES CITED		R-1
ATTACHMENT		A-1

LIST OF FIGURES

Figure No.	Title	Page No.
3.0-1	Location of the Roseton and Danskammer Point Electric Generating Stations	3.0-2
4.0-1	Approximate Danskammer Intake Sampling Locations	4.0-2
4.0-2	Entrainment Abundance Sampling Program - Roseton	4.0-3
4.0-3	White Perch Abundance By Collection Interval	4.0-18
4.0-4	Striped Bass Abundance By Collection Interval	4.0-29
4.0-5	*Alosa* Spp. Abundance By Collection Interval	4.0-40
4.0-6	White Perch Larvae Concentrations	4.0-65
4.0-7	Striped Bass Larvae Concentrations	4.0-66
4.0-8	*Alosa* Spp. Larvae Concentrations	4.0-67
4.0-9	American Shad Larvae Concentrations	4.0-68
4.0-10	Total Larvae Concentrations	4.0-69
5.0-1	Danskammer Point Sampling Locations	5.0-3
5.0-2	Roseton Intake Sampling Locations	5.0-5
5.0-3	Conveyor Belt - Impingement Sampler	5.0-7
6.0-1	Water Quality Sampling Locations	6.0-2
6.0-2	Hudson River Flow at Green Island	6.0-5
6.0-3	Lower Hudson River Long-Term Monthly Average Freshwater Flow	6.0-7
6.0-4	Daily Chloride Concentrations	6.0-9
6.0-5	Minimum Daily Intake Temperatures	6.0-12
6.0-6	Mean 24-Hour Air Temperatures	6.0-13

LIST OF FIGURES

Figure No.	Title	Page No.
6.0-7	Weekly Temperature Values Recorded at CH-1	6.0-15
6.0-8	Weekly Temperature Values Recorded at CH-4	6.0-16
6.0-9	Weekly Temperature Values Recorded at CH-6	6.0-17
6.0-10	Weekly Specific Conductance Recorded at CH-1	6.0-18
6.0-11	Weekly Specific Conductance Recorded at CH-4	6.0-19
6.0-12	Weekly Specific Conductance Recorded at CH-6	6.0-20
6.0-13	Weekly Mean Specific Conductance Values	6.0-21
6.0-14	Weekly Turbidity Values Recorded at CH-1	6.0-22
6.0-15	Weekly Turbidity Values Recorded at CH-4	6.0-23
6.0-16	Weekly Turbidity Values Recorded at CH-6	6.0-24
6.0-17	Weekly Dissolved Oxygen Recorded at CH-1	6.0-26
6.0-18	Weekly Dissolved Oxygen Recorded at CH-4	6.0-27
6.0-19	Weekly Dissolved Oxygen Recorded at CH-6	6.0-28
6.0-20	Weekly pH Values Recorded at CH-1	6.0-29
6.0-21	Weekly pH Values Recorded at CH-4	6.0-30
6.0-22	Weekly pH Values Recorded at CH-6	6.0-31

LIST OF TABLES

Table No.	Title	Page No.
3.0-1	Hydrodynamic and Physiographic Characteristics of Northern Newburgh Bay	3.0-3
3.0-2	Plant Description - Circulating Water Pump Flow Characteristics	3.0-5
4.0-1	Entrainment Abundance Sampling Dates and Number of Samples Collected	4.0-4
4.0-2	Entrainment Abundance Equipment List	4.0-5
4.0-3	Ichthyoplankton Species Inventory and Total Abundance in Entrainment Collections - Danskammer Point	4.0-9
4.0-4	Ichthyoplankton Species Inventory and Total Abundance in Entrainment Collections - Roseton	4.0-10
4.0-5	Daily Mean Abundance of Total Species Larvae - All Lifestage Combined in Entrainment Collections	4.0-12
4.0-6	1980 Daily Mean Physiochemistry - Danskammer Entrainment	4.0-13
4.0-7	1980 Daily Mean Physiochemistry - Roseton Entrainment	4.0-14
4.0-8	Mean Abundance of White Perch Ichthyoplankton by Lifestage in Entrainment Collections - Danskammer Point	4.0-16
4.0-9	Mean Abundance of White Perch Ichthyoplankton By Lifestage in Entrainment Collections - Roseton	4.0-17
4.0-10	Length Frequency of Yolk-Sac White Perch Larvae - Danskammer Point	4.0-20
4.0-11	Length Frequency of Yolk-Sac White Perch Larvae - Roseton	4.0-21

LIST OF TABLES
(Continued)

Table No.	Title	Page No.
4.0-12	Length Frequency of Post-Yolk-Sac White Perch Larvae - Danskammer Point	4.0-22
4.0-13	Length Frequency of Post-Yolk-Sac White Perch Larvae - Roseton	4.0-23
4.0-14	Length Frequency of Juvenile White Perch - Danskammer Point	4.0-24
4.0-15	Length Frequency of Juvenile White Perch - Roseton	4.0-25
4.0-16	Mean Abundance of Striped Bass Ichthyoplankton By Lifestage in Entrainment Collections - Danskammer Point	4.0-27
4.0-17	Mean Abundance of Striped Bass Ichthyoplankton by Lifestage in Entrainment Collections - Roseton	4.0-28
4.0-18	Length Frequency of Yolk-Sac Striped Bass Larvae - Danskammer Point	4.0-31
4.0-19	Length Frequency of Yolk-Sac Striped Bass Larvae - Roseton	4.0-32
4.0-20	Length Frequency of Post-Yolk-Sac Striped Bass Larvae - Danskammer Point	4.0-33
4.0-21	Length Frequency of Post-Yolk-Sac Striped Bass Larvae - Roseton	4.0-34
4.0-22	Length Frequency of Juvenile Striped Bass - Danskammer Point	4.0-35
4.0-23	Length Frequency of Juvenile Striped Bass - Roseton	4.0-36
4.0-24	Mean Abundance of Alosa Spp. Ichthyoplankton By Lifestage in Entrainment Collections - Danskammer Point	4.0-38

LIST OF TABLES
(Continued)

Table No.	Title	Page No.
4.0-25	Mean Abundance of Alosa Spp. Ichthyoplankton By Lifestage in Entrainment Collections - Roseton	4.0-39
4.0-26	Length Frequency of Yolk-Sac Alosa Spp. Larvae - Danskammer Point	4.0-42
4.0-27	Length Frequency of Yolk-Sac Alosa Spp. Larvae - Roseton	4.0-43
4.0-28	Length Frequency of Post-Yolk-Sac Alosa Spp. Larvae - Danskammer Point	4.0-44
4.0-29	Length Frequency of Post-Yolk-Sac Alosa Spp. Larvae - Roseton	4.0-45
4.0-30	Length Frequency of Juvenile Alosa Spp. - Danskammer Point	4.0-47
4.0-31	Length Frequency of Juvenile Alosa Spp. - Roseton	4.0-48
4.0-32	Mean Abundance of American Shad Ichthyoplankton By Lifestage in Entrainment Collections - Danskammer Point	4.0-49
4.0-33	Mean Abundance of American Shad Ichthyoplankton By Lifestage in Entrainment Collections - Roseton	4.0-50
4.0-34	Length Frequency of Yolk-Sac American Shad Larvae - Danskammer Point	4.0-51
4.0-35	Length Frequency of Post-Yolk-Sac American Shad Larvae - Danskammer Point	4.0-53
4.0-36	Length Frequency of Post-Yolk-Sac American Shad Larvae - Roseton	4.0-54
4.0-37	Length Frequency of Juvenile American Shad - Danskammer Point	4.0-55

LIST OF TABLES
(Continued)

Table No.	Title	Page No.
4.0-38	Length Frequency of Juvenile American Shad - Roseton	4.0-56
4.0-39	Mean Abundance of Bay Anchovy Ichthyoplankton in Entrainment Collections	4.0-57
4.0-40	Summary of ANOVA Results for Station Comparisons of Selected Species	4.0-59
4.0-41	Relative Ranking of Danskammer Canal Velocity Measurements	4.0-61
4.0-42	Summary of ANOVA Results for Plant Comparisons of Selected Species	4.0-63
4.0-43	Comparison of 1980 Entrainment Abundance Data	4.0-64
4.0-44	Weekly White Perch Entrainment Concentrations - 1975-1980	4.0-72
4.0-45	Weekly Striped Bass Entrainment Concentrations - 1975-1980	4.0-73
4.0-46	Weekly Alosa Spp. Entrainment Concentrations - 1975-1980	4.0-74
4.0-47	Weekly American Shad Entrainment Concentrations - 1975-1980	4.0-75
4.0-48	Weekly Bay Anchovy Entrainment Collections - 1975-1980	4.0-76
5.0-1	Impingement Sampling Dates and Number Samples Collected	5.0-2
5.0-2	Fish Species Inventory and Total Number Collected in Impingement Samples - Roseton Generating Station - 1980	5.0-9
5.0-3	Fish Species Inventory and Total Number Collected in Impingement Samples - Danskammer Point Generating Station - 1980	5.0-10

LIST OF TABLES
(Continued)

Table No.	Title	Page No.
5.0-4	Monthly Flow Data Related to Impingement Sampling	5.0-12
5.0-5	Abundance and Percent Composition of Impingement Collections at Roseton Generating Station	5.0-13
5.0-6	Abundance and Percent Composition of Impingement Collections at Danskammer Point Generating Station	5.0-14
5.0-7	Biomass and Percent Composition of Impingement Collections at Roseton Generating Station	5.0-15
5.0-8	Biomass and Percent Composition of Impingement Collections at Danskammer Point Generating Station	5.0-16
5.0-9	Invertebrate Abundance and Percent Composition - Roseton	5.0-18
5.0-10	Invertebrate Abundance and Percent Composition - Danskammer Point	5.0-19
5.0-11	Monthly Estimated Number and Percent Composition of the Ten Most Abundant Species Collected in Impingement Samples - Roseton Generating Station	5.0-20
5.0-12	Monthly Estimated Number and Percent Composition of the Ten Most Abundant Species Collected in Impingement Samples - Danskammer Point Generating Station	5.0-22
5.0-13	Monthly Estimated Biomass and Percent Composition of the Top Ten Species Collected in Impingement Samples - Roseton Generating Station	5.0-23

LIST OF TABLES
(Continued)

Table No.	Title	Page No.
5.0-14	Monthly Estimated Biomass and Percent Composition of the Top Ten Species Collected in Impingement Samples - Danskammer Point Generating Station	5.0-25
5.0-15	Impingement Rate for Total Fish in Day and Night Collections - Danskammer Point	5.0-26
5.0-16	Impingement Rate for White Perch in Day and Night Collections - Danskammer Point	5.0-28
5.0-17	Impingement Rate for Alewife in Day and Night Collections - Danskammer Point	5.0-29
5.0-18	Impingement Rate for Total Fish in Day and Night Collections - Roseton	5.0-30
5.0-19	Impingement Rate for White Perch in Day and Night Collections - Roseton	5.0-31
5.0-20	Impingement Rate for Blueback Herring in Day and Night Collections - Roseton	5.0-32
5.0-21	Mean Monthly Estimated Impingement Rate for Total and Select Species	5.0-34
5.0-22	Length Frequency of Alewife in Impingement Collections at Roseton Generating Station	5.0-35
5.0-23	Length Frequency of Alewife in Impingement Collections at Danskammer Point Generating Station	5.0-37
5.0-24	Length Frequency of American Shad in Impingement Collections at Roseton Generating Station	5.0-38
5.0-25	Length Frequency of American Shad in Impingement Collections at Danskammer Point Generating Station	5.0-39

LIST OF TABLES
(Continued)

Table No.	Title	Page No.
5.0-26	Length Frequency of Atlantic Tomcod in Impingement Collections at Roseton Generating Station	5.0-40
5.0-27	Length Frequency of Atlantic Tomcod in Impingement Collections at Danskammer Point Generating Station	5.0-41
5.0-28	Length Frequency of Bay Anchovy in Impingement Collections at Roseton Generating Station	5.0-43
5.0-29	Length Frequency of Bay Anchovy in Impingement Collections at Danskammer Point Generating Station	5.0-44
5.0-30	Length Frequency of Blueback Herring in Impingement Collections at Roseton Generating Station	5.0-45
5.0-31	Length Frequency of Blueback Herring in Impingement Collections at Danskammer Point Generating Station	5.0-46
5.0-32	Length Frequency of Spottail Shiner in Impingement Collections at Roseton Generating Station	5.0-47
5.0-33	Length Frequency of Spottail Shiner in Impingement Collections at Danskammer Point Generating Station	5.0-48
5.0-34	Length Frequency of Striped Bass in Impingement Collections at Roseton Generating Station	5.0-50
5.0-35	Length Frequency of Striped Bass in Impingement Collections at Danskammer Point Generating Station	5.0-51
5.0-36	Length Frequency of White Perch in Impingement Collections at Roseton Generating Station	5.0-52

LIST OF TABLES
(Continued)

Table No.	Title	Page No.
5.0-37	Length Frequency of White Perch in Impingement Collections at Danskammer Point Generating Station	5.0-53
5.0-38	Annual Mean Impingement Rate, Estimated Total Number, and Percentage of the Total Estimated Number Impinged for Selected Species - Danskammer Point Generating Station	5.0-55
5.0-39	Annual Mean Impingement Rate, Estimated Total Number, and Percentage of the Total Estimated Number Impinged for Selected Species - Roseton Generating Station	5.0-56
6.0-1	Water Quality Sampling Dates	6.0-3
6.0-2	Freshwater Flows at Green Island	6.0-8
6.0-3	Monthly Air Temperature and Precipitation Recorded at West Point	6.0-10
6.0-4	1980 Daily Mean Physiochemistry - Roseton Impingement	6.0-32
6.0-5	1980 Daily Mean Physiochemistry - Danskammer Point Impingement	6.0-33

CHAPTER 1.0

REPORT SUMMARY

The entrainment abundance program conducted at Roseton and Danskammer Point during 1980 resulted in the identification of a total of 13 families consisting of 19 species. Entrainment sampling was conducted at the Danskammer Point intake and Roseton seal well between 22 April and 27 August using 4-in. pumps. Alosa spp. and Morone spp. comprised greater than 75% of the total larvae collected, with the major concentrations of the two taxa observed between mid-May and mid-June. Peak American shad concentrations occurred in June and bay anchovy in August. No consistent diel trends were evidenced for the major species at either plant.

Peak concentrations for total larvae occurred on the same dates at both plants, and larval abundance patterns at the two stations were in close agreement from date to date. Danskammer Point entrainment samples, however, yielded about 1.5 times more larvae than Roseton samples.

The 1980 species inventory, as well as abundance patterns for select species, was comparable to that of previous years. The only notable difference was the decrease in striped bass egg concentrations entrained in 1980.

A total of 49 fish species and three invertebrate species were identified in 1980 impingement collections. White perch was the most numerous species at both plants. The top three species at Danskammer Point (white perch, alewife, and blueback herring) comprised 67.6% of the total number collected, while the top three at Roseton (white perch, blueback herring, and bay anchovy) comprised 76.5%. A greater number of organisms were collected at Danskammer Point (83,744) than at Roseton (75,677) in 1980.

Significantly higher impingement rates occurred at night than during the day at both plants. The overall impingement rate pattern at the two plants was characterized by a spring peak followed by a decrease in the summer, an increase in the early fall, and a decrease with the onset of winter. The 1980 estimated number of total fish impinged at Roseton was 318,528, the highest number since the plant came on line in 1973. An estimated 342,353 fish were impinged on the Danskammer Point intake screens in 1980, the third highest total since sampling began in 1972.

The 1980 calculated flow in the Lower Hudson River was lower than the long-term average in every month. Monthly flows, as measured at Green Island, posted record lows for seven months when compared with monthly values for the last 10 years. The salt front was sporadically present in the study area during most of the year and continuously from mid-February through mid-March and August through October. The water temperature pattern in 1980 was consistent with past years, with minimum values recorded in January and February and maximum values in August. This is consistent with the expected pattern for northern temperate zone estuaries.

Weekly water temperatures, specific conductance, turbidity, pH, and dissolved oxygen values were similar among the three mid-channel river stations (MP63-68). Temperature and conductivity values recorded at the Roseton and Danskammer Point intake locations reflected water quality values for these parameters at river channel locations.

CHAPTER 2.0

INTRODUCTION

The ecological studies described in this report were conducted during 1980 by Lawler, Matusky & Skelly Engineers (LMS) at Hudson River locations in the vicinity of the Roseton and Danskammer Point Electric Generating Stations for Central Hudson Gas & Electric Corporation (CHGE). The 1980 entrainment and impingement studies were a continuation of biological sampling programs initiated in 1971, and were designed to permit evaluation of the environmental impact on the Hudson River's aquatic community and water quality resulting from once-through cooling systems at the two electrical generating facilities.

This report presents the materials and methods employed and the results of the aquatic ecology studies performed during 1980. Long-term trends in the data base are also presented and discussed. Supportive data related to the 1980 study presented in the report can be found in the Report Appendix.

CHAPTER 3.0

STATION AND SITE DESCRIPTION

3.1 GEOGRAPHIC LOCATION

The Roseton Electric Generating Station is located on the west bank of the Hudson River approximately 106 km north of the New York Battery and 6 km north of the Newburgh-Beacon Bridge. The Danskammer Point Electric Generating Station is also located on the west bank, approximately 915 m north of the Roseton plant, at a point of land protruding into the river. Plant locations are illustrated in Figure 3.0-1.

3.2 DESCRIPTION OF STUDY AREA

The northern Newburgh Bay area of the Hudson River is bounded on the south by the Newburgh-Beacon Bridge (km 100.4) and on the north by New Hamburg (km 109.5). Newburgh Bay to the south of the bridge is a wide bay with extensive shallow zones, especially along the eastern shore. The City of Newburgh dominates the western shore of the bay. North of the study area, the Hudson River flows through a comparatively deep, narrow channel extending to Esopus Meadows (km 140). The northern Newburgh Bay region of the Hudson River is widest (about 1.5 km) just south of Roseton and narrows slightly in the area of the Newburgh-Beacon Bridge. Wappinger Creek is the only major tributary in the study area, entering on the eastern side of the Hudson River just south of New Hamburg; the area near the confluence is a wide, shallow shelf.

Hydrodynamic and physiographic characteristics of northern Newburgh Bay are presented in Table 3.0-1.

FIGURE 3.0-1

LOCATION OF THE ROSETON AND

DANSKAMMER POINT ELECTRIC GENERATING STATION

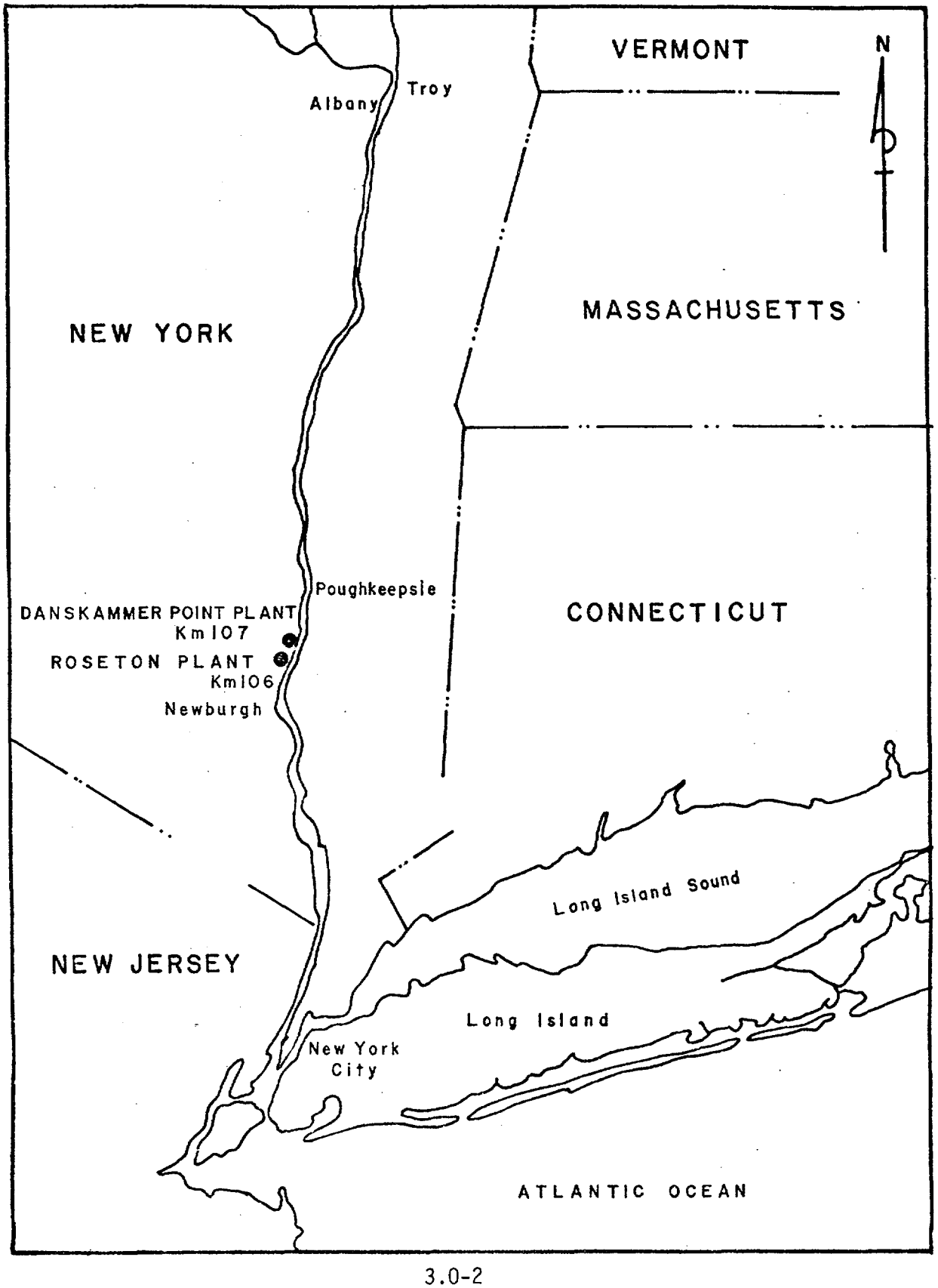


TABLE 3.0-1

HYDRODYNAMIC AND PHYSIOGRAPHIC CHARACTERISTICS OF NORTHERN NEWBURGH BAY

Roseton and Danskammer Point Vicinity

PARAMETER	UNITS	VALUE
Average Ebb Current Velocity	cm/sec	40.23[a]
Average Flood Current Velocity	cm/sec	36.27[a]
Mean High Water	m above mean sea level	0.91[b]
Mean Low Water	m above mean sea level	0.06[b]
Mean Tidal Level	m above mean sea level	0.46[b]
Mean Tidal Range	m	0.88[b]
Spring Tidal Range	m	1.01[b]
Maximum Depth	m	25.0[c]
Mean Depth	m	14.8[c]
Maximum Width	m	1555[c]
Mean Width	m	1335[c]
River Width at Danskammer Point Discharge	m	1045[c]
River Width at Roseton Discharge	m	1198[c]

[a]United States Department of Commerce, National Oceanic and Atmospheric Administration. 1978. Tidal current tables, 1979. Atlantic Coast of North America.

[b]United States Department of Commerce, National Oceanic and Atmospheric Administration. 1978. Tide tables, 1979. East Coast of North and South America.

[c]Lawler, Matusky & Skelly Engineers. 1975. Hudson River Study: aquatic factors governing the siting of power plants. Prepared for Empire State Electric Energy Research Corporation.

3.3 DESCRIPTIONS OF THE GENERATING STATIONS

3.3.1 Roseton Electric Generating Station

The Roseton plant is a fossil-fueled steam electric generating station whose two independent units have a total maximum net generating capacity of 1200 Mw. Steam is cooled by means of a once-through cooling system which uses Hudson River water pumped through a maximum of four pumps with a combined rated capacity of 40.4 m^3/sec. Heated effluent is discharged to the river through a single submerged discharge pipe with a multiport diffuser.

Units 1 and 2 of the Roseton Station were placed in commercial service on 31 December and 14 September 1974, respectively. Plant operation is described in detail in Chapter 2.0 of the 1977 CHGE Annual Progress Report (LMS 1979b). Table 3.0-2 presents plant-specific information related to flow and pump operation.

3.3.2 Danskammer Point Electric Generating Station

The Danskammer Point plant is a fossil-fueled steam electric generating station. The total dependable maximum net generating capability of its four steam turbine generators ranges from 480-491 Mw. The plant is equipped with a once-through cooling system that withdraws cooling water from the river north of the plant and discharges it into a cove area south of Danskammer Point via three separate subsurface discharge structures. Circulating water pump capacities at Danskammer Point are presented in Table 3.0-2.

TABLE 3.0-2

PLANT DESCRIPTION
CIRCULATING WATER PUMP FLOW CHARACTERISTICS

1980

I. ROSETON

No. OF PUMPS	No. OF UNITS	COOLING WATER FLOW (m^3/min)	(gpm)
1	1	825.1	218,000
2	1	1423.2	376,000
2	2	1582.1	418,000
3	2	2123.4	561,000
4	2	2426.2	641,000

II. DANSKAMMER POINT

UNIT	DESIGNATION	COOLING WATER FLOW (m^3/min)	(gpm)
1	1A	79.5	21,000
	1B	79.5	21,000
2	2A	79.5	21,000
	2B	79.5	21,000
3	3A	155.2	41,000
	3B	155.2	41,000
4	4A	189.2	50,000
	4B	189.2	50,000
	4C	189.2	50,000
TOTAL		1196.0	

CHAPTER 4.0

ENTRAINMENT ABUNDANCE

4.1 MATERIALS AND METHODS

4.1.1 Danskammer Point and Roseton

4.1.1.1 Field Collection. Ichthyoplankton entrainment samples were collected during a 126-day period from 24 April to 27 August 1980 at the Danskammer Point intake canal and the Roseton discharge at the seal well. Samples were collected at Danskammer from an area located directly downstream of the intake trash rack (Figure 4.0-1). Collections were made at three locations across the canal, approximately 1.0 m from the canal bottom: Danskammer Intake East (DITE), Danskammer Intake West (DITW), and Danskammer Intake Channel (DITCH). Stations DITW and DITE were 2.1 m from the respective bulkheads and DITCH was in the center of the canal, 2.7 m from these two stations. Roseton entrainment samples were collected from the main discharge flow at the seal well, approximately 2 m from the bottom (Figure 4.0-2).

Samples were collected once a week from 22 April (Danskammer Point) and 24 April (Roseton) to 28 May and from 24 June to 27 August, and twice a week from 3-21 June, the period of peak Morone spp. abundance (Table 4.0-1). The equipment used to collect entrainment abundance samples at Roseton and Danskammer Point is presented in Table 4.0-2.

Sampling procedures were similar at the two plants. The two 0.5-m plankton nets (1.6 m long) were suspended in water-filled tanks that served as a buffer and minimized larval damage. Water was

FIGURE 4.0-1

APPROXIMATE DANSKAMMER INTAKE SAMPLING LOCATIONS

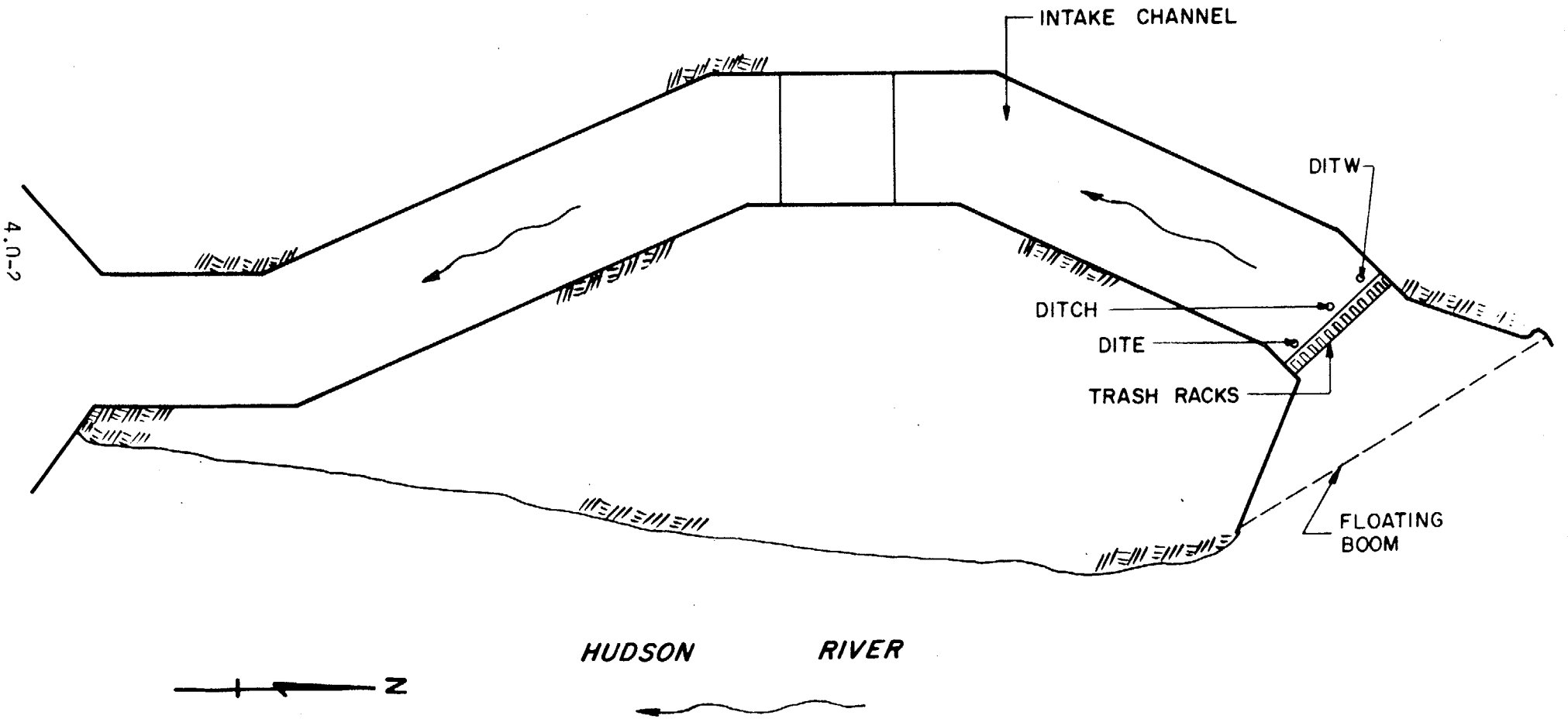


FIGURE 4.0-2

ENTRAINMENT ABUNDANCE SAMPLING PROGRAM

Roseton Discharge - Seal Well

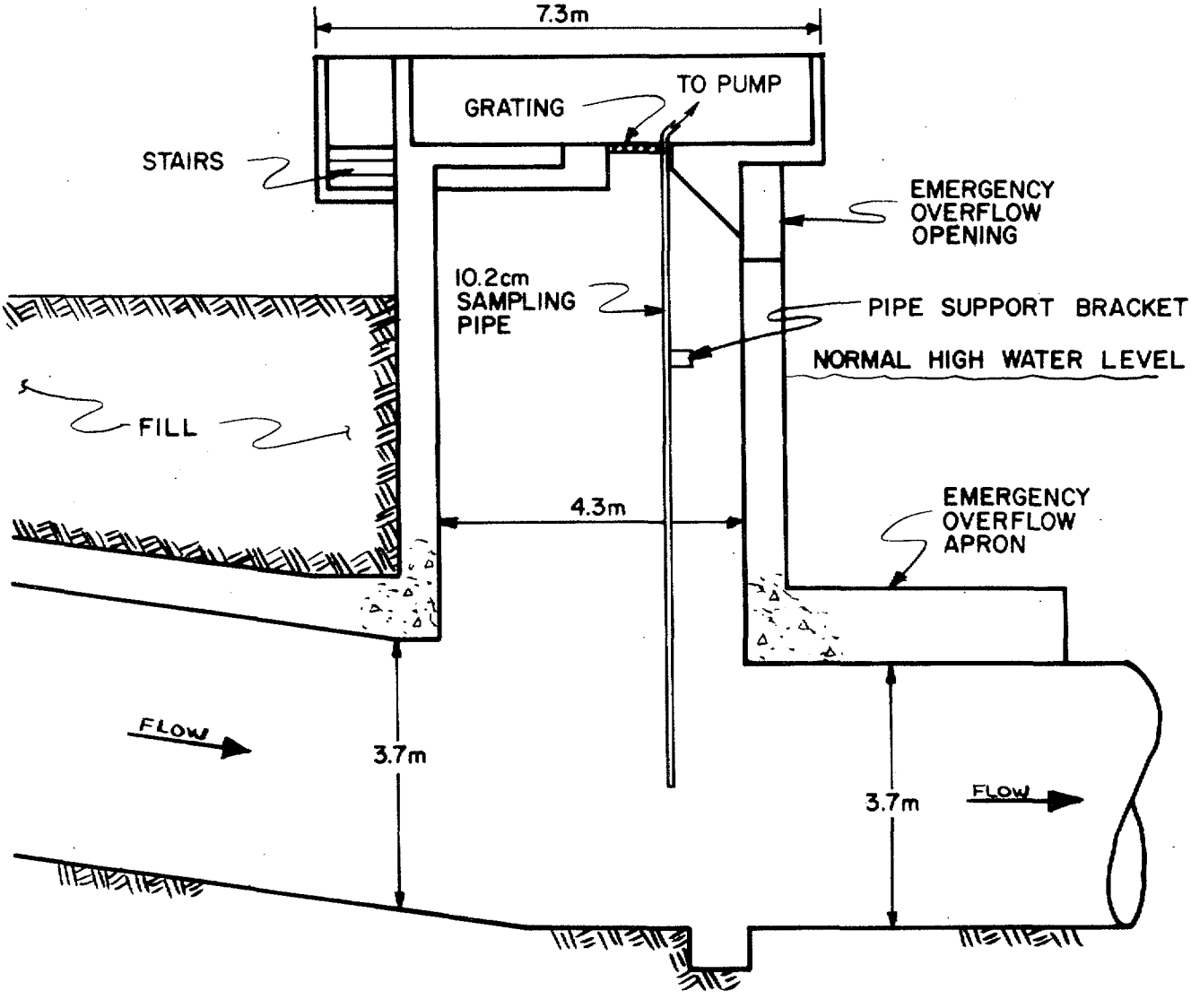


TABLE 4.0-1

ENTRAINMENT ABUNDANCE SAMPLING DATES
AND NUMBER OF SAMPLES COLLECTED

Roseton and Danskammer Point Generating Stations - 1980

SAMPLE DATE	NUMBER OF SAMPLES COLLECTED	
	DANSKAMMER POINT[b]	ROSETON[c]
22-23 Apr	24	0
24-25 Apr	0	8
29-30 Apr	24	8
6- 7 May	24	8
13-14 May	24	8
20-21 May	24	8
27-28 May	24	8
3- 4 Jun	24	10[a]
6- 7 Jun	24	13[a]
10-11 Jun	24	8
13-14 Jun	24	8
17-18 Jun	24	8
20-21 Jun	24	8
24-25 Jun	24	8
1- 2 Jul	24	8
8- 9 Jul	24	8
15-16 Jul	24	8
22-23 Jul	24	8
29-30 Jul	24	8
5- 6 Aug	24	8
12-13 Aug	24	8
19-20 Aug	24	8
26-27 Aug	24	8

[a]Additional samples collected because of Ecological Analysts, Inc.'s larvae program.
[b]One hr samples of 62.5 m^3, 1500 m^3/day.
[c]Three hr samples of 187 m^3, 1500 m^3/day.

TABLE 4.0-2

ENTRAINMENT ABUNDANCE EQUIPMENT LIST

Roseton and Danskammer Point Generating Stations - 1980

ITEM	ROSETON	DANSKAMMER
1/2-meter plankton net(1.6 m length) of 505 μm mesh with cod end bucket	2	2
40 x 60-inch cylinder for water bath	2	2
Homelite Pump (Model 160TP4-1B) powered by a 16HP Briggs & Stratton engine (Model 326431) with associated hoses and PVC pipe (4 inch)	1	1
Flowmeter (Blue-White F-300)	1	1
Flowmeter (Model UNI/F-1)	1	1
Case of 1-qt jars with premeasured volumes of 100% buffered formalin	4	4
Centrifugal pump with 2 hoses, 50-ft extension cord, and 2 wash bottles	1	1
Field labels	24	24
Field data sheets	9	25
Pens/pencils	2	2
1980 CHGE entrainment abundance work plan with clipboard	1	1
8-qt plastic pan and wide-mouth funnel	1	1
Marsh-McBirney velocity meter with probe and attachment assembly	1	1
Calibrated YSI-SCT meter or field thermometer, amber glass bottles, and Niskin water sampler	1 set	1 set
Safety kit, life jacket(s), hard hat(s), and crew chief kit	1 set	1 set
Stopwatch	1	1
Tape measure	1	1

pumped (Homelite pump) through a 10.2-cm sampling pipe at a rate of 1.044 m^3/min (0.613 cfs) into one of the two nets. The flow rate, as indicated by the in-line flowmeter, was controlled by the pump throttle setting. A stopwatch and totalizer flowmeter were used to record time and volume sampled. Eight 3-hr samples were collected at Roseton for each 24-hr period consisting of a composite of six successive 0.5-hr samples. Twenty-four 1-hr samples were collected at Danskammer Point (0.5 hr in each net) over each 24-hr period beginning at 0600 hrs.

When switching sampling locations at Danskammer (i.e., switching from DITE to DITW), the following procedures were followed:

- The end meter reading and time were recorded after the collection of a 1-hr sample.
- The flow was diverted from the 0.5-m net into the empty tank by switching the discharge valve.
- The valve at the next sampling location was opened (DITW) and the previously sampled location (DITE) was closed off.
- The 0.5-m net that was previously sampled was removed from the tank and the discharge flow switched back to that tank.
- A second 0.5-m net was placed into the empty tank and the flow diverted back to this net. The start time and initial meter reading were recorded.

At Danskammer Point, within a 3-hr block during the 24-hr sampling period, each of the three cross channel locations was sampled for one hour, with the 1-hr sample time assigned randomly.

At the end of each 0.5-hr collection period, the net was raised from the holding container(s) and suspended from a frame. A centrifugal pump was used to thoroughly wash down the net from the outside, concentrating all material in the cod end bucket.

At Roseton, surface, mid-, and bottom temperature and conductivity were determined and tide height measured at the trash racks in front of an operating circulating water pump. Temperature and conductivity measurements were taken at the three sampling locations at Danskammer Point at the depth of the intake pipe (1 m off the bottom). Water quality parameters were recorded every 3 hrs at Roseton and in the middle of the 1-hr intervals at Danskammer Point.

Temperature, conductivity, and tide height were recorded with each sample. Collection information was recorded on field data sheets. Samples were labeled, preserved with 5% buffered formalin, and returned to the laboratory for analysis.

4.1.1.2 Laboratory Analysis. Samples were stained with Rose Bengal to facilitate sorting. All eggs were counted and removed from the samples and eggs of Alosa spp. (alewife and blueback herring), American shad, Atlantic tomcod, striped bass, and white perch were identified to species. Alewife and blueback herring are grouped together because of the difficulty in distinguishing between them in their early life stages. All eggs of other species were recorded under the category "others." All larvae were counted, removed from the samples, and identified to the lowest possible taxonomic level. Fish larvae of the species Alosa spp., American shad, Atlantic tomcod, striped bass, and white perch were categorized by life stage and measured for total length. Samples containing large numbers of a single species and life stage were subsampled (subsample size = 60) and measured for total length. Concentrations were calculated as number of eggs or larvae per 1000 m^3.

4.1.1.3 Danskammer Point Intake Velocity Survey. Danskammer Point intake current velocities were measured once per month with a

Marsh-McBirney electronic flowmeter. The intake velocities were measured at six locations across the canal, every two feet from bottom to surface. Testing took place on five dates, with measurements recorded four times daily during different tidal stages.

4.1.1.4 Roseton Direct Release Experiments. To test the efficiency of the Roseton entrainment abundance sampling technique, striped bass larvae were released directly into various locations of the sampling apparatus and the percent recovery was calculated. Seven individual test runs were conducted on 22 and 31 May. Twenty newly hatched yolk-sac larvae were released on each of five test runs on 22 May; 50 yolk-sac larvae were released on each of two test runs on 31 May. Larvae were placed in the 0.5-m collection net or in the pipe upstream from the pump. Larvae were released for the first five tests through a ball valve, utilizing the suction force of the in-line flow. Releases for the final two tests were modified. Larvae were introduced into the sampling flow by creating a siphon from a test tank to the in-line flow. A garden hose was used as the siphon, allowing the larvae to be more gently introduced into the sampling pipe. Sampling was conducted for 5 min or 30 min to test the effects of both short-term and long-term pump operation.

4.2 RESULTS

4.2.1 Species Inventory/Percent Composition

A total of 13 families consisting of 19 identifiable species were identified from the 1980 Danskammer Point and Roseton entrainment samples (Tables 4.0-3 and 4.0-4). Crappies, white sucker, fourspine stickleback, pumpkinseed, and an unidentified (UID) member of the perch family (Percidae) were identified from the Danskammer Point samples only, and largemouth bass and a member of the mudminnow family (Umbridae) were collected in Roseton samples only.

3249
1640
4889

TABLE 4.0-3

ICHTHYOPLANKTON SPECIES INVENTORY AND TOTAL ABUNDANCE[a]
IN ENTRAINMENT COLLECTIONS - 1980

I. DANSKAMMER POINT

COMMON NAME	SCIENTIFIC NAME	TOTAL NUMBER COLLECTED	PERCENT OF TOTAL	TOTAL EGGS	PERCENT OF TOTAL
Herring	Alosa spp.[b]	6545	43.5	6791	50.0
Striped bass	Morone saxatilis[b]	3249	21.6	39	0.3
White perch	Morone americana[b]	1893	12.6	5351	39.4
Tessellated darter	Etheostoma olmstedi[b]	779	5.2	1	<0.1
Minnows and Carps	Cyprinidae[b]	764	5.1	79	0.6
Temperate bass	Morone spp.	489	3.3	0	-
Carp	Cyprinus spp.	252	1.7	0	-
Bay anchovy	Anchoa mitchilli	248	1.6	0	-
American shad	Alosa sapidissima[b]	189	1.3	4	<0.1
Rainbow smelt	Osmerus mordax	136	0.9	0	-
Killifish	Fundulus spp.[b]	58	0.4	79	0.6
American eel	Anguilla rostrata	56	0.4	0	-
Yellow perch	Perca flavescens	40	0.3	0	-
Blueback herring	Alosa aestivalis	30	0.2	0	-
Banded killifish	Fundulus diaphanus	27	0.2	0	-
Sunfish	Lepomis spp.	20	0.1	0	-
Hogchoker	Trinectes maculatus	11	0.1	0	-
Atlantic tomcod	Microgadus tomcod	8	0.1	0	-
Crappies	Pomoxis spp.	4	<0.1	0	-
Alewife	Alosa pseudoharengus	3	<0.1	0	-
Sunfishes	Centrarchidae	3	<0.1	0	-
White sucker	Catostomus commersoni	3	<0.1	0	-
Spottail shiner	Notropis hudsonius	2	<0.1	0	-
Fourspine stickleback	Apeltes quadracus	1	<0.1	0	-
Perches	Percidae	1	<0.1	0	-
Pumpkinseed	Lepomis gibbosus	1	<0.1	0	-
UID	Teleostei[b]	224	1.5	1249	9.2
	GRAND TOTAL	15,036		13,593	

[a]Includes yolk-sac, post-yolk-sac, juvenile, and UID life stage.
[b]Eggs identified.

TABLE 4.0-4

ICHTHYOPLANKTON SPECIES INVENTORY AND TOTAL ABUNDANCE[a]
IN ENTRAINMENT COLLECTIONS - 1980

I. ROSETON

COMMON NAME	SCIENTIFIC NAME	TOTAL NUMBER COLLECTED	PERCENT OF TOTAL	TOTAL EGGS	PERCENT OF TOTAL
Herring	Alosa spp.[b]	4561	44.9	989	39.0
Striped bass	Morone saxatilis	1640	16.1	0	-
White perch	Morone americana[b]	1316	13.0	1392	54.9
Temperate bass	Morone spp.	1015	10.0	0	-
Tessellated darter	Etheostoma olmstedi[b]	415	4.1	1	<0.1
Bay anchovy	Anchoa mitchilli	325	3.2	0	-
Minnows and Carps	Cyprinidae[b]	276	2.7	4	0.2
American shad	Alosa sapidissima[b]	88	0.9	1	<0.1
Carp	Cyprinus spp.	71	0.7	0	-
American eel	Anguilla rostrata	38	0.4	0	-
Rainbow smelt	Osmerus mordax	38	0.4	0	-
Yellow perch	Perca flavescens	15	0.1	0	-
Sunfish	Lepomis spp.	14	0.1	0	-
Atlantic tomcod	Microgadus tomcod	9	0.1	0	-
Banded killifish	Fundulus diaphanus	8	0.1	0	-
Hogchoker	Trinectes maculatus	4	<0.1	0	-
Blueback herring	Alosa aestivalis	3	<0.1	0	-
Alewife	Alosa pseudoharengus	2	<0.1	0	-
Spottail shiner	Notropis hudsonius	2	<0.1	0	-
Sunfishes	Centrarchidae	1	<0.1	0	-
Largemouth Bass	Micropterus salmoides	1	<0.1	0	-
Killifish	Fundulus spp.	1	<0.1	0	-
Mudminnow	Umbridae	1	<0.1	0	-
UID	Teleostei[b]	312	3.1	148	5.8
	GRAND TOTAL	10,156		2,535	

[a]Includes yolk-sac, post-yolk-sac, juvenile, and UID life stage.
[b]Eggs identified.

Alosa spp. (including alewife and blueback herring), striped bass, white perch, tessellated darter, Cyprinidae (including Cyprinus spp.), and Morone spp. comprised 93.3% of the entrainment samples collected at Danskammer Point and 91.7% of the Roseton entrainment sample total. Other species of particular interest in this area of the Hudson River include bay anchovy, Atlantic tomcod, and American shad. These species comprised an additional 3.0% of the Danskammer Point samples and 4.2% of the Roseton samples.

4.2.2 Daily Concentrations for Total Larvae and Select Species

4.2.2.1 Total Larvae. The Danskammer Point and Roseton Generating Stations peak entrainment season occurred during May and June in 1980 (Table 4.0-5). Peak larvae concentrations were found on 3 June at both plants and the distribution around these peaks approaches a curve skewed to the right. That is, with the onset of the spring spawning season, larvae appear suddenly and in great numbers. After the peak is reached, several larval species either remain in the area or the adults continue the spawning act, although of a lesser magnitude than previously. Concentrations at Danskammer Point were greater than at Roseton early in the season. However, after 10 June, concentrations were similar between the two plants. Temperature and conductivity measurements taken at the two plants are presented in Tables 4.0-6 and 4.0-7. Lowest temperatures at Roseton and Danskammer Point were recorded during the first week of sampling in April (10.0 and 8.8°C, respectively) and increased to 29.0 and 27.9°C, respectively, during August. Conductivities were also lowest in April (140 at Roseton and 139 μmhos/cm at Danskammer Point). Highest conductivities were recorded on the last day of sampling (27 August) and were 2630 and 2180 μmhos/cm, respectively. This indicates that all spawning activity in the area of the plants occurred while the salt wedge was still south of the area.

TABLE 4.0-5

DAILY MEAN ABUNDANCE[a] OF TOTAL SPECIES LARVAE
ALL LIFESTAGES COMBINED IN ENTRAINMENT COLLECTIONS

Roseton and Danskammer Point Generating Stations - 1980

START DATE	DANSKAMMER POINT	ROSETON
22 Apr	9.69	NS
24 Apr	NS	4.06
29 Apr	101.33	34.27
6 May	79.38	32.57
13 May	182.20	73.70
20 May	832.95	259.12
27 May	1412.93	772.12
3 Jun	2240.79	~~1323.19~~
6 Jun	1717.67	1078.62
10 Jun	1337.78	933.99
13 Jun	728.04	877.37
17 Jun	288.36	446.80
20 Jun	368.15	340.36
24 Jun	257.36	264.68
1 Jul	101.45	86.86
8 Jul	58.39	35.77
15 Jul	36.07	32.25
22 Jul	20.18	20.07
29 Jul	52.82	22.02
5 Aug	31.88	23.50
12 Aug	67.58	53.80
19 Aug	10.13	18.78
26 Aug	81.07	124.25

[a]Number of organisms per 1000 m^3.
NS - No Sample.

TABLE 4.0-6 (Page 1 of 2)

1980 DAILY MEAN PHYSIOCHEMISTRY

DANSKAMMER ENTRAINMENT

START DATE	MEAN TEMPERATURE (C)	MEAN D.O. (MG/L)	MEAN CONDUCTIVITY (UMHOS/CM)
4/22/80	10.0	*	139
4/23/80	8.8	*	140
4/29/80	10.0	*	160
4/30/80	10.0	*	188
5/06/80	13.2	*	165
5/07/80	12.9	*	182
5/13/80	15.6	*	164
5/14/80	14.4	*	163
5/20/80	16.8	*	173
5/21/80	16.7	*	178
5/27/80	18.3	*	190
5/28/80	18.1	*	193
6/03/80	20.3	*	278
6/04/80	20.4	*	358
6/06/80	19.8	*	222
6/07/80	19.0	*	237
6/10/80	18.5	*	203
6/11/80	18.0	*	207
6/13/80	19.6	*	206
6/14/80	19.3	*	210
6/17/80	21.1	*	199
6/18/80	20.1	*	202
6/20/80	20.3	*	219
6/21/80	20.1	*	207
6/24/80	22.1	*	206
6/25/80	22.0	*	205
7/01/80	22.3	*	228
7/02/80	21.5	*	233
7/08/80	22.2	*	231
7/09/80	21.5	*	248
7/15/80	24.7	*	216
7/16/80	24.8	*	220
7/22/80	26.1	*	228
7/23/80	25.8	*	213
7/29/80	26.1	*	256
7/30/80	24.6	*	325
8/05/80	27.3	*	268
8/06/80	26.6	*	257
8/12/80	27.9	*	252
8/13/80	27.9	*	280

NOTE. * NO DATA RECORDED.

TABLE 4.0-6 (Page 2 of 2)

1980 DAILY MEAN PHYSIOCHEMISTRY

DANSKAMMER ENTRAINMENT

START DATE	MEAN TEMPERATURE (C)	MEAN D.O. (MG/L)	MEAN CONDUCTIVITY (UMHOS/CM)
8/19/80	27.4	*	257
8/20/80	26.9	*	242
8/26/80	27.1	*	1377
8/27/80	26.8	*	2180

NOTE. * NO DATA RECORDED.

TABLE 4.0-7 (Page 1 of 2)

1980 DAILY MEAN PHYSIOCHEMISTRY

ROSETON ENTRAINMENT

START DATE	MEAN TEMPERATURE (C)	MEAN D.O. (MG/L)	MEAN CONDUCTIVITY (UMHOS/CM)
4/24/80	10.8	*	140
4/25/80	10.4	*	140
4/29/80	10.3	*	154
4/30/80	10.0	*	190
5/06/80	12.9	*	169
5/07/80	13.0	*	200
5/13/80	15.0	*	171
5/14/80	15.0	*	200
5/20/80	17.3	*	169
5/21/80	17.0	*	180
5/27/80	18.4	*	190
5/28/80	18.8	*	195
6/03/80	19.7	*	467
6/04/80	19.8	*	352
6/06/80	19.8	*	326
6/07/80	20.2	*	252
6/10/80	19.5	*	254
6/11/80	18.7	*	273
6/13/80	19.9	*	253
6/14/80	19.6	*	248
6/17/80	21.0	*	231
6/18/80	19.8	*	238
6/20/80	20.8	*	338
6/21/80	19.9	*	273
6/24/80	22.5	*	242
6/25/80	22.1	*	248
7/01/80	23.3	*	216
7/02/80	23.1	*	225
7/08/80	23.2	*	223
7/09/80	23.0	*	220
7/15/80	24.7	*	237
7/16/80	23.1	*	253
7/22/80	26.6	*	238
7/23/80	25.2	*	247
7/29/80	26.8	*	253
7/30/80	27.1	*	293
8/05/80	26.9	*	408
8/06/80	26.6	*	367
8/12/80	28.2	*	293
8/13/80	29.0	*	293

NOTE. * NO DATA RECORDED.

TABLE 4.0-7 (Page 2 of 2)

1980 DAILY MEAN PHYSIOCHEMISTRY

ROSETON ENTRAINMENT

START DATE	MEAN TEMPERATURE (C)	MEAN D.O. (MG/L)	MEAN CONDUCTIVITY (UMHOS/CM)
8/19/80	27.5	*	268
8/20/80	27.1	*	263
8/26/80	27.0	*	1804
8/27/80	27.1	*	2630

NOTE. * NO DATA RECORDED.

4.2.2.2 White Perch. White perch eggs and larvae were collected in Danskammer Point samples from 29 April through 22 July (85 days) and in Roseton entrainment samples from 29 April through 29 July (92 days) (Tables 4.0-8 and 4.0-9). The temperatures on the dates of first appearance of eggs and last appearance of post-yolk-sac larvae were, respectively, 10.0 and 24.6°C at Danskammer Point and 10.3 and 27.1°C at Roseton. The corresponding conductivities were 160 and 325 μmhos/cm at Danskammer Point and 154 and 293 μmhos/cm at Roseton. Juveniles were collected through 12 August and 26 August at Danskammer Point and Roseton, respectively. Peak egg concentrations were found at both plants from late May to early June, with greater mean daily concentrations ~~evidenced~~ at Danskammer Point. Peak larval concentrations extended from late May through late June, reflecting the prolonged and multiple spawning behavior of white perch (Scott and Crossman 1973). Peak white perch concentrations occurred earlier at Danskammer Point than at Roseton. This is probably because of the downstream movement of the larvae and the more upstream location of Danskammer Point. Juvenile concentrations were relatively low due to the termination of the program during their presence in the area, their movement downstream, and their increased swimming and avoidance capabilities. Collection information pertaining to individual samples may be found in the Report Appendix.

White perch larvae and juvenile concentrations during each collection interval are graphically presented in Figure 4.0-3. Only the nine dates with high concentrations were graphed since concentrations on other dates were too small to show diel entrainment patterns. No distinct cyclical pattern is evidenced by the graphs at either Danskammer Point or Roseton, and in general the daily entrainment pattern at the two plants is dissimilar. There is no apparent consistency among the graphs with respect to daily fluctuations of entrained white perch larvae. However, the period

TABLE 4.0-8

MEAN ABUNDANCE[a] OF WHITE PERCH ICHTHYOPLANKTON BY LIFESTAGE IN ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1980

START DATE[b]	EGGS	YOLK-SAC	POST-YOLK-SAC	JUVENILES	UNIDENTIFIED	TOTAL LARVAE[c]
22 Apr	0.00	0.00	0.00	0.00	0.00	0.00
24 Apr	NS	NS	NS	NS	NS	NS
29 Apr	36.44	0.00	0.00	0.00	0.00	0.00
6 May	250.77	0.66	0.00	0.00	0.00	0.67
13 May	113.28	12.64	0.00	0.00	0.00	12.64
20 May	821.52	37.55	103.02	0.00	4.46	145.02
27 May	934.32	9.23	112.80	0.00	0.65	122.68
3 Jun	927.06	12.71	225.73	0.00	1.35	239.78
6 Jun	299.51	8.67	244.66	0.00	0.00	253.33
10 Jun	47.70	5.98	141.37	1.93	0.00	149.28
13 Jun	37.64	1.36	61.36	0.00	0.00	62.72
17 Jun	41.62	3.36	39.28	0.00	0.00	42.64
20 Jun	8.72	2.67	70.16	0.00	0.00	72.83
24 Jun	8.71	0.00	87.31	0.00	0.67	87.97
1 Jul	0.66	0.00	15.40	0.00	0.00	15.40
8 Jul	0.00	0.00	23.00	1.35	0.00	24.35
15 Jul	0.00	0.00	8.66	2.61	0.00	11.27
22 Jul	0.00	0.00	8.79	1.36	0.00	10.14
29 Jul	0.00	0.00	0.00	4.82	0.00	4.82
5 Aug	0.00	0.00	0.00	1.29	0.00	1.29
12 Aug	0.00	0.00	0.00	1.30	0.00	1.30
19 Aug	0.00	0.00	0.00	0.00	0.00	0.00
26 Aug	0.00	0.00	0.00	0.00	0.00	0.00

[a]Number of organisms per 1000 m^3; allocated for white perch.
[b]All other sampling dates have concentrations of zero.
[c]Yolk-sac, post-yolk-sac, juvenile, and unidentified.
NS - No Sample.

TABLE 4.0-9

MEAN ABUNDANCE[a] OF WHITE PERCH ICHTHYOPLANKTON BY LIFESTAGE IN ENTRAINMENT COLLECTIONS

Roseton Generating Station - 1980

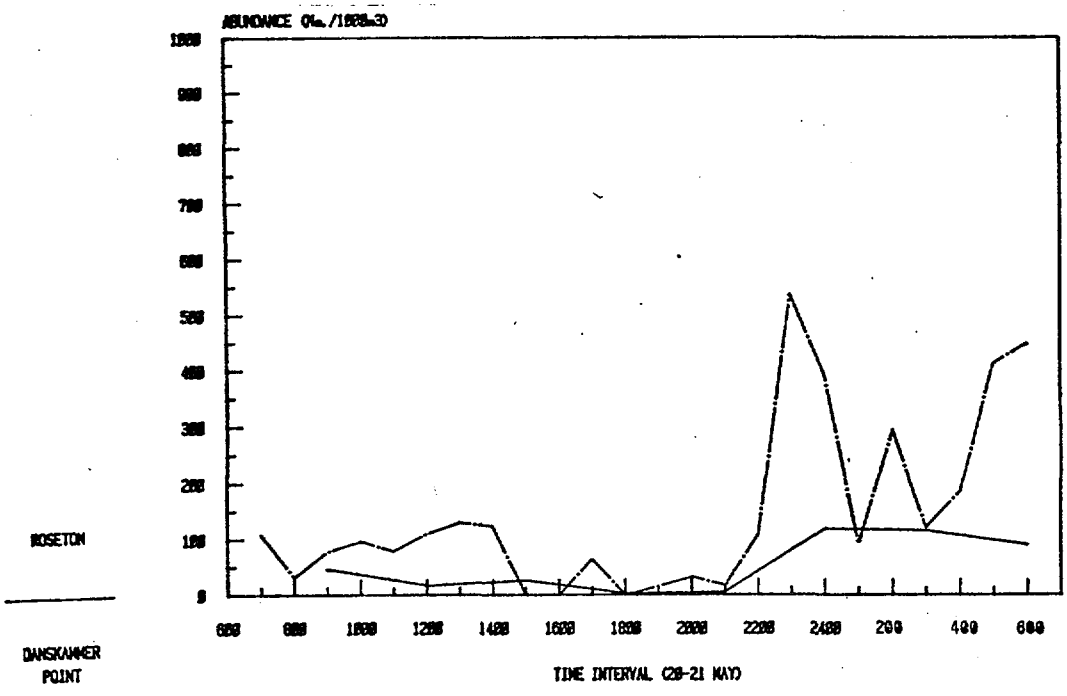
START DATE[b]	EGGS	YOLK-SAC	POST-YOLK-SAC	JUVENILES	UNIDENTIFIED	TOTAL LARVAE[c]
24 Apr	0.00	0.00	0.00	0.00	0.00	0.00
29 Apr	6.14	0.00	0.00	0.00	0.00	0.00
6 May	21.20	0.00	0.00	0.00	0.00	0.00
13 May	35.26	0.69	0.00	0.00	0.00	0.69
20 May	78.85	2.67	30.54	0.00	19.45	52.67
27 May	120.08	0.71	71.92	0.00	62.76	135.39
3 Jun	348.61	0.00	70.93	0.00	27.79	98.72
6 Jun	224.39	0.80	168.68	0.00	66.27	235.76
10 Jun	39.14	0.66	100.93	0.00	33.09	134.67
13 Jun	42.43	0.00	91.94	3.15	12.14	107.24
17 Jun	29.32	0.00	59.92	0.00	8.31	68.24
20 Jun	18.17	0.00	107.47	0.66	5.28	113.41
24 Jun	10.96	0.00	73.04	0.00	12.35	85.38
1 Jul	0.00	0.00	22.67	1.36	2.23	26.26
8 Jul	0.00	0.00	7.59	0.00	0.74	8.33
15 Jul	0.00	0.00	2.54	1.25	0.32	4.11
22 Jul	0.00	0.00	3.32	3.40	0.00	6.72
29 Jul	0.00	0.00	2.57	1.97	0.00	4.54
5 Aug	0.00	0.00	0.00	2.62	0.00	2.62
12 Aug	0.00	0.00	0.00	1.31	0.00	1.31
19 Aug	0.00	0.00	0.00	0.65	0.00	0.65
26 Aug	0.00	0.00	0.00	1.22	0.00	1.22

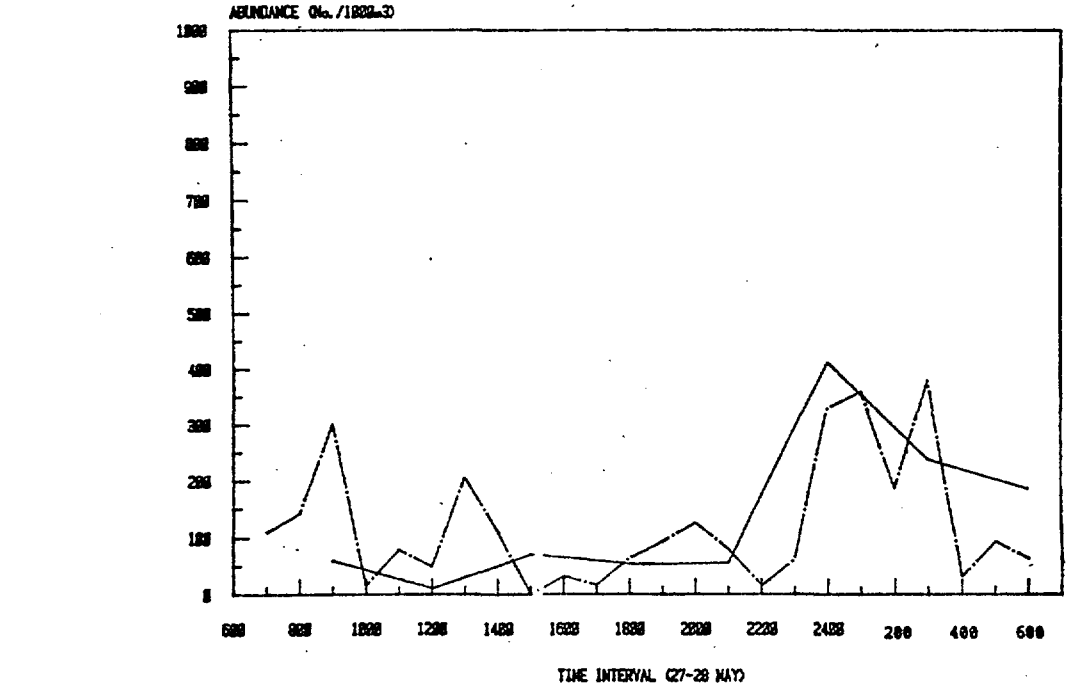
[a] Number of organisms per 1000 m^3; allocated for white perch.
[b] All other sampling dates have concentrations of zero.
[c] Yolk-sac, post-yolk-sac, juvenile, and unidentified.

FIGURE 4.0-3 (Page 1 of 4)

WHITE PERCH ABUNDANCE[a] BY COLLECTION INTERVAL

Roseton and Danskammer Point Generating Stations-1980



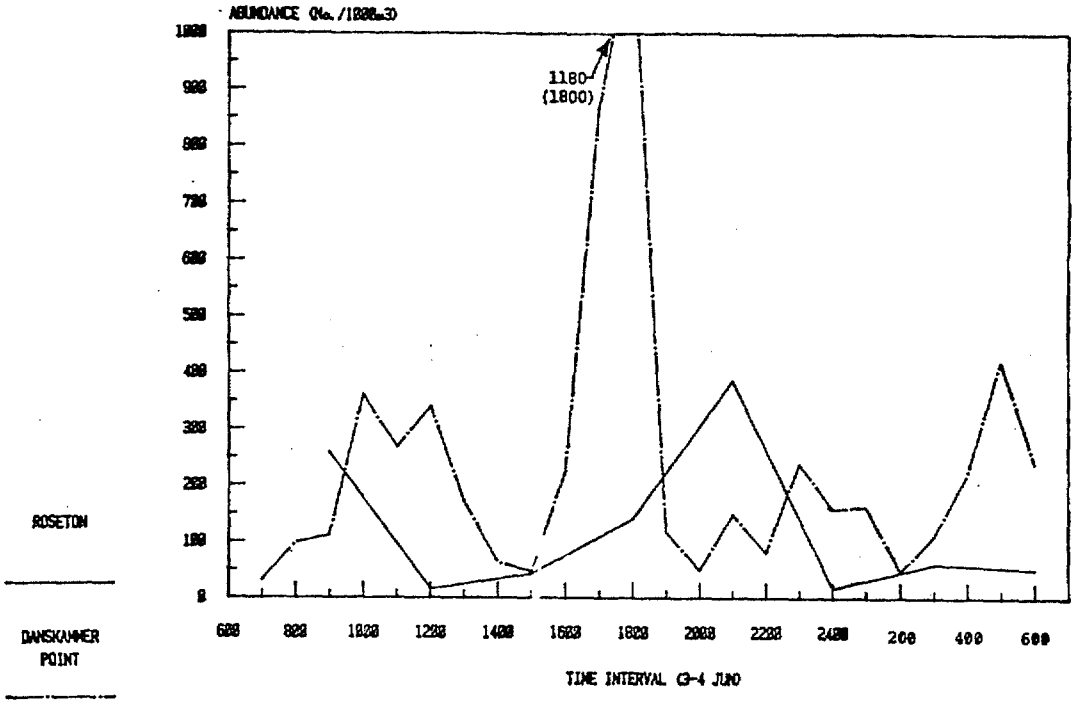


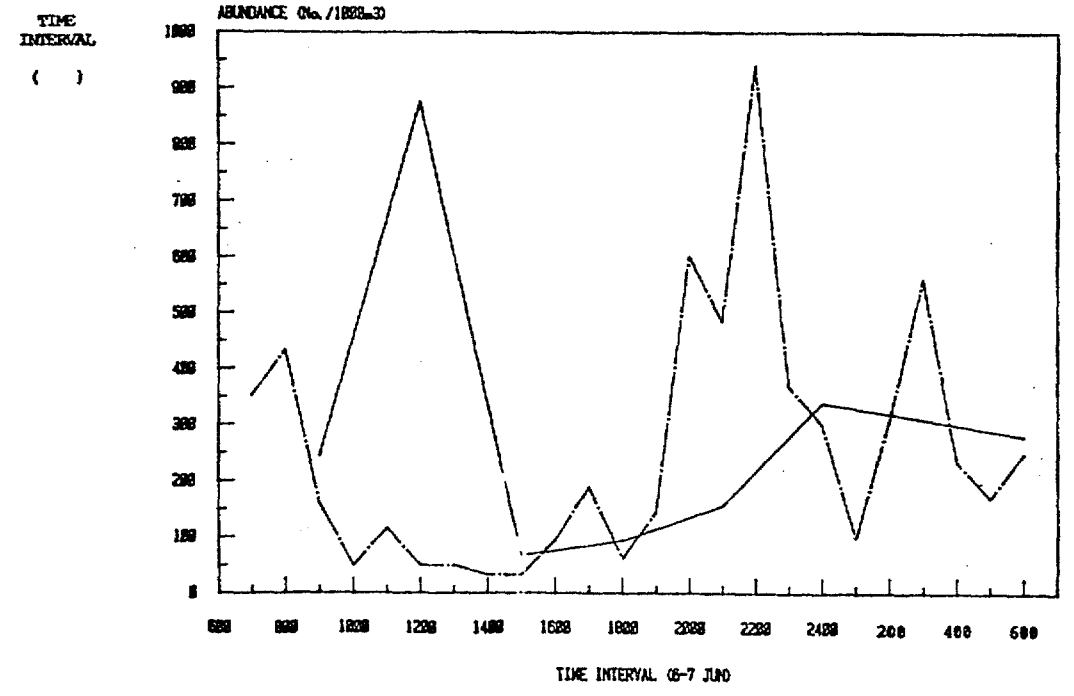
[a]Yolk-sac, post-yolk-sac, and juvenile entrainment.

FIGURE 4.0-3 (Page 2 of 4)

WHITE PERCH ABUNDANCE[a] BY COLLECTION INTERVAL

Roseton and Danskammer Point Generating Stations-1980



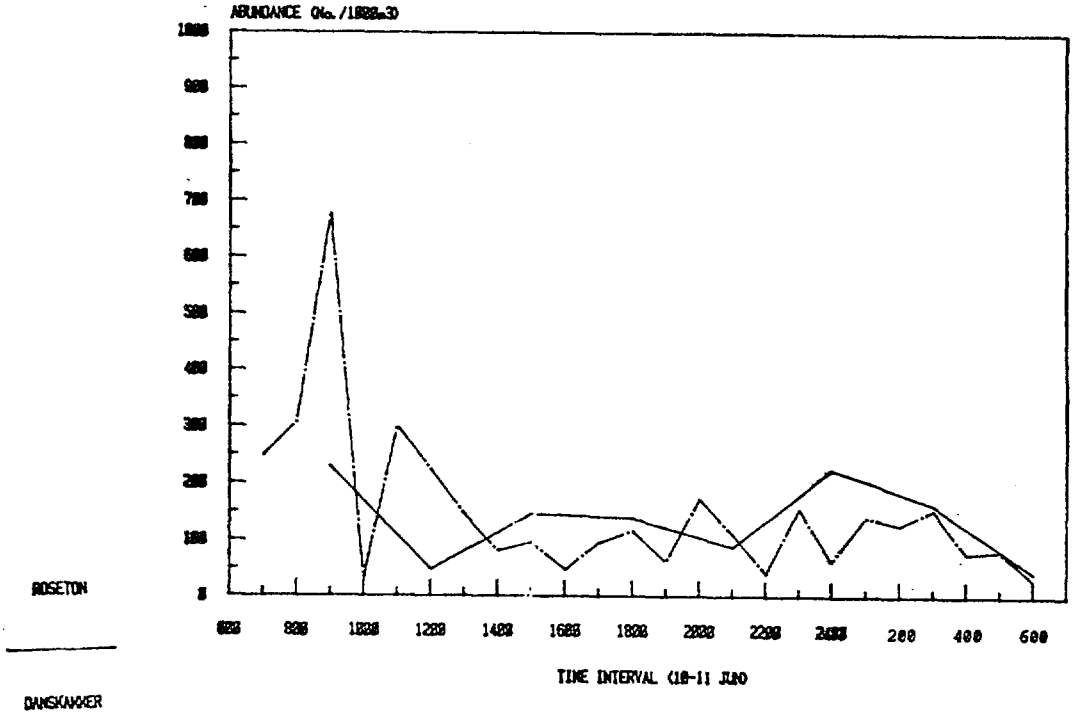


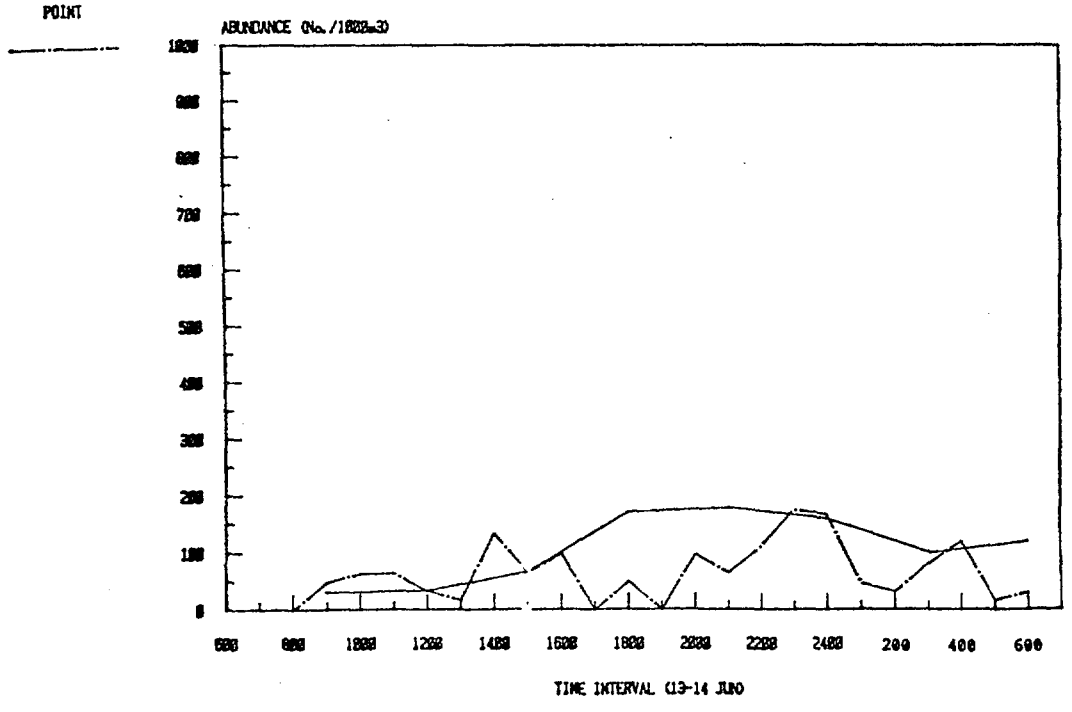
[a]Yolk-sac, post-yolk-sac, and juvenile entrainment.

FIGURE 4.0-3 (Page 3 of 4)

WHITE PERCH ABUNDANCE[a] BY COLLECTION INTERVAL

Roseton and Danskammer Point Generating Stations-1980



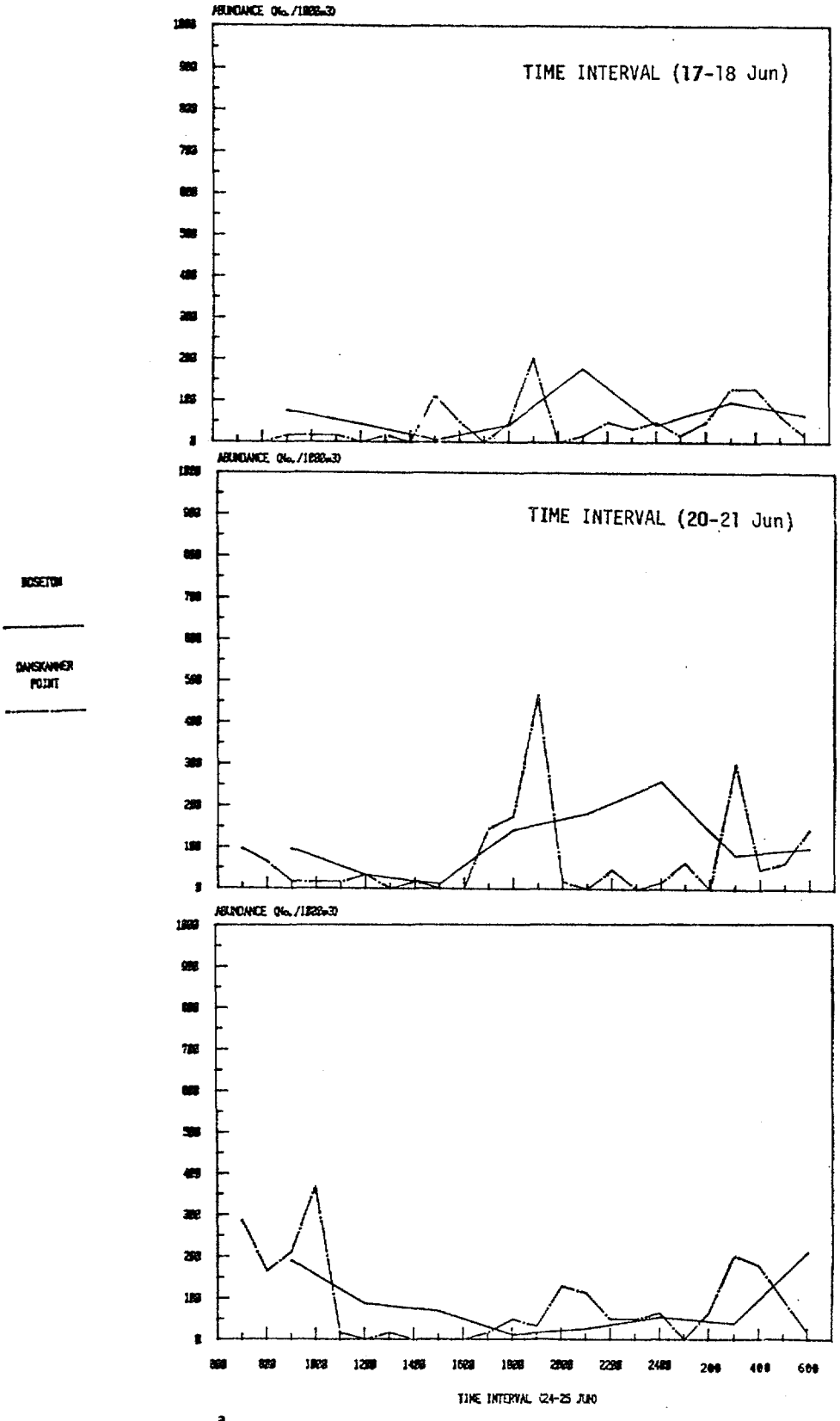


[a]Yolk-sac, post-yolk-sac, and juvenile entrainment.

FIGURE 4.0-3 (Page 4 of 4)

WHITE PERCH ABUNDANCE[a] BY COLLECTION INTERVAL

Roseton and Danskammer Point Generating Stations-1980



[a]Yolk-sac, post-yolk-sac, and juvenile entrainment.

from 1000 to 1600 generally had the lowest concentrations at both plants.

An analysis of the variance (ANOVA) on the combined Roseton and Danskammer Point data sets was performed and is presented in the Report Appendix. These results indicate a difference among 3-hr time periods for post-yolk-sac larvae concentrations. In general, higher concentrations were at night, and lower concentrations were during the day. No difference among photoperiods was found for eggs or yolk-sac larvae.

The length-frequency distributions for white perch yolk-sac, post-yolk-sac larvae, and juveniles are presented in Tables 4.0-10 to 4.0-15. White perch yolk-sac larvae were collected on 10 dates at Danskammer Point and five dates at Roseton, with all yolk-sac larvae between 2.1-5.0-mm in length. No real growth is apparent because of the recruitment of yolk-sac larvae into the population throughout the May-June period.

Post-yolk-sac white perch larvae were within the 2.1-25.0 mm length interval from 20 May through 29 July at the two plants. The length frequency data show higher numbers of larvae in the smaller length ranges early in the year and a broader range as the season progressed. This may be due to the growth of larvae within the study area and the continual recruitment of post-yolk-sac larvae, as well as the prolonged spawning period previously mentioned. The length-frequency data indicate a fairly steady increase in mean total length over the course of the sampling program.

Length of juvenile white perch ranged from 4.1 to 52.0 mm at Roseton and 5.1 to 52.3 mm at Danskammer Point. Juvenile larvae were collected first at Danskammer Point (10 June) then at Roseton (13 June). Daily mean length data are weak since thay are based on only a few individuals for each date.

TABLE 4.0-10

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF YOLK-SAC WHITE PERCH LARVAE
AT DITW, DITCH, & DITE
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE									
	06 MAY	13 MAY	20 MAY	27 MAY	03 JUN	06 JUN	10 JUN	13 JUN	17 JUN	20 JUN
2.1- 3.0			7	7	10	3			3	1
3.1- 4.0	1	16	41	7	9	10	8	2	2	3
4.1- 5.0		2	10							
TOTAL FISH FOR COLLECTION DATE	1	18	58	14	19	13	8	2	5	4
MEAN TOTAL LENGTH (MM)	3.4	3.6	3.6	3.0	2.9	3.2	3.5	3.6	3.0	3.4
INCREMENT OF CHANGE (MM)	.0	.2	.0	.6-	.1-	.3	.3	.1	.6-	.4

TABLE 4.0-11

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF YOLK-SAC WHITE PERCH LARVAE AT RDSW
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE				
	13 MAY	20 MAY	27 MAY	06 JUN	10 JUN
2.1- 3.0			1		
3.1- 4.0	1	3		1	1
4.1- 5.0		1			
TOTAL FISH FOR COLLECTION DATE	1	4	1	1	1
MEAN TOTAL LENGTH (MM)	3.4	3.8	2.9	3.3	3.1
INCREMENT OF CHANGE (MM)	.0	.4	.9-	.4	.2-

TABLE 4.0-12 (Page 1 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF POST-YOLK-SAC WHITE PERCH LARVAE
AT DITW, DITCH, & DITE
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE											
	20 MAY	27 MAY	03 JUN	06 JUN	10 JUN	13 JUN	17 JUN	20 JUN	24 JUN	01 JUL	08 JUL	15 JUL
3.1- 4.0	58	34	37	11	8	1	5	4	2			
4.1- 5.0	95	72	21	27	30	13	2	2	6	1		
5.1- 6.0	3	27	35	20	85	28	11	18	21			
6.1- 7.0		30	79	64	42	21	14	22	12		1	
7.1- 8.0		3	79	105	20	8	1	16	19	4	1	1
8.1- 9.0		1	46	74	12	5	3	8	20	2	1	
9.1-10.0			23	56	5	4	9	9	22	4	3	
10.1-11.0			2	6	3	5	7	9	15	4	9	2
11.1-12.0				2	1	6	3	7	5	3	7	4
12.1-13.0					1		3	1	4	2	7	2
13.1-14.0								4	2	3	5	1
14.1-15.0								1	1			1
15.1-16.0									1		1	
16.1-17.0												
17.1-18.0												
18.1-19.0												
19.1-20.0												
20.1-21.0												1
21.1-22.0												
22.1-23.0												
23.1-24.0												
24.1-25.0												1
TOTAL FISH FOR COLLECTION DATE	156	167	322	365	207	91	58	101	130	23	35	13
MEAN TOTAL LENGTH (MM)	4.2	4.9	6.7	7.5	6.1	6.8	7.7	7.9	8.3	10.0	11.4	13.4
INCREMENT OF CHANGE (MM)	.0	.7	1.8	.8	1.4-	.7	.9	.2	.4	1.7	1.4	2.0

TABLE 4.0-12 (Page 2 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF POST-YOLK-SAC WHITE PERCH LARVAE
AT DITW, DITCH, & DITE
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE 22 JUL
3.1- 4.0	
4.1- 5.0	
5.1- 6.0	1
6.1- 7.0	
7.1- 8.0	
8.1- 9.0	
9.1-10.0	
10.1-11.0	1
11.1-12.0	
12.1-13.0	1
13.1-14.0	2
14.1-15.0	4
15.1-16.0	2
16.1-17.0	
17.1-18.0	2
18.1-19.0	
19.1-20.0	
20.1-21.0	
21.1-22.0	
22.1-23.0	
23.1-24.0	
24.1-25.0	
TOTAL FISH FOR COLLECTION DATE	13
MEAN TOTAL LENGTH (MM)	13.8
INCREMENT OF CHANGE (MM)	.4

TABLE 4.0-13 (Page 1 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF POST-YOLK-SAC WHITE PERCH LARVAE AT RDSW
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE											
	20 MAY	27 MAY	03 JUN	06 JUN	10 JUN	13 JUN	17 JUN	20 JUN	24 JUN	01 JUL	08 JUL	15 JUL
2.1- 3.0						2						
3.1- 4.0	22	10	7	25	12	13	7	3	3	1		
4.1- 5.0	24	45	10	37	30	33	13	15	14	2		
5.1- 6.0	2	20	34	33	38	51	23	24	10	6		
6.1- 7.0		20	28	30	18	21	18	27	12	4	1	
7.1- 8.0		2	21	42	15	4	7	24	9	3		
8.1- 9.0			17	22	7	3	5	9	14	3	1	
9.1-10.0			3	9	13	3	5	9	24	2	1	
10.1-11.0			5	1	7	4	6	6	13	2	2	
11.1-12.0					1	4	4	14	4	2	4	1
12.1-13.0						3	1	10	1	6		1
13.1-14.0							1	8	7	1	2	1
14.1-15.0								5		2		
15.1-16.0								1		1		
16.1-17.0									1			
TOTAL FISH FOR COLLECTION DATE	48	97	125	199	141	141	90	155	112	35	11	3
MEAN TOTAL LENGTH (MM)	4.1	5.1	6.6	6.2	6.4	5.9	6.8	8.3	8.3	9.1	10.8	12.7
INCREMENT OF CHANGE (MM)	.0	1.0	1.5	-.4-	.2	-.5-	.9	1.5	.0	.8	1.7	1.9

TABLE 4.0-13 (Page 2 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF POST-YOLK-SAC WHITE PERCH LARVAE
AT ROSW
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE 22 JUL	29 JUL
2.1- 3.0		
3.1- 4.0		
4.1- 5.0		
5.1- 6.0	1	
6.1- 7.0	1	
7.1- 8.0		
8.1- 9.0		
9.1-10.0		
10.1-11.0		
11.1-12.0		1
12.1-13.0	1	1
13.1-14.0		1
14.1-15.0	1	1
15.1-16.0		
16.1-17.0	1	
TOTAL FISH FOR COLLECTION DATE	5	4
MEAN TOTAL LENGTH (MM)	11.2	13.1
INCREMENT OF CHANGE (MM)	1.5-	1.9

TABLE 4.0-14 (Page 1 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF JUVENILE WHITE PERCH
AT DITW, DITCH & DITE
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE						
	10 JUN	08 JUL	15 JUL	22 JUL	29 JUL	05 AUG	12 AUG
5.1- 6.0	2						
6.1- 7.0							
7.1- 8.0							
8.1- 9.0							
9.1-10.0	1						
10.1-11.0							
11.1-12.0							
12.1-13.0							
13.1-14.0							
14.1-15.0							
15.1-16.0							
16.1-17.0							
17.1-18.0							
18.1-19.0						1	
19.1-20.0					2		
20.1-21.0							
21.1-22.0							
22.1-23.0					1		
23.1-24.0							
24.1-25.0			1		1		
25.1-26.0			1				
26.1-27.0		2					
27.1-28.0							
28.1-29.0							
29.1-30.0					1		
30.1-31.0							
31.1-32.0			1		1		
32.1-33.0							
33.1-34.0							
34.1-35.0							
35.1-36.0			1		1		
36.1-37.0							
37.1-38.0							1
38.1-39.0				1			
39.1-40.0							
40.1-41.0						1	
41.1-42.0							
42.1-43.0							
43.1-44.0							
44.1-45.0							

TABLE 4.0-14 (Page 2 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF JUVENILE WHITE PERCH
AT DITW, DITCH, & DITE
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL CONT'D	NUMBER OF FISH PER SAMPLING DATE						
45.1-46.0				1			
46.1-47.0							
47.1-48.0							
48.1-49.0							
49.1-50.0							
50.1-51.0							
51.1-52.0							
52.1-53.0							
53.1-54.0							
54.1-55.0							
55.1-56.0							
56.1-57.0							
57.1-58.0							
58.1-59.0							
59.1-60.0							
60.1-99.9							1
TOTAL FISH FOR COLLECTION DATE	3	2	4	2	7	2	2
MEAN TOTAL LENGTH (MM)	6.8	26.5	29.6	42.3	26.5	30.0	52.3
INCREMENT OF CHANGE (MM)	.0	19.7	3.1	12.7	15.8-	3.5	22.3

TABLE 4.0-15 (Page 1 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF JUVENILE WHITE PERCH
AT RDSW
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE									
	13 JUN	20 JUN	01 JUL	15 JUL	22 JUL	29 JUL	05 AUG	12 AUG	19 AUG	26 AUG
4.1- 5.0	1									
5.1- 6.0	2									
6.1- 7.0	1									
7.1- 8.0										
8.1- 9.0										
9.1-10.0										
10.1-11.0	1									
11.1-12.0										
12.1-13.0										
13.1-14.0										
14.1-15.0										
15.1-16.0					1	1				
16.1-17.0		1			1					
17.1-18.0					1					
18.1-19.0										
19.1-20.0			1		1					
20.1-21.0					1					
21.1-22.0			1							
22.1-23.0										
23.1-24.0										
24.1-25.0										
25.1-26.0										
26.1-27.0				1						
27.1-28.0										
28.1-29.0										
29.1-30.0										
30.1-31.0										
31.1-32.0				1		1		1		
32.1-33.0										
33.1-34.0								1		
34.1-35.0										
35.1-36.0										
36.1-37.0										
37.1-38.0										
38.1-39.0										
39.1-40.0							1			
40.1-41.0							1			
41.1-42.0										
42.1-43.0										
43.1-44.0							1			1

TABLE 4.0-15 (Page 2 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF JUVENILE WHITE PERCH AT RDSW
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL CONT'D	NUMBER OF FISH PER SAMPLING DATE									
44.1-45.0										
45.1-46.0							1			
46.1-47.0						1				
47.1-48.0										
48.1-49.0									1	
49.1-50.0										
50.1-51.0										
51.1-52.0										1
TOTAL FISH FOR COLLECTION DATE	5	1	2	2	5	3	4	2	1	2
MEAN TOTAL LENGTH (MM)	6.7	16.1	20.2	29.5	18.0	31.7	42.5	32.8	49.0	48.0
INCREMENT OF CHANGE (MM)	.0	9.4	4.1	9.3	11.5-	13.7	10.8	9.7-	16.2	1.0-

4.2.2.3 Striped Bass. Striped bass eggs were collected at Danskammer Point from 6 May to 10 June in relatively low concentrations (Table 4.0-16). Temperatures on the dates of first and last appearance were 19.8 and 18.0°C, with a high of 20.4°C during this period. Conductivities were 165 and 207 μmhos/cm, with a high of 358 μmhos/cm. No striped bass eggs were collected in Roseton entrainment samples in 1980 (Table 4.0-17).

Striped bass larvae were collected from 13 May to 15 July at Danskammer Point and from 13 May to 22 July at Roseton. Peak concentration occurred on 3 June at both plants, and the period of highest concentrations was from late May to early June. Temperatures at Danskammer Point and Roseton on 3 June were 20.3 and 19.7°C, respectively. Striped bass eggs and larvae were present in entrainment samples at each plant for a period of 71 days. Temperatures on dates of first and last appearance were 15.6 and 24.8°C at Danskammer Point and 15.0 and 25.2°C at Roseton. Conductivities were 164 and 220 μmhos/cm and 171 and 238 μmhos/cm, respectively. Collection information pertaining to individual samples may be found in the Report Appendix.

Graphical analysis of concentrations by collection interval reveals no distinct trend for striped bass larvae entrainment (Figure 4.0-4). The diel entrainment pattern at Roseton was generally different from the pattern at Danskammer. Hourly collections at Danskammer Point exhibited variable diel trends for the eight dates examined. There was no consistent photoperiod pattern of high or low striped bass concentrations in Danskammer entrainment samples. Concentrations from 3-hr samples at Roseton do not exhibit any consistent daily pattern. The striped bass yolk-sac ANOVA did not detect a temporal difference in larval concentration among 3-hr time periods for combined Roseton and Danskammer data. However, a significant difference (α = .05) was detected for

TABLE 4.0-16

MEAN ABUNDANCE[a] OF STRIPED BASS ICHTHYOPLANKTON BY LIFESTAGE IN ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1980

START DATE[b]	EGGS	YOLK-SAC	POST-YOLK-SAC	JUVENILES	UNIDENTIFIED	TOTAL LARVAE[c]
29 Apr	0.00	0.00	0.00	0.00	0.00	0.00
6 May	0.67	0.00	0.00	0.00	0.00	0.00
13 May	9.24	2.59	0.00	0.00	0.00	2.59
20 May	5.21	48.09	1.35	0.00	1.31	50.74
27 May	2.63	137.06	235.64	0.00	15.07	387.77
3 Jun	4.00	169.62	575.73	0.00	1.98	747.33
6 Jun	2.66	139.03	374.75	0.00	29.39	543.18
10 Jun	1.35	33.88	214.79	3.21	0.00	251.88
13 Jun	0.00	4.72	22.63	0.00	3.38	30.73
17 Jun	0.00	2.02	14.14	0.00	0.00	16.16
20 Jun	0.00	15.36	65.08	0.00	3.40	83.84
24 Jun	0.00	4.00	31.57	0.00	2.67	38.24
1 Jul	0.00	0.00	11.27	0.00	0.00	11.27
8 Jul	0.00	0.00	0.64	0.00	0.00	0.64
15 Jul	0.00	0.00	0.64	0.65	0.00	1.29
22 Jul	0.00	0.00	0.00	0.00	0.00	0.00
29 Jul	0.00	0.00	0.00	1.31	0.00	1.31
5 Aug	0.00	0.00	0.00	0.00	0.00	0.00

[a] Number of organisms per 1000 m^3; allocated for striped bass.
[b] All other sampling dates have concentrations of zero.
[c] Yolk-sac, post-yolk-sac, juvenile, and unidentified.

TABLE 4.0-17

MEAN ABUNDANCE[a] OF STRIPED BASS ICHTHYOPLANKTON BY LIFESTAGE IN ENTRAINMENT COLLECTIONS

Roseton Generating Station - 1980

START DATE[b]	EGGS	YOLK-SAC	POST-YOLK-SAC	JUVENILES	UNIDENTIFIED	TOTAL LARVAE[c]
29 Apr	0.00	0.00	0.00	0.00	0.00	0.00
6 May	0.00	0.00	0.00	0.00	0.00	0.00
13 May	0.00	1.34	0.00	0.00	0.00	1.34
20 May	0.00	0.66	1.95	0.00	1.77	4.38
27 May	0.00	18.00	60.66	0.00	91.20	169.86
3 Jun	0.00	18.04	542.24	0.00	160.39	720.67
6 Jun	0.00	10.32	337.82	0.00	129.00	477.14
10 Jun	0.00	16.80	115.23	0.00	44.24	176.27
13 Jun	0.00	3.80	58.61	0.00	6.54	68.95
17 Jun	0.00	0.00	11.44	1.29	1.64	14.36
20 Jun	0.00	0.67	35.39	0.66	1.44	38.16
24 Jun	0.00	0.00	25.22	0.00	3.87	29.10
1 Jul	0.00	0.00	2.00	1.32	0.31	3.63
8 Jul	0.00	0.00	0.67	0.00	0.00	0.67
15 Jul	0.00	0.00	0.63	1.26	0.32	2.21
22 Jul	0.00	0.00	0.64	0.70	0.00	1.34
29 Jul	0.00	0.00	0.00	0.00	0.00	0.00
5 Aug	0.00	0.00	0.00	0.65	0.00	0.65
12 Aug	0.00	0.00	0.00	0.00	0.00	0.00

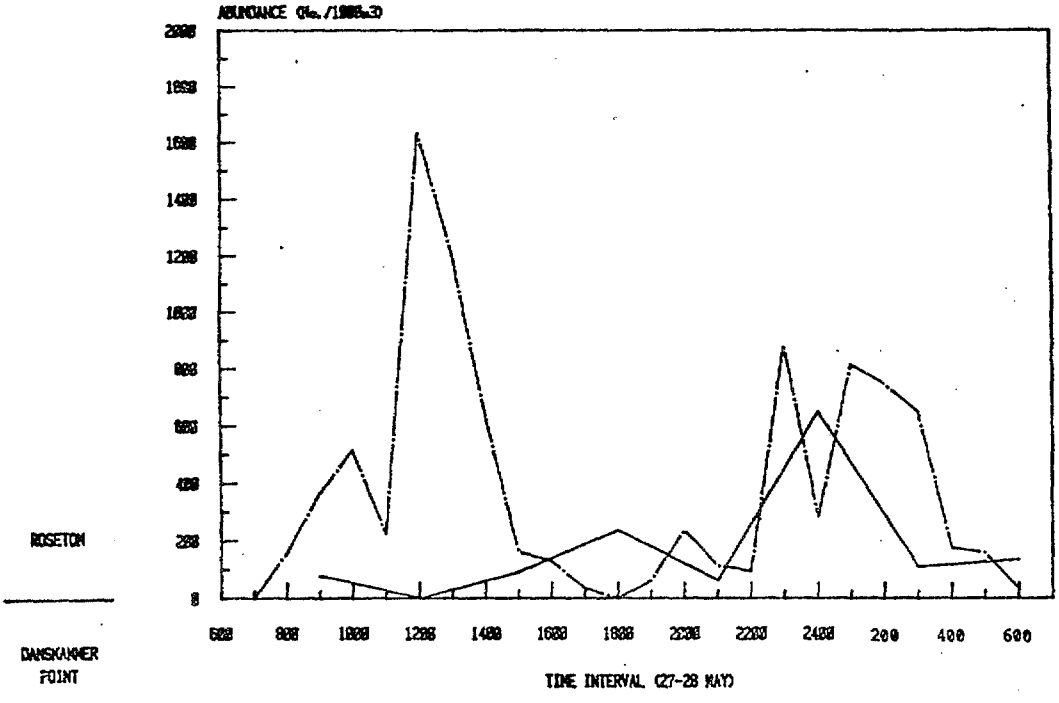
[a] Number of organisms per 1000 m^3; allocated for striped bass.
[b] All other sampling dates have concentrations of zero.
[c] Yolk-sac, post-yolk-sac, juvenile, and unidentified.

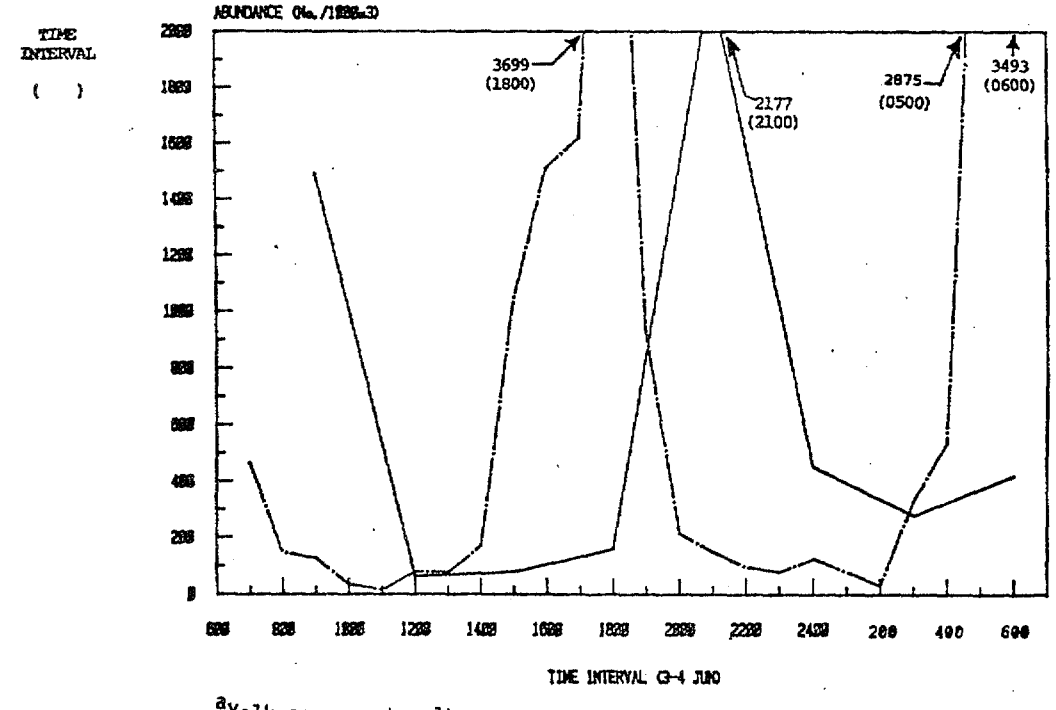
I think these no's are wrong! (more like 460) # 244

FIGURE 4.0-4 (Page 1 of 4)

STRIPED BASS ABUNDANCE[a] BY COLLECTION INTERVAL

Roseton and Danskammer Point Generating Stations-1980



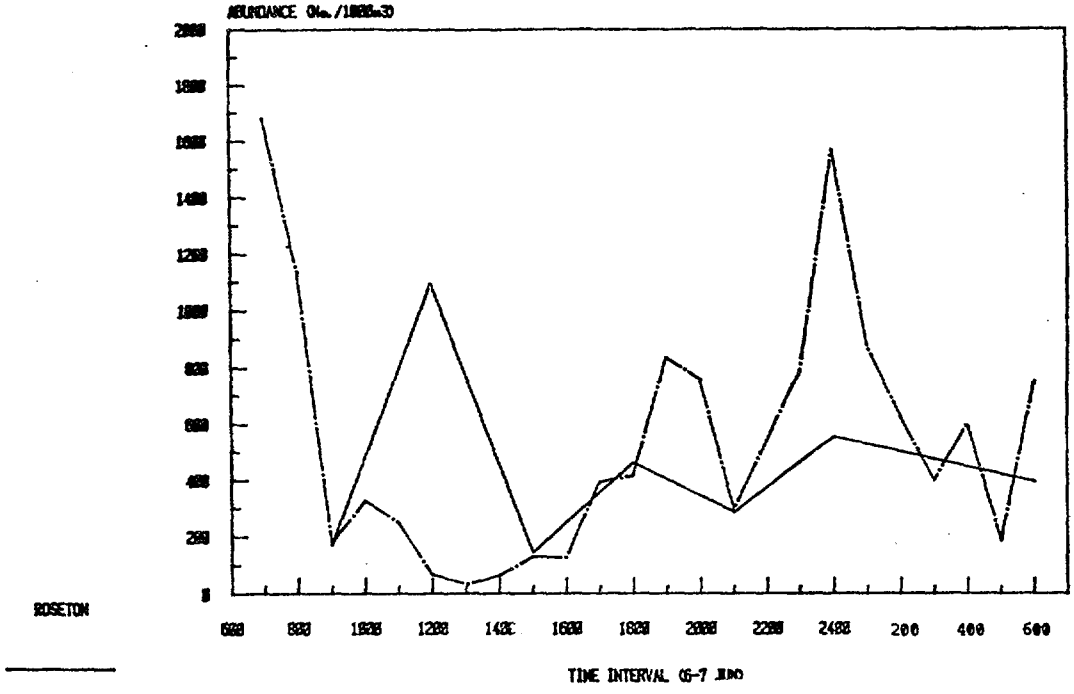


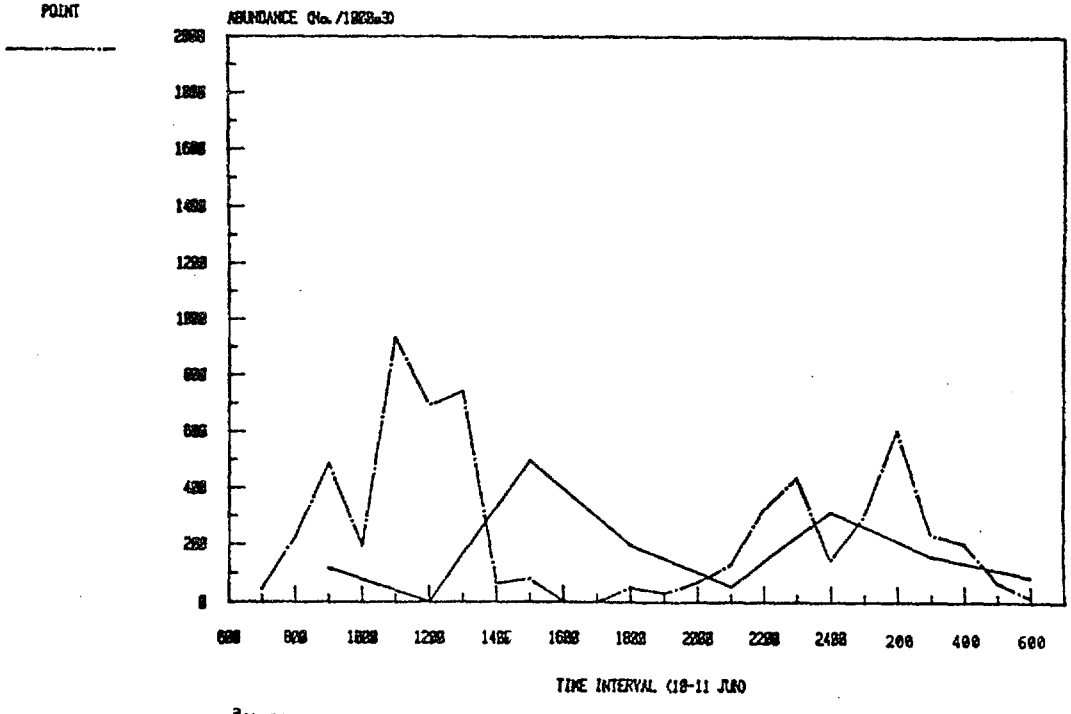
[a]Yolk-sac, post-yolk-sac, and juvenile entrainment.

FIGURE 4.0-4 (Page 2 of 4)

STRIPED BASS ABUNDANCE[a] BY COLLECTION INTERVAL

Roseton and Danskammer Point Generating Stations-1980



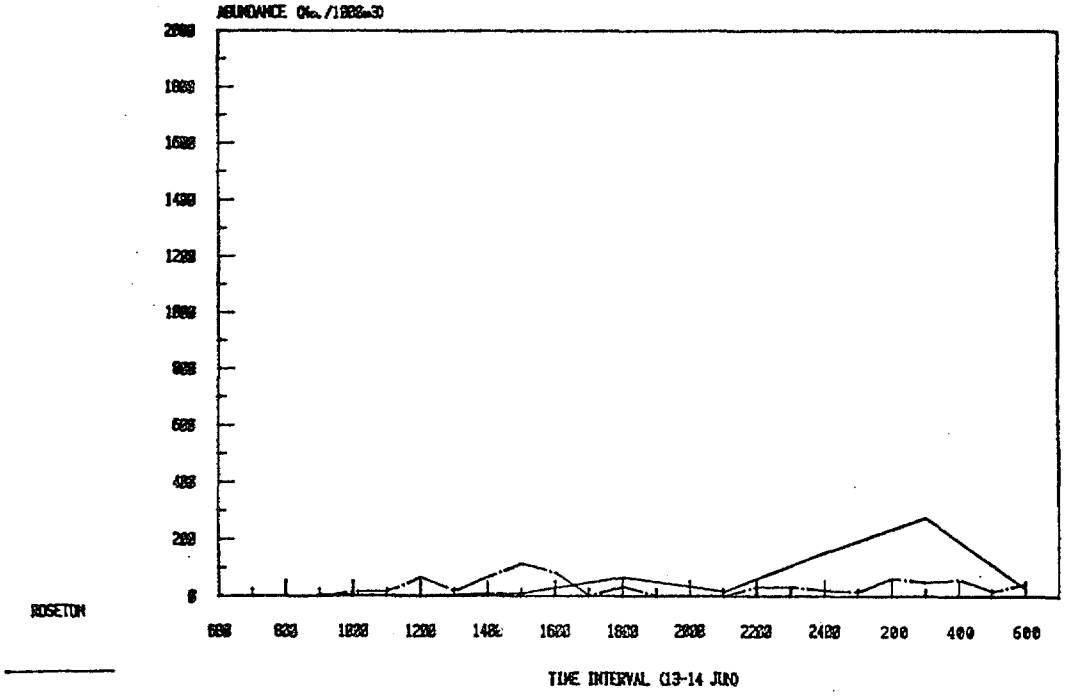


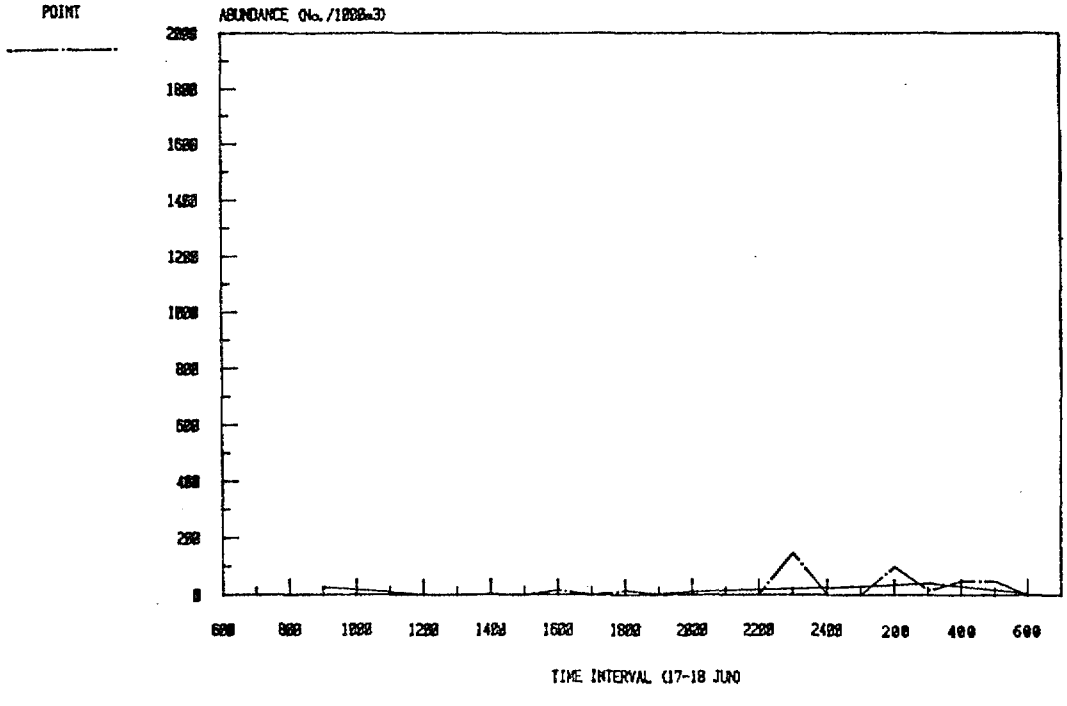
[a]Yolk-sac, post-yolk-sac, and juvenile entrainment.

FIGURE 4.0-4 (Page 3 of 4)

STRIPED BASS ABUNDANCE[a] BY COLLECTION INTERVAL

Roseton and Danskammer Point Generating Stations-1980



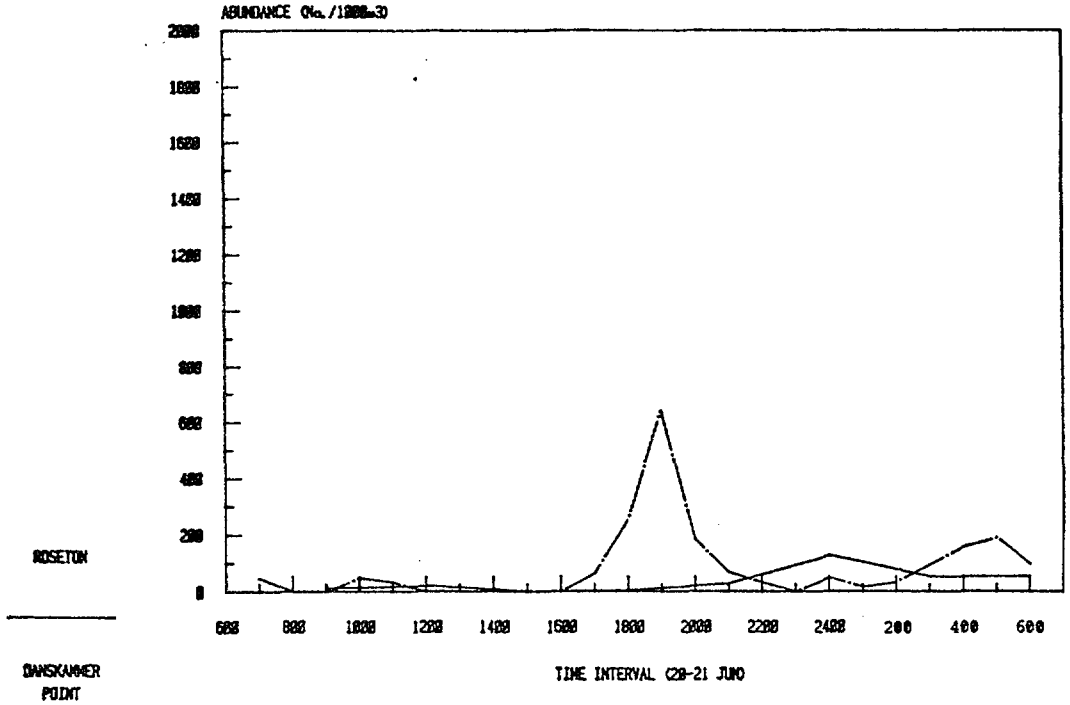


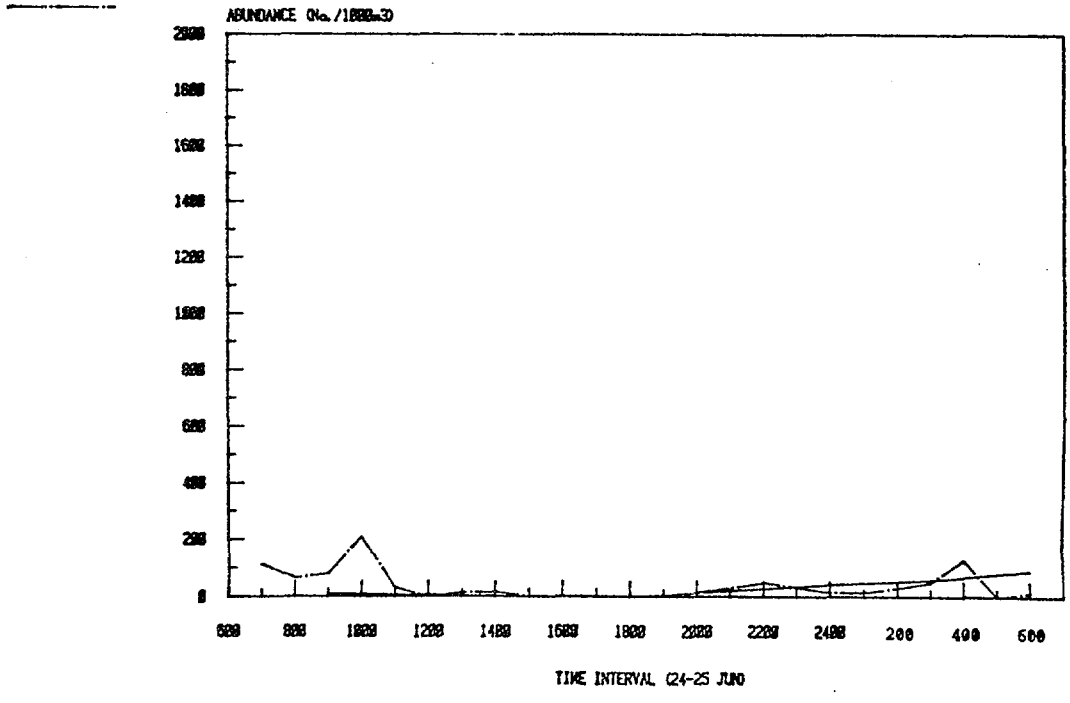
[a]Yolk-sac, post-yolk-sac, and juvenile entrainment.

FIGURE 4.0-4 (Page 4 of 4)

STRIPED BASS ABUNDANCE[a] BY COLLECTION INTERVAL

Roseton and Danskammer Point Generating Stations-1980





[a] Yolk-sac, post-yolk-sac, and juvenile entrainment.

post-yolk-sac larvae. Larger concentrations were collected from midnight to dawn; lower concentrations occurred during daylight hours (Report Appendix).

Striped bass yolk-sac larvae were collected from 13 May to 24 June at Danskammer Point and 13 May to 20 June at Roseton (Tables 4.0-18 and 4.0-19). As evidenced for white perch, no growth was apparent for striped bass yolk-sac larvae due to the duration of the spawning period and subsequent recruitment to the population. Yolk-sac larvae were within the 2.1-8.0-mm length range, with the exception of one 9.1-10.0-mm larva collected on 6 June at Danskammer Point.

Post-yolk-sac larvae were collected from 20 May to 15 July at Danskammer Point and ranged from 3.1 to 28.0 mm (Table 4.0-20). Roseton entrainment samples contained striped bass post-yolk-sac larvae from 20 May to 22 July. They ranged from 4.1 to 19.0 mm (Table 4.0-21). Steady growth is indicated by both the actual length-frequency information and the daily mean total length. The length-frequency distribution during the second half of June was skewed to the right, indicating the presence of smaller striped bass post-yolk-sac larvae entering the population.

Very few juvenile striped bass were collected in 1980, providing little information on growth at this life stage (Tables 4.0-22 and 4.0-23). At Roseton, juveniles in the 13.1 to 48.0-mm length intervals were collected from 22 July to 5 August. Juveniles between 5.1 and 32.0 mm were collected from 10 June to 29 July at Danskammer Point. The lack of information at this life stage results from either the inadequacy of the pump apparatus in collecting juveniles or their emigration ~~from the area~~ during or just prior to metamorphosis.

TABLE 4.0-18

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF YOLK-SAC STRIPED BASS LARVAE
AT DITW, DITCH, & DITE
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE									
	13 MAY	20 MAY	27 MAY	03 JUN	06 JUN	10 JUN	13 JUN	17 JUN	20 JUN	24 JUN
2.1- 3.0		1								
3.1- 4.0	1	6	21	5	4	8				
4.1- 5.0	1	9	18	21	19	6	2	1	1	
5.1- 6.0	2	38	81	96	145	32	4	2	18	6
6.1- 7.0		18	60	17	15	3	1		2	
7.1- 8.0		2								
8.1- 9.0										
9.1-10.0					1					
TOTAL FISH FOR COLLECTION DATE	4	74	180	139	184	49	7	3	21	6
MEAN TOTAL LENGTH (MM)	4.8	5.5	5.5	5.5	5.5	5.2	5.5	5.3	5.7	5.5
INCREMENT OF CHANGE (MM)	.0	.7	.0	.0	.0	.3-	.3	.2-	.4	.2-

TABLE 4.0-19

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF YOLK-SAC STRIPED BASS LARVAE AT RDSW
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE							
	13 MAY	20 MAY	27 MAY	03 JUN	06 JUN	10 JUN	13 JUN	20 JUN
3.1- 4.0	1					1	1	
4.1- 5.0			2	11	4	10	3	1
5.1- 6.0	1	1	14	14	7	13	2	
6.1- 7.0			10					
TOTAL FISH FOR COLLECTION DATE	2	1	26	25	11	24	6	1
MEAN TOTAL LENGTH (MM)	4.7	6.0	5.9	5.1	5.1	5.0	4.8	5.0
INCREMENT OF CHANGE (MM)	.0	1.3	.1-	.8-	.0	.1-	.2-	.2

TABLE 4.0-20

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF POST-YOLK-SAC STRIPED BASS LARVAE
AT DITW, DITCH, & DITE
ROSETON/DANSKAMMER VICINITY- 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE											
	20 MAY	27 MAY	03 JUN	06 JUN	10 JUN	13 JUN	17 JUN	20 JUN	24 JUN	01 JUL	08 JUL	15 JUL
3.1- 4.0				1								
4.1- 5.0		2	1	8	2							
5.1- 6.0	1	110	76	248	146	10	2	25	7			
6.1- 7.0	1	174	108	108	96	6		9	14			
7.1- 8.0		22	76	18	5	2		3	3			
8.1- 9.0		6	87	32	13	1		4	1			
9.1-10.0		1	63	32	8	1	2	5	2			
10.1-11.0			22	19	13	1		12	3			
11.1-12.0			6	8	17	3	2	15	5			
12.1-13.0			1	1	8	3	2	13	3			
13.1-14.0				2	1	6	5	4				
14.1-15.0					2	1	1	1	1	1		
15.1-16.0					1		4	1	3			
16.1-17.0							1	1	1			
17.1-18.0						1	1	1		1	1	
18.1-19.0							1		2	1		
19.1-20.0									2			
20.1-21.0										1		
21.1-22.0										1		1
22.1-23.0										3		
23.1-24.0										3		
24.1-25.0										2		
25.1-26.0										2		
26.1-27.0										1		
27.1-28.0										1		
TOTAL FISH FOR COLLECTION DATE	2	315	440	477	312	35	21	94	47	17	1	1
MEAN TOTAL LENGTH (MM)	6.1	6.3	7.7	6.7	7.0	9.4	13.1	9.4	9.9	23.0	17.6	22.0
INCREMENT OF CHANGE (MM)	.0	.2	1.4	1.0-	.3	2.4	3.7	3.7-	.5	13.1	5.4-	4.4

TABLE 4.0-21 (Page 1 of 2)

LENGTH-FREQUENCY OF POST-YOLK-SAC STRIPED BASS LARVAE AT ROSW ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE									BOTTOM	ALL TIMES	
	20 MAY	27 MAY	03 JUN	06 JUN	10 JUN	13 JUN	17 JUN	20 JUN	24 JUN	01 JUL	08 JUL	15 JUL
4.1- 5.0		1	5	14	7			1	1			
5.1- 6.0		31	39	125	70	5	1	12	4			
6.1- 7.0	1	44	37	33	20	3	2	3	2			
7.1- 8.0	2	3	70	22	8	4	2	1	1			
8.1- 9.0		2	78	54	7	6			4			
9.1-10.0		1	41	30	12	9	2	3	1			
10.1-11.0			18	9	9	24	3	3	3			
11.1-12.0			6		11	22	2	5	7		1	
12.1-13.0					5	14	2	7	5	1		
13.1-14.0					1	2	1	9	2			
14.1-15.0						1	1	1	3	1		
15.1-16.0							1	2	2			
16.1-17.0						2			1			
17.1-18.0								1	2	1		
18.1-19.0								1				1
TOTAL FISH FOR COLLECTION DATE	3	82	294	287	150	92	17	49	38	3	1	1
MEAN TOTAL LENGTH (MM)	6.9	6.3	7.9	6.9	7.2	10.6	10.3	10.4	11.0	14.9	11.2	18.4
INCREMENT OF CHANGE (MM)	.0	.6-	1.6	1.0-	.3	3.4	.3-	.1	.6	3.9	3.7-	7.2

TABLE 4.0-21 (Page 2 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF POST-YOLK-SAC STRIPED BASS LARVAE AT RDSW
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE 22 JUL
4.1- 5.0	
5.1- 6.0	
6.1- 7.0	
7.1- 8.0	
8.1- 9.0	
9.1-10.0	
10.1-11.0	
11.1-12.0	
12.1-13.0	
13.1-14.0	1
14.1-15.0	
15.1-16.0	
16.1-17.0	
17.1-18.0	
18.1-19.0	
TOTAL FISH FOR COLLECTION DATE	1
MEAN TOTAL LENGTH (MM)	13.7
INCREMENT OF CHANGE (MM)	4.7-

TABLE 4.0-22

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF JUVENILE STRIPED BASS
AT DITW, DITCH, & DITE
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE		
	10 JUN	15 JUL	29 JUL
5.1- 6.0	3		
6.1- 7.0	1		
7.1- 8.0			
8.1- 9.0			
9.1-10.0			
10.1-11.0			
11.1-12.0			
12.1-13.0	1		
13.1-14.0			
14.1-15.0			
15.1-16.0			
16.1-17.0			
17.1-18.0			
18.1-19.0			
19.1-20.0			
20.1-21.0			
21.1-22.0			
22.1-23.0			
23.1-24.0			
24.1-25.0			1
25.1-26.0			
26.1-27.0		1	
27.1-28.0			
28.1-29.0			
29.1-30.0			
30.1-31.0			
31.1-32.0			1
TOTAL FISH FOR COLLECTION DATE	5	1	2
MEAN TOTAL LENGTH (MM)	7.2	26.5	28.5
INCREMENT OF CHANGE (MM)	.0	19.3	2.0

TABLE 4.0-23 (Page 1 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF JUVENILE STRIPED BASS
AT RDSW
ROSETON/DANSKAMMER VICINITY

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE					
	17 JUN	20 JUN	01 JUL	15 JUL	22 JUL	05 AUG
14.1-15.0		1				
15.1-16.0						
16.1-17.0						
17.1-18.0	1					
18.1-19.0	1					
19.1-20.0						
20.1-21.0						
21.1-22.0			1			
22.1-23.0						
23.1-24.0						
24.1-25.0			1			
25.1-26.0						
26.1-27.0						
27.1-28.0					1	
28.1-29.0						
29.1-30.0				1		
30.1-31.0						
31.1-32.0						
32.1-33.0						
33.1-34.0						
34.1-35.0						
35.1-36.0						
36.1-37.0						
37.1-38.0						
38.1-39.0						
39.1-40.0						
40.1-41.0						
41.1-42.0						
42.1-43.0						
43.1-44.0						
44.1-45.0						
45.1-46.0						
46.1-47.0						
47.1-48.0						1

TABLE 4.0-23 (Page 2 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF JUVENILE STRIPED BASS AT ROSW ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL CONT'D	NUMBER OF FISH PER SAMPLING DATE					
TOTAL FISH FOR COLLECTION DATE	2	1	2	1	1	1
MEAN TOTAL LENGTH (MM)	18.1	14.9	23.3	29.4	27.1	48.0
INCREMENT OF CHANGE (MM)	.0	3.2-	8.4	6.1	2.3-	20.9

4.2.2.4 Alosa spp. Alosa spp. eggs were collected from the first day of sampling at both plants: 22 April at Danskammer Point and 24 April at Roseton through 17 June and 20 June, respectively. Temperatures on dates of first and last appearance were 10.0 and 20.1°C at Danskammer Point and 10.8 and 19.9°C at Roseton. Corresponding conductivity values at the two plants were 139 and 237 μmhos/cm (Danskammer Point), and 140 and 273 μmhos/cm (Roseton). A peak mean daily concentration of 2028.00 eggs/1000 m^3 was observed on 20 May at Danskammer Point, (temperature 16.8°C) with the high abundance period ranging from late April through late May (Table 4.0-24). Peak egg concentration at Roseton (303.98 eggs/1000 m^3) occurred on 13 May (temperature 15.0°C), with the high abundance period occurring simultaneously with the Danskammer Point period (Table 4.0-25). Significantly (α = .05) greater concentrations of yolk-sac Alosa spp. larvae were collected at Danskammer Point. However, no difference between the two plants was detected for post-yolk-sac larvae concentrations.

Alosa spp. larvae were collected from 22 April through 22 July at Danskammer and 29 April to 29 July at Roseton. Eggs and larvae were found in entrainment samples at Danskammer for a period of 92 days and at Roseton for 97 days. Temperatures on these collection dates were 10.0 and 25.8°C at Danskammer Point and 10.3 and 27.1°C at Roseton. Conductivities were 139 and 213 μmhos/cm (Danskammer Point) and 154 and 293 μmhos/cm (Roseton). Peak Alosa spp. larval concentrations occurred on 3 June at Danskammer Point and 13 June at Roseton.

Alosa spp. abundance by collection interval is presented in Figure 4.0-5. There is no apparent similarity between the daily entrainment patterns at Roseton and Danskammer Point. At Roseton, no consistent peak or low period was observed. However, a general

TABLE 4.0-24

MEAN ABUNDANCE[a] OF ALOSA SPP. ICHTHYOPLANKTON BY LIFESTAGE IN ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1980

START DATE[b]	EGGS	YOLK-SAC	POST-YOLK-SAC	JUVENILES	UNIDENTIFIED	TOTAL LARVAE[c]
22 Apr	53.84	0.64	0.62	0.00	0.00	1.26
24 Apr	NS	NS	NS	NS	NS	NS
29 Apr	548.33	13.12	0.66	0.00	0.70	14.48
6 May	105.87	9.86	30.17	0.00	5.21	45.23
13 May	1415.80	14.58	93.59	0.00	2.61	110.78
20 May	2028.00	89.60	177.91	0.00	121.65	389.16
27 May	280.38	10.53	450.79	0.00	10.49	471.68
3 Jun	25.35	19.43	998.54	0.00	7.29	1025.27
6 Jun	7.44	6.63	610.55	0.00	4.61	621.79
10 Jun	0.00	3.37	746.39	10.28	0.67	760.70
13 Jun	0.00	0.00	520.71	0.00	0.00	520.71
17 Jun	2.76	0.00	191.17	0.00	0.00	191.17
20 Jun	0.00	0.00	93.04	1.32	0.00	94.36
24 Jun	0.00	0.00	54.74	2.01	0.00	56.75
1 Jul	0.00	0.00	38.13	17.11	0.00	55.24
8 Jul	0.00	0.00	3.25	0.65	0.00	3.89
15 Jul	0.00	0.00	3.99	2.60	0.00	6.59
22 Jul	0.00	0.00	1.38	0.72	0.00	2.09
29 Jul	0.00	0.00	0.00	0.00	0.00	0.00

[a] Number of organisms per 1000 m^3.
[b] All other sampling dates have concentrations of zero.
[c] Yolk-sac, post-yolk-sac, juvenile, and unidentified.
NS - No Sample.

TABLE 4.0-25

MEAN ABUNDANCE[a] OF ALOSA SPP. ICHTHYOPLANKTON BY LIFESTAGE IN ENTRAINMENT COLLECTIONS

Roseton Generating Station - 1980

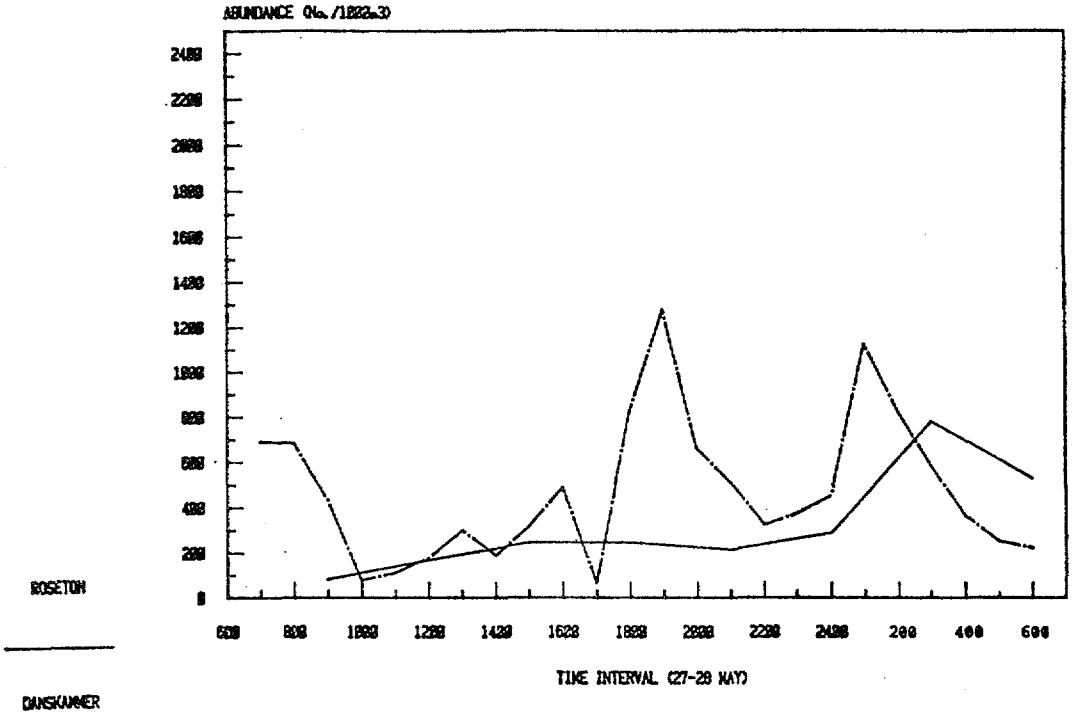
START DATE[b]	EGGS	YOLK-SAC	POST-YOLK-SAC	JUVENILES	UNIDENTIFIED	TOTAL LARVAE[c]
24 Apr	15.71	0.00	0.00	0.00	0.00	0.00
29 Apr	59.80	1.35	0.66	0.00	1.18	3.19
6 May	16.03	2.06	3.31	0.00	9.34	14.70
13 May	303.98	2.63	20.92	0.00	16.03	39.58
20 May	216.19	5.39	55.32	0.00	38.67	99.38
27 May	13.82	0.00	294.09	0.00	24.88	318.98
3 Jun	9.93	0.00	410.73	0.00	12.72	423.45
6 Jun	0.40	0.00	410.77	0.00	2.01	412.78
10 Jun	0.00	0.00	536.67	0.00	5.97	542.64
13 Jun	21.69	0.00	583.12	59.30	0.00	642.42
17 Jun	0.69	0.00	330.76	4.69	0.00	335.45
20 Jun	0.68	0.00	154.59	3.32	0.00	157.91
24 Jun	0.00	0.00	112.28	10.98	0.00	123.26
1 Jul	0.00	0.00	33.13	19.12	0.00	52.25
8 Jul	0.00	0.00	3.34	18.21	0.00	21.55
15 Jul	0.00	0.00	1.26	5.75	0.00	7.01
22 Jul	0.00	0.00	1.35	5.39	0.00	6.74
29 Jul	0.00	0.00	0.65	1.29	0.00	1.94
5 Aug	0.00	0.00	0.00	0.00	0.00	0.00

[a] Number of organisms per 1000 m^3.
[b] All other sampling dates have concentrations of zero.
[c] Yolk-sac, post-yolk-sac, juvenile, and unidentified.

FIGURE 4.0-5 (Page 1 of 4)

ALOSA SPP. ABUNDANCE[a] BY COLLECTION INTERVAL

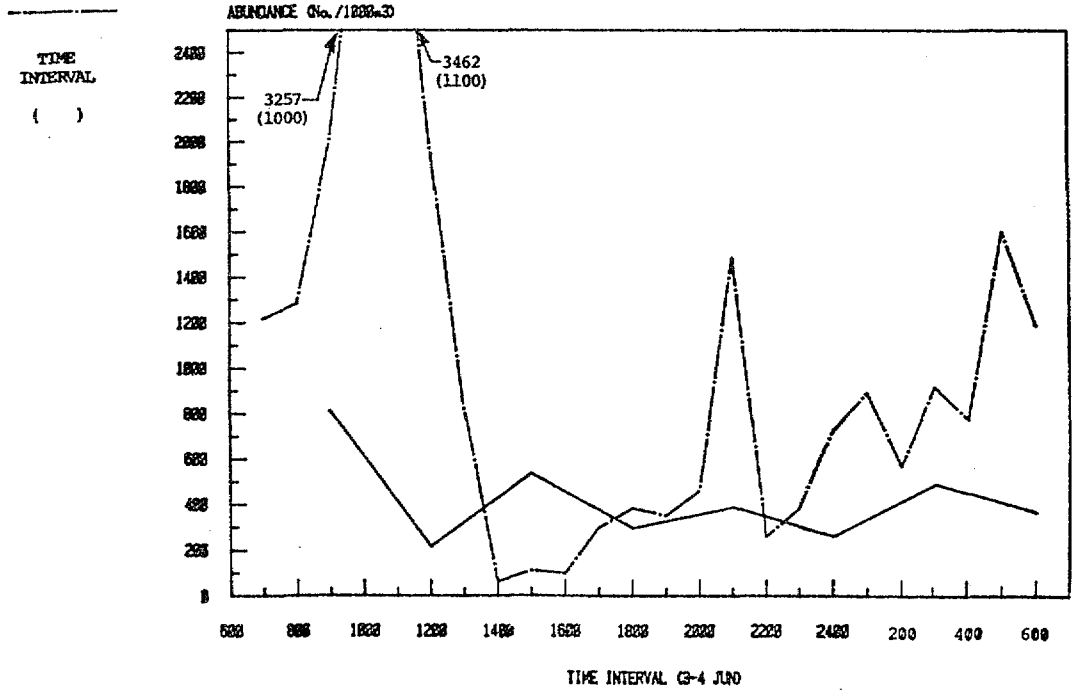
Roseton and Danskammer Point Generating Stations-1980



ROSETON

DANSKAMMER POINT

TIME INTERVAL ( )

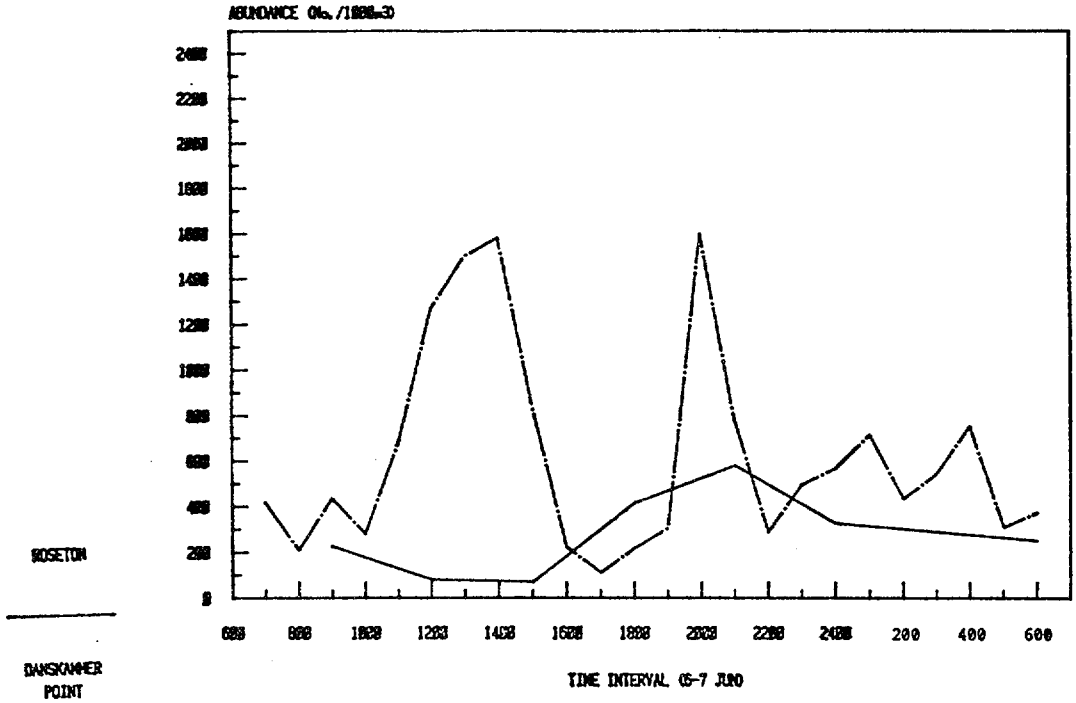


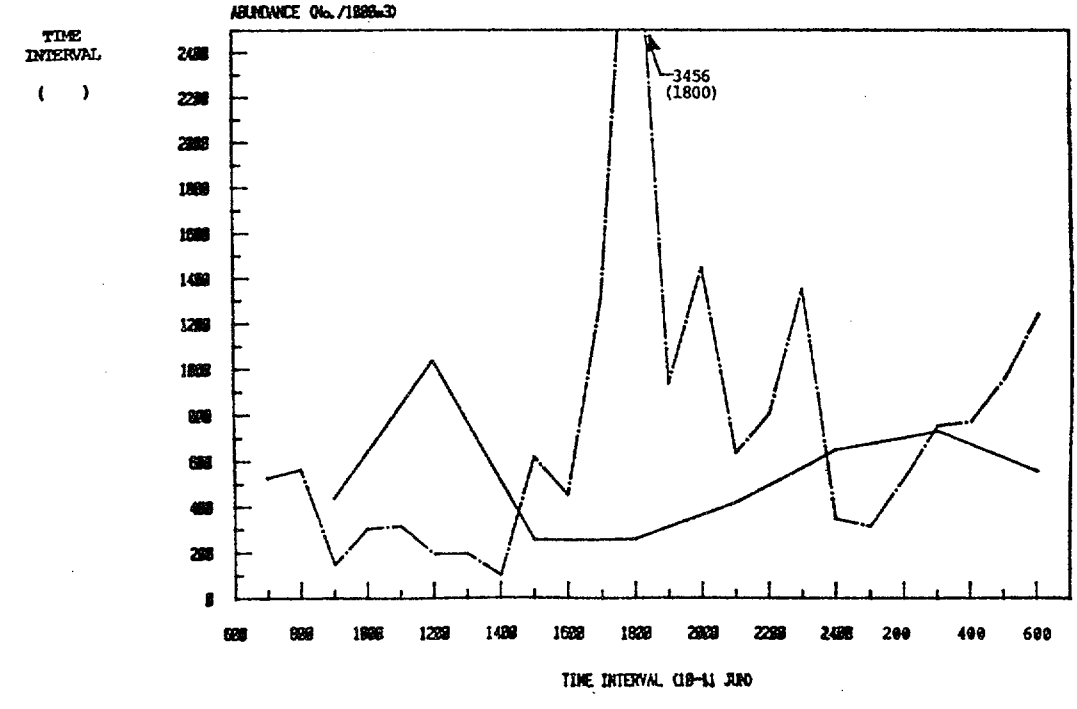
[a]Yolk-sac, post-yolk-sac, and juvenile entrainment.

FIGURE 4.0-5 (Page 2 of 4)

ALOSA SPP. ABUNDANCE[a] BY COLLECTION INTERVAL

Roseton and Danskammer Point Generating Stations-1980



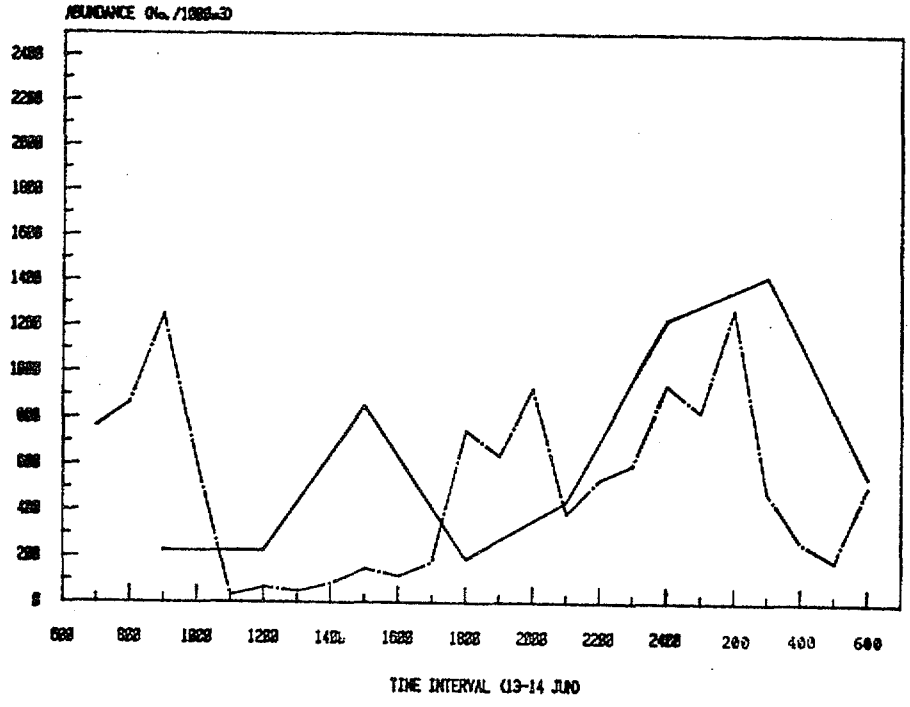


[a]Yolk-sac, post-yolk-sac, and juvenile entrainment.

FIGURE 4.0-5 (Page 3 of 4)

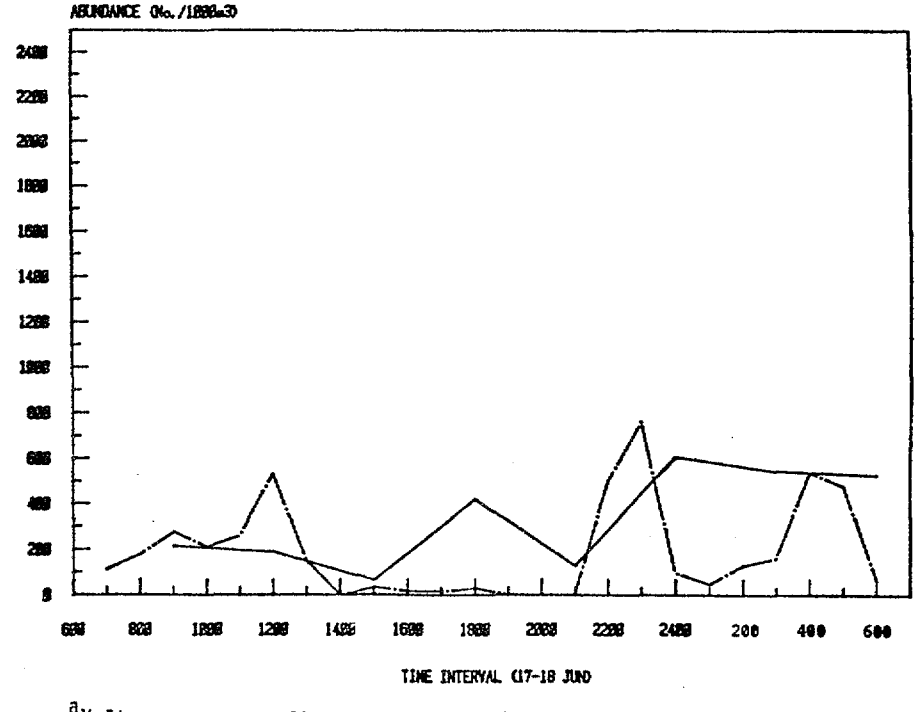
ALOSA SPP. ABUNDANCE[a] BY COLLECTION INTERVAL

Roseton and Danskammer Point Generating Stations-1980



ROSETON

DANSKAMMER POINT

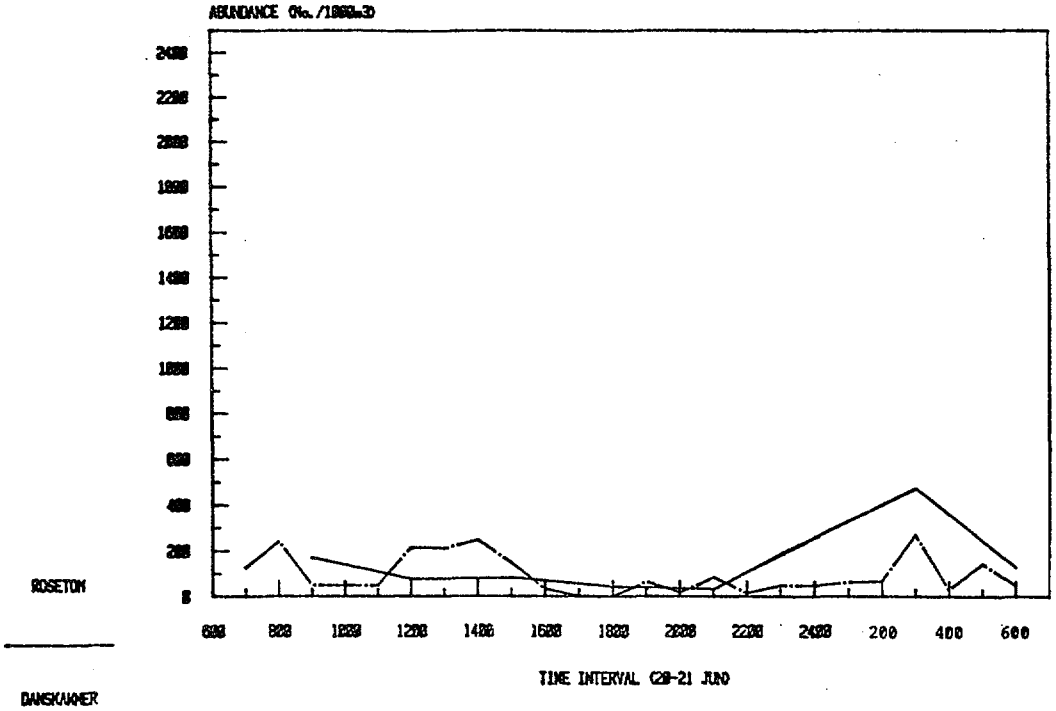


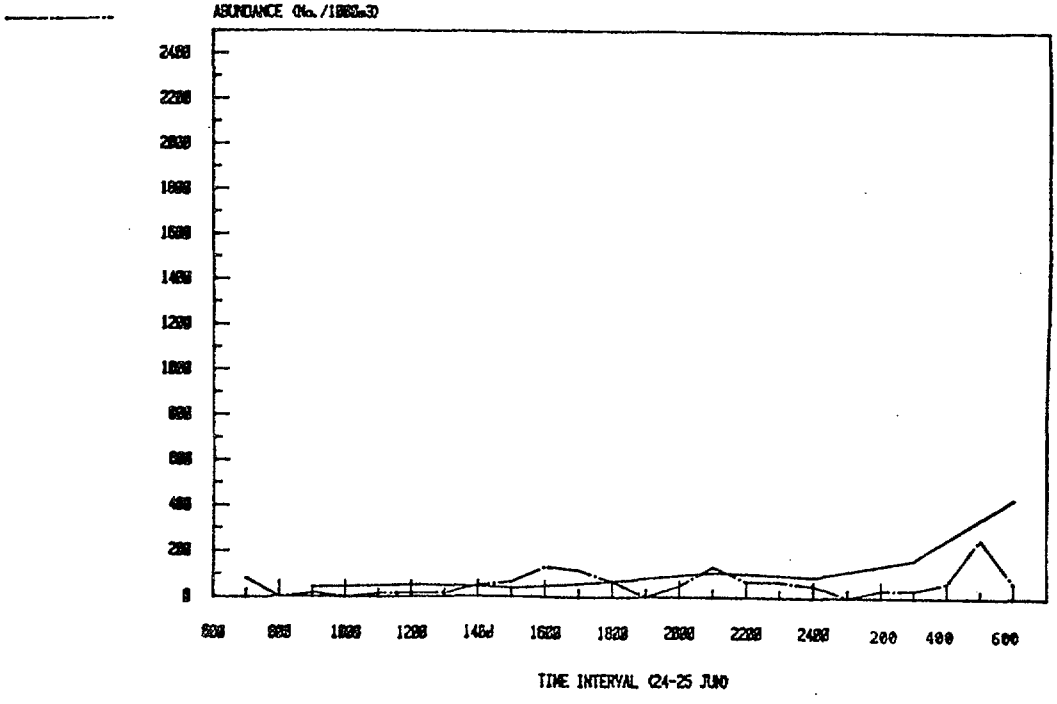
[a]Yolk-sac, post-yolk-sac, and juvenile entrainment.

FIGURE 4.0-5 (Page 4 of 4)

ALOSA SPP. ABUNDANCE[a] BY COLLECTION INTERVAL

Roseton and Danskammer Point Generating Stations-1980





[a]Yolk-sac, post-yolk-sac, and juvenile entrainment.

increase in entrainment concentrations was noted during night hours (2400-0600).

The diel Alosa spp. larvae entrainment pattern fluctuated at Danskammer over the eight dates examined. An increase in the concentration occurred on each date between 2400 and 0600. However, this period was not always representative of the highest daily concentration. No significant difference (α = .05) was detected among 3-hr periods for yolk-sac larvae concentrations at either plant. Using the ANOVA, however, a difference was detected for post-yolk-sac concentrations (Report Appendix). Greatest abundances occurred during the night and dawn periods and lowest during day and dusk.

Yolk-sac larvae, ranging in length from 3.1-13.0 mm were collected at Danskammer Point from 22 April through 10 June (Table 4.0-26). Collections of 4.1-6.0-mm yolk-sac larvae were made at Roseton from 29 April through 20 May (Table 4.0-27). Yolk-sac larvae mean length ranged from 3.8-5.6 mm at Danskammer Point and 5.0-5.4 mm at Roseton. Only 14 Alosa spp. yolk-sac larvae were collected at Roseton during the study period.

Post-yolk-sac larvae were collected from 22 April through 22 July at Danskammer and 29 April through 29 July at Roseton (Tables 4.0-28 and 4.0-29). At Danskammer Point, these larvae were within the 4.1-34.0-mm length interval. The June Alosa spp. population has a length-frequency distribution approximating the shape of a normal curve. This indicates only a few small and/or large larvae in the population, with the bulk of the Alosa spp. between 7.1 to 18.0 mm during June, the peak month. Post-yolk-sac larvae ranged from 4.1-27.0 mm at Roseton and approximated a normal distribution from 6-17 June, but was skewed to the left during late June. This skewness indicates a greater proportion of large larvae in the

TABLE 4.0-26

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF YOLK-SAC ALOSA SPP. LARVAE
AT DITW,DITCH,& DITE
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE								
	22 APR	29 APR	06 MAY	13 MAY	20 MAY	27 MAY	03 JUN	06 JUN	10 JUN
3.1- 4.0	1			1	3	2	2		
4.1- 5.0		1	4	4	34	7	10	4	3
5.1- 6.0		15	5	8	79	7	10	6	1
6.1- 7.0		4	1	7	16		1		
7.1- 8.0									
8.1- 9.0									
9.1-10.0									
10.1-11.0									
11.1-12.0									
12.1-13.0							1		
TOTAL FISH FOR COLLECTION DATE	1	20	10	20	132	16	24	10	4
MEAN TOTAL LENGTH (MM)	3.8	5.6	5.2	5.6	5.4	4.8	5.3	5.1	4.8
INCREMENT OF CHANGE (MM)	.0	1.8	.4-	.4	.2-	.6-	.5	.2-	.3-

TABLE 4.0-27

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF YOLK-SAC ALOSA SPP. LARVAE AT RDSW
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE			
	29 APR	06 MAY	13 MAY	20 MAY
4.1- 5.0	1		1	1
5.1- 6.0	1	1	2	7
TOTAL FISH FOR COLLECTION DATE	2	1	3	8
MEAN TOTAL LENGTH (MM)	5.2	5.2	5.0	5.4
INCREMENT OF CHANGE (MM)	.0	.0	.2-	.4

TABLE 4.0-28 (Page 1 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF POST-YOLK-SAC ALOSA SPP. LARVAE
AT DITW, DITCH, & DITE
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE											
	22 APR	29 APR	06 MAY	13 MAY	20 MAY	27 MAY	03 JUN	06 JUN	10 JUN	13 JUN	17 JUN	20 JUN
4.1- 5.0			1		7	9	6	2	1	1		
5.1- 6.0		1	11	39	111	50	64	16	5	10		
6.1- 7.0			26	57	72	101	98	20	7	11	5	
7.1- 8.0	1		3	29	21	106	111	16	10	25	20	1
8.1- 9.0			2	7	23	89	110	28	9	33	35	1
9.1-10.0				2	10	75	63	23	9	35	38	5
10.1-11.0					2	103	70	40	17	35	30	4
11.1-12.0				1	5	76	105	28	22	55	25	15
12.1-13.0					2	14	93	101	30	41	17	18
13.1-14.0					1	8	67	147	77	51	17	10
14.1-15.0							70	112	135	63	11	8
15.1-16.0							56	102	161	73	16	11
16.1-17.0							19	75	139	77	13	11
17.1-18.0							9	42	124	76	11	7
18.1-19.0							1	8	72	63	9	9
19.1-20.0							1	2	27	53	7	9
20.1-21.0								2	8	24	9	11
21.1-22.0									1	3	2	10
22.1-23.0									1	4	4	2
23.1-24.0											2	1
24.1-25.0												
25.1-26.0											1	
26.1-27.0												
27.1-28.0												
28.1-29.0												
29.1-30.0												
30.1-31.0												
31.1-32.0												
32.1-33.0												
33.1-34.0												
TOTAL FISH FOR COLLECTION DATE	1	1	43	135	254	631	943	764	855	733	272	133
MEAN TOTAL LENGTH (MM)	7.1	5.3	6.4	6.7	6.7	8.7	10.4	13.4	15.4	14.5	12.5	15.7
INCREMENT OF CHANGE (MM)	.0	1.8-	1.1	.3	.0	2.0	1.7	3.0	2.0	.9-	2.0-	3.2

TABLE 4.0-28 (Page 2 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF POST-YOLK-SAC ALOSA SPP. LARVAE
AT DITW, DITCH, & DITE
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE				
	24 JUN	01 JUL	08 JUL	15 JUL	22 JUL
4.1- 5.0					
5.1- 6.0					
6.1- 7.0					
7.1- 8.0					
8.1- 9.0					
9.1-10.0	1	1			
10.1-11.0	1				
11.1-12.0		3			
12.1-13.0	5	2	1	1	
13.1-14.0	11	1			
14.1-15.0	9	2		1	
15.1-16.0	12				
16.1-17.0	6	2		1	
17.1-18.0	8	3		1	
18.1-19.0	5			1	
19.1-20.0	11	2			
20.1-21.0	6	7	1		
21.1-22.0	4	3			
22.1-23.0	2	5			
23.1-24.0		5			
24.1-25.0		6	2		1
25.1-26.0		5			
26.1-27.0		1	1		1
27.1-28.0		3			
28.1-29.0		2			
29.1-30.0					
30.1-31.0		2			
31.1-32.0					
32.1-33.0					
33.1-34.0				1	
TOTAL FISH FOR COLLECTION DATE	81	55	5	6	2
MEAN TOTAL LENGTH (MM)	16.6	21.6	22.0	19.1	26.0
INCREMENT OF CHANGE (MM)	.9	5.0	.4	2.9-	6.9

TABLE 4.0-29 (Page 1 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF POST-YOLK-SAC ALOSA SPP. LARVAE AT RDSW
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE											
	29 APR	06 MAY	13 MAY	20 MAY	27 MAY	03 JUN	06 JUN	10 JUN	13 JUN	17 JUN	20 JUN	24 JUN
4.1- 5.0		1		17	2		3	1	1			
5.1- 6.0		2	8	37	14	29	6	6	14	3		1
6.1- 7.0	1	1	7	7	37	31	6	10	15	5		
7.1- 8.0			2	15	79	52	8	13	31	17		
8.1- 9.0				4	62	31	11	15	25	22	2	2
9.1-10.0					43	30	10	7	22	19	6	
10.1-11.0					39	47	18	17	20	30	5	2
11.1-12.0				2	19	48	26	8	25	17	7	1
12.1-13.0					7	31	42	18	25	19	1	4
13.1-14.0					1	35	37	40	26	27	5	10
14.1-15.0						40	54	73	25	15	5	6
15.1-16.0						21	41	71	47	14	5	7
16.1-17.0						15	23	72	32	25	9	8
17.1-18.0						6	13	54	27	29	6	4
18.1-19.0						1	7	19	15	22	10	12
19.1-20.0						1		8	25	27	23	19
20.1-21.0							1	2	11	27	30	25
21.1-22.0									1	10	32	21
22.1-23.0									2	3	30	14
23.1-24.0									2	2	12	10
24.1-25.0									1	2	3	4
25.1-26.0									1			1
26.1-27.0										1		
TOTAL FISH FOR COLLECTION DATE	1	4	17	82	303	418	306	434	393	336	191	151
MEAN TOTAL LENGTH (MM)	6.5	5.6	6.1	6.1	8.6	10.8	13.2	14.5	13.4	14.7	19.2	19.0
INCREMENT OF CHANGE (MM)	.0	.9-	.5	.0	2.5	2.2	2.4	1.3	1.1-	1.3	4.5	.2-

TABLE 4.0-29 (Page 2 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF POST-YOLK-SAC ALOSA SPP. LARVAE
AT ROSW
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE 01 JUL	08 JUL	15 JUL	22 JUL	29 JUL
4.1- 5.0					
5.1- 6.0					
6.1- 7.0	1				
7.1- 8.0					
8.1- 9.0	1				
9.1-10.0	3				
10.1-11.0	3				
11.1-12.0	1				
12.1-13.0	5				
13.1-14.0	3				
14.1-15.0	2		1		
15.1-16.0		1			
16.1-17.0					
17.1-18.0					
18.1-19.0	3			1	
19.1-20.0	4				1
20.1-21.0	5	1			
21.1-22.0	4	1	1	1	
22.1-23.0	4				
23.1-24.0	9	2			
24.1-25.0					
25.1-26.0					
26.1-27.0					
TOTAL FISH FOR COLLECTION DATE	48	5	2	2	1
MEAN TOTAL LENGTH (MM)	17.6	21.0	18.3	20.1	19.4
INCREMENT OF CHANGE (MM)	1.4-	3.4	2.7-	1.8	.7-

population. Mean total length data indicate a fairly steady increase, reflecting the fast growth of these larvae (Graham 1956; Scott and Crossman 1973).

Juvenile Alosa spp. larvae were collected during June and July at both plants and ranged from 8.1 to 45.0 mm at Roseton and 11.1 to 40.0 mm at Danskammer Point (Tables 4.0-30 and 4.0-31). Juveniles from 8.1 to 20.0 mm were collected on only one date at each plant; thereafter, all juveniles were greater than 23.1 mm in length.

4.2.2.5 American Shad. American shad eggs were collected in Danskammer Point entrainment samples from 29 April to 27 May and in Roseton samples on 6 May only (Tables 4.0-32 and 4.0-33). Temperatures on these dates were 10.0 and 18.1°C at Danskammer Point and 12.9°C at Roseton. Corresponding conductivities were 160 and 193 μmhos/cm (Danskammer Point) and 169 μmhos/cm (Roseton). Daily egg concentrations were low ($\leq$ 1.31 eggs/1000 m^3). American shad larvae were collected from 13 May to 24 June, with peak concentrations occurring on 6 June. Eggs and larvae were present in Danskammer entrainment samples for a period of 57 days and in Roseton entrainment samples for 49 days.

American shad larvae concentrations were too low and sparse to warrant graphical analysis of diel abundance patterns. No significant difference (α = .05) was detected by the ANOVA for post-yolk-sac larvae concentrations among 3-hr time periods. No ANOVA was performed on American shad yolk-sac larvae, once again due to inadequate concentrations.

A single yolk-sac larva, 11.0 mm in length (Table 4.0-34), was collected at Danskammer Point. Post-yolk-sac larvae were collected from 13 May to 24 June at Danskammer and ranged from 10.1-29.0 mm in

TABLE 4.0-30

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF JUVENILE ALOSA SPP.
AT DITW, DITC1, & DITE
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE						
	10 JUN	20 JUN	24 JUN	01 JUL	08 JUL	15 JUL	22 JUL
11.1-12.0	1						
12.1-13.0	2						
13.1-14.0							
14.1-15.0							
15.1-16.0	3						
16.1-17.0	5						
17.1-18.0	3						
18.1-19.0	1						
19.1-20.0	1						
20.1-21.0							
21.1-22.0							
22.1-23.0							
23.1-24.0							
24.1-25.0							
25.1-26.0		1		1			
26.1-27.0		1	1	4			
27.1-28.0				5			
28.1-29.0			2	1			
29.1-30.0				1	1	1	
30.1-31.0				6			
31.1-32.0				1			
32.1-33.0				2		1	
33.1-34.0				1		1	
34.1-35.0				1		1	
35.1-36.0				2			
36.1-37.0				1			
37.1-38.0							
38.1-39.0							
39.1-40.0							1
TOTAL FISH FOR COLLECTION DATE	16	2	3	26	1	4	1
MEAN TOTAL LENGTH (MM)	16.0	26.0	27.6	30.4	29.5	32.8	40.0
INCREMENT OF CHANGE (MM)	.0	10.0	1.6	2.8	.9-	3.3	7.2

TABLE 4.0-31 (Page 1 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF JUVENILE ALOSA SPP.
AT RDSW
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE								
	13 JUN	17 JUN	20 JUN	24 JUN	01 JUL	08 JUL	15 JUL	22 JUL	29 JUL
8.1- 9.0	1								
9.1-10.0									
10.1-11.0									
11.1-12.0	1								
12.1-13.0	1								
13.1-14.0	1								
14.1-15.0	2								
15.1-16.0	3								
16.1-17.0	2								
17.1-18.0	2								
18.1-19.0	3								
19.1-20.0	2								
20.1-21.0									
21.1-22.0									
22.1-23.0									
23.1-24.0			2			1			
24.1-25.0			2	1	4	2			1
25.1-26.0				4	7	2			
26.1-27.0	1		1	4	5	1		1	
27.1-28.0	1	1		4	2	3			
28.1-29.0				1	4	5			
29.1-30.0		3			2	1		1	
30.1-31.0		1			2	4			
31.1-32.0						2			
32.1-33.0					1		1		
33.1-34.0		1				1			
34.1-35.0							1	1	
35.1-36.0									
36.1-37.0					1	1	1	1	
37.1-38.0						1			
38.1-39.0								1	
39.1-40.0								2	
40.1-41.0									
41.1-42.0									
42.1-43.0							1		
43.1-44.0									
44.1-45.0							2		

TABLE 4.0-31 (Page 2 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF JUVENILE ALOSA SPP.
AT RDSW
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL CONT'D	NUMBER OF FISH PER SAMPLING DATE								
TOTAL FISH FOR COLLECTION DATE	20	6	5	14	28	24	6	7	1
MEAN TOTAL LENGTH (MM)	17.0	30.3	24.4	26.4	27.4	29.2	39.7	35.3	25.0
INCREMENT OF CHANGE (MM)	.0	13.3	5.9-	2.0	1.0	1.8	10.5	4.4-	10.3-

TABLE 4.0-32

MEAN ABUNDANCE[a] OF AMERICAN SHAD ICHTHYOPLANKTON BY LIFESTAGE IN ENTRAINMENT COLLECTIONS

Danskammer Point Generating Station - 1980

START DATE[b]	EGGS	YOLK-SAC	POST-YOLK-SAC	JUVENILES	UNIDENTIFIED	TOTAL LARVAE[c]
22 Apr	0.00	0.00	0.00	0.00	0.00	0.00
24 Apr	NS	NS	NS	NS	NS	NS
29 Apr	1.31	0.00	0.00	0.00	0.00	0.00
6 May	0.00	0.00	0.00	0.00	0.00	0.00
13 May	0.66	0.67	2.00	0.00	0.00	2.67
20 May	0.00	0.00	9.71	0.00	0.00	9.71
27 May	0.66	0.00	2.64	0.00	0.00	2.64
3 Jun	0.00	0.00	10.58	0.00	0.00	10.58
6 Jun	0.00	0.00	34.36	0.00	0.00	34.36
10 Jun	0.00	0.00	24.04	1.95	0.00	25.99
13 Jun	0.00	0.00	23.02	3.41	0.00	26.44
17 Jun	0.00	0.00	1.36	2.02	0.00	3.38
20 Jun	0.00	0.00	0.67	1.38	0.00	2.05
24 Jun	0.00	0.00	0.67	0.00	0.00	0.67
1 Jul	0.00	0.00	0.00	1.97	0.00	1.97
8 Jul	0.00	0.00	0.00	3.19	0.00	3.19
15 Jul	0.00	0.00	0.00	1.94	0.00	1.94
22 Jul	0.00	0.00	0.00	0.00	0.00	0.00
29 Jul	0.00	0.00	0.00	0.00	0.00	0.00
5 Aug	0.00	0.00	0.00	0.69	0.00	0.69
12 Aug	0.00	0.00	0.00	0.00	0.00	0.00

[a] Number of organisms per 1000 m^3.
[b] All other sampling dates have concentrations of zero.
[c] Yolk-sac, post-yolk-sac, juvenile, and unidentified.
NS - No Sample.

4006

TABLE 4.0-33

MEAN ABUNDANCE[a] OF AMERICAN SHAD ICHTHYOPLANKTON BY LIFESTAGE IN ENTRAINMENT COLLECTIONS

Roseton Generating Station - 1980

START DATE[b]	EGGS	YOLK-SAC	POST-YOLK-SAC	JUVENILES	UNIDENTIFIED	TOTAL LARVAE[c]
24 Apr	0.00	0.00	0.00	0.00	0.00	0.00
29 Apr	0.00	0.00	0.00	0.00	0.00	0.00
6 May	0.64	0.00	0.00	0.00	0.00	0.00
13 May	0.00	0.00	0.69	0.00	0.00	0.69
20 May	0.00	0.00	3.18	0.00	0.00	3.18
27 May	0.00	0.00	3.38	0.00	0.00	3.38
3 Jun	0.00	0.00	5.76	0.00	0.00	5.76
6 Jun	0.00	0.00	18.11	0.00	0.00	18.11
10 Jun	0.00	0.00	14.89	0.00	0.00	14.89
13 Jun	0.00	0.00	4.53	5.21	0.00	9.74
17 Jun	0.00	0.00	1.93	2.63	0.00	4.56
20 Jun	0.00	0.00	2.02	0.66	0.00	2.68
24 Jun	0.00	0.00	1.29	0.65	0.00	1.94
1 Jul	0.00	0.00	0.00	0.00	0.00	0.00
8 Jul	0.00	0.00	0.00	1.42	0.00	1.42
15 Jul	0.00	0.00	0.00	0.64	0.00	0.64
22 Jul	0.00	0.00	0.00	0.00	0.00	0.00

[a] Number of organisms per 1000 m^3.
[b] All other sampling dates have concentrations of zero.
[c] Yolk-sac, post-yolk-sac, juvenile, and unidentified.

TABLE 4.0-34

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF YOLK-SAC AMERICAN SHAD LARVAE
AT DITW, DITCH, & DITE
ROSETON/DANSKAMMER VICINITY - 1980

NUMBER OF FISH PER SAMPLING DATE

LENGTH (MM) INTERVAL	13 MAY
10.1-11.0	1
TOTAL FISH FOR COLLECTION DATE	1
MEAN TOTAL LENGTH (MM)	11.0
INCREMENT OF CHANGE (MM)	.0

length (Table 4.0-35). Consistent increases in mean total length were ~~evidenced~~ throughout the collection period. Post-yolk-sac larvae were collected at Roseton from 13 May to 24 June and ranged from 11.1-31.0 mm (Table 4.0-36). Steady increases in mean total length were seen throughout the study period and may be the result of rapid growth and little recruitment to the study area following the initial influx.

A consistent growth pattern was evidenced at Danskammer Point for American shad juveniles, as shown in Table 4.0-37. Positive growth increments were noted for each date and were the largest (indicating fastest growth) on 8 and 15 July. Juvenile shad from the 24.1 to 32.0-mm length interval were collected from 13 to 24 July at Roseton (Table 4.0-38). Larger larvae (49.1-54.0 mm) were collected on 8 and 15 July. Growth pattern data are not as complete or consistent as for Danskammer Point.

4.2.2.6 Bay Anchovy. No bay anchovy eggs were collected in either the 1980 Danskammer Point or Roseton entrainment samples.

Bay anchovy larvae were collected at both plants from 8 July to 26 August, the last date of sampling. Temperatures on these dates were 22.2 and 26.8°C at Danskammer Point and 23.2 and 27.1°C at Roseton. Conductivities were 231 and 2180 μmhos/cm (Danskammer Point) and 223 and 2630 μmhos/cm (Roseton). These were the only larvae collected while the salt wedge was in evidence in front of the two plants. Bay anchovy larvae were not identified to life stage; therefore, the results in Table 4.0-39 are presented as yolk-sac, post-yolk-sac, and juveniles combined. Concentrations were highest at both plants on the final sampling date. This indicates that the Roseton and Danskammer Point entrainment sampling program did not encompass the entire bay anchovy spawning-developmental season.

TABLE 4.0-35

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF POST-YOLK-SAC AMERICAN SHAD LARVAE
AT DITW, DITCH, & DITE
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE									
	13 MAY	20 MAY	27 MAY	03 JUN	06 JUN	10 JUN	13 JUN	17 JUN	20 JUN	24 JUN
10.1-11.0		1								
11.1-12.0	3	4								
12.1-13.0		5	1	1						
13.1-14.0		4		1	1					1
14.1-15.0		1								
15.1-16.0			1	2			1			
16.1-17.0			1	4	6					
17.1-18.0				1						
18.1-19.0			1	3	1	1				
19.1-20.0				1	4	1				
20.1-21.0					12	6	2			
21.1-22.0				2	8	5				
22.1-23.0				1	6	5	2			
23.1-24.0					3	6	11			
24.1-25.0					6	4	5			
25.1-26.0					3	3	4	2	1	
26.1-27.0						5	6			
27.1-28.0							2			
28.1-29.0							1			
TOTAL FISH FOR COLLECTION DATE	3	15	4	16	50	36	34	2	1	1
MEAN TOTAL LENGTH (MM)	11.4	12.5	15.7	17.6	21.2	23.3	24.6	25.6	25.4	13.8
INCREMENT OF CHANGE (MM)	.0	1.1	3.2	1.9	3.6	2.1	1.3	1.0	.2-	11.6-

TABLE 4.0-36

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF POST-YOLK-SAC AMERICAN SHAD LARVAE AT RDSW
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE									
	13 MAY	20 MAY	27 MAY	03 JUN	06 JUN	10 JUN	13 JUN	17 JUN	20 JUN	24 JUN
11.1-12.0	1	2	1							
12.1-13.0		3	1							
13.1-14.0				1						
14.1-15.0										
15.1-16.0			1							
16.1-17.0										
17.1-18.0			1			2				
18.1-19.0			1		2	1				
19.1-20.0				1	2					
20.1-21.0					4	1				
21.1-22.0				2	2	3	1			
22.1-23.0					2	3	2		1	
23.1-24.0					1	6	2	1	1	
24.1-25.0					1	3	1	1		
25.1-26.0					1	2		1		
26.1-27.0										
27.1-28.0						1			1	2
28.1-29.0										
29.1-30.0										
30.1-31.0							1			
TOTAL FISH FOR COLLECTION DATE	1	5	5	4	15	22	7	3	3	2
MEAN TOTAL LENGTH (MM)	11.5	12.1	15.1	19.2	21.4	22.8	24.1	24.5	24.5	27.5
INCREMENT OF CHANGE (MM)	.1	.6	3.0	4.1	2.2	1.4	1.3	.4	.0	3.0

TABLE 4.0-37 (Page 1 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF JUVENILE AMERICAN SHAD
AT DITW,DITCH,& DITE
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE							
	10 JUN	13 JUN	17 JUN	20 JUN	01 JUL	08 JUL	15 JUL	05 AUG
24.1-25.0	1							
25.1-26.0	1							
26.1-27.0	1	3						
27.1-28.0		1	1					
28.1-29.0								
29.1-30.0		1	1					
30.1-31.0								
31.1-32.0			1					
32.1-33.0					1			
33.1-34.0				1				
34.1-35.0				1				
35.1-36.0					1			
36.1-37.0								
37.1-38.0								
38.1-39.0					1			
39.1-40.0								
40.1-41.0								
41.1-42.0								
42.1-43.0								
43.1-44.0								
44.1-45.0						1		
45.1-46.0								
46.1-47.0								
47.1-48.0						1		
48.1-49.0						1		
49.1-50.0								
50.1-51.0						2		
51.1-52.0								
52.1-53.0								
53.1-54.0								
54.1-55.0								
55.1-56.0								
56.1-57.0							1	
57.1-58.0								
58.1-59.0								
59.1-60.0								
60.1-99.9							1	1

TABLE 4.0-37 (Page 2 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF JUVENILE AMERICAN SHAD
AT DITW, DITCH, & DITE
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL CONT'D	NUMBER OF FISH PER SAMPLING DATE							
TOTAL FISH FOR COLLECTION DATE	3	5	3	2	3	5	2	1
MEAN TOTAL LENGTH (MM)	25.8	27.7	29.8	34.3	35.8	48.8	60.5	69.0
INCREMENT OF CHANGE (MM)	.0	1.9	2.1	4.5	1.5	13.0	11.7	8.5

TABLE 4.0-38 (Page 1 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF JUVENILE AMERICAN SHAD AT RDSW
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL	NUMBER OF FISH PER SAMPLING DATE					
	13 JUN	17 JUN	20 JUN	24 JUN	08 JUL	15 JUL
24.1-25.0		1				
25.1-26.0						
26.1-27.0	5	1				
27.1-28.0	1					
28.1-29.0	1		1			
29.1-30.0	1	1		1		
30.1-31.0						
31.1-32.0		1				
32.1-33.0						
33.1-34.0						
34.1-35.0						
35.1-36.0						
36.1-37.0						
37.1-38.0						
38.1-39.0						
39.1-40.0						
40.1-41.0						
41.1-42.0						
42.1-43.0						
43.1-44.0						
44.1-45.0						
45.1-46.0						
46.1-47.0						
47.1-48.0						
48.1-49.0						
49.1-50.0						
50.1-51.0					1	
51.1-52.0						1
52.1-53.0						
53.1-54.0						
54.1-55.0					1	

TABLE 4.0-38 (Page 2 of 2)

BOTTOM ALL TIMES

LENGTH-FREQUENCY OF JUVENILE AMERICAN SHAD AT RDSW
ROSETON/DANSKAMMER VICINITY - 1980

LENGTH (MM) INTERVAL CONT'D	NUMBER OF FISH PER SAMPLING DATE					
TOTAL FISH FOR COLLECTION DATE	8	4	1	1	2	1
MEAN TOTAL LENGTH (MM)	27.6	28.1	28.9	30.0	53.0	52.0
INCREMENT OF CHANGE (MM)	.0	.5	.8	1.1	23.0	1.0-

TABLE 4.0-39

MEAN ABUNDANCE[a] OF BAY ANCHOVY ICHTHYOPLANKTON
BY LIFESTAGE IN ENTRAINMENT COLLECTIONS

Roseton and Danskammer Point Generating Stations - 1980

START DATE[b]	LARVAE[c]	
	DANSKAMMER POINT	ROSETON
1 Jul	0.00	0.00
8 Jul	1.99	2.10
15 Jul	6.73	9.95
22 Jul	2.03	3.17
29 Jul	4.18	12.36
5 Aug	17.01	11.72
12 Aug	61.89	45.53
19 Aug	7.36	15.48
26 Aug	64.05	106.83

[a]Number of organisms per 1000 m^3.
[b]All other sampling dates have concentrations of zero.
[c]No eggs collected at either plant; Bay Anchovy are not identified to lifestages.

No data are presented for daily fluctuations or length frequency because of the low concentrations.

4.2.3 Comparison Among Danskammer Point Sampling Locations

The three sampling locations across the Danskammer Point intake canal were selected as representative of the entrained water through the Danskammer condenser cooling system. One would expect natural fluctuations of larval concentrations across the canal due to sampling error and the patchy distribution of ichthyoplankton. A significant difference in larval concentrations at the three stations may indicate a partitioning of larvae across the canal. If a partitioning exists, precise estimates of entrainment should include considerations for flow at each sampling location.

A series of ANOVAs were performed on the entrainment data from the stations at Danskammer Point. Separate analyses were performed for yolk-sac and post-yolk-sac. The taxa evaluated were total larvae, white perch, striped bass, Alosa spp., and American shad. If significant differences (α = .05) were detected among stations or 3-hr time periods, a Tukey pairwise comparison procedure was used to further define the differences.

The results of the comparisons among DITE, DITW, and DITCH are summarized in Table 4.0-40. There was no significant difference among the three stations for any yolk-sac larval taxon tested. Significant differences were detected for total and white perch post-yolk-sac larvae. In each case, concentrations were greatest at DITW.

4.2.4 Danskammer Point Intake Velocity Study

Results of the Danskammer Intake Velocity Study are presented in the Report Appendix. The data indicate very low water velocity from

TABLE 4.0-40

SUMMARY OF ANOVA RESULTS FOR STATION[a] COMPARISONS OF SELECTED SPECIES

Danskammer Point Generating Station - 1980

SPECIES	NO SIGNIFICANT DIFFERENCE	SIGNIFICANT[b] DIFFERENCE	ORDER
Total larvae			
Yolk-sac	X		Largest: DITW DITE DITCH :Smallest
Post-yolk-sac		X	
White perch			
Yolk-sac	X		Largest: DITW DITCH DITE :Smallest
Post-yolk-sac		X	
Striped bass			
Yolk-sac	X		
Post-yolk-sac	X		
Alosa spp.			
Yolk-sac	X		
Post-Yolk-sac	X		
American shad			
Yolk-sac	not tested[c]		
Post-yolk-sac	X		

[a]Stations: DITE - Danskammer Intake East, DITCH - Danskammer Intake Channel, and DITW - Danskammer Intake West

[b]Significant at $\alpha = .05$.

[c]Insufficient concentrations to compute ANOVAs.

2.44 m off the bottom to the surface. Highest velocities were recorded from 0.61 to 1.22 m off the bottom, coinciding with the location of the entrainment sampling pipe. These patterns are due to the skimmer wall at the Danskammer intake. This wall extends approximately 2.4 m below mean high water and provides an opening for water inflow extending about 2.0 m from the bottom.

Velocities at six locations across the canal at 61-cm depth increments were measured. Visual examination of the data did not reveal a flow pattern across the canal. In order to determine if there was a flow gradient, the data were ranked from lowest to highest flow at the +0.61- and +1.22-m depth increments for each test date (Table 4.0-41). A Friedman Rank Sum Test was performed on the ranks of the velocity means of the +0.61- and +1.22-m depth increments at the six stations across the canal. The results indicate a significant difference (α = .05) among the velocities at the six locations. The follow-up multiple comparison procedure revealed the following pattern:

SIGNIFICANCE	HIGHEST VELOCITY				LOWEST VELOCITY	
at α = .05	2	3	1	4	6	5
at α = .10	2	3	1	4	6	5

where 1 = west, 6 = east

Velocities were highest on the west side (1, 2, 3) of the intake and significantly lower on the east side (4, 5, 6).

The highest flows on the west side of the canal correspond to the highest concentrations of total and white perch post-yolk-sac larvae

TABLE 4.0-41 (Page 1 of 2)

RELATIVE RANKING OF DANSKAMMER CANAL VELOCITY MEASUREMENTS

Danskammer Point Generating Station - 1980

DATE	TIDE	DEPTH FROM BOTTOM (m)	RANK OF FLOW WEST STATION 1	2	3	4	5	EAST 6
29 Apr	Mid-flood	0.61	5.5	3	5.5	2	4	1
		1.22	3	4	2	6	1	5
		Rank of Mean Flow	3	4	2	6	1	5
29 Apr	High slack-ebb	0.61	4.5	3	4.5	1	6	2
		1.22	3	4	5	6	2	1
		Rank of Mean Flow	5	4	6	3	2	1
29 Apr	Mid-ebb	0.61	3	4	2	6	1	5
		1.22	1	5	4	6	2	3
		Rank of Mean Flow	2	5	3	6	1	4
13 May	Low slack	0.61	3	5	2	6	1	4
		1.22	6	5	4	2.5	1	2.5
		Rank of Mean Flow	5	6	3	4	1	2
13 May	Mid-flood	0.61	5	4	6	1	3	2
		1.22	6	2.5	4.5	4.5	2.5	1
		Rank of Mean Flow	6	4	5	2	3	1
13 May	Low slack	0.61	5	6	2	1	3	4
		1.22	6	5	3	4	1	2
		Rank of Mean Flow	6	5	2.5	2.5	1	4
13 May	Mid-ebb	0.61	4	1	5.5	3	2	5.5
		1.22	5	3	6	4	1.5	1.5
		Rank of Mean Flow	5	1	6	3	2	4
1 Jul	Mid-ebb	0.61	6	5	2	4	1	3
		1.22	6	3	5	4	1	2
		Rank of Mean Flow	6	4	5	3	1	2
1 Jul	Low slack	0.61	6	5	3	1	4	2
		1.22	5	2.5	4	6	1	2.5
		Rank of Mean Flow	6	4	5	2	3	1
1 Jul	Mid-flood	0.61	3.5	2	3.5	1	6	5
		1.22	4	5	6	3	2	1
		Rank of Mean Flow	4	3	5	1.5	6	1.5
1 Jul	High slack	0.61	4.5	4.5	3	1	6	2
		1.22	5	3	4	6	1	2
		Rank of Mean Flow	5	3	4	6	2	1

NOTE: Rank of flow - 1 as the lowest and 6 as the highest.

TABLE 4.0-41 (Page 2 of 2)

RELATIVE RANKING OF DANSKAMMER CANAL VELOCITY MEASUREMENTS

DATE	TIDE	DEPTH FROM BOTTOM (m)	RANK OF FLOW WEST STATION 1	2	3	4	5	EAST 6
22 Jul	Mid-flood	0.61	3	5	6	4	1	2
		1.22	3	5	6	4	1	2
		Rank of Mean Flow	3	5	6	4	1	2
22 Jul	High slack	0.61	5.5	5.5	3	4	1	2
		1.22	3	6	5	4	1	2
		Rank of Mean Flow	3	6	5	4	1	2
22 Jul	Mid-ebb	0.61	6	5	4	2.5	1	2.5
		1.22	4	6	5	3	1	2
		Rank of Mean Flow	4	6	5	3	1	2
22 Jul	Low slack	0.61	6	3	5	4	1	2
		1.22	4	6	5	3	1	2
		Rank of Mean Flow	5.5	4	5.5	3	1	2
19 Aug	Mid-flood	0.61	1	3	2	6	5	4
		1.22	2	6	4	1	3	5
		Rank of Mean Flow	1	4	2	3	5.5	5.5
19 Aug	High slack	0.61	3	4	1	6	2	5
		1.22	2	4	5	1	3	6
		Rank of Mean Flow	2	4	1	5	3	6
19 Aug	Mid-ebb	0.61	1	5	4	6	2	3
		1.22	5	4	6	3	1	2
		Rank of Mean Flow	3	4	5	6	1	2
19 Aug	Low slack	0.61	4	5	3	6	2	1
		1.22	2	4	5	6	3	1
		Rank of Mean Flow	3.5	5	3.5	6	2	1
		$\sum_{i=0.61}^{1.22} \sum_{j=1}^{n=19}$	154.5	161.0	155.5	142.5	82.0	102.5

$\bar{i}$ = two depths tested (0.61, 1.22)
j = survey by date, tide
R = rank of the observation
n = number of surveys

NOTE: Rank of flow - 1 as the lowest and 6 as the highest.

at the DITW station. These results indicate that not only is more water entering the cooling water system from the west side of the canal, but greater concentrations of total and white perch post-yolk-sac larvae are present in this section of flow.

4.2.5 Comparison Between Plants

A series of three-way ANOVAs were used to evaluate differences in entrainment concentrations between the two plants. The data were log (Y+1) transformed to smooth out the variance and more closely approach a normal distribution. A Tukey comparison was used to further define significant differences (α = .05) in the data. A summary of the results is presented in Table 4.0-42.

4.2.5.1 Similarities. Except for the initial sampling dates, all collections were made on the same dates and over the same 24-hr time intervals at the two facilities. The pump sampling rates ($\simeq$1 m^3/min) were nearly identical, as were the mean daily volumes sampled and the total volumes sampled over the season (Table 4.0-43). Peak larval concentrations occurred on the same dates at both plants and examination of Figures 4.0-6 to 4.0-10 shows that larval abundance patterns at the two stations were in close agreement from date to date, as were the mean lengths of the collected larval species. The ANOVA demonstrates that there were no significant differences between post-yolk-sac larval concentrations for white perch, striped bass, Alosa spp., or American shad.

4.2.5.2 Differences. Danskammer Point entrainment samples yielded approximately 1.5 times more larvae than Roseton samples and more of each species (of which more than 100 individuals were collected) except for bay anchovy. Eggs were collected earlier in the season and in much higher concentrations at Danskammer Point. Most of the

TABLE 4.0-42

SUMMARY OF ANOVA RESULTS FOR PLANT COMPARISONS OF SELECTED SPECIES

Roseton and Danskammer Point Generating Stations - 1980

SPECIES	NO SIGNIFICANT DIFFERENCE	SIGNIFICANT[a] DIFFERENCE	ORDER
White perch			
Eggs	X		
Yolk-sac		X	Danskammer Point > Roseton
Post-yolk-sac	X		
Striped bass			
Eggs		X	Danskammer Point > Roseton
Yolk-sac		X	Danskammer Point > Roseton
Post-yolk-sac	X		
Alosa spp.			
Eggs		X	Danskammer Point > Roseton
Yolk-sac		X	Danskammer Point > Roseton
Post-Yolk-sac	X		
American shad			
Yolk-sac		X	Danskammer Point > Roseton
Post-yolk-sac	X		

[a]Significant at $\alpha = .05$.

TABLE 4.0-43

COMPARISON OF 1980 ENTRAINMENT ABUNDANCE DATA

Roseton and Danskammer Point Generating Stations - 1980

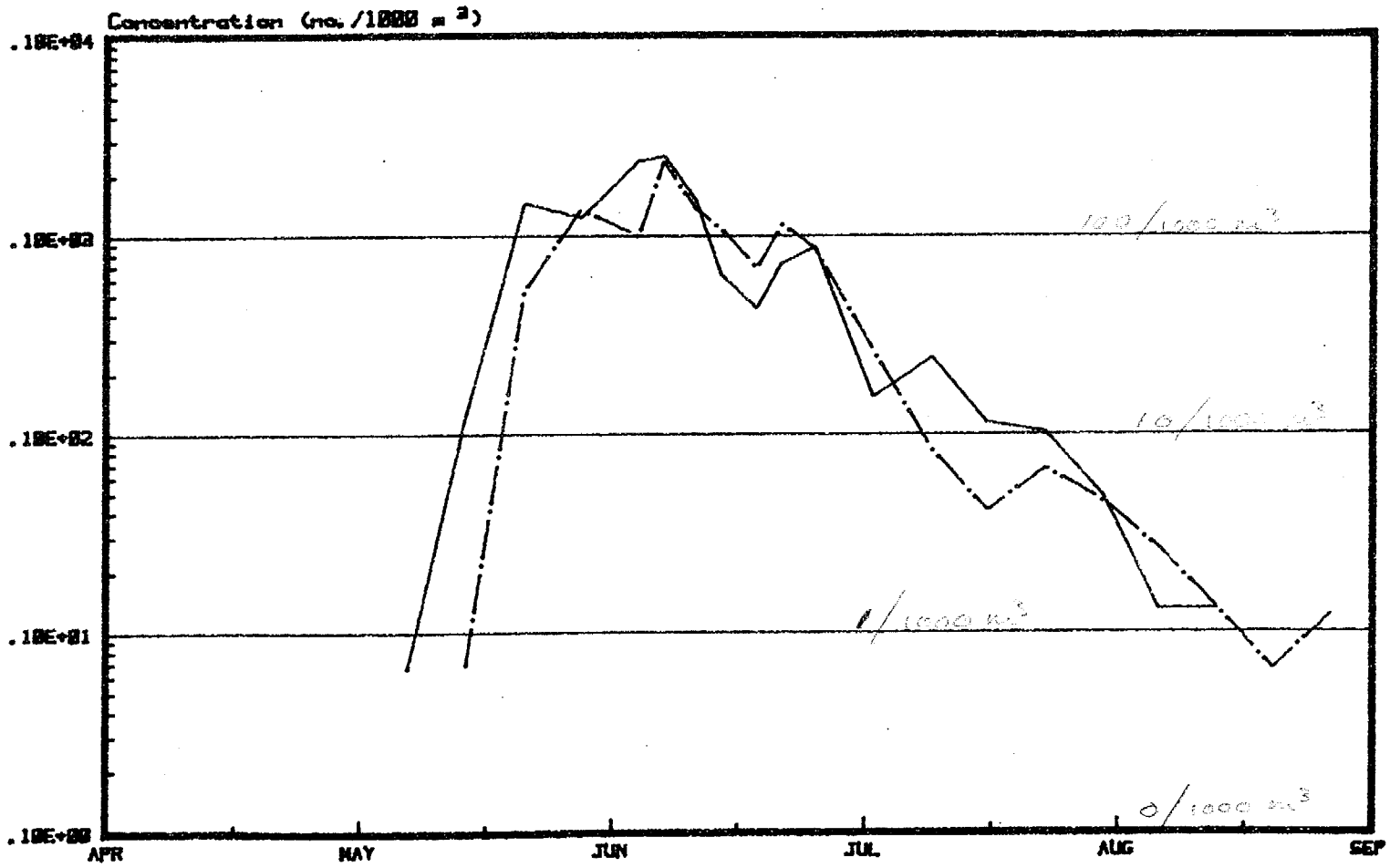
	ROSETON	DANSKAMMER POINT
Sampling Season Dates	24 Apr - 27 Aug	22 Apr - 27 Aug
Sampling Season Duration	126 days	128 days
No. Dates Sampled (24-hr Periods)	22	22
Total No. Samples Collected	176 (3 hr. samples)	528 (1 hr. samples)
Total Hours Sampled	528	528
Mean Volume Sampled per Date (24 hrs) /Standard Deviation	1498 m^3 $\pm$ 82	1493 m^3 $\pm$ 28
Total Volume Sampled (Entire Season)	32958 m^3	32842 m^3
Date of Peak Larval Concentrations (all species, all life stages)	3 Jun (1323/1000 m^3)	3 Jun (2241/1000 m^3)
[a]Estimated No. Days Concentrations Exceeded 1000/1000m^3	8	19
[a]Estimated No. Days Concentrations Exceeded 100/1000 m^3	46	64

[a]From Figures

FIGURE 4.0-6

WHITE PERCH LARVAE CONCENTRATIONS

Roseton and Danskammer Point - 1980



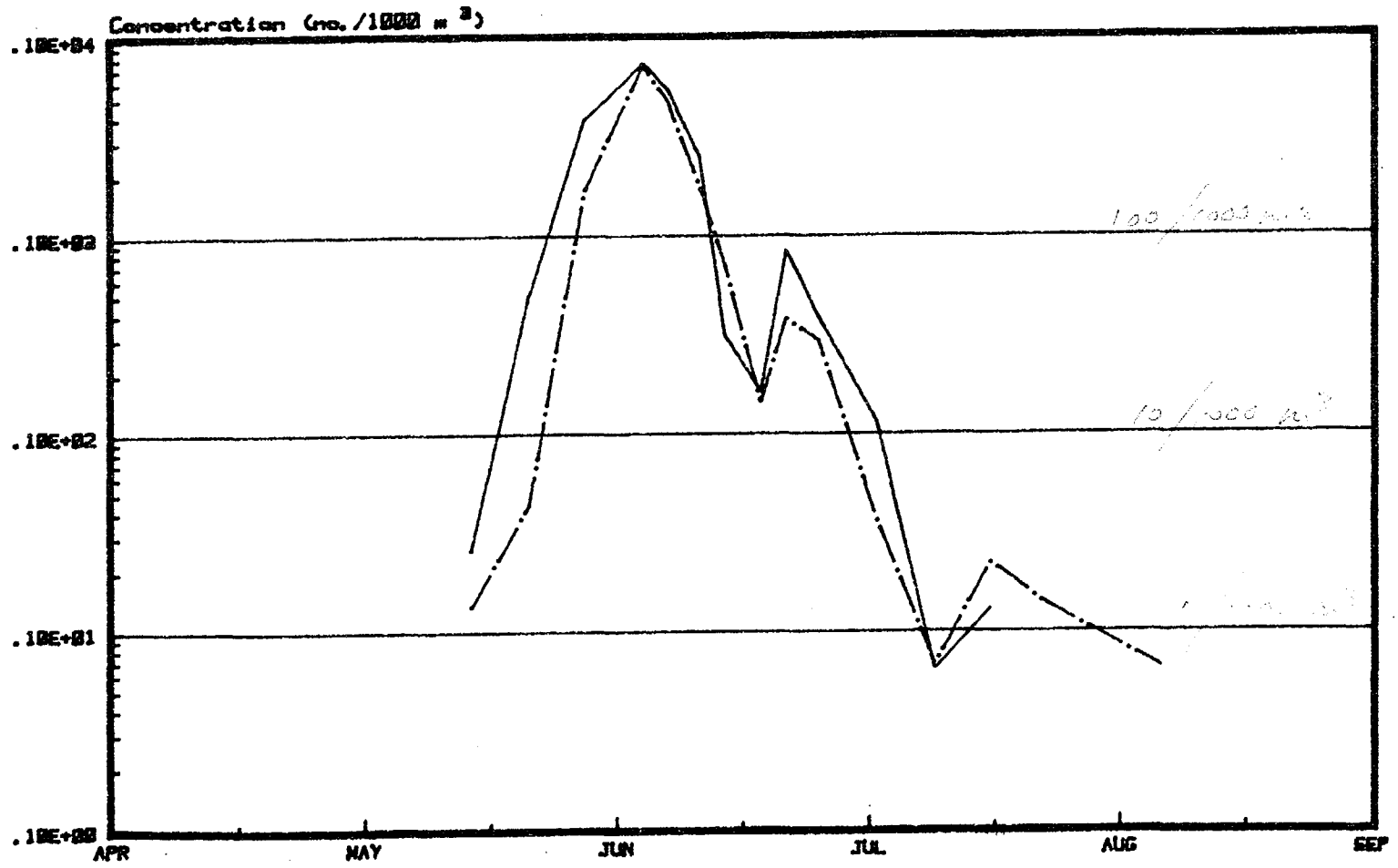
Collection Date

Larvae include yolk sac, post-yolk-sac, UID and juveniles.

FIGURE 4.0-7

STRIPED BASS LARVAE CONCENTRATIONS

Roseton and Danskammer Point - 1980

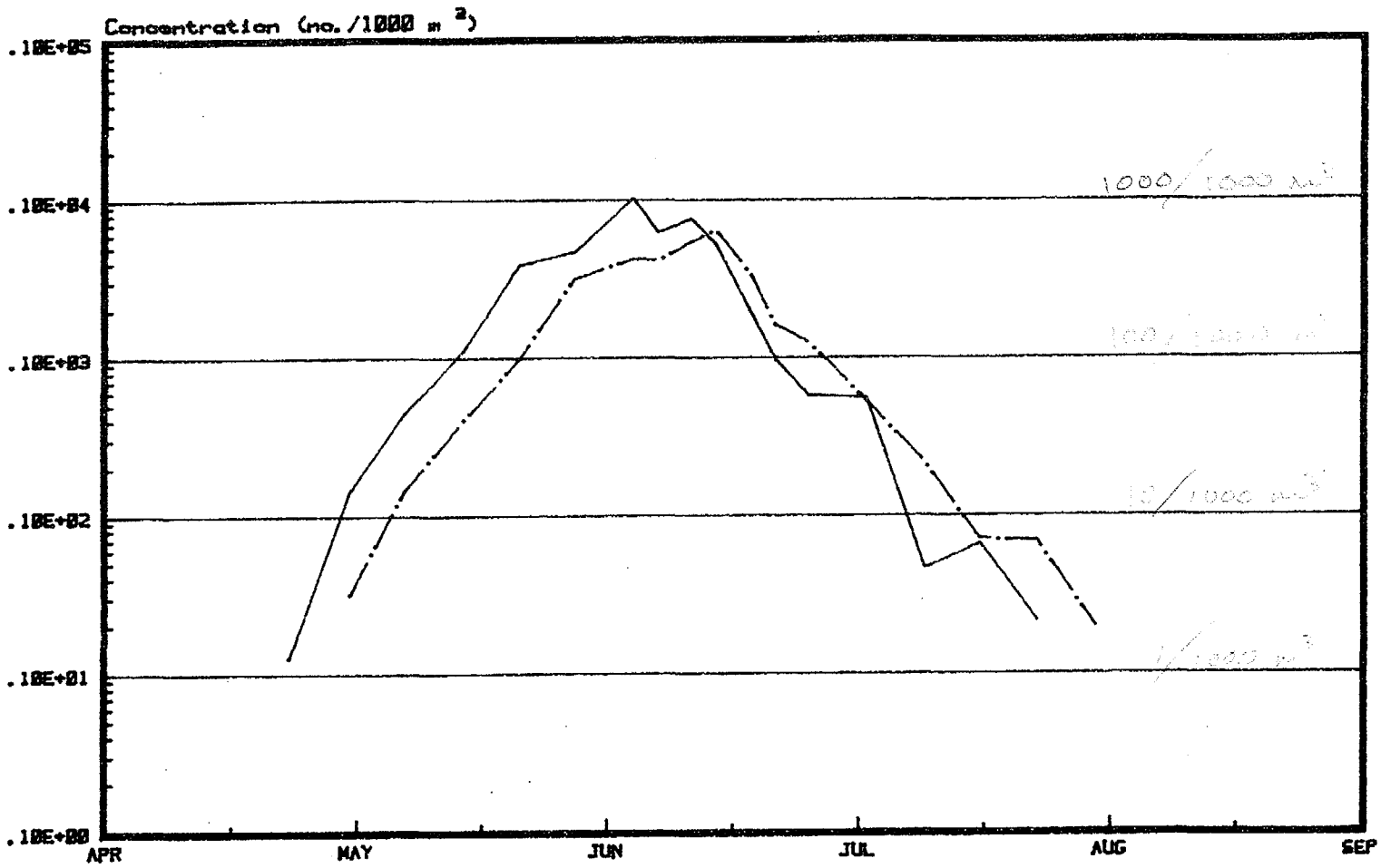


Larvae include yolk sac, post-yolk-sac, UID and juveniles.

FIGURE 4.0-8

ALOSA SPP. LARVAE CONCENTRATIONS

Roseton and Danskammer Point - 1980



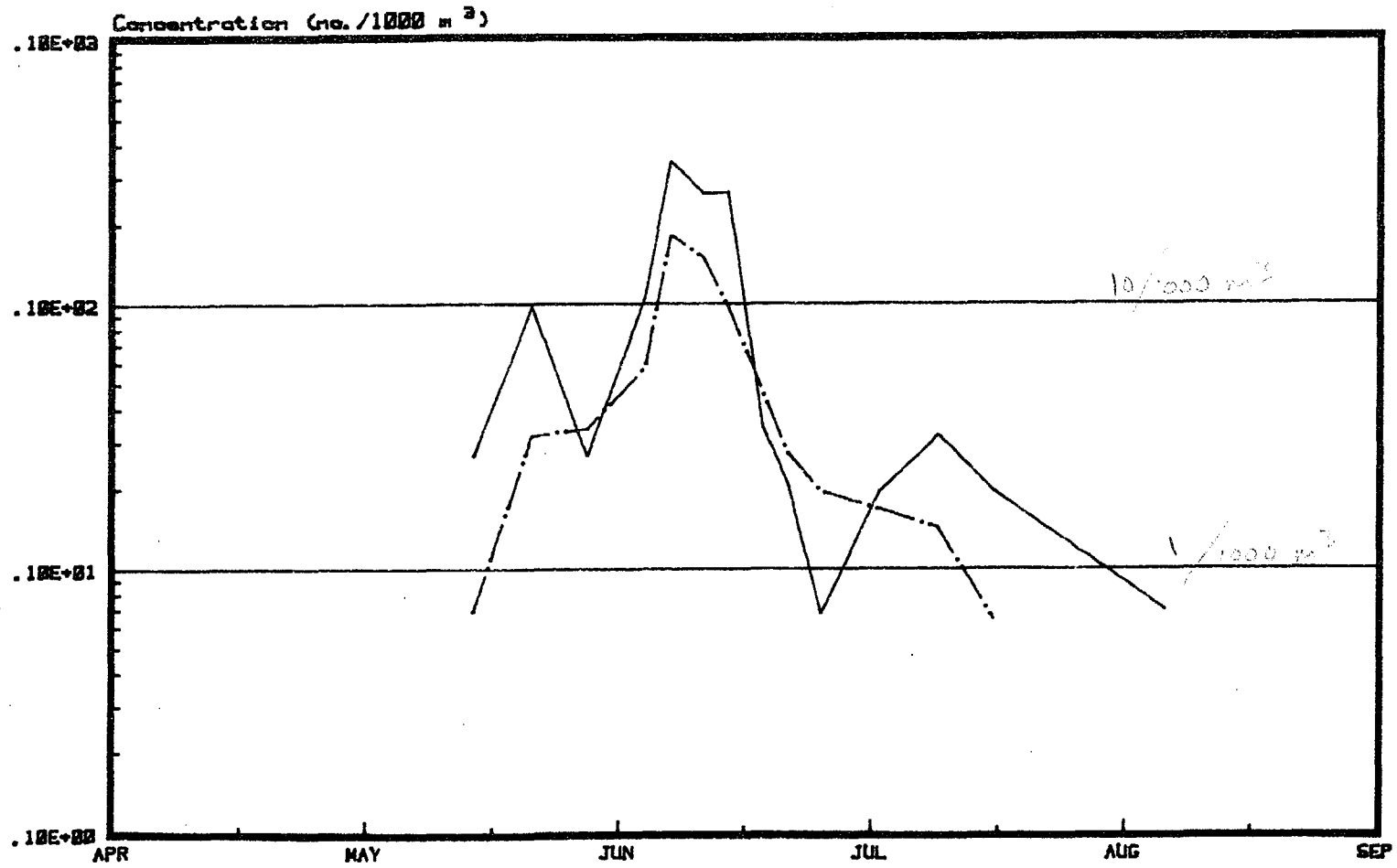
Collection Date

Larvae include yolk sac, post-yolk-sac, UID and juveniles.

FIGURE 4.0-9

AMERICAN SHAD LARVAE CONCENTRATIONS

Roseton and Danskammer Point - 1980

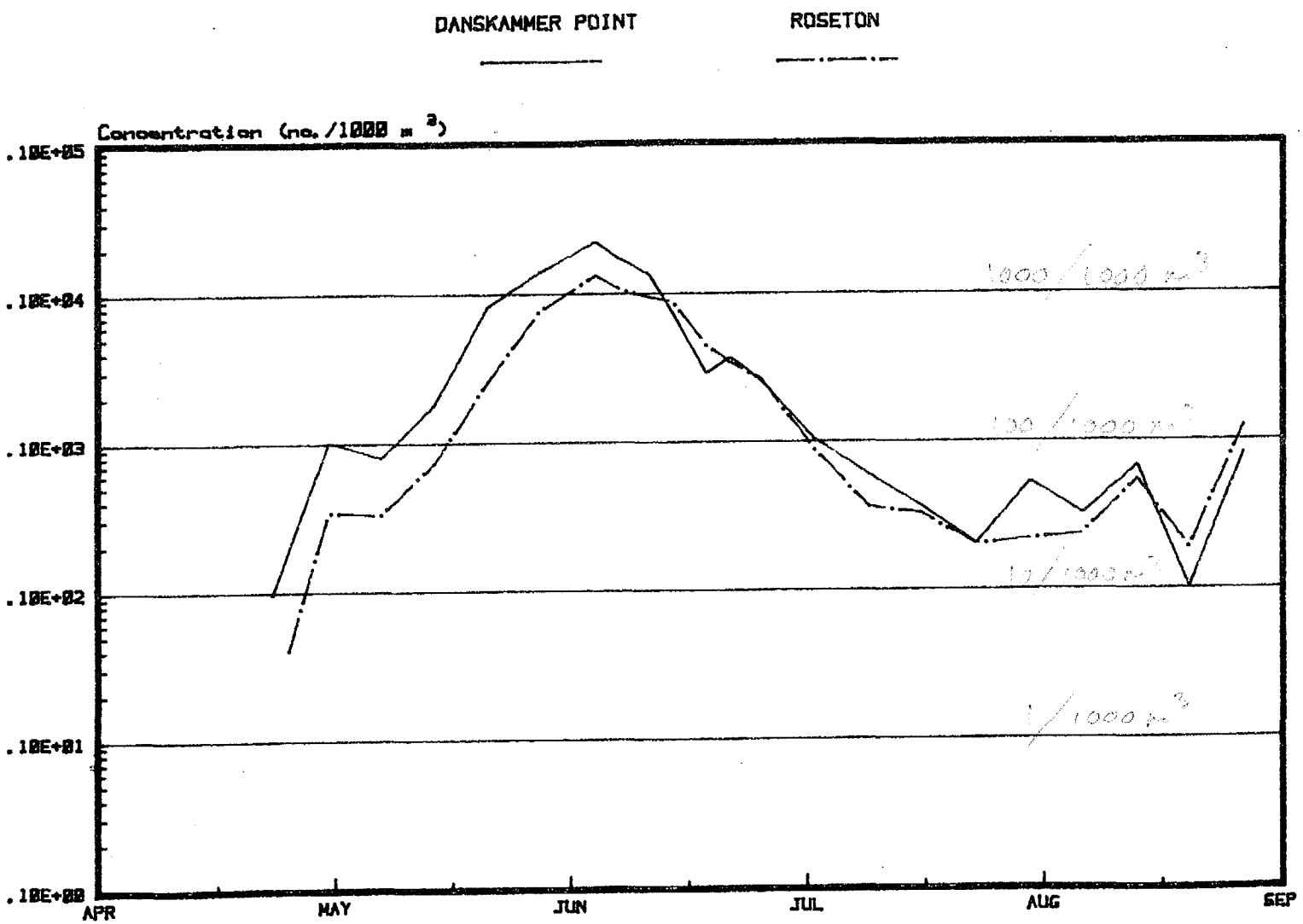


Larvae include yolk sac, post-yolk-sac, UID and juveniles.

FIGURE 4.0-10

TOTAL LARVAE CONCENTRATIONS

Roseton and Danskammer Point - 1980



Collection Date

Larvae include yolk sac, post-yolk-sac, UID and juveniles.

difference in larval abundance between the two plants is due to differences during the early part of the season when more yolk-sac larvae were taken at Danskammer Point (Figure 4.0-10). The results of the ANOVA showed significantly greater concentrations of striped bass and Alosa spp. eggs and yolk-sac larvae and American shad and white perch yolk-sac larvae collected at Danskammer Point. From the graphic analysis it appears that early season egg and larval concentrations at Roseton lagged about a week behind those at Danskammer Point. These differences may be explained by two factors: (1) spawning occurs north of Danskammer Point, and (2) the Danskammer Point intake is closer to the river channel. Therefore, the planktonic eggs and larvae are more likely to be entrained first at Danskammer Point and in higher concentrations as they drift downstream. Concentrations at the two facilities were more similar later in the season as the larvae become more evenly distributed by mixing and/or, with growth, become more nektonic. The fact that larger numbers of bay anchovy (and no eggs) were collected at Roseton reinforces these observations. Dovel (1981) claims that bay anchovy spawn in the Haverstraw Bay area and the larvae migrate upstream. Therefore, we might expect that the nektonic, northward-migrating bay anchovy larvae are taken in somewhat larger numbers at Roseton.

4.2.6 Comparison With Previous Years

4.2.6.1 Species Inventory. Although sampling was limited to four months during 1980 (sampling was conducted during at least nine months for the 1975-1979 entrainment programs), the species inventory is comparable to that of previous years. White perch, striped bass, Alosa spp., and Cyprinid eggs were collected every year from 1975 to 1980, while American shad eggs were collected every year except 1979. Atlantic tomcod eggs were not collected in 1980

because no sampling occurred during the winter spawning period. Larval collections were similar for this five-year period, with white perch, striped bass, Alosa spp., American shad, rainbow smelt, American eel, Cyprinids, Lepomis spp., and Etheostoma spp. the major taxonomic groups. Atlantic tomcod was a major larval species from 1975-1979, but comprised only 0.1% of the 1980 samples because of the sampling schedule. Infrequent collections of Atlantic sturgeon, log perch, brown bullhead, white sucker, hogchoker, Fundulus spp., Gasterosteidae, and Pomoxis spp. also occurred during this six-year period.

4.2.6.2 Select Species Abundance. White perch, Alosa spp., American shad, and bay anchovy egg and larval concentrations, as well as periods of peak abundance in 1980, were similar to the results of previous years (Tables 4.0-44 to 4.0-48). Striped bass egg concentrations were lowest in 1980 Danskammer Point entrainment samples, and 1980 was the first year that no striped bass eggs were collected at Roseton. This difference may result from the different sampling location at Roseton (seal well discharge vs intake), the different sampling technique (pump vs net) used in 1980, or an absence of striped bass eggs in the Roseton/Danskammer Point vicinity. Striped bass larvae concentrations in 1980 were similar to those of previous five years at both plants.

Peak white perch entrainment occurred in a period of less than one month (29 May-25 June) over the six years studied. This consistent temporal pattern is useful in predicting peak periods of larval entrainment in the vicinity of the two plants. Peak striped bass, Alosa spp., and American shad concentrations also occurred at approximately this time every year (15 May-25 June), yielding a consistent pattern of peak larval entrainment (of the major species) during a 42-day period.

TABLE 4.0-44

WEEKLY WHITE PERCH ENTRAINMENT CONCENTRATIONS[a]

Roseton and Danskammer Point Generating Stations - 1975-1980

	1975		1976		1977		1978		1979		1980[b]	
SAMPLE INTERVAL	DI	RI	DI	RI	DI	RI	DI	RI	DI	RI	DI	RDSW
17-23 Apr	0	0	0	0	0	0	0	0	0	0	0	NS
24-30 Apr	0	0	0	0	0	0	0	0	0	0	0	0
1-7 May	0	0	0	12	2	0	0	0	0	0	1	0
8-14 May	0	0	7	2	2	0	0	0	6	0	13	1
15-21 May	6	8	22	8	4	0	7	7	27	13	145	53
22-28 May	5	44	3	2	46	36	24	40	45	83	123	135
29 May-4 June	232	121	6	1	14	14	81	79	228	151	240	99
5-11 June	596	137	11	5	104	159	32	22	47	37	200	185
12-18 June	275	138	102	53	136	153	85	109	169	50	53	86
19-25 Jun	15	44	508	575	12	20	151	187	95	71	80	99
26 Jun-2 Jul	16	19	94	172	0	0	4	2	129	243	15	25
3-9 Jul	NS	NS	27	70	15	3	13	15	23	49	23	8
10-16 Jul	68	30	10	21	13	0	3	0	114	32	9	3
17-23 Jul	19	10	10	20	0	2	0	2	0	16	9	3
24-30 Jul	4	4	0	6	0	0	0	0	16	3	0	3
31 Jul-6 Aug	2	2	0	3	0	0	0	0	0	0	0	0
7-13 Aug	NS	0	0	0	0	0	0	0	0	0	0	0
14-20 Aug	0	0	0	0	0	0	0	0	0	0	0	0
21-27 Aug	1	0	0	0	0	0	0	0	0	0	0	0

[a]Number of organisms per 1000 m^3.
[b]Pump samples.
NS - No sample collected.

TABLE 4.0-45

WEEKLY STRIPED BASS ENTRAINMENT CONCENTRATIONS[a]

Roseton and Danskammer Point Generating Stations - 1975-1980

	1975		1976		1977		1978		1979		1980[b]	
SAMPLE INTERVAL	DI	RI	DI	RI	DI	RI	DI	RI	DI	RI	DI	RDSW
17-23 Apr	0	0	0	0	0	0	0	0	0	0	0	0
24-30 Apr	0	0	0	0	0	0	0	0	0	0	0	0
1-7 May	0	0	0	0	0	0	0	0	0	0	0	0
8-14 May	0	0	2	6	97	47	0	0	3	0	3	1
15-21 May	15	6	36	30	5	0	0	4	107	18	51	4
22-28 May	2	12	0	2	17	36	12	53	372	90	388	170
29 May-4 June	282	167	37	23	20	16	182	222	74	77	747	721
5-11 June	132	372	67	45	1069	485	174	506	47	102	396	327
12-18 June	9	47	109	96	509	458	351	332	328	22	23	41
19-25 Jun	7	2	167	42	23	22	1268	386	20	6	61	33
26 Jun-2 Jul	0	0	0	0	16	5	33	12	41	24	11	2
3-9 Jul	NS	NS	0	0	29	5	17	21	0	5	1	1
10-16 Jul	4	2	0	0	0	0	12	0	7	0	1	1
17-23 Jul	0	1	0	0	0	0	0	0	0	4	0	1
24-30 Jul	0	0	0	0	0	0	0	0	2	1	0	0
31 Jul-6 Aug	0	0	0	1	0	0	0	0	0	0	0	0

[a]Number of organisms per 1000 m^3.
[b]Pump samples.
NS - No sample collected.

TABLE 4.0-46

WEEKLY ALOSA SPP. ENTRAINMENT CONCENTRATIONS[a]

Roseton and Danskammer Point Generating Stations - 1975-1980

SAMPLE INTERVAL	1975		1976		1977		1978		1979		1980[b]	
	DI	RI	DI	RI	DI	RI	DI	RI	DI	RI	DI	RDSW
17-23 Apr	0	0	8	2	0	0	0	0	0	0	1	NS
24-30 Apr	0	0	3	0	13	16	0	0	0	0	14	2
1-7 May	0	7	78	167	2	5	0	3	16	5	45	15
8-14 May	14	11	19	12	9	8	7	3	31	7	111	40
15-21 May	67	48	70	50	40	22	19	20	40	41	389	99
22-28 May	62	119	651	190	435	474	229	159	220	189	472	319
29 May-4 June	906	545	216	84	876	747	235	264	3564	891	1025	423
5-11 June	876	360	194	175	1822	720	1487	945	545	370	686	478
12-18 June	948	1154	196	330	196	392	798	600	798	157	356	457
19-25 Jun	211	170	1301	1668	108	149	598	497	345	128	74	133
26 Jun-2 Jul	82	70	184	50	6	19	127	183	119	93	38	33
3-9 Jul	NS	NS	38	183	29	13	6	12	35	116	3	3
10-16 Jul	7	16	16	25	10	2	6	6	44	4	4	1
17-23 Jul	2	8	0	10	2	5	2	0	9	2	1	1
24-30 Jul	0	0	3	5	0	3	0	0	0	0	0	1
31 Jul-6 Aug	0	0	1	0	0	0	0	0	3	0	0	0
7-13 Aug	0	NS	0	5	0	0	0	3	0	0	0	0
14-20 Aug	0	0	0	0	0	0	0	0	0	0	0	0

[a]Number of organisms per 1000 m^3.
[b]Pump samples.
NS - No sample collected.

TABLE 4.0-47

WEEKLY AMERICAN SHAD ENTRAINMENT CONCENTRATIONS[a]

Roseton and Danskammer Point Generating Stations - 1975-1980

	1975		1976		1977		1978		1979		1980[b]	
SAMPLE INTERVAL	DI	RI	DI	RI	DI	RI	DI	RI	DI	RI	DI	RDSW
17-23 Apr	0	0	0	0	0	0	0	0	0	0	0	NS
24-30 Apr	0	0	0	0	0	0	0	0	0	0	0	0
1-7 May	0	0	1	1	0	0	0	0	0	0	0	0
8-14 May	0	0	13	4	9	7	0	0	0	0	3	1
15-21 May	13	3	30	28	40	16	4	0	0	0	10	3
22-28 May	0	2	58	17	22	40	25	19	7	3	3	3
29 May-4 June	0	0	10	10	10	19	26	8	109	53	11	6
5-11 June	0	0	0	0	0	0	4	8	33	55	29	17
12-18 June	0	0	5	2	0	0	0	0	12	5	12	3
19-25 Jun	0	0	0	0	0	0	0	0	17	5	1	2
26 Jun-2 Jul	0	0	0	0	0	0	0	0	16	0	0	0
3-9 Jul	NS	NS	0	0	0	0	0	0	0	0	0	0

[a]Number of organisms per 1000 m^3.
[b]Pump samples.
NS = No sample collected.

TABLE 4.0-48

WEEKLY BAY ANCHOVY ENTRAINMENT CONCENTRATIONS[a]

Roseton and Danskammer Point Generating Stations - 1975-1980

	1975		1976		1977		1978		1979		1980[b]	
SAMPLE INTERVAL	DI	RI	DI	RI	DI	RI	DI	RI	DI	RI	DI	RDSW
19-25 Jun	1	0	0	0	0	0	0	0	0	0	0	0
26 June-2 Jul	0	0	0	0	0	0	0	0	0	0	0	0
3-9 Jul	NS	NS	0	0	0	0	0	0	0	0	2	2
10-16 Jul	2	0	0	3	0	0	0	0	4	5	7	10
17-23 Jul	15	21	0	0	0	0	8	11	17	4	2	3
24-30 Jul	7	2	3	11	0	4	43	62	6	5	4	12
31 Jul-6 Aug	9	43	2	0	19	15	113	51	66	46	17	12
7 Aug-13 Aug	NS	NS	0	0	24	28	10	16	17	4	62	46
14-20 Aug	92	62	0	0	6	4	17	1	8	81	7	15
21-27 Aug	33	23	12	7	12	29	10	8	NS	NS	64	107
28 Aug-3 Sep	NS	NS	NS	NS	NS	NS	9	4	8	18	0	0
4-10 Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0	0
11-17 Sep	7	0	4	2	6	0	5	12	0	0	0	0
18-24 Sep	0	0	0	0	0	0	2	0	0	0	0	0
25 Sep-1 Oct	0	0	0	0	0	0	0	0	0	0	0	0

[a]Number of organisms per 1000 m^3.
[b]Pump samples.
NS - No sample collected.

4.2.7 Conclusions

The evidence from the 1980 entrainment abundance sampling program suggests that both plants entrain larvae from the same "community" of species, but somewhat differently from the individual populations because of the physical differences of the plants' intakes and changes in ichthyoplankton distribution through space and time. The lack of diel agreement in abundance at the two stations reflects the patchy distribution of organisms as they enter the Roseton-Danskammer Point region.

The Roseton-Danskammer Point data also reflect the seasonal patterns of ichthyoplankton abundance: Alosa spp. occur first and in the greatest numbers, followed by Morone spp. and, finally, the bay anchovy. Striped bass achieve somewhat higher concentrations than white perch, but white perch abundance is sustained for a longer time. The species of Alosa and Morone account for over 80% of the ichthyoplankton collected during the sampling season.

why no figures/Graphs to show # impinged over time?

CHAPTER 5.0

IMPINGEMENT

5.1 MATERIALS AND METHODS

5.1.1 Danskammer Point and Roseton

5.1.1.1 Sampling Locations and Frequency. Impingement samples were collected once each week from the traveling screenwash discharges at Danskammer Point and Roseton. Sampling was conducted simultaneously during 24-hr periods at both plants.

Sampling dates are listed in Table 5.0-1. If a total of 1000 or more fish were collected in one regularly scheduled 24-hr period, an additional collection was made within four days. Only the plant where the 1000 or more fish were impinged was resampled.

Temperature and conductivity were measured at the plant intakes at approximately 0630, 1230, 1830, and 0030 hours during each sampling date. Tide height was recorded, and temperature and conductivity were measured with calibrated instruments at surface and bottom water depths.

5.1.1.2 Collection Procedures

5.1.1.2.1 Danskammer Point. Fish were collected from the Units 1 and 2 and Units 3 and 4 sluiceway discharges (Figure 5.0-1) in a 0.9 x 0.9 x 0.9-m basket made of 0.95-cm wire mesh. Attached to the bottom of each basket was a 1.91-cm mesh net (0.9 x 0.9 x 3.0 m), which was lined with a 0.64-cm mesh net. These baskets were suspended below the respective sluiceway discharges to intercept the entire screenwash discharge.

TABLE 5.0-1

IMPINGEMENT SAMPLING DATES AND NUMBER OF SAMPLES COLLECTED

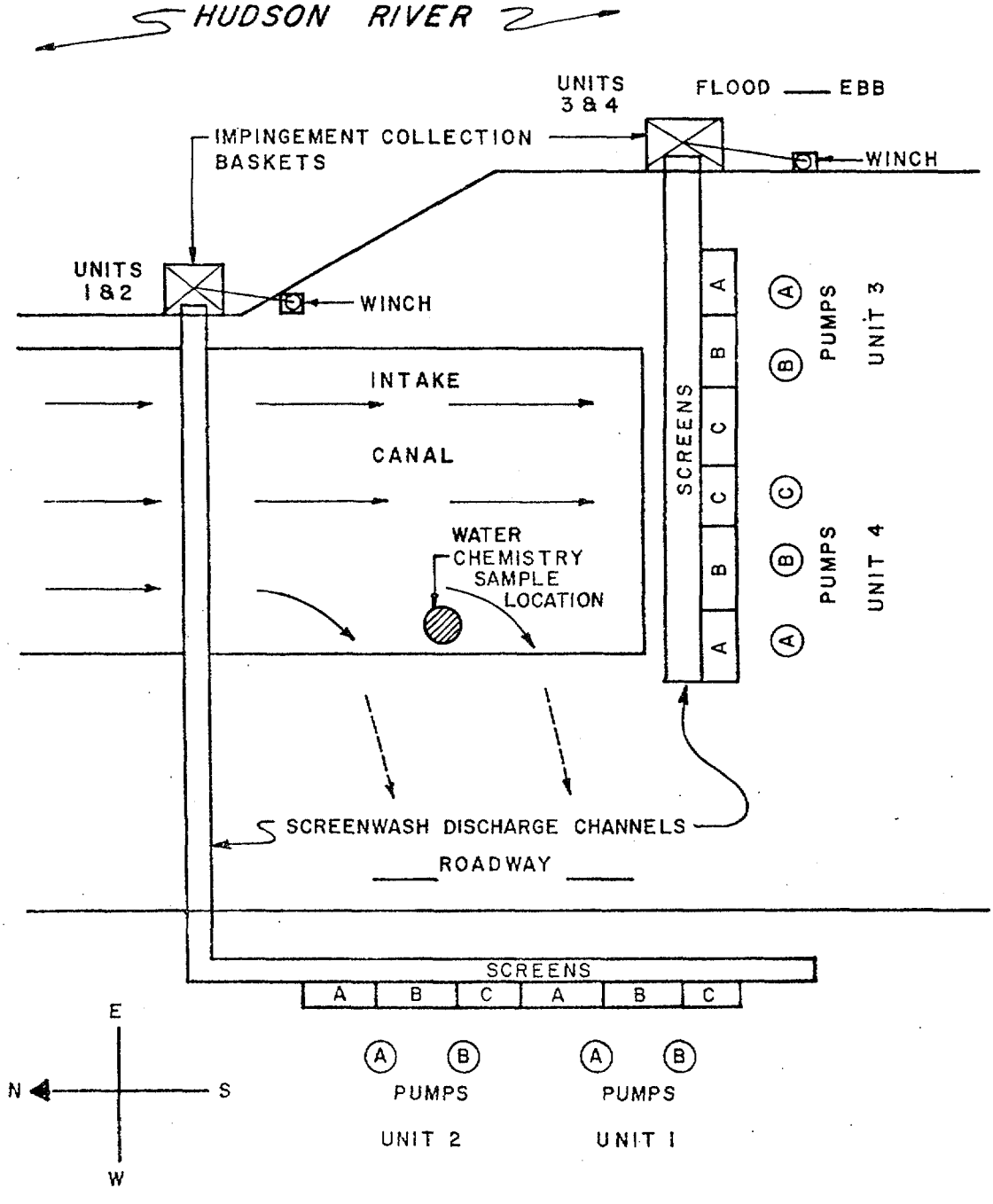
Roseton and Danskammer Point Generating Stations - 1980

SAMPLE DATE	NUMBER OF SAMPLES COLLECTED ROSETON	DANSKAMMER	SAMPLE DATE	NUMBER OF SAMPLES COLLECTED ROSETON	DANSKAMMER
3- 4 Jan	4	5	24-25 Jul	4	8
10-11 Jan	4	4	31 Jul- 1 Aug	4	8
17-18 Jan	4	4	7- 8 Aug	4	7
24-25 Jan[a]	4	4	11-12 Aug	4	8
31 Jan-1 Feb	4	7	14-15 Aug	4	8
7- 8 Feb	4	8	18-19 Aug[a]	4	-
14-15 Feb	4	8	21-22 Aug	4	8
21-22 Feb	4	8	25-26 Aug[a]	4	-
28-29 Feb	4	8	28-29 Aug[a,b]	4	7
3- 4 Mar[a]	3	-	2- 3 Sep	4	8
6- 7 Mar	4	8	4- 5 Sep[a,b]	4	8
13-14 Mar[a]	4	7	8- 9 Sep	4	8
20-21 Mar	4	8	11-12 Sep	4	8
27-28 Mar	4	8	18-19 Sep	4	8
3- 4 Apr	4	8	25-26 Sep	4	8
10-11 Apr	4	8	29-30 Sep[b]	-	8
17-18 Apr	4	8	2- 3 Oct	4	8
21-22 Apr[b]	-	8	6- 7 Oct[b]	-	8
24-25 Apr	4	8	9-10 Oct	4	6
28-29 Apr[a,b]	4	8	13-14 Oct[a]	4	-
1- 2 May	4	5	16-17 Oct	4	8
5- 6 May[a]	4	-	20-21 Oct[a]	4	-
8- 9 May	4	4	23-24 Oct	4	8
15-16 May	4	8	27-28 Oct[a,b]	4	8
19-20 May[b]	-	8	30-31 Oct	4	8
22-23 May	4	8	3- 4 Nov[a]	4	8
26-27 May[b]	-	8	6- 7 Nov	4	6
29-30 May	4	8	10-11 Nov[a,b]	4	8
2- 3 Jun[b]	-	8	13-14 Nov	4	8
5- 6 Jun	3	8	17-18 Nov[b]	-	8
9-10 Jun[b]	-	8	20-21 Nov	4	8
12-13 Jun	4	8	24-25 Nov[b]	-	8
16-17 Jun[b]	-	8	25-26 Nov	4	6
19-20 Jun	4	7	4- 5 Dec	4	3
26-27 Jun	4	8	11-12 Dec	3	8
3- 4 Jul	4	7	18-19 Dec	4	8
10-11 Jul	4	8	22-23 Dec[b]	-	8
14-15 Jul[b]	-	8	23-24 Dec	4	8
17-18 Jul	4	8	29-30 Dec[b]	-	8

[a]Additional impingement at Roseton.
[b]Additional impingement at Danskammer Point.

FIGURE 5.0-1

DANSKAMMER POINT SAMPLING LOCATIONS



A prewash of the operating hauling screens was conducted before each 24-hr sampling period to remove any fish accumulated on the intake screens. All marked and tagged fish found in the prewash sample were preserved for identification and returned to the organization conducting the fish tagging. Fish collected during the prewash were not included in the analysis of impingement data. Four 6-hr samples were collected during each 24-hr survey. Samples were collected at each designated site at approximately 1200, 1800, 2400, and 0600 hours.

Normally, the intake screens were washed for 30 min at Roseton and 15 min at Danskammer Point at the end of each 6-hr interval. When the debris load was heavy, the screens may have been operated continuously or cleaned more frequently. When this occurred, the timing of collections was such that samples were still separated into the discrete 6-hr intervals listed above.

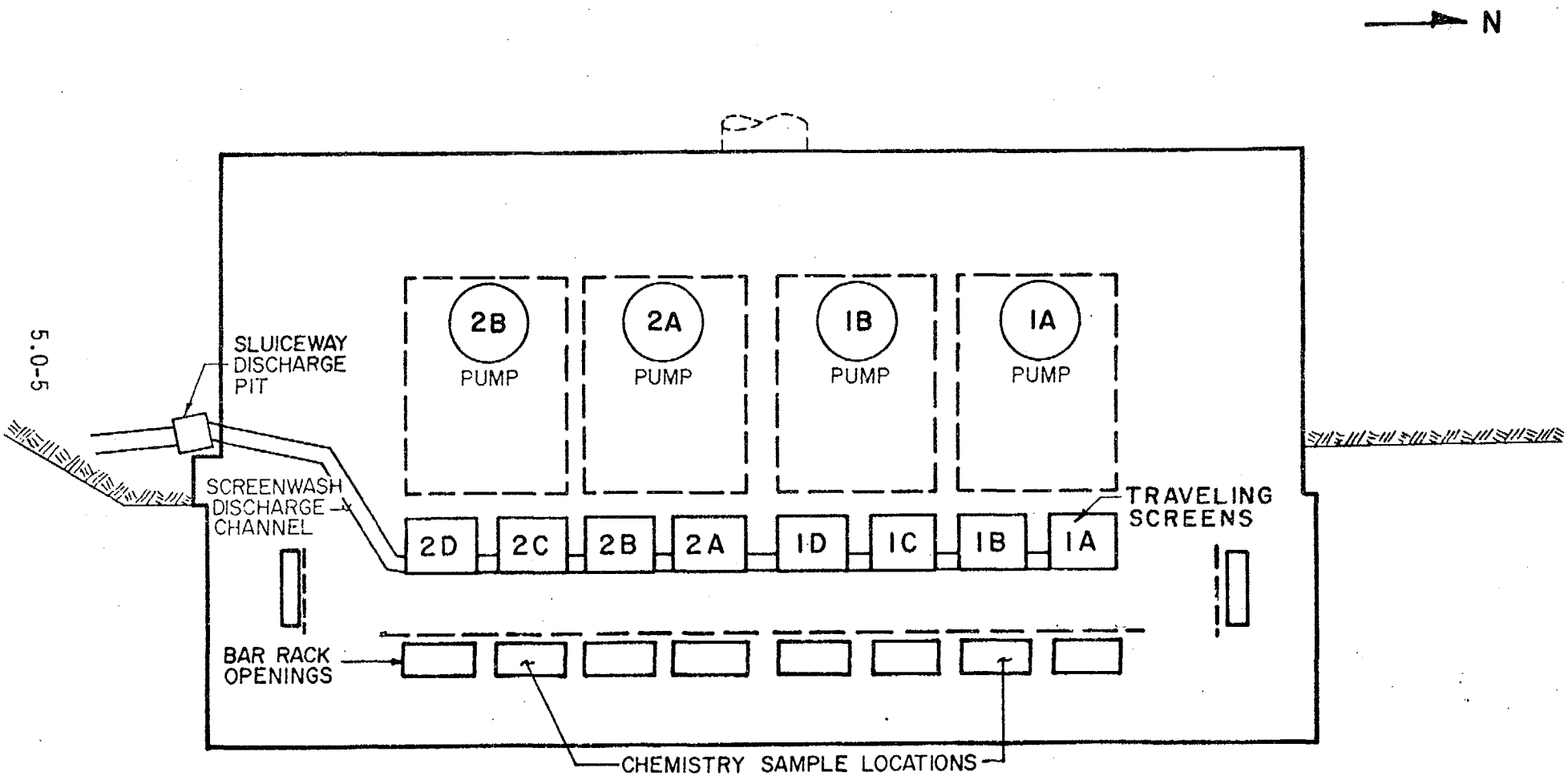
The collected fish were sorted and counted by species and preserved in 10% buffered formalin. Any collected sturgeon were returned to the river immediately after being weighed and measured. At 3-hr intervals during the 24-hr sampling period, the plant control room was contacted to confirm the number of circulating pumps in operation. The intake screens were visually inspected during each collection interval to establish that they were in operation. The screenwash pressure was recorded for each screen during each wash period.

5.1.1.2.2 Roseton. Two collection devices were used at Roseton (Figure 5.0-2), depending on the quantity of debris. A 0.9 x 0.9 x 0.9-m collection basket equipped with 0.95-cm wire mesh was used when the debris load was light, and a conveyor belt system equipped with a 0.64-cm woven mesh belt was used

FIGURE 5.0-2

ROSETON INTAKE SAMPLING LOCATIONS

Roseton Generating Station



when debris was heavy (Figure 5.0-3). The collection device was placed in the sluiceway discharge pit to intercept the entire screenwash discharge.

The procedures described for sampling at Danskammer Point were also used at Roseton: prewash; collection intervals; handling of tagged fish; procedures during heavy debris loads; field processing of samples; and plant data recording.

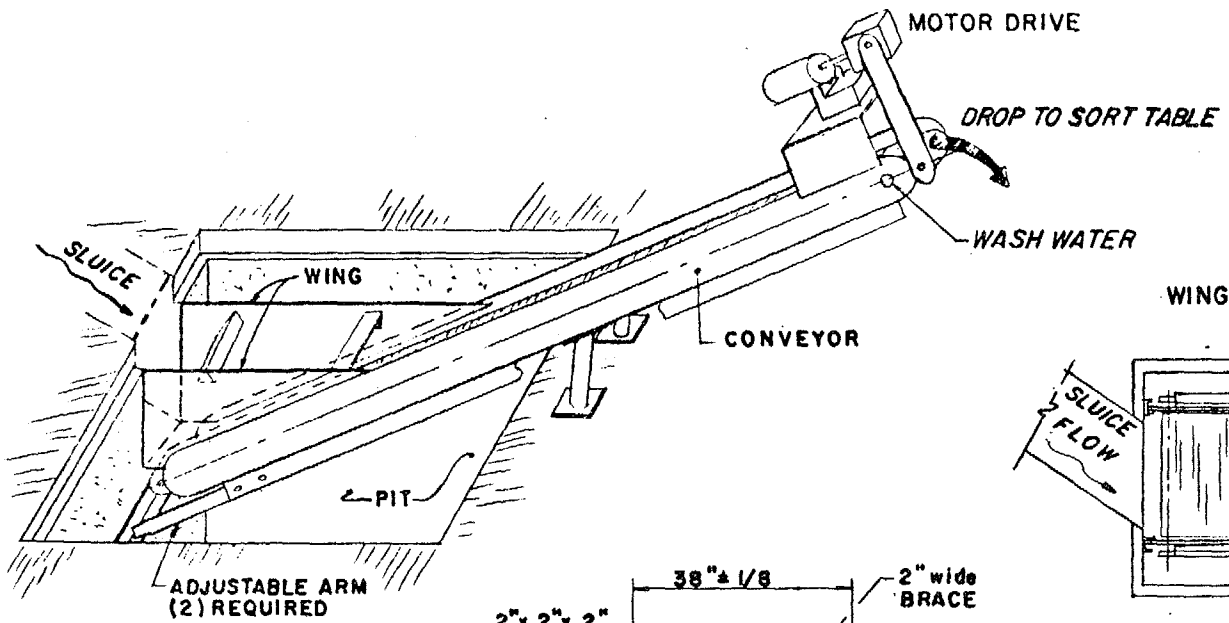
5.1.1.3 Laboratory Analysis. Each 6-hr impingement sample was sorted and counted by species and a total species biomass was obtained. White perch, striped bass, and Atlantic tomcod were examined for fin clips and tags. For samples containing fewer than 100 individuals per species, all specimens were measured to the nearest 0.1 cm (total length) and weighed to the nearest 0.1 g. When a collection contained more than 100 individuals of a species, that species was stratified into large and small individuals (generally young-of-the-year or yearlings and adults). All individuals from the group with the fewest specimens were measured for length and weighed. The remaining fish in the sample were then subsampled (using a random numbers table) to obtain specimens for length and weight measurements.

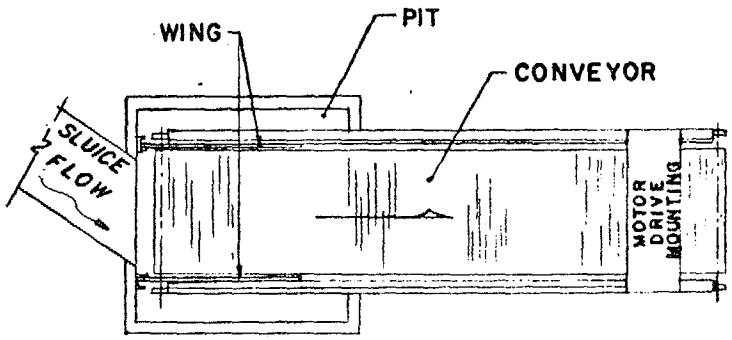
5.1.1.4 Impingement Rate Computations. Weekly impingement samples were used to estimate the number of fish impinged at Roseton and Danskammer Point. Each month was divided into four seven-day periods: days 1 through 7, 8 through 14, 15 through 21, and 22 through the last day of the month. For each period, the number of fish collected was divided by the total plant flow sampled within that period to produce an impingement rate. The impingement rate for the four seven-day periods was averaged to produce a monthly mean impingement rate. If there was no sample taken within one of the four periods, the remaining intervals were averaged to obtain

FIGURE 5.0-3

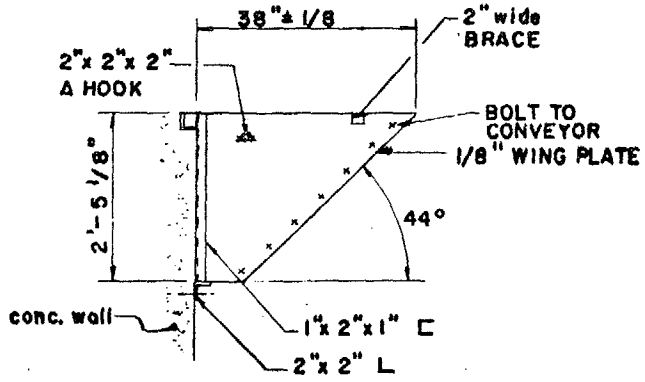
CONVEYOR BELT—IMPINGEMENT SAMPLER

Roseton Electric Generating Station





CONVEYOR AND PIT PLAN



WING ATTACHMENT METHOD

the monthly rate. The monthly mean impingement rate was then multiplied by the monthly plant flow to produce an estimated total number of fish impinged per month. The monthly estimates were summed to obtain an annual total.

5.2 RESULTS

5.2.1 Species Inventory

A total of 49 fish species and three invertebrate species were collected in the 1980 impingement collections. Roseton and Danskammer Point accounted for totals of 45 and 46 species, respectively (Tables 5.0-2 and 5.0-3), with a total of 39 species common to both. Atlantic sturgeon, emerald shiner, black bullhead, northern pipefish, central mudminnow, and northern stargazer were collected only at Roseton. Species collected only at Danskammer Point included tidewater silverside, white sucker, rock bass, chain pickerel, redfin pickerel, brown trout, and channel catfish. A total of 27 families were represented by these impingement collections. The families Centrarchidae and Clupeidae were each represented by six species, the most for any family. There were 18 families represented by a single species. Tidewater silverside, Atlantic needlefish, summer flounder, northern pipefish, and northern stargazer have not been reported from previous impingement collections (LMS 1978, LMS 1979a, 1979b, LMS 1980a, LMS 1980b). These five new species are all marine fish and their presence in northern Newburgh Bay was probably caused by the extended period of saltwater intrusion in 1980 as a result of low precipitation.

White perch was the most numerous species at both plants, with blueback herring and bay anchovy second and third at Roseton and alewife and blueback herring at Danskammer Point. The top three species comprised 76.5% percent of the total number collected at

TABLE 5.0-2 (Page 1 of 2)

FISH SPECIES INVENTORY AND TOTAL
NUMBER COLLECTED IN IMPINGEMENT SAMPLES

Roseton Generating Station - 1980

COMMON NAME	SCIENTIFIC NAME	NO. COLLECTED
White perch	Morone americana	28,112
Blueback herring	Alosa aestivalis	18,094
Bay anchovy	Anchoa mitchilli	11,675
Pumpkinseed	Lepomis gibbosus	5,146
Alewife	Alosa pseudoharengus	2,125
Spottail shiner	Notropis hudsonius	1,652
American shad	Alosa sapidissima	1,372
Striped bass	Morone saxatilis	1,128
Blue crab	Callinectes sapidus	933
Hogchoker	Trinectes maculatus	719
Gizzard shad	Dorosoma cepedianum	714
Weakfish	Cynoscion regalis	641
Atlantic tomcod	Microgadus tomcod	601
Banded killifish	Fundulus diaphanus	582
Rainbow smelt	Osmerus mordax	572
Bluegill	Lepomis macrochirus	302
Tessellated darter	Etheostoma olmstedi	246
Brown bullhead	Ictalurus nebulosus	159
White catfish	Ictalurus catus	149
Crayfish	Cambarinae	107
Yellow perch	Perca flavescens	105
Golden shiner	Notemigonus crysoleucas	78
Mud crab	Rithropanopeus harrisii	78
Goldfish	Carassius auratus	63
	Alosa spp.	62
American eel	Anguilla rostrata	59
Largemouth bass	Micropterus salmoides	53
Fourspine stickleback	Apeltes quadracus	52
Bluefish	Pomatomus saltatrix	30
Redbreast sunfish	Lepomis auritus	16
Carp	Cyprinus carpio	13
Threespine stickleback	Gasterosteus aculeatus	7
Atlantic menhaden	Brevoortia tyrannus	5
Black crappie	Pomoxis nigromaculatus	4
Mummichog	Fundulus heteroclitus	4
Central mudminnow	Umbra limi	4
Crevalle jack	Caranx hippos	3
Black bullhead	Ictalurus melas	2
Summer flounder	Paralichthys dentatus	2

Total =

Volume Sampled =

TABLE 5.0-2 (Page 2 of 2)

FISH SPECIES INVENTORY AND TOTAL
NUMBER COLLECTED IN IMPINGEMENT SAMPLES

COMMON NAME	SCIENTIFIC NAME	No. COLLECTED
Emerald shiner	Notropis atherinoides	1
	Ictalurus spp.	1
Atlantic sturgeon	Acipenser oxyrhynchus	1
Atlantic needlefish	Strongylura marina	1
Northern pipefish	Syngnathus fuscus	1
Northern stargazer	Astroscopus guttatus	1
Hickory shad	Alosa mediocris	1
White mullet	Mugil curema	1
TOTAL		75,677

Volume sampled

TABLE 5.0-3 (Page 1 of 2)

FISH SPECIES INVENTORY AND TOTAL
NUMBER COLLECTED IN IMPINGEMENT SAMPLES

Danskammer Point Generating Station - 1980

COMMON NAME	SCIENTIFIC NAME	No. COLLECTED
White perch	Morone americana	42,961
Alewife	Alosa pseudoharengus	8,543
Blueback herring	Alosa aestivalis	5,089
Gizzard shad	Dorosoma cepedianum	4,981
Spottail shiner	Notropis hudsonius	3,608
Pumpkinseed	Lepomis gibbosus	3,227
American shad	Alosa sapidissima	2,938
Bay anchovy	Anchoa mitchilli	2,095
Atlantic tomcod	Microgadus tomcod	1,999
Striped bass	Morone saxatilis	1,364
Weakfish	Cynoscion regalis	1,162
Blue crab	Callinectes sapidus	1,060
White catfish	Ictalurus catus	687
Hogchoker	Trinectes maculatus	390
Bluefish	Pomatomus saltatrix	390
Crayfish	Cambarinae	373
Largemouth bass	Micropterus salmoides	351
Brown bullhead	Ictalurus nebulosus	336
Yellow perch	Perca flavescens	306
Mud crab	Rithropanopeus harrisii	306
Golden shiner	Notemigonus crysoleucas	288
Bluegill	Lepomis macrochirus	273
Goldfish	Carassius auratus	198
American eel	Anguilla rostrata	184
Banded killifish	Fundulus diaphanus	146
Rainbow smelt	Osmerus mordax	135
	Alsoa spp.	111
Tessellated darter	Etheostoma olmstedi	98
Redbreast sunfish	Lepomis auritus	57
Carp	Cyprinus carpio	28
Black crappie	Pomoxis nigromaculatus	13
Fourspine stickleback	Apeltes quadracus	10
Rock bass	Ambloplites rupestris	6
Atlantic menhaden	Brevoortia tyrannus	6
White sucker	Catostomus commersoni	5
Crevalle jack	Caranx hippos	3
White mullet	Mugil curema	3
Chain pickerel	Esox niger	2
Threespine stickleback	Gasterosteus aculeatus	2
Summer flounder	Paralichthys dentatus	2

TABLE 5.0-3 (Page 2 of 2)

FISH SPECIES INVENTORY AND TOTAL
NUMBER COLLECTED IN IMPINGEMENT SAMPLES

Danskammer Point Generating Station - 1980

COMMON NAME	SCIENTIFIC NAME	No. COLLECTED
Channel catfish	Citalurus punctatus	1
Redfin pickerel	Esox americanus americanus	1
Brown trout	Salmo trutta	1
Atlantic needlefish	Strongylura marina	1
Hickory shad	Alosa mediocris	1
Tidewater silverside	Menidia beryllina	1
Sunfishes	Centrarchidae	1
Mummichog	Fundulus heteroclitus	1
TOTAL		83,744

Roseton and 67.6% of the total at Danskammer Point. A greater number of organisms were collected at Danskammer Point (83,744) than at Roseton (75,677) in 1980.

5.2.2 Sample Parameters

The monthly flow data related to Roseton and Danskammer Point impingement sampling are presented in Table 5.0-4. At Roseton, impingement collections were conducted on 65 days and facilitated sampling 17.7% of the total annual plant flow. The monthly percent of flow sampled ranged from 11.4 in December to 25.9 in October. Danskammer Point impingement sampling was conducted on 72 days. A total of 19,541,000 gal of water were sampled, representing 20.0% of the total annual plant flow. The percent of flow sampled increased from 10.8 in March to 27.0 in November because of the increased sampling effort during high abundance periods.

5.2.3 Abundance, Biomass, and Percent Composition

The monthly abundance and percent composition data for fish collected at Roseton and Danskammer Point are presented in Tables 5.0-5 and 5.0-6, respectively. The biomass and percent composition data are presented in Table 5.0-7 for Roseton and Table 5.0-8 for Danskammer Point.

White perch was the most abundant species at both plants, comprising 37.7% of the total fish collected in Roseton impingement samples and 52.4% at Danskammer Point. Blueback herring (24.3%), bay anchovy (15.7%), and pumpkinseed (6.9%) were the next most numerically abundant species in Roseton collections. Each of the other species collected made up less than 3.0% of the annual percent composition. Alewife (10.4%), blueback herring (6.2%), gizzard shad (6.1%), spottail shiner (4.4%), rainbow smelt (3.9%), and American

TABLE 5.0-4

MONTHLY FLOW DATA RELATED TO IMPINGEMENT SAMPLING

Roseton and Danskammer Point Generating Stations - 1980

	ROSETON				DANSKAMMER POINT			
MONTH	TOTAL PLANT FLOW[a]	FLOW[a] SAMPLED	PERCENT OF FLOW SAMPLED	NUMBER OF DAYS SAMPLED	TOTAL PLANT FLOW[a]	FLOW[a] SAMPLED	PERCENT OF FLOW SAMPLED	NUMBER OF DAYS SAMPLED
Jan	18660.23	2985	16.0	5	3183.75	381	12.0	5
Feb	18285.31	2437	13.3	4	3908.58	504	12.9	4
Mar	18663.54	2732	14.6	5	3440.34	371	10.8	4
Apr	20790.45	3601	17.3	5	4969.79	919	18.5	6
May	19006.15	3951	20.8	6	7471.29	1783	23.9	7
Jun	22930.95	2987	13.0	4	9235.13	2239	24.2	7
Jul	26466.22	4115	15.5	5	12095.35	2153	17.8	6
Aug	25728.08	5805	22.6	7	12278.10	1893	15.4	5
Sep	17721.50	3780	21.3	6	11171.85	2706	24.2	7
Oct	21240.53	5504	25.9	8	9444.75	2047	21.7	7
Nov	18174.88	3589	19.7	6	11291.73	3050	27.0	8
Dec	18680.71	2132	11.4	4	9113.83	1495	16.4	6
Total	246348.55	43618	17.7	65	97604.49	19541	20.0	72

[a]Flow in million gallons.

TABLE 5.0-5 (Page 1 of 6)

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS 1980
ROSETON GENERATING STATION

	JAN		FEB		MAR		APR	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	0	0.0	0	0.0	1	0.1	2	*
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0
AMERICAN EEL	4	0.3	1	*	1	0.1	7	0.2
AMERICAN SHAD	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC MENHADEN	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC NEEDLEFISH	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC STURGEON	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC TOMCOD	136	11.7	5	0.2	1	0.1	1	*
BANDED KILLIFISH	9	0.8	4	0.2	6	0.4	7	0.2
BAY ANCHOVY	0	0.0	0	0.0	0	0.0	0	0.0
BLACK BULLHEAD	0	0.0	0	0.0	0	0.0	1	*
BLACK CRAPPIE	0	0.0	1	*	1	0.1	1	*
BLUEBACK HERRING	0	0.0	0	0.0	0	0.0	11	0.2
BLUEFISH	0	0.0	0	0.0	0	0.0	0	0.0
BLUEGILL	6	0.5	0	0.0	9	0.6	40	0.9
BROWN BULLHEAD	4	0.3	1	*	0	0.0	5	0.1
CARP	6	0.5	3	0.1	0	0.0	0	0.0
CENTRAL MUDMINNOW	0	0.0	0	0.0	4	0.3	0	0.0
CREVALLE JACK	0	0.0	0	0.0	0	0.0	0	0.0
EMERALD SHINER	0	0.0	1	*	0	0.0	0	0.0
FOURSPINE STICKLEBACK	0	0.0	1	*	2	0.1	34	0.7
GIZZARD SHAD	28	2.4	0	0.0	0	0.0	0	0.0
GOLDEN SHINER	12	1.0	14	0.6	13	0.9	6	0.1
GOLDFISH	15	1.3	6	0.3	10	0.7	8	0.2
HICKORY SHAD	0	0.0	0	0.0	0	0.0	0	0.0
HOGCHOKER	0	0.0	0	0.0	0	0.0	14	0.3
ICTALURUS SP	0	0.0	0	0.0	0	0.0	0	0.0
LARGEMOUTH BASS	2	0.2	1	*	0	0.0	2	*
MUMMICHOG	0	0.0	0	0.0	1	0.1	1	*
NORTHERN PIPEFISH	0	0.0	0	0.0	0	0.0	0	0.0
NORTHERN STARGAZER	0	0.0	0	0.0	0	0.0	0	0.0
PUMPKINSEED	113	9.7	43	1.9	36	2.4	58	1.3
RAINBOW SMELT	0	0.0	170	7.3	156	10.4	55	1.2
REDBREAST SUNFISH	0	0.0	0	0.0	0	0.0	2	*
SPOTTAIL SHINER	65	5.6	150	6.5	225	14.9	526	11.5
STRIPED BASS	8	0.7	58	2.5	51	3.4	2	*
SUMMER FLOUNDER	0	0.0	0	0.0	0	0.0	0	0.0
TESSELLATED DARTER	0	0.0	3	0.1	8	0.5	165	3.6
THREESPINE STICKLEBACK	1	0.1	5	0.2	1	0.1	0	0.0

TABLE 5.0-5 (Page 2 of 6)

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
ROSETON GENERATING STATION

	JAN		FEB		MAR		APR	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
WEAKFISH	0	0.0	0	0.0	0	0.0	0	0.0
WHITE CATFISH	2	0.2	12	0.5	8	0.5	8	0.2
WHITE MULLET	0	0.0	0	0.0	0	0.0	0	0.0
WHITE PERCH	734	63.2	1832	78.8	964	64.0	3613	78.7
YELLOW PERCH	16	1.4	13	0.6	8	0.5	23	0.5
TOTAL	1161	99.9	2324	99.8	1506	100.2	4592	99.9
MONTHLY FLOW SAMPLED (MG)	2985		2437		2732		3601	
MONTHLY FLOW SAMPLED (MCM)	11.2980		9.2228		10.3392		13.6297	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS
(MCM) MILLION CUBIC METER

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
ROSETON GENERATING STATION

1980

	MAY		JUN		JUL		AUG	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	15	0.5	3	0.3	313	13.5	828	5.3
ALOSA SP	0	0.0	6	0.7	56	2.4	0	0.0
AMERICAN EEL	2	0.1	4	0.5	2	0.1	4	*
AMERICAN SHAD	0	0.0	1	0.1	390	16.8	350	2.3
ATLANTIC MENHADEN	0	0.0	0	0.0	3	0.1	1	*
ATLANTIC NEEDLEFISH	0	0.0	0	0.0	0	0.0	1	*
ATLANTIC STURGEON	0	0.0	0	0.0	1	*	0	0.0
ATLANTIC TOMCOD	46	1.5	148	16.8	26	1.1	26	0.2
BANDED KILLIFISH	4	0.1	3	0.3	2	0.1	19	0.1
BAY ANCHOVY	0	0.0	0	0.0	106	4.6	5124	33.0
BLACK BULLHEAD	0	0.0	0	0.0	1	*	0	0.0
BLACK CRAPPIE	1	*	0	0.0	0	0.0	0	0.0
BLUEBACK HERRING	113	3.7	34	3.9	811	35.0	1458	9.4
BLUEFISH	0	0.0	2	0.2	8	0.3	8	0.1
BLUEGILL	9	0.3	0	0.0	0	0.0	0	0.0
BROWN BULLHEAD	3	0.1	3	0.3	15	0.6	74	0.5
CARP	0	0.0	0	0.0	0	0.0	0	0.0
CENTRAL MUDMINNOW	0	0.0	0	0.0	0	0.0	0	0.0
CREVALLE JACK	0	0.0	0	0.0	0	0.0	1	*
EMERALD SHINER	0	0.0	0	0.0	0	0.0	0	0.0
FOURSPINE STICKLEBACK	5	0.2	0	0.0	0	0.0	2	*
GIZZARD SHAD	0	0.0	0	0.0	0	0.0	0	0.0
GOLDEN SHINER	2	0.1	1	0.1	5	0.2	0	0.0
GOLDFISH	8	0.3	2	0.2	0	0.0	4	*
HICKORY SHAD	0	0.0	0	0.0	0	0.0	0	0.0
HOGCHOKER	35	1.2	4	0.5	15	0.6	30	0.2
ICTALURUS SP	1	*	0	0.0	0	0.0	0	0.0
LARGEMOUTH BASS	0	0.0	0	0.0	0	0.0	0	0.0
MUMMICHOG	0	0.0	1	0.1	0	0.0	0	0.0
NORTHERN PIPEFISH	0	0.0	0	0.0	0	0.0	1	*
NORTHERN STARGAZER	0	0.0	0	0.0	0	0.0	1	*
PUMPKINSEED	27	0.9	5	0.6	5	0.2	33	0.2
RAINBOW SMELT	85	2.8	3	0.3	19	0.8	20	0.1
REDBREAST SUNFISH	0	0.0	0	0.0	0	0.0	1	*
SPOTTAIL SHINER	76	2.5	32	3.6	11	0.5	71	0.5
STRIPED BASS	4	0.1	3	0.3	71	3.1	180	1.2
SUMMER FLOUNDER	0	0.0	0	0.0	0	0.0	0	0.0
TESSELLATED DARTER	52	1.7	4	0.5	1	*	2	*
THREESPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0

TABLE 5.0-5 (Page 4 of 6)

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
ROSETON GENERATING STATION

	MAY		JUN		JUL		AUG	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
WEAKFISH	0	0.0	0	0.0	0	0.0	147	0.9
WHITE CATFISH	9	0.3	5	0.6	6	0.3	11	0.1
WHITE MULLET	0	0.0	0	0.0	0	0.0	0	0.0
WHITE PERCH	2542	83.6	615	70.0	450	19.4	7116	45.9
YELLOW PERCH	0	0.0	0	0.0	0	0.0	0	0.0
TOTAL	3039	100.0	879	99.9	2317	99.7	15513	100.0
MONTHLY FLOW SAMPLED (MG)	3951		2987		4115		5805	
MONTHLY FLOW SAMPLED (MCM)	14.9551		11.3075		15.5762		21.9732	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS
(MCM) MILLION CUBIC METER

TABLE 5.0-5 (Page 5 of 6)

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS 1980
ROSETON GENERATING STATION

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	494	5.5	425	1.6	44	0.7	0	0.0	2125	2.9
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0	62	0.1
AMERICAN EEL	6	0.1	4	*	14	0.2	10	0.6	59	0.1
AMERICAN SHAD	140	1.6	456	1.7	34	0.5	1	0.1	1372	1.8
ATLANTIC MENHADEN	1	*	0	0.0	0	0.0	0	0.0	5	*
ATLANTIC NEEDLEFISH	0	0.0	0	0.0	0	0.0	0	0.0	1	*
ATLANTIC STURGEON	0	0.0	0	0.0	0	0.0	0	0.0	1	*
ATLANTIC TOMCOD	155	1.7	8	*	2	*	47	2.8	601	0.8
BANDED KILLIFISH	262	2.9	124	0.5	133	2.1	9	0.5	582	0.8
BAY ANCHOVY	3374	37.7	3071	11.7	0	0.0	0	0.0	11675	15.7
BLACK BULLHEAD	0	0.0	0	0.0	0	0.0	0	0.0	2	*
BLACK CRAPPIE	0	0.0	0	0.0	0	0.0	0	0.0	4	*
BLUEBACK HERRING	647	7.2	13156	50.3	1859	28.8	5	0.3	18094	24.3
BLUEFISH	9	0.1	3	*	0	0.0	0	0.0	30	*
BLUEGILL	9	0.1	145	0.6	71	1.1	13	0.8	302	0.4
BROWN BULLHEAD	33	0.4	12	*	6	0.1	3	0.2	159	0.2
CARP	1	*	0	0.0	0	0.0	3	0.2	13	*
CENTRAL MUDMINNOW	0	0.0	0	0.0	0	0.0	0	0.0	4	*
CREVALLE JACK	0	0.0	1	*	1	*	0	0.0	3	*
EMERALD SHINER	0	0.0	0	0.0	0	0.0	0	0.0	1	*
FOURSPINE STICKLEBACK	1	*	2	*	5	0.1	0	0.0	52	0.1
GIZZARD SHAD	0	0.0	0	0.0	248	3.8	438	25.9	714	1.0
GOLDEN SHINER	4	*	2	*	5	0.1	14	0.8	78	0.1
GOLDFISH	0	0.0	0	0.0	1	*	9	0.5	63	0.1
HICKORY SHAD	0	0.0	1	*	0	0.0	0	0.0	1	*
HOGCHOKER	53	0.6	509	1.9	54	0.8	5	0.3	719	1.0
ICTALURUS SP	0	0.0	0	0.0	0	0.0	0	0.0	1	*
LARGEMOUTH BASS	2	*	7	*	16	0.2	23	1.4	53	0.1
MUMMICHOG	0	0.0	0	0.0	1	*	0	0.0	4	*
NORTHERN PIPEFISH	0	0.0	0	0.0	0	0.0	0	0.0	1	*
NORTHERN STARGAZER	0	0.0	0	0.0	0	0.0	0	0.0	1	*
PUMPKINSEED	112	1.3	2547	9.7	1940	30.1	227	13.4	5146	6.9
RAINBOW SMELT	4	*	49	0.2	8	0.1	3	0.2	572	0.8
REDBREAST SUNFISH	0	0.0	9	*	3	*	1	0.1	16	*
SPOTTAIL SHINER	176	2.0	129	0.5	87	1.4	104	6.2	1652	2.2
STRIPED BASS	165	1.8	399	1.5	49	0.8	138	8.2	1128	1.5
SUMMER FLOUNDER	0	0.0	2	*	0	0.0	0	0.0	2	*
TESSELLATED DARTER	2	*	7	*	2	*	0	0.0	246	0.3
THREESPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0	7	*

TABLE 5.0-5 (Page 6 of 6)

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
ROSETON GENERATING STATION

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
WEAKFISH	412	4.6	80	0.3	2	*	0	0.0	641	0.9
WHITE CATFISH	4	*	42	0.2	40	0.6	2	0.1	149	0.2
WHITE MULLET	0	0.0	0	0.0	1	*	0	0.0	1	*
WHITE PERCH	2890	32.3	4949	18.9	1814	28.2	593	35.1	28112	37.7
YELLOW PERCH	0	0.0	1	*	4	0.1	40	2.4	105	0.1
TOTAL	8956	99.9	26140	99.6	6444	99.8	1688	100.1	74559	100.1
MONTHLY FLOW SAMPLED (MG)	3780		5504		3589		2132		43618	
MONTHLY FLOW SAMPLED (MCM)	14.3057		20.8341		13.5828		8.0690		165.0933	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS
(MCM) MILLION CUBIC METER

TABLE 5.0-6 (Page 1 of 6)

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS 1980
DANSKAMMER POINT GENERATING STATION

	JAN		FEB		MAR		APR	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	0	0.0	0	0.0	0	0.0	185	1.6
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0
AMERICAN EEL	2	0.5	0	0.0	1	0.3	18	0.2
AMERICAN SHAD	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC MENHADEN	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC NEEDLEFISH	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC TOMCOD	136	31.0	151	23.0	0	0.0	1	*
BANDED KILLIFISH	12	2.7	2	0.3	1	0.3	14	0.1
BAY ANCHOVY	0	0.0	0	0.0	0	0.0	0	0.0
BLACK CRAPPIE	0	0.0	1	0.2	0	0.0	2	*
BLUEBACK HERRING	0	0.0	0	0.0	0	0.0	52	0.5
BLUEFISH	0	0.0	0	0.0	0	0.0	0	0.0
BLUEGILL	6	1.4	2	0.3	2	0.6	39	0.3
BROWN BULLHEAD	0	0.0	0	0.0	1	0.3	10	0.1
BROWN TROUT	0	0.0	0	0.0	0	0.0	0	0.0
CARP	2	0.5	1	0.2	0	0.0	0	0.0
CHAIN PICKEREL	0	0.0	0	0.0	0	0.0	1	*
CHANNEL CATFISH	1	0.2	0	0.0	0	0.0	0	0.0
CREVALLE JACK	0	0.0	0	0.0	0	0.0	0	0.0
FOURSPINE STICKLEBACK	0	0.0	1	0.2	0	0.0	3	*
GIZZARD SHAD	15	3.4	10	1.5	1	0.3	0	0.0
GOLDEN SHINER	10	2.3	35	5.3	5	1.6	42	0.4
GOLDFISH	19	4.3	14	2.1	5	1.6	22	0.2
HICKORY SHAD	0	0.0	0	0.0	0	0.0	0	0.0
HOGCHOKER	0	0.0	0	0.0	0	0.0	5	*
LARGEMOUTH BASS	7	1.6	4	0.6	1	0.3	4	*
MUMMICHOG	0	0.0	0	0.0	0	0.0	0	0.0
PUMPKINSEED	61	13.9	47	7.2	38	11.8	182	1.6
RAINBOW SMELT	0	0.0	16	2.4	13	4.0	62	0.5
REDBREAST SUNFISH	0	0.0	0	0.0	1	0.3	3	*
REDFIN PICKEREL	0	0.0	0	0.0	1	0.3	0	0.0
ROCK BASS	0	0.0	0	0.0	0	0.0	1	*
SPOTTAIL SHINER	34	7.7	183	27.9	27	8.4	980	8.5
STRIPED BASS	12	2.7	16	2.4	11	3.4	24	0.2
SUMMER FLOUNDER	0	0.0	0	0.0	0	0.0	0	0.0
SUNFISHES	0	0.0	0	0.0	0	0.0	0	0.0
TESSELLATED DARTER	0	0.0	0	0.0	0	0.0	71	0.6
THREESPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0
TIDEWATER SILVERSIDE	0	0.0	0	0.0	0	0.0	0	0.0

TABLE 5.0-6 (Page 2 of 6)

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
DANSKAMMER POINT GENERATING STATION

	JAN		FEB		MAR		APR	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
WEAKFISH	0	0.0	0	0.0	0	0.0	0	0.0
WHITE CATFISH	0	0.0	9	1.4	3	0.9	13	0.1
WHITE MULLET	0	0.0	0	0.0	0	0.0	0	0.0
WHITE PERCH	120	27.3	161	24.5	209	65.1	9683	83.9
WHITE SUCKER	0	0.0	0	0.0	0	0.0	1	*
YELLOW PERCH	2	0.5	4	0.6	1	0.3	123	1.1
TOTAL	439	100.0	657	100.1	321	99.8	11541	99.9
MONTHLY FLOW SAMPLED (MG)	382		504		371		919	
MONTHLY FLOW SAMPLED (MCM)	1.4438		1.9075		1.4046		3.4788	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS
(MCM) MILLION CUBIC METER

TABLE 5.0-6 (Page 3 of 6)

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS 1980
DANSKAMMER POINT GENERATING STATION

	MAY		JUN		JUL		AUG	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	1590	15.4	306	3.4	652	19.7	634	17.6
ALOSA SP	16	0.2	11	0.1	84	2.5	0	0.0
AMERICAN EEL	23	0.2	28	0.3	14	0.4	18	0.5
AMERICAN SHAD	2	*	9	0.1	1089	32.8	139	3.9
ATLANTIC MENHADEN	0	0.0	0	0.0	3	0.1	2	0.1
ATLANTIC NEEDLEFISH	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC TOMCOD	448	4.3	773	8.6	5	0.2	8	0.2
BANDED KILLIFISH	5	*	3	*	3	0.1	2	0.1
BAY ANCHOVY	3	*	1	*	48	1.4	336	9.3
BLACK CRAPPIE	3	*	0	0.0	0	0.0	0	0.0
BLUEBACK HERRING	228	2.2	481	5.3	414	12.5	208	5.8
BLUEFISH	0	0.0	0	0.0	10	0.3	55	1.5
BLUEGILL	46	0.4	10	0.1	0	0.0	6	0.2
BROWN BULLHEAD	17	0.2	5	0.1	7	0.2	30	0.8
BROWN TROUT	0	0.0	0	0.0	1	*	0	0.0
CARP	1	*	1	*	0	0.0	1	*
CHAIN PICKEREL	0	0.0	0	0.0	0	0.0	0	0.0
CHANNEL CATFISH	0	0.0	0	0.0	0	0.0	0	0.0
CREVALLE JACK	0	0.0	0	0.0	0	0.0	0	0.0
FOURSPINE STICKLEBACK	2	*	0	0.0	1	*	0	0.0
GIZZARD SHAD	0	0.0	0	0.0	0	0.0	0	0.0
GOLDEN SHINER	10	0.1	3	*	1	*	0	0.0
GOLDFISH	20	0.2	10	0.1	2	0.1	2	0.1
HICKORY SHAD	0	0.0	0	0.0	0	0.0	0	0.0
HOGCHOKER	35	0.3	22	0.2	11	0.3	17	0.5
LARGEMOUTH BASS	2	*	0	0.0	0	0.0	3	0.1
MUMMICHOG	0	0.0	0	0.0	0	0.0	0	0.0
PUMPKINSEED	304	2.9	100	1.1	26	0.8	33	0.9
RAINBOW SMELT	17	0.2	14	0.2	3	0.1	1	*
REDBREAST SUNFISH	17	0.2	8	0.1	4	0.1	3	0.1
REDFIN PICKEREL	0	0.0	0	0.0	0	0.0	0	0.0
ROCK BASS	2	*	0	0.0	2	0.1	0	0.0
SPOTTAIL SHINER	958	9.3	685	7.6	34	1.0	30	0.8
STRIPED BASS	30	0.3	71	0.8	33	1.0	87	2.4
SUMMER FLOUNDER	0	0.0	0	0.0	0	0.0	0	0.0
SUNFISHES	0	0.0	0	0.0	0	0.0	0	0.0
TESSELLATED DARTER	13	0.1	5	0.1	3	0.1	0	0.0
THREESPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0
TIDEWATER SILVERSIDE	0	0.0	0	0.0	0	0.0	0	0.0

TABLE 5.0-6 (Page 4 of 6)

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
DANSKAMMER POINT GENERATING STATION

	MAY		JUN		JUL		AUG	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
WEAKFISH	0	0.0	0	0.0	0	0.0	126	3.5
WHITE CATFISH	7	0.1	51	0.6	37	1.1	31	0.9
WHITE MULLET	0	0.0	0	0.0	0	0.0	0	0.0
WHITE PERCH	6513	62.9	6407	71.1	830	25.0	1828	50.8
WHITE SUCKER	1	*	1	*	0	0.0	0	0.0
YELLOW PERCH	41	0.4	3	*	0	0.0	0	0.0
TOTAL	10354	99.9	9008	99.9	3317	99.9	3600	100.1
MONTHLY FLOW SAMPLED (MG)	1783		2239		2153		1893	
MONTHLY FLOW SAMPLED (MCM)	6.7493		8.4747		8.1500		7.1639	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS
(MCM) MILLION CUBIC METER

TABLE 5.0-6 (Page 5 of 6)

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS 1980
DANSKAMMER POINT GENERATING STATION

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	1734	17.4	2152	16.3	1290	9.0	0	0.0	8543	10.4
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0	111	0.1
AMERICAN EEL	27	0.3	28	0.2	17	0.1	8	0.2	184	0.2
AMERICAN SHAD	303	3.0	786	6.0	610	4.3	0	0.0	2938	3.6
ATLANTIC MENHADEN	1	*	0	0.0	0	0.0	0	0.0	6	*
ATLANTIC NEEDLEFISH	1	*	0	0.0	0	0.0	0	0.0	1	*
ATLANTIC TOMCOD	107	1.1	7	0.1	54	0.4	309	5.8	1999	2.4
BANDED KILLIFISH	20	0.2	12	0.1	31	0.2	41	0.8	146	0.2
BAY ANCHOVY	1496	15.0	206	1.6	5	*	0	0.0	2095	2.6
BLACK CRAPPIE	1	*	0	0.0	3	*	3	0.1	13	*
BLUEBACK HERRING	249	2.5	2507	19.0	949	6.6	1	*	5089	6.2
BLUEFISH	313	3.1	12	0.1	0	0.0	0	0.0	390	0.5
BLUEGILL	14	0.1	62	0.5	57	0.4	29	0.5	273	0.3
BROWN BULLHEAD	112	1.1	55	0.4	82	0.6	17	0.3	336	0.4
BROWN TROUT	0	0.0	0	0.0	0	0.0	0	0.0	1	*
CARP	0	0.0	0	0.0	2	*	20	0.4	28	*
CHAIN PICKEREL	0	0.0	0	0.0	1	*	0	0.0	2	*
CHANNEL CATFISH	0	0.0	0	0.0	0	0.0	0	0.0	1	*
CREVALLE JACK	0	0.0	0	0.0	3	*	0	0.0	3	*
FOURSPINE STICKLEBACK	0	0.0	1	*	1	*	1	*	10	*
GIZZARD SHAD	0	0.0	44	0.3	1718	12.0	3193	59.9	4981	6.1
GOLDEN SHINER	8	0.1	5	*	36	0.3	133	2.5	288	0.4
GOLDFISH	2	*	1	*	11	0.1	90	1.7	198	0.2
HICKORY SHAD	0	0.0	1	*	0	0.0	0	0.0	1	*
HOGCHOKER	149	1.5	97	0.7	53	0.4	1	*	390	0.5
LARGEMOUTH BASS	1	*	69	0.5	203	1.4	57	1.1	351	0.4
MUMMICHOG	0	0.0	0	0.0	0	0.0	1	*	1	*
PUMPKINSEED	172	1.7	1317	10.0	491	3.4	456	8.6	3227	3.9
RAINBOW SMELT	2	*	2	*	5	*	0	0.0	135	0.2
REDBREAST SUNFISH	8	0.1	8	0.1	5	*	0	0.0	57	0.1
REDFIN PICKEREL	0	0.0	0	0.0	0	0.0	0	0.0	1	*
ROCK BASS	0	0.0	0	0.0	0	0.0	1	*	6	*
SPOTTAIL SHINER	196	2.0	84	0.6	198	1.4	199	3.7	3608	4.4
STRIPED BASS	322	3.2	244	1.9	341	2.4	173	3.2	1364	1.7
SUMMER FLOUNDER	1	*	0	0.0	1	*	0	0.0	2	*
SUNFISHES	0	0.0	0	0.0	1	*	0	0.0	1	*
TESSELLATED DARTER	4	*	1	*	1	*	0	0.0	98	0.1
THREESPINE STICKLEBACK	1	*	0	0.0	1	*	0	0.0	2	*
TIDEWATER SILVERSIDE	0	0.0	1	*	0	0.0	0	0.0	1	*

TABLE 5.0-6 (Page 6 of 6)

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
DANSKAMMER POINT GENERATING STATION

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
WEAKFISH	944	9.5	91	0.7	1	*	0	0.0	1162	1.4
WHITE CATFISH	78	0.8	243	1.8	194	1.4	21	0.4	687	0.8
WHITE MULLET	0	0.0	0	0.0	3	*	0	0.0	3	*
WHITE PERCH	3698	37.1	5142	39.0	7901	55.3	469	8.8	42961	52.4
WHITE SUCKER	1	*	0	0.0	0	0.0	1	*	5	*
YELLOW PERCH	0	0.0	0	0.0	25	0.2	107	2.0	306	0.4
TOTAL	9965	99.8	13178	99.9	14294	99.9	5331	100.0	82005	99.9
MONTHLY FLOW SAMPLED (MG)	2705		2047		3051		1495		19542	
MONTHLY FLOW SAMPLED (MCM)	10.2408		7.7483		11.5456		5.6604		73.9677	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS
(MCM) MILLION CUBIC METER

TABLE 5.0-7 (Page 1 of 6)

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS 1980
ROSETON GENERATING STATION

	JAN		FEB		MAR		APR	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
ALEWIFE	0	0.0	0	0.0	10	*	531	1.5
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0
AMERICAN EEL	297	1.2	2	*	115	0.5	408	1.1
AMERICAN SHAD	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC MENHADEN	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC NEEDLEFISH	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC STURGEON	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC TOMCOD	4204	16.9	172	0.9	35	0.1	30	0.1
BANDED KILLIFISH	77	0.3	32	0.2	36	0.1	27	0.1
BAY ANCHOVY	0	0.0	0	0.0	0	0.0	0	0.0
BLACK BULLHEAD	0	0.0	0	0.0	0	0.0	157	0.4
BLACK CRAPPIE	0	0.0	142	0.7	180	0.7	2	*
BLUEBACK HERRING	0	0.0	0	0.0	0	0.0	327	0.9
BLUEFISH	0	0.0	0	0.0	0	0.0	0	0.0
BLUEGILL	816	3.3	0	0.0	654	2.7	709	1.9
BROWN BULLHEAD	969	3.9	169	0.9	0	0.0	232	0.6
CARP	329	1.3	216	1.1	0	0.0	0	0.0
CENTRAL MUDMINNOW	0	0.0	0	0.0	26	0.1	0	0.0
CREVALLE JACK	0	0.0	0	0.0	0	0.0	0	0.0
EMERALD SHINER	0	0.0	2	*	0	0.0	0	0.0
FOURSPINE STICKLEBACK	0	0.0	1	*	2	*	21	0.1
GIZZARD SHAD	203	0.8	0	0.0	0	0.0	0	0.0
GOLDEN SHINER	515	2.1	667	3.4	513	2.1	118	0.3
GOLDFISH	858	3.4	898	4.5	1200	4.9	1447	4.0
HICKORY SHAD	0	0.0	0	0.0	0	0.0	0	0.0
HOGCHOKER	0	0.0	0	0.0	0	0.0	341	0.9
ICTALURUS SP	0	0.0	0	0.0	0	0.0	0	0.0
LARGEMOUTH BASS	75	0.3	28	0.1	0	0.1	24	0.1
MUMMICHOG	0	0.0	0	0.0	6	*	1	*
NORTHERN PIPEFISH	0	0.0	0	0.0	0	0.0	0	0.0
NORTHERN STARGAZER	0	0.0	0	0.0	0	0.0	0	0.0
PUMPKINSEED	8801	35.4	1964	9.9	2280	9.4	1448	4.0
RAINBOW SMELT	0	0.0	730	3.7	1466	6.0	341	0.9
REDBREAST SUNFISH	0	0.0	0	0.0	0	0.0	4	*
SPOTTAIL SHINER	467	1.9	1309	6.6	1689	6.9	2347	6.4
STRIPED BASS	39	0.2	501	2.5	1434	5.9	21	0.1
SUMMER FLOUNDER	0	0.0	0	0.0	0	0.0	0	0.0
TESSELLATED DARTER	0	0.0	12	0.1	26	0.1	564	1.5
THREESPINE STICKLEBACK	1	*	6	*	2	*	0	0.0

TABLE 5.0-7 (Page 2 of 6)

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
ROSETON GENERATING STATION

	JAN		FEB		MAR		APR	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
WEAKFISH	0	0.0	0	0.0	0	0.0	0	0.0
WHITE CATFISH	400	1.6	357	1.8	2825	11.6	38	0.1
WHITE MULLET	0	0.0	0	0.0	0	0.0	0	0.0
WHITE PERCH	6246	25.1	11265	57.0	10590	43.4	25424	69.8
YELLOW PERCH	595	2.4	1301	6.6	1292	5.3	1871	5.1
TOTAL (KG.)	24.9	100.1	19.8	100.0	24.4	99.8	36.4	99.9
MONTHLY FLOW SAMPLED (MG)	2985		2437		2732		3601	
MONTHLY FLOW SAMPLED (MCM)	11.2980		9.2228		10.3392		13.6297	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS
(MCM) MILLION CUBIC METER
(GM) GRAMS
(KG) KILLOGRAMS

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS 1980
ROSETON GENERATING STATION

	MAY		JUN		JUL		AUG	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
ALEWIFE	2875	11.2	11	0.1	624	6.2	3645	6.5
ALOSA SP	0	0.0	0	*	0	*	0	0.0
AMERICAN EEL	578	2.2	154	0.9	435	4.3	304	0.5
AMERICAN SHAD	0	0.0	1	*	581	5.8	971	1.7
ATLANTIC MENHADEN	0	0.0	0	0.0	4	*	140	0.3
ATLANTIC NEEDLEFISH	0	0.0	0	0.0	0	0.0	1	*
ATLANTIC STURGEON	0	0.0	0	0.0	64	0.6	0	0.0
ATLANTIC TOMCOD	67	0.3	412	2.5	108	1.1	143	0.3
BANDED KILLIFISH	32	0.1	14	0.1	2	*	32	0.1
BAY ANCHOVY	0	0.0	0	0.0	320	3.2	12116	21.7
BLACK BULLHEAD	0	0.0	0	0.0	194	1.9	0	0.0
BLACK CRAPPIE	248	1.0	0	0.0	0	0.0	0	0.0
BLUEBACK HERRING	2415	9.4	3515	21.0	715	7.1	3169	5.7
BLUEFISH	0	0.0	7	*	46	0.5	166	0.3
BLUEGILL	564	2.2	0	0.0	0	0.0	0	0.0
BROWN BULLHEAD	25	0.1	575	3.4	926	9.2	859	1.5
CARP	0	0.0	0	0.0	0	0.0	0	0.0
CENTRAL MUDMINNOW	0	0.0	0	0.0	0	0.0	0	0.0
CREVALLE JACK	0	0.0	0	0.0	0	0.0	2	*
EMERALD SHINER	0	0.0	0	0.0	0	0.0	0	0.0
FOURSPINE STICKLEBACK	3	*	0	0.0	0	0.0	0	*
GIZZARD SHAD	0	0.0	0	0.0	0	0.0	0	0.0
GOLDEN SHINER	11	*	9	0.1	289	2.9	0	0.0
GOLDFISH	1465	5.7	563	3.4	0	0.0	855	1.5
HICKORY SHAD	0	0.0	0	0.0	0	0.0	0	0.0
HOGCHOKER	543	2.1	26	0.2	26	0.3	276	0.5
ICTALURUS SP	0	0.0	0	0.0	0	0.0	0	0.0
LARGEMOUTH BASS	0	0.0	0	0.0	0	0.0	0	0.0
MUMMICHOG	0	0.0	8	*	0	0.0	0	0.0
NORTHERN PIPEFISH	0	0.0	0	0.0	0	0.0	1	*
NORTHERN STARGAZER	0	0.0	0	0.0	0	0.0	2	*
PUMPKINSEED	1339	5.2	305	1.8	331	3.3	768	1.4
RAINBOW SMELT	289	1.1	5	*	10	0.1	32	0.1
REDBREAST SUNFISH	0	0.0	0	0.0	0	0.0	0	0.0
SPOTTAIL SHINER	389	1.5	235	1.4	81	0.8	379	0.7
STRIPED BASS	21	0.1	274	1.6	795	7.9	484	0.9
SUMMER FLOUNDER	0	0.0	0	0.0	0	0.0	0	0.0
TESSELLATED DARTER	146	0.6	11	0.1	4	*	5	*
THREESPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0

TABLE 5.0-7 (Page 4 of 6)

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
ROSETON GENERATING STATION

	MAY		JUN		JUL		AUG	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
WEAKFISH	0	0.0	0	0.0	0	0.0	360	0.6
WHITE CATFISH	1174	4.6	85	0.5	1334	13.3	2295	4.1
WHITE MULLET	0	0.0	0	0.0	0	0.0	0	0.0
WHITE PERCH	13569	52.7	13494	62.8	3174	31.5	28786	51.6
YELLOW PERCH	0	0.0	0	0.0	0	0.0	0	0.0
TOTAL (KG.)	25.7	100.1	16.7	99.9	10.1	100.0	55.8	100.0
MONTHLY FLOW SAMPLED (MG)	3951		2987		4115		5805	
MONTHLY FLOW SAMPLED (MCM)	14.9551		11.3075		15.5762		21.9732	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS
(MCM) MILLION CUBIC METER
(GM) GRAMS
(KG) KILLOGRAMS

TABLE 5.0-7 (Page 5 of 6)

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS 1980
ROSETON GENERATING STATION

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	KG.	PCNT
ALEWIFE	2717	8.5	2067	2.8	225	0.7	0	0.0	12.70	3.3
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0	.00	*
AMERICAN EEL	308	1.0	440	0.6	904	2.8	2243	7.3	6.19	1.6
AMERICAN SHAD	450	1.4	1929	2.6	206	0.6	0	0.0	4.14	1.1
ATLANTIC MENHADEN	1	*	0	0.0	0	0.0	0	0.0	.14	*
ATLANTIC NEEDLEFISH	0	0.0	0	0.0	0	0.0	0	0.0	.00	*
ATLANTIC STURGEON	0	0.0	0	0.0	0	0.0	0	0.0	.06	*
ATLANTIC TOMCOD	1005	3.1	124	0.2	55	0.2	1607	5.2	7.96	2.1
BANDED KILLIFISH	874	2.7	527	0.7	500	1.6	45	0.1	2.20	0.6
BAY ANCHOVY	5387	16.9	1575	2.2	0	0.0	0	0.0	19.40	5.1
BLACK BULLHEAD	0	0.0	0	0.0	0	0.0	0	0.0	.35	0.1
BLACK CRAPPIE	0	0.0	0	0.0	0	0.0	0	0.0	.57	0.1
BLUEBACK HERRING	1672	5.2	19269	26.4	3076	9.6	8	*	34.16	9.0
BLUEFISH	205	0.6	54	0.1	0	0.0	0	0.0	.48	0.1
BLUEGILL	12	*	525	0.7	119	0.4	442	1.4	3.84	1.0
BROWN BULLHEAD	216	0.7	385	0.5	383	1.2	766	2.5	5.50	1.4
CARP	4	*	0	0.0	0	0.0	270	0.9	.82	0.2
CENTRAL MUDMINNOW	0	0.0	0	0.0	0	0.0	0	0.0	.03	*
CREVALLE JACK	0	0.0	2	*	27	0.1	0	0.0	.03	*
EMERALD SHINER	0	0.0	0	0.0	0	0.0	0	0.0	.00	*
FOURSPINE STICKLEBACK	0	*	1	*	2	*	0	0.0	.03	*
GIZZARD SHAD	0	0.0	0	0.0	2000	6.3	7484	24.3	9.69	2.5
GOLDEN SHINER	228	0.7	114	0.2	121	0.4	558	1.8	3.14	0.8
GOLDFISH	0	0.0	0	0.0	8	*	982	3.2	8.28	2.2
HICKORY SHAD	0	0.0	134	0.2	0	0.0	0	0.0	.13	*
HOGCHOKER	446	1.4	6871	9.4	628	2.0	119	0.4	9.28	2.4
ICTALURUS SP	0	0.0	0	0.0	0	0.0	0	0.0	.00	0.0
LARGEMOUTH BASS	7	*	516	0.7	516	1.6	761	2.5	1.93	0.5
MUMMICHOG	0	0.0	0	0.0	5	*	0	0.0	.02	*
NORTHERN PIPEFISH	0	0.0	0	0.0	0	0.0	0	0.0	.00	*
NORTHERN STARGAZER	0	0.0	0	0.0	0	0.0	0	0.0	.00	*
PUMPKINSEED	512	1.6	9260	12.7	6775	21.2	4248	13.8	38.02	10.0
RAINBOW SMELT	2	*	57	0.1	22	0.1	8	*	2.96	0.8
REDBREAST SUNFISH	0	0.0	228	0.3	12	*	6	*	.25	0.1
SPOTTAIL SHINER	992	3.1	485	0.7	390	1.2	761	2.5	9.52	2.5
STRIPED BASS	574	1.8	1764	2.4	285	0.9	916	3.0	7.11	1.9
SUMMER FLOUNDER	0	0.0	255	0.3	0	0.0	0	0.0	.25	0.1
TESSELLATED DARTER	2	*	27	*	7	*	0	0.0	.80	0.2
THREESPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0	.01	*

TABLE 5.0-7 (Page 6 of 6)

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
ROSETON GENERATING STATION

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	KG.	PCNT
WEAKFISH	1540	4.8	467	0.6	21	0.1	0	0.0	2.39	0.6
WHITE CATFISH	1186	3.7	1924	2.6	1897	5.9	1428	4.6	14.94	3.9
WHITE MULLET	0	0.0	0	0.0	13	*	0	0.0	.01	*
WHITE PERCH	13619	42.6	24009	32.9	13554	42.5	5858	19.0	166.59	43.7
YELLOW PERCH	0	0.0	17	*	139	0.4	2344	7.6	7.56	2.0
TOTAL (KG.)	32.0	99.8	73.0	99.9	31.9	99.8	30.9	100.	381.49	99.9
MONTHLY FLOW SAMPLED (MG)	3780		5504		3589		2132		43618	
MONTHLY FLOW SAMPLED (MCM)	14.3057		20.8341		13.5828		8.0690		165.0933	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS
(MCM) MILLION CUBIC METER
(GM) GRAMS
(KG) KILLOGRAMS

TABLE 5.0-8 (Page 1 of 6)

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS 1980
DANSKAMMER POINT GENERATING STATION

	JAN		FEB		MAR		APR	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
ALEWIFE	0	0.0	0	0.0	0	0.0	47955	13.5
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0
AMERICAN EEL	206	1.3	0	0.0	387	3.0	559	0.2
AMERICAN SHAD	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC MENHADEN	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC NEEDLEFISH	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC TOMCOD	4456	28.1	4217	17.7	0	0.0	32	*
BANDED KILLIFISH	103	0.7	24	0.1	0	0.0	90	*
BAY ANCHOVY	0	0.0	0	0.0	0	0.0	0	0.0
BLACK CRAPPIE	0	0.0	118	0.5	0	0.0	401	0.1
BLUEBACK HERRING	0	0.0	0	0.0	0	0.0	12531	3.5
BLUEFISH	0	0.0	0	0.0	0	0.0	0	0.0
BLUEGILL	510	3.2	134	0.6	98	0.8	3173	0.9
BROWN BULLHEAD	0	0.0	0	0.0	197	1.5	611	0.2
BROWN TROUT	0	0.0	0	0.0	0	0.0	0	0.0
CARP	142	0.9	64	0.3	0	0.0	0	0.0
CHAIN PICKEREL	0	0.0	0	0.0	0	0.0	1297	0.4
CHANNEL CATFISH	9	0.1	0	0.0	0	0.0	0	0.0
CREVALLE JACK	0	0.0	0	0.0	0	0.0	0	0.0
FOURSPINE STICKLEBACK	0	0.0	0	*	0	0.0	1	*
GIZZARD SHAD	577	3.6	3684	15.4	412	3.2	0	0.0
GOLDEN SHINER	413	2.6	2819	11.8	334	2.6	2256	0.6
GOLDFISH	1383	8.7	1729	7.2	1650	13.0	3023	0.9
HICKORY SHAD	0	0.0	0	0.0	0	0.0	0	0.0
HOGCHOKER	0	0.0	0	0.0	0	0.0	92	*
LARGEMOUTH BASS	276	1.7	400	1.7	524	4.1	1022	0.3
MUMMICHOG	0	0.0	0	0.0	0	0.0	0	0.0
PUMPKINSEED	4150	26.2	2961	12.4	1865	14.7	9729	2.7
RAINBOW SMELT	0	0.0	238	1.0	227	1.8	1041	0.3
REDBREAST SUNFISH	0	0.0	0	0.0	2	*	195	0.1
REDFIN PICKEREL	0	0.0	0	0.0	144	1.1	0	0.0
ROCK BASS	0	0.0	0	0.0	0	0.0	211	0.1
SPOTTAIL SHINER	299	1.9	1870	7.8	234	1.8	9664	2.7
STRIPED BASS	867	5.5	343	1.4	149	1.2	2397	0.7
SUMMER FLOUNDER	0	0.0	0	0.0	0	0.0	0	0.0
SUNFISHES	0	0.0	0	0.0	0	0.0	0	0.0
TESSELLATED DARTER	0	0.0	0	0.0	0	0.0	292	0.1
THREESPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0
TIDEWATER SILVERSIDE	0	0.0	0	0.0	0	0.0	0	0.0

TABLE 5.0-8 (Page 2 of 6)

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
DANSKAMMER POINT GENERATING STATION

	JAN		FEB		MAR		APR	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
WEAKFISH	0	0.0	0	0.0	0	0.0	0	0.0
WHITE CATFISH	0	0.0	1092	4.6	1287	10.1	859	0.2
WHITE MULLET	0	0.0	0	0.0	0	0.0	0	0.0
WHITE PERCH	2409	15.2	3697	15.5	5137	40.4	245128	69.1
WHITE SUCKER	0	0.0	0	0.0	0	0.0	6	*
YELLOW PERCH	46	0.3	496	2.1	80	0.6	12431	3.5
TOTAL (KG.)	15.8	100.0	23.9	100.1	12.7	99.9	355.0	100.1
MONTHLY FLOW SAMPLED (MG)	382		504		371		919	
MONTHLY FLOW SAMPLED (MCM)	1.4438		1.9075		1.4046		3.4788	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS
(MCM) MILLION CUBIC METER
(GM) GRAMS
(KG) KILLOGRAMS

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS 1980
DANSKAMMER POINT GENERATING STATION

	MAY		JUN		JUL		AUG	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
ALEWIFE	286910	45.0	19372	6.4	13082	23.0	12634	16.1
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0
AMERICAN EEL	3240	0.5	3058	1.0	1167	2.0	1070	1.4
AMERICAN SHAD	30	*	226	0.1	1135	2.0	642	0.8
ATLANTIC MENHADEN	0	0.0	0	0.0	7	*	208	0.3
ATLANTIC NEEDLEFISH	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC TOMCOD	826	0.1	2425	0.8	23	*	41	0.1
BANDED KILLIFISH	34	*	19	*	11	*	7	*
BAY ANCHOVY	12	*	3	*	149	0.3	659	0.8
BLACK CRAPPIE	124	*	0	0.0	0	0.0	0	0.0
BLUEBACK HERRING	34964	5.5	57844	19.3	2422	4.2	272	0.3
BLUEFISH	0	0.0	0	0.0	47	0.1	3181	4.0
BLUEGILL	3360	0.5	832	0.3	0	0.0	554	0.7
BROWN BULLHEAD	1524	0.2	1143	0.4	868	1.5	741	0.9
BROWN TROUT	0	0.0	0	0.0	158	0.3	0	0.0
CARP	97	*	82	*	0	0.0	4	*
CHAIN PICKEREL	0	0.0	0	0.0	0	0.0	0	0.0
CHANNEL CATFISH	0	0.0	0	0.0	0	0.0	0	0.0
CREVALLE JACK	0	0.0	0	0.0	0	0.0	0	0.0
FOURSPINE STICKLEBACK	1	*	0	0.0	0	*	0	0.0
GIZZARD SHAD	0	0.0	0	0.0	0	0.0	0	0.0
GOLDEN SHINER	455	0.1	110	*	119	0.2	0	0.0
GOLDFISH	3037	0.5	1617	0.5	755	1.3	533	0.7
HICKORY SHAD	0	0.0	0	0.0	0	0.0	0	0.0
HOGCHOKER	435	0.1	158	0.1	41	0.1	109	0.1
LARGEMOUTH BASS	454	0.1	0	0.0	0	0.0	39	0.1
MUMMICHOG	0	0.0	0	0.0	0	0.0	0	0.0
PUMPKINSEED	21620	3.4	6075	2.0	1958	3.4	2299	2.9
RAINBOW SMELT	90	*	101	*	2	*	0	*
REDBREAST SUNFISH	1475	0.2	668	0.2	370	0.6	269	0.3
REDFIN PICKEREL	0	0.0	0	0.0	0	0.0	0	0.0
ROCK BASS	317	*	0	0.0	421	0.7	0	0.0
SPOTTAIL SHINER	9166	1.4	6433	2.1	291	0.5	181	0.2
STRIPED BASS	934	0.1	2859	1.0	2021	3.5	3368	4.3
SUMMER FLOUNDER	0	0.0	0	0.0	0	0.0	0	0.0
SUNFISHES	0	0.0	0	0.0	0	0.0	0	0.0
TESSELLATED DARTER	40	*	16	*	9	*	0	0.0
THREESPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0
TIDEWATER SILVERSIDE	0	0.0	0	0.0	0	0.0	0	0.0

TABLE 5.0-8 (Page 4 of 6)

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
DANSKAMMER POINT GENERATING STATION

	MAY		JUN		JUL		AUG	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
WEAKFISH	0	0.0	0	0.0	0	0.0	370	0.5
WHITE CATFISH	670	0.1	3912	1.3	3599	6.3	5343	6.8
WHITE MULLET	0	0.0	0	0.0	0	0.0	0	0.0
WHITE PERCH	262305	41.2	192711	64.1	28338	49.7	46109	58.6
WHITE SUCKER	598	0.1	465	0.2	0	0.0	0	0.0
YELLOW PERCH	4562	0.7	301	0.1	0	0.0	0	0.0
TOTAL (KG.)	637.3	99.8	300.4	99.9	57.0	99.7	78.6	99.9
MONTHLY FLOW SAMPLED (MG)	1783		2239		2153		1893	
MONTHLY FLOW SAMPLED (MCM)	6.7493		8.4747		8.1500		7.1639	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS
(MCM) MILLION CUBIC METER
(GM) GRAMS
(KG) KILLOGRAMS

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS 1980
DANSKAMMER POINT GENERATING STATION

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	KG.	PCNT
ALEWIFE	26574	15.2	24057	12.2	19307	7.1	0	0.0	449.89	19.4
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0	.00	0.0
AMERICAN EEL	2223	1.3	4691	2.4	2471	0.9	1606	0.8	20.68	0.9
AMERICAN SHAD	1784	1.0	4672	2.4	3442	1.3	0	0.0	11.93	0.5
ATLANTIC MENHADEN	10	*	0	0.0	0	0.0	0	0.0	.22	*
ATLANTIC NEEDLEFISH	0	0.0	0	0.0	0	0.0	0	0.0	.00	0.0
ATLANTIC TOMCOD	698	0.4	89	*	1608	0.6	13903	6.9	28.32	1.2
BANDED KILLIFISH	137	0.1	84	*	162	0.1	234	0.1	.93	*
BAY ANCHOVY	2686	1.5	324	0.2	6	*	0	0.0	3.84	0.2
BLACK CRAPPIE	161	0.1	0	0.0	500	0.2	703	0.4	2.01	0.1
BLUEBACK HERRING	2058	1.2	6405	3.3	1272	0.5	106	0.1	117.87	5.1
BLUEFISH	16455	9.4	512	0.3	0	0.0	0	0.0	20.20	0.9
BLUEGILL	827	0.5	4225	2.1	3324	1.2	3222	1.6	20.26	0.9
BROWN BULLHEAD	3171	1.8	3521	1.8	4801	1.8	2422	1.2	19.00	0.8
BROWN TROUT	0	0.0	0	0.0	0	0.0	0	0.0	.16	*
CARP	0	0.0	0	0.0	269	0.1	2513	1.3	3.17	0.1
CHAIN PICKEREL	0	0.0	0	0.0	1730	0.6	0	0.0	3.03	0.1
CHANNEL CATFISH	0	0.0	0	0.0	0	0.0	0	0.0	.01	*
CREVALLE JACK	0	0.0	0	0.0	113	*	0	0.0	.11	*
FOURSPINE STICKLEBACK	0	0.0	0	*	0	*	1	*	.00	*
GIZZARD SHAD	0	0.0	1811	0.9	43670	16.1	97008	48.4	147.16	6.3
GOLDEN SHINER	399	0.2	402	0.2	3415	1.3	8967	4.5	19.69	0.8
GOLDFISH	327	0.2	166	0.1	2527	0.9	13276	6.6	30.02	1.3
HICKORY SHAD	0	0.0	283	0.1	0	0.0	0	0.0	.28	*
HOGCHOKER	1755	1.0	1527	0.8	861	0.3	8	*	4.99	0.2
LARGEMOUTH BASS	519	0.3	2877	1.5	12210	4.5	4806	2.4	23.13	1.0
MUMMICHOG	0	0.0	0	0.0	0	0.0	4	*	.00	*
PUMPKINSEED	6675	3.8	16558	8.4	11508	4.2	19027	9.5	104.42	4.5
RAINBOW SMELT	7	*	11	*	36	*	0	0.0	1.75	0.1
REDBREAST SUNFISH	457	0.3	447	0.2	431	0.2	0	0.0	4.31	0.2
REDFIN PICKEREL	0	0.0	0	0.0	0	0.0	0	0.0	.14	*
ROCK BASS	0	0.0	0	0.0	0	0.0	7	*	.96	*
SPOTTAIL SHINER	1649	0.9	663	0.3	1617	0.6	1837	0.9	33.90	1.5
STRIPED BASS	8485	4.9	5655	2.9	12876	4.7	6751	3.4	46.70	2.0
SUMMER FLOUNDER	195	0.1	0	0.0	180	0.1	0	0.0	.37	*
SUNFISHES	0	0.0	0	0.0	1	*	0	0.0	.00	*
TESSELLATED DARTER	13	*	5	*	5	*	0	0.0	.38	*
THREESPINE STICKLEBACK	0	*	0	0.0	1	*	0	0.0	.00	*
TIDEWATER SILVERSIDE	0	0.0	3	*	0	0.0	0	0.0	.00	*

TABLE 5.0-8 (Page 6 of 6)

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
DANSKAMMER POINT GENERATING STATION

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	KG.	PCNT
WEAKFISH	4678	2.7	880	0.4	7	*	0	0.0	5.93	0.3
WHITE CATFISH	9204	5.3	10959	5.6	13381	4.9	4939	2.5	55.24	2.4
WHITE MULLET	0	0.0	0	0.0	50	*	0	0.0	.05	*
WHITE PERCH	82639	47.3	105872	53.8	127636	47.1	8372	4.2	1110.35	47.8
WHITE SUCKER	750	0.4	0	0.0	0	0.0	7	*	1.83	0.1
YELLOW PERCH	0	0.0	0	0.0	1738	0.6	10677	5.3	30.33	1.3
TOTAL (KG.)	174.5	99.9	196.7	99.9	271.2	99.9	200.4	100.	2323.56	100.0
MONTHLY FLOW SAMPLED (MG)	2705		2047		3051		1495		19542	
MONTHLY FLOW SAMPLED (MCM)	10.2408		7.7483		11.5456		5.6604		73.9677	

* LESS THAN 0.1 PERCENT
(MG) MILLION GALLONS
(MCM) MILLION CUBIC METER
(GM) GRAMS
(KG) KILLOGRAMS

shad (3.6%) were the only other species collected at Danskammer Point that comprised greater than 3.0% of the annual percent composition.

In addition to being numerically dominant, white perch comprised the largest annual percent composition for biomass. At Roseton, white perch made up 43.7% of the annual fish biomass collected and 47.8% at Danskammer. Pumpkinseed, blueback herring, bay anchovy, white catfish, and alewife collected at Roseton ranked second, third, fourth, fifth, and sixth, respectively, and were the only other species contributing greater than 3.0% to the annual percent biomass. At Danskammer, alewife, gizzard shad, blueback herring, and pumpkinseed were the next most dominant species with respect to biomass.

Abundance and percent composition data for invertebrates collected at the two plants are presented in Tables 5.0-9 and 5.0-10. Blue crabs were the most abundant invertebrate species, comprising 83.5 and 61.0% of the total number of impinged invertebrates at Roseton and Danskammer Point, respectively. Blue crabs were most abundant in the summer to fall, corresponding to the increased salinity in the Newburgh Bay vicinity. Peak blue crab impingement occurred in September. Crayfish impingement was the greatest in the spring and summer, with the peak occurring in August (58) at Roseton and in September (155) at Danskammer Point. Mud crab impingement was highest during the fall at both plants.

5.2.4 Monthly and Annual Impingement Estimates

The Roseton Generating Station monthly and annual estimated impingement of the 10 most abundant species is presented in Table 5.0-11. White perch had the highest impingement rate during all months except July, September, and October. Blueback herring had the

TABLE 5.0-9

INVERTEBRATE ABUNDANCE AND PERCENT COMPOSITION

Roseton Generating Station - 1980

SPECIES	JAN		FEB		MAR		APR		MAY		JUN	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Blue crab	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	33.3
Crayfish	0	0.0	0	0.0	0	0.0	4	100.0	2	100.0	4	66.7
Mud crab	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

SPECIES	JUL		AUG		SEP		OCT		NOV		DEC		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Blue crab	16	44.4	157	73.0	310	94.2	271	93.1	177	75.6	0	0.0	933	83.5
Crayfish	20	55.6	58	27.0	16	4.9	3	1.0	0	0.0	0	0.0	107	9.6
Mud crab	0	0.0	0	0.0	3	0.9	17	5.8	57	24.4	1	100.0	78	7.0

TABLE 5.0-10

INVERTEBRATE ABUNDANCE AND PERCENT COMPOSITION[a]

Danskammer Point Generating Station - 1980

SPECIES	JAN		FEB		MAR		APR		MAY		JUN	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Blue crab	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	3.3
Crayfish	0	0.0	1	100.0	1	100.0	37	97.4	20	100.0	29	96.7
Mud crab	0	0.0	0	0.0	0	0.0	1	2.6	0	0.0	0	0.0

SPECIES	JUL		AUG		SEP		OCT		NOV		DEC		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Blue crab	7	12.1	106	60.2	451	73.9	269	81.8	226	47.7	0	0.0	1060	61.0
Crayfish	51	87.9	70	39.8	155	25.4	6	1.8	3	0.6	0	0.0	373	21.4
Mud crab	0	0.0	0	0.0	4	0.7	54	16.4	245	51.7	2	100.0	306	17.6

TABLE 5.0-11

MONTHLY ESTIMATED NUMBER AND PERCENT COMPOSITION
OF THE TEN MOST ABUNDANT SPECIES COLLECTED IN IMPINGEMENT SAMPLES

Roseton Generating Station - 1980

	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
SPECIES	ESTIMATED NUMBER	%	ESTIMATED NUMBER	%	ESTIMATED NUMBER	%	ESTIMATED NUMBER	%	ESTIMATED NUMBER	%	ESTIMATED NUMBER	%
White perch	4488	62.3	12953	77.8	6245	63.3	15246	71.6	11947	83.9	4880	70.7
Blueback herring	0	0.0	0	0.0	0	0.0	35	0.2	574	4.0	257	3.7
Bay anchovy	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pumpkinseed	590	8.2	296	1.8	258	2.6	301	1.4	148	1.0	41	0.6
Spottail shiner	368	5.1	1125	6.8	1542	15.6	3462	16.3	373	2.6	243	3.5
Alewife	0	0.0	0	0.0	9	0.1	10	<0.1	80	0.6	23	0.3
American shad	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	7	0.1
Gizzard shad	213	3.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Striped bass	56	0.8	421	2.5	356	3.6	10	<0.0	19	0.1	25	0.4
Hogchoker	0	0.0	0	0.0	0	0.0	64	0.3	177	1.2	30	0.4
Total Species	7203		16649		9862		21281		14243		6898	

	JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		TOTAL	
SPECIES	ESTIMATED NUMBER	%	ESTIMATED NUMBER	%	ESTIMATED NUMBER	%	ESTIMATED NUMBER	%	ESTIMATED NUMBER	%	ESTIMATED NUMBER	%	ESTIMATED NUMBER	%
White perch	2003	16.4	32399	47.3	8870	29.7	18622	20.8	8190	30.1	5416	35.8	131259	41.2
Blueback herring	3936	32.3	6260	9.1	2093	7.0	42530	47.5	7175	26.3	49	0.3	62909	19.7
Bay anchovy	511	4.2	20791	30.4	12490	41.8	11145	12.4	0	0.0	0	0.0	44937	14.1
Pumpkinseed	32	0.3	157	0.2	363	1.2	7884	8.8	7508	27.6	1866	12.3	19444	6.1
Spottail shiner	53	0.4	373	0.5	505	1.7	482	0.5	387	1.4	960	6.4	9873	3.1
Alewife	1810	14.8	4178	6.1	1482	5.0	1534	1.7	174	0.6	0	0.0	9300	2.9
American shad	2490	20.4	1780	2.6	461	1.5	1555	1.7	133	0.5	9	0.1	6435	2.0
Gizzard shad	0	0.0	0	0.0	0	0.0	0	0.0	1772	6.5	3878	25.7	5863	1.8
Striped bass	331	2.7	957	1.4	480	1.6	1446	1.6	267	1.0	1289	8.5	5657	1.8
Hogchoker	82	0.7	136	0.2	268	0.9	2377	2.7	293	1.1	47	0.3	3474	1.1
Total Species	12198		68442		29887		89501		27246		15118		318528	

highest rate in July and October, and bay anchovy in September. These three species represented 75.1% of the estimated annual impingement (white perch, 41.2%; blueback herring, 19.7%; and bay anchovy, 14.1%). Pumpkinseed (6.1%), spottail shiner (3.1%), and alewife (2.9%) ranked fourth, fifth, and sixth, respectively. The total 1980 estimated impingement at Roseton was 318,528. At the 95% confidence level, this estimate has a range of ±62,128.

The monthly and annual Danskammer Point estimated impingement of the 10 most abundant species is presented in Table 5.0-12. White perch had the highest estimated impingement during each month except January, February, July, and December. Atlantic tomcod had the highest estimate in January, spottail shiner in February, American shad in July, and gizzard shad in December. White perch accounted for 51.1% of the estimated impingement total. Alewife (9.9%), gizzard shad (7.7%), blueback herring (5.7%), spottail shiner (4.6%), and pumpkinseed (3.4%) ranked second through sixth, respectively. The total 1980 estimated impingement at Danskammer was 342,353. At the 95% confidence level, this estimate has a range of ±57,305.

Eight of the 10 most abundant species at Roseton were also among the top 10 contributors to annual estimated biomass (Table 5.0-13). White catfish and goldfish, fourth and ninth, respectively, in estimated annual biomass, were not among the 10 most abundant species. White perch contributed the most to estimated annual biomass and for ten months had the highest estimated monthly biomass. Pumpkinseed, the No. 2 contributor to annual biomass, had peak totals in July and the late fall-winter months (January and October-December).

White perch, alewife, and gizzard shad, the three most abundant species at Danskammer Point, were also the top three species with

TABLE 5.0-12

MONTHLY ESTIMATED NUMBER AND PERCENT COMPOSITION
OF THE TEN MOST ABUNDANT SPECIES COLLECTED IN IMPINGEMENT SAMPLES

Danskammer Point Generating Station - 1980

SPECIES	JANUARY ESTIMATED NUMBER	%	FEBRUARY ESTIMATED NUMBER	%	MARCH ESTIMATED NUMBER	%	APRIL ESTIMATED NUMBER	%	MAY ESTIMATED NUMBER	%	JUNE ESTIMATED NUMBER	%
White perch	801	23.5	1217	24.1	1975	65.9	40194	82.1	27871	66.7	22294	71.2
Alewife	0	0.0	0	0.0	0	0.0	616	1.3	5826	13.9	1023	3.3
Gizzard shad	143	4.2	78	1.5	8	0.3	0	0.0	0	0.0	0	0.0
Blueback herring	0	0.0	0	0.0	0	0.0	152	0.3	814	2.0	1696	5.4
Spottail shiner	263	7.7	1399	27.7	236	7.9	4619	9.4	3748	9.0	2251	7.2
Pumpkinseed	470	13.8	367	7.3	366	12.2	989	2.0	1278	3.1	358	1.1
American shad	0	0.0	0	0.0	0	0.0	0	0.0	5	<0.1	29	0.1
Bay anchovy	0	0.0	0	0.0	0	0.0	0	0.0	6	<0.1	4	<0.1
Atlantic tomcod	1184	34.8	1193	23.6	0	0.0	4	<0.1	835	2.0	2763	8.8
Striped bass	89	2.6	123	2.4	102	3.4	108	0.2	92	0.2	248	0.8
Total Species	3406		5056		2998		48970		41805		31317	

SPECIES	JULY ESTIMATED NUMBER	%	AUGUST ESTIMATED NUMBER	%	SEPTEMBER ESTIMATED NUMBER	%	OCTOBER ESTIMATED NUMBER	%	NOVEMBER ESTIMATED NUMBER	%	DECEMBER ESTIMATED NUMBER	%	TOTAL ESTIMATED NUMBER	%
White perch	4105	25.7	12893	49.6	13687	35.9	16858	38.4	29167	55.4	3993	12.4	175055	51.1
Alewife	3101	19.5	4717	18.1	6992	18.3	6809	15.5	4656	8.8	0	0.0	33740	9.9
Gizzard shad	0	0.0	0	0.0	0	0.0	88	0.2	6510	12.4	19455	60.5	26282	7.7
Blueback herring	1762	11.1	1026	3.9	929	2.4	9814	22.4	3413	6.5	9	<0.1	19615	5.7
Spottail shiner	202	1.3	248	1.0	731	1.9	260	0.6	745	1.4	1054	3.3	15756	4.6
Pumpkinseed	150	0.9	241	0.9	616	1.6	3116	7.1	1759	3.3	1883	5.9	11593	3.4
American shad	4758	29.8	906	3.5	1199	3.1	2425	5.5	2180	4.1	0	0.0	11502	3.4
Bay anchovy	247	1.6	2604	10.0	5831	15.3	1123	2.6	18	<0.1	0	0.0	9833	2.9
Atlantic tomcod	23	0.1	76	0.3	379	1.0	22	<0.1	203	0.4	1816	5.6	8498	2.5
Striped bass	146	0.9	657	2.5	1215	3.2	1104	2.5	1280	2.4	1237	3.8	6401	1.9
Total Species	15942		26012		38161		43917		52614		32155		342353	

TABLE 5.0-13

MONTHLY ESTIMATED BIOMASS[a] AND PERCENT COMPOSITION
OF THE TOP TEN SPECIES COLLECTED IN IMPINGEMENT SAMPLES

Roseton Generating Station - 1980

	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
SPECIES	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%
White perch	32.6	22.9	79.4	55.8	71.2	42.8	128.5	64.7	62.9	51.6	83.7	63.8
Pumpkinseed	45.6	32.1	13.8	9.7	15.5	9.3	6.5	3.3	6.4	5.3	2.5	1.9
Blueback herring	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.6	12.4	10.2	26.6	20.3
White catfish	4.1	2.9	2.5	1.8	18.3	11.0	0.2	0.1	3.7	3.0	0.7	0.5
Gizzard shad	1.4	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bay anchovy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Spottail shiner	2.4	1.7	10.0	7.0	11.3	6.8	16.5	8.3	1.9	1.6	1.8	1.4
Alewife	0.0	0.0	0.0	0.0	0.1	0.1	2.9	1.5	15.8	13.0	0.1	0.1
Goldfish	3.7	2.6	6.6	4.6	9.7	5.8	11.1	5.6	7.0	5.7	5.5	4.2
Hogchoker	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.8	2.5	2.1	0.2	0.2
Total (Kg)	142.2		142.4		166.5		198.7		121.8		131.1	

	JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		TOTAL	
SPECIES	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%
White perch	16.9	31.2	132.2	52.3	44.1	40.9	87.7	32.9	62.3	42.7	54.2	19.8	855.5	42.7
Pumpkinseed	2.0	3.7	3.9	1.5	2.2	2.0	29.8	11.2	26.6	18.2	33.7	12.3	188.5	9.4
Blueback herring	3.3	6.1	13.2	5.2	5.6	5.2	62.7	23.5	11.9	8.2	0.1	<0.1	136.9	6.8
White catfish	7.4	13.7	12.1	4.8	6.2	5.8	9.8	3.7	7.3	5.0	13.0	4.8	85.3	4.3
Gizzard shad	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.4	9.9	64.9	23.8	80.7	4.0
Bay anchovy	1.5	2.8	49.2	19.4	19.1	17.7	5.9	2.2	0.0	0.0	0.0	0.0	75.8	3.8
Spottail shiner	0.4	0.7	2.0	0.8	2.8	2.6	1.7	0.6	1.8	1.2	7.1	2.6	59.5	3.0
Alewife	3.4	6.3	17.5	6.9	8.3	7.7	7.7	2.9	0.9	0.6	0.0	0.0	56.6	2.8
Goldfish	0.0	0.0	4.6	1.8	0.0	0.0	0.0	0.0	0.1	0.1	8.0	2.9	56.3	2.8
Hogchoker	0.1	0.2	1.1	0.4	2.1	1.9	31.5	11.8	3.2	2.2	1.1	0.4	43.5	2.2
Total (Kg)	54.2		253.0		107.7		266.7		145.9		273.1		2003.4	

[a]Biomass in kilograms.

respect to estimated annual biomass (Table 5.0-14). Seven of the 10 most abundant species were also among the top 10 contributors to estimated annual biomass. White catfish, goldfish, and yellow perch (sixth, eighth, and tenth, respectively) were not among the 10 most abundant species. White perch comprised a major portion of the biomass for each month except December, while alewife and gizzard shad demonstrated seasonal peaks.

5.2.5 Diel Abundance

5.2.5.1 Danskammer Point. The impingement rates during the day are compared to night impingement rates for total fish in Table 5.0-15. The day period was defined as approximately 0600-1800 hours and the night period as 1800-0600. The exact start and end times of each period varied somewhat because of the variation in start and end sampling times. The impingement rates (number of fish/mil gal) rather than actual number impinged are used to compare the two photoperiods to eliminate any difference in flow sampled during each interval. The data were subjected to a paired t-test to determine if there was a significant difference (α = .05) in the total fish impingement rate between these two photoperiods. The results were as follows:

$n = 72$

degrees of freedom (d.f.) = 71

$t = -4.375$

For α = .05, the critical value for a two-tailed test = 1.96

For α = .01, the critical value for a two-tailed test = 2.57

The results demonstrate that there is a difference between the two impinged populations (day vs night) at both the α = .05 and α = .01 significance level. The negative sign (-) indicates that

TABLE 5.0-14

MONTHLY ESTIMATED BIOMASS[a] AND PERCENT COMPOSITION
OF THE TOP TEN SPECIES COLLECTED IN IMPINGEMENT SAMPLES

Danskammer Point Generating Station - 1980

	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
SPECIES	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%
White perch	13.9	11.3	27.8	15.1	47.9	41.9	1237.4	74.8	1138.2	42.8	671.1	64.2
Alewife	0.0	0.0	0.0	0.0	0.0	0.0	160.3	9.7	1145.1	43.0	62.5	6.0
Gizzard shad	4.0	3.2	28.8	15.6	3.1	2.7	0.0	0.0	0.0	0.0	0.0	0.0
Pumpkinseed	31.8	25.8	23.1	12.5	17.8	15.6	48.6	2.9	90.6	3.4	22.5	2.2
Blueback herring	0.0	0.0	0.0	0.0	0.0	0.0	36.5	2.2	141.2	5.3	201.7	19.3
White catfish	0.0	0.0	8.7	4.7	9.5	8.3	3.2	0.2	1.7	0.1	16.1	1.5
Striped bass	6.1	4.9	2.6	1.4	1.5	1.3	9.8	0.6	3.2	0.1	10.1	1.0
Goldfish	12.7	10.3	13.9	7.6	14.9	13.0	11.2	0.7	13.8	0.5	6.9	0.7
Spottail shiner	2.4	1.9	14.3	7.8	1.9	1.7	44.3	2.7	36.0	1.4	20.8	2.0
Yellow perch	0.2	0.2	3.6	2.0	0.8	0.7	47.6	2.9	39.3	1.5	1.0	0.1
Total (Kg)	123.4		184.1		114.2		1655.0		2660.4		1046.1	

	JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		TOTAL	
SPECIES	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%	ESTIMATED BIOMASS	%
White perch	139.0	49.6	357.3	60.2	317.3	46.6	422.0	57.8	475.8	47.5	66.7	6.2	4914.4	48.4
Alewife	61.4	21.9	92.9	15.7	107.4	15.8	103.1	14.1	69.9	7.0	0.0	0.0	1802.8	17.8
Gizzard shad	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.5	163.7	16.3	557.8	51.7	760.9	7.5
Pumpkinseed	11.5	4.1	14.8	2.5	24.2	3.6	41.8	5.7	41.2	4.1	76.1	7.0	443.9	4.4
Blueback herring	12.1	4.3	1.8	0.3	8.6	1.3	25.3	3.5	4.6	0.5	1.0	0.1	432.7	4.3
White catfish	18.5	6.6	29.1	4.9	35.8	5.3	32.1	4.4	49.0	4.9	27.4	2.5	231.4	2.3
Striped bass	8.8	3.1	24.6	4.1	33.6	4.9	22.4	3.1	47.9	4.8	31.8	2.9	202.4	2.0
Goldfish	3.9	1.4	4.5	0.8	1.7	0.2	0.3	<0.1	9.1	0.9	63.0	5.8	155.8	1.5
Spottail shiner	1.7	0.6	1.5	0.3	6.2	0.9	2.1	0.3	6.2	0.6	9.9	0.9	147.3	1.5
Yellow perch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	0.6	51.1	4.7	149.9	1.5
Total (Kg)	280.2		593.5		680.7		730.6		1002.7		1079.7		10150.7	

[a]Biomass in kilograms.

TABLE 5.0-15

IMPINGEMENT RATE[a] FOR TOTAL FISH IN DAY AND NIGHT COLLECTIONS

Danskammer Point Generating Station - 1980

DATE	DAY	NIGHT	DATE	DAY	NIGHT	DATE	DAY	NIGHT
3-4 Jan	0.20	0.50	2-3 Jun	4.96	13.74	2-3 Oct	1.36	8.85
10-11 Jan	0.88	1.19	5-6 Jun	5.26	5.82	6-7 Oct	3.10	9.10
17-18 Jan	0.94	1.92	9-10 Jun	3.04	6.42	9-10 Oct	0.87	1.46
24-25 Jan	0.99	1.51	12-12 Jun	7.94	11.06	16-17 Oct	5.32	4.63
31 Jan-1 Feb	1.04	1.98	16-17 Jun	3.35	2.24	23-24 Oct	7.58	14.02
			19-20 Jun	1.08	0.64	27-28 Oct	13.17	13.83
7-8 Feb	1.36	0.40	26-27 Jun	0.64	1.92	30-31 Oct	12.42	13.10
14-15 Feb	0.63	0.86						
21-22 Feb	2.30	1.91	3-4 Jul	0.77	0.82	3-4 Nov	3.74	17.17
28-29 Feb	0.65	1.85	10-11 Jul	1.06	6.17	6-7 Nov	2.83	5.18
			14-15 Jul	1.25	1.15	10-11 Nov	4.75	8.66
6-7 Mar	0.42	0.99	17-18 Jul	0.42	1.45	13-14 Nov	3.95	3.88
13-14 Mar	0.64	0.83	24-25 Jul	0.53	3.79	17-18 Nov	5.51	6.84
20-21 Mar	0.24	0.24	31 Jul-1 Aug	2.07	14.59	20-21 Nov	4.12	5.44
27-28 Mar	2.54	1.52				24-25 Nov	3.88	7.64
			7-8 Aug	2.14	6.54	25-26 Nov	4.57	2.33
3-4 Apr	10.12	7.04	11-12 Aug	1.36	5.34			
10-11 Apr	1.10	4.50	14-15 Aug	0.39	1.00	4-5 Dec	2.76	1.07
17-18 Apr	13.77	16.11	21-22 Aug	0.27	2.08	11-12 Dec	3.88	3.62
21-22 Apr	12.14	20.49	28-29 Aug	2.43	7.82	18-19 Dec	6.96	4.78
24-25 Apr	12.02	11.02				22-23 Dec	4.84	5.27
28-29 Apr	12.88	20.46	2-3 Sep	1.51	8.57	23-24 Dec	3.71	4.67
			4-5 Sep	3.20	14.81	29-30 Dec	1.87	1.36
1-2 May	6.80	6.79	8-9 Sep	2.29	6.69			
8-9 May	0.93	0.42	11-12 Sep	3.92	4.34			
15-16 May	9.57	9.31	18-19 Sep	0.77	2.90			
19-20 May	15.04	6.76	25-26 Sep	4.38	7.83			
22-23 May	7.08	2.74	29-30 Sep	2.89	8.01			
26-27 May	8.97	6.26						
29-30 May	5.44	10.29						

[a] Number of fish per million gallons.
Day - 0600-1800.
Night - 1800-0600

night > day (this is because of the way the data are input into the paired t-test).

The diel abundance data for the two most numerically dominant species, white perch and alewife, are presented in Tables 5.0-16 and 5.0-17. Out of the 72 dates when white perch were collected, impingement rates were greater at night on 52 dates (72%). This supports the significant results for the total fish data. The statistically greater night (total fish) impingement rate is the result of the high proportion of white perch in the samples. The frequency of alewives in impingement samples was not as high as for white perch. Of the 53 dates when alewife were impinged, night impingement rates were higher 34 times (64%). Once again this supports the findings for total fish.

5.2.5.2 Roseton. The impingement rate for total fish in day and night impingement collections is presented in Table 5.0-18. Results of the paired t-test demonstrate that a significant difference (α = .05 and α = .01) exists between day and night impingement concentrations (d.f. = 64, t = -6.281). As was the case for Danskammer Point, concentrations were greater at night than during the day at Roseton. the impingement rate was

The diel abundance of white perch and blueback herring, the two most numerically adominant species, are presented in Tables 5.0-19 and 5.0-20. White perch night impingement rates were greater than day impingement rates on 55 of the 64 dates on which they were collected (86%). Blueback herring were collected at higher night rates on 42 of the 43 dates on which were collected (98%). These data support the results of the total fish paired t-test.

TABLE 5.0-16

IMPINGEMENT RATE[a] FOR WHITE PERCH IN DAY AND NIGHT COLLECTIONS

Danskammer Point Generating Station - 1980

DATE	DAY	NIGHT	DATE	DAY	NIGHT	DATE	DAY	NIGHT
3-4 Jan	0.10	0.20	2-3 Jun	3.76	9.26	2-3 Oct	0.74	5.37
10-11 Jan	0.06	0.31	5-6 Jun	4.02	4.19	6-7 Oct	2.33	3.72
17-18 Jan	0.10	0.17	9-10 Jun	2.68	3.78	9-10 Oct	0.51	0.72
24-25 Jan	0.14	0.20	12-13 Jun	6.86	6.53	16-17 Oct	1.08	1.47
31 Jan-1 Feb	0.42	1.06	16-17 Jun	2.51	1.75	23-24 Oct	4.86	5.14
			19-20 Jun	0.83	0.47	27-28 Oct	3.01	4.80
7-8 Feb	0.35	0.20	26-27 Jun	0.48	1.16	30-31 Oct	5.76	6.64
14-15 Feb	0.16	0.18						
21-22 Feb	0.24	0.32	3-4 Jun	0.48	0.18	3-4 Nov	0.96	9.46
28-29 Feb	0.12	0.80	10-11 Jul	0.22	0.89	6-7 Nov	2.42	1.72
			14-15 Jul	0.72	0.22	10-11 Nov	2.67	3.58
6-7 Mar	0.19	0.44	17-18 Jul	0.09	0.12	13-14 Nov	2.22	2.34
13-14 Mar	0.24	0.43	24-25 Jul	0.16	1.53	17-18 Nov	2.77	4.48
20-21 Mar	0.12	0.13	31 Jul-1 Aug	1.32	2.80	20-21 Nov	2.57	4.11
27-28 Mar	2.22	1.27				24-25 Nov	2.08	4.98
			7-8 Aug	0.79	4.33	25-26 Nov	2.89	1.46
3-4 Apr	7.69	4.80	11-12 Aug	0.36	3.17			
10-11 Apr	0.95	3.78	14-15 Aug	0.17	0.37	4-5 Dec	0.99	0.51
17-18 Apr	11.37	13.33	21-22 Aug	0.12	1.52	11-12 Dec	0.20	0.65
21-22 Apr	9.69	18.51	28-29 Aug	1.38	2.53	18-19 Dec	0.22	0.28
24-25 Apr	9.96	8.44				22-23 Dec	0.16	0.30
28-29 Apr	11.21	18.38	2-3 Sep	0.74	2.28	23-24 Dec	0.04	0.16
			4-5 Sep	0.94	6.46	29-30 Dec	0.15	0.10
1-2 May	5.19	4.90	8-9 Sep	1.18	2.20			
8-9 May	0.66	0.26	11-12 Sep	2.04	1.62			
15-16 May	5.57	6.36	18-19 Sep	0.33	0.36			
19-20 May	18.35	4.12	25-26 Sep	2.12	3.39			
22-23 May	3.78	1.36	29-39 Sep	1.23	4.02			
26-27 May	6.98	4.49						
29-30 May	4.23	5.62						

[a] Number of fish per million gallons.
Day - 0600-1800.
Night - 1800-0600

TABLE 5.0-17

IMPINGEMENT RATE[a] FOR ALEWIFE IN DAY AND NIGHT COLLECTIONS

Danskammer Point Generating Station - 1980

DATE	DAY	NIGHT	DATE	DAY	NIGHT	DATE	DAY	NIGHT
3-4 Jan	0.00	0.00	2-3 Jun	0.31	0.30	2-3 Oct	0.23	2.02
10-11 Jan	0.00	0.00	5-6 Jun	0.19	0.51	6-7 Oct	0.24	2.46
17-18 Jan	0.00	0.00	9-10 Jun	0.03	0.30	9-10 Oct	0.23	0.22
24-25 Jan	0.00	0.00	12-13 Jun	0.11	0.60	16-17 Oct	0.23	0.46
31 Jan-1 Feb	0.00	0.00	16-17 Jun	0.08	0.03	23-24 Oct	0.72	1.84
			19-20 Jun	0.02	0.00	27-28 Oct	1.60	1.67
7-8 Feb	0.00	0.00	26-27 Jun	0.01	0.03	30-31 Oct	2.82	2.19
14-15 Feb	0.00	0.00						
21-22 Feb	0.00	0.00	3-4 Jul	0.04	0.01	3-4 Nov	0.81	1.18
28-29 Feb	0.00	0.00	10-11 Jul	0.19	1.08	6-7 Nov	0.26	0.64
			14-15 Jul	0.36	0.34	10-11 Nov	0.51	3.03
6-7 Mar	0.00	0.00	17-18 Jul	0.10	0.68	13-14 Nov	0.29	0.43
13-14 Mar	0.00	0.00	24-25 Jul	0.09	0.60	17-18 Nov	0.12	0.26
20-21 Mar	0.00	0.00	31 Jul-1 Aug	0.24	4.43	20-21 Nov	0.06	0.01
27-28 Mar	0.00	0.00				24-25 Nov	0.06	0.04
			7-8 Aug	1.00	1.30	25-26 Nov	0.01	0.00
3-4 Apr	0.03	0.00	11-12 Aug	0.22	0.77			
10-11 Apr	0.00	0.06	14-15 Aug	0.06	0.20	4-5 Dec	0.00	0.00
17-18 Apr	0.04	0.11	21-22 Aug	0.07	0.22	11-12 Dec	0.00	0.00
21-22 Apr	0.26	0.07	28-29 Aug	0.35	1.14	18-19 Dec	0.00	0.00
24-25 Apr	0.18	0.33				22-23 Dec	0.00	0.00
28-29 Apr	0.47	0.46	2-3 Sep	0.12	2.33	23-24 Dec	0.00	0.00
			4-5 Sep	0.39	2.80	29-30 Dec	0.00	0.00
1-2 May	0.49	0.88	8-9 Sep	0.20	0.98			
8-9 May	0.09	0.12	11-12 Sep	0.30	0.92			
15-16 May	1.76	1.56	18-19 Sep	0.10	1.08			
19-20 May	3.66	1.48	25-26 Sep	0.42	1.17			
22-23 May	1.56	1.05	29-30 Sep	0.29	0.78			
26-27 May	1.12	0.32						
29-30 May	0.41	0.32						

[a] Number of fish per million gallons.
Day - 0600-1800.
Night - 1800-0600.

TABLE 5.0-18

IMPINGEMENT RATE[a] FOR TOTAL FISH IN DAY AND NIGHT COLLECTIONS

Roseton Generating Station - 1980

DATE	DAY	NIGHT	DATE	DAY	NIGHT	DATE	DAY	NIGHT
3-4 Jan	0.39	0.58	5-6 Jun	0.41	0.28	2-3 Oct	0.13	2.88
10-11 Jan	0.22	0.48	12-13 Jun	0.36	0.98	9-10 Oct	0.57	7.49
17-18 Jan	0.32	0.29	19-20 Jun	0.06	0.13	13-14 Oct	1.50	8.30
24-25 Jan	0.20	0.46	26-27 Jun	0.03	0.16	16-17 Oct	0.92	6.23
31 Jan-1 Feb 1	0.28	0.68				20-21 Oct	5.36	13.38
			3-4 Jul	0.02	0.16	23-24 Oct	1.04	7.84
7-8 Feb	0.14	0.25	10-11 Jul	0.02	1.32	27-28 Oct	1.22	8.98
14-15 Feb	1.84	0.67	17-18 Jul	0.03	0.17	30-31 Oct	3.81	4.22
21-22 Feb	0.68	0.54	24-25 Jul	0.02	1.21			
28-29 Feb	0.67	2.97	31 Jul-1 Aug	0.17	2.58	3-4 Nov	1.90	8.60
						6-7 Nov	0.90	4.47
3-4 Mar	0.44	0.71	7-8 Aug	0.15	4.86	10-11 Nov	0.54	0.60
6-7 Mar	0.74	0.87	11-12 Aug	0.09	4.52	13-14 Nov	1.52	0.42
13-14 Mar	0.22	0.92	14-15 Aug	0.11	4.00	20-21 Nov	0.42	0.84
20-21 Mar	0.21	0.39	18-19 Aug	0.02	3.72	25-26 Nov	0.53	0.72
27-28 Mar	0.49	0.64	21-22 Aug	0.03	6.02			
			25-26 Aug	0.93	3.40	4-5 Dec	1.13	1.80
3-4 Apr	0.52	0.84	28-29 Aug	1.84	7.59	11-12 Dec	0.50	1.33
10-11 Apr	0.08	0.16				18-19 Dec	0.12	0.41
17-18 Apr	0.39	2.47	2-3 Sep	0.68	6.63	23-24 Dec	0.70	0.64
24-25 Apr	0.28	3.36	4-5 Sep	0.44	10.48			
28-29 Apr	0.47	3.72	8-9 Sep	0.08	1.87			
			11-12 Sep	0.12	0.78			
1-2 May	0.84	2.82	18-19 Sep	0.03	1.38			
5-6 May	0.09	0.67	25-26 Sep	0.26	1.24			
8-9 May	0.06	1.10						
15-16 May	0.38	1.75						
22-23 May	0.16	0.16						
29-30 May	0.12	0.37						

[a] Number of fish per million gallons.
Day - 0600-1800.

TABLE 5.0-19

IMPINGEMENT RATE[a] FOR WHITE PERCH IN DAY AND NIGHT COLLECTIONS

Roseton Generating Station - 1980

DATE	DAY	NIGHT	DATE	DAY	NIGHT	DATE	DAY	NIGHT
3-4 Jan	0.26	0.28	5-6 Jun	0.36	0.16	2-3 Oct	0.05	1.42
10-11 Jan	0.08	0.36	12-13 Jun	0.24	0.66	9-10 Oct	0.26	1.86
17-18 Jan	0.22	0.18	19-20 Jun	0.03	0.08	13-14 Oct	0.33	1.61
24-25 Jan	0.07	0.26	26-27 Jun	0.03	0.08	16-17 Oct	0.20	1.26
31 Jan-1 Feb	0.19	0.54				20-21 Oct	1.54	1.52
			3-4 Jul	0.00	0.01	23-24 Oct	0.36	0.96
7-8 Feb	0.12	0.23	10-11 Jul	0.01	0.04	27-28 Oct	0.18	0.74
14-15 Feb	1.62	0.44	17-18 Jul	0.00	0.00	30-31 Oct	0.74	0.76
21-22 Feb	0.46	0.16	24-25 Jul	0.01	0.26			
28-29 Feb	0.45	2.70	31 Jul-1 Aug	0.10	0.70	3-4 Nov	0.90	1.36
						6-7 Nov	0.41	0.38
3-4 Mar	0.21	0.24	7-8 Aug	0.08	2.60	10-11 Nov	0.37	0.22
6-7 Mar	0.62	0.66	11-12 Aug	0.04	2.00	13-14 Nov	1.10	0.20
13-14 Mar	0.14	0.62	14-15 Aug	0.08	3.00	20-21 Nov	0.18	0.37
20-21 Mar	0.12	0.29	18-19 Aug	0.00	0.40	25-26 Nov	0.24	0.36
27-28 Mar	0.29	0.31	21-22 Aug	0.00	1.88			
			25-26 Aug	0.71	1.97	4-5 Dec	0.32	1.16
3-4 Apr	0.27	0.24	28-29 Aug	1.60	3.04	11-12 Dec	0.12	0.38
10-11 Apr	0.04	0.09				18-19 Dec	0.02	0.10
17-18 Apr	0.24	1.64	2-3 Sep	0.34	2.40	23-24 Dec	0.06	0.10
24-25 Apr	0.17	2.92	4-5 Sep	0.22	3.36			
28-29 Apr	0.42	3.40	8-9 Sep	0.05	0.51			
			11-12 Sep	0.04	0.16			
1-2 May	0.74	2.54	18-19 Sep	0.01	0.18			
5-6 May	0.05	0.48	25-26 Sep	0.08	0.18			
8-9 May	0.02	0.84						
15-16 May	0.32	1.60						
22-23 May	0.12	0.12						
29-30 May	0.07	0.20						

[a] Number of fish per million gallons.
Day - 0600-1800.
Night - 1800-0600.

TABLE 5.0-20

IMPINGEMENT RATE[a] FOR BLUEBACK HERRING IN DAY AND NIGHT COLLECTIONS

Roseton Generating Station - 1980

DATE	DAY	NIGHT	DATE	DAY	NIGHT	DATE	DAY	NIGHT
3-4 Jan	0.00	0.00	5-6 Jun	0.00	0.01	2-3 Oct	0.00	0.08
10-11 Jan	0.00	0.00	12-13 Jun	0.00	0.02	9-10 Oct	0.02	3.19
17-18 Jan	0.00	0.00	19-20 Jun	0.00	0.02	13-14 Oct	0.32	2.72
24-25 Jan	0.00	0.00	26-27 Jun	0.00	0.02	16-17 Oct	0.32	3.64
31 Jan-1 Feb	0.00	0.00				20-21 Oct	2.84	10.04
			3-4 Jul	0.00	0.00	23-24 Oct	0.31	6.10
7-8 Feb	0.00	0.00	10-11 Jul	0.00	0.36	27-28 Oct	0.08	4.94
14-15 Feb	0.00	0.00	17-18 Jul	0.00	0.02	30-31 Oct	0.12	1.85
21-22 Feb	0.00	0.00	24-25 Jul	0.00	0.52			
28-29 Feb	0.00	0.00	31 Jul-1 Aug	0.00	1.10	3-4 Nov	0.09	1.82
						6-7 Nov	0.07	3.56
3-4 Mar	0.00	0.00	7-8 Aug	0.00	0.32	10-11 Nov	0.07	0.28
6-7 Mar	0.00	0.00	11-12 Aug	0.01	1.21	13-14 Nov	0.05	0.07
13-14 Mar	0.00	0.00	14-15 Aug	0.00	0.38	20-21 Nov	0.00	0.08
20-21 Mar	0.00	0.00	18-19 Aug	0.00	0.34	25-26 Nov	0.01	0.04
27-28 Mar	0.00	0.00	21-22 Aug	0.00	0.23			
			25-26 Aug	0.04	0.17	4-5 Dec	0.00	0.00
3-4 Apr	0.00	0.00	28-29 Aug	0.02	0.81	11-12 Dec	0.00	0.01
10-11 Apr	0.00	0.00				18-19 Dec	0.00	0.00
17-18 Apr	0.00	0.00	2-3 Sep	0.04	0.76	23-24 Dec	0.00	0.00
24-25 Apr	0.00	0.00	4-5 Sep	0.04	0.44			
28-29 Apr	0.00	0.02	8-9 Sep	0.00	0.18			
			11-12 Sep	0.01	0.14			
1-2 May	0.00	0.03	18-19 Sep	0.00	0.04			
5-6 May	0.00	0.06	25-26 Sep	0.00	0.08			
8-9 May	0.02	0.12						
15-16 May	0.00	0.04						
22-23 May	0.02	0.00						
29-30 May	0.00	0.01						

[a]Number of fish per million gallons.
Day - 0600-1800.
Night - 1800-0600

The results of this day-night analysis indicate that night impingement is greater than day impingement at both plants for total fish as well as for the dominant species.

5.2.6 Seasonal Impingement Patterns and Length Frequency of Selected Species

Comparison of the mean monthly impingement rates among months and between plants is an appropriate technique for evaluating fish concentrations in the intake cooling water. The monthly mean impingement rate is useful in determining periods of peak abundance in the vicinity of the two plants. When used in combination with length-frequency data, the age structure of seasonally high fish populations can be determined.

The monthly mean impingement rate for all species combined was higher at Danskammer Point than at Roseton for all months except August (Table 5.0-21). (The same pattern was evidenced in 1979 [LMS 1980].)

The highest impingement rate for total fish occurred during October at Roseton and during April at Danskammer Point. The overall impingement rate pattern at both plants was a spring peak followed by a decrease in the summer, an increase in the early fall, and a decrease with the onset of winter.

5.2.6.1 Alewife. Alewife impingement at Roseton in 1980 occurred primarily from July to November. The length-frequency data show that the majority of these fish were between 4.1 and 10.0 cm and were young-of-the-year (Table 5.0-22). At Danskammer Point, alewife impingement occurred from April through November with peaks in May and October. The length-frequency data indicate that there were three age groups present during this period: adults, yearlings, and

TABLE 5.0-21

MEAN MONTHLY ESTIMATED IMPINGEMENT RATE[a] FOR TOTAL AND SELECT SPECIES

Roseton and Danskammer Point Generating Station - 1980

I. ROSETON

SPECIES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	ANNUAL[b]
Alewife	0.0000	0.0000	0.0005	0.0005	0.0042	0.0010	0.0684	0.1624	0.0836	0.0722	0.0096	0.0000	0.0335
American shad	0.0000	0.0000	0.0000	0.0000	0.0000	0.0003	0.0941	0.0692	0.0260	0.0732	0.0073	0.0005	0.0226
Atlantic tomcod	0.0543	0.0021	0.0003	0.0004	0.0114	0.0496	0.0047	0.0047	0.0252	0.0021	0.0004	0.0254	0.0151
Bay anchovy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0193	0.8081	0.7048	0.5247	0.0000	0.0000	0.1714
Blueback herring	0.0000	0.0000	0.0000	0.0017	0.0302	0.0112	0.1487	0.2433	0.1181	2.0023	0.3948	0.0026	0.2461
Spottail shiner	0.0197	0.0615	0.0826	0.1665	0.0196	0.0106	0.0020	0.0145	0.0285	0.0227	0.0213	0.0514	0.0417
Striped bass	0.0030	0.0230	0.0191	0.0005	0.0010	0.0011	0.0125	0.0372	0.0271	0.0681	0.0147	0.0690	0.0230
White perch	0.2405	0.7084	0.3346	0.7333	0.6286	0.2128	0.0757	1.2593	0.5005	0.8767	0.4506	0.2899	0.5259
Total Species	0.3860	0.9105	0.5284	1.0236	0.7494	0.3008	0.4609	2.6602	1.6865	4.2137	1.4991	0.8093	1.2690

II. DANSKAMMER POINT

SPECIES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	ANNUAL[b]
Alewife	0.0000	0.0000	0.0000	0.1239	0.7798	0.1108	0.2564	0.3842	0.6259	0.7209	0.4123	0.0000	0.2845
American shad	0.0000	0.0000	0.0000	0.0000	0.0007	0.0031	0.3934	0.0738	0.1073	0.2568	0.1931	0.0000	0.0857
Atlantic tomcod	0.3718	0.3053	0.0000	0.0008	0.1118	0.2992	0.0019	0.0062	0.0339	0.0023	0.0180	0.1993	0.1125
Bay anchovy	0.0000	0.0000	0.0000	0.0000	0.0008	0.0004	0.0204	0.2121	0.5219	0.1189	0.0016	0.0000	0.0730
Blueback herring	0.0000	0.0000	0.0000	0.0306	0.1089	0.1836	0.1457	0.0836	0.0832	1.0391	0.3023	0.0010	0.1648
Spottail shiner	0.0827	0.3580	0.0685	0.9295	0.5016	0.2437	0.0167	0.0202	0.0654	0.0275	0.0660	0.1157	0.2080
Striped bass	0.0279	0.0315	0.0297	0.0217	0.0123	0.0269	0.0121	0.0535	0.1088	0.1169	0.1134	0.1357	0.0575
White perch	0.2517	0.3113	0.5740	8.0877	3.7304	2.4140	0.3394	1.0501	1.2251	1.7849	2.5830	0.4381	1.8991
Total Species	1.0697	1.2935	0.8714	9.8535	5.5954	3.3911	1.3180	2.1186	3.4158	4.6499	4.6595	3.5282	3.4804

[a] Number of fish per million gallons.
[b] Mean of 12 monthly rates.

TABLE 5.0-22

LENGTH-FREQUENCY OF ALEWIFE

ROSETON GENERATING STATION - 1980

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3.1- 4.0	0	0	0	0	0	0	2	0	0	1	0	0
4.1- 5.0	0	0	0	0	0	0	21	0	0	0	0	0
5.1- 6.0	0	0	0	0	0	0	88	8	0	0	0	0
6.1- 7.0	0	0	0	0	0	0	101	82	18	3	3	0
7.1- 8.0	0	0	0	0	0	0	33	322	126	65	8	0
8.1- 9.0	0	0	0	0	1	0	6	164	125	170	19	0
9.1- 10.0	0	0	0	0	0	0	1	22	11	91	9	0
10.1- 11.0	0	0	1	0	1	0	0	3	0	6	1	0
11.1- 12.0	0	0	0	0	1	1	0	0	0	1	0	0
12.1- 13.0	0	0	0	0	0	0	0	2	0	0	0	0
13.1- 14.0	0	0	0	0	0	0	0	1	1	1	0	0
14.1- 15.0	0	0	0	0	0	0	1	4	5	0	0	0
15.1- 16.0	0	0	0	0	0	0	0	4	6	2	0	0
16.1- 17.0	0	0	0	0	0	0	0	2	4	1	1	0
17.1- 18.0	0	0	0	0	0	0	0	3	0	2	0	0
18.1- 19.0	0	0	0	0	0	0	0	0	0	0	0	0
19.1- 20.0	0	0	0	0	0	0	0	0	0	0	0	0
20.1- 21.0	0	0	0	0	0	0	0	0	0	0	0	0
21.1- 22.0	0	0	0	0	0	0	0	0	0	0	0	0
22.1- 23.0	0	0	0	0	0	0	0	0	0	0	0	0
23.1- 24.0	0	0	0	0	0	0	0	0	0	0	0	0
24.1- 25.0	0	0	0	0	0	0	0	0	0	0	0	0
25.1- 26.0	0	0	0	0	0	0	0	0	0	0	0	0
26.1- 27.0	0	0	0	0	1	0	0	0	0	0	0	0
27.1- 28.0	0	0	0	0	1	0	0	0	0	0	0	0
28.1- 29.0	0	0	0	0	2	0	0	0	0	0	0	0
29.1- 30.0	0	0	0	2	3	0	0	0	0	0	0	0
30.1- 31.0	0	0	0	0	4	0	0	1	0	0	0	0
31.1- 32.0	0	0	0	0	1	0	0	0	1	2	0	0
TOTAL ANALYZED	0	0	1	2	15	1	253	618	297	345	41	0
MEAN LENGTH			10.8	29.4	25.6	12.0	6.3	8.0	8.5	8.9	8.7	
LEN RANGE(MIN)	.0	.0	10.8	29.1	8.8	12.0	4.0	5.5	6.2	3.8	6.8	.0
(MAX)	.0	.0	10.8	29.6	31.4	12.0	14.2	30.6	31.9	31.8	16.5	.0

NOTE. NS - NO SAMPLE.

young-of-the-year (Table 5.0-23). The adult population made up the bulk of the April and May samples, corresponding to the spawning season for this species. Beginning in April, coincident with the presence of adults, and continuing through November, yearling alewives were present. They ranged in length from 7.2 cm in the spring to 21.0 cm in November, and were most abundant during September. Young-of-the-year were first collected in July, peaked in October, and were present through November, when they attained a maximum size of 14.0 cm.

5.2.6.2 American Shad. The American shad impingement pattern was similar between the two plants during 1980. Most impingement occurred from July to November and consisted of young-of-the-year in the 3.1- to 16.0-cm size class (Tables 5.0-24 and 5.0-25). At Danskammer Point, impingement of yearlings and adults was recorded; however, their contribution to the monthly impingement rate for this species was minimal. The peak American shad impingement rate at Roseton and Danskammer Point occurred in July, but the length-frequency data indicate more fish analyzed in October. This is because less intake water was withdrawn in July and, consequently, fewer fish were impinged.

5.2.6.3 Atlantic Tomcod. The Atlantic tomcod mean monthly impingement rate at Roseton and Danskammer Point was highest in January, with a second peak in June. The length-frequency data show that the winter peak consisted of yearlings and the spring peak was caused by the presence of young-of-the-year (Tables 5.0-26 and 5.0-27). In March, after the spawning season, Atlantic tomcod were either absent or collected in very low concentrations until recruitment of the young. Few older fish were collected at either plant until the onset of the spawning season in December. At that time, yearling (spawning adults) fish were collected.

TABLE 5.0- 23

LENGTH-FREQUENCY OF ALEWIFE

DANSKAMMER POINT GENERATING STATION - 1980

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3.1- 4.0	0	0	0	0	0	0	2	0	0	0	0	0
4.1- 5.0	0	0	0	0	0	0	8	1	0	0	0	0
5.1- 6.0	0	0	0	0	0	0	47	2	1	0	0	0
6.1- 7.0	0	0	0	0	0	0	66	30	21	3	2	0
7.1- 8.0	0	0	0	0	0	1	69	166	335	111	35	0
8.1- 9.0	0	0	0	3	0	0	34	114	460	480	174	0
9.1- 10.0	0	0	0	2	6	1	6	23	109	441	259	0
10.1- 11.0	0	0	0	1	28	3	0	1	11	195	184	0
11.1- 12.0	0	0	0	1	52	22	0	0	3	110	67	0
12.1- 13.0	0	0	0	1	23	74	4	2	2	27	17	0
13.1- 14.0	0	0	0	0	14	70	15	3	7	3	5	0
14.1- 15.0	0	0	0	0	1	20	62	30	41	11	0	0
15.1- 16.0	0	0	0	0	0	7	91	53	124	31	7	0
16.1- 17.0	0	0	0	0	0	0	35	48	141	51	27	0
17.1- 18.0	0	0	0	0	1	3	11	18	87	63	72	0
18.1- 19.0	0	0	0	0	0	1	1	2	17	36	62	0
19.1- 20.0	0	0	0	0	0	3	0	3	0	4	36	0
20.1- 21.0	0	0	0	0	0	1	0	1	0	0	13	0
21.1- 22.0	0	0	0	0	2	2	1	0	3	0	0	0
22.1- 23.0	0	0	0	0	3	1	0	0	1	0	0	0
23.1- 24.0	0	0	0	1	4	2	2	3	0	0	0	0
24.1- 25.0	0	0	0	0	5	0	0	0	1	1	0	0
25.1- 26.0	0	0	0	4	4	0	1	0	0	1	0	0
26.1- 27.0	0	0	0	2	34	2	0	0	1	0	0	0
27.1- 28.0	0	0	0	7	121	8	6	3	1	1	0	0
28.1- 29.0	0	0	0	23	233	21	7	12	6	5	0	0
29.1- 30.0	0	0	0	43	246	19	4	7	10	6	1	0
30.1- 31.0	0	0	0	39	207	11	4	4	7	3	1	0
31.1- 32.0	0	0	0	31	92	7	4	2	2	5	2	0
32.1- 33.0	0	0	0	15	33	5	0	1	0	0	0	0
33.1- 34.0	0	0	0	1	13	0	0	0	0	1	0	0
34.1- 35.0	0	0	0	1	0	0	0	0	0	0	0	0
TOTAL ANALYZED	0	0	0	175	1122	284	480	529	1391	1589	964	0
MEAN LENGTH				29.2	27.4	17.6	12.1	11.6	11.2	10.6	11.7	
LEN RANGE(MIN)	.0	.0	.0	8.7	9.2	7.2	3.1	4.6	6.0	6.6	6.8	.0
(MAX)	.0	.0	.0	34.4	34.0	32.7	31.8	32.3	31.8	33.3	31.9	.0

TABLE 5.0-24

LENGTH-FREQUENCY OF AMERICAN SHAD

ROSETON GENERATING STATION - 1980

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3.1- 4.0	0	0	0	0	0	0	5	0	0	0	0	0
4.1- 5.0	0	0	0	0	0	1	32	0	0	0	0	0
5.1- 6.0	0	0	0	0	0	0	85	5	0	0	0	0
6.1- 7.0	0	0	0	0	0	0	70	147	40	1	0	0
7.1- 8.0	0	0	0	0	0	0	21	154	76	33	1	0
8.1- 9.0	0	0	0	0	0	0	2	12	13	149	8	0
9.1- 10.0	0	0	0	0	0	0	0	1	4	118	19	0
10.1- 11.0	0	0	0	0	0	0	0	2	1	30	6	0
11.1- 12.0	0	0	0	0	0	0	0	0	0	2	0	0
12.1- 13.0	0	0	0	0	0	0	0	0	0	5	0	0
13.1- 14.0	0	0	0	0	0	0	0	0	0	0	0	0
14.1- 15.0	0	0	0	0	0	0	0	0	0	0	0	0
15.1- 16.0	0	0	0	0	0	0	0	0	0	0	0	0
16.1- 17.0	0	0	0	0	0	0	0	0	0	0	0	0
17.1- 18.0	0	0	0	0	0	0	0	0	0	0	0	0
18.1- 19.0	0	0	0	0	0	0	1	0	0	0	0	0
19.1- 20.0	0	0	0	0	0	0	0	0	0	0	0	0
20.1- 21.0	0	0	0	0	0	0	0	0	0	0	0	0
21.1- 22.0	0	0	0	0	0	0	0	0	0	1	0	0
TOTAL ANALYZED	0	0	0	0	0	1	216	321	134	339	34	0
MEAN LENGTH						4.2	5.9	7.1	7.4	9.1	9.5	
LEN RANGE(MIN)	.0	.0	.0	.0	.0	4.2	3.7	5.7	6.2	7.0	8.0	.0
(MAX)	.0	.0	.0	.0	.0	4.2	18.7	10.2	10.4	21.2	10.8	.0

NOTE. NS - NO SAMPLE.

TABLE 5.0-25 (Page 1 of 2)

LENGTH-FREQUENCY OF AMERICAN SHAD

DANSKAMMER POINT GENERATING STATION - 1980

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
4.1- 5.0	0	0	0	0	0	0	34	0	0	0	0	0
5.1- 6.0	0	0	0	0	0	0	146	0	0	2	0	0
6.1- 7.0	0	0	0	0	0	0	118	25	10	3	0	0
7.1- 8.0	0	0	0	0	0	0	89	38	103	27	1	0
8.1- 9.0	0	0	0	0	0	0	25	18	133	240	72	0
9.1- 10.0	0	0	0	0	0	0	2	3	28	266	257	0
10.1- 11.0	0	0	0	0	0	0	1	0	7	118	93	0
11.1- 12.0	0	0	0	0	0	0	0	0	2	24	14	0
12.1- 13.0	0	0	0	0	2	0	0	0	1	10	3	0
13.1- 14.0	0	0	0	0	0	2	0	0	0	4	1	0
14.1- 15.0	0	0	0	0	0	3	0	0	0	1	2	0
15.1- 16.0	0	0	0	0	0	3	0	0	0	0	1	0
16.1- 17.0	0	0	0	0	0	1	0	0	0	0	0	0
17.1- 18.0	0	0	0	0	0	0	0	0	0	0	0	0
18.1- 19.0	0	0	0	0	0	0	0	1	1	0	0	0
19.1- 20.0	0	0	0	0	0	0	1	0	1	1	0	0
20.1- 21.0	0	0	0	0	0	0	0	0	2	0	0	0
21.1- 22.0	0	0	0	0	0	0	0	0	1	0	0	0
22.1- 23.0	0	0	0	0	0	0	0	0	0	0	0	0
23.1- 24.0	0	0	0	0	0	0	0	0	1	0	0	0
24.1- 25.0	0	0	0	0	0	0	0	0	1	0	0	0
25.1- 26.0	0	0	0	0	0	0	0	0	0	0	0	0
26.1- 27.0	0	0	0	0	0	0	0	0	0	0	0	0
27.1- 28.0	0	0	0	0	0	0	0	0	0	0	0	0
28.1- 29.0	0	0	0	0	0	0	0	0	0	0	0	0
29.1- 30.0	0	0	0	0	0	0	0	0	0	0	0	0
30.1- 31.0	0	0	0	0	0	0	0	0	0	0	0	0
31.1- 32.0	0	0	0	0	0	0	0	0	0	0	0	0
32.1- 33.0	0	0	0	0	0	0	0	0	0	0	0	0
33.1- 34.0	0	0	0	0	0	0	0	0	0	0	0	0
34.1- 35.0	0	0	0	0	0	0	0	0	0	0	0	0
35.1- 36.0	0	0	0	0	0	0	0	0	0	0	0	0
36.1- 37.0	0	0	0	0	0	0	0	0	0	0	0	0
37.1- 38.0	0	0	0	0	0	0	0	0	0	0	0	0
38.1- 39.0	0	0	0	0	0	0	0	1	0	0	0	0

TABLE 5.0-25 (Page 2 of 2)

LENGTH-FREQUENCY OF AMERICAN SHAD

DANSKAMMER POINT GENERATING STATION - 1980

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
(CONT'D)												
TOTAL ANALYZED	0	0	0	0	2	9	416	86	291	696	444	0
MEAN LENGTH					13.0	14.9	6.5	8.0	8.6	9.4	9.7	
LEN RANGE(MIN)	.0	.0	.0	.0	12.9	13.1	4.2	6.4	6.5	5.5	8.0	.0
(MAX)	.0	.0	.0	.0	13.0	16.2	19.7	38.5	24.5	19.7	15.2	.0

NOTE. NS - NO SAMPLE.

TABLE 5.0-26

LENGTH-FREQUENCY OF ATLANTIC TOMCOD

ROSETON GENERATING STATION - 1980

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3.1- 4.0	0	0	0	0	1	0	0	0	0	0	0	0
4.1- 5.0	0	0	0	0	17	2	0	0	0	0	0	0
5.1- 6.0	0	0	0	0	19	26	1	1	0	0	0	0
6.1- 7.0	0	0	0	0	8	67	11	2	3	0	0	0
7.1- 8.0	0	0	0	0	0	40	6	6	23	0	0	0
8.1- 9.0	0	0	0	0	0	5	4	7	49	2	0	0
9.1- 10.0	0	0	0	0	0	0	1	6	47	1	0	0
10.1- 11.0	0	0	0	0	0	0	2	2	26	0	0	0
11.1- 12.0	2	0	0	0	0	0	0	2	7	0	0	1
12.1- 13.0	15	0	0	0	0	0	0	0	0	2	1	5
13.1- 14.0	25	1	0	0	0	0	0	0	0	0	0	17
14.1- 15.0	30	0	0	1	0	0	0	0	0	2	1	11
15.1- 16.0	18	1	1	0	0	0	0	0	0	0	0	7
16.1- 17.0	9	2	0	0	0	0	0	0	0	0	0	2
17.1- 18.0	8	0	0	0	0	0	0	0	0	0	0	1
18.1- 19.0	2	0	0	0	0	0	0	0	0	0	0	0
19.1- 20.0	3	1	0	0	0	0	0	0	0	0	0	0
20.1- 21.0	6	0	0	0	0	0	0	0	0	0	0	0
21.1- 22.0	1	0	0	0	0	0	0	0	0	0	0	0
22.1- 23.0	0	0	0	0	0	0	0	0	0	0	0	0
23.1- 24.0	1	0	0	0	0	0	0	0	0	0	0	0
24.1- 25.0	0	0	0	0	0	0	0	0	0	0	0	0
25.1- 26.0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL ANALYZED	120	5	1	1	45	140	25	26	155	7	2	45
MEAN LENGTH	15.2	16.3	16.0	14.7	5.3	6.7	7.5	8.6	9.1	11.6	13.7	14.5
LEN RANGE(MIN)	11.3	13.3	16.0	14.7	3.3	4.7	5.4	6.0	6.7	8.2	12.9	11.9
(MAX)	23.4	19.1	16.0	14.7	6.3	8.7	10.2	11.2	11.4	15.0	14.5	25.3

NOTE. NS - NO SAMPLE.

TABLE 5.0-27

LENGTH-FREQUENCY OF ATLANTIC TOMCOD

DANSKAMMER POINT GENERATING STATION - 1980

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3.1- 4.0	0	0	0	0	1	0	0	0	0	0	0	0
4.1- 5.0	0	0	0	0	7	3	0	0	0	0	0	0
5.1- 6.0	0	0	0	0	118	53	0	0	0	0	0	0
6.1- 7.0	0	0	0	0	135	236	0	0	1	0	0	0
7.1- 8.0	0	0	0	0	5	307	5	4	7	0	0	1
8.1- 9.0	0	0	0	0	0	39	0	0	22	0	0	0
9.1- 10.0	0	0	0	0	0	0	0	3	34	1	0	0
10.1- 11.0	0	0	0	0	0	0	0	1	23	2	0	1
11.1- 12.0	5	2	0	0	0	0	0	0	10	2	4	2
12.1- 13.0	11	14	0	0	0	0	0	0	0	1	8	13
13.1- 14.0	25	35	0	0	0	0	0	0	0	1	12	50
14.1- 15.0	25	27	0	0	0	0	0	0	0	0	19	78
15.1- 16.0	18	27	0	1	0	0	0	0	0	0	7	74
16.1- 17.0	15	13	0	0	0	1	0	0	0	0	1	47
17.1- 18.0	5	11	0	0	0	0	0	0	0	0	1	16
18.1- 19.0	5	4	0	0	0	0	0	0	0	0	0	6
19.1- 20.0	3	1	0	0	0	0	0	0	0	0	0	2
20.1- 21.0	1	3	0	0	0	0	0	0	0	0	0	3
21.1- 22.0	3	1	0	0	0	0	0	0	0	0	0	3
22.1- 23.0	1	0	0	0	0	0	0	0	0	0	0	5
23.1- 24.0	0	0	0	0	0	0	0	0	0	0	0	1
24.1- 25.0	2	1	0	0	0	0	0	0	0	0	0	3
25.1- 26.0	0	0	0	0	0	0	0	0	0	0	0	0
26.1- 27.0	0	0	0	0	0	0	0	0	0	0	0	2
TOTAL ANALYZED	119	139	0	1	266	639	5	8	97	7	52	307
MEAN LENGTH	15.3	15.1		15.1	6.1	7.1	7.9	8.6	9.5	11.3	14.0	15.5
LEN RANGE(MIN)	11.2	11.8	.0	15.1	4.0	4.6	7.6	7.1	6.6	9.6	11.2	7.6
(MAX)	24.7	24.3	.0	15.1	7.3	16.4	8.0	10.1	11.8	13.2	17.2	26.7

NOTE. NS - NO SAMPLE.

5.2.6.4 Bay Anchovy. Bay anchovy were present in the plant vicinity only during the summer to early fall, corresponding to their spawning season and the increased river conductivity. Length-frequency data show a fairly normal or "bell-shaped" distribution throughout the July to October period (Tables 5.0-28 to 5.0-29). Bay anchovy length ranged from 3.1 to 10.3 cm at Roseton and 3.2 to 10.1 cm at Danskammer Point. In July, only yearling bay anchovy were collected, whereas in August, September, and October both young-of-the-year and older fish were present.

5.2.6.5 Blueback Herring. Blueback herring were collected at both plants from April to December. The highest mean monthly impingement rate occurred in October during the migration of young-of-the-year bluebacks out of the estuary. As evidenced for alewives, three age classes of blueback herring were collected (Tables 5.0-30 and 5.0-31).

In the spring (April-June), especially at Danskammer Point, adult blueback herring were the primary age group impinged. Yearlings were collected from April through November at Roseton and from May through November at Danskammer Point and ranged from 6.8 to 19.5 cm. Young-of-the-year were recruited in July and were collected through December at Roseton and through November at Danskammer. They comprised the major portion of the blueback herring population during the fall.

5.2.6.6 Spottail Shiner. Spottail shiner were present in Roseton and Danskammer Point impingement samples throughout the year. The highest impingement was in April (both plants) and consisted of yearling and older fish (Tables 5.0-32 and 5.0-33). There was a decline in spottail shiner impingement during June and July at Roseton and July and August at Danskammer followed by a late summer to early fall increase. Impingement from August to September

TABLE 5.0-28

LENGTH-FREQUENCY OF BAY ANCHOVY

ROSETON GENERATING STATION - 1980

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3.1- 4.0	0	0	0	0	0	0	0	1	18	3	0	0
4.1- 5.0	0	0	0	0	0	0	0	82	187	81	0	0
5.1- 6.0	0	0	0	0	0	0	0	87	237	197	0	0
6.1- 7.0	0	0	0	0	0	0	3	105	112	182	0	0
7.1- 8.0	0	0	0	0	0	0	43	531	226	80	0	0
8.1- 9.0	0	0	0	0	0	0	35	351	141	50	0	0
9.1- 10.0	0	0	0	0	0	0	1	44	10	1	0	0
10.1- 11.0	0	0	0	0	0	0	0	1	0	0	0	0
TOTAL ANALYZED	0	0	0	0	0	0	82	1202	931	594	0	0
MEAN LENGTH							8.0	7.5	6.4	6.2		
LEN RANGE(MIN)	.0	.0	.0	.0	.0	.0	7.0	3.9	3.1	3.5	.0	.0
(MAX)	.0	.0	.0	.0	.0	.0	9.3	10.3	9.5	9.1	.0	.0

NOTE. NS - NO SAMPLE.

TABLE 5.0-29

LENGTH-FREQUENCY OF BAY ANCHOVY

DANSKAMMER POINT GENERATING STATION - 1980

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3.1- 4.0	0	0	0	0	0	0	0	0	8	0	0	0
4.1- 5.0	0	0	0	0	0	0	0	5	30	14	0	0
5.1- 6.0	0	0	0	0	0	0	0	6	107	42	1	0
6.1- 7.0	0	0	0	0	0	0	1	14	133	64	1	0
7.1- 8.0	0	0	0	0	0	1	15	91	295	30	1	0
8.1- 9.0	0	0	0	0	2	0	16	75	257	14	0	0
9.1- 10.0	0	0	0	0	1	0	3	8	16	1	0	0
10.1- 11.0	0	0	0	0	0	0	0	1	0	0	0	0
TOTAL ANALYZED	0	0	0	0	3	1	35	200	846	165	3	0
MEAN LENGTH					8.5	7.4	8.2	7.8	7.3	6.5	6.5	
LEN RANGE(MIN)	.0	.0	.0	.0	8.1	7.4	7.0	4.2	3.2	4.2	5.6	.0
(MAX)	.0	.0	.0	.0	9.2	7.4	9.5	10.1	9.9	9.2	7.8	.0

NOTE. NS - NO SAMPLE.

TABLE 5.0-30

LENGTH-FREQUENCY OF BLUEBACK HERRING

ROSETON GENERATING STATION -1980

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2.1- 3.0	0	0	0	0	0	0	0	0	0	1	0	0
3.1- 4.0	0	0	0	0	0	0	20	0	0	0	0	0
4.1- 5.0	0	0	0	0	0	0	80	1	0	0	2	0
5.1- 6.0	0	0	0	0	0	0	120	183	88	22	146	2
6.1- 7.0	0	0	0	1	3	0	89	435	286	839	313	3
7.1- 8.0	0	0	0	5	25	0	11	88	30	939	103	0
8.1- 9.0	0	0	0	4	48	0	0	3	2	116	14	0
9.1- 10.0	0	0	0	0	16	2	0	0	0	12	3	0
10.1- 11.0	0	0	0	0	3	2	0	0	1	1	0	0
11.1- 12.0	0	0	0	0	0	1	0	0	3	0	0	0
12.1- 13.0	0	0	0	0	0	2	1	0	2	0	0	0
13.1- 14.0	0	0	0	0	0	1	2	1	6	4	0	0
14.1- 15.0	0	0	0	0	0	1	0	3	6	4	0	0
15.1- 16.0	0	0	0	0	0	0	0	0	2	3	0	0
16.1- 17.0	0	0	0	0	0	0	0	0	0	0	0	0
17.1- 18.0	0	0	0	0	0	0	0	0	0	0	0	0
18.1- 19.0	0	0	0	0	0	0	0	0	0	0	0	0
19.1- 20.0	0	0	0	0	0	0	0	0	0	1	0	0
20.1- 21.0	0	0	0	0	0	0	0	0	0	1	0	0
21.1- 22.0	0	0	0	0	0	0	0	0	0	0	0	0
22.1- 23.0	0	0	0	0	0	0	0	0	0	0	0	0
23.1- 24.0	0	0	0	0	0	0	0	0	0	0	0	0
24.1- 25.0	0	0	0	0	0	0	0	0	0	2	0	0
25.1- 26.0	0	0	0	0	1	0	0	0	1	2	0	0
26.1- 27.0	0	0	0	0	1	3	0	1	0	1	1	0
27.1- 28.0	0	0	0	0	2	8	0	1	0	1	0	0
28.1- 29.0	0	0	0	0	1	5	0	1	0	1	0	0
29.1- 30.0	0	0	0	0	5	3	0	1	1	0	0	0
30.1- 31.0	0	0	0	0	0	1	0	0	0	0	0	0
31.1- 32.0	0	0	0	1	0	0	0	0	0	0	0	0
TOTAL ANALYZED	0	0	0	11	105	29	323	718	428	1950	582	5
MEAN LENGTH				10.0	10.3	22.9	5.6	6.6	6.8	7.3	6.6	6.1
LEN RANGE(MIN)	.0	.0	.0	6.8	6.4	9.1	3.1	4.6	5.2	2.4	4.8	5.4
(MAX)	.0	.0	.0	31.1	29.7	30.3	13.4	29.1	29.9	28.3	26.5	7.0

NOTE. NS - NO SAMPLE.

TABLE 5.0-31

LENGTH-FREQUENCY OF BLUEBACK HERRING

DANSKAMMER POINT GENERATING STATION - 1980

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3.1- 4.0	0	0	0	0	0	0	3	0	0	0	0	0
4.1- 5.0	0	0	0	0	0	0	9	0	0	0	5	0
5.1- 6.0	0	0	0	0	0	0	10	23	16	25	94	0
6.1- 7.0	0	0	0	0	0	0	25	50	104	344	210	0
7.1- 8.0	0	0	0	0	1	0	3	17	12	602	128	0
8.1- 9.0	0	0	0	0	5	0	0	0	1	131	45	0
9.1- 10.0	0	0	0	0	12	5	0	0	0	20	14	0
10.1- 11.0	0	0	0	0	8	12	0	0	0	3	1	0
11.1- 12.0	0	0	0	0	2	31	1	0	3	2	0	0
12.1- 13.0	0	0	0	0	0	20	8	0	6	1	0	0
13.1- 14.0	0	0	0	0	0	8	18	1	27	4	0	0
14.1- 15.0	0	0	0	0	0	0	21	0	16	4	1	0
15.1- 16.0	0	0	0	0	0	0	7	0	13	3	1	0
16.1- 17.0	0	0	0	0	0	0	0	0	3	1	0	0
17.1- 18.0	0	0	0	0	0	1	0	0	1	1	0	0
18.1- 19.0	0	0	0	0	0	1	0	0	0	0	1	0
19.1- 20.0	0	0	0	0	0	1	0	0	0	0	1	0
20.1- 21.0	0	0	0	0	1	0	0	0	0	0	0	0
21.1- 22.0	0	0	0	0	0	0	0	0	0	0	0	0
22.1- 23.0	0	0	0	0	0	1	0	0	0	0	0	0
23.1- 24.0	0	0	0	0	0	3	0	0	0	0	0	0
24.1- 25.0	0	0	0	0	3	12	0	0	0	0	0	0
25.1- 26.0	0	0	0	0	5	20	3	1	0	4	0	0
26.1- 27.0	0	0	0	1	16	54	1	0	0	2	0	1
27.1- 28.0	0	0	0	8	36	101	2	0	3	1	0	0
28.1- 29.0	0	0	0	18	51	83	0	0	1	1	0	0
29.1- 30.0	0	0	0	16	36	56	2	0	0	0	0	0
30.1- 31.0	0	0	0	4	17	11	0	0	0	0	0	0
31.1- 32.0	0	0	0	2	4	1	0	0	0	0	0	0
32.1- 33.0	0	0	0	1	1	0	0	0	0	0	0	0
TOTAL ANALYZED	0	0	0	50	198	421	113	92	206	1149	501	1
MEAN LENGTH				29.0	25.8	24.8	11.4	6.8	9.5	7.6	7.0	26.8
LEN RANGE(MIN)	.0	.0	.0	26.6	7.3	9.5	3.4	5.5	5.3	5.3	4.7	26.8
(MAX)	.0	.0	.0	32.3	32.2	31.7	29.5	25.7	28.6	28.7	19.5	26.8

NOTE. NS - NO SAMPLE.

TABLE 5.0-32

LENGTH-FREQUENCY OF SPOTTAIL SHINER

ROSETON GENERATING STATION - 1980

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
4.1- 5.0	0	0	0	3	0	0	3	7	4	0	0	0
5.1- 6.0	1	4	6	37	5	0	0	15	27	12	2	0
6.1- 7.0	9	16	38	161	23	1	0	0	28	47	34	12
7.1- 8.0	11	25	55	131	21	7	0	0	1	33	22	30
8.1- 9.0	4	8	15	30	4	7	1	8	8	4	9	6
9.1- 10.0	4	6	7	9	1	2	5	15	49	4	6	13
10.1- 11.0	19	52	65	44	7	9	0	9	29	15	9	25
11.1- 12.0	8	32	34	16	8	4	1	7	9	3	2	14
12.1- 13.0	0	2	1	5	1	0	1	0	2	0	1	2
13.1- 14.0	1	0	0	0	0	0	0	0	0	0	0	0
14.1- 15.0	0	0	0	0	0	0	0	0	0	0	0	0
15.1- 16.0	0	0	0	0	0	0	0	0	0	0	0	0
16.1- 17.0	0	0	0	0	0	0	0	0	0	0	0	0
17.1- 18.0	0	0	1	0	0	0	0	0	0	0	0	0
TOTAL ANALYZED	57	145	222	436	70	30	11	61	157	118	85	102
MEAN LENGTH	9.3	9.6	9.0	7.6	8.0	9.3	8.5	8.2	8.5	7.5	7.8	9.1
LEN RANGE(MIN)	5.9	5.7	5.7	4.8	5.6	7.0	4.4	4.2	4.2	5.2	5.5	6.2
(MAX)	13.2	12.9	17.7	12.1	12.3	11.6	12.1	11.7	12.4	11.7	12.2	12.7

NOTE. NS - NO SAMPLE.

TABLE 5.0- 33

LENGTH-FREQUENCY OF SPOTTAIL SHINER

DANSKAMMER POINT GENERATING STATION - 1980

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3.1- 4.0	0	0	0	0	0	0	1	0	0	0	0	0
4.1- 5.0	0	0	0	0	0	0	0	0	0	0	0	0
5.1- 6.0	0	0	1	4	2	1	0	0	0	0	3	1
6.1- 7.0	4	5	1	33	11	5	0	0	2	6	9	16
7.1- 8.0	4	16	7	108	89	43	4	1	3	11	32	27
8.1- 9.0	2	12	2	96	94	63	9	3	7	4	9	9
9.1- 10.0	0	11	3	42	37	35	6	9	72	14	15	15
10.1- 11.0	12	85	9	337	294	198	9	6	57	39	88	84
11.1- 12.0	9	40	3	220	249	124	4	2	30	5	31	33
12.1- 13.0	0	8	1	22	21	15	1	0	2	1	6	11
13.1- 14.0	0	0	0	0	2	1	0	0	0	0	0	0
TOTAL ANALYZED	31	177	27	862	799	485	34	21	173	80	193	196
MEAN LENGTH	9.8	10.3	9.4	10.0	10.2	10.3	9.5	9.9	10.2	9.7	9.8	9.9
LEN RANGE(MIN)	6.5	6.2	6.0	5.2	5.7	5.2	3.2	7.8	6.3	6.3	5.7	6.0
(MAX)	11.6	13.0	12.5	13.0	13.1	13.4	12.3	11.6	12.9	13.0	12.5	12.7

NOTE. NS - NO SAMPLE.

consisted of young-of-the-year (3.2- to 9.5-cm) and yearling (9.5- to 13.0-cm) fish.

5.2.6.7 Striped Bass. The peak striped bass impingement rate occurred during December at both locations. The mean monthly rate was generally low, never exceeding 0.0690 and 0.1357 fish/million gal at Roseton and Danskammer Point, respectively. The length-frequency data indicate a wide size range for striped bass impinged at the two plants (Tables 5.0-34 to 5.0-35). At Roseton, striped bass from 2.7 to 38.3 cm were collected; at Danskammer Point this species ranged from 3.5 to 49.8 cm in length. Yearlings comprised the bulk of the January-March fish at Roseton. Recruitment of young-of-the-year occurred in July at both plants, and it was these young fish that made up the majority of the population through December. Yearling striped bass, which were present throughout the year at Danskammer Point, were most abundant from August to November.

5.2.6.8 White Perch. The white perch monthly mean impingement rate at Roseton varied from a low of 0.0757 fish/million gal in July to a high of 1.2593 fish/million gal in August. White perch length-frequency data from Roseton show that the January to June samples were composed primarily of yearlings, while the July to December samples had young-of-the-year as the dominant age group (Table 5.0-36). Throughout the year, larger fish were collected (up to 26.3 cm) but made up only a fraction of the overall abundance.

The white perch mean monthly impingement rate at Danskammer Point was higher than that of any other species during 9 of the 12 months. Peak concentrations occurred in April (8.0877 fish/million gal) and November (2.5830 fish/million gal). White perch collected from January through June consisted of adults as well as yearlings (Table 5.0-37). During the first half of the year, white perch less

TABLE 5.0-34 (Page 1 of 2)

LENGTH-FREQUENCY OF STRIPED BASS

ROSETON GENERATING STATION - 1980

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2.1- 3.0	0	0	0	0	0	0	3	0	0	0	0	0
3.1- 4.0	0	0	0	0	0	0	10	4	0	0	0	0
4.1- 5.0	0	0	0	0	0	0	34	22	5	0	0	0
5.1- 6.0	0	0	0	0	0	0	16	58	36	5	0	0
6.1- 7.0	0	0	3	0	0	0	3	54	53	66	3	2
7.1- 8.0	3	20	8	0	1	1	1	31	45	99	18	42
8.1- 9.0	2	12	13	0	3	0	0	5	12	80	24	70
9.1- 10.0	0	14	15	0	0	1	0	2	4	13	2	17
10.1- 11.0	1	6	3	2	0	0	0	0	1	2	1	0
11.1- 12.0	0	3	5	0	0	0	0	0	0	0	1	2
12.1- 13.0	0	0	1	0	0	0	0	0	1	2	0	1
13.1- 14.0	0	0	1	0	0	0	2	1	0	1	0	2
14.1- 15.0	0	0	0	0	0	0	0	0	1	1	0	0
15.1- 16.0	0	0	0	0	0	0	0	0	0	0	0	0
16.1- 17.0	0	0	0	0	0	0	0	0	0	0	0	0
17.1- 18.0	0	0	0	0	0	0	0	0	0	0	0	0
18.1- 19.0	0	0	0	0	0	0	1	0	0	0	0	0
19.1- 20.0	0	1	0	0	0	0	0	0	0	0	0	0
20.1- 21.0	0	0	0	0	0	0	0	0	0	0	0	0
21.1- 22.0	0	0	0	0	0	0	0	0	0	0	0	0
22.1- 23.0	0	0	0	0	0	0	0	0	0	1	0	0
23.1- 24.0	0	0	0	0	0	0	0	0	0	0	0	0
24.1- 25.0	0	0	0	0	0	0	0	0	0	0	0	0
25.1- 26.0	0	0	0	0	0	0	0	0	0	0	0	0
26.1- 27.0	0	0	0	0	0	0	0	0	0	0	0	0
27.1- 28.0	0	0	0	0	0	0	0	0	0	0	0	0
28.1- 29.0	0	0	0	0	0	0	0	0	0	0	0	0
29.1- 30.0	0	0	0	0	0	1	0	0	0	0	0	0
30.1- 31.0	0	0	0	0	0	0	0	0	0	0	0	0
31.1- 32.0	0	0	0	0	0	0	0	0	0	0	0	0
32.1- 33.0	0	0	0	0	0	0	0	0	0	0	0	0
33.1- 34.0	0	0	0	0	0	0	0	0	0	0	0	0
34.1- 35.0	0	0	0	0	0	0	0	0	0	0	0	0
35.1- 36.0	0	0	0	0	0	0	0	0	0	0	0	0
36.1- 37.0	0	0	0	0	0	0	0	0	0	0	0	0
37.1- 38.0	0	0	0	0	0	0	0	0	0	0	0	0
38.1- 39.0	0	0	0	0	0	0	1	0	0	0	0	0
39.1- 40.0	0	0	0	0	0	0	0	0	0	0	0	0
40.1- 41.0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 5.0-34 (Page 2 of 2)

LENGTH-FREQUENCY OF STRIPED BASS

ROSETON GENERATING STATION - 1980

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
(CONT'D)												
41.1- 42.0	0	0	0	0	0	0	0	0	0	0	0	0
42.1- 43.0	0	0	1	0	0	0	0	0	0	0	0	0
TOTAL ANALYZED	6	56	50	2	4	3	71	177	158	270	49	136
MEAN LENGTH	8.4	9.0	9.8	10.9	8.2	15.7	5.7	6.2	6.9	7.8	8.2	8.5
LEN RANGE(MIN)	7.7	7.1	6.2	10.8	7.9	7.6	2.7	3.7	4.3	5.6	6.3	6.7
(MAX)	10.2	19.7	43.0	11.0	8.4	29.9	38.3	13.7	14.1	22.6	11.3	14.0

NOTE. NS - NO SAMPLE.

TABLE 5.0-35 (Page 1 of 2)

LENGTH-FREQUENCY OF STRIPED BASS

DANSKAMMER POINT GENERATING STATION - 1980

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3.1- 4.0	0	0	0	0	0	0	2	1	0	0	0	0
4.1- 5.0	0	0	0	0	0	0	0	0	0	0	0	0
5.1- 6.0	0	0	0	0	0	0	1	4	4	0	0	0
6.1- 7.0	1	0	1	1	0	0	3	6	28	8	5	1
7.1- 8.0	0	0	1	0	0	0	1	24	85	46	54	32
8.1- 9.0	3	6	2	0	3	3	2	3	70	58	115	76
9.1- 10.0	0	5	4	1	6	7	0	0	34	36	29	24
10.1- 11.0	2	2	1	1	2	19	0	1	16	27	6	3
11.1- 12.0	0	0	1	3	5	10	2	4	5	8	9	2
12.1- 13.0	0	1	0	3	6	7	3	0	4	5	8	2
13.1- 14.0	0	0	0	1	1	7	1	6	7	4	9	0
14.1- 15.0	0	0	0	0	1	4	3	6	12	4	10	3
15.1- 16.0	0	0	0	0	0	2	3	3	12	6	11	1
16.1- 17.0	0	0	0	1	0	2	1	4	2	13	10	1
17.1- 18.0	0	0	0	0	0	0	4	3	2	6	9	2
18.1- 19.0	1	0	1	3	1	0	1	3	2	1	14	1
19.1- 20.0	1	1	0	0	1	0	1	2	3	10	8	0
20.1- 21.0	0	0	0	1	2	2	0	5	1	3	8	5
21.1- 22.0	0	0	0	0	0	4	0	1	1	1	6	1
22.1- 23.0	1	1	0	1	1	0	0	0	3	0	5	1
23.1- 24.0	2	0	0	0	0	0	1	2	2	0	9	1
24.1- 25.0	0	0	0	0	0	1	0	0	2	1	4	3
25.1- 26.0	1	0	0	1	1	0	0	0	1	0	1	2
26.1- 27.0	0	0	0	0	0	1	2	1	0	1	2	3
27.1- 28.0	0	0	0	0	0	1	0	0	1	0	1	1
28.1- 29.0	0	0	0	1	0	0	0	0	0	0	2	1
29.1- 30.0	0	0	0	0	0	0	1	1	2	0	1	4
30.1- 31.0	0	0	0	2	0	0	0	0	1	1	1	0
31.1- 32.0	0	0	0	1	0	0	0	0	0	0	1	1
32.1- 33.0	0	0	0	1	0	0	0	0	0	2	0	0
33.1- 34.0	0	0	0	0	0	0	0	1	2	0	0	1
34.1- 35.0	0	0	0	0	0	0	0	1	0	0	0	0
35.1- 36.0	0	0	0	0	0	0	1	1	1	0	0	0
36.1- 37.0	0	0	0	0	0	0	0	0	0	0	0	0
37.1- 38.0	0	0	0	0	0	0	0	0	0	0	0	0
38.1- 39.0	0	0	0	0	0	1	0	0	0	1	1	0
39.1- 40.0	0	0	0	0	0	0	0	0	0	0	0	1
40.1- 41.0	0	0	0	0	0	0	0	0	3	0	0	0
41.1- 42.0	0	0	0	0	1	0	0	0	0	0	0	0

TABLE 5.0-35 (Page 2 of 2)

LENGTH-FREQUENCY OF STRIPED BASS

DANSKAMMER POINT GENERATING STATION - 1980

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
(CONT'D)												
42.1- 43.0	0	0	0	0	0	0	0	0	0	0	1	0
43.1- 44.0	0	0	0	0	0	0	0	0	0	0	0	0
44.1- 45.0	0	0	0	0	0	0	0	0	0	0	0	0
45.1- 46.0	0	0	0	0	0	0	0	0	0	0	0	0
46.1- 47.0	0	0	0	0	0	0	0	0	0	0	0	0
47.1- 48.0	0	0	0	0	0	0	0	0	0	0	0	0
48.1- 49.0	0	0	0	0	0	0	0	0	0	0	0	0
49.1- 50.0	0	0	0	0	0	0	0	0	1	0	0	0
TOTAL ANALYZED	12	16	11	22	30	71	33	83	307	242	340	173
MEAN LENGTH	15.7	11.0	9.9	18.5	13.1	13.6	14.9	13.2	10.7	11.1	12.4	11.5
LEN RANGE(MIN)	6.7	8.2	7.0	6.9	8.6	8.2	3.5	3.8	6.0	6.2	6.6	7.0
(MAX)	25.7	22.4	18.8	32.5	25.9	38.8	35.9	35.3	49.8	38.2	42.8	39.8

NOTE. NS - NO SAMPLE.

TABLE 5.0-36

LENGTH-FREQUENCY OF WHITE PERCH

ROSETON GENERATING STATION - 1980

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1.1- 2.0	0	0	0	0	0	0	1	0	0	0	0	0
2.1- 3.0	0	0	0	0	0	0	3	0	1	3	0	0
3.1- 4.0	0	0	0	0	0	0	22	13	3	0	0	0
4.1- 5.0	32	11	6	0	1	0	101	226	97	10	4	1
5.1- 6.0	286	277	143	43	105	15	133	933	440	218	73	71
6.1- 7.0	204	344	263	258	422	70	7	523	313	752	303	90
7.1- 8.0	59	169	203	441	372	141	4	67	73	676	430	91
8.1- 9.0	16	30	69	205	83	74	13	4	8	220	198	38
9.1- 10.0	2	5	30	38	16	18	19	35	11	29	25	16
10.1- 11.0	1	3	1	9	3	0	11	25	10	21	14	12
11.1- 12.0	3	6	5	31	10	1	1	16	12	41	37	16
12.1- 13.0	6	5	18	47	8	16	3	6	5	21	20	16
13.1- 14.0	8	11	12	30	10	17	4	10	3	5	5	6
14.1- 15.0	22	12	16	16	8	13	2	12	6	8	3	4
15.1- 16.0	13	15	17	13	4	25	3	15	6	4	4	6
16.1- 17.0	8	5	16	6	2	27	4	26	13	6	6	2
17.1- 18.0	3	3	9	9	11	8	4	28	16	10	2	2
18.1- 19.0	1	7	4	2	1	4	5	18	9	3	2	1
19.1- 20.0	0	5	5	2	0	2	1	9	8	2	1	3
20.1- 21.0	1	1	1	1	0	2	0	8	7	0	0	1
21.1- 22.0	0	0	0	0	0	1	2	2	2	0	0	0
22.1- 23.0	0	0	0	0	0	0	0	0	3	0	0	0
23.1- 24.0	0	0	0	0	0	0	1	2	0	0	0	0
24.1- 25.0	0	0	0	0	0	0	0	0	0	0	0	0
25.1- 26.0	0	0	0	0	0	0	0	0	1	0	0	0
26.1- 27.0	0	0	0	0	0	0	0	1	0	0	0	0
TOTAL ANALYZED	665	939	818	1151	1056	434	344	1979	1047	2029	1127	376
MEAN LENGTH	7.0	7.2	7.9	8.4	7.4	9.7	6.6	6.7	7.0	7.4	7.8	8.2
LEN RANGE(MIN)	4.2	4.1	4.6	5.1	4.7	5.3	1.9	3.2	3.0	2.5	4.3	4.2
(MAX)	20.2	20.1	20.5	20.9	18.3	21.1	23.5	26.3	25.2	19.7	19.3	20.1

NOTE. NS - NO SAMPLE.

TABLE 5.0-37

LENGTH-FREQUENCY OF WHITE PERCH

DANSKAMMER POINT GENERATING STATION - 1980

INTERVAL (CM)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2.1- 3.0	0	0	0	0	0	0	2	1	0	0	1	0
3.1- 4.0	0	0	0	0	0	0	7	0	2	0	0	0
4.1- 5.0	1	1	0	0	0	1	22	41	20	2	1	6
5.1- 6.0	30	18	11	10	55	23	35	250	295	62	53	59
6.1- 7.0	32	49	29	198	330	288	3	155	484	441	476	126
7.1- 8.0	10	34	47	535	487	558	23	16	300	724	1078	91
8.1- 9.0	1	12	33	355	213	325	84	4	42	327	859	45
9.1- 10.0	0	1	7	59	37	55	112	54	24	32	160	15
10.1- 11.0	0	0	7	26	13	22	75	80	55	47	108	10
11.1- 12.0	2	2	6	160	76	72	34	57	100	156	421	18
12.1- 13.0	4	9	21	381	203	204	41	26	82	145	444	19
13.1- 14.0	2	8	12	234	183	228	55	48	76	95	177	15
14.1- 15.0	14	6	10	157	172	242	45	57	112	109	141	14
15.1- 16.0	8	8	10	219	208	243	53	59	138	134	120	10
16.1- 17.0	3	2	5	231	225	238	58	66	143	132	83	12
17.1- 18.0	0	3	4	202	221	203	54	61	100	110	56	8
18.1- 19.0	1	5	1	133	192	117	35	42	72	50	35	8
19.1- 20.0	0	1	0	54	110	66	15	35	41	35	25	3
20.1- 21.0	0	0	1	33	40	19	6	6	24	6	11	2
21.1- 22.0	0	1	1	5	12	5	2	7	6	4	4	1
22.1- 23.0	0	0	0	6	5	1	2	4	3	4	1	1
23.1- 24.0	0	0	0	3	4	0	1	1	0	3	1	1
24.1- 25.0	0	1	0	2	0	0	0	0	2	0	1	1
25.1- 26.0	0	0	0	1	0	1	0	1	2	1	0	0
26.1- 27.0	0	0	0	0	0	0	0	1	0	0	1	0
27.1- 28.0	0	0	0	1	0	0	0	0	1	1	0	0
28.1- 29.0	0	0	0	1	0	0	0	0	0	0	0	0
29.1- 30.0	0	0	0	0	0	0	0	0	0	0	0	0
30.1- 31.0	0	0	0	0	0	0	0	0	0	0	0	0
31.1- 32.0	0	0	1	0	0	0	0	0	0	0	0	0
TOTAL ANALYZED	108	161	206	3006	2786	2911	764	1072	2124	2620	4257	465
MEAN LENGTH	8.9	9.3	10.1	12.2	12.4	12.1	12.2	10.8	10.6	10.3	9.9	9.0
LEN RANGE(MIN)	4.8	4.6	5.2	5.7	5.5	4.8	2.8	2.4	4.0	4.3	2.7	4.6
(MAX)	18.2	25.0	32.0	29.0	23.9	25.8	23.5	26.2	27.6	27.3	26.7	24.1

NOTE. NS - NO SAMPLE.

than 110 cm were yearlings, whereas those greater than 10 cm were categorized as adults (based on Con Ed length-age data). Young-of-the-year were recruited to the impingement population in July and were collected through December. It was these young white perch that caused the peak white perch impingement rate during the fall. Yearlings and adults were also collected throughout the second half of the year.

5.2.7 Comparison With Previous Years

Impingement sampling has been conducted at Danskammer Point since 1972 and at Roseton since July of 1973. The annual mean impingement rate, estimated total number impinged, and the percentage of the total number impinged for selected and total species since 1973 are presented in Tables 5.0-38 and 5.0-39.

5.2.7.1 Roseton. The 1980 estimated annual number impinged for total species was 318,528, the highest number since 1973 (Table 5.0-39). This estimate is based on two components: the annual plant flow and the mean rate of impingement. The mean rate in 1980 was 1.2690, second only to 1973. The annual mean rate provides a better means of comparing concentrations of fish in the plant intake cooling water. Both the rate and estimated total number impinged were relatively high in 1980.

White perch has consistently been the dominant species in impingement. Only in 1978 was it not the numerically dominant species, when white perch comprised 28.2% of the total impingement and bay anchovy made up 28.9%.

The estimated annual impingement of striped bass and American shad was higher in 1980 than in any other year. The 1980 annual mean rate for striped bass was second only to 1973 and for American shad

TABLE 5.0-38

ANNUAL MEAN IMPINGEMENT RATE, ESTIMATED TOTAL NUMBER, AND PERCENTAGE OF THE TOTAL ESTIMATED NUMBER IMPINGED FOR SELECTED SPECIES

Danskammer Point Generating Station - 1973-1980

	WHITE PERCH			STRIPED BASS			ATLANTIC TOMCOD			ALEWIFE		
YEAR	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED
1973	0.8015	110,545	10.8	0.1451	18,992	1.8	6.9843	647,076	63.0	1.0048	148,912	14.5
1974	0.7105	84,253	25.5	0.0464	6,293	1.9	1.5781	155,908	47.1	0.2190	31,379	9.5
1975	0.8054	98,230	30.3	0.0214	2,588	0.8	0.6212	46,926	14.5	0.2338	29,755	9.2
1976	1.2230	117,738	47.8	0.0142	1,421	0.6	0.5373	54,637	22.2	0.0921	9,920	4.0
1977	1.3002	140,835	47.4	0.0175	1,859	0.6	0.3041	26,879	9.1	0.2076	24,633	8.3
1978	0.5456	52,240	29.3	0.0141	1,495	0.8	0.1976	18,395	10.3	0.2298	24,343	13.7
1979	0.8349	79,089	40.6	0.0257	2,087	1.1	0.3874	32,174	16.5	0.1112	10,841	5.6
1980	1.8991	175,055	51.1	0.0575	6,401	1.9	0.1125	8,498	2.5	0.2845	33,740	9.9

	AMERICAN SHAD			BAY ANCHOVY			BLUEBACK HERRING			SPOTTAIL SHINER			TOTAL SPECIES	
YEAR	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER
1973	0.0089	1,266	0.1	0.1540	1,852	0.2	0.2230	29,234	2.8	0.1499	16,137	1.6	9.7541	1,027,304
1974	0.0164	2,444	0.7	0.0148	2,252	0.7	0.0959	13,339	4.0	0.0886	9,672	2.9	3.0032	330,788
1975	0.0186	2,456	0.8	0.0138	2,047	0.6	0.7473	100,111	30.9	0.0967	9,855	3.0	2.8647	323,874
1976	0.0180	2,011	0.8	0.0005	69	<0.1	0.1224	14,176	5.8	0.1584	14,279	5.8	2.4985	246,258
1977	0.0209	2,600	0.9	0.0102	1,253	0.4	0.2546	30,096	10.1	0.2127	21,547	7.3	2.8116	296,947
1978	0.0325	3,624	2.0	0.0292	2,829	1.6	0.3826	40,526	22.7	0.0743	6,856	3.8	1.7946	178,155
1979	0.0409	4,201	2.2	0.0174	1,962	1.0	0.2662	26,397	13.6	0.1814	15,170	7.8	2.1290	194,879
1980	0.0857	11,502	3.4	0.0730	9,833	2.9	0.1648	19,615	5.7	0.2080	15,756	4.6	3.4804	342,353

[a]Number of fish collected per million gallons of flow sampled.

TABLE 5.0-39

ANNUAL MEAN IMPINGEMENT RATE, ESTIMATED TOTAL NUMBER, AND PERCENTAGE OF THE TOTAL ESTIMATED NUMBER IMPINGED FOR SELECTED SPECIES

Roseton Generating Station - 1973-1980

	WHITE PERCH			STRIPED BASS			ATLANTIC TOMCOD			ALEWIFE		
YEAR	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED
1973[b]	0.898	9,157	41.4	0.039	490	2.2	0.014	259	1.2	0.187	1,873	8.5
1974	0.3733	37,330	64.6	0.0051	642	1.1	0.0445	4,296	7.4	0.0125	1,464	2.5
1975	0.6123	139,400	48.4	0.0058	1,338	0.5	0.0203	4,755	1.7	0.0484	12,214	4.2
1976	0.5290	104,183	69.4	0.0030	607	0.4	0.0388	7,208	4.8	0.0093	2,424	1.6
1977	0.5988	131,747	43.1	0.0098	2,730	0.9	0.0775	19,424	6.3	0.1248	37,251	12.2
1978	0.2135	57,980	28.2	0.0045	1,220	0.6	0.0065	1,670	0.8	0.0896	25,971	12.6
1979	0.3443	93,391	45.5	0.0044	1,187	0.6	0.0163	3,770	1.8	0.0314	9,578	4.7
1980	0.5259	131,259	41.2	0.0230	5,657	1.8	0.0151	3,637	1.1	0.0335	9,300	2.9

	AMERICAN SHAD			BAY ANCHOVY			BLUEBACK HERRING			SPOTTAIL SHINER			TOTAL SPECIES	
YEAR	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER	PERCENT OF TOTAL IMPINGED	ANNUAL MEAN RATE[a]	ESTIMATED ANNUAL NUMBER
1973[b]	0.0016	21	0.1	0.176	1,107	5.0	0.599	6,377	28.8	0.064	1,515	6.9	2.062	22,105
1974	0.0025	337	0.6	0.0211	3,414	5.9	0.0257	2,746	4.8	0.0543	3,661	6.3	0.5944	57,775
1975	0.0094	2,348	0.8	0.0097	2,348	0.8	0.3338	78,854	27.4	0.0698	14,999	5.2	1.2518	288,149
1976	0.0015	367	0.2	0.0085	2,380	1.6	0.0444	10,447	7.0	0.0403	8,502	5.7	0.7449	150,069
1977	0.0082	2,426	0.8	0.0970	31,184	10.2	0.1777	46,066	15.1	0.0623	13,205	4.3	1.2578	305,956
1978	0.0137	4,138	2.0	0.1947	59,265	28.9	0.1081	28,984	14.1	0.0215	5,464	2.7	0.7297	205,341
1979	0.0177	5,397	2.6	0.0829	28,120	13.7	0.1629	40,936	19.9	0.0372	8,537	4.2	0.7541	205,320
1980	0.0226	6,435	2.0	0.1714	44,937	14.1	0.2461	62,909	19.8	0.0417	9,873	3.1	1.2690	318,528

[a]Number of fish collected per million gallons of flow sampled.
[b]Impingement samples began July 1973.

the rate was higher than in any other year. This indicates that these species were present in relatively high concentrations in the Roseton vicinity during 1980. Bay anchovy and blueback herring had the second highest estimated annual impingement in 1980. Atlantic tomcod, alewife, and spottail shiner were not impinged in unusually high or low numbers in comparison with other years.

5.2.7.2 Danskammer Point. An estimated 342,353 fish were impinged on the Danskammer Point cooling water intake traveling screens in 1980. This represents the second highest annual total since 1973 (Table 5.0-38). The annual mean rate (3.4804) was also the second highest during the period from 1973-1980. In 1973 and 1974, Atlantic tomcod was the most numerous of the species impinged. From 1975-1980, white perch was the numerically dominant species. The highest white perch annual estimated total and mean rate occurred in 1980. More American shad and bay anchovy were also impinged in 1980 than in any previous year examined. Striped bass and alewife had higher annual mean rates and estimated totals in 1980 than in any year except 1973. The number of Atlantic tomcod impinged at Danskammer Point has undergone a generally declining trend since 1973, reaching an annual low in 1980. Spottail shiner impingement was neither unusually high nor low.

Gizzard shad

CHAPTER 6.0

HUDSON RIVER WATER QUALITY

6.1 MATERIALS AND METHODS

6.1.1 Field Collection

Water quality samples were taken at Stations CH-1, CH-4, and CH-6. Their locations are described below and depicted in Figure 6.0-1.

- North Control Channel (CH-1) - Mile point 68.0, this station was approximately 1.5 miles north of the Danskammer Point plant in mid-channel at a depth of 50 ft (low water).
- Roseton/Danskammer Reference (CH-4) - Mile point 66.0, at a depth of 55 ft (at low water) in mid-channel aligned with the Roseton oil loading dock catwalk.
- South Control Channel (CH-6) - Mile point 62.5, at a point formed by the intersection of a line extending eastward from the brown ranch-style house (on the west shore) with a line connecting the two mid-channel lights on the Newburgh-Beacon Bridge. The depth was approximately 40 ft (at low water).

Sampling was conducted at low slack to maintain consistent tidal conditions throughout the monitoring program. Samples were collected weekly from each of the three stations as listed below:

Temperature	- every two meters starting at surface
pH	- surface, mid-depth, and bottom
Dissolved oxygen	- surface, mid-depth, and bottom
Conductivity	- every two meters starting at surface
Turbidity	- surface, mid-depth, and bottom

The 1980 sampling dates are presented in Table 6.0-1.

FIGURE 6.0-1

WATER QUALITY SAMPLING LOCATIONS

Roseton and Danskammer Point Vicinity - 1980

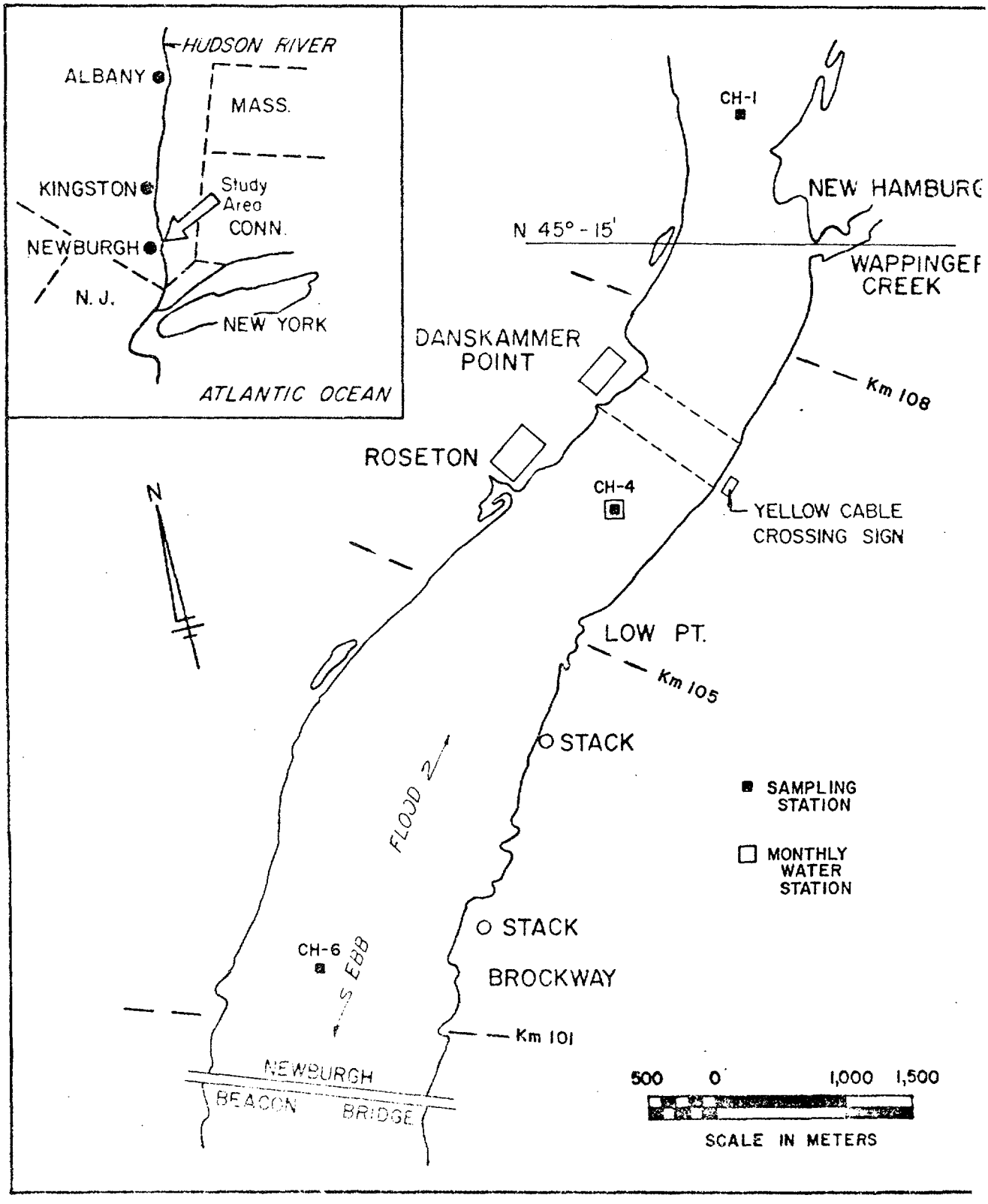


TABLE 6.0-1

WATER QUALITY SAMPLING DATES

Roseton and Danskammer Point Vicinity - 1980

26 Mar	6 Aug
2 Apr	13 Aug
10 Apr	20 Aug
16 Apr	27 Aug
23 Apr	4 Sep
1 May	10 Sep
7 May	17 Sep
14 May	24 Sep
21 May	1 Oct
28 May	8 Oct
4 Jun	15 Oct
11 Jun	23 Oct
18 Jun	29 Oct
25 Jun	5 Nov
2 Jul	12 Nov
9 Jul	19 Nov
16 Jul	3 Dec
23 Jul	11 Dec
31 Jul	17 Dec

6.1.2 Laboratory Analysis

6.1.2.1 Turbidity. This parameter was measured with nephelometric turbidimeter Model 104 manufactured by Ecologic Instrument Corp. All turbidity values were reported in Nephelometric Turbidity Units (NTU).

6.1.2.2 pH. Prior to analysis, the pH probe was calibrated following the manufacturer's instructions. These instructions changed slightly with the different pH meters used.

6.1.2.3 Dissolved Oxygen. This parameter was measured with a field YSI-DOA meter. If the meter was not available, wet samples were taken, preserved with manganous sulfate solution and alkali-iodide-azide solutions, and returned to the laboratory for titration according to the Winkler DO procedures.

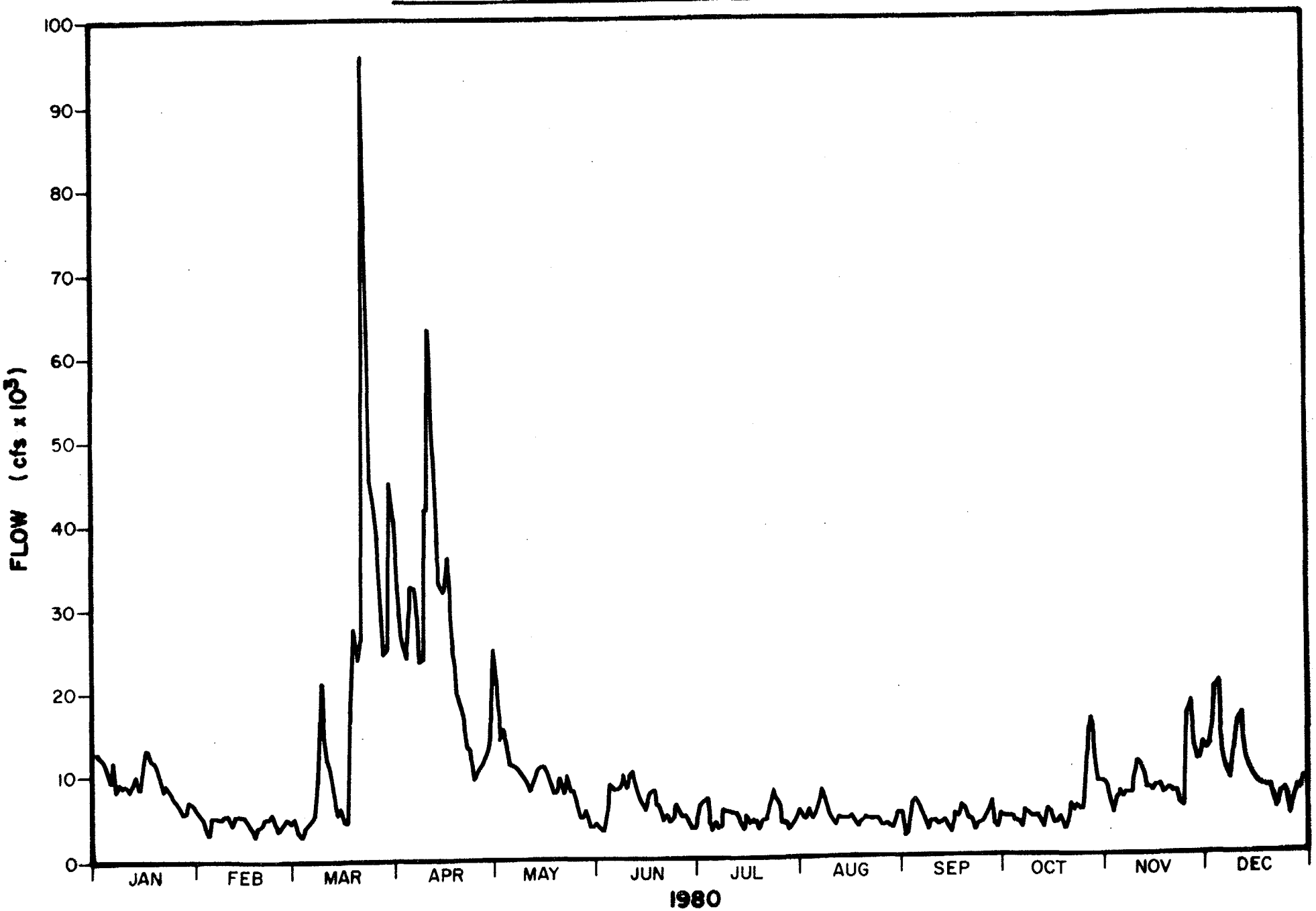
6.1.2.4 Conductivity. This parameter was measured with a field YSI-SCT meter. If the meter was not available, wet samples were returned to the laboratory. A standard reference solution of 0.01M KCl was used. Conductivity measurements were made at various temperatures. Values were corrected to specific conductivity at 25°C by multiplying the recorded value by a factor from a conductance vs temperature graph (APHA 1971).

6.2. RESULTS

6.2.1 Physicochemical Program

6.2.1.1 Freshwater Flow. Daily freshwater flow in the Hudson River during 1980, as measured at Green Island (river km 247), is illustrated in Figure 6.0-2. The calculated monthly average flow in

HUDSON RIVER FLOW AT GREEN ISLAND



the Lower Hudson is graphically presented in Figure 6.0-3. As illustrated, 1980 was characterized by low flows during most of the year. Only the month of March exceeded the long-term average. There was a relatively brief high flow period in the spring, and slight increases were noted during November and December. The calculated flow in the Lower Hudson (Figure 6.0-3) was lower than the long-term average in every month; only in July was it higher than flows recorded in 1979.

Table 6.0-2 presents the monthly flows measured at Green Island for 1980 and recent study years, as well as long-term monthly averages. Monthly flows posted for 1980 hit record lows for seven months when compared with monthly values of the last 10 years. Overall, the mean 1980 monthly flow of 9710 cfs was approximately 70% of the long-term monthly average of 13,462 cfs.

6.2.1.2 Salinity. Chloride data recorded daily at the Danskammer Point intake and presented as sodium chloride (NaCl) is graphically shown in Figure 6.0-4, which also presents the plant data as parts per million (ppm) salinity. The conversion formula is:

$$\text{Salinity} = 1.805\ (0.606627335\ \text{NaCl}) + 30$$

During 1980, in the Newburgh Bay portion of the Hudson River, the salt front (100 ppm salinity) was present sporadically during most of the year and continuously from mid-February through mid-March and August through October. The prolonged presence of salt water in the Roseton and Danskammer Point vicinity is directly related to the low freshwater flow to the lower estuary (Figure 6.0-2) and low annual precipitation in the Hudson River watershed area (Table 6.0-3).

FIGURE 6.0-3

LOWER HUDSON RIVER LONG-TERM MONTHLY AVERAGE FRESHWATER FLOW

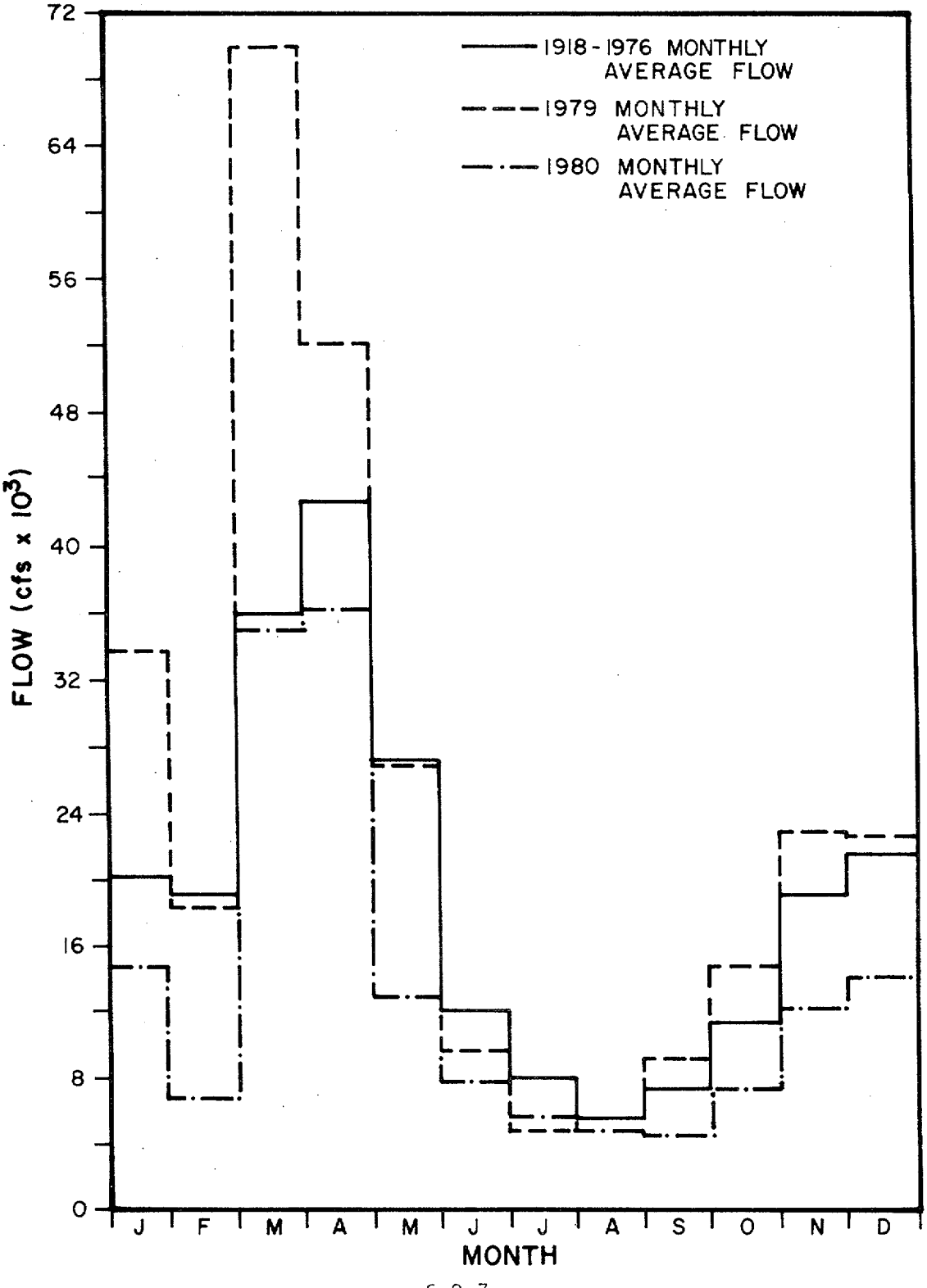


TABLE 6.0-2

FRESHWATER FLOWS AT GREEN ISLAND

MONTH	1918-1976 LONG TERM AVERAGE FLOWS (cfs)	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Jan	12879	9002	13410	26210	22010	19070	14740	7956	26310	20162	9044
Feb	12484	12110	10930	20460	18640	19370	31260	8032	14120	11850	4527
Mar	22344	20220	26860	29410	20730	23680	31690	43540	21870	44240	22380
Apr	31155	37270	37960	30960	30170	25580	36760	40560	33560	38120	26430
May	19480	35240	40520	27600	22960	20000	31800	16020	18730	19570	9676
Jun	9792	7334	29630	13050	8791	12970	15220	7325	9954	8318	6796
Jul	7040	6233	18380	10390	11780	7464	15280	5735	4643	4644	5080
Aug	5608	8929	7616	5591	6359	8966	14630	5439	5976	5248	4596
Sep	6289	9315	6309	4791	10390	17030	9573	14410	6195	7800	4170
Oct	8125	7811	7291	5650	9049	23400	23230	30140	8608	11080	5520[a]
Nov	12485	7291	26150	8280	17180	22500	17930	23440	8020	16420	8540[a]
Dec	13979	17000	27010	26420	19380	18780	14080	26550	10700	15190	9632[a]
Mean[b]	13462	14830	21017	17410	16433	18211	21311	19161	14053	16920	9708

[a]Preliminary data.

[b] $\sum\left(\frac{\text{Mean Monthly Flow x Days Per Month}}{\text{Days Per Year}}\right)$

SOURCE: United States Geological Survey

FIGURE 6.0-4

DAILY CHLORIDE CONCENTRATIONS

Danskammer Point Generating Station - 1980

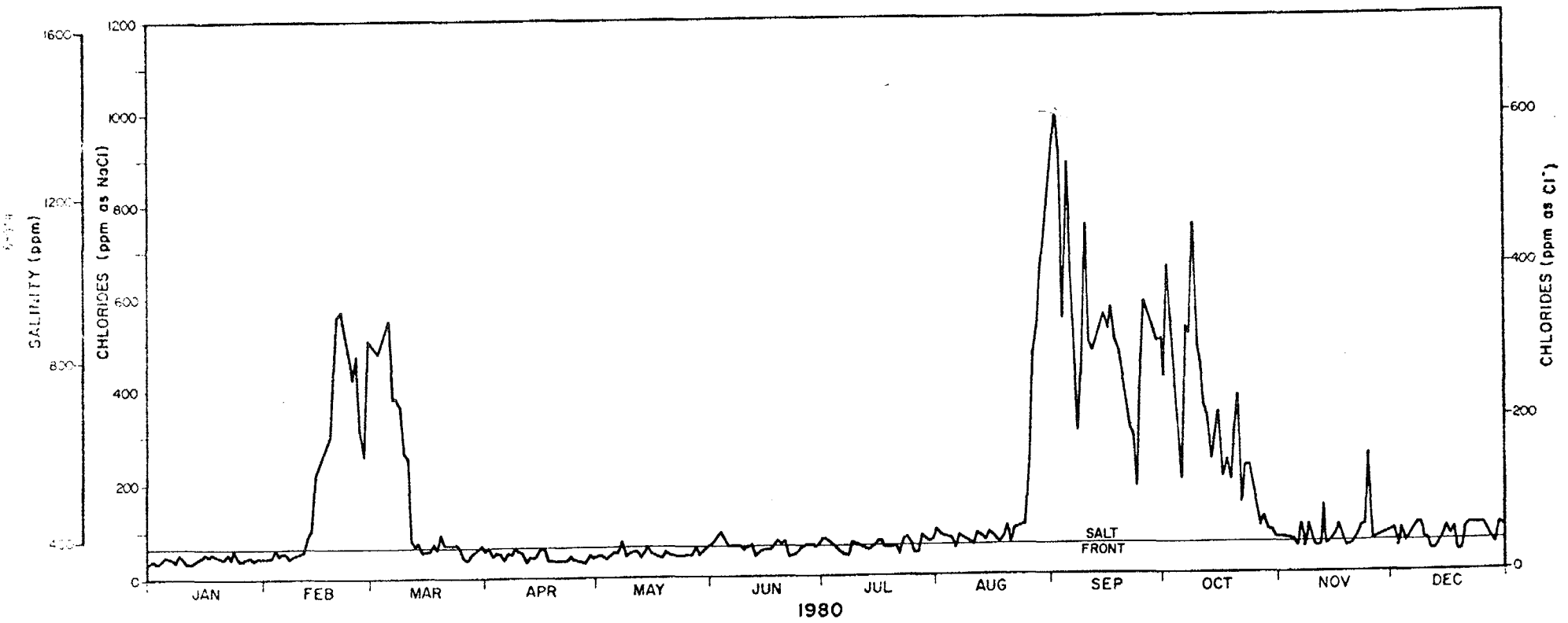


TABLE 6.0-3

MONTHLY AIR TEMPERATURE AND PRECIPITATION RECORDED AT WEST POINT[a]

1980

MONTH	AIR TEMPERATURES (°C) AVERAGE MIN	AVERAGE MAX	AVERAGE DAILY	DEV. FROM NORM.[c]	PRECIPITATION[b] TOTAL INCHES	TOTAL CM	DEV. FROM NORM. INCHES	DEV. FROM NORM. CM
Jan	-4.8	2.7	-1.0	1.8	1.54	3.91	-1.60	-4.06
Feb	-8.2	2.7	-2.7	-1.1	1.29	3.28	-1.82	-4.62
Mar	-1.8	8.2	3.2	-0.1	7.38	18.75	3.45	8.76
Apr	5.1	17.6	11.3	1.3	7.68	19.51	3.83	9.73
May	11.3	25.3	18.3	2.4	1.57	3.99	-2.52	-6.40
Jun	13.2	27.4	20.3	-0.7	4.46	11.33	0.81	2.06
Jul	18.3	31.7	25.0	1.3	3.40	8.64	-0.89	-2.26
Aug	18.8	31.0	24.9	2.3	1.44	3.66	-2.39	-6.07
Sep	14.4	26.9	20.7	1.9	1.41	3.58	-2.42	-6.15
Oct	6.7	16.5	11.6	-1.3	3.51	8.92	-0.16	-0.41
Nov	0.7	9.3	5.1	-1.2	3.54	8.99	-1.00	-2.54
Dec	-6.9	2.6	-2.2	-1.4	1.23	3.12	-2.95	-7.49
Annual Total					38.45	97.68	-7.66	-19.45

[a]Date Source: NOAA; Environmental Data Service, Monthly Climatology Data.
[b]Includes snow and sleet.
[c]Dev. from Norm. - Deviation from Normal.

6.2.1.3 Thermal Characteristics. The 1980 water temperature profile on Figure 6.0-5 indicates the minimum daily temperature recorded at the Danskammer Point intake and the mean daily water temperature taken as part of the weekly impingement collection.

The highest minimum daily temperature recorded during 1980 was 27.8°C, which occurred during 8-14 August; the lowest value was 0.6°C recorded during most of the winter months of January and February and the last week of December. The pattern depicted in Figure 6.0-5 is consistent with that of previous years and is characteristic of temperate zone water bodies.

6.2.2 Climatology

The climatological information presented in this section, consisting of records of air temperature and precipitation, was obtained from two sources. Air temperature was recorded from the 15-m (50-ft) level at the Roseton meteorological tower; hourly readings were averaged to provide daily mean air temperature values (plotted on Figure 6.0-6). Data on air temperature and precipitation compiled by the National Oceanic and Atmospheric Administration (NOAA) Environmental Data Service was tabulated for West Point, the closest station to the Roseton/Danskammer Point study area. The NOAA data in terms of monthly averages and deviations from the norm (1941-1975) are tabulated in Table 6.0-3.

Monthly air temperatures exhibited a temporal pattern similar to that of previous years, with temperatures slightly warmer than normal during the summer months and slightly cooler than normal during the fall months (Table 6.0-3). The coldest daily temperature at Roseton was recorded on 25 December (-17.0°C); the warmest daily temperature, 27.9°C, occurred on 21 July.

FIGURE 6.0-5

MINIMUM DAILY INTAKE TEMPERATURE

Danskammer Point Generating Station - 1980

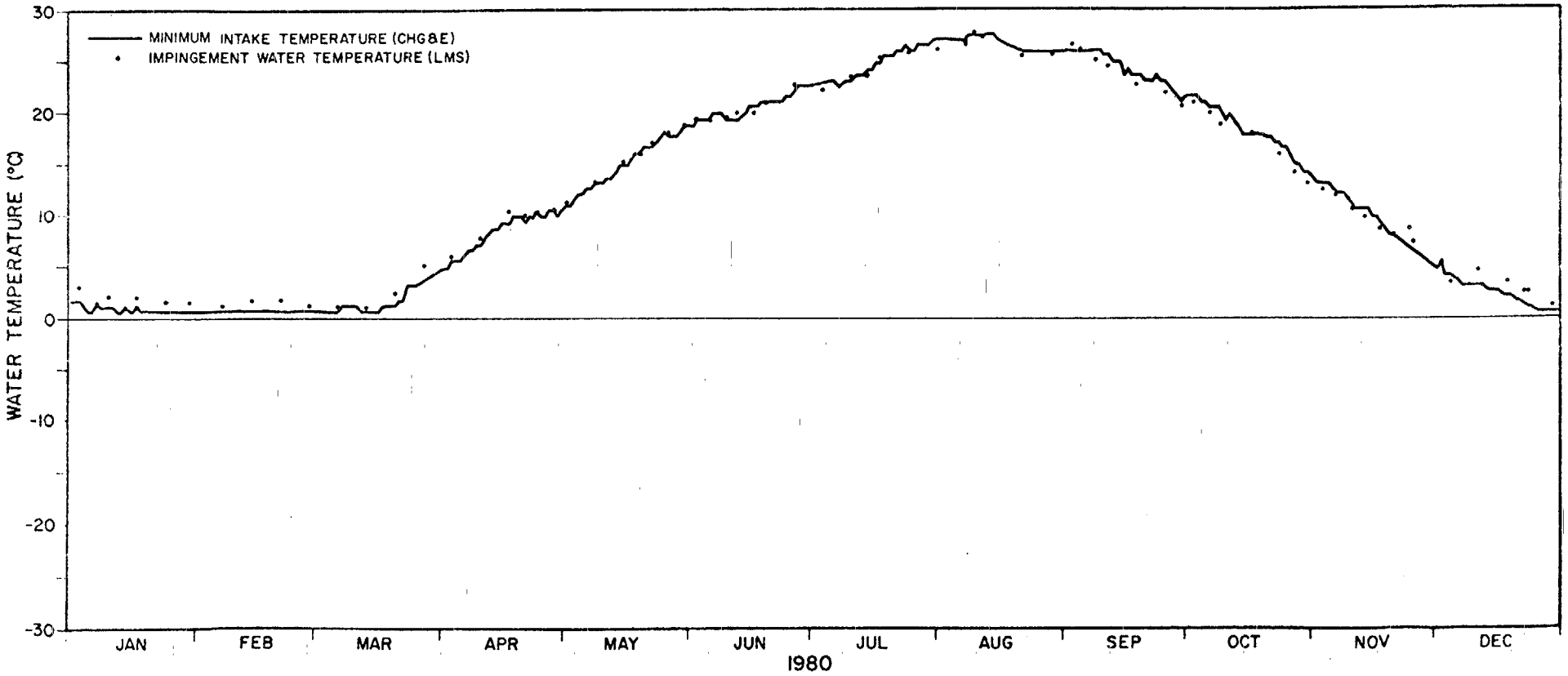
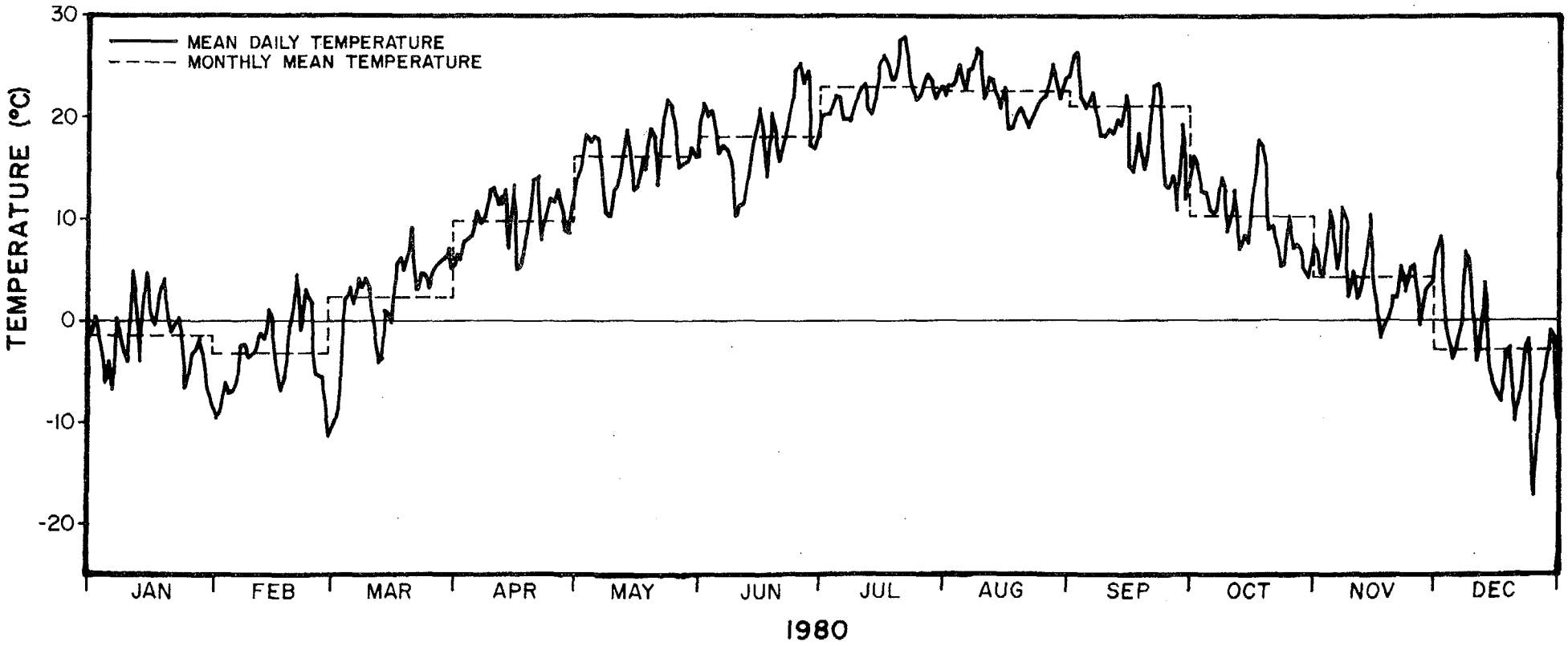


FIGURE 6.0-6

MEAN 24-HOUR AIR TEMPERATURE

Roseton and Danskammer Point Vicinity - 1980



Precipitation was below the long-term average during nine of the 12 months, with the annual total of 97.7 cm approximately 19.5 cm less than the long-term average. The greatest precipitation was recorded during April (19.5 cm); the lowest monthly total occurred during December (3.0 cm).

6.2.3. Water Quality Parameters

6.2.3.1 River Channel Locations. Water temperature, specific conductance, turbidity, pH, and dissolved oxygen were monitored on a weekly schedule at three locations in northern Newburgh Bay.

Water temperature from surface, mid-depth, and bottom water strata at the three northern Newburgh stations is presented in Figures 6.0-7 through 6.0-9. Similar trends and annual peaks were observed at the three stations; in addition, there were minimal differences noted between the different water strata.

Specific conductance from the surface, mid-depth, and bottom water strata at the three stations is shown in Figures 6.0-10 through 6.0-12. Major differences in amplitude of the values were evident during the late summer-early fall period, with the higher values recorded at the two southern stations (CH-4, CH-6) as opposed to the northern station (CH-1). Figure 6.0-13 presents station mean specific conductance readings to demonstrate the large degree of variability among the three locations. Bottom conductivity values were higher than surface readings, reflecting the higher density of the more saline marine waters penetrating the lower estuary; the vertical disparity was much less pronounced at Station CH-1 in comparison with the other two stations.

Turbidity (Figures 6.0-14 through 6.0-16) was generally low in the study area throughout the year. It was highest during the spring as

WEEKLY TEMPERATURE VALUES RECORDED AT CH-1

Roseton and Danskammer Point Vicinity - 1980

SURFACE ———— MID — — — BOTTOM —·—·—

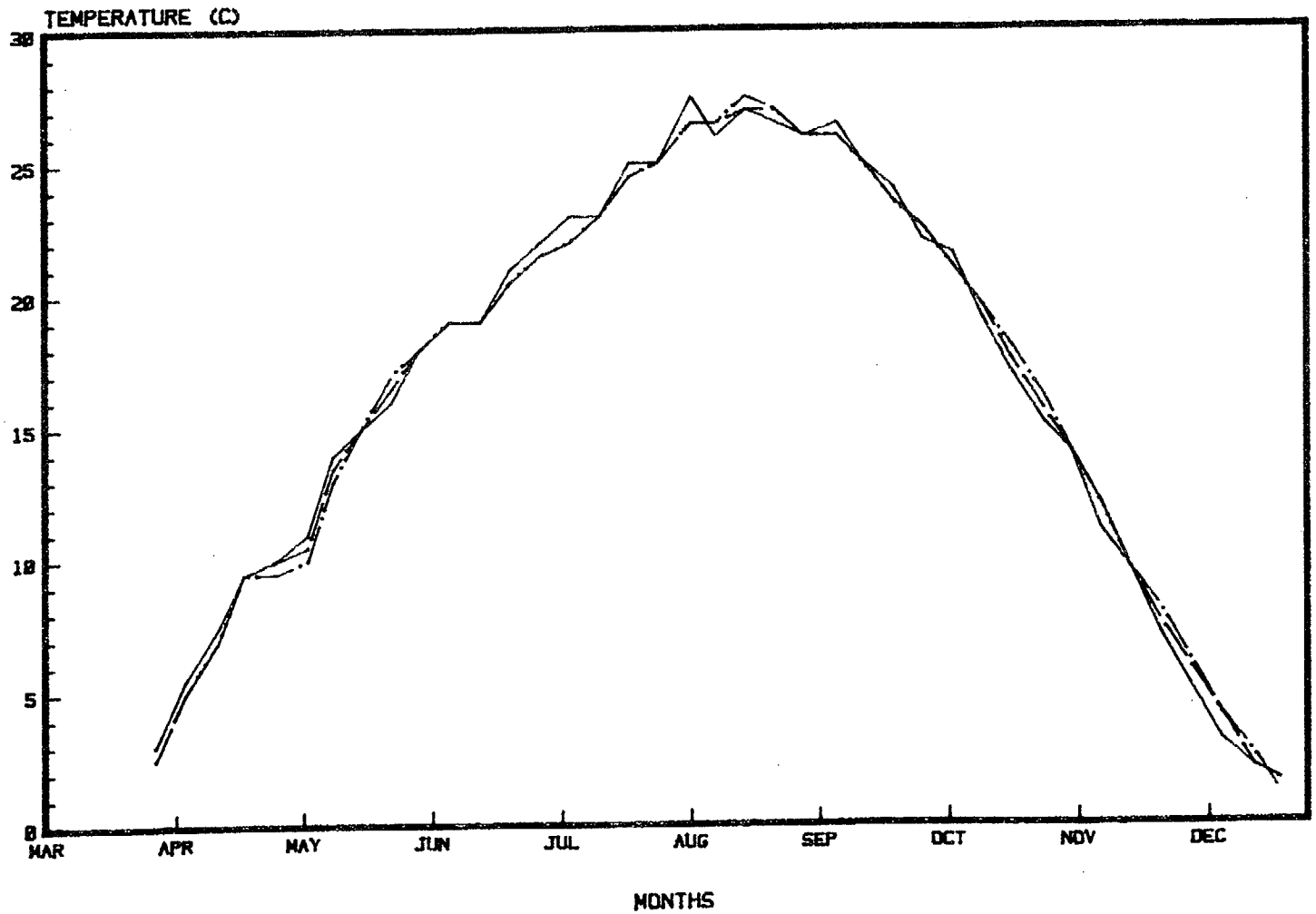


FIGURE 6.0-8

WEEKLY TEMPERATURE VALUES RECORDED AT CH-4

Roseton and Danskammer Point Vicinity - 1980

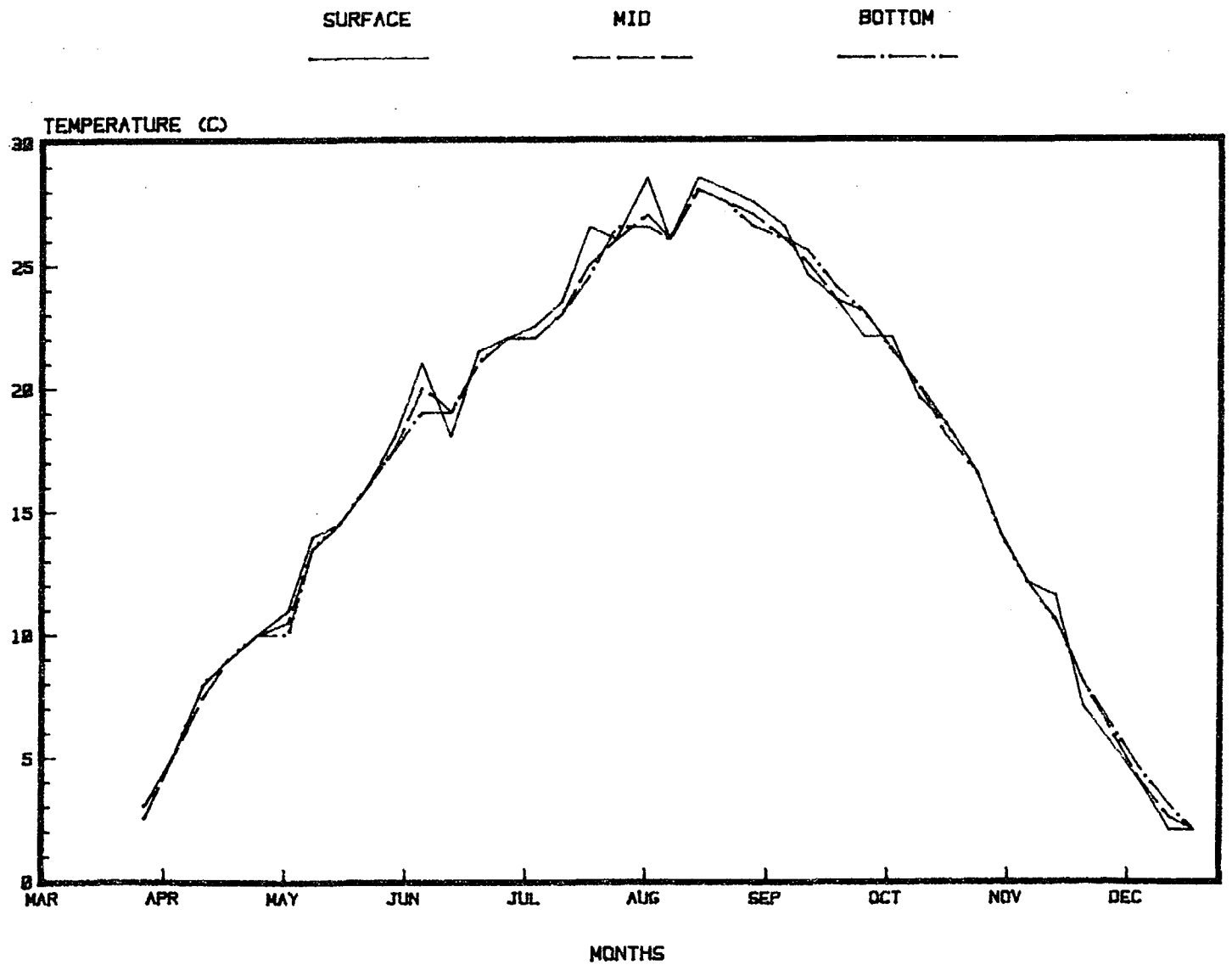


FIGURE 6.0-9

WEEKLY TEMPERATURE VALUES RECORDED AT CH-6

Roseton and Danskammer Point Vicinity - 1980

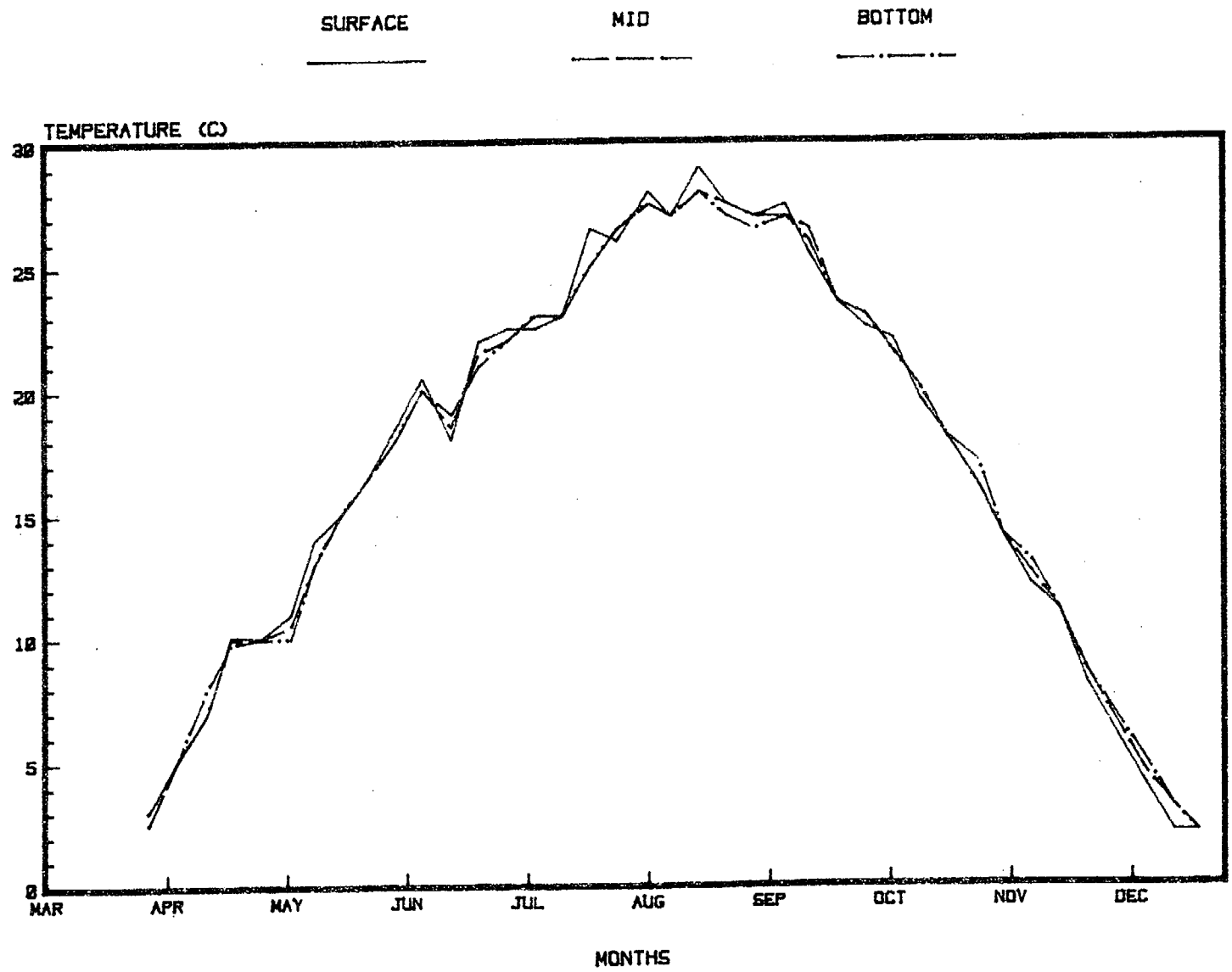


FIGURE 6.0-10

WEEKLY SPECIFIC CONDUCTANCE RECORDED AT CH-1

Roseton and Danskammer Point Vicinity - 1980

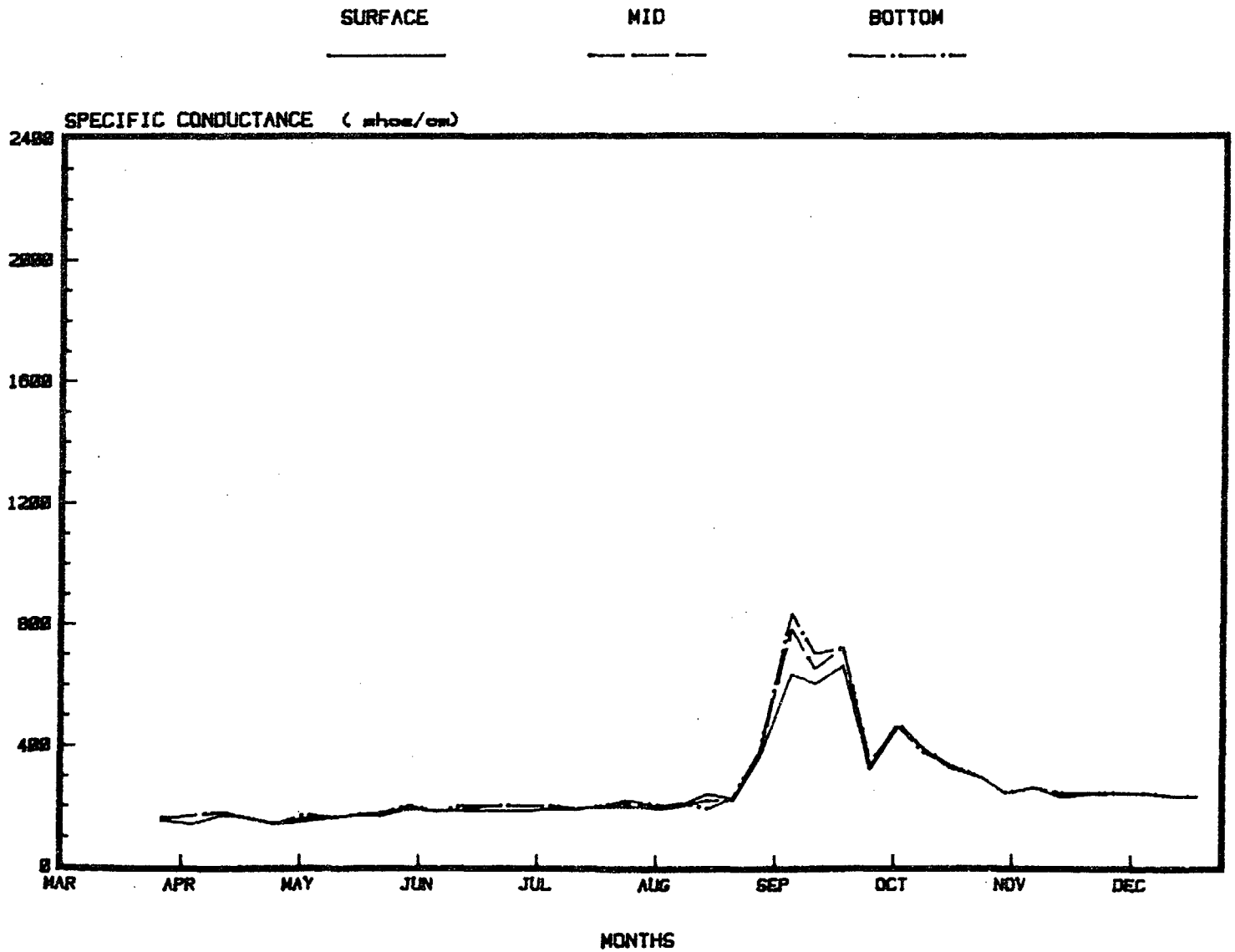


FIGURE 6.0-11

WEEKLY SPECIFIC CONDUCTANCE RECORDED AT CH-4

Roseton and Danskammer Point Vicinity - 1980

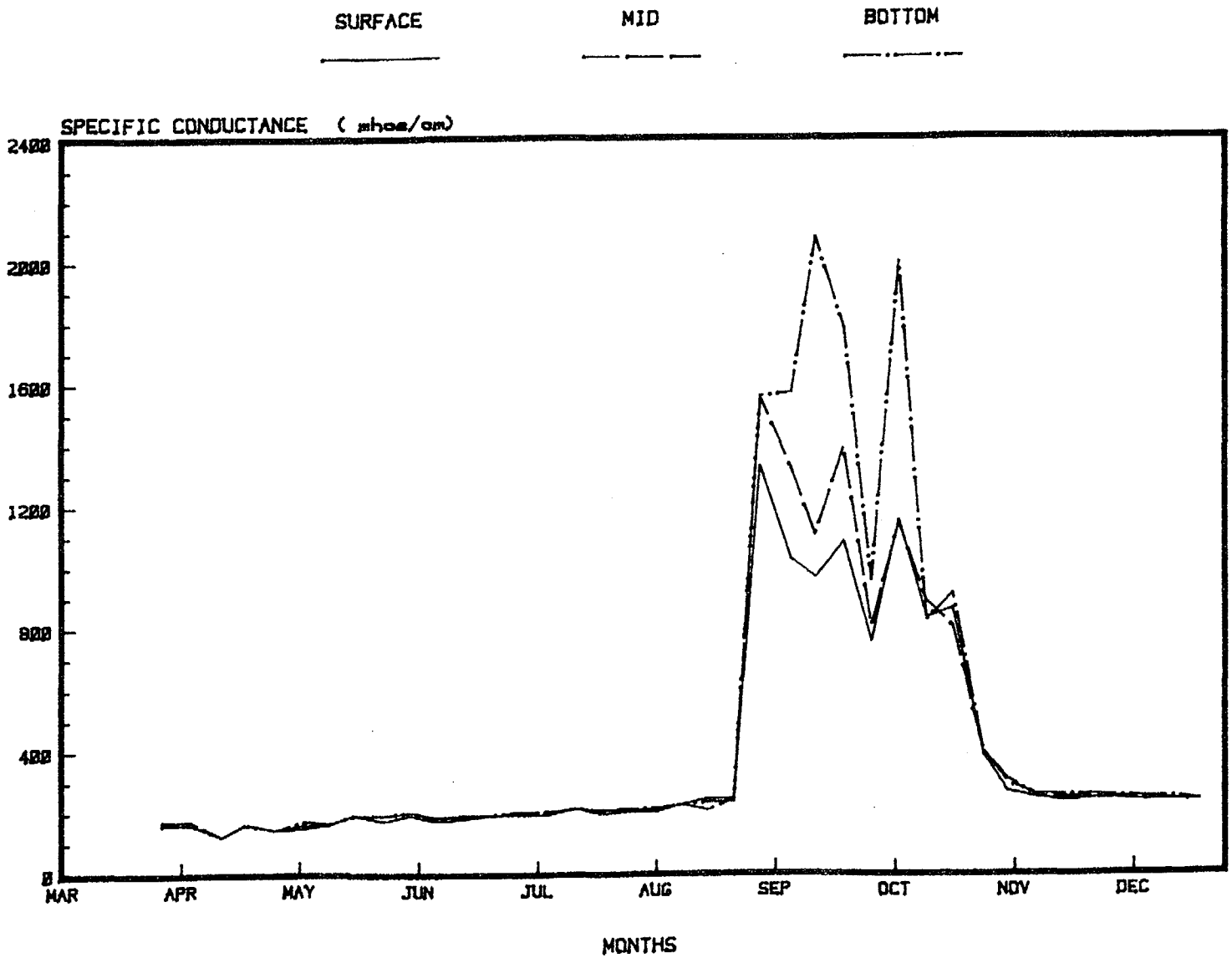


FIGURE 6.0-12

WEEKLY SPECIFIC CONDUCTANCE RECORDED AT CH-6

Roseton and Danskammer Point Vicinity - 1980

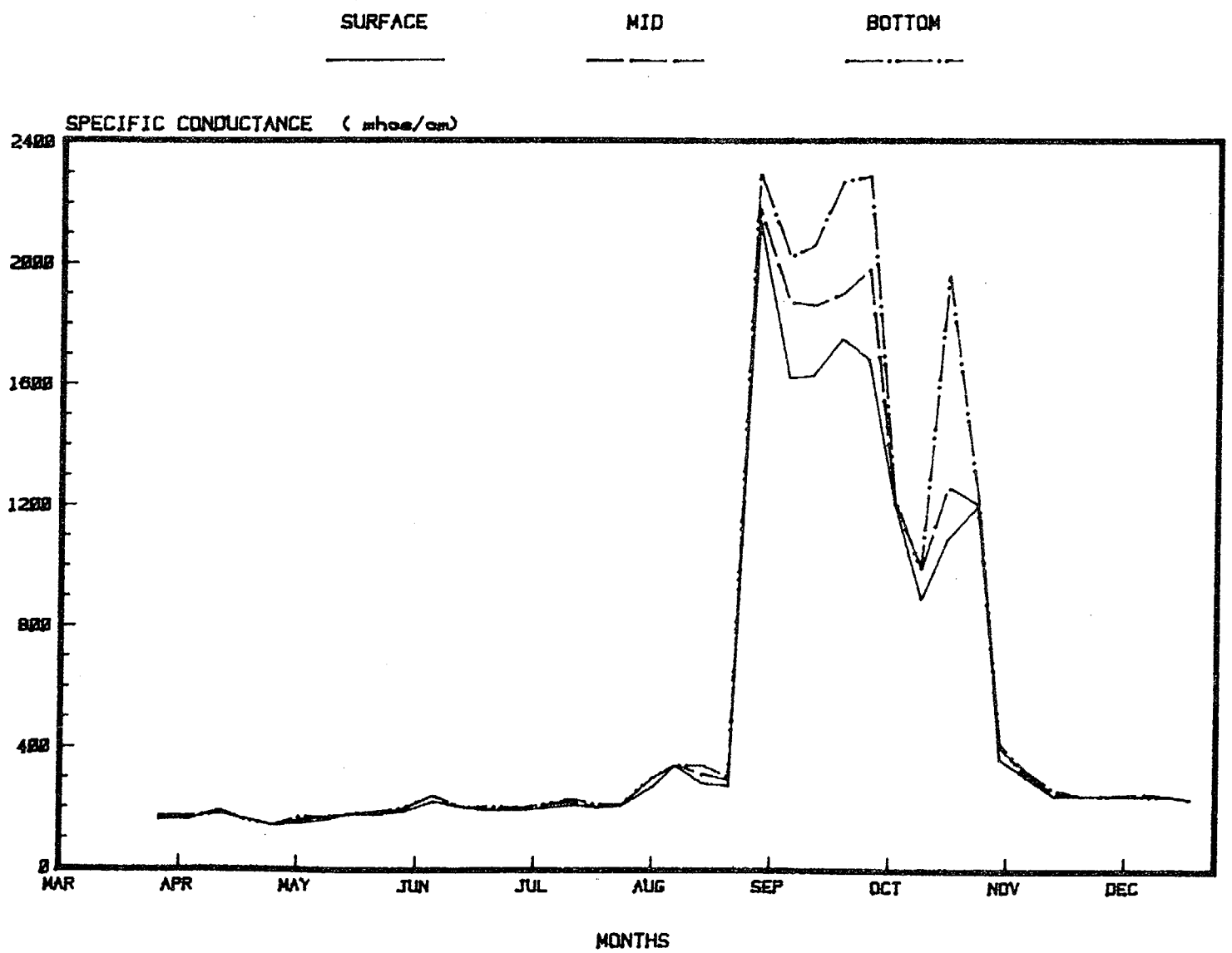
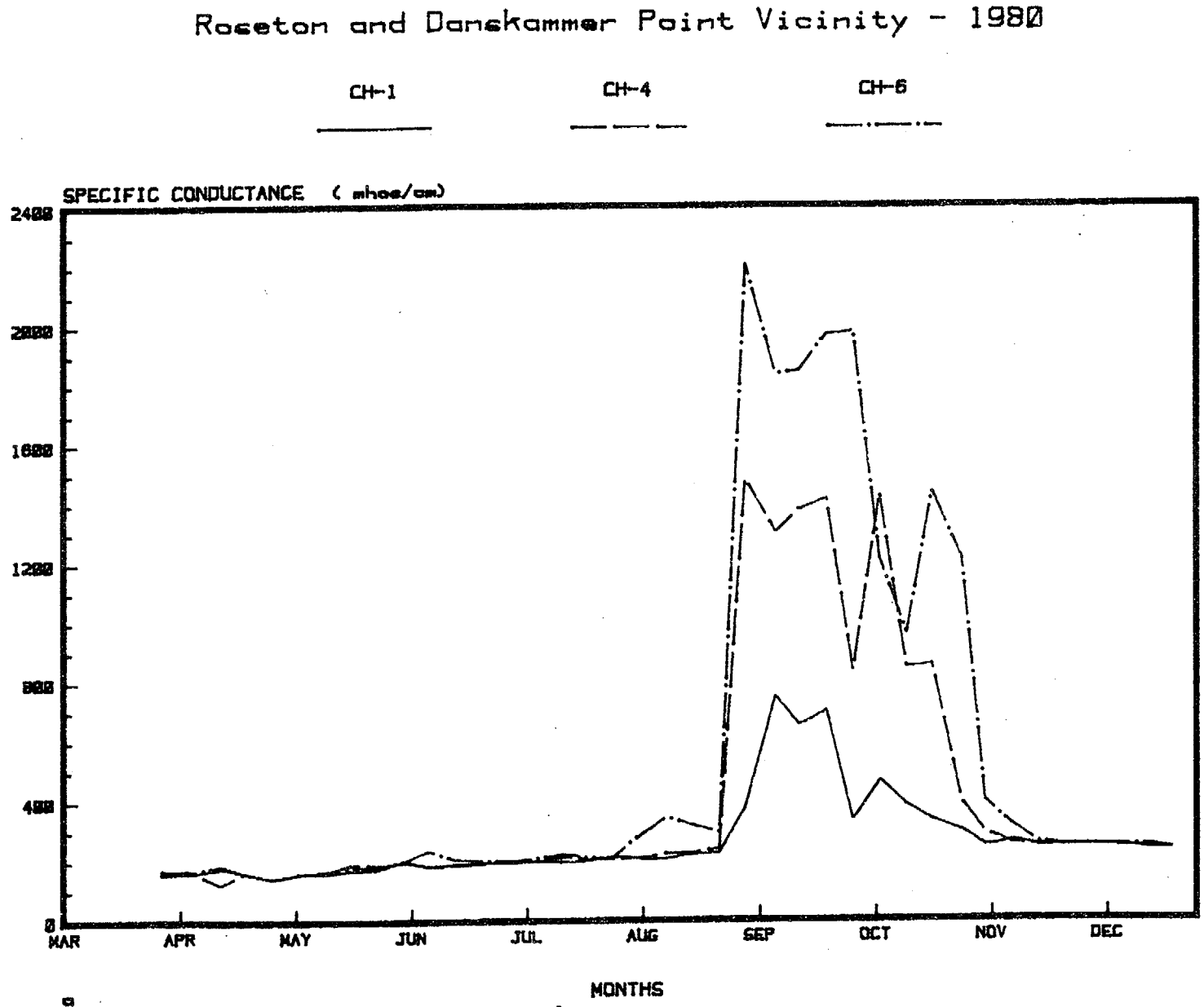


FIGURE 6.0-13

WEEKLY MEAN[a] SPECIFIC CONDUCTANCE VALUES

Roseton and Danskammer Point Vicinity - 1980



[a] Mean of surface, mid, and bottom samples.

FIGURE 6.0-14

WEEKLY TURBIDITY VALUES RECORDED AT CH-1

Roseton and Danskammer Point Vicinity - 1980

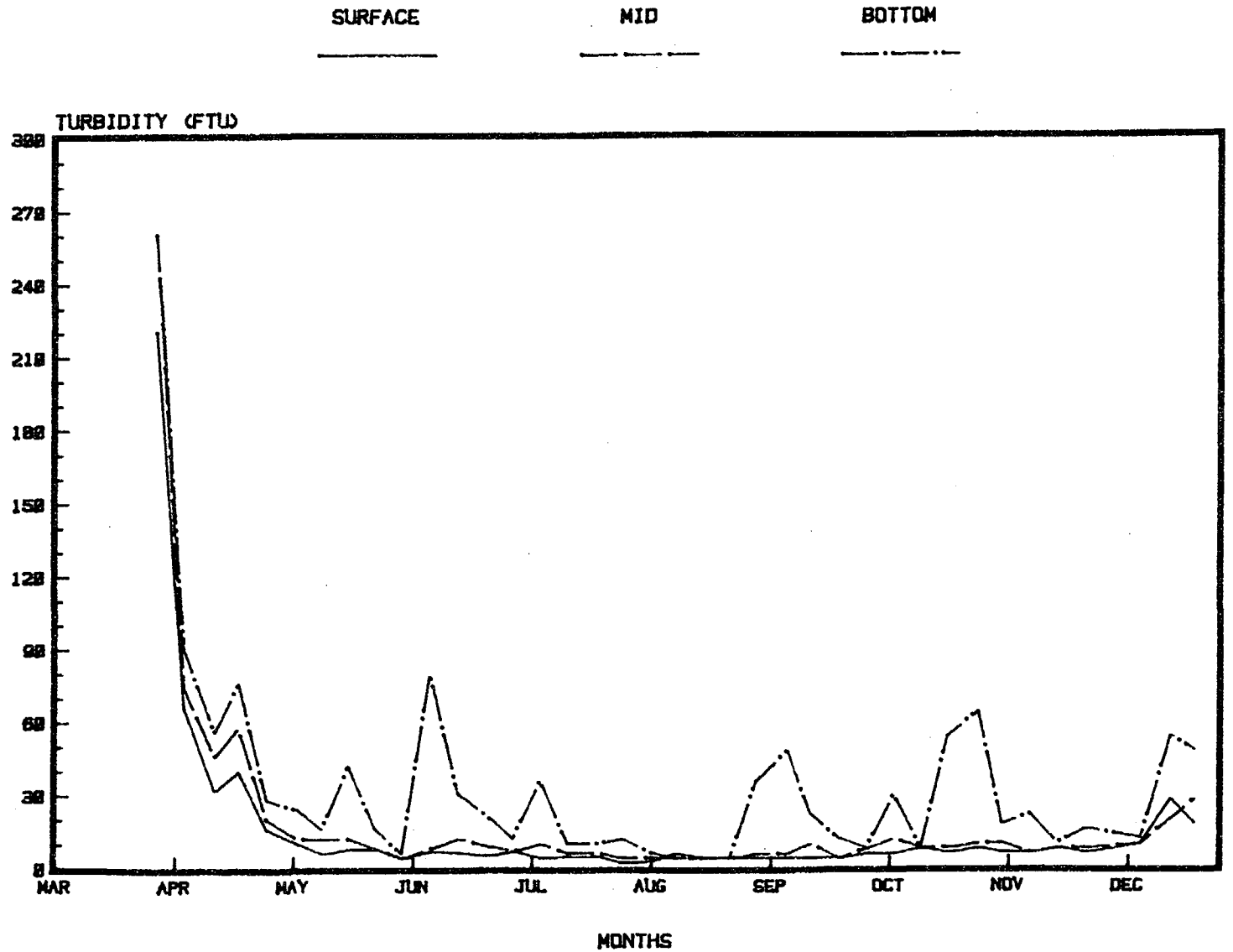


FIGURE 6.0-15

WEEKLY TURBIDITY VALUES RECORDED AT CH-4

Roseton and Danskammer Point Vicinity - 1980

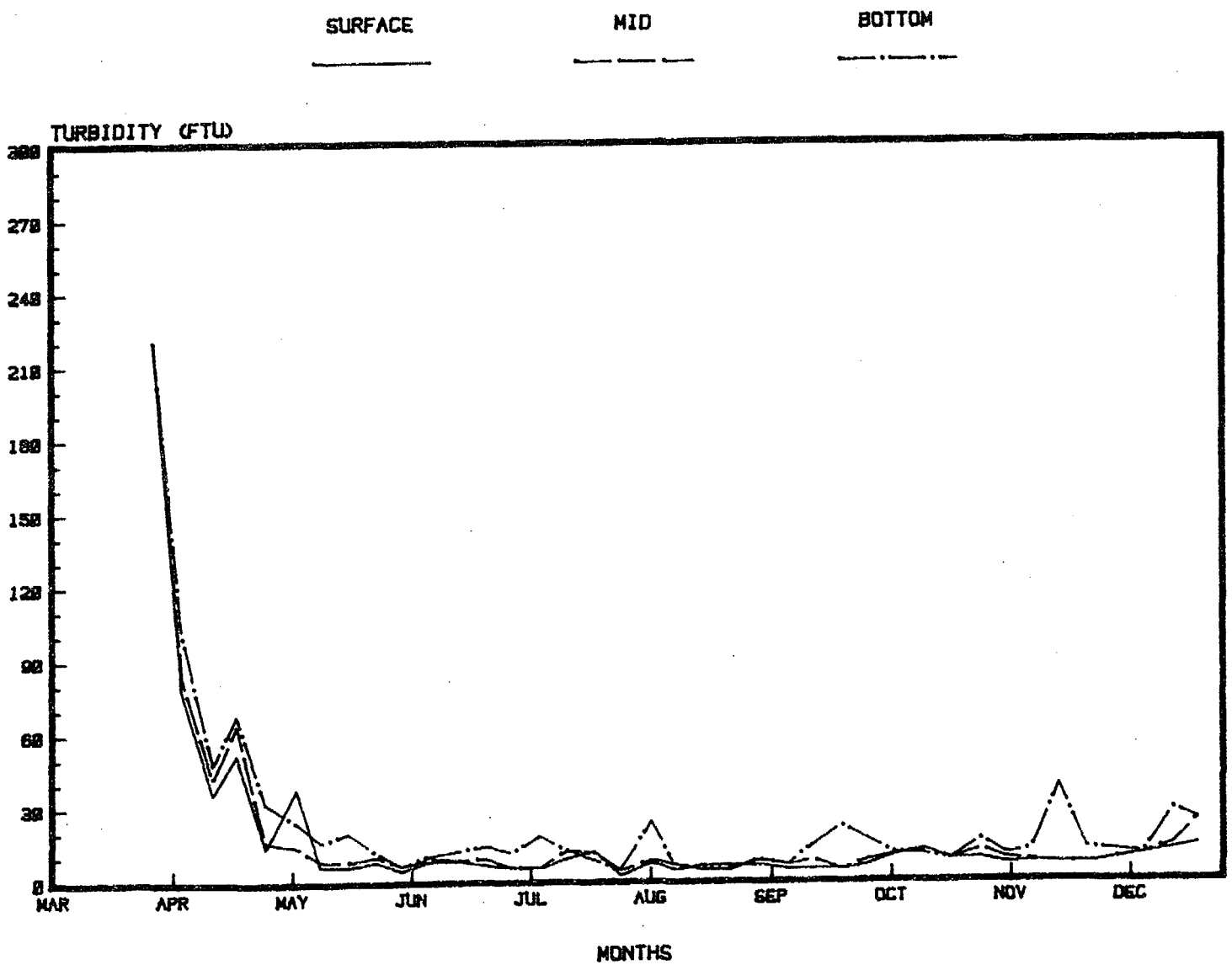
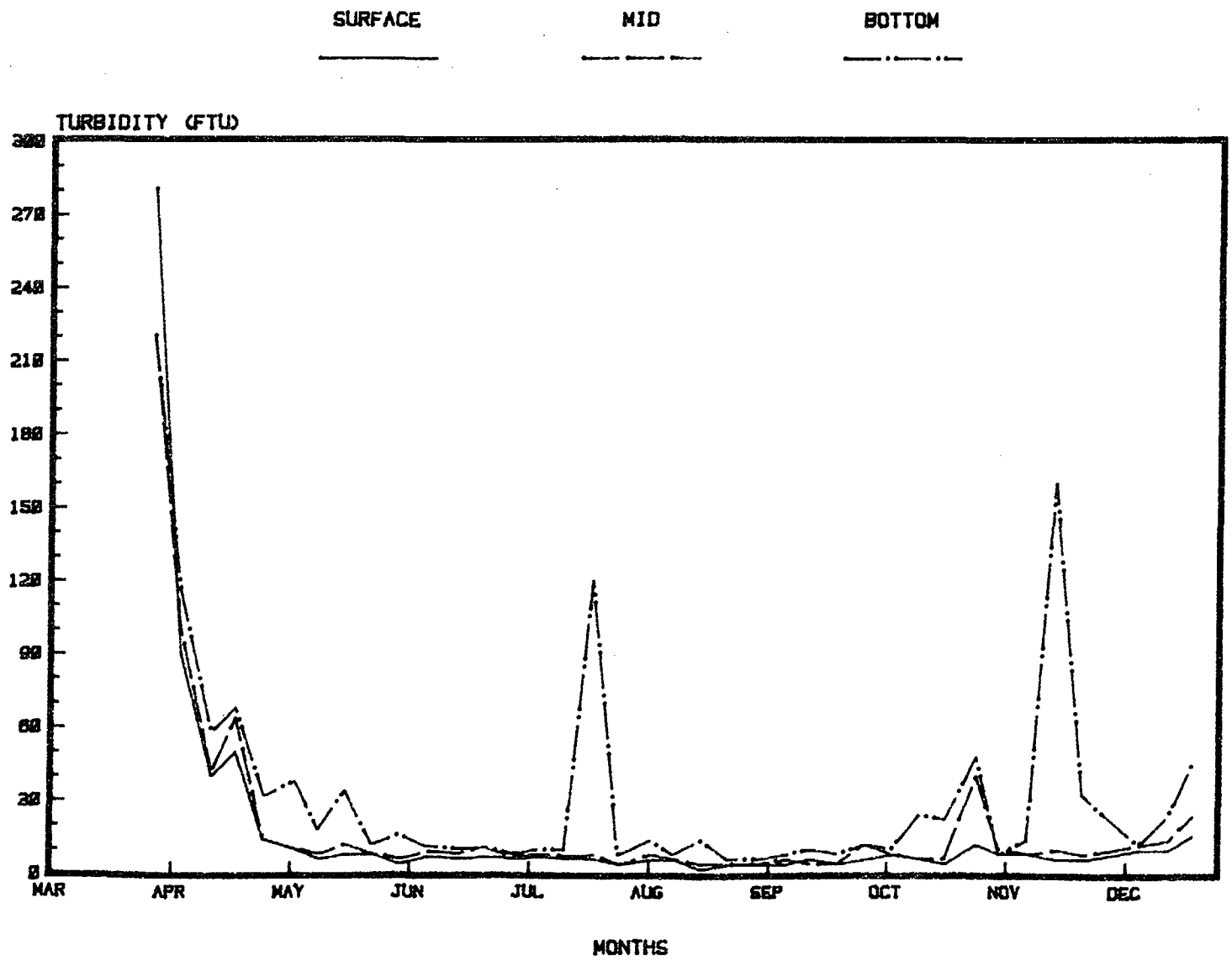


FIGURE 6.0-16

WEEKLY TURBIDITY VALUES RECORDED AT CH-6

Roseton and Danskammer Point Vicinity - 1980



a result of the spring thaw and runoff. Bottom values were higher than surface and mid-depth samples, consistent with the settling nature of the particulate matter. Turbidity values were generally higher at the northern station, CH-1, occurring as sporadic peaks throughout the year. However, two distinct peaks at the bottom strata were recorded at the southern station, CH-6: one during July and the other during November.

Dissolved oxygen (Figures 6.0-17 through 6.0-19) was in excess of 5.0 mg/l during the entire year, reaching the lowest values during August. The annual trend of high spring and fall and low summer DO concentrations is consistent with the inverse relationship between oxygen and water temperature. Hydrogen ion activity, pH (Figures 6.0-20 through 6.0-22), was consistently at or near 7.0 throughout the year.

6.2.3.2 Plant Locations. Temperature and conductivity values measured at Roseton and Danskammer Point on impingement sampling dates are presented in Tables 6.0-4 and 6.0-5. Winter temperatures were generally lower at Danskammer Point and summer temperatures were higher at Roseton. Temperatures ranged from 1.8 to 28.5°C at Roseton and 0.5 to 27.8°C at Danskammer Point. The higher temperatures at Roseton are probably due to the intake location being closer to the shoreline as opposed to Danskammers' intake, which extends farther out into the river.

Conductivity values measured at the two plants indicate fresh to brackish water ranging from 152 to 2810 μmhos/cm at Roseton and 140 to 2295 μmhos/cm at Danskammer Point.

In general, temperature and conductivity values recorded at the plant intake locations reflected water quality values for these parameters at river channel locations.

FIGURE 6.0-17

WEEKLY DISSOLVED OXYGEN RECORDED AT CH-1

Roseton and Danskammer Point Vicinity - 1980

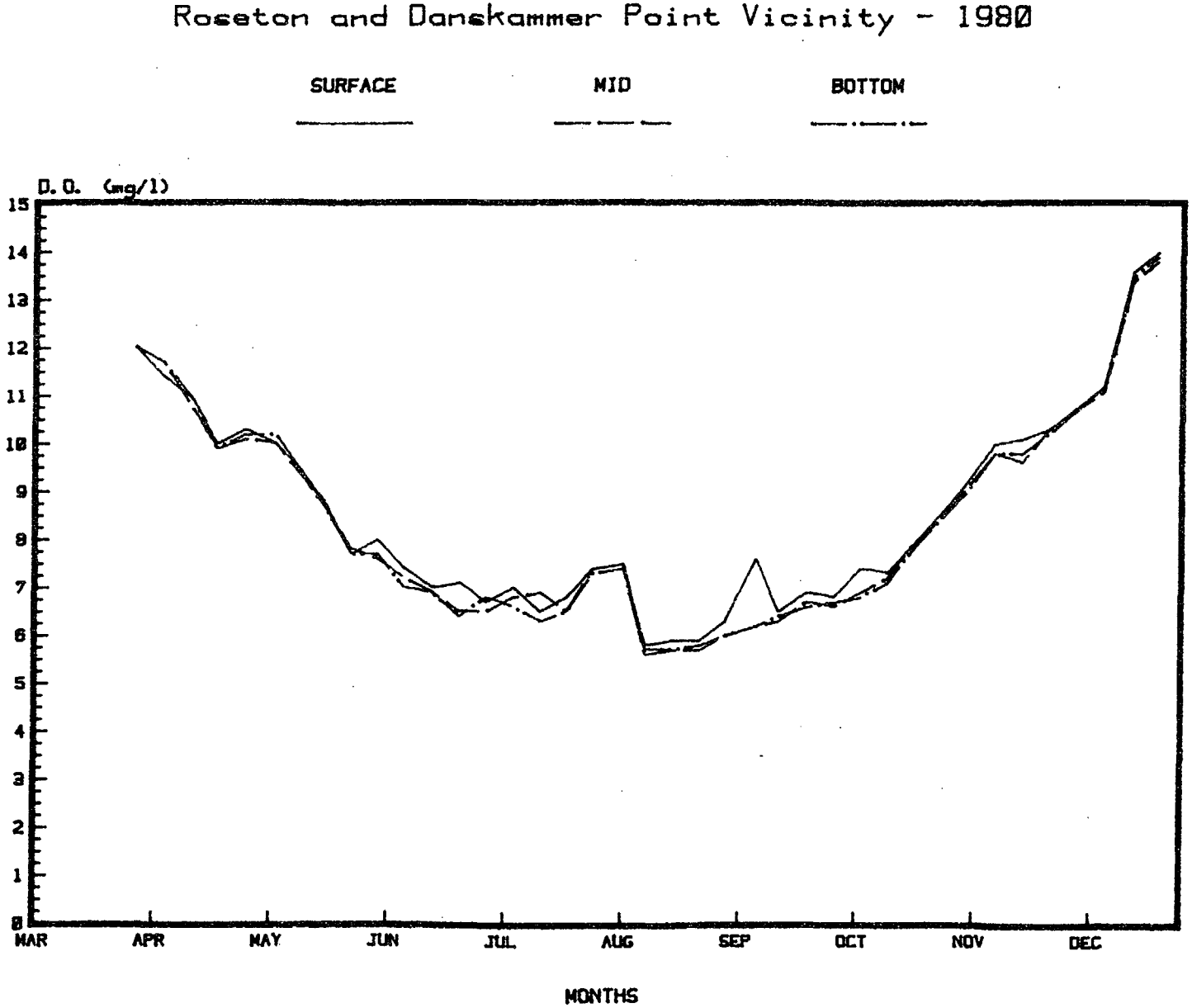


FIGURE 6.0-18

WEEKLY DISSOLVED OXYGEN RECORDED AT CH-4

Roseton and Danskammer Point Vicinity - 1980

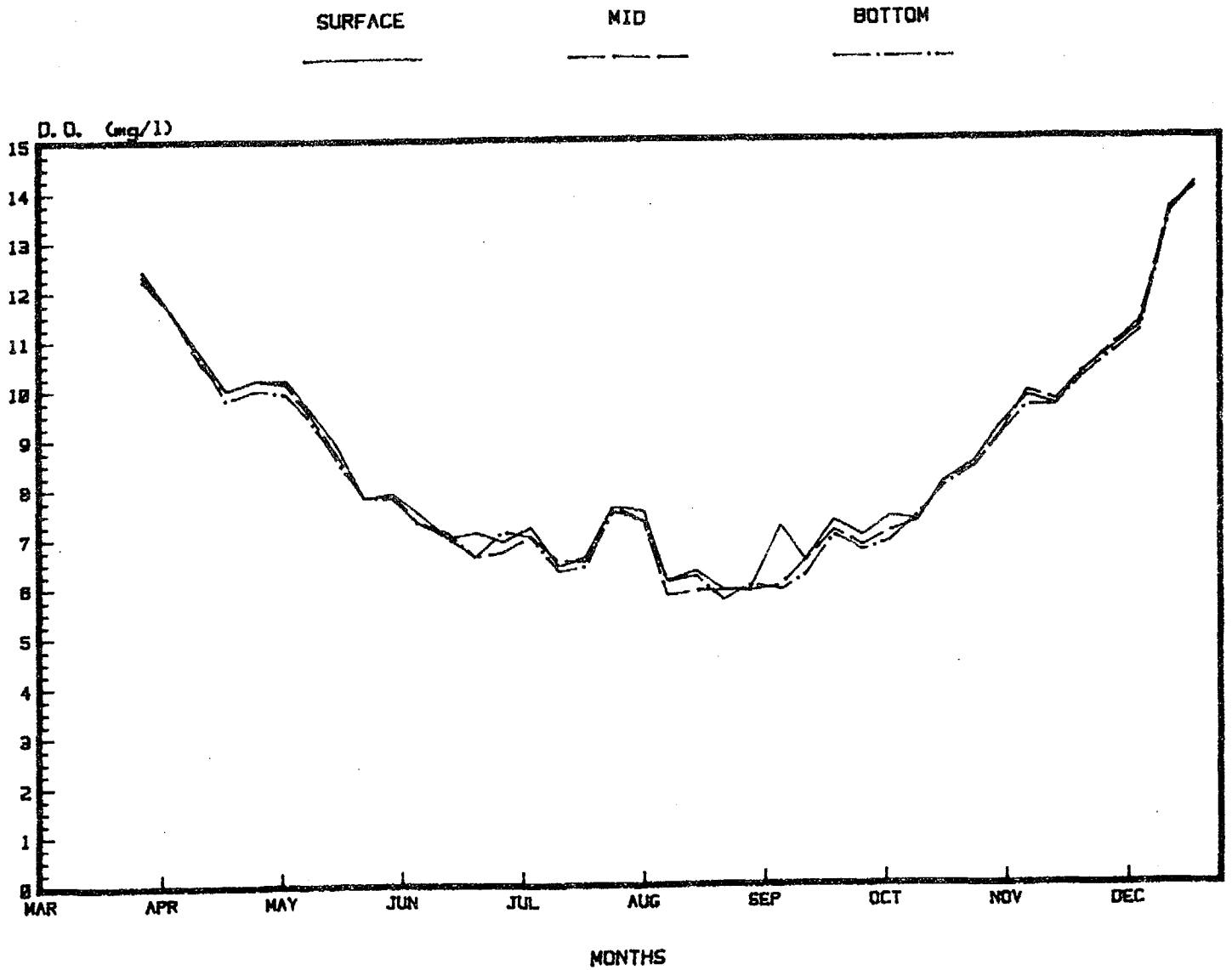


FIGURE 6.0-19

WEEKLY DISSOLVED OXYGEN RECORDED AT CH-6

Roseton and Danskammer Point Vicinity - 1980

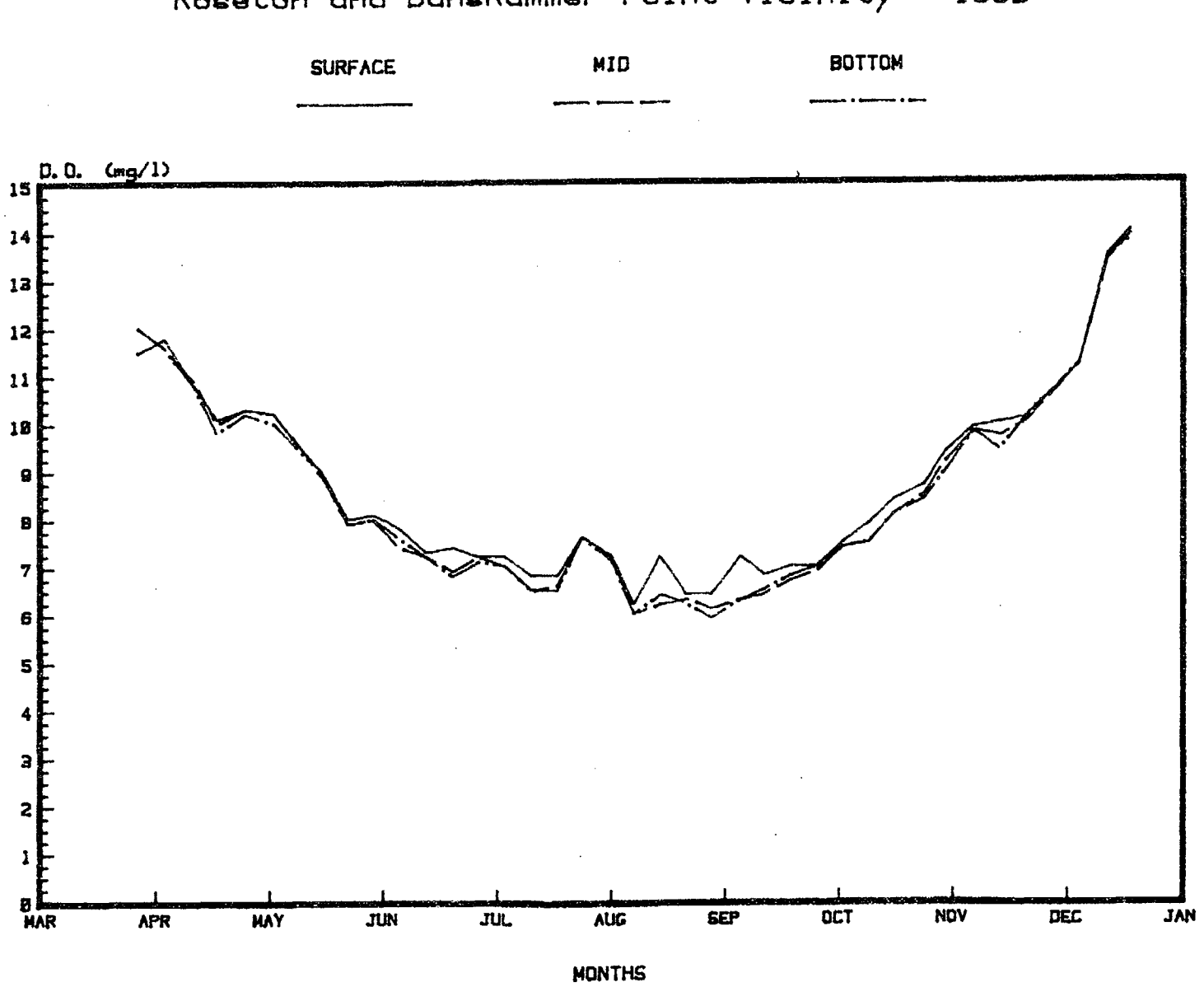


FIGURE 6.0-20

WEEKLY pH VALUES RECORDED AT CH-1

Roseton and Danskammer Point Vicinity - 1980

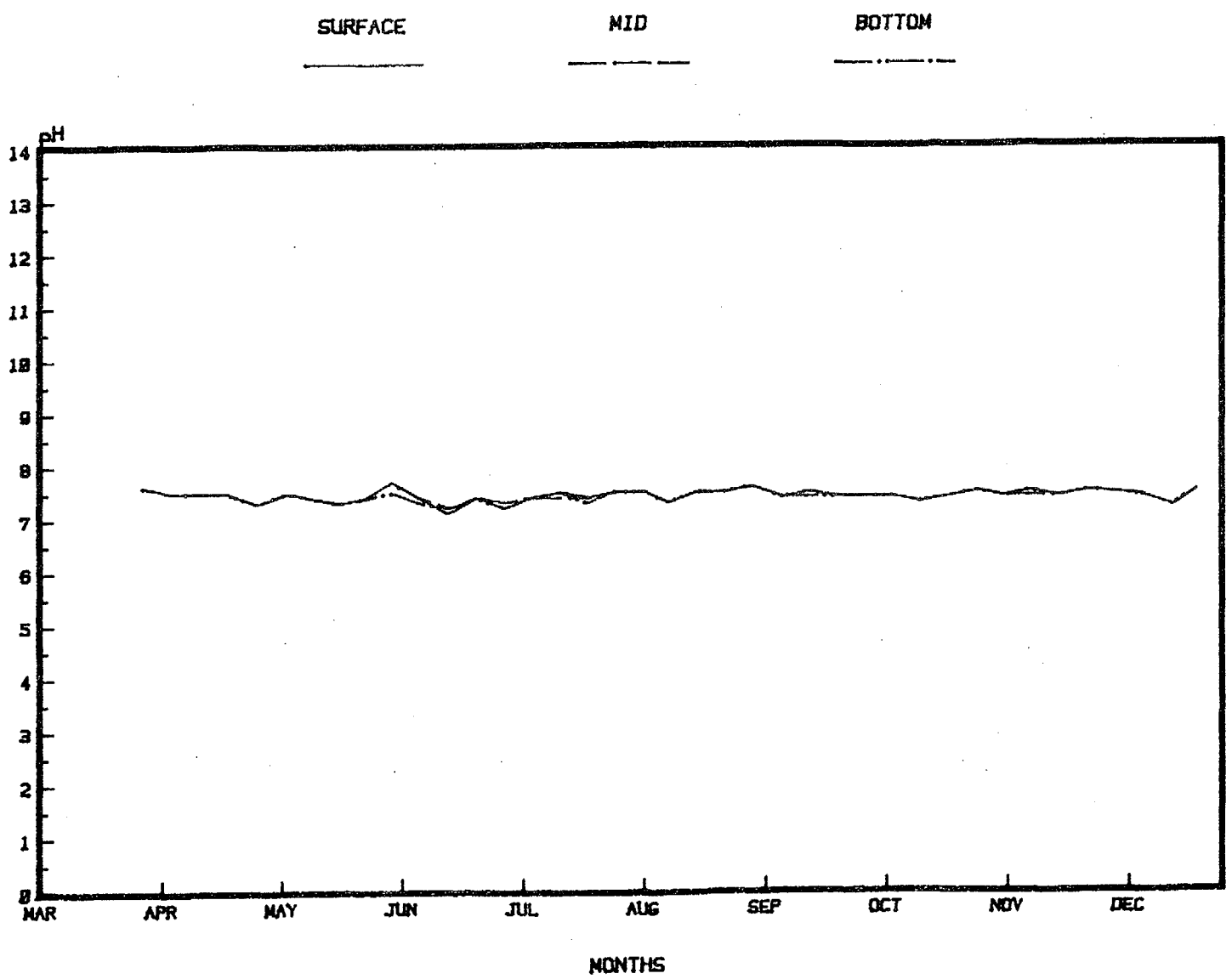


FIGURE 6.0-21

WEEKLY pH VALUES RECORDED AT CH-4

Roseton and Danskammer Point Vicinity - 1980

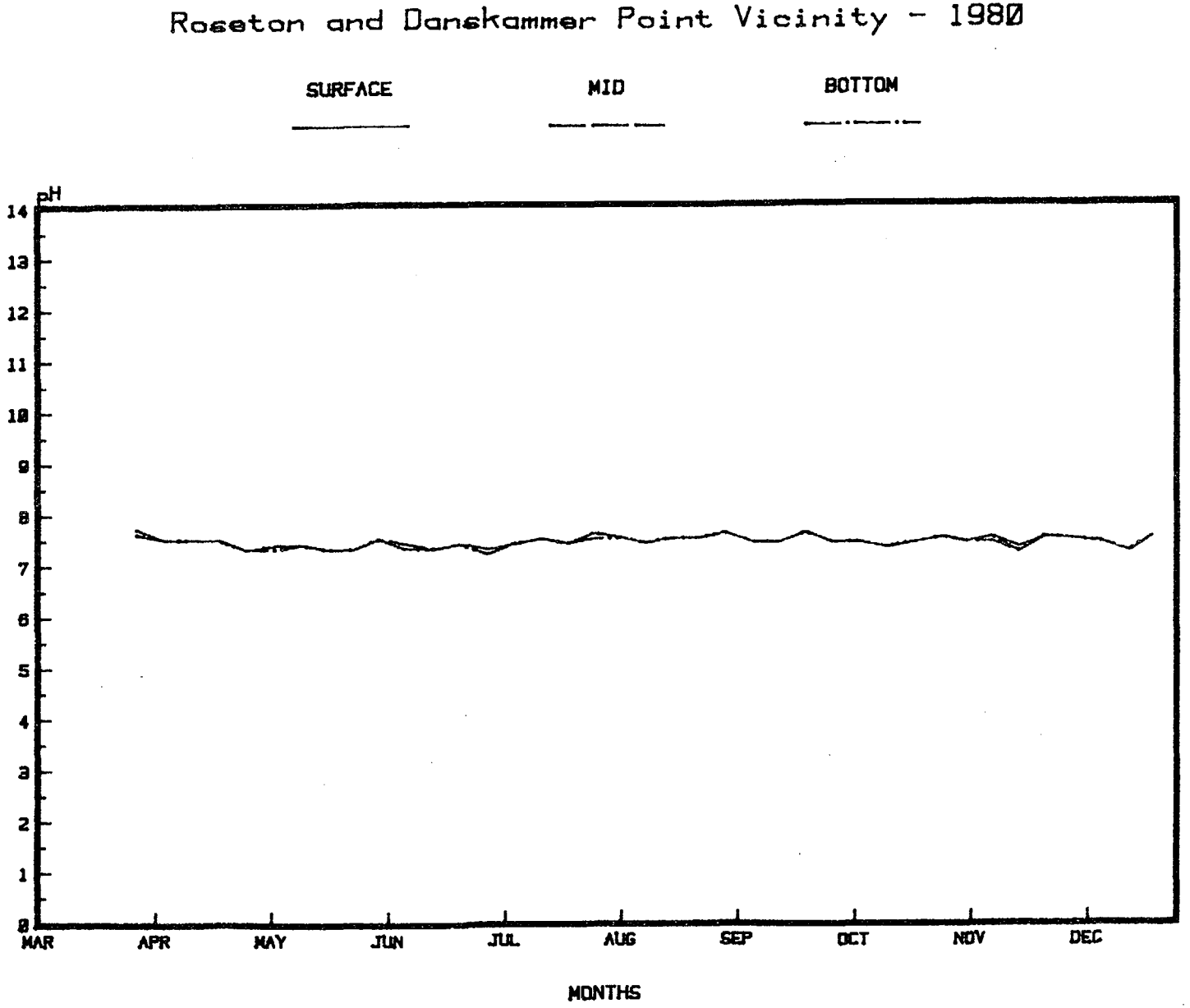


FIGURE 6.0-22

WEEKLY pH VALUES RECORDED AT CH-6

Roseton and Danskammer Point Vicinity - 1980

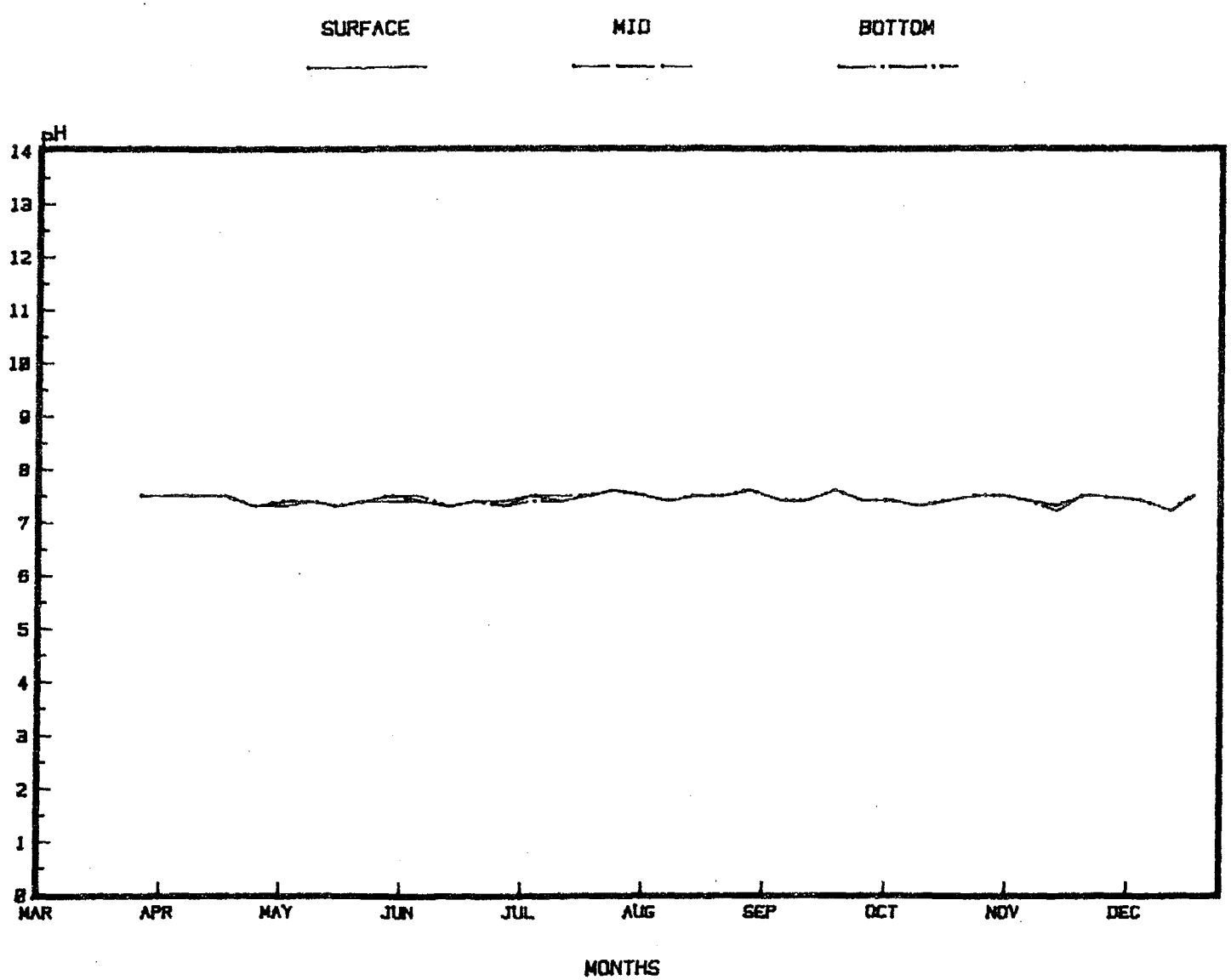


TABLE 6.0-4 (Page 1 of 4)

1980 DAILY MEAN PHYSIOCHEMISTRY

ROSETON IMPINGEMENT

START DATE	MEAN TEMPERATURE (C)	MEAN D.O. (MG/L)	MEAN CONDUCTIVITY (UMHOS/CM)
1/03/80	2.8	*	190
1/04/80	2.5	*	190
1/10/80	2.8	*	182
1/11/80	2.8	*	190
1/17/80	4.1	*	185
1/18/80	3.3	*	200
1/24/80	2.8	*	190
1/25/80	2.6	*	185
1/31/80	2.2	*	185
2/01/80	3.0	*	185
2/07/80	2.8	*	182
2/08/80	2.0	*	180
2/14/80	1.9	*	642
2/15/80	2.0	*	720
2/21/80	4.3	*	1315
2/22/80	2.0	*	1085
2/28/80	2.9	*	872
2/29/80	2.0	*	1110
3/03/80	4.5	*	1085
3/04/80	3.1	*	1295
3/06/80	4.1	*	1132
3/07/80	1.8	*	605
3/13/80	2.3	*	220
3/14/80	3.3	*	545
3/20/80	3.0	*	225
3/21/80	3.0	*	215
3/27/80	4.1	*	160
3/28/80	4.0	*	160
4/03/80	5.7	*	173
4/04/80	6.5	*	170
4/10/80	8.2	*	185
4/11/80	8.0	*	180
4/17/80	10.4	*	160
4/18/80	9.5	*	155
4/24/80	9.7	*	143
4/25/80	10.8	*	140
4/28/80	10.9	*	152
4/29/80	10.8	*	190
5/01/80	11.5	*	170
5/02/80	11.5	*	160

NOTE. * NO DATA RECORDED.

1980 DAILY MEAN PHYSIOCHEMISTRY

ROSETON IMPINGEMENT

START DATE	MEAN TEMPERATURE (C)	MEAN D.O. (MG/L)	MEAN CONDUCTIVITY (UMHOS/CM)
5/05/80	13.1	*	153
5/06/80	12.8	*	163
5/08/80	13.7	*	167
5/09/80	14.5	*	160
5/15/80	15.2	*	178
5/16/80	14.8	*	165
5/22/80	17.2	*	187
5/23/80	17.0	*	180
5/29/80	19.0	*	195
5/30/80	18.8	*	195
6/05/80	19.9	*	275
6/06/80	18.8	*	305
6/12/80	19.9	*	233
6/13/80	21.0	*	220
6/19/80	21.9	*	237
6/20/80	21.3	*	220
6/26/80	21.7	*	217
6/27/80	22.5	*	235
7/03/80	22.7	*	228
7/04/80	21.3	*	240
7/10/80	24.0	*	213
7/11/80	24.5	*	235
7/17/80	25.1	*	247
7/18/80	23.5	*	240
7/24/80	26.2	*	212
7/25/80	26.0	*	240
7/31/80	25.8	*	393
8/01/80	25.0	*	260
8/07/80	26.5	*	273
8/08/80	28.0	*	265
8/11/80	26.5	*	320
8/12/80	26.0	*	325
8/14/80	28.2	*	307
8/15/80	28.5	*	250
8/18/80	27.7	*	278
8/19/80	27.5	*	275
8/21/80	26.9	*	248
8/22/80	26.0	*	640
8/25/80	26.8	*	1192
8/26/80	27.0	*	2290
8/28/80	26.7	*	2675

NOTE. * NO DATA RECORDED.

TABLE 6.0-4 (Page 3 of 4)

1980 DAILY MEAN PHYSIOCHEMISTRY

ROSETON IMPINGEMENT

START DATE	MEAN TEMPERATURE (C)	MEAN D.O. (MG/L)	MEAN CONDUCTIVITY (UMHOS/CM)
8/29/80	26.5	*	1840
9/02/80	27.2	*	2042
9/03/80	25.0	*	2160
9/04/80	26.8	*	1507
9/05/80	27.8	*	2810
9/08/80	25.7	*	1602
9/09/80	25.0	*	1900
9/11/80	25.3	*	1710
9/12/80	25.0	*	1500
9/18/80	23.4	*	1247
9/19/80	23.0	*	1430
9/25/80	22.9	*	1740
9/26/80	22.0	*	1615
10/02/80	21.6	*	1542
10/03/80	21.5	*	1820
10/09/80	20.0	*	1100
10/10/80	19.0	*	1010
10/13/80	18.3	*	1167
10/14/80	18.0	*	515
10/16/80	18.3	*	1000
10/17/80	18.0	*	1150
10/20/80	17.4	*	718
10/21/80	16.8	*	1760
10/23/80	16.3	*	782
10/24/80	14.8	*	860
10/27/80	14.7	*	460
10/28/80	14.8	*	390
10/30/80	13.4	*	318
10/31/80	12.5	*	320
11/03/80	13.8	*	277
11/04/80	13.3	*	340
11/06/80	12.0	*	267
11/07/80	13.0	*	280
11/10/80	11.5	*	258
11/11/80	11.5	*	240
11/13/80	11.1	*	227
11/14/80	10.5	*	220
11/20/80	9.3	*	228
11/21/80	8.5	*	240
11/25/80	8.8	*	270
11/26/80	7.8	*	258

1980 DAILY MEAN PHYSIOCHEMISTRY

ROSETON IMPINGEMENT

START DATE	MEAN TEMPERATURE (C)	MEAN D.O. (MG/L)	MEAN CONDUCTIVITY (UMHOS/CM)
12/04/80	4.6	*	238
12/05/80	4.0	*	240
12/11/80	5.3	*	215
12/12/80	4.3	*	215
12/18/80	3.8	*	230
12/19/80	4.0	*	210
12/23/80	4.8	*	250
12/24/80	3.1	*	218

NOTE. * NO DATA RECORDED.

TABLE 6.0-5 (Page 1 of 4)

1980 DAILY MEAN PHYSIOCHEMISTRY

OANSKAMMER IMPINGEMENT

START DATE	MEAN TEMPERATURE (C)	MEAN D.O. (MG/L)	MEAN CONDUCTIVITY (UMHOS/CM)
1/03/80	3.0	*	183
1/04/80	3.0	*	180
1/10/80	2.2	*	180
1/11/80	2.3	*	180
1/17/80	1.8	*	190
1/18/80	3.0	*	185
1/24/80	1.8	*	175
1/25/80	1.5	*	180
1/31/80	1.7	*	174
2/01/80	1.5	*	185
2/07/80	1.3	*	193
2/08/80	0.5	*	180
2/14/80	1.0	*	315
2/15/80	2.0	*	558
2/21/80	2.2	*	1052
2/22/80	1.0	*	550
2/28/80	1.3	*	725
2/29/80	1.0	*	1080
3/06/80	1.6	*	843
3/07/80	0.5	*	495
3/13/80	1.2	*	219
3/14/80	1.0	*	230
3/20/80	2.3	*	220
3/21/80	3.0	*	220
3/27/80	5.2	*	157
3/28/80	5.0	*	160
4/03/80	5.8	*	172
4/04/80	7.0	*	170
4/10/80	7.9	*	178
4/11/80	7.3	*	180
4/17/80	10.6	*	155
4/18/80	10.0	*	150
4/21/80	10.6	*	140
4/22/80	9.0	*	140
4/24/80	10.5	*	140
4/25/80	10.0	*	140
4/28/80	10.7	*	163
4/29/80	11.0	*	220
5/01/80	11.1	*	158
5/02/80	11.5	*	160

NOTE: * NO DATA RECORDED.

1980 DAILY MEAN PHYSIOCHEMISTRY

DANSKAMMER IMPINGEMENT

START DATE	MEAN TEMPERATURE (C)	MEAN D.O. (MG/L)	MEAN CONDUCTIVITY (UMHOS/CM)
5/08/80	13.5	*	163
5/09/80	13.0	*	170
5/15/80	15.3	*	178
5/16/80	15.0	*	180
5/19/80	16.2	*	153
5/20/80	16.0	*	170
5/22/80	17.2	*	177
5/23/80	17.0	*	180
5/26/80	18.0	*	180
5/27/80	18.0	*	180
5/29/80	18.8	*	193
5/30/80	18.5	*	200
6/02/80	19.3	*	207
6/03/80	19.5	*	220
6/05/80	19.7	*	267
6/06/80	18.8	*	295
6/09/80	18.8	*	193
6/10/80	21.8	*	200
6/12/80	20.0	*	250
6/13/80	20.5	*	205
6/16/80	20.3	*	200
6/17/80	19.8	*	200
6/19/80	21.5	*	238
6/20/80	20.7	*	250
6/26/80	22.7	*	208
6/27/80	23.3	*	230
7/03/80	22.5	*	218
7/04/80	22.0	*	220
7/10/80	23.4	*	228
7/11/80	23.8	*	225
7/14/80	24.0	*	237
7/15/80	24.0	*	225
7/17/80	25.5	*	213
7/18/80	26.0	*	200
7/24/80	26.2	*	233
7/25/80	26.0	*	220
7/31/80	26.3	*	253
8/01/80	26.0	*	220
8/07/80	26.8	*	237
8/08/80	27.0	*	260
8/11/80	27.7	*	248

NOTE. * NO DATA RECORDED.

TABLE 6.0-5 (Page 3 of 4)

1980 DAILY MEAN PHYSIOCHEMISTRY

DANSKAMMER IMPINGEMENT

START DATE	MEAN TEMPERATURE (C)	MEAN D.O. (MG/L)	MEAN CONDUCTIVITY (UMHOS/CM)
8/12/80	27.5	*	260
8/14/80	27.8	*	255
8/15/80	27.5	*	240
8/21/80	25.8	*	240
8/22/80	26.0	*	365
8/28/80	26.1	*	1724
8/29/80	25.5	*	1780
9/02/80	27.0	*	1873
9/03/80	26.0	*	2060
9/04/80	26.2	*	1247
9/05/80	26.5	*	2295
9/08/80	25.4	*	1418
9/09/80	25.0	*	2100
9/11/80	24.9	*	1440
9/12/80	24.5	*	1415
9/18/80	23.2	*	1157
9/19/80	22.3	*	1370
9/25/80	22.3	*	1652
9/26/80	22.0	*	1725
9/29/80	20.8	*	1190
9/30/80	21.3	*	965
10/02/80	21.3	*	1505
10/03/80	21.3	*	1935
10/06/80	20.2	*	913
10/07/80	20.5	*	1585
10/09/80	19.4	*	912
10/10/80	18.0	*	800
10/16/80	18.2	*	983
10/17/80	17.8	*	835
10/23/80	16.3	*	515
10/24/80	15.3	*	875
10/27/80	14.3	*	403
10/28/80	14.2	*	325
10/30/80	13.6	*	323
10/31/80	12.0	*	285
11/03/80	12.8	*	253
11/04/80	12.3	*	290
11/06/80	12.6	*	255
11/07/80	11.9	*	240
11/10/80	11.6	*	247
11/11/80	10.5	*	230

* NO DATA RECORDED.

TABLE 6.0-5 (Page 4 of 4)

1980 DAILY MEAN PHYSIOCHEMISTRY

DANSKAMMER IMPINGEMENT

START DATE	MEAN TEMPERATURE (C)	MEAN D.O. (MG/L)	MEAN CONDUCTIVITY (UMHOS/CM)
11/13/80	10.2	*	232
11/14/80	9.5	*	230
11/17/80	9.1	*	263
11/18/80	8.0	*	250
11/20/80	8.5	*	235
11/21/80	7.5	*	235
11/24/80	8.7	*	260
11/25/80	8.8	*	243
11/26/80	7.3	*	233
12/04/80	3.7	*	233
12/11/80	5.0	*	215
12/12/80	4.8	*	205
12/18/80	3.8	*	213
12/19/80	3.5	*	215
12/22/80	2.4	*	210
12/23/80	2.3	*	260
12/24/80	3.1	*	222
12/29/80	1.5	*	220
12/30/80	1.0	*	230

NOTE. * NO DATA RECORDED.

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ATTACHMENT A

ATTACHMENT A

Roseton Direct Release Experiment

The results of the Roseton entrainment direct release experiments are summarized in Table A-1. Run No. I consisted of releasing 20 larvae into the collection net (which was suspended in a culvert filled with water), washing down the net, and counting the number of organisms. The results indicate no loss of larvae during the washing and counting procedures.

Twenty larvae were placed in the 0.5-m net for each of Runs II and III, and the entrainment pump was run for 30 min at 0.613 cfs. A total of 19, or 47.5% of the larvae were recovered, indicating 52.5% lost. The loss was attributed to the turbulent water action on these newly hatched yolk-sac larvae and their vulnerability to damage.

Twenty yolk-sac larvae were introduced into the inflow side of the entrainment pumps for Runs IV and V for 5 and 30 min, respectively. A total of 17 larvae were recovered during Run IV and one during run V for a total recovery of 45%. Field observations during these tests noted that at the time of sampling, air was entering the system, causing the pump to lose its prime and produce erratic flow. This problem was corrected for later runs.

A modification was made to the method of larvae introduction for Runs VI and VII. Instead of releasing larvae through a ball valve and then into the pump, larvae were passed into the pump through a garden hose. This method caused the larvae to pass rapidly through the ball valve because of the Venturi effect on the in-line flow.

TABLE A-1

NUMBER RELEASED, NUMBER RECOVERED AND PERCENT RECAPTURED DURING ROSETON'S DIRECT RELEASE EXPERIMENTS

Roseton Generating Station - 1980

DATE	RUN NUMBER	RELEASE LOCATION	SAMPLE RUN TIME (min)	NUMBER RELEASED	NUMBER RECOVERED	PERCENT RECAPTURE
22 May	I	0.5 m net	0	20	20	100%
22 May	II	0.5 m net	30	20	6	30%
22 May	III	0.5 m net	30	20	13	65%
22 May	IV	Pump	5	20	17	85%
22 May	V	Pump	30	20	1	5%
31 May	VI	Pump	5	50	43	86%
31 May	VII	Pump	30	50	47	94%

Altering the system so that flow from the hose gently entered the in-line flow minimized damage.

A total of 100 larvae were introduced into the pump for Runs VI and VII: 90 were recovered. The higher recovery for these tests as opposed to Runs IV and V was attributed to the improved introduction technique and the additional week of growth of the yolk-sac larvae, probably making them hardier.

CENTRAL HUDSON GAS & ELECTRIC CORPORATION

ENVIRONMENTAL AFFAIRS DIVISION

1980

ICHTHYOPLANKTON ENTRAINMENT SURVIVAL STUDY

ROSETON GENERATING STATION

September 1982

LMSE-83/0051&176-197

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TABLE OF CONTENTS

	Page No.
LIST OF FIGURES	iii
LIST OF TABLES	iv
1.0 INTRODUCTION	1.0-1
2.0 MATERIALS AND METHODS	2.0-1
2.1 Field Program	2.0-1
2.1.1 Sampling Locations and Frequency	2.0-1
2.1.2 Collection Procedure	2.0-1
2.1.3 Bioassay Facility and Sorting Procedures	2.0-9
2.1.4 Viability Observation Procedure	2.0-12
2.2 Laboratory Analysis	2.0-13
2.2.1 Sort - Fish Egg and Larval Analysis	2.0-13
2.2.2 Identification - Fish Eggs and Larvae	2.0-13
2.3 Data Analysis	2.0-14
3.0 STUDY RESULTS	3.0-1
3.1 Species Inventory	3.0-1
3.2 Collection Parameters	3.0-1
3.2.1 Roseton Intake	3.0-1
3.2.2 Seal Well Discharge	3.0-3
3.2.3 Physical/Chemical Information	3.0-3
3.3 Temporal Abundance Pattern	3.0-7
3.4 Initial Survival	3.0-15
3.4.1 Eggs	3.0-15
3.4.2 *Alosa* spp. Larvae	3.0-15
3.4.3 Striped Bass Larvae	3.0-17
3.4.4 White Perch Larvae	3.0-19
3.5 Extended Ichthyoplankton Survival	3.0-22
3.5.1 *Alosa* spp.	3.0-22
3.5.2 Striped Bass	3.0-22
3.5.3 White Perch	3.0-26
3.6 Plant Entrainment Survival - S_e	3.0-26

TABLE OF CONTENTS
(Continued)

	Page No.
4.0 REPORT SUMMARY	4.0-1
REFERENCES CITED	R-1
APPENDICES	
A - Collection Velocity Comparison	
B - Collection Information by Water Temperature	
C - Initial Survival Data Analysis	
D - Intake and Seal Well Collection Information Sample Abundance and Concentration	
E - Intake and Seal Well Collection Information Inital and Extended Survival Data	
F - Intake and Seal Well Collection Information Length Frequency Data	

LIST OF FIGURES

Figure No.	Title	Page No.
2.0-1	Roseton Intake Sampling Location	2.0-2
2.0-2	Ichthyoplankton Survival Sampling Program Roseton Discharge - Seal Well	2.0-3
2.0-3	Ichthyoplankton Collection Table - General Design	2.0-6
2.0-4	Schematic Diagram of the Larval Table	2.0-7
2.0-5	Roseton Seal Well Larval Table	2.0-8
2.0-6	Ichthyoplankton Bioassay Facility - Roseton Generating Station	2.0-10
2.0-7	Ichthyoplankton Holding Tank and Sorting Table	2.0-11
3.0-1	Mean Concentration of Alosa spp. Collected During the Entrainment Survival Study	3.0-8
3.0-2	Length Intervals and Frequency of Occurrence for Alosa spp. Collected During Roseton Entrainment Survival Study	3.0-9
3.0-3	Mean Concentration of Striped Bass Collected During the Entrainment Survival Study	3.0-10
3.0-4	Length Intervals and Frequency of Occurrence for Striped Bass Collected During Roseton Entrainment Survival Study	3.0-12
3.0-5	Mean Concentration of White Perch Collected During the Entrainment Survival Study	3.0-13
3.0-6	Length Intervals and Frequency of Occurrence for White Perch Collected During Roseton Entrainment Survival Study	3.0-14
3.0-7	Initial Survival of Post-Yolk-Sac Alosa Larvae Relative to Water Temperature	3.0-18
3.0-8	Initial Survival of Striped Bass Larvae Relative to Water Temperature	3.0-20
3.0-9	Initial Survival of Post-Yolk-Sac White Perch Larvae Relative to Water Temperature	3.0-21

LIST OF TABLES

Table No.	Title	Page No.
2.0-1	Sample Period, Pump Operation, and Number of Samples Collected During the Roseton Entrainment Survival Study	2.0-4
3.0-1	Total Number of Ichthyoplankton Collected by Life Stage During Entrainment Survival Study	3.0-2
3.0-2	Physical and Chemical Data Recorded at Danskammer Point and Roseton Intakes During Ichthyoplankton Survival Study	3.0-4
3.0-3	Water Temperature Recorded During Entrainment Survival Study	3.0-5
3.0-4	Conductivity Recorded During Entrainment Survival Study	3.0-6
3.0-5	Initial Survival Information Collected During the Ichthyoplankton Survival Study	3.0-16
3.0-6	Ichthyoplankton Survival Study - Latent Survival Observation Information - All Sampling Periods	3.0-23
3.0-7	Ichthyoplankton Survival Study - Latent Survival Observation Information - Comparative Sampling Periods	3.0-24
3.0-8	Ichthyoplankton Survival Study - Calculated Extended Survival	3.0-25
3.0-9	Plant Entrainment Survival	3.0-28

CHAPTER 1.0

INTRODUCTION

Since 1975, ichthyoplankton entrainment survival studies have been conducted at the Roseton Generating Station using a pump/larval table combination designed by Ecological Analysts, Inc. (EAI 1980). Developmental work on the larval table as a method of collecting fish larvae with a minimum of stress was conducted at the Roseton and Danskammer Point plants by Lawler, Matusky & Skelly Engineers (LMS) during 1974 (McGroddy and Wyman 1977; LMS 1978). During recent years, LMS and EAI have refined the basic larval table, and each has developed a somewhat different design based on an induced-flow concept.

Central Hudson Gas & Electric Corp. (CHGE) proposed a comprehensive entrainment survival study for 1980 that would require the use of induced-flow larval tables during the season when Alosa spp. and Morone spp. larvae were expected to be abundant in the Roseton region of the Hudson River estuary. Both LMS and EAI collected entrainment survival samples at similar time intervals at intake and seal well locations, which permitted survival results achieved by the two different designs to be compared.

The program schedule proposed for the 1980 Roseton entrainment survival program was to collect ichthyoplankton samples during four time periods per week at the intake and discharge seal well between 25 May and 21 June. Six comparative samples were scheduled to be collected at each location per time period, with sampling timed to coincide with the diel period of peak larval entrainment based on previous entrainment programs. Initial ichthyoplankton survival information was to be recorded for all organisms. Following these observations, made during the collection sort procedure in the

laboratory, all live and stunned specimens were to be held in a flow-through system for evaluation of extended survival (48 hrs).

The following sections detail the results of LMS' Roseton entrainment survival program. Sample collection information and summary data are presented in the report appendix.

CHAPTER 2.0

MATERIALS AND METHODS

2.1 FIELD PROGRAM

2.1.1 Sampling Locations and Frequency

Ichthyoplankton survival samples were collected at the Roseton intake and discharge seal well during the period 28 May-26 June 1980. The two sample locations are described below:

- Roseton Intake (RI) - Station at the northern end of the Roseton intake structure. Larval table intake hose (10.2 cm) located in front of traveling screen 1B (circulating water pump 1A) bar rack anchored 3 m from the river bottom (Figure 2.0-1).
- Roseton Discharge Seal Well (RDSW) - Sample water withdrawal from the main discharge flow through a 10.2-cm pipe with inlet opening approximately 2 m from the bottom of the seal well structure (Figure 2.0-2).

Samples were collected simultaneously at both sampling locations six times on each date between 1900-0430 hrs. No samples were collected at the discharge seal well during the first six dates because of problems in maintaining sample flow to the larval table. Decreased numbers of larvae limited sampling at each location during the last sampling week (Table 2.0-1). As a result, simultaneous sampling was conducted on only nine dates. Eighty-eight samples were collected at the intake and 58 at the seal well, with 52 comparative sample sets collected between the two locations.

2.1.2 Collection Procedure

Sampling was conducted with an induced-flow larval table for 15 min at each station. The table's general design is shown in

FIGURE 2.0-1

ROSETON INTAKE SAMPLING LOCATION

Entrainment Survival Study - 1980

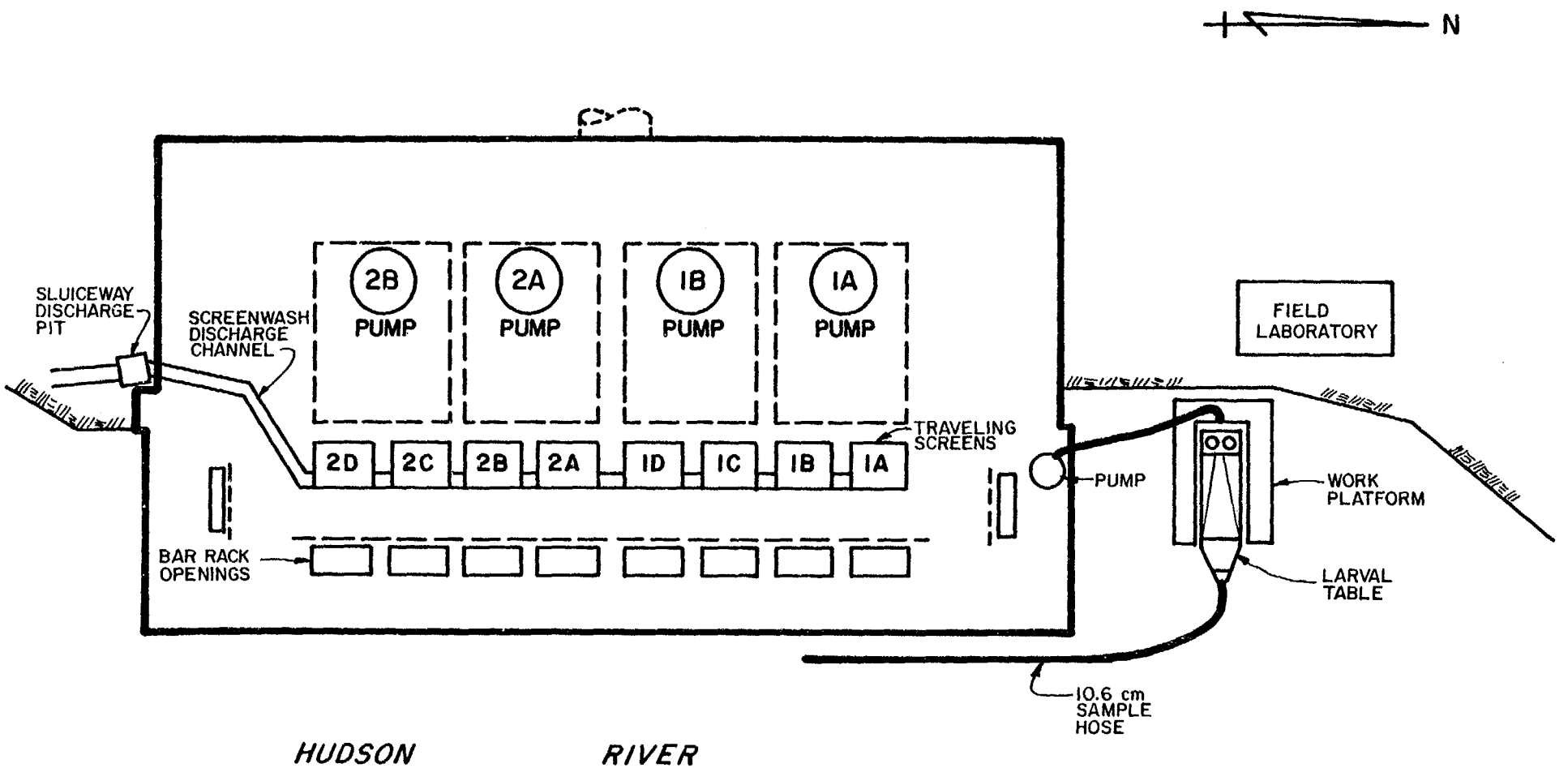


FIGURE 2.0-2

ICHTHYOPLANKTON SURVIVAL SAMPLING PROGRAM

Roseton Discharge - Seal Well
1980

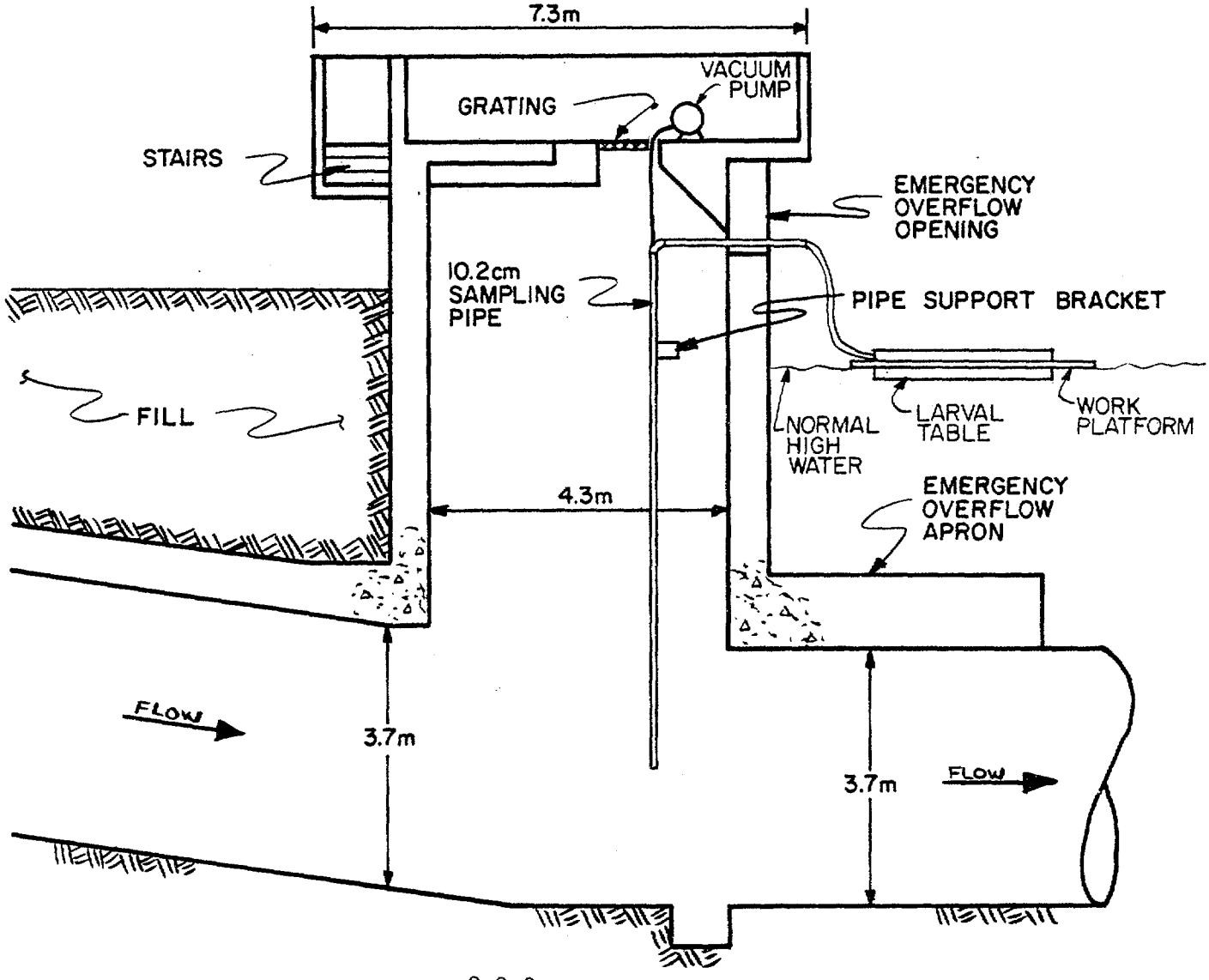


TABLE 2.0-1

SAMPLE PERIOD, PUMP OPERATION, AND NUMBER OF SAMPLES COLLECTED DURING THE ROSETON ENTRAINMENT SURVIVAL STUDY

Roseton Generating Station - 1980

	INTAKE				SEAL WELL		
	SAMPLE PERIOD			CIRCULATING	SAMPLE PERIOD		
SAMPLE DATE	START TIME	END TIME	NUMBER SAMPLES COLLECTED	WATER PUMP OPERATION	START TIME	END TIME	NUMBER SAMPLES COLLECTED
28-29 May	2201	0410	6	1A,2A	-	-	NS
29-30 May	2038	0131	6	1A,2A	-	-	NS
2- 3 Jun	2000	0004	6	1A,2A	-	-	NS
3- 4 Jun	1943	0013	6	1A,2A	-	-	NS
4- 5 Jun	1942	0118	6	1A,1B,2A	-	-	NS
5- 6 Jun	2013	0100	6	1A,1B,2A	-	-	NS
9-10 Jun	2050	0130	6	1A,2A[a],2B	2050	0130	6
10-11 Jun	2005	0115	6	1A,2A,2B	2005	0115	6
11-12 Jun	1932	0100	6	1A,1B[b],2A	1932	0100	6
12-13 Jun	2015	0115	6	1A,1B,2A	2015	0115	6
16-17 Jun	1945	0030	6	1A,1B,2A	1945	0030	6
17-18 Jun	1920	0010	6	1A,1B,2A	1920	0010	6
18-19 Jun	1915	0010	6	1A,1B,2A	1915	0010	6
19 Jun	1938	2345	6	1A,1B,2A	1938	2345	6
23 Jun	1950	2330	4	1A,1B,2A	1950	2330	4
24 Jun	-	-	NS		-	-	NS
25 Jun	-	-	NS		-	-	NS
26 Jun	-	-	NS	1B,2A,2B	1912	2304	6
Total			88				58

[a] Pump 2A not operating 2159-2225 9 Jun 80.
[b] Pump 1B commenced operation at 2050.
NS - No Sample.

Figure 2.0-3; detailed designs of the intake and seal well tables are shown in Figures 2.0-4 and 2.0-5, respectively. Velocity meters on each discharge line were used to monitor sample collection velocities and determine sample volumes. Valves on the intake lines and valves and pumps on the discharge lines regulated the flow.

Flow rates varied among samples, which are defined as all ichthyoplankton and extraneous material collected from water filtered through the table for 15 min at a constant flow rate. Rates ranged from 0.76 to 1.57 m^3/min (11.36 to 23.56 m^3 in 15 min). Nominal sample volume was 11.36 m^3, but samples of greater volume were taken at the request of CHGE during the latter part of the program.

Temperature and conductivity of the water in the larval table were recorded during the collection of each sample. Tidal height and stage were also recorded.

A sampling interval was initiated when the table was filled with water to its operating depth of 50 cm from behind the angled screens. Pump discharge water supplied to the table on the discharge side of the collection flume eliminated the possibility of sample contamination. Opening a 6-in. knife-gate valve on the bow of the table, which permitted water to flow through the angled screens and collection baskets, initiated the actual sample time of 15 min. Closing this valve terminated it. After sampling, the larval table was completely drained and the sample collection baskets were removed and transported to the laboratory for analysis. Each of the two larval tables was outfitted with two collection baskets. Although only one basket was used at a time, each sample was comprised of the contents of both baskets. One basket was operational during the 15-min sample time; the second, during the table drain period of up to 15 min. The time from the end of one sample to the start of the next was approximately 45 min.

FIGURE 2.0-3

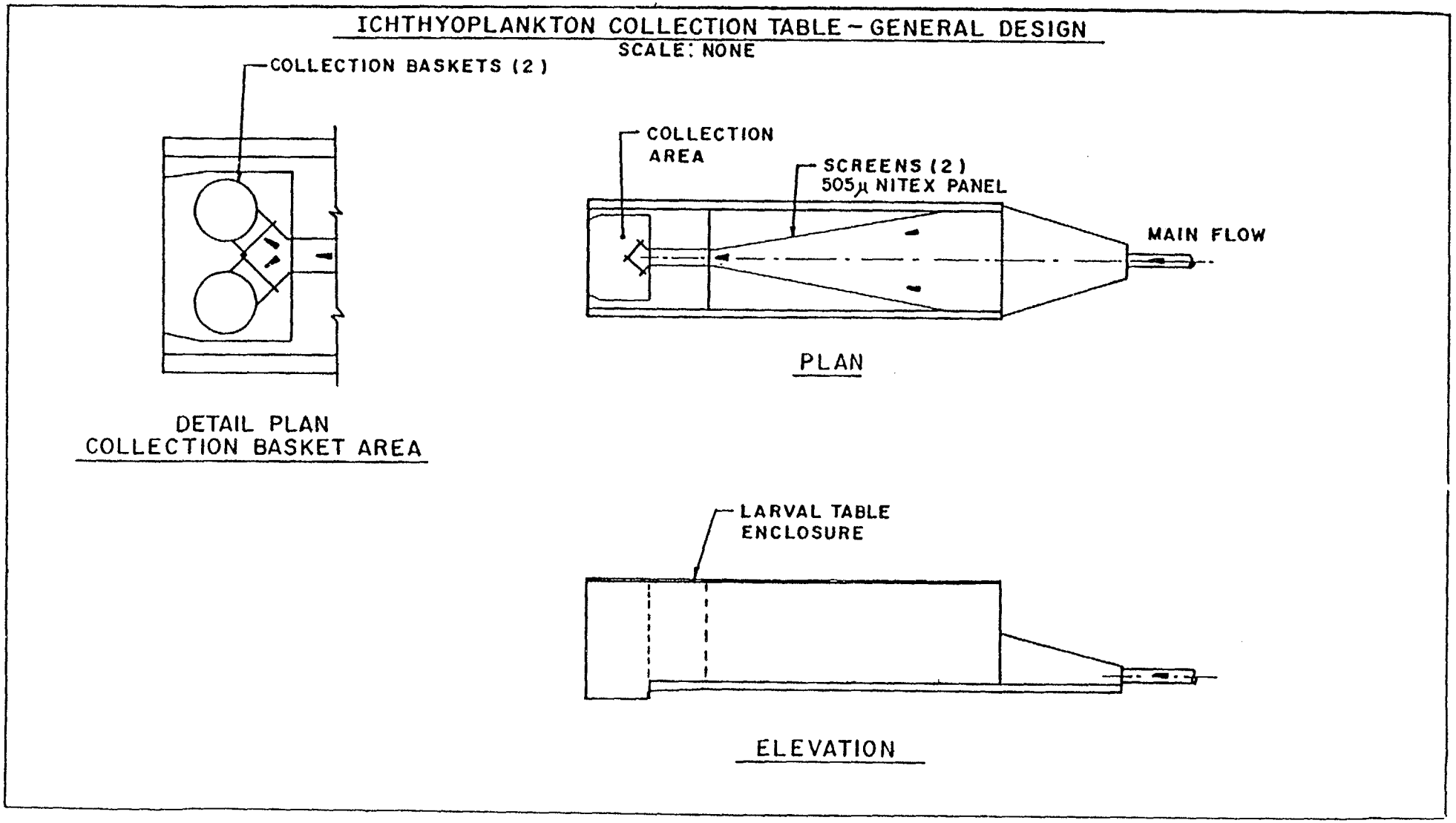

ICHTHYOPLANKTON COLLECTION TABLE - GENERAL DESIGN
SCALE: NONE
COLLECTION BASKETS (2)
DETAIL PLAN
COLLECTION BASKET AREA
COLLECTION AREA
SCREENS (2)
505μ NITEX PANEL
MAIN FLOW
PLAN
LARVAL TABLE ENCLOSURE
ELEVATION

FIGURE 2.0-4

SCHEMATIC DIAGRAM OF THE LARVAL TABLE

Roseton Intake

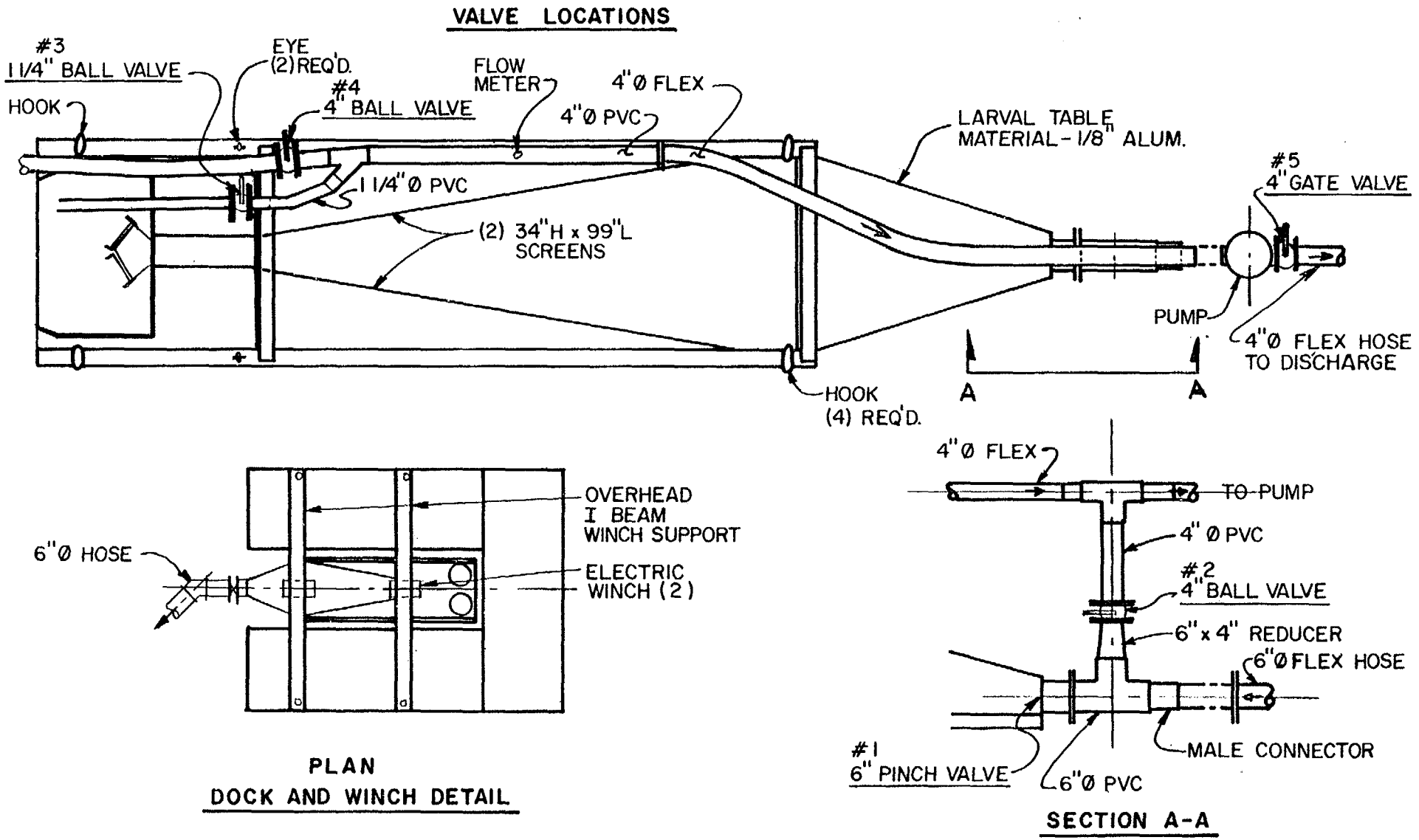
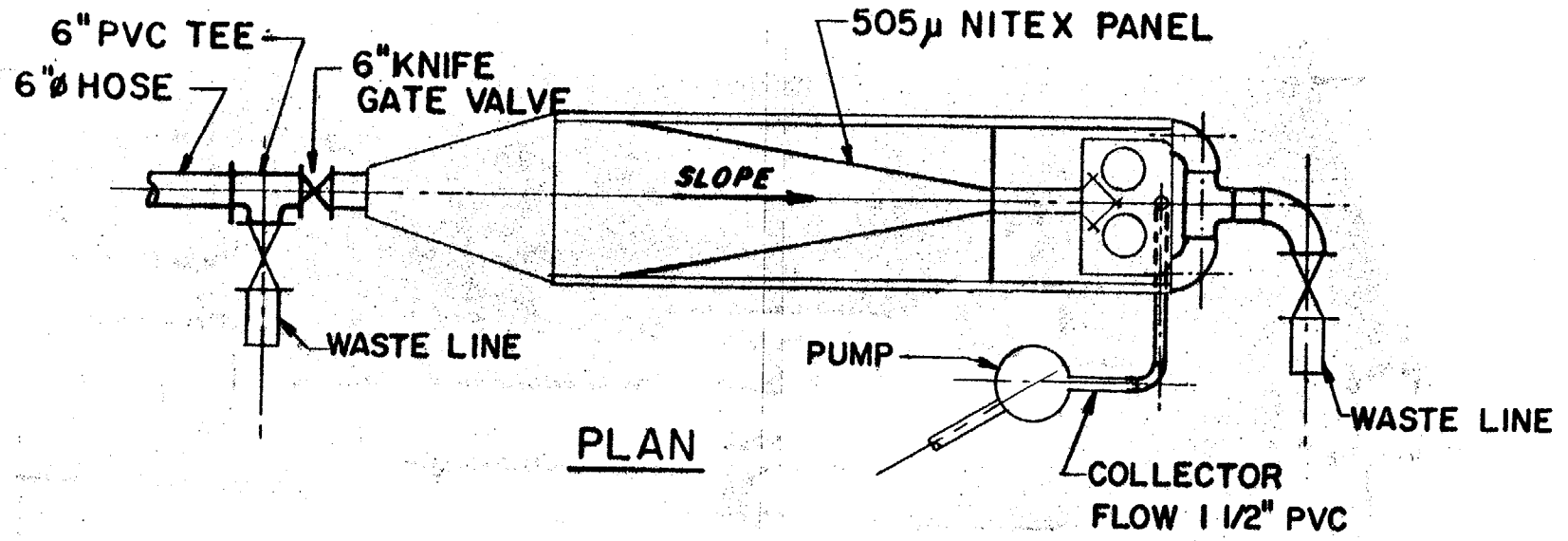
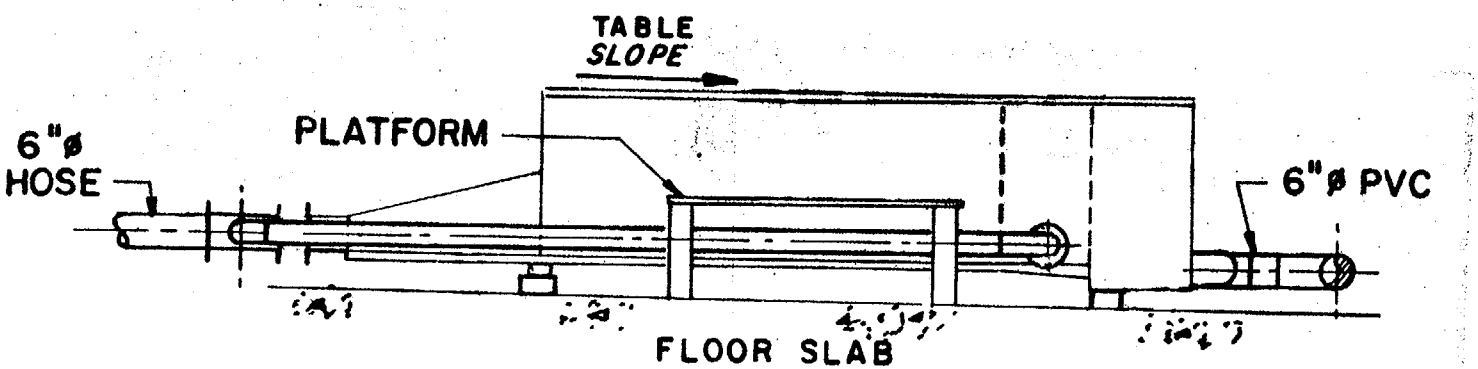


FIGURE 2.0-5

ROSETON SEAL WELL LARVAL TABLE



PLAN



ELEVATION

2.1.3 Bioassay Facility and Sorting Procedures

Laboratory analyses and ichthyoplankton survival observations were conducted in a modified 7.9 x 2.4 m (26 x 8 ft) trailer (Figure 2.0-6) located along the bulkhead just north of the intake structure. The bioassay facility consisted of two rooms: one for long-term holding of ichthyoplankton and the other a laboratory work area. The holding room consisted of upper and lower flow-through water tables, each one capable of holding approximately twelve 20-gal aquaria. Filtered ambient water was delivered to the aquaria through overhead PVC pipes, with flow controlled by valves (Figure 2.0-7). Ambient water was drawn from the Hudson River at a depth of 3.0 m and filtered using a rapid sand filter. Other than filtration, no further treatment of the circulating water, such as addition of a biocide, was done. The holding room was equipped with fluorescent lights directly over each level of aquaria to facilitate survival observations.

The laboratory work area was equipped with a lighted table for observing initial sorting and latent effects (Figure 2.0-7). This table, which functioned as a flow-through water bath, maintained the samples at ambient Hudson River temperature through the sort and analysis period. Workbench space was available in both rooms for sorting and analysis of ichthyoplankton samples.

The collection containers were transported to the wet lab and placed in the lighted flow-through sorting table. The clear Plexiglas bottoms of the larval table collection baskets permitted ichthyoplankton sorting to be conducted in the container. All live (swimming normally) and stunned (swimming erratically) Morone spp., Alosa spp., and other larvae were removed from the container (with widebore turkey basters or plastic spoons) and placed in separate long-term holding containers (live larvae of a species in one

FIGURE 2.0-6

ICHTHYOPLANKTON BIOASSY FACILITY

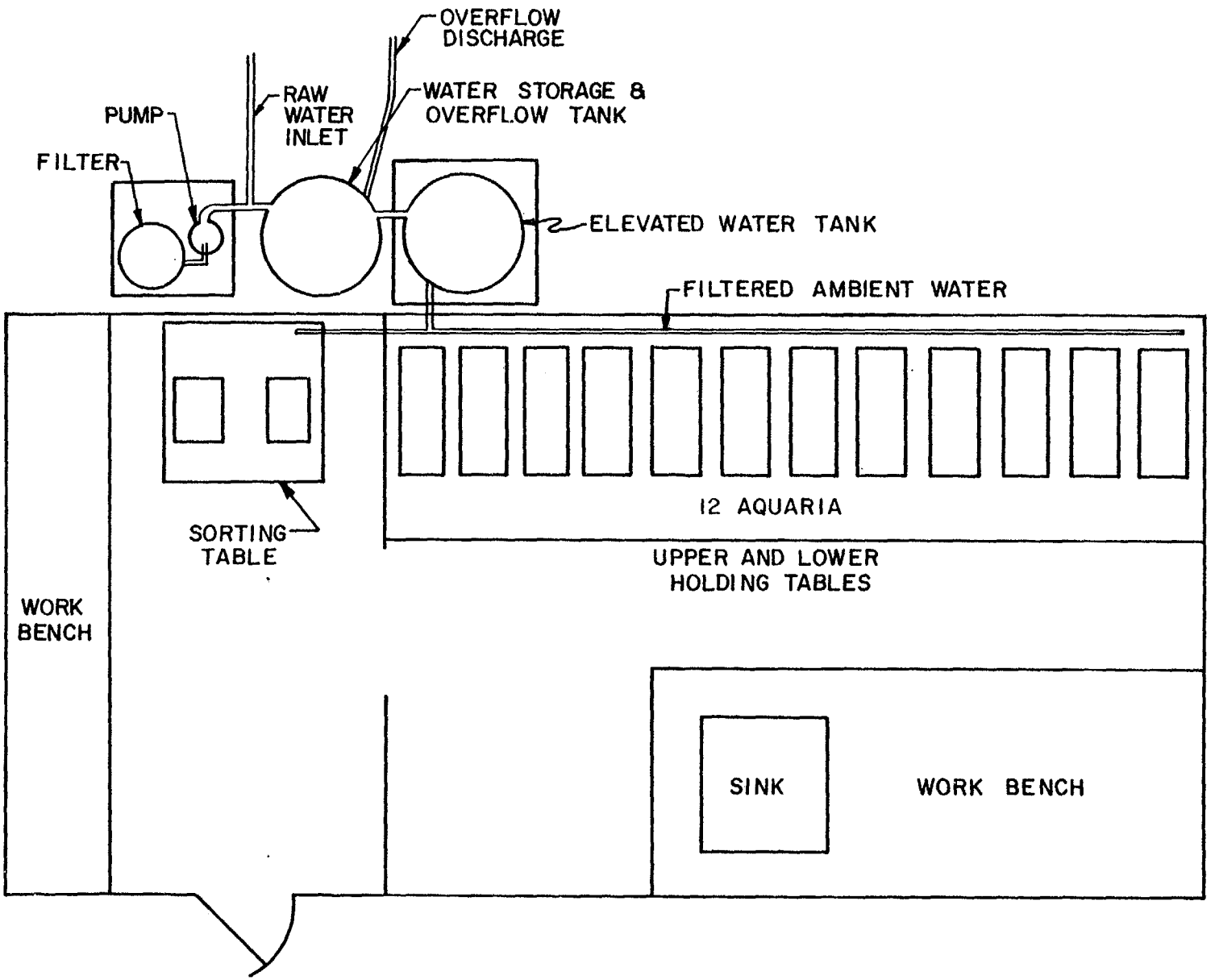
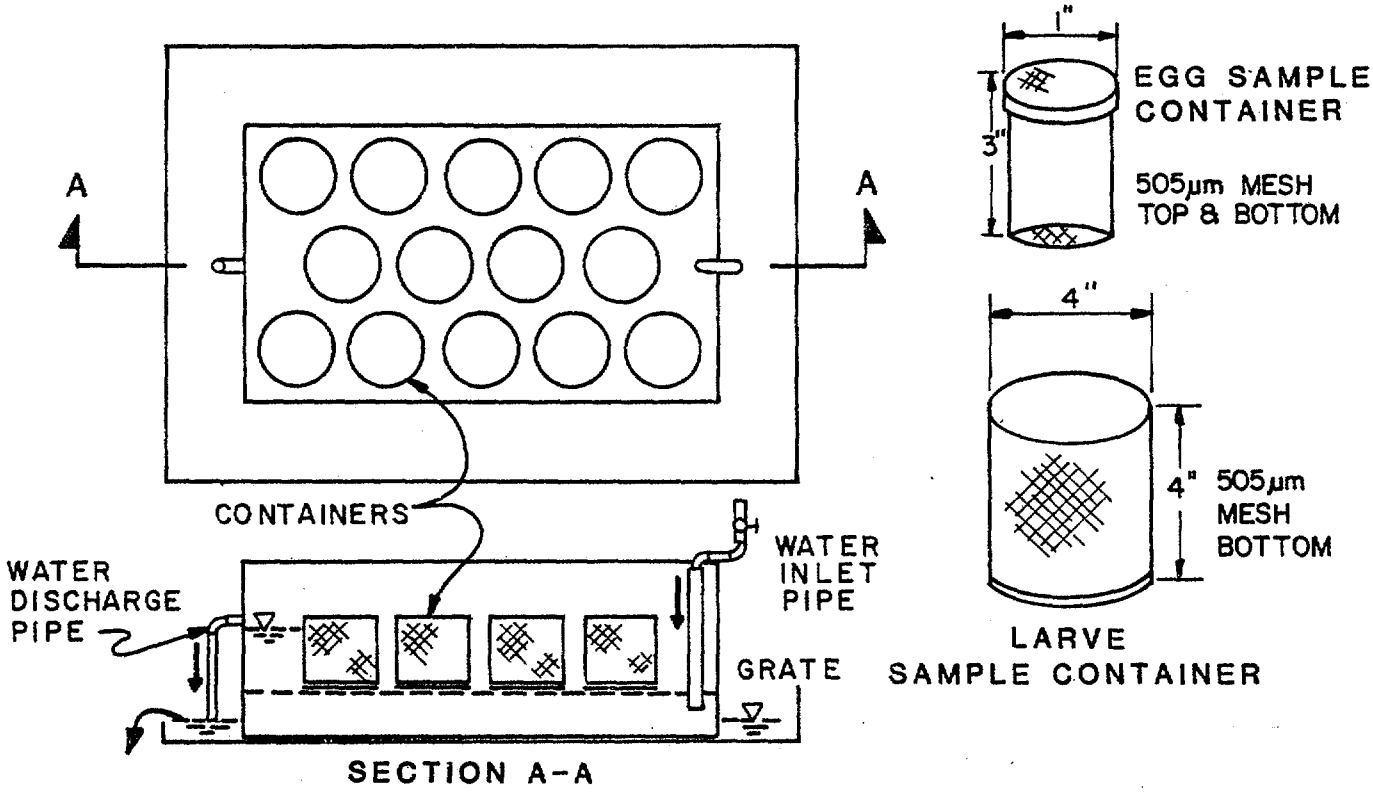


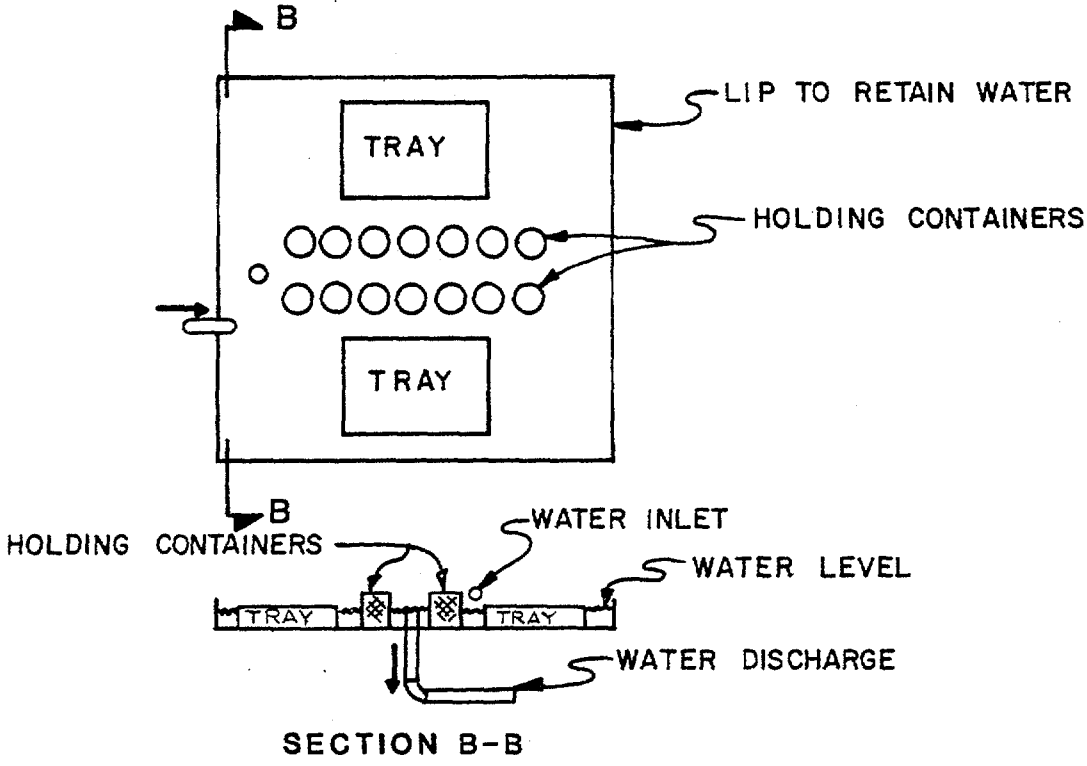
FIGURE 2.0-7

ICHTHYOPLANKTON HOLDING TANK AND SORTING TABLE

ICHTHYOPLANKTON HOLDING TANK AND CONTAINER



FLOW THROUGH SORTING TABLE



container and stunned in another) (Figure 2.0-7). A 5X illuminated magnifier was used to aid in sorting. Separate containers were used to isolate the larvae by major taxa (Morone, Alosa, etc.) and life stage to minimize predation. The maximum number of larvae per container was 20. All live eggs - those that are clear and transparent - were removed and placed in specially designed flow-through containers (Figure 2.0-7). Before 10 June 1980, ichthyoplankton and eggs observed to be dead were not removed from the sample during the initial sort but were counted during the quality control check. After this date all organisms determined to be dead at the time of the initial sort were removed and labeled as initial dead. All field observations and water quality data were recorded on a data sheet for each sample through the sort and analysis period. Sort time to separate larvae for initial observation was limited to 45 min; ichthyoplankton-containing samples not completed in that time were preserved for later analysis.

After initial viability sorting, each container was placed in a prescribed area in the flow-through water system. Lights were on in the wet lab at all times. The remainder of the sample in the collection container was thoroughly rinsed into a mason jar containing a premeasured volume of 5% buffered formalin and labeled. This portion was later processed in the laboratory; all larvae were considered in the QC count. Eggs and larvae observed in the QC check were considered initially dead for data analysis.

2.1.4 Viability Observation Procedure

The initially live and stunned ichthyoplankton were observed at 6, 12, 24, and 48 hrs following each individual collection. Dead organisms were removed, placed in separate vials, and labeled according to collection location, date, time, run number, and condition (live or stunned when sorted). Larvae were not fed during

the observation period. Color-coded labels were used for the various observation periods and larval conditions, which were recorded for all larvae remaining at the 48-hr observation. Larvae were preserved in color-coded vials for laboratory analysis.

2.2 LABORATORY ANALYSIS

Ichthyoplankton survival samples were analyzed in two stages:

- Any fish eggs or larvae remaining in the sample after initial field sorting and subsequent preservation were removed and identified.
- All fish eggs and larvae from each survival time period of each sample were identified.

2.2.1 Sort - Fish Egg and Larval Analysis

Following a rinse to remove formalin, the preserved sample contents remaining after the initial viability sort were placed in shallow pans and examined for fish eggs and larvae. This procedure served as a quality control check on the viability sort and ensured that all eggs and larvae were separated from the remaining sample material. Fish eggs and larvae found in the sample were preserved for later analysis.

2.2.2 Identification - Fish Eggs and Larvae

Fish eggs and larvae from each observation period and from the sample sort procedure were identified to the lowest possible taxon. In addition, life stage and length were determined for each larval specimen. Keys specific to Hudson River ichthyoplankton were used to identify the larvae and eggs: Jones et al. (1978) and Alber and Arvidson (in preparation).

2.3 DATA ANALYSIS

Sample information was input to LMS' HP 3000 computer using a view screen format. Summary reports detailing species abundance, life stage, initial and latent viability, and length-frequency information were prepared and are presented in the report appendix.

Initial ichthyoplankton survival from the intake and seal well discharge stations was calculated using the following formula:

$$P_I \text{ or } P_{SW} = \frac{L_I + S_I}{N_{TOT}} \qquad (1)$$

Where:

P_I (P_{SW}) = Proportion surviving at the intake (seal well)
L_I = Larvae initially counted as live
S_I = Larvae initially counted as stunned
N_{TOT} = Total number larvae collected

Initial survival estimates were based on all organisms initially collected, including organisms identified from the quality control analysis. Extended survival was calculated for those organisms initially classified as live or stunned and monitored throughout the 48-hr period following collection. The initial effects of entrainment were measured by comparing survival at the intake with survival at the seal well. The proportion surviving at each location (calculated by using Formula 1) were tested for differences using the z statistic (Fleiss 1973).

$$z = \frac{P_I - P_{SW}}{\sqrt{\bar{p}\bar{q}\left(\frac{1}{n_I} + \frac{1}{n_{SW}}\right)}} \qquad (2)$$

Where:

$$\bar{p} = \frac{\text{Number live and stunned at both locations}}{\text{Total number caught at both locations}}$$

$$\bar{q} = 1 - \bar{p}$$

n_I = Number collected at intake

n_{SW} = Number collected at seal well

To test the null hypothesis, $H_o : P_I = P_{SW}$, against the one-sided alternative, $H_A : P_I > P_{SW}$, z is compared to a normal probability table. If z is greater than 1.645, the conclusion is $P_I > P_{SW}$ at $\alpha = .05$.

With small sample sizes (n_I or $n_{SW} \leq 25$) or extreme proportions (P_I or $P_{SW} \geq 0.95$), the expected number live or dead could be very small. In this case the z statistic may reject the null hypothesis (H_o) more often than it should. To avoid this, Fisher's exact test for a 2 x 2 table was used (Everitt 1977). If the data were arranged in a table as follows:

	LIVE	DEAD
Seal Well	a	b
Intake	c	d

Then, under the assumption that the row and column totals are fixed, the probability of getting this table is:

$$p = \frac{(a+b)!\ (c+d)!\ (a+c)!\ (b+d)!}{a!\ b!\ c!\ d!\ N!} \qquad (3)$$

This probability under the fixed totals assumption is calculated for the observed table and every possible table with lower survival at

the seal well. If the sum of the probabilities is less than or equal to .05, then $H_0 : P_I = P_{SW}$ is rejected. For the 1980 sampling program no test was performed if fewer than five larvae were caught at either location.

The results of the z statistic comparison between the proportion surviving at the plant intake and the proportion surviving at the seal well following plant passage indicate:

1.	$P_I = P_{SW}$	No plant-induced mortality
2.	$P_I > P_{SW}$	Plant-induced mortality
3.	$P_I < P_{SW}$	No plant impact detected

Survival at the seal well is the result of the conditional probabilities of surviving plant passage and collection. Assuming there is no interaction between the two probabilities:

$$P_{SW} = P_S \times P_E$$

Where:

P_S = Probability of surviving collection

P_E = Probability of surviving plant passage

P_I was used as an estimate of P_S.

CHAPTER 3.0

STUDY RESULTS

3.1 SPECIES INVENTORY

The ichthyoplankton species collected at the Roseton intake and seal well discharge stations and their total abundance by life stage are presented in Table 3.0-1. Similar species representation was observed at both locations, differing only in the identification of a single post-yolk-sac yellow perch larva collected at the intake station. Eggs belonging to Alosa spp., striped bass, and white perch were identified. However, only white perch eggs were collected from the seal well station. Larvae of three taxa - Alosa spp., striped bass, and white perch - accounted for 86% and 87% of the intake and seal well collections, respectively, with Alosa spp. the most abundant of the three.

3.2 COLLECTION PARAMETERS

3.2.1 Roseton Intake

A total of 88 samples were collected at the Roseton intake on 15 dates. Six samples were collected on each date, with the exception of 23 June when only four were collected. The highest sample abundance, 108 larvae, was collected during 29-30 May (between 2325 and 2340 hrs) and was comprised of five species: the major species were Alosa spp. (38), striped bass (24), and white perch (41) (Appendix D). The Alosa spp. and white perch were predominantly post-yolk-sac and the striped bass were predominantly yolk-sac. No larvae were found in 10 of the 88 samples collected.

TABLE 3.0-1

TOTAL NUMBER OF ICHTHYOPLANKTON COLLECTED BY LIFE STAGE
DURING ENTRAINMENT SURVIVAL STUDY

Roseton Generating Station - 1980

I. ROSETON INTAKE (28 May - 23 June 1980: 88 Samples)

	NUMBER COLLECTED					
SPECIES	EGG	YOLK-SAC	POST-YOLK-SAC	JUVENILE	UID	TOTAL LARVAE[a]
Alosa spp.	20	14	266	0	0	280
American shad	0	0	10	0	0	10
Cyprinidae	0	11	49	0	0	60
Rainbow smelt	0	0	0	1	0	0
Striped bass	21	115	57	0	5	177
Tessellated darter	0	13	8	1	0	21
Morone spp.	0	0	5	0	7	12
UID	4	0	1	0	0	1
White perch	30	24	174	0	0	198
Yellow perch	0	0	1	0	0	1
TOTAL	75	177	571	2	12	760

II. ROSETON SEAL WELL DISCHARGE (9-26 June 1980: 58 Samples)

	NUMBER COLLECTED					
SPECIES	EGG	YOLK-SAC	POST-YOLK-SAC	JUVENILE	UID	TOTAL LARVAE[a]
Alosa spp.	0	0	328	0	3	331
American shad	0	0	16	0	0	16
Cyprinidae	0	11	19	0	2	32
Rainbow smelt	0	0	4	4	0	4
Striped bass	0	21	57	0	1	79
Tessellated darter	0	8	4	1	0	12
Morone spp.	0	0	8	0	1	9
UID	2	0	2	0	0	2
White perch	13	1	84	0	0	85
TOTAL	15	41	522	5	7	570

[a]Larvae include yolk-sac, post-yolk-sac, and UID; juveniles and eggs excluded.

3.2.2 Seal Well Discharge

Fifty-eight samples were collected on 10 sampling dates at the Roseton seal well. Six samples each were collected simultaneously from the seal well and the intake except on 23-24 June, when only four samples were collected, and 26 June, when no intake samples were collected. The highest single sample abundance was recorded on 12 June at 2205-2220 hrs, when 32 larvae representing seven species were collected. Post-yolk-sac Alosa spp. (19) and striped bass (8) were the major taxa collected. Only one seal well collection did not yield any larvae.

3.2.3 Physical/Chemical Information

Table 3.0-2 shows minimum daily intake temperature and daily chloride data (as NaCl) recorded at the Danskammer Point Generating Station during the ichthyoplankton survival study. Mean daily water temperature and conductivity monitored as part of the Roseton entrainment and impingement abundance studies (LMS 1981) are also presented in this table. Water temperature increased gradually during the 31-day study period, ranging from 17.8 to 22.8°C, and averaged 20.1°C. Chloride and conductivity data used to indicate saltwater intrusion into the study area were stable at low values throughout the study period, and were not representative of marine-derived waters.

Water temperature and conductivity readings taken in the larval table flume during each intake and seal well sample are presented in Tables 3.0-3 and 3.0-4, respectively. Generally, the intake values corresponded to the daily values recorded at the Danskammer Point intake and the entrainment and impingement abundance values collected at Roseton. No difference in conductivity was noted between intake and seal well samples. Water temperature from the intake samples ranged from 18.0 to 23.0°C and averaged 19.8°C; seal well samples ranged from 20.0 to 30.0°C and averaged 25.3°C.

TABLE 3.0-2

PHYSICAL AND CHEMICAL DATA RECORDED AT DANSKAMMER POINT AND ROSETON INTAKES DURING ICHTHYOPLANKTON SURVIVAL STUDY

May-June 1980

	DANSKAMMER POINT INTAKE DATA		ROSETON INTAKE BIOLOGICAL COLLECTION[a]	
DATE	MINIMUM DAILY TEMP. (°C)	CHLORIDE (mg/l NaCl)	MEAN WATER TEMP (°C)	MEAN CONDUCTIVITY (μmhos/cm)
26 May	17.8	-	-	-
27 May	17.8	48	18.4	190
28 May	17.8	61	18.8	195
29 May	18.3	48	19.0	195
30 May	18.9	52	18.8	195
31 May	18.9	-	-	-
1 Jun	18.9	-	-	-
2 Jun	19.4	74	-	-
3 Jun	19.4	84	19.7	467
4 Jun	19.4	93	19.8	352
5 Jun	19.4	78	19.9	275
6 Jun	20.0	62	19.8	326
7 Jun	20.0	-	20.2	252
8 Jun	20.0	-	-	-
9 Jun	19.4	65	-	-
10 Jun	19.4	55	19.5	254
11 Jun	19.4	63	18.7	273
12 Jun	19.4	66	19.9	233
13 Jun	-	43	19.9	253
14 Jun	20.0	50	19.6	248
15 Jun	20.6	54	-	-
16 Jun	20.6	55	-	-
17 Jun	20.6	57	21.0	231
18 Jun	21.1	65	19.8	238
19 Jun	21.1	78	21.9	237
20 Jun	21.1	70	20.8	338
21 Jun	21.1	76	19.9	273
22 Jun	-	42	-	-
23 Jun	21.1	44	-	-
24 Jun	21.7	48	22.5	242
25 Jun	21.7	58	22.1	248
26 Jun	-	64	21.7	217
27 Jun	22.8	69	22.5	235
28 Jun	-	65	-	-
29 Jun	22.8	61	-	-

- No Data

[a]Roseton entrainment and impingement surveys.

TABLE 3.0-3

WATER TEMPERATURE (°C) RECORDED DURING ENTRAINMENT SURVIVAL STUDY

Roseton Generating Station - 1980

DATE	RUN #1		RUN #2		RUN #3		RUN #4		RUN #5		RUN #6	
	INTAKE	SEAL WELL	INTAKE	SEAL WELL	INTAKE	SEAL WELL	INTAKE	SEAL WELL	INTAKE	SEAL WELL	INTAKE	SEAL WELL
28-29 May	19.0	-	20.0	-	19.0	-	19.0	-	18.0	-	18.0	-
29-30 May	19.0	-	19.0	-	19.0	-	18.5	-	18.0	-	18.0	-
2- 3 Jun	20.0	-	20.0	-	20.0	-	20.0	-	20.0	-	20.0	-
3- 4 Jun	20.5	-	20.0	-	20.0	-	20.0	-	20.0	-	20.5	-
4- 5 Jun	20.0	-	21.0	-	19.0	-	20.0	-	21.0	-	20.0	-
5- 6 Jun	20.0	-	19.5	-	19.0	-	19.0	-	19.0	-	19.0	-
9-10 Jun	20.0	22.5	19.5	23.0	19.5	23.0	19.0	23.0	19.0	21.5	19.0	21.0
10-11 Jun	19.0	23.0	19.0	27.0	19.0	25.0	19.0	23.0	19.0	23.0	18.0	21.0
11-12 Jun	19.0	25.0	19.5	25.0	19.0	25.0	19.0	23.0	18.0	24.0	18.0	23.0
12-13 Jun	19.0	25.0	19.0	24.0	19.0	25.0	19.5	25.0	NA	23.0	19.0	22.0
16-17 Jun	21.0	25.0	20.5	20.0	20.0	25.0	20.0	24.0	20.0	24.0	20.0	23.0
17-18 Jun	22.0	27.0	21.0	26.5	20.0	26.5	21.0	26.0	20.5	25.0	20.0	25.0
18-19 Jun	21.0	27.0	21.0	27.0	21.0	27.0	21.0	26.0	21.0	26.0	21.0	26.0
19-20 Jun	21.5	28.0	20.5	27.0	20.5	27.0	20.5	27.0	19.0	26.0	19.5	26.0
23-24 Jun	23.0	24.0	22.0	28.5	22.0	28.0	22.0	27.0	-	-	-	-
24-25 Jun	-	-	-	-	-	-	-	-	-	-	-	-
25-26 Jun	-	-	-	-	-	-	-	-	-	-	-	-
26-27 Jun	-	30.0	-	30.0	-	30.0	-	30.0	-	30.00	-	30.0

- No sample
NA - Not available

TABLE 3.0-4

CONDUCTIVITY (μmhos/cm) RECORDED DURING ENTRAINMENT SURVIVAL STUDY

Roseton Generating Station - 1980

DATE	RUN #1		RUN #2		RUN #3		RUN #4		RUN #5		RUN #6	
	INTAKE	SEAL WELL	INTAKE	SEAL WELL	INTAKE	SEAL WELL	INTAKE	SEAL WELL	INTAKE	SEAL WELL	INTAKE	SEAL WELL
28-29 May	200	-	190	-	190	-	190	-	200	-	200	-
29-30 May	190	-	200	-	200	-	190	-	190	-	190	-
2- 3 Jun	230	-	220	-	210	-	210	-	210	-	260	-
3- 4 Jun	450	-	1100	-	940	-	880	-	370	-	340	-
4- 5 Jun	300	-	280	-	270	-	260	-	230	-	220	-
5- 6 Jun	250	-	260	-	350	-	530	-	300	-	240	-
9-10 Jun	210	220	220	250	230	230	260	270	260	280	250	260
10-11 Jun	260	260	260	240	260	260	260	300	270	260	290	300
11-12 Jun	240	220	340	220	240	230	250	230	270	230	280	230
12-13 Jun	200	260	210	210	210	260	220	270	NA	270	210	210
16-17 Jun	230	200	230	220	230	200	230	200	230	200	220	230
17-18 Jun	250	240	230	240	230	240	230	240	230	240	230	230
18-19 Jun	230	220	240	220	230	220	230	200	230	220	230	210
19-20 Jun	260	220	270	220	260	230	260	220	250	220	240	220
23-24 Jun	210	240	210	230	260	230	210	230	-	-	-	-
24-25 Jun	-	-	-	-	-	-	-	-	-	-	-	-
25-26 Jun	-	-	-	-	-	-	-	-	-	-	-	-
26-27 Jun	-	220	-	220	-	220	-	230	-	230	-	230

- No sample
NA - Not available

3.3 TEMPORAL ABUNDANCE PATTERN

Alosa spp. larvae were collected on every sampling date at both locations. Using primarily the intake data (Figure 3.0-1) that cover the longest time span, peak abundance was observed during 29-30 May, reaching a mean concentration of 1350.4 larvae per 1000 m^3. Alosa spp. larval abundance declined following the peak, but did exhibit a smaller, secondary peak during the third week of June. Post-yolk-sac larvae predominated, with small numbers of yolk-sac observed primarily in the 3.1 to 5.0-mm length range (Figure 3.0-2) during the period 28 May-11 June.

When sampling was conducted at both locations, the mean concentration of larvae was greater in seal well samples than in intake samples on all but one date (18-19 June). Peak mean date abundance of Alosa spp. larvae at the seal well location (1089.1/1000 m^3) was observed during 12-13 June, which corresponds to the peak from the entrainment abundance program (LMS 1981) conducted during the same time period.

Length-frequency information for post-yolk-sac Alosa spp. larvae (Figure 3.0-2) indicates a similar range of larval lengths between intake and seal well collections, However, the frequency of occurrence points to a greater percentage of smaller larvae at the intake than at the seal well. The higher incidence of smaller larvae at the intake was probably the result of sampling commencing two weeks earlier, i.e., 146 of the total 266 larvae measured at the intake were collected before 9 June 1980.

Striped bass larvae were present throughout the sampling period. Highest concentrations were observed during the first two weekly sampling periods (Figure 3.0-3). Yolk-sac larvae comprised a greater percentage of the total collection on several of the sampling dates and persisted in collections through 18-19 June. Generally,

FIGURE 3.0-1

MEAN CONCENTRATION OF ALOSA SPP. COLLECTED DURING THE ENTRAINMENT SURVIVAL STUDY

Roseton Generating Station — 1980

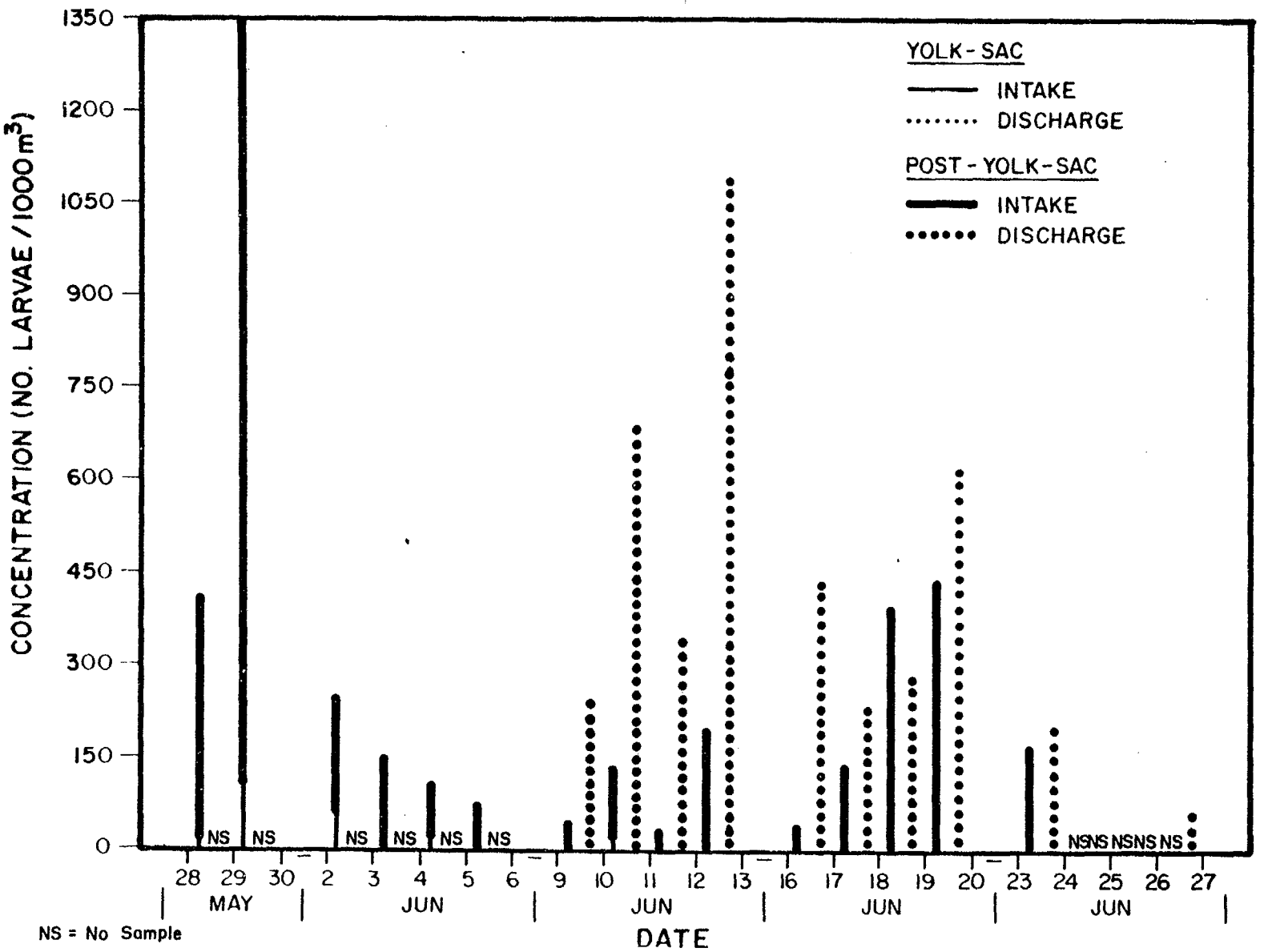
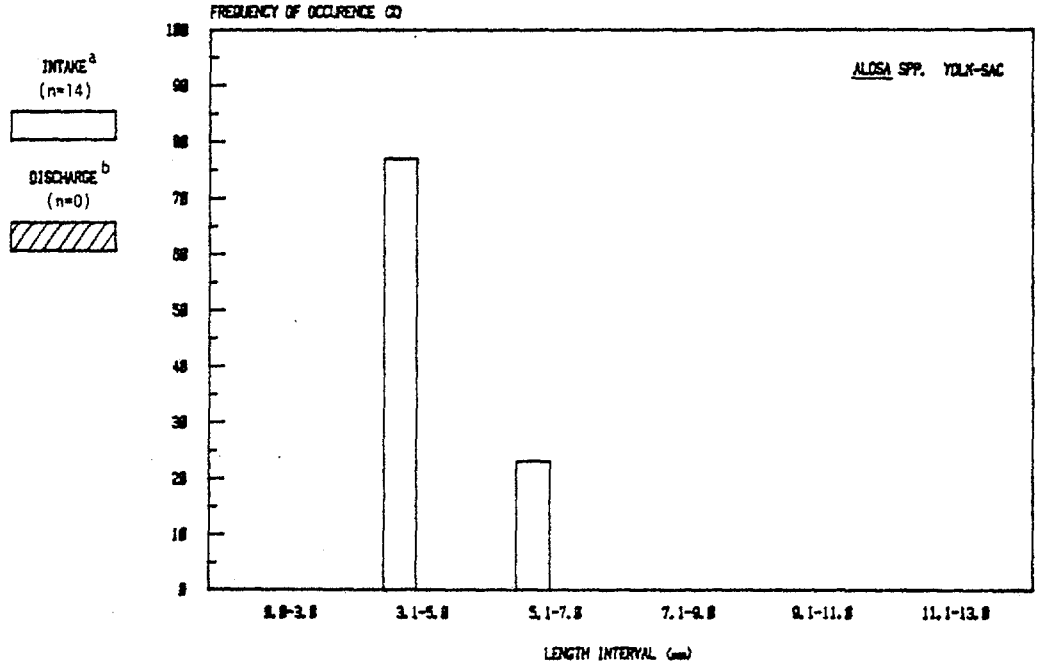
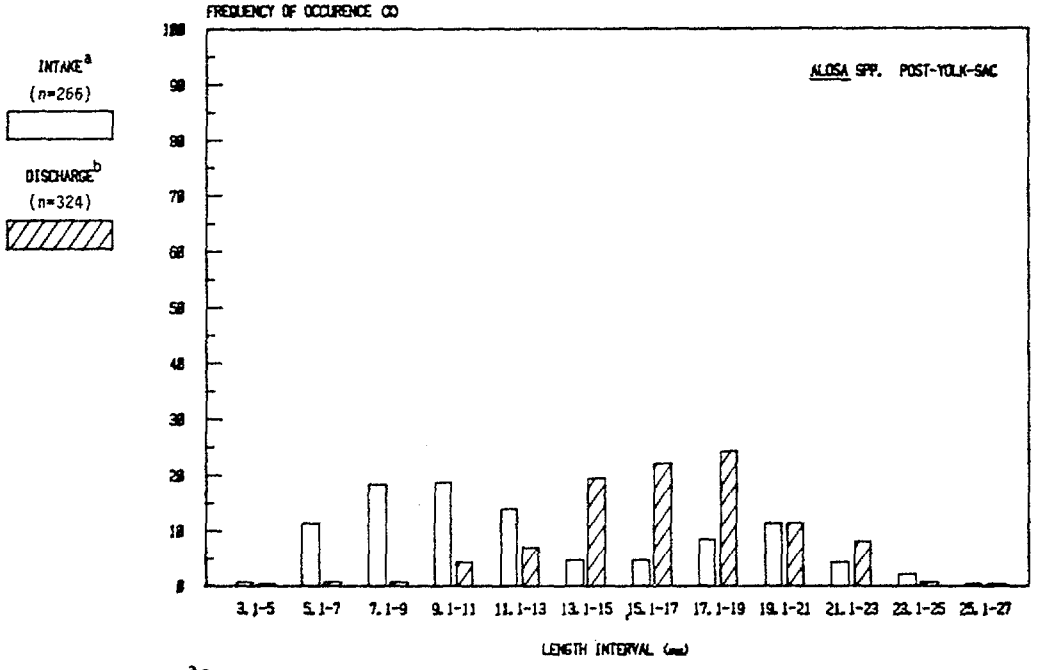


FIGURE 3.0-2

LENGTH INTERVALS AND FREQUENCY OF OCCURRENCE FOR ALOSA SPP. COLLECTED DURING ROSETON ENTRAINMENT SURVIVAL STUDY

ROSETON GENERATING STATION - 1980



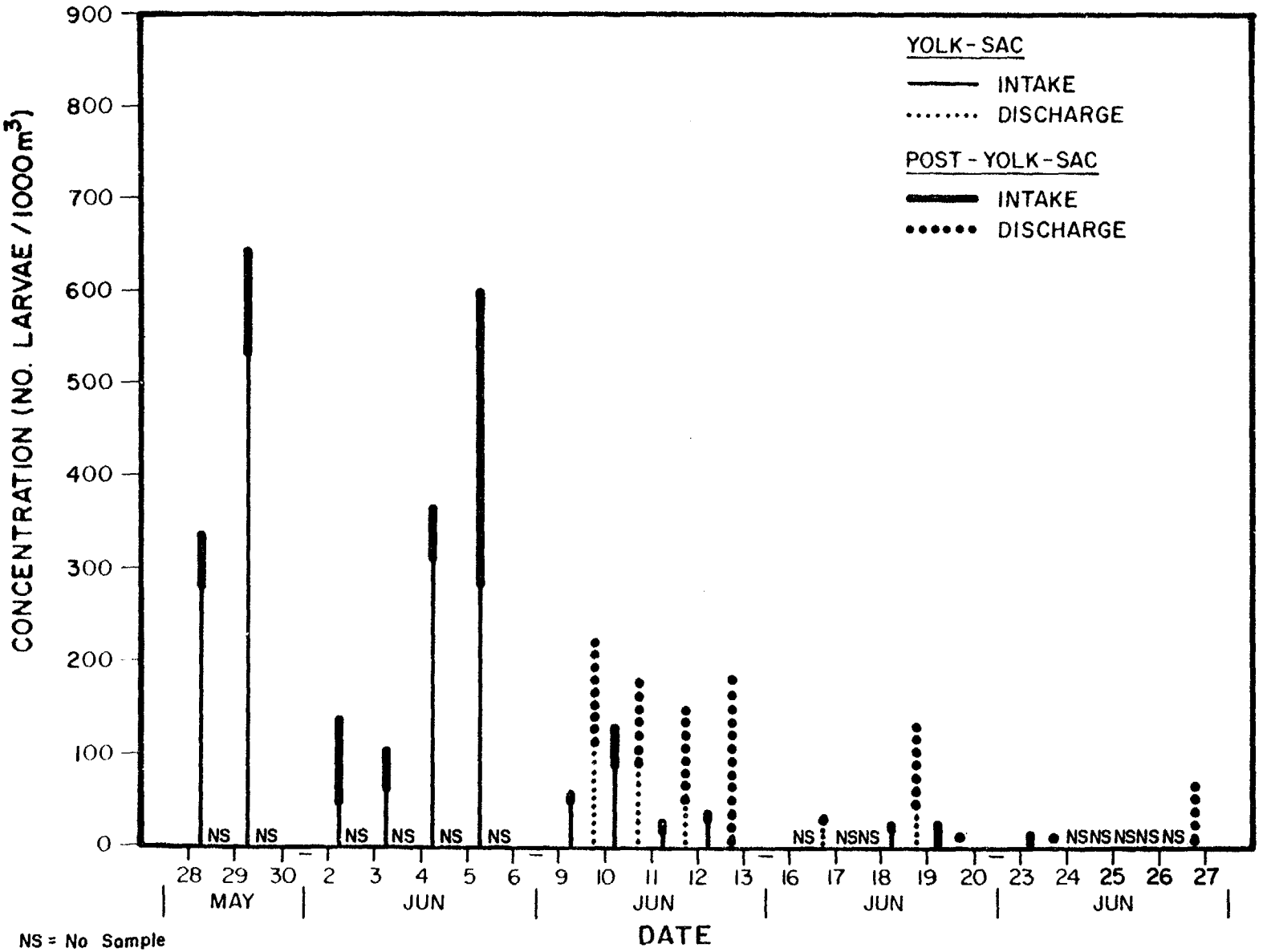


[a]Sampling dates: 28 May to 23 June.
[b]Sampling dates: 9 June to 26 June.

FIGURE 3.0-3

MEAN CONCENTRATION OF STRIPED BASS COLLECTED DURING THE ENTRAINMENT SURVIVAL STUDY

Roseton Generating Station — 1980



NS = No Sample

the mean striped bass larval concentration at the seal well station was higher than the intake concentration on the same date.

A similar distribution and frequency of occurrence of striped bass yolk-sac larval lengths was found in the intake and seal well collections (Figure 3.0-4), although post-yolk-sac larvae were smaller at the intake station than at the seal well location (Figure 3.0-4). In addition, the range of larval lengths was greater at the seal well. As noted for Alosa spp. larvae, the difference in the observed frequency of occurrence of larval lengths between the two stations is attributed primarily to earlier sampling at the intake.

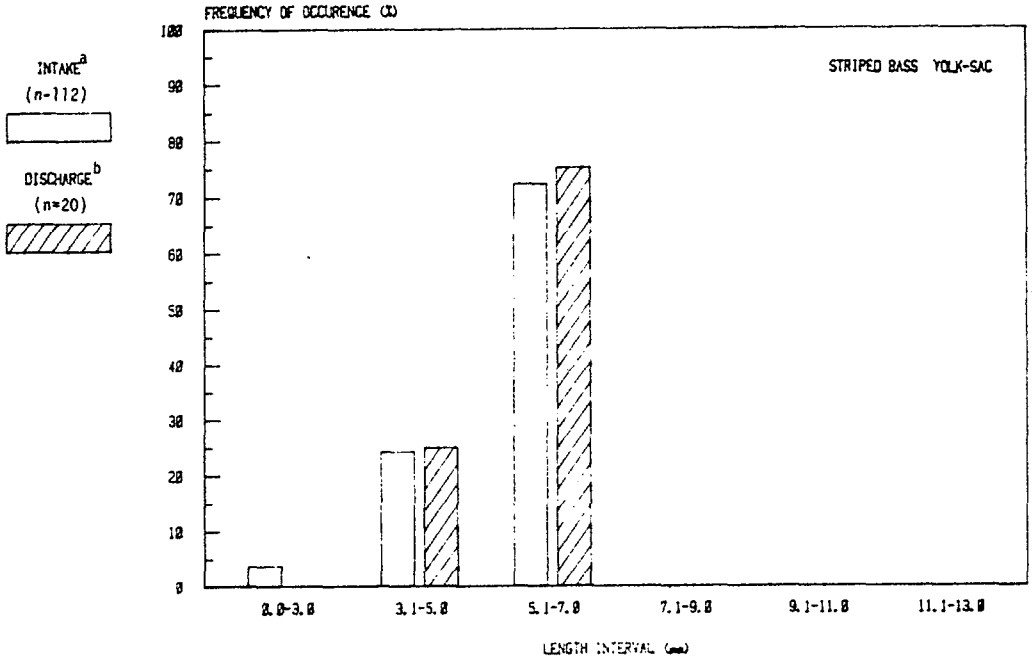
White perch larvae were present throughout the study period. The peak concentration (based on intake data) was observed during 29-30 May, when a mean concentration of 763.2/1000 m^2 was found (Figure 3.0-5). During this period, post-yolk-sac larvae predominated. However, yolk-sac larvae were collected in low numbers through 17-18 June. They were collected at the seal well station on only one date in a concentration similar to the intake value. As noted for Alosa spp. and striped bass, the mean concentration at the seal well was generally greater than the corresponding intake sampling date concentration.

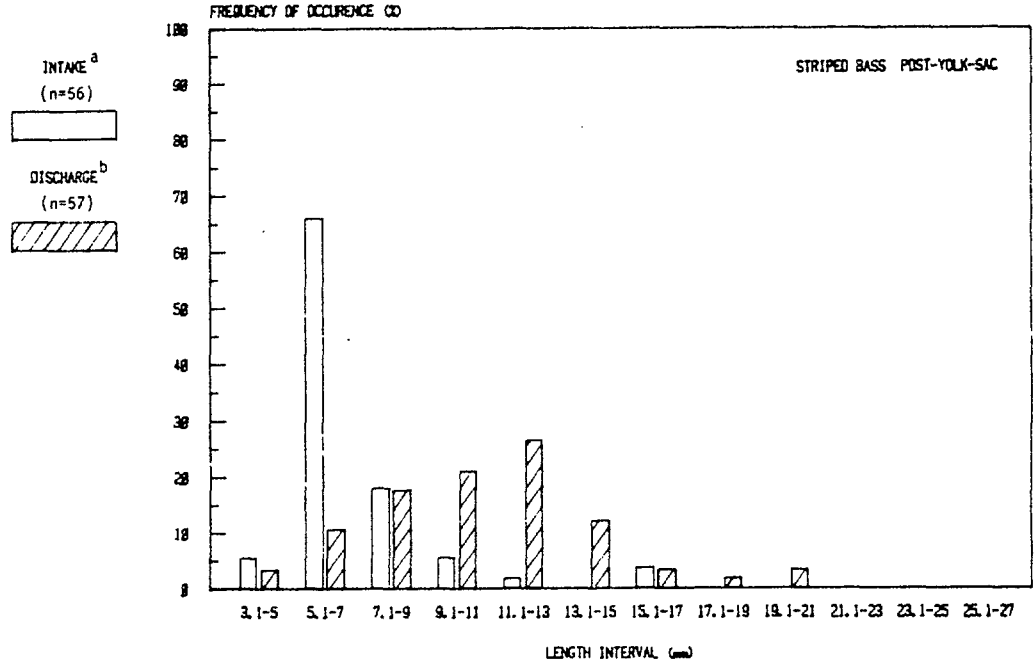
Low numbers of white perch yolk-sac larvae collected during the study precluded any meaningful length-frequency comparison between the two sampling locations. Post-yolk-sac white perch larvae collected at the two locations exhibited similar ranges in length, with the frequency of occurrence of smaller larvae slightly higher in intake samples than in seal well samples (Figure 3.0-6).

FIGURE 3.0-4

LENGTH INTERVALS AND FREQUENCY OF OCCURRENCE FOR STRIPED BASS COLLECTED DURING ROSETON ENTRAINMENT SURVIVAL STUDY

ROSETON GENERATING STATION - 1980



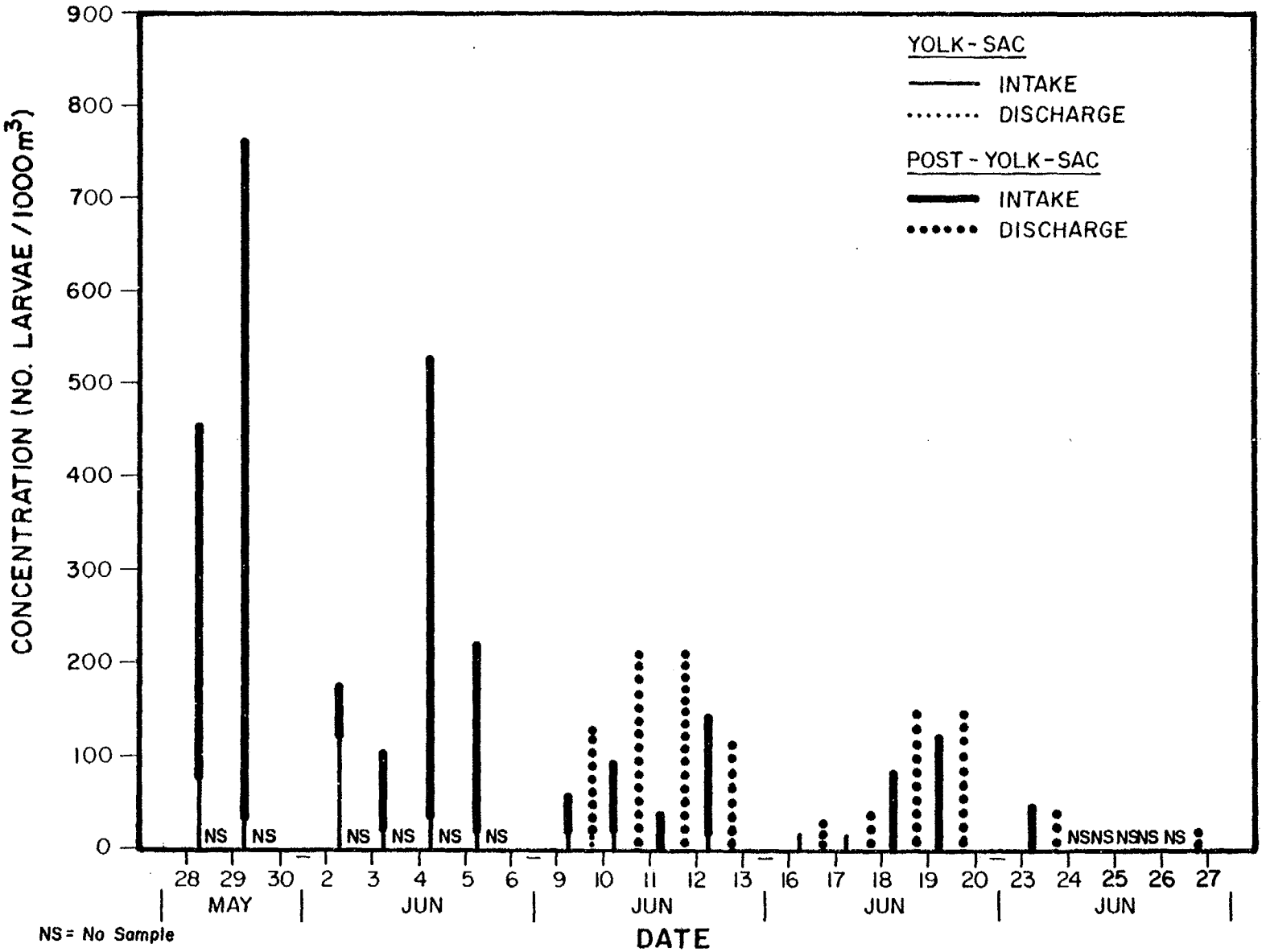


[a]Sampling dates: 28 May to 23 June.
[b]Sampling dates: 9 June to 26 June.

FIGURE 3.0-5

MEAN CONCENTRATION OF WHITE PERCH COLLECTED DURING THE ENTRAINMENT SURVIVAL STUDY

Roseton Generating Station — 1980

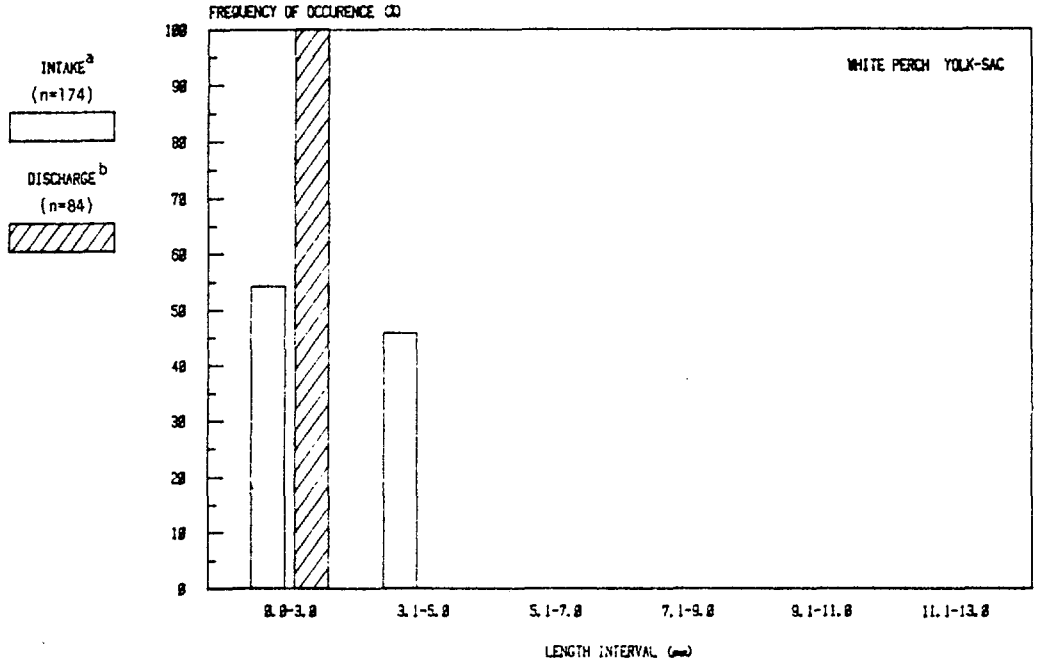


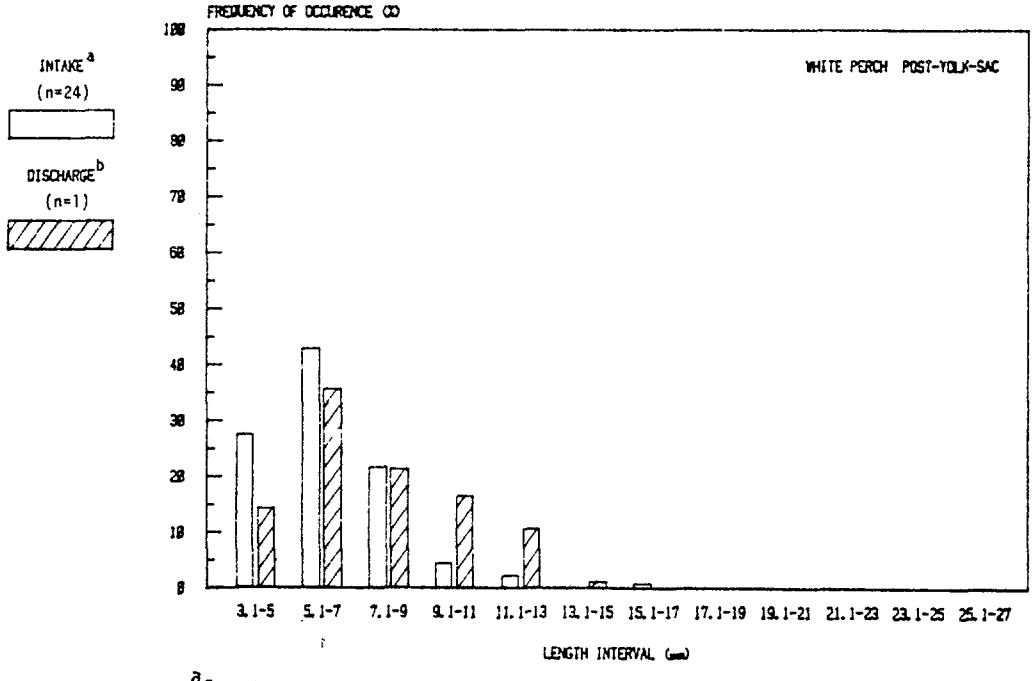
NS = No Sample

FIGURE 3.0-6

LENGTH INTERVALS AND FREQUENCY OF OCCURRENCE FOR WHITE PERCH COLLECTED DURING ROSETON ENTRAINMENT SURVIVAL STUDY

ROSETON GENERATING STATION - 1980





[a]Sampling dates: 28 May to 23 June.
[b]Sampling dates: 9 June to 26 June.

3.4 INITIAL SURVIVAL

3.4.1 Eggs

Twenty Alosa spp. eggs and 21 striped bass eggs were collected during the entrainment survival study at the intake location (Table 3.0-5). These eggs were all found during the second (quality control) sort.

Thirty white perch eggs were collected at the intake station and 13 at the discharge. Only two were observed in the initial viability sort. Both were from intake samples and both were recorded as dead.

3.4.2 Alosa spp. Larvae

Fourteen yolk-sac and 276 post-yolk-sac Alosa spp. larvae were identified in intake collections (Table 3.0-5). Initial count from intake samples for survival analysis yielded zero yolk-sac and 209 post-yolk-sac larvae, resulting in sort efficiencies of zero for yolk-sac and 0.76 for post-yolk-sac larvae. At the seal well station 335 post-yolk-sac larvae were sorted for viability analysis out of a collection of 344 post-yolk-sac larvae, yielding a 0.97 sort efficiency.

Initial survival of post-yolk-sac larvae at the intake, based on the total number collected and combining the initial live and initial stunned counts, was 0.66. Initial survival recorded for post-yolk-sac Alosa spp. larvae at the seal well location was 0.19. Comparing the proportions surviving at the two locations, survival at the seal well was significantly lower (α = .05) than at the intake (Appendix C).

TABLE 3.0-5

INITIAL SURVIVAL INFORMATION COLLECTED DURING THE ICHTHYOPLANKTON SURVIVAL STUDY

Roseton Generating Station - 28 May-27 June 1980

I. BASED ON ALL SAMPLES COLLECTED

TAXON	SAMPLE LOCATION	TOTAL NUMBER COLLECTED			INITIAL COUNT			INITIAL VIABILITY INFORMATION: INITIAL LIVE			INITIAL VIABILITY INFORMATION: INITIAL STUNNED		
		EGG	YOLK-SAC	POST-YOLK-SAC	EGG	YOLK-SAC	POST-YOLK-SAC	EGG	YOLK-SAC	POST-YOLK-SAC	EGG	YOLK-SAC	POST YOLK-SAC
Alosa spp.[a]	I	20	14	276	0	0	209	0	0	162	0	0	21
	SW	0	0	344	0	0	335	0	0	8	0	0	56
Striped bass	I	21	115	57	0	61	37	0	49	33	0	6	3
	SW	0	21	57	0	9	54	0	2	38	0	3	5
White perch	I	30	24	174	2	0	124	0	0	100	0	0	11
	SW	13	1	84	0	0	70	0	0	26	0	0	6

II. BASED ON SIMULTANEOUS COLLECTION AT THE INTAKE AND SEAL WELL

TAXON	SAMPLE LOCATION	TOTAL NUMBER COLLECTED			INITIAL COUNT			INITIAL VIABILITY INFORMATION: INITIAL LIVE			INITIAL VIABILITY INFORMATION: INITIAL STUNNED		
		EGG	YOLK-SAC	POST-YOLK-SAC	EGG	YOLK-SAC	POST-YOLK-SAC	EGG	YOLK-SAC	POST-YOLK-SAC	EGG	YOLK-SAC	POST YOLK-SAC
Alosa spp.[a]	I	0	1	130	0	0	127	0	0	80	0	0	21
	SW	0	0	335	0	0	326	0	0	8	0	0	56
Striped bass	I	1	13	10	0	9	7	0	2	5	0	1	1
	SW	0	21	47	0	9	45	0	2	35	0	3	5
White perch	I	9	5	40	2	0	34	0	0	17	0	0	5
	SW	12	1	81	0	0	67	0	0	26	0	0	6

[a]Includes American shad
I = Intake
SW = Seal Well

Initial survival of post-yolk-sac Alosa spp. larvae was evaluated relative to the water temperature recorded at the time of collection. The survival data broken down by 1.0°C increments is graphically presented in Figure 3.0-7. Intake survival collected over a temperature range of 18-22°C remained consistent over the entire five degree range, averaging 66% and ranging between 60 and 83%. Seal well collections were made over a 10 degree temperature range from 20 to 30°C; survival at the two lowest temperatures (20-21°C) was approximately 32%. It decreased to 15-20% between 22 and 28°C and was zero at 30°C.

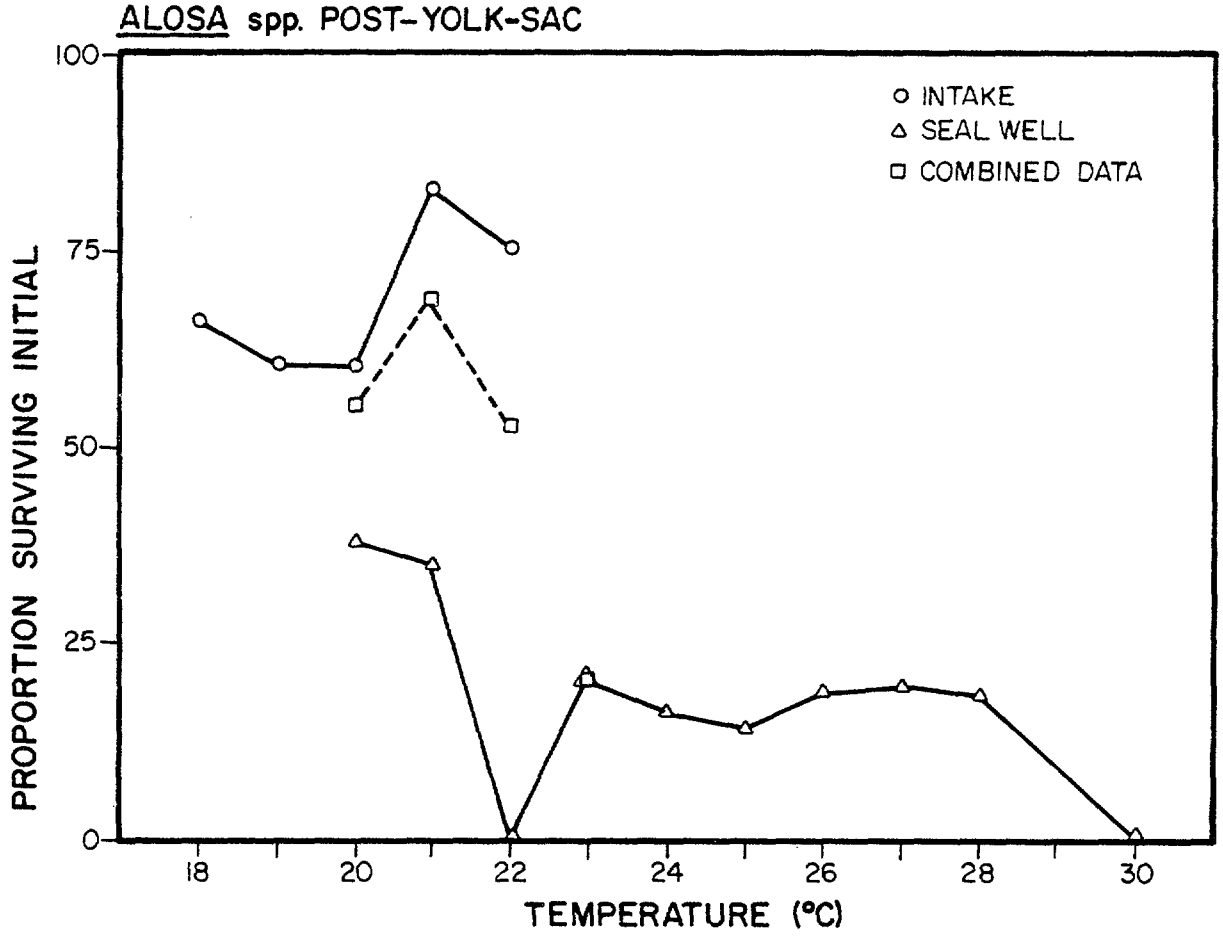
3.4.3 Striped Bass Larvae

Striped bass larvae collected during the ichthyoplankton survival study were predominantly yolk-sac, accounting for 67% of the total 172 larvae collected at the intake and 27% of the 78 larvae identified to life stage at the seal well. Sort efficiencies for yolk-sac and post-yolk-sac striped bass larvae at the intake station were 0.53 and 0.65, respectively. Yolk-sac sort efficiencies from seal well samples were comparable to the intake: 0.43. However, post-yolk-sac sort efficiency was much higher at the seal well (0.95) than at the intake.

Initial survival of yolk-sac striped bass at the Roseton intake was 0.48; post-yolk-sac larval initial survival was 0.63. Yolk-sac survival at the seal well was 0.24, while post-yolk-sac larval initial survival was 0.75. Proportional survival comparisons between intake and seal well samples for yolk-sac striped bass indicated a significant difference, with the survival at the seal well lower than at the intake. There was no difference in intake and seal well survival for post-yolk-sac striped bass larvae (Appendix C).

FIGURE 3.0-7

INITIAL SURVIVAL OF POST-YOLK-SAC ALOSA LARVAE RELATIVE TO WATER TEMPERATURE



Initial survival of both yolk-sac and post-yolk-sac striped bass larvae was evaluated based on water temperature (Figure 3.0-8). Because of the low abundance of these larvae in entrainment survival collections, a large degree of variability is present in the data, especially for yolk-sacs. Generally, initial intake survival was high for both life stages, with a similar pattern of the lowest survival observed at 19°C. Very few (21) yolk-sac striped bass were collected at the seal well, making observations on survival and temperature extremely tenuous. Post-yolk-sac larvae exhibited a high initial survival up to 28°C, where a definite decline in survival was suggested.

3.4.4 White Perch Larvae

White perch larvae were the second most abundant taxon collected during the entrainment survival program. A total of 198 larvae were identified from the intake samples, consisting of 24 yolk-sac and 174 post-yolk-sac. Initial sorting for survival observation did not yield any yolk-sac larvae, resulting in an initial survival of zero; all yolk-sac were recovered in the quality control sort. Sort efficiency for post-yolk-sac white perch at the intake was 0.71. Post-yolk-sac initial survival at the intake was 0.64. At the seal well station a collection of 85 white perch larvae were comprised of one yolk-sac and 84 post-yolk-sac organisms. No yolk-sac larvae were observed during the initial sort, while 70 post-yolk-sac larvae were observed, resulting in sort efficiencies of zero and 0.83. Initial survival for post-yolk-sac larvae collected from the seal well was 0.38. For post-yolk-sac white perch larvae, a significantly lower initial survival was found at the seal well than at the intake location (Appendix C).

White perch post-yolk-sac initial survival related to water temperature (Figure 3.0-9) pointed to a decreasing trend in survival with an increase in temperature at the intake: from 82% at 18°C to 33%

FIGURE 3.0-8

INITIAL SURVIVAL OF STRIPED BASS LARVAE

RELATIVE TO WATER TEMPERATURE

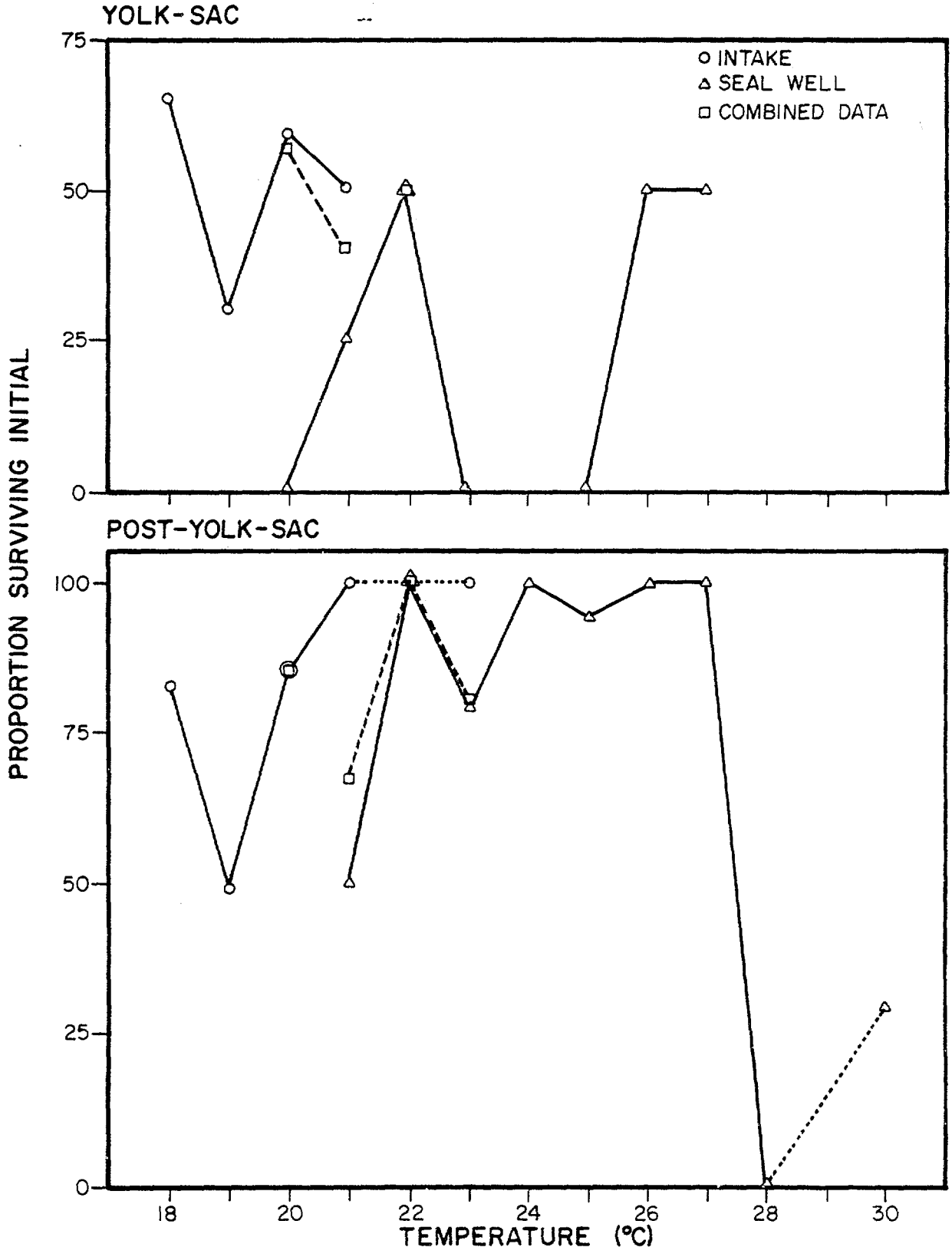
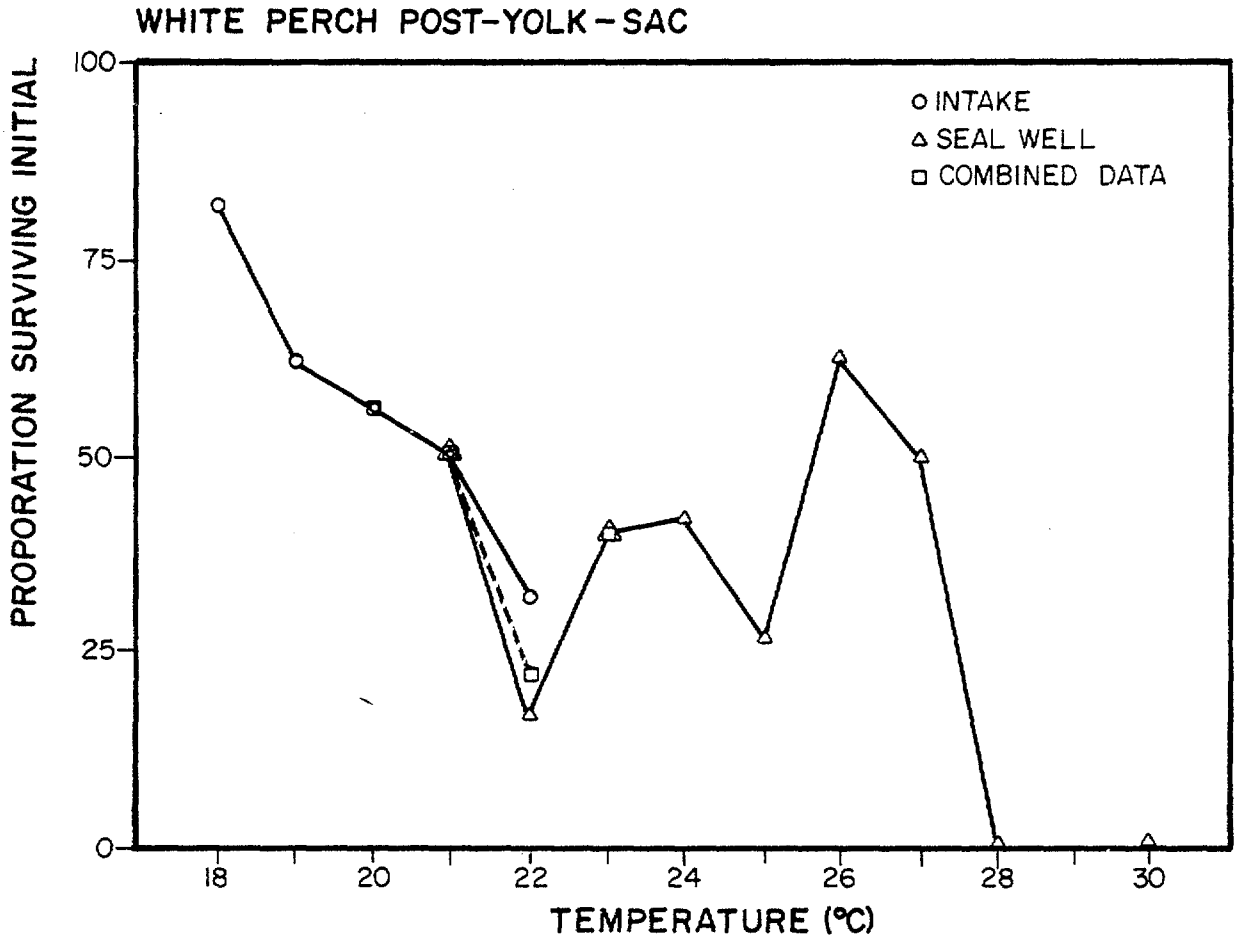


FIGURE 3.0-9

INITIAL SURVIVAL OF POST-YOLK-SAC WHITE PERCH LARVAE RELATIVE TO WATER TEMPERATURE



at 22°C. At the seal well station, initial survival exhibited a range from 17% to 63% and averaged 32%.

3.5 EXTENDED ICHTHYOPLANKTON SURVIVAL

Extended survival observations were conducted on all ichthyoplankton species collected. Following an initial determination of condition, latent survival checks were made at 6, 12, 24, and 48 hrs following collection. Results of these checks for the major species collected during the study period by location and life stage are presented in Table 3.0-6; latent survival data for the comparative samples are given in Table 3.0-7. Results for the major species are discussed below. Extended survival for the major species calculated for each data set by observation period is shown in Table 3.0-8.

3.5.1 Alosa spp.

No yolk-sac Alosa spp. larvae were initially sorted from samples collected at Roseton intake and seal well locations. Forty-eight-hour survival for all post-yolk-sac larvae collected at the Roseton seal well and initially determined to be live or stunned was zero, with all specimens dying within 6 hrs of collection. More than 20% of the post-yolk-sac larvae collected at the intake survived through the first 6-hr period following collection. Alosa spp. post-yolk-sac larvae initially determined to be stunned experienced 100% mortality during the first 6-hr observation period. Latent survival declined dramatically following the 6-hr period, terminating in a 3.3% survival at 48 hrs.

3.5.2 Striped Bass

Striped bass was the only major species collected for which latent survival information was obtained for both yolk-sac and post-yolk-sac larvae, although the number of data points - especially for yolk-sac larvae - is generally small.

TABLE 3.0-6

ICHTHYOPLANKTON SURVIVAL STUDY -
LATENT SURVIVAL OBSERVATION INFORMATION[a]
ALL SAMPLING PERIODS

Roseton Generating Station - 1980

I. ROSETON INTAKE

SPECIES	LIFESTAGE	INITIAL SURVIVAL COUNT			LATENT SURVIVAL							
					6 HOUR		12 HOUR		24 HOUR		48 HOUR	
		LIVE	STUNNED	DEAD	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED
Alosa spp.[b]	Yolk-sac	0	0	0	0	0	0	0	0	0	0	0
	Post-yolk-sac	162	21	26	38	0	15	0	10	0	6	0
Striped bass	Yolk-sac	49	6	6	28	1	14	1	3	0	2	0
	Post-yolk-sac	33	3	1	25	1	17	1	8	0	6	0
White perch	Yolk-sac	0	0	0	0	0	0	0	0	0	0	0
	Post-yolk-sac	100	11	13	61	3	42	1	27	0	24	0

II. ROSETON SEAL WELL

SPECIES	LIFESTAGE	INITIAL SURVIVAL COUNT			LATENT SURVIVAL							
					6 HOUR		12 HOUR		24 HOUR		48 HOUR	
		LIVE	STUNNED	DEAD	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED
Alosa spp.	Yolk-sac	0	0	0	0	0	0	0	0	0	0	0
	Post-yolk-sac	8	56	271	0	0	0	0	0	0	0	0
Striped bass	Yolk-sac	2	3	4	1	2	0	1	0	0	0	0
	Post-yolk-sac	38	5	11	35	1	34	1	32	1	31	1
White perch	Yolk-sac	0	0	0	0	0	0	0	0	0	0	0
	Post-yolk-sac	26	6	38	18	1	16	1	13	1	13	1

[a] Information obtained using samples collected simultaneously at intake and seal well.
[b] *Alosa* spp. = Alewife, blueback herring, and American shad.

TABLE 3.0-7

ICHTHYOPLANKTON SURVIVAL STUDY -
LATENT SURVIVAL OBSERVATION INFORMATION[a]
COMPARATIVE SAMPLING PERIODS

Roseton Generating Station - 1980

I. ROSETON INTAKE

SPECIES	LIFESTAGE	INITIAL SURVIVAL COUNT			LATENT SURVIVAL							
					6 HOUR		12 HOUR		24 HOUR		48 HOUR	
		LIVE	STUNNED	DEAD	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED
Alosa spp.[b]	Yolk-sac	0	0	0	0	0	0	0	0	0	0	0
	Post-yolk-sac	80	21	26	10	0	7	0	6	0	2	0
Striped bass	Yolk-sac	2	1	6	1	0	0	0	0	0	0	0
	Post-yolk-sac	5	1	1	4	0	4	0	3	0	3	0
White perch	Yolk-sac	0	0	0	0	0	0	0	0	0	0	0
	Post-yolk-sac	17	5	12	12	1	11	0	11	0	10	0

II. ROSETON SEAL WELL

SPECIES	LIFESTAGE	INITIAL SURVIVAL COUNT			LATENT SURVIVAL							
					6 HOUR		12 HOUR		24 HOUR		48 HOUR	
		LIVE	STUNNED	DEAD	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED
Alosa spp.	Yolk-sac	0	0	0	0	0	0	0	0	0	0	0
	Post-yolk-sac	8	56	262	0	0	0	0	0	0	0	0
Striped bass	Yolk-sac	2	3	4	1	2	0	1	0	0	0	0
	Post-yolk-sac	35	5	5	32	1	31	1	29	1	28	1
White perch	Yolk-sac	0	0	0	0	0	0	0	0	0	0	0
	Post-yolk-sac	26	6	35	18	1	16	1	13	1	13	1

[a] Information obtained using samples collected simultaneously at intake and seal well.
[b] Alosa spp. = Alewife, blueback herring, and American shad.

TABLE 3.0-8

ICHTHYOPLANKTON SURVIVAL STUDY -
CALCULATED EXTENDED SURVIVAL

Roseton Generating Station - 1980

I. BASED ON ALL SAMPLE DATA

TAXON	LIFESTAGE	COLLECTION LOCATION	EXTENDED SURVIVAL 6 HOUR	12 HOUR	24 HOUR	48 HOUR
Alosa spp.	Post-yolk-sac	Intake	0.211	0.083	0.056	0.033
		Seal Well	0.0	0.0	0.0	0.0
Striped bass	Yolk-sac	Intake	0.509	0.228	0.053	0.035
		Seal Well	0.600	0.200	0.0	0.0
	Post-yolk-sac	Intake	0.743	0.514	0.229	0.171
		Seal Well	0.837	0.814	0.767	0.744
White perch	Post-yolk-sac	Intake	0.577	0.387	0.243	0.216
		Seal Well	0.594	0.531	0.438	0.438

II. BASED ON COMPARATIVE COLLECTION DATA

TAXON	LIFESTAGE	COLLECTION LOCATION	EXTENDED SURVIVAL 6 HOUR	12 HOUR	24 HOUR	48 HOUR
Alosa spp.	Post-yolk-sac	Intake	0.099	0.069	0.059	0.020
		Seal Well	0.0	0.0	0.0	0.0
Striped bass	Yolk-sac	Intake	0.667	0.0	0.0	0.0
		Seal Well	0.600	0.200	0.0	0.0
	Post-yolk-sac	Intake	0.667	0.667	0.500	0.500
		Seal Well	0.825	0.800	0.750	0.725
White perch	Post-yolk-sac	Intake	0.591	0.500	0.500	0.455
		Seal Well	0.594	0.531	0.438	0.438

$$\text{Extended Survival } (ES_i) = \frac{\text{Number of larvae alive and stunned at observation time } i}{\text{Total number of larvae initially alive and stunned}}$$

A total of 28 yolk-sac larvae out of the 49 initially collected live at the intake survived the first 6 hrs following collection, resulting in a 57.1% survival rate. Survival through the 48-hr observation period was 4.1%, with 50% mortality occurring between the 6- and 12-hr observation checks. Only two striped bass yolk-sac larvae classified live were collected at the seal well; both were still alive at the 6-hr check and one survived through the 12-hr check but was dead at 24 hrs.

Twenty-five of the 33 initially live striped bass post-yolk-sac larvae collected at the intake station were alive at the 6-hr check, yielding a 75.8% survival. Intake larval survival gradually decreased with time over the next 42 hrs, with 18.2% surviving through the 48-hr observation period. Overall long-term survival of post-yolk-sac striped bass larvae collected at the seal well was consistently high throughout the 48-hr holding period; 81.6% (31) of the 38 initially live larvae were still alive at 48 hrs.

3.5.3 White Perch

Approximately four times more white perch post-yolk-sac larvae were sorted and determined to be live at the intake (100) than at the seal well (26). However, latent survival at the first observation check was similar for both locations: 61% at the intake and 69.2% at the seal well. Long-term survival remained high for larvae collected at the seal well, with 50% of the initially live organisms surviving through the 48-hr period; 48-hr survival for intake samples was 24.0%.

3.6 PLANT ENTRAINMENT SURVIVAL - S_e

Plant entrainment survival (S_e) was calculated using initial survival data for Alosa spp. post-yolk-sac, striped bass yolk-sac, and

white perch post-yolk-sac, those species and life stages having a proportion surviving in the intake collections significantly greater than the proportion surviving at the seal well. Entrainment survival calculated for all samples and for comparative samples is presented in Table 3.0-9.

Alosa spp. post-yolk-sac entrainment survival for comparative sample dates was 0.246; striped bass yolk-sac entrainment survival was the same at both locations; and the white perch post-yolk-sac value was 0.718. No plant-induced mortality was detected for striped bass post-yolk-sac larvae since initial survival was greater at the seal well than at the intake. Calculated entrainment survival values using all sample dates were similar to those from comparative sample dates with the exception of striped bass yolk-sac, which had a value of 0.498.

TABLE 3.0-9

PLANT ENTRAINMENT SURVIVAL

Roseton Generating Station - 1980

I. BASED ON ALL SAMPLES COLLECTED

TAXON	SAMPLING LOCATION	INITIAL SURVIVAL[a] YOLK-SAC	INITIAL SURVIVAL[a] POST-YOLK-SAC	ENTRAINMENT SURVIVAL (S_e)[b] YOLK-SAC	ENTRAINMENT SURVIVAL (S_e)[b] POST-YOLK-SAC
Alosa spp.[c]	I	0	0.663		0.281
	SW	0	0.186		
Striped bass	I	0.478	0.632	0.498	$P_I < P_{SW}$
	SW	0.238	0.754		
White perch	I	0	0.638		0.597
	SW	0	0.381		

II. BASED ON COMPARATIVE SAMPLES

TAXON	SAMPLING LOCATION	INITIAL SURVIVAL[a] YOLK-SAC	INITIAL SURVIVAL[a] POST-YOLK-SAC	ENTRAINMENT SURVIVAL (S_e)[b] YOLK-SAC	ENTRAINMENT SURVIVAL (S_e)[b] POST-YOLK-SAC
Alosa spp.[c]	I	0	0.777		0.246
	SW	0	0.191		
Striped bass	I	0.231	0.600	$P_I = P_{SW}$	$P_I < P_{SW}$
	SW	0.238	0.851		
White perch	I	0	0.550		0.718
	SW	0	0.395		

[a] Initial Survival = $\frac{\text{Initial Number Live + Initial Number Stunned}}{\text{Total Number Collected}}$

[b] $S_e = \frac{P_{SW}}{P_I}$

[c] Includes American shad.

CHAPTER 4.0

REPORT SUMMARY

An entrainment survival program was conducted at the Roseton Generating Station during the period 28 May-26 June 1980 using induced-flow larval tables. Larval tables were located at and sampled from the cooling water intake and the condenser cooling water discharge at the seal well.

- Similar species representation was observed at both locations, with the dominant species being Alosa spp. (alewife, blueback herring), striped bass, and white perch.
- Eighty-eight samples were collected at the intake and 58 were collected at the seal well. Ten samples collected at the intake contained no larvae, while only one seal well sample had no larvae.
- Abundance patterns based on larval table samples followed normal seasonal trends. Peak abundance periods based on larval table samples corresponded closely to peak periods based on 24-hr entrainment abundance samples collected over the same time period. Post-yolk-sac larvae were the dominant life stage collected for Alosa spp. and white perch, while yolk-sac larvae were the major striped bass life stage collected.
- Very few fish eggs were observed during the initial viability sort, precluding any evaluation of survival for this group. No yolk-sac Alosa spp. larvae were collected at the seal well station; initial survival for post-yolk-sac Alosa spp. was 0.66 and 0.19 at the intake and seal well, respectively. Alosa spp. post-yolk-sac survival was significantly lower in seal well samples than in intake samples. Yolk-sac and post-yolk-sac striped bass larvae were collected at each location, with no difference in initial survival for post-yolk-sac larvae between the two locations, but significantly lower survival for yolk-sac observed at the seal well. Initial survival of yolk-sac

striped bass larvae at the intake was 0.48 and post-yolk-sac survival was 0.63. Yolk-sac striped bass survival at the seal well was 0.24, while post-yolk-sac initial survival was 0.75. Post-yolk-sac white perch survival was significantly lower (α =.05) at the seal well, with initial survival values of 0.64 and 0.38 at the intake and seal well stations, respectively.

- Extended survival based on dates when samples were collected at both locations was low for Alosa spp. larvae (only post-yolk-sac were evaluated), with no organisms collected at the seal well surviving through the first 6-hr period following collection and approximately 20% of the organisms collected at the intake surviving. Striped bass yolk-sac survival at the 6-hr observation check was 66.7% and 60.0% at the intake and seal well, respectively; survival at 48 hrs was zero for intake and seal well samples. Post-yolk-sac survival at the 6-hr check was high for striped bass collected at both locations: 66.7 and 82.5%, respectively. Survival at 48 hrs for post-yolk-sac striped bass was highly variable between samples collected at the two locations: 50.0% for the intake samples and 72.5% for the seal well samples. White perch post-yolk-sac survival was comparable for intake (59.1%) and seal well (59.4%) collections at 6 hrs; 48-hr survival for intake specimens was 45.5%, while seal well specimens exhibited a survival of 43.8%.

- Plant entrainment survival (S_e) calculated on initial survival values for comparable sampling dates was 24.6 for Alosa spp. post-yolk-sac and 71.8 for post-yolk-sac white perch. Intake and seal well survival were the same for yolk-sac striped bass and intake survival was lower than seal well survival for post-yolk-sac striped bass.

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REPORT APPENDIX

ROSETON ICHTHYOPLANKTON SURVIVAL PROGRAM

1980

APPENDIX - A

COLLECTION VELOCITY COMPARISON

APPENDIX A

COLLECTION VELOCITY EVALUATION

Four different through-table velocities were used for the intake collections. All samples from the first seven dates and the majority of the rest were collected at velocities of 0.76 m^3/min (200 gpm). The following table presents a summary of the velocities employed during the sampling program.

ROSETON SAMPLE COLLECTION INFORMATION - INTAKE

PUMP RATE (m^3/min)	VOLUME SAMPLED (m^3)	No. OF SAMPLES	No. ZERO COLLECTIONS	TOTAL LARVAE COLLECTED	MEAN LARVAL ABUNDANCE
0.76	11.36	62	5	606	9.77
0.92	13.74	21	4	135	6.43
0.93	13.91	1	1	0	-
1.10	16.46	4	0	18	4.50

Four through-table velocities were used as part of the seal well collection program, with the largest percentages corresponding to either 0.76 m^3/min or 0.95 m^3/min. The following table presents a summary of velocities employed at the seal well station.

ROSETON SAMPLE COLLECTION INFORMATION - SEAL WELL

PUMP RATE (m^3/min)	VOLUME SAMPLED (m^3)	No. OF SAMPLES	No. ZERO COLLECTIONS	TOTAL LARVAE COLLECTED	MEAN LARVAL ABUNDANCE
0.76	11.36	26	0	230	8.85
0.95	14.19	22	0	289	13.14
0.17	17.60	4	0	22	5.50
1.57	23.56	6	1	29	4.83

Sample Volume Comparison

The total number of ichthyoplankton collected in the larval tables at the Roseton intake and seal well was analyzed separately using a two-way analysis of variance (ANOVA) (Snedecor and Cochran 1967) to examine the effect of different sample volumes on sample larval abundance. Only dates with comparison volume sampling were included in the ANOVA. Before an ANOVA was implemented on either data set, Bartlett's test (Snedecor and Cochran 1967) was used to determine if an assumption of homogeneity of variance was valid. The assumption was not rejected in either case (α = .05), resulting in the ANOVA's being performed on the actual collection data.

At α = .05 significance level, both the intake and seal well data sets had the same results: the samples with higher volume had significantly more larvae than the 11.36 m^3 samples (Table A-1). Both locations also exhibited differences among dates, so the higher volume samples collected during 23 and 26 June were eliminated in the ANOVA because their effects would be confounded with the effect of date.

Evaluation of ichthyoplankton survival at the different through-table velocities (Table A-2) suggests for Alosa spp post-yolk-sac and both life stages of striped bass an increase in survival with an increase in velocity; white perch post-yolk-sac demonstrate the opposite trend, with decreasing survival with an increase in velocity. It should be noted that combining the survival data to obtain the trends is tenuous because of the influence of temperature, which appears to be the major influence, at the seal well station.

TABLE A-1

STATISTICAL ANALYSIS FOR LARVAE COLLECTED DURING SAMPLE VOLUME COMPARISON

Roseton Generating Station - 1980

INTAKE

TWO-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F
Date[a] (D)	6	365.706	60.951	4.20*
Volume[b] (V)	1	72.781	72.781	5.02*
(D) x (V)	6	93.039	15.506	1.07
Error	28	406.083	14.503	
Total	41	937.609		

*Significant at α = .05.

VOLUME	MEAN[c]	SD
11.36	3.8	3.38
13.74	6.1	5.75

SEAL WELL

TWO-WAY ANALYSIS OF VARIANCE
(Log Transformed)

SOURCE	DF	SS	MS	F
Date[a] (D)	6	1063.739	177.290	4.85*
Volume[d] (V)	1	186.114	186.114	5.09*
(D) x (V)	6	236.817	39.469	1.08
Error	28	1024.250	36.580	
Total	41	2510.920		

*Significant at α = .05.

VOLUME	MEAN[c]	SD
11.36	8.9	7.29
14.19	13.1	8.00

[a]Dates used were from 10 June through 19 June.
[b]Volumes used were 11.36 and 13.74.
[c]Mean of all samples collected at the particular volume.
[d]Volumes used were 11.36 and 14.19.

TABLE A-2

ICHTHYOPLANKTON SURVIVAL AND THROUGH TABLE VELOCITY

Roseton Generating Station - 1980

INTAKE

TAXON	COLLECTION VELOCITY (m^3/min)	INITIAL VIABILITY LIVE	INITIAL VIABILITY STUNNED	INITIAL VIABILITY DEAD	48-hr SURVIVAL LIVE	48-hr SURVIVAL STUNNED	NUMBER COLLECTED
Alosa spp. Post-Yolk-Sac	0.76	96	8	6	4	0	175
	0.92	54	5	17	2	0	80
	0.93						0
	1.10	6	3	2	0	0	11
Striped bass Yolk-Sac	0.76	49	6	3	2	0	112
	0.92	0	0	3	0	0	3
	0.93						0
	1.10						0
Striped bass Post-Yolk-Sac	0.76	31	2	1	4	0	53
	0.92	2	0	0	2	0	3
	0.93						0
	1.10	0	1	0	0	0	1
White perch Post-Yolk-Sac	0.76	90	10	5	18	0	153
	0.92	9	1	6	5	0	18
	0.93						0
	1.10	1	0	2	1	0	3

SEAL WELL

TAXON	COLLECTION VELOCITY (m^3/min)	INITIAL VIABILITY LIVE	INITIAL VIABILITY STUNNED	INITIAL VIABILITY DEAD	48-hr SURVIVAL LIVE	48-hr SURVIVAL STUNNED	NUMBER COLLECTED
Alosa spp. Post-Yolk-Sac	0.76	4	25	84	0	0	120
	0.95	3	26	154	0	0	185
	1.17	0	2	12	0	0	14
	1.57	0	0	9	0	0	9
Striped bass Yolk-Sac	0.76	1	3	2	0	0	16
	0.95	1	0	2	0	0	4
	1.17						0
	1.57						0
Striped bass Post-Yolk-Sac	0.76	20	4	3	15	1	29
	0.95	15	1	1	13	0	17
	1.17	0	0	1	0	0	1
	1.57	3	0	6	3	0	10
White perch Post-Yolk-Sac	0.76	12	1	11	6	0	35
	0.95	14	5	22	7	1	43
	1.17	0	0	2	0	0	3
	1.57	0	0	3	0	0	3

APPENDIX - B

COLLECTION INFORMATION BY WATER TEMPERATURE

- *Alosa* spp. Post-yolk-sac
- Striped bass Yolk-sac
- Striped bass Post-yolk-sac
- White perch Post-yolk-sac

TABLE B-1

ICHTHYOPLANKTON SURVIVAL INFORMATION BY WATER TEMPERATURE

Roseton Generating Station

ALOSA SPP. POST-YOLK-SAC

SAMPLE TEMPERATURE (°C)	LOCATION	NUMBER OF SAMPLES	INITIAL SURVIVAL			48-hr SURVIVAL		TOTAL NUMBER COLLECTED
			LIVE	STUNNED	DEAD	LIVE	STUNNED	
18	I	8	58	0	1	4	0	88
	SW	-						
19	I	33	38	3	10	2	0	68
	SW	-						
20	I	29	26	6	2	0	0	53
	SW	1	0	6	10	0	0	16
21	I	12	27	6	5	0	0	40
	SW	3	1	5	8	0	0	17
22	I	4	6	3	3	0	0	12
	SW	2	0	0	3	0	0	5
23	I	1	0	0	0	0	0	0
	SW	10	3	10	49	0	0	65
24	I	-						
	SW	5	3	2	27	0	0	32
25	I	-						
	SW	11	0	11	69	0	0	81
26	I	-						
	SW	8	0	12	54	0	0	66
27	I	-						
	SW	9	0	5	21	0	0	26
28	I	-						
	SW	3	0	2	9	0	0	11
29	I	-						
	SW	-						
30	I	-						
	SW	6	0	0	9	0	0	9
TOTAL	I	87	155	18	21	6	0	261
	SW	58	7	53	259	0	0	328

- No Sample.

TABLE B-2

ICHTHYOPLANKTON SURVIVAL INFORMATION BY WATER TEMPERATURE

STRIPED BASS YOLK-SAC

SAMPLE TEMPERATURE (°C)	LOCATION	NUMBER OF SAMPLES	INITIAL SURVIVAL			48-hr SURVIVAL		TOTAL NUMBER COLLECTED
			LIVE	STUNNED	DEAD	LIVE	STUNNED	
18	I	8	17	3	1	0	0	31
	SW	-						
19	I	33	14	1	5	0	0	49
	SW	-						
20	I	29	16	1	0	2	0	29
	SW	1	0	0	0	0	0	1
21	I	12	2	1	0	0	0	6
	SW	3	0	1	0	0	0	4
22	I	4	0	0	0	0	0	0
	SW	2	1	0	0	0	0	2
23	I	1	0	0	0	0	0	0
	SW	10	0	0	0	0	0	4
24	I	-						
	SW	5	0	0	0	0	0	0
25	I	-						
	SW	11	0	0	0	0	0	4
26	I	-						
	SW	8	1	0	1	0	0	2
27	I	-						
	SW	9	0	2	0	0	0	4
28	I	-						
	SW	3	0	0	0	0	0	0
29	I	-						
	SW	-						
30	I	-						
	SW	6	0	0	0	0	0	0
TOTAL	I	87	49	6	6	2	0	115
	SW	58	2	3	1	0	0	21

TABLE B-3

ICHTHYOPLANKTON SURVIVAL INFORMATION BY WATER TEMPERATURE

STRIPED BASS POST-YOLK-SAC

SAMPLE TEMPERATURE (°C)	LOCATION	NUMBER OF SAMPLES	INITIAL SURVIVAL			48-hr SURVIVAL		TOTAL NUMBER COLLECTED
			LIVE	STUNNED	DEAD	LIVE	STUNNED	
18	I	8	5	0	0	0	0	6
	SW	-						
19	I	33	16	1	1	3	0	35
	SW	-						
20	I	29	10	1	0	2	0	13
	SW	1	0	0	0	0	0	0
21	I	12	2	0	0	1	0	2
	SW	3	1	1	0	1	0	4
22	I	4	0	0	0	0	0	0
	SW	2	3	0	0	0	0	3
23	I	1	0	1	0	0	0	1
	SW	10	9	2	3	7	0	14
24	I	-						
	SW	5	1	0	0	1	0	1
25	I	-						
	SW	11	14	1	1	12	0	16
26	I	-						
	SW	8	3	1	0	3	1	4
27	I	-						
	SW	9	4	0	0	4	0	4
28	I	-						
	SW	3	0	0	1	0	0	1
29	I	-						
	SW	-						
30	I	-						
	SW	6	3	0	6	3	0	10
TOTAL	I	87	33	3	1	6	0	57
	SW	58	38	5	11	31	1	57

TABLE B-4

ICHTHYOPLANKTON SURVIVAL INFORMATION BY WATER TEMPERATURE

WHITE PERCH POST-YOLK-SAC

SAMPLE TEMPERATURE (°C)	LOCATION	NUMBER OF SAMPLES	INITIAL SURVIVAL			48-hr SURVIVAL		TOTAL NUMBER COLLECTED
			LIVE	STUNNED	DEAD	LIVE	STUNNED	
18	I	8	35	5	0	6	0	49
	SW	-						
19	I	33	36	2	7	8	0	61
	SW	-						
20	I	29	19	3	1	7	0	39
	SW	1	0	0	0	0	0	0
21	I	12	9	1	2	2	0	20
	SW	3	1	0	0	0	0	2
22	I	4	1	0	2	1	0	3
	SW	2	1	0	0	0	0	6
23	I	1	0	0	0	0	0	0
	SW	10	9	1	11	1	0	25
24	I	-						
	SW	5	3	0	4	3	0	7
25	I	-						
	SW	11	2	1	7	2	0	11
26	I	-						
	SW	8	5	0	3	4	0	8
27	I	-						
	SW	9	5	4	7	3	1	18
28	I	-						
	SW	3	0	0	3	0	0	4
29	I	-						
	SW	-						
30	I	-						
	SW	6	0	0	3	0	0	3
TOTAL	I	87	100	11	12	24	0	172
	SW	58	26	6	38	13	1	84

APPENDIX - C

INITIAL SURVIVAL DATA ANALYSIS

ALL SAMPLES COLLECTED

Alosa spp.: Post-Yolk-Sac

$$P_I = \frac{162 + 21}{276} = 0.663 \qquad P_{SW} = \frac{8 + 56}{344} = 0.186$$

$$Z = \frac{0.663 - 0.186}{0.396\ (0.602)\ \left(\frac{1}{276} + \frac{1}{344}\right)} = \frac{0.477}{0.039} = 12.231^*$$

Striped bass: Yolk-Sac

$$P_I = \frac{49 + 6}{115} = 0.478 \qquad P_{SW} = \frac{2 + 3}{21} = 0.238$$

$$Z = \frac{0.478 - 0.238}{0.441\ (0.559)\ \left(\frac{1}{115} + \frac{1}{21}\right)} = \frac{0.240}{0.118} = 2.034^*$$

Striped bass: Post-Yolk-Sac

$$P_I = \frac{33 + 3}{57} = 0.632 \qquad P_{SW} = \frac{38 + 5}{57} = 0.754$$

White perch: Post-Yolk-Sac

$$P_I = \frac{100 + 11}{174} = 0.638 \qquad P_{SW} = \frac{26 + 6}{84} = 0.381$$

$$Z = \frac{0.638 - 0.381}{0.554\ (0.446)\ \left(\frac{1}{174} + \frac{1}{84}\right)} = \frac{0.257}{0.666} = 3.894^*$$

*Significantly different @ $\alpha = 0.05$

COMPARATIVE SAMPLES

Alosa spp.: Post-Yolk-Sac

$$P_I = \frac{80 + 21}{130} = 0.777 \qquad P_D = \frac{8 + 56}{335} = 0.191$$

$$Z = \frac{0.777 - 0.191}{0.355\ (0.645)\ \left(\frac{1}{130} + \frac{1}{335}\right)} = \frac{0.586}{0.041} = 14.327^*$$

Striped bass: Yolk-Sac

$$P_I = \frac{2 + 1}{13} = 0.231 \qquad P_{SW} = \frac{2 + 3}{21} = 0.238$$

Striped bass: Post-Yolk-Sac

$$P_I = \frac{5 + 1}{10} = 0.600 \qquad P_{SW} = \frac{35 + 5}{47} = 0.851$$

White perch: Post-Yolk-Sac

$$P_I = \frac{17 + 5}{90} = 0.550 \qquad P_{SW} = \frac{26 + 6}{81} = 0.395$$

$$Z = \frac{0.550 - 0.395}{0.446\ (0.554)\ \left(\frac{1}{40} + \frac{1}{81}\right)} = \frac{0.155}{0.096} = 1.615$$

*Significantly different @ $\alpha = 0.05$

APPENDIX - D

INTAKE AND SEAL WELL COLLECTION INFORMATION

SAMPLE ABUNDANCE AND CONCENTRATION

V01A (NCOL)

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2050
SAMPLE END TIME - 2105
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/09
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000101
WATER TEMPERATURE(C)- 22.5
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - F
WATER HEIGHT (M) - 2.21

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
			LIVE	STUNNED	DEAD+	6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	
ALOS	PYS	2	0	0	0	0	0	0	0	0	0	0	0	2
CYP	PYS	1	1	0	0	1	0	0	0	0	0	0	0	0
MOR	UID	1	1	0	0	1	0	1	0	1	0	1	0	0
SB	YS	2	1	0	0	1	0	0	0	0	0	0	0	1
SB	PYS	1	1	0	0	0	0	0	0	0	0	0	0	0
UID	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	EGG	2	0	0	0	0	0	0	0	0	0	0	0	2
WP	PYS	5	1	0	0	0	0	0	0	0	0	0	0	4

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2145
SAMPLE END TIME - 2200
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/09
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000102
WATER TEMPERATURE(C)- 23.0
CONDUCTIVITY (UMHOS)- 250
TIDE STAGE - F
WATER HEIGHT (M) - 2.13

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	3	0	1	2	0	0	0	0	0	0	0	0	0
ASD	PYS	2	0	1	1	0	0	0	0	0	0	0	0	0
CYP	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1
RSM	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
SB	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	PYS	1	1	0	0	0	0	0	0	0	0	0	0	0
TO	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
WP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2240
SAMPLE END TIME - 2255
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/09
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000103
WATER TEMPERATURE(C)- 23.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.13

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	3	0	0	2	0	0	0	0	0	0	0	0	1
ASO	PYS	1	0	1	0	0	0	0	0	0	0	0	0	0
SB	YS	1	0	0	1	0	0	0	0	0	0	0	0	0
SB	PYS	2	1	1	0	1	0	1	0	1	0	1	0	0
WP	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2330
SAMPLE END TIME - 2345
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/09
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000104
WATER TEMPERATURE(C)- 23.0
CONDUCTIVITY (UMHOS)- 270
TIDE STAGE - E
WATER HEIGHT (M) - 2.34

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	5	2	0	3	0	0	0	0	0	0	0	0	0
SB	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
WP	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 0025
SAMPLE END TIME - 0040
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/10
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000105
WATER TEMPERATURE(C)- 21.5
CONDUCTIVITY (UMHOS)- 280
TIDE STAGE - E
WATER HEIGHT (M) - 2.62

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	UID	1	0	0	1	0	0	0	0	0	0	0	0	0
ALOS	PYS	2	1	0	0	0	0	0	0	0	0	0	0	1
SB	YS	1	0	1	0	0	1	0	1	0	0	0	0	0
SB	PYS	1	0	1	0	0	0	0	0	0	0	0	0	0
WP	PYS	1	1	0	0	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 0115
SAMPLE END TIME - 0130
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/10
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000106
WATER TEMPERATURE(C)- 21.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - E
WATER HEIGHT (M) - 2.74

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	2	0	0	0	0	0	0	0	0	0	0	0	2
CYP	YS	2	0	0	0	0	0	0	0	0	0	0	0	2
CYP	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	YS	2	0	0	0	0	0	0	0	0	0	0	0	2
SB	PYS	2	0	0	0	0	0	0	0	0	0	0	0	2
WP	EGG	2	0	0	0	0	0	0	0	0	0	0	0	2

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION	- RD	SAMPLE COLLECTION DATE	- 80/06/10	INVENTORY NUMBER	- 000107
SAMPLE START TIME	- 2005	SAMPLE VOLUME (CU.M.)	- 11.3550	WATER TEMPERATURE(C)	- 23.0
SAMPLE END TIME	- 2020	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 260
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- .7570	TIDE STAGE	- F
				WATER HEIGHT (M)	- 2.46

			INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		CONTROL
SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	COUNT
ALOS	PYS	8	0	0	7	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2100
SAMPLE END TIME - 2115
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/10
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000108
WATER TEMPERATURE(C)- 27.0
CONDUCTIVITY (UMHOS)- 240
TIDE STAGE - F
WATER HEIGHT (M) - 2.31

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	7	0	1	6	0	0	0	0	0	0	0	0	0
CYP	YS	2	1	0	0	1	0	1	0	1	0	1	0	1
RSM	JUV	1	0	1	0	0	0	0	0	0	0	0	0	0
SB	YS	3	0	1	0	0	1	0	0	0	0	0	0	2
WP	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	2	2	0	0	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2155
SAMPLE END TIME - 2210
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/10
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000109
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - F
WATER HEIGHT (M) - 2.16

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	7	0	0	7	0	0	0	0	0	0	0	0	0
ASD	PYS	2	0	0	2	0	0	0	0	0	0	0	0	0
SB	PYS	2	2	0	0	2	0	2	0	2	0	2	0	0
TD	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	3	0	0	3	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2255
SAMPLE END TIME - 2310
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/10
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000110
WATER TEMPERATURE(C)- 23.0
CONDUCTIVITY (UMHOS)- 300
TIDE STAGE - F
WATER HEIGHT (M) - 2.16

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	8	0	2	6	0	0	0	0	0	0	0	0	0
CYP	PYS	4	1	2	0	1	1	1	1	0	1	0	0	1
RSM	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
RSM	JUV	1	0	1	0	0	0	0	0	0	0	0	0	0
SB	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	PYS	1	0	1	0	0	0	0	0	0	0	0	0	0
TD	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
TD	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
WP	PYS	6	2	1	3	2	0	2	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 0010
SAMPLE END TIME - 0025
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .6
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000111
WATER TEMPERATURE(C) - 23.0
CONDUCTIVITY (UMHOS) - 260
TIDE STAGE - E
WATER HEIGHT (M) - 2.26

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	UID	1	0	0	1	0	0	0	0	0	0	0	0	0
ALOS	PYS	7	0	2	5	0	0	0	0	0	0	0	0	0
SB	YS	1	0	0	1	0	0	0	0	0	0	0	0	0
SB	PYS	3	2	0	1	2	0	2	0	1	0	1	0	0
WP	PYS	4	2	0	1	2	0	1	0	1	0	1	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 0100
SAMPLE END TIME - 0115
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000112
WATER TEMPERATURE(C)- 21.0
CONDUCTIVITY (UMHOS)- 300
TIDE STAGE - E
WATER HEIGHT (M) - 2.49

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	13	0	5	8	0	0	0	0	0	0	0	0	0
ASO	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
SB	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
WP	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 1932
SAMPLE END TIME - 1947
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000113
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - F
WATER HEIGHT (M) - 2.77

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	2	0	0	2	0	0	0	0	0	0	0	0	0
SB	YS	2	0	0	0	0	0	0	0	0	0	0	0	2
WP	PYS	3	0	0	2	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2024
SAMPLE END TIME - 2039
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .8
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000114
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - F
WATER HEIGHT (M) - 2.72

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	5	0	0	5	0	0	0	0	0	0	0	0	0
ASD	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
SB	UID	1	0	0	1	0	0	0	0	0	0	0	0	0
TD	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2135
SAMPLE END TIME - 2150
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000115
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.41

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	7	0	1	6	0	0	0	0	0	0	0	0	0
ASD	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
CYP	PYS	2	1	0	1	1	0	1	0	1	0	1	0	0
SB	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	PYS	3	3	0	0	3	0	3	0	2	0	2	0	0
WP	PYS	2	1	1	0	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2245
SAMPLE END TIME - 2300
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000116
WATER TEMPERATURE(C)- 23.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.29

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	4	0	0	4	0	0	0	0	0	0	0	0	0
ASD	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
RSM	PYS	2	0	0	2	0	0	0	0	0	0	0	0	0
SB	PYS	3	3	0	0	3	0	3	0	3	0	3	0	0
TD	YS	2	0	0	0	0	0	0	0	0	0	0	0	2
TD	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
WP	PYS	5	1	0	3	1	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2340
SAMPLE END TIME - 2355
SAMPLE DURATION(MIN) - 15
SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463
INVENTORY NUMBER - 000117
WATER TEMPERATURE(C)- 24.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.24

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	4	0	0	4	0	0	0	0	0	0	0	0	0
CYP	UID	1	0	0	1	0	0	0	0	0	0	0	0	0
CYP	PYS	1	0	1	0	0	1	0	1	0	1	0	1	0
SB	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
TD	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	2	0	0	2	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 0045
SAMPLE END TIME - 0100
SAMPLE DURATION(MIN) - 15
SAMPLE COLLECTION DATE - 80/06/12
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570
INVENTORY NUMBER - 000118
WATER TEMPERATURE(C)- 23.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.24

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	UID	1	0	0	0	0	0	0	0	0	0	0	0	1
ALOS	PYS	4	1	0	3	0	0	0	0	0	0	0	0	0
MOR	PYS	1	0	1	0	0	0	0	0	0	0	0	0	0
RSM	JUV	1	0	1	0	0	0	0	0	0	0	0	0	0
SB	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
WP	PYS	3	1	0	2	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2015
SAMPLE END TIME - 2030
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/12
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000119
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - F
WATER HEIGHT (M) - 3.02

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	8	0	0	8	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2115
SAMPLE END TIME - 2130
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/12
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000120
WATER TEMPERATURE(C)- 24.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - F
WATER HEIGHT (M) - 2.79

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	23	3	0	20	0	0	0	0	0	0	0	0	0
CYP	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	3	3	0	0	3	0	3	0	3	0	3	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2205
SAMPLE END TIME - 2220
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/12
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000121
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - F
WATER HEIGHT (M) - 2.57

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	19	0	2	17	0	0	0	0	0	0	0	0	0
ASD	PYS	1	0	1	0	0	0	0	0	0	0	0	0	0
CYP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
MOR	PYS	1	1	0	0	0	0	0	0	0	0	0	0	0
SB	PYS	8	7	1	0	7	0	6	0	6	0	6	0	0
TD	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2300
SAMPLE END TIME - 2315
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/12
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000122
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 270
TIDE STAGE - F
WATER HEIGHT (M) - 2.39

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
			LIVE	STUNNED	DEAD+	6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	
ALOS	PYS	15	0	1	13	0	0	0	0	0	0	0	0	1
ASD	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
CYP	UID	1	0	0	0	0	0	0	0	0	0	0	0	1
CYP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	PYS	2	1	0	1	1	0	1	0	1	0	1	0	0
TD	YS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 0000
SAMPLE END TIME - 0015
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/13
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000123
WATER TEMPERATURE(C)- 23.0
CONDUCTIVITY (UMHOS)- 270
TIDE STAGE - F
WATER HEIGHT (M) - 2.24

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	18	0	4	14	0	0	0	0	0	0	0	0	0
ASD	PYS	2	0	0	2	0	0	0	0	0	0	0	0	0
CYP	PYS	1	1	0	0	0	0	0	0	0	0	0	0	0
SB	PYS	2	2	0	0	2	0	2	0	2	0	2	0	0
WP	PYS	5	3	0	2	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- HQ
SAMPLE START TIME - 0100
SAMPLE END TIME - 0115
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/13
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000124
WATER TEMPERATURE(C)- 22.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - F
WATER HEIGHT (M) - 2.21

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	3	3	0	3	0	0	0	0	0	0	0	0	0
SB	PYS	2	2	0	0	1	0	1	0	1	0	0	0	0
WP	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 1945
SAMPLE END TIME - 2000
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/16
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000125
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - E
WATER HEIGHT (M) - 3.17

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	4	0	1	3	0	0	0	0	0	0	0	0	0
ASD	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
CYP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	YS	1	0	0	1	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2045
SAMPLE END TIME - 2100
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/16
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000126
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 3.33

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	16	0	6	10	0	0	0	0	0	0	0	0	0
SB	YS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2135
SAMPLE END TIME - 2150
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/16
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000127
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - E
WATER HEIGHT (M) - 3.43

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	6	0	2	4	0	0	0	0	0	0	0	0	0
SB	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2230
SAMPLE END TIME - 2245
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/16
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000128
WATER TEMPERATURE(C)- 24.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - E
WATER HEIGHT (M) - 3.35

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	3	0	2	1	0	0	0	0	0	0	0	0	0
WP	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2321
SAMPLE END TIME - 2336
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/16
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000129
WATER TEMPERATURE(C)- 24.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - F
WATER HEIGHT (M) - 2.97

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
MOR	PYS	1	1	0	0	0	0	0	0	0	0	0	0	0
WP	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 0015
SAMPLE END TIME - 0030
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/17
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000130
WATER TEMPERATURE(C)- 23.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.79

			INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	COUNT
ALOS	PYS	5	0	1	3	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 1920
SAMPLE END TIME - 1935
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/17
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000131
WATER TEMPERATURE(C)- 27.0
CONDUCTIVITY (UMHOS)- 240
TIDE STAGE - E
WATER HEIGHT (M) - 2.82

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
WP	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2015
SAMPLE END TIME - 2030
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/17
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000132
WATER TEMPERATURE(C)- 26.5
CONDUCTIVITY (UMHOS)- 240
TIDE STAGE - E
WATER HEIGHT (M) - 3.02

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
WP	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION	- RO	SAMPLE COLLECTION DATE	- 80/06/17	INVENTORY NUMBER	- 000133
SAMPLE START TIME	- 2100	SAMPLE VOLUME (CU.M.)	- 11.3550	WATER TEMPERATURE(C)	- 26.5
SAMPLE END TIME	- 2115	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 240
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- .7570	TIDE STAGE	- E
				WATER HEIGHT (M)	- 3.10

			INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		CONTROL
SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	COUNT
CYP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2220
SAMPLE END TIME - 2235
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/17
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000134
WATER TEMPERATURE(C)- 26.0
CONDUCTIVITY (UMHOS)- 240
TIDE STAGE - E
WATER HEIGHT (M) - 3.20

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	8	0	0	8	0	0	0	0	0	0	0	0	0
ASD	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
UID	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
WP	EGG	2	0	0	0	0	0	0	0	0	0	0	0	2

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2310
SAMPLE END TIME - 2325
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/17
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000135
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 240
TIDE STAGE - E
WATER HEIGHT (M) - 3.07

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	4	0	2	2	0	0	0	0	0	0	0	0	0
WP	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2355
SAMPLE END TIME - 0010
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/17
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000136
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 2.95

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	4	0	2	2	0	0	0	0	0	0	0	0	0
CYP	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
WP	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 1915
SAMPLE END TIME - 1930
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000137
WATER TEMPERATURE(C)- 27.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 2.57

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	1	0	1	0	0	0	0	0	0	0	0	0	0
SB	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
WP	PYS	2	1	0	0	1	0	1	0	1	0	1	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2000
SAMPLE END TIME - 2015
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000138
WATER TEMPERATURE(C)- 27.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 2.69

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
SB	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
WP	PYS	6	0	3	3	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2055
SAMPLE END TIME - 2110
SAMPLE DURATION(MIN) - 15
SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570
INVENTORY NUMBER - 000139
WATER TEMPERATURE(C)- 27.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 2.87

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
SB	YS	1	0	1	0	0	0	0	0	0	0	0	0	0
SB	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2220
SAMPLE END TIME - 2235
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000140
WATER TEMPERATURE(C)- 26.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - E
WATER HEIGHT (M) - 3.02

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	7	0	3	4	0	0	0	0	0	0	0	0	0
RSM	JUV	1	0	0	1	0	0	0	0	0	0	0	0	0
SB	YS	1	0	0	1	0	0	0	0	0	0	0	0	0
SB	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2306
SAMPLE END TIME - 2321
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000141
WATER TEMPERATURE(C)- 26.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 3.05

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	5	0	2	3	0	0	0	0	0	0	0	0	0
MOR	PYS	1	0	1	0	0	0	0	0	0	0	0	0	0
SB	PYS	2	1	1	0	1	1	1	1	1	1	1	1	0
WP	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	2	1	0	1	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2355
SAMPLE END TIME - 0010
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000142
WATER TEMPERATURE(C)- 26.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - E
WATER HEIGHT (M) - 3.05

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	8	0	3	5	0	0	0	0	0	0	0	0	0
SB	YS	1	1	0	0	0	0	0	0	0	0	0	0	0
SB	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
WP	PYS	2	1	0	1	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE GC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 1938
SAMPLE END TIME - 1953
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000143
WATER TEMPERATURE(C)- 28.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - F
WATER HEIGHT (M) - 2.39

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	2	0	1	1	0	0	0	0	0	0	0	0	0
WP	PYS	2	0	0	1	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2030
SAMPLE END TIME - 2045
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000144
WATER TEMPERATURE(C)- 27.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 2.51

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
MOR	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
WP	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2113
SAMPLE END TIME - 2128
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000145
WATER TEMPERATURE(C)- 27.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 2.69

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	2	0	1	1	0	0	0	0	0	0	0	0	0
WP	PYS	2	0	0	2	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2200
SAMPLE END TIME - 2215
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000146
WATER TEMPERATURE(C)- 27.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 2.84

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	9	0	1	8	0	0	0	0	0	0	0	0	0
CYP	PYS	2	2	0	0	2	0	2	0	2	0	2	0	0
MOR	PYS	1	0	1	0	0	0	0	0	0	0	0	0	0
SB	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
TD	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	3	1	1	1	1	1	1	1	1	1	1	1	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2245
SAMPLE END TIME - 2300
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000147
WATER TEMPERATURE(C)- 26.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 2.90

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	23	0	3	20	0	0	0	0	0	0	0	0	0
WP	EGG	2	0	0	0	0	0	0	0	0	0	0	0	2
WP	PYS	1	1	0	0	1	0	1	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2330
SAMPLE END TIME - 2345
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000148
WATER TEMPERATURE(C)- 26.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 3.00

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	14	0	1	13	0	0	0	0	0	0	0	0	0
WP	PYS	2	1	0	1	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 1950
SAMPLE END TIME - 2005
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/23
SAMPLE VOLUME (CU.M.) - 17.6003
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.1734

INVENTORY NUMBER - 000149
WATER TEMPERATURE(C)- 24.0
CONDUCTIVITY (UMHOS)- 240
TIDE STAGE - F
WATER HEIGHT (M) - 2.44

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
CYP	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
UID	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2125
SAMPLE END TIME - 2140
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/23
SAMPLE VOLUME (CU.M.) - 17.6003
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.1734

INVENTORY NUMBER - 000150
WATER TEMPERATURE(C)- 28.5
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.41

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	5	0	0	5	0	0	0	0	0	0	0	0	0
ASD	PYS	1	1	0	0	0	0	0	0	0	0	0	0	0
CYP	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
SB	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
WP	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2225
SAMPLE END TIME - 2240
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/23
SAMPLE VOLUME (CU.M.) - 17.6003
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.1734

INVENTORY NUMBER - 000151
WATER TEMPERATURE(C)- 28.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.36

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	4	0	1	3	0	0	0	0	0	0	0	0	0
UID	PYS	1	0	1	0	0	0	0	0	0	0	0	0	0
WP	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2315
SAMPLE END TIME - 2330
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/23
SAMPLE VOLUME (CU.M.) - 17.6003
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.1734

INVENTORY NUMBER - 000152
WATER TEMPERATURE(C)- 27.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.44

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	4	0	1	3	0	0	0	0	0	0	0	0	0
WP	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE GC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 1912
SAMPLE END TIME - 1927
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/26
SAMPLE VOLUME (CU.M.) - 23.5616
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.5708

INVENTORY NUMBER - 000153
WATER TEMPERATURE(C)- 30.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 2.84

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
SB	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION	- RD	SAMPLE COLLECTION DATE	- 80/06/26	INVENTORY NUMBER	- 000154
SAMPLE START TIME	- 1948	SAMPLE VOLUME (CU.M.)	- 23.5616	WATER TEMPERATURE(C)	- 30.0
SAMPLE END TIME	- 2003	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 220
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- 1.5708	TIDE STAGE	- E
				WATER HEIGHT (M)	- 2.87

			INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		CONTROL
SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	COUNT
(NONE COLLECTED.)														

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2019
SAMPLE END TIME - 2034
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/26
SAMPLE VOLUME (CU.M.) - 23.5616
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.5708

INVENTORY NUMBER - 000155
WATER TEMPERATURE(C) - 30.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - F
WATER HEIGHT (M) - 2.62

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
MOR	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
SB	PYS	3	2	0	1	2	0	2	0	2	0	2	0	0
WP	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2141
SAMPLE END TIME - 2156
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/26
SAMPLE VOLUME (CU.M.) - 23.5616
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.5708

INVENTORY NUMBER - 000156
WATER TEMPERATURE(C)- 30.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.26

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
CYP	PYS	2	0	0	2	0	0	0	0	0	0	0	0	0
SB	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
TD	JUV	1	1	0	0	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2214
SAMPLE END TIME - 2229
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/26
SAMPLE VOLUME (CU.M.) - 23.5616
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.5708

INVENTORY NUMBER - 000157
WATER TEMPERATURE(C)- 30.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 2.21

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	3	3	0	3	0	0	0	0	0	0	0	0	0
CYP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
MOR	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	PYS	2	0	0	2	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2249
SAMPLE END TIME - 2304
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/26
SAMPLE VOLUME (CU.M.) - 23.5616
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.5708

INVENTORY NUMBER - 000158
WATER TEMPERATURE(C)- 30.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 2.16

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	5	0	0	5	0	0	0	0	0	0	0	0	0
CYP	YS	2	0	0	0	0	0	0	0	0	0	0	0	2
SB	PYS	3	0	0	2	0	0	0	0	0	0	0	0	1
WP	PYS	3	0	0	3	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2201
SAMPLE END TIME - 2216
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/28
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000001
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - F
WATER HEIGHT (M) - 2.44

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	6	1	0	0	1	0	0	0	0	0	0	0	5
SB	YS	5	0	0	0	0	0	0	0	0	0	0	0	5
SB	PYS	2	2	0	0	1	0	1	0	0	0	0	0	0
UID	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2311
SAMPLE END TIME - 2326
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/28
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000002
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 190
TIDE STAGE - F
WATER HEIGHT (M) - 2.26

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	3	2	0	0	2	0	0	0	0	0	0	0	1
CYP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
MOR	PYS	1	1	0	0	1	0	1	0	0	0	0	0	0
SB	YS	10	4	0	0	4	0	2	0	0	0	0	0	6
SB	PYS	2	2	0	0	2	0	0	0	0	0	0	0	0
UID	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	13	5	0	0	4	0	2	0	1	0	0	0	8

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0021
SAMPLE END TIME - 0036
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/29
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000003
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 190
TIDE STAGE - F
WATER HEIGHT (M) - 2.21

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	9	7	0	0	1	0	0	0	0	0	0	0	2
CYP	PYS	2	2	0	0	2	0	2	0	2	0	2	0	0
TD	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	8	1	0	0	1	0	0	0	0	0	0	0	7

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0119
SAMPLE END TIME - 0134
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/29
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000004
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 190
TIDE STAGE - F
WATER HEIGHT (M) - 2.29

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	1	1	0	0	1	0	0	0	0	0	0	0	0
SB	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
UID	PYS	1	1	0	0	1	0	1	0	1	0	0	0	0
WP	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	YS	2	0	0	0	0	0	0	0	0	0	0	0	2
WP	PYS	4	3	0	0	1	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0215
SAMPLE END TIME - 0230
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/29
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000005
WATER TEMPERATURE(C)- 18.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - HS
WATER HEIGHT (M) - 2.54

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
ALOS	PYS	2	0	0	0	0	0	0	0	0	0	0	0	2
SB	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0355
SAMPLE END TIME - 0410
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/29
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000006
WATER TEMPERATURE(C)- 18.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - E
WATER HEIGHT (M) - 2.69

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
ALOS	PYS	6	4	0	0	3	0	1	0	0	0	0	0	2
CYP	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
SB	YS	3	2	0	0	0	0	0	0	0	0	0	0	1
WP	EGG	2	0	0	0	0	0	0	0	0	0	0	0	2
WP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2038
SAMPLE END TIME - 2053
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/29
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000007
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 190
TIDE STAGE - E
WATER HEIGHT (M) - 2.87

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	2	1	0	0	1	0	0	0	0	0	0	0	1
SB	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2127
SAMPLE END TIME - 2142
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/29
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000008
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - F
WATER HEIGHT (M) - 2.62

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
LOS	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
LOS	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
LOS	PYS	1	1	0	0	0	0	0	0	0	0	0	0	0
YP	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
B	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
B	YS	3	0	0	0	0	0	0	0	0	0	0	0	3
P	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1

OTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2221
SAMPLE END TIME - 2236
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/29
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000009
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - F
WATER HEIGHT (M) - 2.44

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
ALOS	PYS	4	2	0	0	0	0	0	0	0	0	0	0	2
CYP	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
SB	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	YS	7	1	0	0	0	0	0	0	0	0	0	0	6
SB	PYS	2	2	0	0	2	0	1	0	0	0	0	0	0
TD	YS	2	0	0	0	0	0	0	0	0	0	0	0	2
WP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	2	1	0	0	1	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2325
SAMPLE END TIME - 2340
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/29
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000010
WATER TEMPERATURE(C)- 18.5
CONDUCTIVITY (UMHOS)- 190
TIDE STAGE - F
WATER HEIGHT (M) - 2.18

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	YS	2	0	0	0	0	0	0	0	0	0	0	0	2
ALOS	PYS	36	20	0	0	4	0	0	0	0	0	0	0	16
CYP	PYS	3	3	0	0	3	0	3	0	3	0	3	0	0
SB	YS	19	8	3	0	7	0	4	0	1	0	0	0	8
SB	PYS	5	5	0	0	2	0	2	0	0	0	0	0	0
TD	YS	2	0	1	0	0	0	0	0	0	0	0	0	1
UID	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	40	30	4	0	22	1	17	1	6	0	6	0	6

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0023
SAMPLE END TIME - 0038
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/30
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000011
WATER TEMPERATURE(C)- 18.0
CONDUCTIVITY (UMHOS)- 190
TIDE STAGE - F
WATER HEIGHT (M) - 2.16

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	YS	3	0	0	0	0	0	0	0	0	0	0	0	3
ALOS	PYS	29	24	0	0	10	0	5	0	2	0	2	0	5
CYP	PYS	3	3	0	0	3	0	3	0	3	0	3	0	0
MOR	PYS	1	1	0	0	0	0	0	0	0	0	0	0	0
SB	YS	6	6	0	0	1	0	0	0	0	0	0	0	0
SB	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1
TO	YS	1	1	0	0	1	0	1	0	1	0	1	0	0
WP	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	7	4	1	0	0	0	0	0	0	0	0	0	2

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0116
SAMPLE END TIME - 0131
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/30
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000012
WATER TEMPERATURE(C)- 18.0
CONDUCTIVITY (UMHOS)- 190
TIDE STAGE - F
WATER HEIGHT (M) - 2.18

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	13	9	0	0	4	0	2	0	2	0	2	0	4
CYP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
CYP	PYS	2	2	0	0	2	0	2	0	2	0	2	0	0
SB	YS	1	1	0	0	0	0	0	0	0	0	0	0	0
TD	YS	3	1	0	0	1	0	1	0	1	0	1	0	2
TD	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
WP	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2000
SAMPLE END TIME - 2015
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/02
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000013
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 3.07

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2050
SAMPLE END TIME - 2105
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/02
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000014
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 3.15

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	2	0	0	0	0	0	0	0	0	0	0	0	2
SB	UID	1	1	0	0	1	0	1	0	0	0	0	0	0
SB	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	YS	2	0	0	0	0	0	0	0	0	0	0	0	2
WP	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- R1
SAMPLE START TIME - 2139
SAMPLE END TIME - 2154
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/02
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000015
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - E
WATER HEIGHT (M) - 3.23

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
ALOS	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2220
SAMPLE END TIME - 2235
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/02
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000016
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - E
WATER HEIGHT (M) - 3.23

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1
MP	†3	3	0	0	0	0	0	0	0	0	0	0	0	3
MP	PYS	2	2	0	0	2	0	2	0	2	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2256
SAMPLE END TIME - 2311
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/02
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000017
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - E
WATER HEIGHT (M) - 2.95

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
ALOS	PYS	4	0	0	0	0	0	0	0	0	0	0	0	4
SB	UID	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	YS	2	1	0	0	1	0	1	0	0	0	0	0	1
SB	PYS	1	0	1	0	0	1	0	1	0	0	0	0	0
WP	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2349
SAMPLE END TIME - 0004
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/02
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000018
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - F
WATER HEIGHT (M) - 2.90

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
ALOS	PYS	5	2	0	0	1	0	0	0	0	0	0	0	3
SB	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	YS	1	1	0	0	1	0	1	0	1	0	1	0	0
SB	PYS	5	5	0	0	5	0	2	0	1	0	0	0	0
WP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 1943
SAMPLE END TIME - 1958
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/03
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000019
WATER TEMPERATURE(C)- 20.5
CONDUCTIVITY (UMHOS)- 450
TIDE STAGE - E
WATER HEIGHT (M) - 2.87

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	2	2	0	0	1	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2037
SAMPLE END TIME - 2052
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/03
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000020
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 1100
TIDE STAGE - E
WATER HEIGHT (M) - 2.92

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	EGG	3	0	0	0	0	0	0	0	0	0	0	0	3
ALOS	PYS	6	3	0	0	0	0	0	0	0	0	0	0	3
CYP	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
SB	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	YS	1	1	0	0	1	0	1	0	0	0	0	0	0
SB	PYS	2	1	0	0	1	0	1	0	1	0	1	0	1
UID	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	2	0	0	0	0	0	0	0	0	0	0	0	2

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2125
SAMPLE END TIME - 2140
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/03
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000021
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UNHOS)- 940
TIDE STAGE - E
WATER HEIGHT (M) - 3.05

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	3	2	0	0	0	0	0	0	0	0	0	0	1
CYP	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
SB	PYS	1	1	0	0	1	0	1	0	1	0	0	0	0
TD	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	EGG	4	0	0	0	0	0	0	0	0	0	0	0	4

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION	- RI	SAMPLE COLLECTION DATE	- 80/06/03	INVENTORY NUMBER	- 000022
SAMPLE START TIME	- 2213	SAMPLE VOLUME (CU.M.)	- 11.3550	WATER TEMPERATURE(C)	- 20.0
SAMPLE END TIME	- 2228	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 880
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- .7570	TIDE STAGE	- E
				WATER HEIGHT (M)	- 3.12

			INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		CONTROL
SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	COUNT

(NONE COLLECTED.)

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2316
SAMPLE END TIME - 2331
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/03
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000023
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 370
TIDE STAGE - E
WATER HEIGHT (M) - 3.12

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	EGG	14	0	0	0	0	0	0	0	0	0	0	0	14
SB	YS	2	2	0	0	2	0	2	0	1	0	1	0	0
WP	PYS	2	1	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2358
SAMPLE END TIME - 0013
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/03
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000024
WATER TEMPERATURE(C)- 20.5
CONDUCTIVITY (UMHOS)- 340
TIDE STAGE - LS
WATER HEIGHT (M) - 2.95

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	YS	1	1	0	0	1	0	1	0	0	0	0	0	0
WP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
YP	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 1942
SAMPLE END TIME - 1957
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/04
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000025
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 300
TIDE STAGE - E
WATER HEIGHT (M) - 2.84

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	2	0	0	0	0	0	0	0	0	0	0	0	2
SB	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	7	5	0	0	3	0	2	0	2	0	2	0	2

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2028
SAMPLE END TIME - 2043
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/04
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000026
WATER TEMPERATURE(C)- 21.0
CONDUCTIVITY (UMHOS)- 280
TIDE STAGE - E
WATER HEIGHT (M) - 2.92

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
CYP	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
SB	YS	2	2	0	0	1	0	0	0	0	0	0	0	0
WP	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	12	7	0	1	1	0	0	0	0	0	0	0	4

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2111
SAMPLE END TIME - 2126
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/04
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000027
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 270
TIDE STAGE - E
WATER HEIGHT (M) - 3.02

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1
CYP	YS	2	0	0	0	0	0	0	0	0	0	0	0	2
SB	UID	2	2	0	0	0	0	0	0	0	0	0	0	0
SB	EGG	2	0	0	0	0	0	0	0	0	0	0	0	2
SB	YS	6	5	0	0	0	0	0	0	0	0	0	0	1
SB	PYS	3	1	0	0	0	0	0	0	0	0	0	0	2
WP	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	11	11	0	0	2	0	2	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- R1
SAMPLE START TIME - 2204
SAMPLE END TIME - 2219
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/04
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000028
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - E
WATER HEIGHT (M) - 3.20

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
CYP	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
SB	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	YS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0019
SAMPLE END TIME - 0034
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/05
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000029
WATER TEMPERATURE(C)- 21.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 3.15

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	UID	1	1	0	0	1	0	1	0	0	0	0	0	0
SB	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	YS	3	0	0	0	0	0	0	0	0	0	0	0	3
SB	PYS	1	1	0	0	1	0	1	0	0	0	0	0	0
WP	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0103
SAMPLE END TIME - 0118
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/05
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000030
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - F
WATER HEIGHT (M) - 2.95

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	2	2	0	0	0	0	0	0	0	0	0	0	0
SB	YS	9	6	1	0	3	0	1	0	0	0	0	0	2
WP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	3	0	1	0	0	1	0	0	0	0	0	0	2

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2013
SAMPLE END TIME - 2028
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/05
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000031
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 250
TIDE STAGE - F
WATER HEIGHT (M) - 2.62

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
SB	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2108
SAMPLE END TIME - 2123
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/05
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000032
WATER TEMPERATURE(C)- 19.5
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - E
WATER HEIGHT (M) - 2.74

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	3	1	0	0	0	0	0	0	0	0	0	0	2
CYP	YS	2	0	1	0	0	1	0	1	0	1	0	1	1
MOR	UID	2	1	1	0	1	0	0	0	0	0	0	0	0
SB	YS	7	2	1	0	1	1	1	1	0	0	0	0	4
SB	PYS	15	4	1	0	4	0	2	0	0	0	0	0	10
WP	EGG	2	0	0	0	0	0	0	0	0	0	0	0	2
WP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	13	10	0	0	10	0	5	0	3	0	3	0	3

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2207
SAMPLE END TIME - 2222
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/05
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000033
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 350
TIDE STAGE - E
WATER HEIGHT (M) - 3.00

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
MOR	UIO	1	0	0	1	0	0	0	0	0	0	0	0	0
SB	EGG	4	0	0	0	0	0	0	0	0	0	0	0	4
SB	YS	4	2	0	0	2	0	0	0	0	0	0	0	2
SB	PYS	6	4	0	0	2	0	2	0	2	0	2	0	2
TD	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
TD	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	EGG	2	0	0	0	0	0	0	0	0	0	0	0	2
WP	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2308
SAMPLE END TIME - 2323
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/05
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000034
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 530
TIDE STAGE - E
WATER HEIGHT (M) - 3.25

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1
CYP	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
SB	YS	3	2	0	0	2	0	0	0	0	0	0	0	1
TD	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2357
SAMPLE END TIME - 0012
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/05
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000035
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 300
TIDE STAGE - E
WATER HEIGHT (M) - 3.25

			INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	COUNT
ALOS	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0045
SAMPLE END TIME - 0100
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/06
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000036
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 240
TIDE STAGE - E
WATER HEIGHT (M) - 3.15

			INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		CONTROL
SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	COUNT
MOR	UID	1	0	1	0	0	0	0	0	0	0	0	0	0
SB	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	YS	4	0	0	0	0	0	0	0	0	0	0	0	4

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2050
SAMPLE END TIME - 2105
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/09
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000037
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - F
WATER HEIGHT (M) - 2.21

			INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	COUNT
ALOS	PYS	3	3	0	0	1	0	0	0	0	0	0	0	0
SB	YS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2145
SAMPLE END TIME - 2200
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/09
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000038
WATER TEMPERATURE(C)- 19.5
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - F
WATER HEIGHT (M) - 2.13

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
CYP	PYS	2	2	0	0	2	0	2	0	2	0	2	0	0
MOR	UID	1	1	0	0	0	0	0	0	0	0	0	0	0
SB	YS	1	1	0	0	1	0	0	0	0	0	0	0	0
TD	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
WP	PYS	1	1	0	0	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2240
SAMPLE END TIME - 2255
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/09
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000039
WATER TEMPERATURE(C)- 19.5
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.13

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ASD	PYS	1	0	1	0	0	0	0	0	0	0	0	0	0
CYP	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	2	0	1	0	0	1	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2330
SAMPLE END TIME - 2345
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/09
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000040
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - E
WATER HEIGHT (M) - 2.34

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
WP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION	- RI	SAMPLE COLLECTION DATE	- 80/06/10	INVENTORY NUMBER	- 000041
SAMPLE START TIME	- 0025	SAMPLE VOLUME (CU.M.)	- 11.3550	WATER TEMPERATURE(C)	- 19.0
SAMPLE END TIME	- 0040	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 260
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- .7570	TIDE STAGE	- E
				WATER HEIGHT (M)	- 2.62

			INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	COUNT
CYP	PYS	1	1	0	0	1	0	1	0	1	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0115
SAMPLE END TIME - 0130
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/10
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000042
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 250
TIDE STAGE - E
WATER HEIGHT (M) - 2.74

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
CYP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
WP	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2005
SAMPLE END TIME - 2020
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/10
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000043
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - F
WATER HEIGHT (M) - 2.46

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	3	1	0	1	0	0	0	0	0	0	0	0	1
TD	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2100
SAMPLE END TIME - 2115
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/10
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000044
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - F
WATER HEIGHT (M) - 2.34

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
CYP	PYS	4	4	0	0	4	0	4	0	4	0	4	0	0
SB	YS	2	0	0	1	0	0	0	0	0	0	0	0	1
SB	PYS	1	1	0	0	0	0	0	0	0	0	0	0	0
WP	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	2	1	0	1	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2155
SAMPLE END TIME - 2210
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/10
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000045
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - F
WATER HEIGHT (M) - 2.16

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	3	2	0	1	0	0	0	0	0	0	0	0	0
ASD	PYS	1	1	0	0	0	0	0	0	0	0	0	0	0
CYP	PYS	5	3	0	0	3	0	3	0	3	0	3	0	2
WP	PYS	1	1	0	0	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2255
SAMPLE END TIME - 2310
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/10
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000046
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - F
WATER HEIGHT (M) - 2.16

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD*	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
ALOS	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1
CYP	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
SB	YS	1	0	0	1	0	0	0	0	0	0	0	0	0
WP	PYS	3	2	0	1	1	0	0	0	0	0	0	0	0

NOTE: * DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0010
SAMPLE END TIME - 0025
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000047
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 270
TIDE STAGE - E
WATER HEIGHT (M) - 2.26

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	1	1	0	0	0	0	0	0	0	0	0	0	0
SB	YS	3	1	0	1	0	0	0	0	0	0	0	0	1
SB	PYS	2	0	0	0	0	0	0	0	0	0	0	0	2
WP	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0100
SAMPLE END TIME - 0115
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000048
WATER TEMPERATURE(C)- 18.0
CONDUCTIVITY (UMHOS)- 290
TIDE STAGE - E
WATER HEIGHT (M) - 2.49

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT

(NONE COLLECTED.)

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- R1
SAMPLE START TIME - 1935
SAMPLE END TIME - 1947
SAMPLE DURATION(MIN) - 15
SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570
INVENTORY NUMBER - 000049
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 240
TIDE STAGE - F
WATER HEIGHT (M) - 2.77

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
(NONE COLLECTED.)														

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION	- RI	SAMPLE COLLECTION DATE	- 80/06/11	INVENTORY NUMBER	- 000050
SAMPLE START TIME	- 2024	SAMPLE VOLUME (CU.M.)	- 13.9099	WATER TEMPERATURE(C)	- 19.5
SAMPLE END TIME	- 2039	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 340
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- .9273	TIDE STAGE	- F
				WATER HEIGHT (M)	- 2.72

			INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		CONTROL
SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	COUNT

(NONE COLLECTED.)

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2135
SAMPLE END TIME - 2150
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000051
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 240
TIDE STAGE - F
WATER HEIGHT (M) - 2.41

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
CYP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
CYP	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1
SB	PYS	1	1	0	0	1	0	1	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2245
SAMPLE END TIME - 2300
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000052
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 250
TIDE STAGE - F
WATER HEIGHT (M) - 2.29

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ASD	PYS	2	1	0	1	1	0	1	0	0	0	0	0	0
CYP	PYS	2	2	0	0	2	0	2	0	2	0	2	0	0
WP	PYS	2	2	0	0	2	0	2	0	2	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION	- RI	SAMPLE COLLECTION DATE	- 80/06/11	INVENTORY NUMBER	- 000053
SAMPLE START TIME	- 2340	SAMPLE VOLUME (CU.M.)	- 13.7396	WATER TEMPERATURE(C)	- 18.0
SAMPLE END TIME	- 2355	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 270
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- .9160	TIDE STAGE	- F
				WATER HEIGHT (M)	- 2.24

			INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	COUNT
SB	YS	1	0	0	1	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0045
SAMPLE END TIME - 0100
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/12
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000054
WATER TEMPERATURE(C)- 18.0
CONDUCTIVITY (UMHOS)- 280
TIDE STAGE - F
WATER HEIGHT (M) - 2.24

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	2	1	0	1	0	0	0	0	0	0	0	0	0
CYP	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
WP	PYS	1	1	0	0	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2015
SAMPLE END TIME - 2030
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/12
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000055
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - E
WATER HEIGHT (M) - 3.02

			INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	COUNT
MOR	UID	1	0	0	1	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2115
SAMPLE END TIME - 2130
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/12
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000056
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - F
WATER HEIGHT (M) - 2.79

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
CYP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
CYP	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
TD	YS	1	1	0	0	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2205
SAMPLE END TIME - 2220
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/12
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000057
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - F
WATER HEIGHT (M) - 2.57

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
ASD	PYS	1	0	1	0	0	0	0	0	0	0	0	0	0
CYP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
CYP	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
SB	YS	1	0	0	1	0	0	0	0	0	0	0	0	0
TD	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
WP	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	4	2	0	2	2	0	2	0	2	0	2	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- R1
SAMPLE START TIME = 2300
SAMPLE END TIME = 2315
SAMPLE DURATION(MIN) = 15

SAMPLE COLLECTION DATE = 80/06/12
SAMPLE VOLUME (CU.M.) = 13.7396
TEST VELOCITY (CPS) = .0
PUMP RATE (CU.M/MIN) = .9160

INVENTORY NUMBER - 000058
WATER TEMPERATURE(C)- 19.5
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - F
WATER HEIGHT (M) - 2.39

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	4	3	0	1	0	0	0	0	0	0	0	0	0
CYP	PYS	3	3	0	0	3	0	3	0	3	0	3	0	0
WP	PYS	1	0	1	0	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0000
SAMPLE END TIME - 0015
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/13
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000059
WATER TEMPERATURE(C)- NA
CONDUCTIVITY (UMHOS)- NA
TIDE STAGE - F
WATER HEIGHT (M) - 2.24

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	5	1	0	4	0	0	0	0	0	0	0	0	0
ASD	PYS	1	0	1	0	0	0	0	0	0	0	0	0	0
CYP	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1
TD	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	2	0	0	1	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0100
SAMPLE END TIME - 0115
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/13
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000060
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - F
WATER HEIGHT (M) - 2.21

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	5	2	1	2	0	0	0	0	0	0	0	0	0
CYP	YS	1	1	0	0	1	0	1	0	1	0	1	0	0
CYP	PYS	2	2	0	0	2	0	2	0	2	0	2	0	0
SB	YS	1	0	0	1	0	0	0	0	0	0	0	0	0
SB	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	3	0	0	2	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 1945
SAMPLE END TIME - 2000
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/16
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000061
WATER TEMPERATURE(C)- 21.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 3.17

			INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	COUNT
ALOS	PYS	2	1	1	0	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION	- R1	SAMPLE COLLECTION DATE	- 80/06/16	INVENTORY NUMBER	- 000062
SAMPLE START TIME	- 2045	SAMPLE VOLUME (CU.M.)	- 13.7396	WATER TEMPERATURE(C)	- 20.5
SAMPLE END TIME	- 2100	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 230
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- .9160	TIDE STAGE	- E
				WATER HEIGHT (M)	- 3.33

			INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		QUALITY CONTROL
SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	COUNT

(NONE COLLECTED.)

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2135
SAMPLE END TIME - 2150
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/16
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000063
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 3.43

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	1	0	1	0	0	0	0	0	0	0	0	0	0
WP	EGG	1	0	0	1	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2230
SAMPLE END TIME - 2245
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/16
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000064
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 3.35

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
WP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- R1
SAMPLE START TIME - 2321
SAMPLE END TIME - 2336
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/16
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000065
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.97

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
WP	EGG	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION	- RI	SAMPLE COLLECTION DATE	- 80/06/17	INVENTORY NUMBER	- 000066
SAMPLE START TIME	- 0015	SAMPLE VOLUME (CU.M.)	- 13.7396	WATER TEMPERATURE(C)	- 20.0
SAMPLE END TIME	- 0030	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 220
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- .9160	TIDE STAGE	- F
				WATER HEIGHT (M)	- 2.79

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	

(NONE COLLECTED.)

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- NI
SAMPLE START TIME - 1920
SAMPLE END TIME - 1935
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/17
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000067
WATER TEMPERATURE(C)- 22.0
CONDUCTIVITY (UMHOS)- 250
TIDE STAGE - E
WATER HEIGHT (M) - 2.82

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
WP	YS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2015
SAMPLE END TIME - 2030
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/17
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000068
WATER TEMPERATURE(C)- 21.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 3.02

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT

(NONE COLLECTED.)

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2100
SAMPLE END TIME - 2115
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/17
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000069
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 3.10

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
(NONE COLLECTED.)														

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION	- RI	SAMPLE COLLECTION DATE	- 80/06/17	INVENTORY NUMBER	- 000070
SAMPLE START TIME	- 2220	SAMPLE VOLUME (CU.M.)	- 13.7396	WATER TEMPERATURE(C)	- 21.0
SAMPLE END TIME	- 2235	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 230
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- .9160	TIDE STAGE	- E
				WATER HEIGHT (M)	- 3.20

			INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	COUNT
ALOS	PYS	3	1	1	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2310
SAMPLE END TIME - 2325
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/17
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000071
WATER TEMPERATURE(C)- 20.5
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 3.07

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	6	1	3	2	0	0	0	0	0	0	0	0	0
RSM	JUV	1	0	0	1	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION	- RI	SAMPLE COLLECTION DATE	- 80/06/17	INVENTORY NUMBER	- 000072
SAMPLE START TIME	- 2355	SAMPLE VOLUME (CU.M.)	- 11.3550	WATER TEMPERATURE(C)	- 20.0
SAMPLE END TIME	- 0010	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 230
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- .7570	TIDE STAGE	- E
				WATER HEIGHT (M)	- 3.05

			INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		CONTROL
SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	COUNT

(NONE COLLECTED.)

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- R1
SAMPLE START TIME - 1915
SAMPLE END TIME - 1930
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER = 000073
WATER TEMPERATURE(C) = 29.0
CONDUCTIVITY (UMHOS) = 230
TIDE STAGE = E
WATER HEIGHT (M) = 2.97

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
MOR	PYS	1	0	1	0	0	0	0	0	0	0	0	0	0
SB	YS	1	0	1	0	0	0	0	0	0	0	0	0	0
WP	PYS	3	0	1	0	0	0	0	0	0	0	0	0	2

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION	- RI	SAMPLE COLLECTION DATE	- 80/06/18	INVENTORY NUMBER	- 000074
SAMPLE START TIME	- 2000	SAMPLE VOLUME (CU.M.)	- 13.7396	WATER TEMPERATURE(C)	- 21.0
SAMPLE END TIME	- 2015	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 240
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- .9160	TIDE STAGE	- E
				WATER HEIGHT (M)	- 2.69

			INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	COUNT
ALOS	PYS	2	0	0	2	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2055
SAMPLE END TIME - 2110
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000075
WATER TEMPERATURE(C)- 21.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 2.87

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	1	1	0	0	1	0	1	0	1	0	0	0	0
WP	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2220
SAMPLE END TIME - 2235
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000076
WATER TEMPERATURE(C)- 21.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 3.02

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	13	10	0	3	0	0	0	0	0	0	0	0	0
ASD	PYS	1	1	0	0	0	0	0	0	0	0	0	0	0
WP	EGG	2	0	0	0	0	0	0	0	0	0	0	0	2
WP	PYS	2	1	0	1	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2306
SAMPLE END TIME - 2321
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000077
WATER TEMPERATURE(C)- 21.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 3.05

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	6	3	3	0	0	0	0	0	0	0	0	0	0
ASD	PYS	2	2	0	0	2	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2355
SAMPLE END TIME - 0010
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000078
WATER TEMPERATURE(C)- 21.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 3.05

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	9	8	1	0	0	0	0	0	0	0	0	0	0
CYP	PYS	1	0	1	0	0	1	0	1	0	1	0	1	0
SB	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 1938
SAMPLE END TIME - 1953
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000079
WATER TEMPERATURE(C)- 21.5
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - F
WATER HEIGHT (M) - 2.39

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	3	3	0	0	0	0	0	0	0	0	0	0	0
NOR	UID	1	0	1	0	0	0	0	0	0	0	0	0	0
TD	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
WP	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION	- RI	SAMPLE COLLECTION DATE	- 80/06/19	INVENTORY NUMBER	- 000080
SAMPLE START TIME	- 2030	SAMPLE VOLUME (CU.M.)	- 11.3550	WATER TEMPERATURE(C)	- 20.5
SAMPLE END TIME	- 2045	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 270
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- .7570	TIDE STAGE	- E
				WATER HEIGHT (M)	- 2.51

			INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	COUNT
WP	PYS	2	0	2	0	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2113
SAMPLE END TIME - 2128
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000081
WATER TEMPERATURE(C)- 20.5
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - E
WATER HEIGHT (M) - 2.69

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	1	0	1	0	0	0	0	0	0	0	0	0	0
CYP	PYS	2	0	0	0	0	0	0	0	0	0	0	0	2
SB	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
WP	PYS	2	1	0	1	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2200
SAMPLE END TIME - 2215
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000082
WATER TEMPERATURE(C)- 20.5
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - E
WATER HEIGHT (M) - 2.84

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	12	11	1	0	0	0	0	0	0	0	0	0	0
TD	YS	1	0	0	0	0	0	0	0	0	0	0	0	1
WP	PYS	2	2	0	0	2	0	2	0	2	0	2	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2245
SAMPLE END TIME - 2300
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000083
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 250
TIDE STAGE - E
WATER HEIGHT (M) - 2.90

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	14	11	2	1	2	0	2	0	2	0	2	0	0
ASO	PYS	1	1	0	0	1	0	1	0	1	0	0	0	0
SB	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0
WP	EGG	1	0	0	1	0	0	0	0	0	0	0	0	0
WP	PYS	1	1	0	0	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2330
SAMPLE END TIME - 2345
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000084
WATER TEMPERATURE(C)- 19.5
CONDUCTIVITY (UMHOS)- 240
TIDE STAGE - E
WATER HEIGHT (M) - 3.00

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	5	4	0	1	1	0	1	0	1	0	0	0	0
CYP	PYS	1	0	0	0	0	0	0	0	0	0	0	0	1
TD	JUV	1	1	0	0	1	0	1	0	1	0	1	0	0
WP	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 1950
SAMPLE END TIME - 2005
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/23
SAMPLE VOLUME (CU.M.) - 16.4648
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.0977

INVENTORY NUMBER - 000085
WATER TEMPERATURE(C)- 23.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - F
WATER HEIGHT (M) - 2.44

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
CYP	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0
MOR	PYS	2	0	0	1	0	0	0	0	0	0	0	0	1
SB	PYS	1	0	1	0	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2125
SAMPLE END TIME - 2140
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/23
SAMPLE VOLUME (CU.M.) - 16.4648
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.0977

INVENTORY NUMBER - 000086
WATER TEMPERATURE(C)- 22.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - F
WATER HEIGHT (M) - 2.41

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	3	2	0	1	1	0	1	0	1	0	0	0	0
WP	PYS	2	1	0	1	1	0	1	0	1	0	1	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2225
SAMPLE END TIME - 2240
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/23
SAMPLE VOLUME (CU.M.) - 16.4648
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.0977

INVENTORY NUMBER - 000087
WATER TEMPERATURE(C)- 22.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - F
WATER HEIGHT (M) - 2.36

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT LIVE	INITIAL COUNT STUNNED	INITIAL COUNT DEAD+	SURVIVAL OBSERVATION INFORMATION 6 HOUR LIVE	6 HOUR STUNNED	12 HOUR LIVE	12 HOUR STUNNED	24 HOUR LIVE	24 HOUR STUNNED	48 HOUR LIVE	48 HOUR STUNNED	QUALITY CONTROL COUNT
ALOS	PYS	2	0	1	1	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
COLLECTION INFORMATION

SAMPLE COLLECTION LOCATION- R1
SAMPLE START TIME - 2315
SAMPLE END TIME - 2330
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/23
SAMPLE VOLUME (CU.M.) - 16.4648
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.0977

INVENTORY NUMBER - 000088
WATER TEMPERATURE(C)- 22.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - F
WATER HEIGHT (M) - 2.44

SPECIES	LIFE STAGE	TOTAL NO. COLLECTED	INITIAL COUNT			SURVIVAL OBSERVATION INFORMATION								QUALITY CONTROL COUNT
						6 HOUR		12 HOUR		24 HOUR		48 HOUR		
			LIVE	STUNNED	DEAD+	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	LIVE	STUNNED	
ALOS	PYS	6	4	2	0	0	0	0	0	0	0	0	0	0
WP	PYS	1	0	0	1	0	0	0	0	0	0	0	0	0

NOTE: + DOES NOT INCLUDE QC COUNT.

APPENDIX - E

INTAKE AND SEAL WELL COLLECTION INFORMATION

INITIAL AND EXTENDED SURVIVAL DATA

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- ND
SAMPLE START TIME - 2050
SAMPLE END TIME - 2105
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/09
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000101
WATER TEMPERATURE(C)- 22.5
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - F
WATER HEIGHT (M) - 2.21

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13
CYP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
MOR	0	.00	0	.00	0	.00	0	.00	1	88.07	0	.00
SB	0	.00	2	176.13	1	88.07	0	.00	0	.00	3	264.20
UID	1	88.07	0	.00	0	.00	0	.00	0	.00	0	.00
WP	2	176.13	0	.00	5	440.33	0	.00	0	.00	5	440.33

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2145
SAMPLE END TIME - 2200
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/09
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000102
WATER TEMPERATURE(C)- 23.0
CONDUCTIVITY (UMHOS)- 250
TIDE STAGE - F
WATER HEIGHT (M) - 2.13

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	3	264.20	0	.00	0	.00	3	264.20
ASD	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13
CYP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
RSH	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	0	.00	1	88.07	1	88.07	0	.00	0	.00	2	176.13
TD	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
WP	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2240
SAMPLE END TIME - 2255
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/09
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000103
WATER TEMPERATURE(C)- 23.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.13

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	3	264.20	0	.00	0	.00	3	264.20
ASD	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	0	.00	1	88.07	2	176.13	0	.00	0	.00	3	264.20
WP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME * 2330
SAMPLE END TIME * 2345
SAMPLE DURATION(MIN) * 15

SAMPLE COLLECTION DATE - 80/06/09
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000104
WATER TEMPERATURE(C)- 23.0
CONDUCTIVITY (UMHOS)- 270
TIDE STAGE - E
WATER HEIGHT (M) - 2.34

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	5	440.33	0	.00	0	.00	5	440.33
SB	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
WP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 0025
SAMPLE END TIME - 0040
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/10
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000105
WATER TEMPERATURE(C)- 21.5
CONDUCTIVITY (UMHOS)- 280
TIDE STAGE - E
WATER HEIGHT (M) - 2.62

SPECIES	.....EGG..... NUMBER	CONC	....YOLK-SAC... NUMBER	CONC	.POST YOLK-SAC. NUMBER	CONC	....JUVENILE... NUMBER	CONC	.UID LIFE STAGE NUMBER	CONC	.TOTAL LARVAE** NUMBER	CONC
ALOS	0	.00	0	.00	2	176.13	0	.00	1	88.07	2	176.13
SB	0	.00	1	88.07	1	88.07	0	.00	0	.00	2	176.13
WP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 0115
SAMPLE END TIME - 0130
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/10
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000106
WATER TEMPERATURE(C)- 21.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - E
WATER HEIGHT (M) - 2.74

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13
CYP	0	.00	2	176.13	1	88.07	0	.00	0	.00	3	264.20
SB	0	.00	2	176.13	2	176.13	0	.00	0	.00	4	352.27
WP	2	176.13	0	.00	0	.00	0	.00	0	.00	0	.00

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME * 2005
SAMPLE END TIME * 2020
SAMPLE DURATION(MIN) * 15

SAMPLE COLLECTION DATE - 80/06/10
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000107
WATER TEMPERATURE(C)- 23.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - F
WATER HEIGHT (M) - 2.46

	******EGG******		****YOLK-SAC***		*POST YOLK-SAC*		****JUVENILE***		*UID LIFE STAGE		*TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	8	704.54	0	.00	0	.00	8	704.54

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2100
SAMPLE END TIME - 2115
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/10
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000108
WATER TEMPERATURE(C)- 27.0
CONDUCTIVITY (UMHOS)- 240
TIDE STAGE - F
WATER HEIGHT (M) - 2.31

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	7	616.47	0	.00	0	.00	7	616.47
CYP	0	.00	2	176.13	0	.00	0	.00	0	.00	2	176.13
RSM	0	.00	0	.00	0	.00	1	88.07	0	.00	0	.00
SB	0	.00	3	264.20	0	.00	0	.00	0	.00	3	264.20
WP	1	88.07	0	.00	2	176.13	0	.00	0	.00	2	176.13

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2155
SAMPLE END TIME - 2210
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/10
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .9570
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000108
INVENTORY NUMBER - 000109
WATER TEMPERATURE(C) - 25.0
CONDUCTIVITY (UMHOS) - F 260
TIDE STAGE - F
WATER HEIGHT (M) - 2.16

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		MID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALPS	0	.00	0	.00	7	493.17	0	.00	0	.00	7	493.17
ASQ	0	.00	0	.00	2	140.91	0	.00	0	.00	2	140.91
SB	0	.00	0	.00	2	140.91	0	.00	0	.00	2	140.91
TO	0	.00	1	70.45	0	.00	0	.00	0	.00	1	70.45
WP	0	.00	0	.00	3	211.36	0	.00	0	.00	3	211.36

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2255
SAMPLE END TIME - 2310
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/10
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000110
WATER TEMPERATURE(C)- 23.0
CONDUCTIVITY (UMHOS)- 300
TIDE STAGE - F
WATER HEIGHT (M) - 2.16

SPECIES	.....EGG..... NUMBER	CONC	....YOLK-SAC... NUMBER	CONC	.POST YOLK-SAC. NUMBER	CONC	....JUVENILE... NUMBER	CONC	.UID LIFE STAGE NUMBER	CONC	.TOTAL LARVAE** NUMBER	CONC
ALOS	0	.00	0	.00	8	563.63	0	.00	0	.00	8	563.63
CYP	0	.00	0	.00	4	281.81	0	.00	0	.00	4	281.81
RSM	0	.00	0	.00	1	70.45	1	70.45	0	.00	1	70.45
SB	0	.00	1	70.45	1	70.45	0	.00	0	.00	2	140.91
TD	0	.00	1	70.45	1	70.45	0	.00	0	.00	2	140.91
WP	0	.00	0	.00	6	422.72	0	.00	0	.00	6	422.72

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 0010
SAMPLE END TIME - 0025
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000111
WATER TEMPERATURE(C)- 23.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - E
WATER HEIGHT (M) - 2.26

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	7	616.47	0	.00	1	88.07	7	616.47
SB	0	.00	1	88.07	3	264.20	0	.00	0	.00	4	352.27
WP	0	.00	0	.00	4	352.27	0	.00	0	.00	4	352.27

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 0100
SAMPLE END TIME - 0115
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000112
WATER TEMPERATURE(C)- 21.0
CONDUCTIVITY (UMHOS)- 300
TIDE STAGE - E
WATER HEIGHT (M) - 2.49

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	13	1144.87	0	.00	0	.00	13	1144.87
ASO	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	0	.00	1	88.07	1	88.07	0	.00	0	.00	2	176.13
WP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 1932
SAMPLE END TIME - 1947
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000113
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - F
WATER HEIGHT (M) - 2.77

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13
SB	0	.00	2	176.13	0	.00	0	.00	0	.00	2	176.13
WP	0	.00	0	.00	3	264.20	0	.00	0	.00	3	264.20

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2024
SAMPLE END TIME - 2039
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000114
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - F
WATER HEIGHT (M) - 2.72

SPECIES	.....EGG..... NUMBER	CONC	....YOLK-SAC... NUMBER	CONC	.POST YOLK-SAC. NUMBER	CONC	....JUVENILE... NUMBER	CONC	.UID LIFE STAGE NUMBER	CONC	.TOTAL LARVAE** NUMBER	CONC
ALOS	0	.00	0	.00	5	352.27	0	.00	0	.00	5	352.27
ASD	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45
SB	0	.00	0	.00	0	.00	0	.00	1	70.45	0	.00
TD	0	.00	1	70.45	0	.00	0	.00	0	.00	1	70.45
WP	1	70.45	0	.00	1	70.45	0	.00	0	.00	1	70.45

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2135
SAMPLE END TIME - 2150
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000115
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.41

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	7	616.47	0	.00	0	.00	7	616.47
ASO	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
CYP	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13
SB	0	.00	1	88.07	3	264.20	0	.00	0	.00	4	352.27
WP	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2245
SAMPLE END TIME - 2300
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000116
WATER TEMPERATURE(C)- 23.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.29

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	4	281.81	0	.00	0	.00	4	281.81
ASD	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45
RSM	0	.00	0	.00	2	140.91	0	.00	0	.00	2	140.91
SB	0	.00	0	.00	3	211.36	0	.00	0	.00	3	211.36
TD	0	.00	2	140.91	1	70.45	0	.00	0	.00	3	211.36
WP	0	.00	0	.00	5	352.27	0	.00	0	.00	5	352.27

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2340
SAMPLE END TIME - 2355
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000117
WATER TEMPERATURE(C)- 24.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.24

	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	4	281.81	0	.00	0	.00	4	281.81
CYP	0	.00	0	.00	1	70.45	0	.00	1	70.45	1	70.45
SB	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45
TO	0	.00	1	70.45	0	.00	0	.00	0	.00	1	70.45
WP	0	.00	0	.00	2	140.91	0	.00	0	.00	2	140.91

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 0045
SAMPLE END TIME - 0100
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/12
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000118
WATER TEMPERATURE(C)- 23.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.24

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	4	352.27	0	.00	1	88.07	4	352.27
MOR	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
RSM	0	.00	0	.00	0	.00	1	88.07	0	.00	0	.00
SB	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
WP	0	.00	0	.00	3	264.20	0	.00	0	.00	3	264.20

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2015
SAMPLE END TIME - 2030
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/12
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000119
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - F
WATER HEIGHT (M) - 3.02

	....EGG.....		...YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.09	0	.00	8	704.54	0	.00	0	.00	8	704.54

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2115
SAMPLE END TIME - 2130
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/12
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000120
WATER TEMPERATURE(C)- 24.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - F
WATER HEIGHT (M) - 2.79

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	23	1620.43	0	.00	0	.00	23	1620.43
CYP	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45
WP	0	.00	0	.00	3	211.36	0	.00	0	.00	3	211.36

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2205
SAMPLE END TIME - 2220
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/12
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000121
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - F
WATER HEIGHT (M) - 2.57

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	19	1673.27	0	.00	0	.00	19	1673.27
ASD	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
CYP	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07
MOR	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	0	.00	0	.00	8	704.54	0	.00	0	.00	8	704.54
TD	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07
WP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2300
SAMPLE END TIME - 2315
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/12
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000122
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 270
TIDE STAGE - F
WATER HEIGHT (M) - 2.39

SPECIES	.....EGG..... NUMBER	CONC	....YOLK-SAC... NUMBER	CONC	.POST YOLK-SAC. NUMBER	CONC	....JUVENILE... NUMBER	CONC	.UID LIFE STAGE NUMBER	CONC	.TOTAL LARVAE** NUMBER	CONC
ALOS	0	.00	0	.00	15	1056.80	0	.00	0	.00	15	1056.80
ASD	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45
CYP	0	.00	1	70.45	0	.00	0	.00	1	70.45	1	70.45
SB	0	.00	0	.00	2	140.91	0	.00	0	.00	2	140.91
TD	0	.00	1	70.45	0	.00	0	.00	0	.00	1	70.45

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 0000
SAMPLE END TIME - 0015
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/13
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000123
WATER TEMPERATURE(C)- 23.0
CONDUCTIVITY (UMHOS)- 270
TIDE STAGE - F
WATER HEIGHT (M) - 2.24

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	18	1268.16	0	.00	0	.00	18	1268.16
ASD	0	.00	0	.00	2	140.91	0	.00	0	.00	2	140.91
CYP	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45
SB	0	.00	0	.00	2	140.91	0	.00	0	.00	2	140.91
WP	0	.00	0	.00	5	352.27	0	.00	0	.00	5	352.27

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 0100
SAMPLE END TIME - 0115
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/13
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000124
WATER TEMPERATURE(C)- 22.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - F
WATER HEIGHT (M) - 2.21

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	3	211.36	0	.00	0	.00	3	211.36
SB	0	.00	0	.00	2	140.91	0	.00	0	.00	2	140.91
WP	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 1945
SAMPLE END TIME - 2000
SAMPLE DURATION(MIN) - 15
SAMPLE COLLECTION DATE - 80/06/16
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463
INVENTORY NUMBER - 000125
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - E
WATER HEIGHT (M) - 3.17

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	4	281.81	0	.00	0	.00	4	281.81
ASD	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45
CYP	0	.00	1	70.45	0	.00	0	.00	0	.00	1	70.45
SB	0	.00	1	70.45	0	.00	0	.00	0	.00	1	70.45

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

V02A

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2045
SAMPLE END TIME - 2100
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/16
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000126
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 3.33

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	16	1127.25	0	.00	0	.00	16	1127.25
SB	0	.00	1	70.45	0	.00	0	.00	0	.00	1	70.45

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2135
SAMPLE END TIME - 2150
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/16
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000127
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - E
WATER HEIGHT (M) - 3.43

	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	6	528.40	0	.00	0	.00	6	528.40
SB	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2230
SAMPLE END TIME - 2245
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/16
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000128
WATER TEMPERATURE(C)- 24.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - E
WATER HEIGHT (M) - 3.35

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	3	264.20	0	.00	0	.00	3	264.20
WP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2321
SAMPLE END TIME - 2336
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/16
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000129
WATER TEMPERATURE(C)- 24.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - F
WATER HEIGHT (M) - 2.97

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45
MOR	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45
WP	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 0015
SAMPLE END TIME - 0030
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/17
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000130
WATER TEMPERATURE(C)- 23.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.79

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	5	352.27	0	.00	0	.00	5	352.27

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 1920
SAMPLE END TIME - 1935
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/17
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000131
WATER TEMPERATURE(C)- 27.0
CONDUCTIVITY (UMHOS)- 240
TIDE STAGE - E
WATER HEIGHT (M) - 2.82

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45
WP	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2015
SAMPLE END TIME - 2030
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/17
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000132
WATER TEMPERATURE(C)- 26.5
CONDUCTIVITY (UMHOS)- 240
TIDE STAGE - E
WATER HEIGHT (M) - 3.02

	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45
WP	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION	- RD	SAMPLE COLLECTION DATE	- 80/06/17	INVENTORY NUMBER	- 000133
SAMPLE START TIME	- 2100	SAMPLE VOLUME (CU.M.)	- 11.3550	WATER TEMPERATURE(C)	- 26.5
SAMPLE END TIME	- 2115	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 240
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- .7570	TIDE STAGE	- E
				WATER HEIGHT (M)	- 3.10

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
CYP	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2220
SAMPLE END TIME - 2235
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/17
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000134
WATER TEMPERATURE(C)- 26.0
CONDUCTIVITY (UMHOS)- 240
TIDE STAGE - E
WATER HEIGHT (M) - 3.20

SPECIES	.....EGG..... NUMBER	CONC	....YOLK-SAC... NUMBER	CONC	.POST YOLK-SAC. NUMBER	CONC	....JUVENILE... NUMBER	CONC	.UID LIFE STAGE NUMBER	CONC	.TOTAL LARVAE** NUMBER	CONC
ALOS	0	.00	0	.00	8	563.63	0	.00	0	.00	8	563.63
ASD	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45
UID	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45
WP	2	140.91	0	.00	0	.00	0	.00	0	.00	0	.00

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2310
SAMPLE END TIME - 2325
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/17
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000135
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 240
TIDE STAGE - E
WATER HEIGHT (M) - 3.07

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	4	352.27	0	.00	0	.00	4	352.27
WP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2355
SAMPLE END TIME - 0010
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/17
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000136
WATER TEMPERATURE(C)- 25.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 2.95

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	4	352.27	0	.00	0	.00	4	352.27
CYP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
WP	1	88.07	0	.00	0	.00	0	.00	0	.00	0	.00

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 1915
SAMPLE END TIME - 1930
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000137
WATER TEMPERATURE(C)- 27.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 2.57

SPECIES	.....EGG..... NUMBER	CONC	....YOLK-SAC... NUMBER	CONC	.POST YOLK-SAC. NUMBER	CONC	....JUVENILE... NUMBER	CONC	.UID LIFE STAGE NUMBER	CONC	.TOTAL LARVAE** NUMBER	CONC
ALOS	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
WP	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2000
SAMPLE END TIME - 2015
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000138
WATER TEMPERATURE(C)- 27.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 2.69

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45
SB	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45
WP	0	.00	0	.00	6	422.72	0	.00	0	.00	6	422.72

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2055
SAMPLE END TIME - 2110
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER = 000139
WATER TEMPERATURE(C)= 27.0
CONDUCTIVITY (UMHOS)= 220
TIDE STAGE = E
WATER HEIGHT (M) = 2.67

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
SB	0	.00	1	88.07	1	88.07	0	.00	0	.00	2	176.13

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2220
SAMPLE END TIME - 2235
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000140
WATER TEMPERATURE(C)- 26.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - E
WATER HEIGHT (M) - 3.02

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	7	493.17	0	.00	0	.00	7	493.17
RSM	0	.00	0	.00	0	.00	1	70.45	0	.00	0	.00
SB	0	.00	1	70.45	1	70.45	0	.00	0	.00	2	140.91

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2306
SAMPLE END TIME - 2321
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000141
WATER TEMPERATURE(C)- 26.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 3.05

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	5	440.33	0	.00	0	.00	5	440.33
MOR	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13
WP	1	88.07	0	.00	2	176.13	0	.00	0	.00	2	176.13

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2355
SAMPLE END TIME - 0010
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9863

INVENTORY NUMBER - 000142
WATER TEMPERATURE(C)- 26.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - 0
WATER HEIGHT(M) - 3.05

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	8	563.63	0	.00	0	.00	8	563.63
SB	0	.00	1	70.45	1	70.45	0	.00	0	.00	2	140.91
WP	0	.00	0	.00	2	140.91	0	.00	0	.00	2	140.91

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 1938
SAMPLE END TIME - 1953
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000143
WATER TEMPERATURE(C)- 28.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - F
WATER HEIGHT (M) - 2.39

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13
WP	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2030
SAMPLE END TIME - 2045
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000144
WATER TEMPERATURE(C)- 27.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 2.51

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
MOR	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
WP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION-	RD	SAMPLE COLLECTION DATE -	80/06/19	INVENTORY NUMBER -	000145
SAMPLE START TIME -	2113	SAMPLE VOLUME (CU.M.) -	11.3550	WATER TEMPERATURE(C)-	27.0
SAMPLE END TIME -	2128	TEST VELOCITY (CPS) -	.0	CONDUCTIVITY (UMHOS)-	230
SAMPLE DURATION(MIN) -	15	PUMP RATE (CU.M/MIN) -	.7570	TIDE STAGE -	E
				WATER HEIGHT (M) -	2.69

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13
WP	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2200
SAMPLE END TIME - 2215
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000146
WATER TEMPERATURE(C)- 27.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 2.84

SPECIES	.....EGG..... NUMBER	CONC	....YOLK-SAC... NUMBER	CONC	.POST YOLK-SAC. NUMBER	CONC	....JUVENILE... NUMBER	CONC	.UID LIFE STAGE NUMBER	CONC	.TOTAL LARVAE** NUMBER	CONC
ALOS	0	.00	0	.00	9	634.08	0	.00	0	.00	9	634.08
CYP	0	.00	0	.00	2	140.91	0	.00	0	.00	2	140.91
MOR	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45
SB	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45
TD	0	.00	0	.00	1	70.45	0	.00	0	.00	1	70.45
WP	0	.00	0	.00	3	211.36	0	.00	0	.00	3	211.36

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2245
SAMPLE END TIME - 2300
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000147
WATER TEMPERATURE(C)- 26.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 2.90

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	23	1620.43	0	.00	0	.00	23	1620.43
WP	2	140.91	0	.00	1	70.45	0	.00	0	.00	1	70.45

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2330
SAMPLE END TIME - 2345
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 14.1938
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9463

INVENTORY NUMBER - 000148
WATER TEMPERATURE(C)- 26.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 3.00

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	14	986.35	0	.00	0	.00	14	986.35
WP	0	.00	0	.00	2	140.91	0	.00	0	.00	2	140.91

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 1950
SAMPLE END TIME - 2005
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/23
SAMPLE VOLUME (CU.M.) - 17.6003
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.1734

INVENTORY NUMBER - 000149
WATER TEMPERATURE(C)- 24.0
CONDUCTIVITY (UMHOS)- 240
TIDE STAGE - F
WATER HEIGHT (M) - 2.44

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	1	56.82	0	.00	0	.00	1	56.82
CYP	0	.00	0	.00	1	56.82	0	.00	0	.00	1	56.82
UID	1	56.82	0	.00	0	.00	0	.00	0	.00	0	.00

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2125
SAMPLE END TIME - 2140
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/23
SAMPLE VOLUME (CU.M.) - 17.6003
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.1734

INVENTORY NUMBER - 000150
WATER TEMPERATURE(C)- 28.5
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.41

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	5	284.09	0	.00	0	.00	5	284.09
ASO	0	.00	0	.00	1	56.82	0	.00	0	.00	1	56.82
CYP	0	.00	0	.00	1	56.82	0	.00	0	.00	1	56.82
SB	0	.00	0	.00	1	56.82	0	.00	0	.00	1	56.82
WP	0	.00	0	.00	1	56.82	0	.00	0	.00	1	56.82

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION-	RD	SAMPLE COLLECTION DATE -	80/06/23	INVENTORY NUMBER -	000151
SAMPLE START TIME -	2225	SAMPLE VOLUME (CU.M.) -	17.6003	WATER TEMPERATURE(C)-	28.0
SAMPLE END TIME -	2240	TEST VELOCITY (CPS) -	.0	CONDUCTIVITY (UMHOS)-	230
SAMPLE DURATION(MIN) -	15	PUMP RATE (CU.M/MIN) -	1.1734	TIDE STAGE -	F
				WATER HEIGHT (M) -	2.36

	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	4	227.27	0	.00	0	.00	4	227.27
UID	0	.00	0	.00	1	56.82	0	.00	0	.00	1	56.82
WP	0	.00	0	.00	1	56.82	0	.00	0	.00	1	56.82

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION	- RD	SAMPLE COLLECTION DATE	- 80/06/23	INVENTORY NUMBER	- 000152
SAMPLE START TIME	- 2315	SAMPLE VOLUME (CU.M.)	- 17.6003	WATER TEMPERATURE(C)	- 27.0
SAMPLE END TIME	- 2330	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 230
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- 1.1734	TIDE STAGE	- F
				WATER HEIGHT (M)	- 2.44

	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	4	227.27	0	.00	0	.00	4	227.27
WP	0	.00	0	.00	1	56.82	0	.00	0	.00	1	56.82

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 1912
SAMPLE END TIME - 1927
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/26
SAMPLE VOLUME (CU.M.) - 23.5616
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.5708

INVENTORY NUMBER - 000153
WATER TEMPERATURE(C)- 30.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 2.84

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	1	42.44	0	.00	0	.00	1	42.44
SB	0	.00	0	.00	1	42.44	0	.00	0	.00	1	42.44

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION	- RD	SAMPLE COLLECTION DATE	- 80/06/26	INVENTORY NUMBER	- 000154
SAMPLE START TIME	- 1948	SAMPLE VOLUME (CU.M.)	- 23.5616	WATER TEMPERATURE(C)	- 30.0
SAMPLE END TIME	- 2003	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 220
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- 1.5708	TIDE STAGE	- E
				WATER HEIGHT (M)	- 2.87

	••••••EGG••••••		••••YOLK-SAC•••		•POST YOLK-SAC•		••••JUVENILE•••		•UID LIFE STAGE		•TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC

(NO SPECIES FOUND)

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION-	RD	SAMPLE COLLECTION DATE -	80/06/26	INVENTORY NUMBER -	000155
SAMPLE START TIME -	2019	SAMPLE VOLUME (CU.M.) -	23.5616	WATER TEMPERATURE(C)-	30.0
SAMPLE END TIME -	2034	TEST VELOCITY (CPS) -	.0	CONDUCTIVITY (UMHOS)-	220
SAMPLE DURATION(MIN) -	15	PUMP RATE (CU.M/MIN) -	1.5708	TIDE STAGE -	F
				WATER HEIGHT (M) -	2.62

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
MOR	0	.00	0	.00	1	42.44	0	.00	0	.00	1	42.44
SB	0	.00	0	.00	3	127.33	0	.00	0	.00	3	127.33
WP	1	42.44	0	.00	0	.00	0	.00	0	.00	0	.00

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2141
SAMPLE END TIME - 2156
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/26
SAMPLE VOLUME (CU.M.) - 23.5616
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.5708

INVENTORY NUMBER - 000156
WATER TEMPERATURE(C)- 30.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.26

SPECIES	.....EGG..... NUMBER	CONC	....YOLK-SAC... NUMBER	CONC	.POST YOLK-SAC. NUMBER	CONC	....JUVENILE... NUMBER	CONC	.UID LIFE STAGE NUMBER	CONC	.TOTAL LARVAE** NUMBER	CONC
CYP	0	.00	0	.00	2	84.88	0	.00	0	.00	2	84.88
SB	0	.00	0	.00	1	42.44	0	.00	0	.00	1	42.44
TD	0	.00	0	.00	0	.00	1	42.44	0	.00	0	.00

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2214
SAMPLE END TIME - 2229
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/26
SAMPLE VOLUME (CU.M.) - 23.5616
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.5708

INVENTORY NUMBER - 000157
WATER TEMPERATURE(C)- 30.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 2.21

	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	3	127.33	0	.00	0	.00	3	127.33
CYP	0	.00	1	42.44	0	.00	0	.00	0	.00	1	42.44
MOR	0	.00	0	.00	1	42.44	0	.00	0	.00	1	42.44
SB	0	.00	0	.00	2	84.88	0	.00	0	.00	2	84.88

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RD
SAMPLE START TIME - 2249
SAMPLE END TIME - 2304
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/26
SAMPLE VOLUME (CU.M.) - 23.5616
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.5708

INVENTORY NUMBER - 000158
WATER TEMPERATURE(C)- 30.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 2.16

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	5	212.21	0	.00	0	.00	5	212.21
CYP	0	.00	2	84.88	0	.00	0	.00	0	.00	2	84.88
SB	0	.00	0	.00	3	127.33	0	.00	0	.00	3	127.33
WP	0	.00	0	.00	3	127.33	0	.00	0	.00	3	127.33

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2201
SAMPLE END TIME - 2216
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/28
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000001
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - F
WATER HEIGHT (M) - 2.44

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	6	528.40	0	.00	0	.00	6	528.40
SB	0	.00	5	440.33	2	176.13	0	.00	0	.00	7	616.47
UID	1	88.07	0	.00	0	.00	0	.00	0	.00	0	.00
WP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2311
SAMPLE END TIME - 2326
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/28
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000002
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 190
TIDE STAGE - F
WATER HEIGHT (M) - 2.26

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	3	264.20	0	.00	0	.00	3	264.20
CYP	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07
MOR	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	0	.00	10	880.67	2	176.13	0	.00	0	.00	12	1056.80
UID	1	88.07	0	.00	0	.00	0	.00	0	.00	0	.00
WP	0	.00	1	88.07	13	1144.87	0	.00	0	.00	14	1232.94

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME * 0021
SAMPLE END TIME * 0036
SAMPLE DURATION(MIN) * 15

SAMPLE COLLECTION DATE - 80/05/29
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000003
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 190
TIDE STAGE - F
WATER HEIGHT (M) - 2.21

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	9	792.60	0	.00	0	.00	9	792.60
CYP	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13
TD	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07
WP	0	.00	0	.00	8	704.54	0	.00	0	.00	8	704.54

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0119
SAMPLE END TIME - 0134
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/29
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000004
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 190
TIDE STAGE - F
WATER HEIGHT (M) - 2.29

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	1	88.07	0	.00	0	.00	0	.00	0	.00	0	.00
UID	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
WP	1	88.07	2	176.13	4	352.27	0	.00	0	.00	6	528.40

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0215
SAMPLE END TIME - 0230
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/29
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000005
WATER TEMPERATURE(C)- 18.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - HS
WATER HEIGHT (M) - 2.54

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	1	88.07	0	.00	2	176.13	0	.00	0	.00	2	176.13
SB	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07
WP	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- R1
SAMPLE START TIME - 0355
SAMPLE END TIME - 0410
SAMPLE DURATION(MIN) - 15
SAMPLE COLLECTION DATE - 80/05/29
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570
INVENTORY NUMBER - 000006
WATER TEMPERATURE(C)- 18.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - E
WATER HEIGHT (M) - 2.69

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	1	88.07	6	528.40	0	.00	0	.00	7	616.47
CYP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	0	.00	3	264.20	0	.00	0	.00	0	.00	3	264.20
WP	2	176.13	1	88.07	0	.00	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2038
SAMPLE END TIME - 2053
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/29
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000007
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 190
TIDE STAGE - E
WATER HEIGHT (M) - 2.87

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13
SB	1	88.07	0	.00	0	.00	0	.00	0	.00	0	.00

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2127
SAMPLE END TIME - 2142
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/29
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000008
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - F
WATER HEIGHT (M) - 2.62

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	1	88.07	1	88.07	1	88.07	0	.00	0	.00	2	176.13
CYP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	1	88.07	3	264.20	0	.00	0	.00	0	.00	3	264.20
WP	1	88.07	0	.00	0	.00	0	.00	0	.00	0	.00

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2221
SAMPLE END TIME - 2236
SAMPLE DURATION(MIN) - 15
SAMPLE COLLECTION DATE - 80/05/29
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570
INVENTORY NUMBER - 000009
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - F
WATER HEIGHT (M) - 2.44

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	1	88.07	4	352.27	0	.00	0	.00	5	440.33
CYP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	1	88.07	7	616.47	2	176.13	0	.00	0	.00	9	792.60
TD	0	.00	2	176.13	0	.00	0	.00	0	.00	2	176.13
WP	0	.00	1	88.07	2	176.13	0	.00	0	.00	3	264.20

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2325
SAMPLE END TIME - 2340
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/29
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000010
WATER TEMPERATURE(C)- 18.5
CONDUCTIVITY (UMHOS)- 190
TIDE STAGE - F
WATER HEIGHT (M) - 2.18

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	2	176.13	36	3170.41	0	.00	0	.00	38	3346.54
CYP	0	.00	0	.00	3	264.20	0	.00	0	.00	3	264.20
SB	0	.00	19	1673.27	5	440.33	0	.00	0	.00	24	2113.61
TD	0	.00	2	176.13	0	.00	0	.00	0	.00	2	176.13
UID	1	88.07	0	.00	0	.00	0	.00	0	.00	0	.00
WP	1	88.07	1	88.07	40	3522.68	0	.00	0	.00	41	3610.74

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0023
SAMPLE END TIME - 0038
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/30
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000011
WATER TEMPERATURE(C)- 18.0
CONDUCTIVITY (UMHOS)- 190
TIDE STAGE - F
WATER HEIGHT (M) - 2.16

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC.		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	3	264.20	29	2553.94	0	.00	0	.00	32	2818.14
CYP	0	.00	0	.00	3	264.20	0	.00	0	.00	3	264.20
MOR	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	0	.00	6	528.40	1	88.07	0	.00	0	.00	7	616.47
TO	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07
WP	1	88.07	0	.00	7	616.47	0	.00	0	.00	7	616.47

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0116
SAMPLE END TIME - 0131
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/05/30
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000012
WATER TEMPERATURE(C)- 18.0
CONDUCTIVITY (UMHOS)- 190
TIDE STAGE - F
WATER HEIGHT (M) - 2.18

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	13	1144.87	0	.00	0	.00	13	1144.87
CYP	0	.00	1	88.07	2	176.13	0	.00	0	.00	3	264.20
SB	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07
TD	0	.00	3	264.20	1	88.07	0	.00	0	.00	4	352.27
WP	1	88.07	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2000
SAMPLE END TIME - 2015
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/02
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000013
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 3.07

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07
SB	1	88.07	0	.00	0	.00	0	.00	0	.00	0	.00
WP	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2050
SAMPLE END TIME - 2105
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/02
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000014
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - E
WATER HEIGHT (M) - 3.15

SPECIES	.....EGG..... NUMBER	CONC	....YOLK-SAC... NUMBER	CONC	.POST YOLK-SAC. NUMBER	CONC	....JUVENILE... NUMBER	CONC	.UID LIFE STAGE NUMBER	CONC	.TOTAL LARVAE** NUMBER	CONC
ALOS	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13
SB	1	88.07	0	.00	0	.00	0	.00	1	88.07	0	.00
WP	1	88.07	2	176.13	1	88.07	0	.00	0	.00	3	264.20

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2139
SAMPLE END TIME - 2154
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/02
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000015
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - E
WATER HEIGHT (M) - 3.23

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	1	88.07	1	88.07	0	.00	0	.00	2	176.13

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2220
SAMPLE END TIME - 2235
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/02
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000016
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - E
WATER HEIGHT (M) - 3.23

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
WP	0	.00	3	264.20	2	176.13	0	.00	0	.00	5	440.33

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2256
SAMPLE END TIME - 2311
SAMPLE DURATION(MIN) - 15
SAMPLE COLLECTION DATE - 80/06/02
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570
INVENTORY NUMBER - 000017
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - E
WATER HEIGHT (M) - 2.95

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	1	88.07	4	352.27	0	.00	0	.00	5	440.33
SB	0	.00	2	176.13	1	88.07	0	.00	1	88.07	3	264.20
WP	1	88.07	1	88.07	1	88.07	0	.00	0	.00	2	176.13

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2349
SAMPLE END TIME - 0004
SAMPLE DURATION(MIN) - 15
SAMPLE COLLECTION DATE - 80/06/02
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570
INVENTORY NUMBER - 000018
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - F
WATER HEIGHT (M) - 2.90

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	1	88.07	5	440.33	0	.00	0	.00	6	528.40
SB	1	88.07	1	88.07	5	440.33	0	.00	0	.00	6	528.40
WP	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 1943
SAMPLE END TIME - 1958
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/03
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000019
WATER TEMPERATURE(C)- 20.5
CONDUCTIVITY (UMHOS)- 450
TIDE STAGE - E
WATER HEIGHT (M) - 2.87

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	1	88.07	0	.00	0	.00	0	.00	0	.00	0	.00
WP	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2037
SAMPLE END TIME - 2052
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/03
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000020
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 1100
TIDE STAGE - E
WATER HEIGHT (M) - 2.92

	.....EGG.....		...YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	3	264.20	0	.00	6	528.40	0	.00	0	.00	6	528.40
CYP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	1	88.07	1	88.07	2	176.13	0	.00	0	.00	3	264.20
UID	1	88.07	0	.00	0	.00	0	.00	0	.00	0	.00
WP	1	88.07	0	.00	2	176.13	0	.00	0	.00	2	176.13

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- R1
SAMPLE START TIME - 2125
SAMPLE END TIME - 2140
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/03
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000021
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 940
TIDE STAGE - E
WATER HEIGHT (M) - 3.05

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	3	264.20	0	.00	0	.00	3	264.20
CYP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
TD	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07
WP	4	352.27	0	.00	0	.00	0	.00	0	.00	0	.00

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION	- A1	SAMPLE COLLECTION DATE	- 80/06/03	INVENTORY NUMBER	- 000022
SAMPLE START TIME	- 2213	SAMPLE VOLUME (CU.M.)	- 11.3550	WATER TEMPERATURE(C)	- 20.0
SAMPLE END TIME	- 2228	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 880
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- .7570	TIDE STAGE	- E
				WATER HEIGHT (M)	- 3.12

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC

(NO SPECIES FOUND)

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2316
SAMPLE END TIME - 2331
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/03
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000023
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 370
TIDE STAGE - E
WATER HEIGHT (M) - 3.12

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	14	1232.94	0	.00	0	.00	0	.00	0	.00	0	.00
SB	0	.00	2	176.13	0	.00	0	.00	0	.00	2	176.13
WP	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2316
SAMPLE END TIME - 2331
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/03
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000023
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 370
TIDE STAGE - E
WATER HEIGHT (M) - 3.12

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	14	1232.94	0	.00	0	.00	0	.00	0	.00	0	.00
SB	0	.00	2	176.13	0	.00	0	.00	0	.00	2	176.13
WP	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2358
SAMPLE END TIME - 0013
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/03
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000024
WATER TEMPERATURE(C)- 20.5
CONDUCTIVITY (UMHOS)- 340
TIDE STAGE - LS
WATER HEIGHT (M) - 2.95

SPECIES	.....EGG..... NUMBER	CONC	....YOLK-SAC... NUMBER	CONC	.POST YOLK-SAC. NUMBER	CONC	....JUVENILE... NUMBER	CONC	.UID LIFE STAGE NUMBER	CONC	.TOTAL LARVAE** NUMBER	CONC
ALOS	1	88.07	0	.00	0	.00	0	.00	0	.00	0	.00
SB	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07
WP	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07
YP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 1942
SAMPLE END TIME - 1957
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/04
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000025
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 300
TIDE STAGE - E
WATER HEIGHT (M) - 2.84

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13
SB	1	88.07	0	.00	0	.00	0	.00	0	.00	0	.00
WP	0	.00	1	88.07	7	616.47	0	.00	0	.00	8	704.54

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2028
SAMPLE END TIME - 2043
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/04
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000026
WATER TEMPERATURE(C)- 21.0
CONDUCTIVITY (UMHOS)- 280
TIDE STAGE - E
WATER HEIGHT (M) - 2.92

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
CYP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	0	.00	2	176.13	0	.00	0	.00	0	.00	2	176.13
WP	1	88.07	0	.00	12	1056.80	0	.00	0	.00	12	1056.80

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2111
SAMPLE END TIME - 2126
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/04
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000027
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 270
TIDE STAGE - E
WATER HEIGHT (M) - 3.02

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
CYP	0	.00	2	176.13	0	.00	0	.00	0	.00	2	176.13
SB	2	176.13	6	528.40	3	264.20	0	.00	2	176.13	9	792.60
WP	1	88.07	0	.00	11	968.74	0	.00	0	.00	11	968.74

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2204
SAMPLE END TIME - 2219
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/04
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000028
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - E
WATER HEIGHT (M) - 3.20

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07
CYP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	1	88.07	1	88.07	0	.00	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION	- RI	SAMPLE COLLECTION DATE	- 80/06/05	INVENTORY NUMBER	- 000029
SAMPLE START TIME	- 0019	SAMPLE VOLUME (CU.M.)	- 11.3550	WATER TEMPERATURE(C)	- 21.0
SAMPLE END TIME	- 0034	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 230
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- .7570	TIDE STAGE	- F
				WATER HEIGHT (M)	- 3.15

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	1	88.07	3	264.20	1	88.07	0	.00	1	88.07	4	352.27
WP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- R1
SAMPLE START TIME - 0103
SAMPLE END TIME - 0118
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/05
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000030
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - F
WATER HEIGHT (M) - 2.95

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13
SB	0	.00	9	792.60	0	.00	0	.00	0	.00	9	792.60
WP	0	.00	1	88.07	3	264.20	0	.00	0	.00	4	352.27

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2013
SAMPLE END TIME - 2028
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/05
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000031
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 250
TIDE STAGE - F
WATER HEIGHT (M) - 2.62

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UIO LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
SB	0	.00	1	88.07	1	88.07	0	.00	0	.00	2	176.13

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2108
SAMPLE END TIME - 2123
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/05
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000032
WATER TEMPERATURE(C)- 19.5
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - E
WATER HEIGHT (M) - 2.74

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	3	264.20	0	.00	0	.00	3	264.20
CYP	0	.00	2	176.13	0	.00	0	.00	0	.00	2	176.13
MOR	0	.00	0	.00	0	.00	0	.00	2	176.13	0	.00
SB	0	.00	7	616.47	15	1321.00	0	.00	0	.00	22	1937.47
WP	2	176.13	1	88.07	13	1144.87	0	.00	0	.00	14	1232.94

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2207
SAMPLE END TIME - 2222
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/05
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000033
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 350
TIDE STAGE - E
WATER HEIGHT (M) - 3.00

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
MOR	0	.00	0	.00	0	.00	0	.00	1	88.07	0	.00
SB	4	352.27	4	352.27	6	528.40	0	.00	0	.00	10	880.67
TD	0	.00	1	88.07	1	88.07	0	.00	0	.00	2	176.13
WP	2	176.13	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2308
SAMPLE END TIME - 2323
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/05
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000034
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 530
TIDE STAGE - E
WATER HEIGHT (M) - 3.25

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
CYP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	0	.00	3	264.20	0	.00	0	.00	0	.00	3	264.20
TD	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2357
SAMPLE END TIME - 0012
SAMPLE DURATION(MIN) - 15
SAMPLE COLLECTION DATE - 80/06/05
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570
INVENTORY NUMBER - 000035
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 300
TIDE STAGE - E
WATER HEIGHT (M) - 3.25

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	1	88.07	0	.00	0	.00	0	.00	0	.00	0	.00
WP	1	88.07	0	.00	0	.00	0	.00	0	.00	0	.00

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0045
SAMPLE END TIME - 0100
SAMPLE DURATION(MIN) - 15
SAMPLE COLLECTION DATE - 80/06/06
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570
INVENTORY NUMBER - 000036
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 240
TIDE STAGE - E
WATER HEIGHT (M) - 3.15

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
MOR	0	.00	0	.00	0	.00	0	.00	1	88.07	0	.00
SB	1	88.07	4	352.27	0	.00	0	.00	0	.00	4	352.27

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION-	RI	SAMPLE COLLECTION DATE -	80/06/09	INVENTORY NUMBER -	000037
SAMPLE START TIME -	2050	SAMPLE VOLUME (CU.M.) -	11.3550	WATER TEMPERATURE(C)-	20.0
SAMPLE END TIME -	2105	TEST VELOCITY (CPS) -	.0	CONDUCTIVITY (UMHOS)-	210
SAMPLE DURATION(MIN) -	15	PUMP RATE (CU.M/MIN) -	.7570	TIDE STAGE -	F
				WATER HEIGHT (M) -	2.21

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	3	264.20	0	.00	0	.00	3	264.20
S8	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2145
SAMPLE END TIME - 2200
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/09
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000038
WATER TEMPERATURE(C)- 19.5
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - F
WATER HEIGHT (M) - 2.13

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
CYP	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13
MOR	0	.00	0	.00	0	.00	0	.00	1	88.07	0	.00
SB	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07
TD	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
WP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2240
SAMPLE END TIME - 2255
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/09
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000039
WATER TEMPERATURE(C)- 19.5
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.13

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ASD	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
CYP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07
WP	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2330
SAMPLE END TIME - 2345
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/09
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000040
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - E
WATER HEIGHT (M) - 2.34

	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
WP	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION	- RI	SAMPLE COLLECTION DATE	- 80/06/10	INVENTORY NUMBER	- 000041
SAMPLE START TIME	- 0025	SAMPLE VOLUME (CU.M.)	- 11.3550	WATER TEMPERATURE(C)	- 19.0
SAMPLE END TIME	- 0040	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 260
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- .7570	TIDE STAGE	- E
				WATER HEIGHT (M)	- 2.62

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
CYP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0115
SAMPLE END TIME - 0130
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/10
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000042
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 250
TIDE STAGE - E
WATER HEIGHT (M) - 2.74

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
CYP	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07
SB	1	88.07	0	.00	1	88.07	0	.00	0	.00	1	88.07
WP	1	88.07	0	.00	0	.00	0	.00	0	.00	0	.00

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION-	RI	SAMPLE COLLECTION DATE -	80/06/10	INVENTORY NUMBER -	000043
SAMPLE START TIME -	2005	SAMPLE VOLUME (CU.M.) -	11.3550	WATER TEMPERATURE(C)-	19.0
SAMPLE END TIME -	2020	TEST VELOCITY (CPS) -	.0	CONDUCTIVITY (UMHOS)-	260
SAMPLE DURATION(MIN) -	15	PUMP RATE (CU.M/MIN) -	.7570	TIDE STAGE -	F
				WATER HEIGHT (M) -	2.46

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	3	264.20	0	.00	0	.00	3	264.20
TD	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2100
SAMPLE END TIME - 2115
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/10
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000044
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - F
WATER HEIGHT (M) - 2.34

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
CYP	0	.00	0	.00	4	352.27	0	.00	0	.00	4	352.27
SB	0	.00	2	176.13	1	88.07	0	.00	0	.00	3	264.20
WP	1	88.07	1	88.07	2	176.13	0	.00	0	.00	3	264.20

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2155
SAMPLE END TIME - 2210
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/10
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000045
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - F
WATER HEIGHT (M) - 2.16

	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	3	218.35	0	.00	0	.00	3	218.35
ASD	0	.00	0	.00	1	72.78	0	.00	0	.00	1	72.78
CYP	0	.00	0	.00	5	363.91	0	.00	0	.00	5	363.91
WP	0	.00	0	.00	1	72.78	0	.00	0	.00	1	72.78

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2255
SAMPLE END TIME - 2310
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/10
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000046
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - F
WATER HEIGHT (M) - 2.16

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	1	72.78	1	72.78	0	.00	0	.00	2	145.56
CYP	0	.00	0	.00	1	72.78	0	.00	0	.00	1	72.78
SB	0	.00	1	72.78	0	.00	0	.00	0	.00	1	72.78
WP	0	.00	0	.00	3	218.35	0	.00	0	.00	3	218.35

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0010
SAMPLE END TIME - 0025
SAMPLE DURATION(MIN) - 15
SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570
INVENTORY NUMBER - 000047
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 270
TIDE STAGE - E
WATER HEIGHT (M) - 2.26

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	0	.00	3	264.20	2	176.13	0	.00	0	.00	5	440.33
WP	1	88.07	0	.00	0	.00	0	.00	0	.00	0	.00

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION-	RI	SAMPLE COLLECTION DATE -	80/06/11	INVENTORY NUMBER -	000048
SAMPLE START TIME -	0100	SAMPLE VOLUME (CU.M.) -	11.3550	WATER TEMPERATURE(C)-	18.0
SAMPLE END TIME -	0115	TEST VELOCITY (CPS) -	.0	CONDUCTIVITY (UMHOS)-	290
SAMPLE DURATION(MIN) -	15	PUMP RATE (CU.M/MIN) -	.7570	TIDE STAGE -	E
				WATER HEIGHT (M) -	2.49

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC

(NO SPECIES FOUND)

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION	- RI	SAMPLE COLLECTION DATE	- 80/06/11	INVENTORY NUMBER	- 000049
SAMPLE START TIME	- 1932	SAMPLE VOLUME (CU.M.)	- 11.3550	WATER TEMPERATURE(C)	- 19.0
SAMPLE END TIME	- 1947	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 240
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- .7570	TIDE STAGE	- F
				WATER HEIGHT (M)	- 2.77

	••••••EGG••••••		••••YOLK-SAC•••		•POST YOLK-SAC•		••••JUVENILE•••		•UID LIFE STAGE		•TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC

(NO SPECIES FOUND)

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2024
SAMPLE END TIME - 2039
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 13.9099
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9273

INVENTORY NUMBER - 000050
WATER TEMPERATURE(C)- 19.5
CONDUCTIVITY (UMHOS)- 340
TIDE STAGE - F
WATER HEIGHT (M) - 2.72

	....EGG....		...YOLK-SAC...		.POST YOLK-SAC.		...JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC

(NO SPECIES FOUND)

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION-	RI	SAMPLE COLLECTION DATE -	80/06/11	INVENTORY NUMBER -	000051
SAMPLE START TIME -	2135	SAMPLE VOLUME (CU.M.) -	11.3550	WATER TEMPERATURE(C)-	19.0
SAMPLE END TIME -	2150	TEST VELOCITY (CPS) -	.0	CONDUCTIVITY (UMHOS)-	240
SAMPLE DURATION(MIN) -	15	PUMP RATE (CU.M/MIN) -	.7570	TIDE STAGE -	F
				WATER HEIGHT (M) -	2.41

	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
CYP	0	.00	1	88.07	1	88.07	0	.00	0	.00	2	176.13
SB	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2245
SAMPLE END TIME - 2300
SAMPLE DURATION(MIN) - 15
SAMPLE COLLECTION DATE - 80/06/11
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160
INVENTORY NUMBER - 000052
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 250
TIDE STAGE - F
WATER HEIGHT (M) - 2.29

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ASO	0	.00	0	.00	2	145.56	0	.00	0	.00	2	145.56
CYP	0	.00	0	.00	2	145.56	0	.00	0	.00	2	145.56
WP	0	.00	0	.00	2	145.56	0	.00	0	.00	2	145.56

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION-	RI	SAMPLE COLLECTION DATE -	80/06/11	INVENTORY NUMBER -	000053
SAMPLE START TIME -	2340	SAMPLE VOLUME (CU.M.) -	13.7396	WATER TEMPERATURE(C)-	18.0
SAMPLE END TIME -	2355	TEST VELOCITY (CPS) -	.0	CONDUCTIVITY (UMHOS)-	270
SAMPLE DURATION(MIN) -	15	PUMP RATE (CU.M/MIN) -	.9160	TIDE STAGE -	F
				WATER HEIGHT (M) -	2.24

	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
SB	0	.00	1	72.78	0	.00	0	.00	0	.00	1	72.78

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- R1
SAMPLE START TIME - 0045
SAMPLE END TIME - 0100
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/12
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000054
WATER TEMPERATURE(C)- 18.0
CONDUCTIVITY (UMHOS)- 280
TIDE STAGE - F
WATER HEIGHT (M) - 2.24

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13
CYP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
WP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2015
SAMPLE END TIME - 2030
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/12
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000055
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 200
TIDE STAGE - E
WATER HEIGHT (M) - 3.02

	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
MOR	0	.00	0	.00	0	.00	0	.00	1	88.07	0	.00

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2115
SAMPLE END TIME - 2130
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/12
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000056
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - F
WATER HEIGHT (M) - 2.79

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	1	72.78	0	.00	0	.00	1	72.78
CYP	0	.00	1	72.78	1	72.78	0	.00	0	.00	2	145.56
TD	0	.00	1	72.78	0	.00	0	.00	0	.00	1	72.78

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2205
SAMPLE END TIME - 2220
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/12
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000057
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - F
WATER HEIGHT (M) - 2.57

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
ASD	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
CYP	0	.00	1	88.07	1	88.07	0	.00	0	.00	2	176.13
SB	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07
TD	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
WP	1	88.07	0	.00	4	352.27	0	.00	0	.00	4	352.27

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2300
SAMPLE END TIME - 2315
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/12
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000058
WATER TEMPERATURE(C)- 19.5
CONDUCTIVITY (UMHOS)- 220
TIDE STAGE - F
WATER HEIGHT (M) - 2.39

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	4	291.13	0	.00	0	.00	4	291.13
CYP	0	.00	0	.00	3	218.35	0	.00	0	.00	3	218.35
WP	0	.00	0	.00	1	72.78	0	.00	0	.00	1	72.78

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0000
SAMPLE END TIME - 0015
SAMPLE DURATION(MIN) - 15
SAMPLE COLLECTION DATE - 80/06/13
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160
INVENTORY NUMBER - 000059
WATER TEMPERATURE(C)- NA
CONDUCTIVITY (UMHOS)- NA
TIDE STAGE - F
WATER HEIGHT (M) - 2.24

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	5	363.91	0	.00	0	.00	5	363.91
ASD	0	.00	0	.00	1	72.78	0	.00	0	.00	1	72.78
CYP	0	.00	0	.00	1	72.78	0	.00	0	.00	1	72.78
TO	0	.00	0	.00	1	72.78	0	.00	0	.00	1	72.78
WP	0	.00	0	.00	2	145.56	0	.00	0	.00	2	145.56

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 0100
SAMPLE END TIME - 0115
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/13
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000060
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - F
WATER HEIGHT (M) - 2.21

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	5	363.91	0	.00	0	.00	5	363.91
CYP	0	.00	1	72.78	2	145.56	0	.00	0	.00	3	218.35
SB	0	.00	1	72.78	1	72.78	0	.00	0	.00	2	145.56
WP	0	.00	1	72.78	3	218.35	0	.00	0	.00	4	291.13

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION	- RI	SAMPLE COLLECTION DATE	- 80/06/16	INVENTORY NUMBER	- 000061
SAMPLE START TIME	- 1945	SAMPLE VOLUME (CU.M.)	- 13.7396	WATER TEMPERATURE(C)	- 21.0
SAMPLE END TIME	- 2000	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 230
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- .9160	TIDE STAGE	- E
				WATER HEIGHT (M)	- 3.17

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	2	145.56	0	.00	0	.00	2	145.56

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION	- RI	SAMPLE COLLECTION DATE	- 80/06/16	INVENTORY NUMBER	- 000062
SAMPLE START TIME	- 2045	SAMPLE VOLUME (CU.M.)	- 13.7396	WATER TEMPERATURE(C)	- 20.5
SAMPLE END TIME	- 2100	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 230
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- .9160	TIDE STAGE	- E
				WATER HEIGHT (M)	- 3.33

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC

(NO SPECIES FOUND)

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2135
SAMPLE END TIME - 2150
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/16
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000063
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 3.43

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
WP	1	88.07	0	.00	0	.00	0	.00	0	.00	0	.00

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2230
SAMPLE END TIME - 2245
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/16
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000064
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 3.35

	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
WP	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2321
SAMPLE END TIME - 2336
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/16
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000065
WATER TEMPERATURE(C)- 20.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - F
WATER HEIGHT (M) - 2.97

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
WP	1	72.78	0	.00	0	.00	0	.00	0	.00	0	.00

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION	- RI	SAMPLE COLLECTION DATE	- 80/06/17	INVENTORY NUMBER	- 000066
SAMPLE START TIME	- 0015	SAMPLE VOLUME (CU.M.)	- 13.7396	WATER TEMPERATURE(C)	- 20.0
SAMPLE END TIME	- 0030	TEST VELOCITY (CPS)	- .0	CONDUCTIVITY (UMHOS)	- 220
SAMPLE DURATION(MIN)	- 15	PUMP RATE (CU.M/MIN)	- .9160	TIDE STAGE	- F
				WATER HEIGHT (M)	- 2.79

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC

(NO SPECIES FOUND)

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

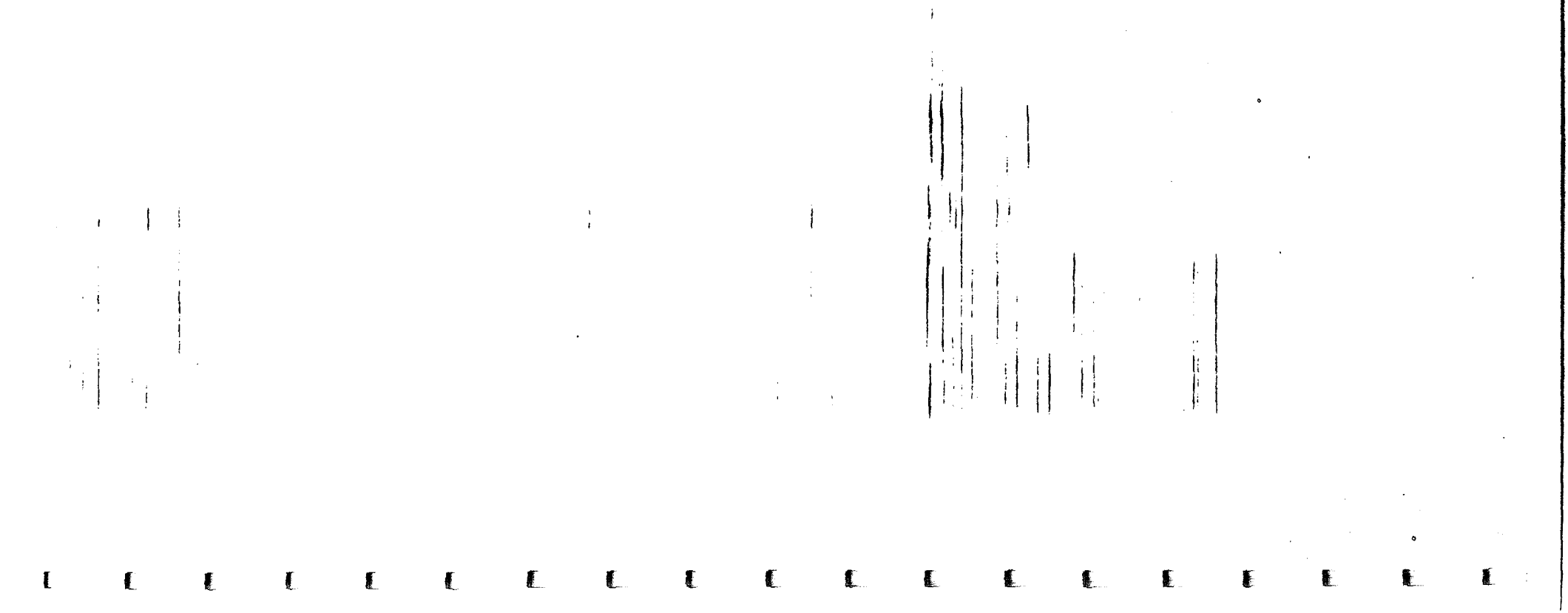
SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 1920
SAMPLE END TIME - 1935
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/17
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000067
WATER TEMPERATURE(C) - 22.0
CONDUCTIVITY (UMHOS) - 250
TIDE STAGE - F
WATER HEIGHT (M) - 2.82

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC. NUMBER	POST YOLK-SAC. CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	1	72.78	0	.00	0	.00	1	72.78
WP	0	.00	1	72.78	0	.00	0	.00	0	.00	1	72.78

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.



ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- R1
SAMPLE START TIME - 2015
SAMPLE END TIME - 2030
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/17
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000061
WATER LOCATION (L) - 010068
WATER TEMPERATURE(C) - 21.0
CONDUCTIVITY (UMHOS) - 230
TIDE STAGE - E
WATER HEIGHT (M) - 3.02

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC

(NO SPECIES FOUND)

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION-	RI	SAMPLE COLLECTION DATE -	80/06/17	INVENTORY NUMBER -	000069
SAMPLE START TIME -	2100	SAMPLE VOLUME (CU.M.) -	11.3550	WATER TEMPERATURE(C)-	20.0
SAMPLE END TIME -	2115	TEST VELOCITY (CPS) -	.0	CONDUCTIVITY (UMHOS)-	230
SAMPLE DURATION(MIN) -	15	PUMP RATE (CU.M/MIN) -	.7570	TIDE STAGE -	E
				WATER HEIGHT (M) -	3.10

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC

(NO SPECIES FOUND)

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2220
SAMPLE END TIME - 2235
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/17
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000070
WATER TEMPERATURE(C)- 21.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 3.20

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	3	218.35	0	.00	0	.00	3	218.35

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2310
SAMPLE END TIME - 2325
SAMPLE DURATION(MIN) - 15
SAMPLE COLLECTION DATE - 80/06/17
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570
INVENTORY NUMBER - 000071
WATER TEMPERATURE(C)- 20.5
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 3.07

	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	6	528.40	0	.00	0	.00	6	528.40
RSM	0	.00	0	.00	0	.00	1	88.07	0	.00	0	.00

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION-	RI	SAMPLE COLLECTION DATE -	80/06/17	INVENTORY NUMBER -	000072
SAMPLE START TIME -	2355	SAMPLE VOLUME (CU.M.) -	11.3550	WATER TEMPERATURE(C)-	20.0
SAMPLE END TIME -	0010	TEST VELOCITY (CPS) -	.0	CONDUCTIVITY (UMHOS)-	230
SAMPLE DURATION(MIN) -	15	PUMP RATE (CU.M/MIN) -	.7570	TIDE STAGE -	E
				WATER HEIGHT (M) -	2.95

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC

(NO SPECIES FOUND)

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 1915
SAMPLE END TIME - 1930
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000073
WATER TEMPERATURE(C)- 21.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 2.57

	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
MOR	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
SB	0	.00	1	88.07	0	.00	0	.00	0	.00	1	88.07
WP	0	.00	0	.00	3	264.20	0	.00	0	.00	3	264.20

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2000
SAMPLE END TIME - 2015
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000074
WATER TEMPERATURE(C)- 21.0
CONDUCTIVITY (UMHOS)- 240
TIDE STAGE - E
WATER HEIGHT (M) - 2.69

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	2	145.56	0	.00	0	.00	2	145.56

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2055
SAMPLE END TIME - 2110
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000075
WATER TEMPERATURE(C)- 21.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 2.87

SPECIES	EGG NUMBER	EGG CONC	YOLK-SAC NUMBER	YOLK-SAC CONC	POST YOLK-SAC NUMBER	POST YOLK-SAC CONC	JUVENILE NUMBER	JUVENILE CONC	UID LIFE STAGE NUMBER	UID LIFE STAGE CONC	TOTAL LARVAE** NUMBER	TOTAL LARVAE** CONC
ALOS	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
WP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2220
SAMPLE END TIME - 2235
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000076
WATER TEMPERATURE(C)- 21.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 3.02

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	13	946.17	0	.00	0	.00	13	946.17
ASD	0	.00	0	.00	1	72.78	0	.00	0	.00	1	72.78
WP	2	145.56	0	.00	2	145.56	0	.00	0	.00	2	145.56

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2306
SAMPLE END TIME - 2321
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000077
WATER TEMPERATURE(C)- 21.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 3.05

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	6	528.40	0	.00	0	.00	6	528.40
ASD	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2355
SAMPLE END TIME - 0010
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/18
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000078
WATER TEMPERATURE(C)- 21.0
CONDUCTIVITY (UMHOS)- 230
TIDE STAGE - E
WATER HEIGHT (M) - 3.05

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	9	655.04	0	.00	0	.00	9	655.04
CYP	0	.00	0	.00	1	72.78	0	.00	0	.00	1	72.78
SB	0	.00	0	.00	1	72.78	0	.00	0	.00	1	72.78

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 1938
SAMPLE END TIME - 1953
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000079
WATER TEMPERATURE(C)- 21.5
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - F
WATER HEIGHT (M) - 2.39

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	3	264.20	0	.00	0	.00	3	264.20
MOR	0	.00	0	.00	0	.00	0	.00	1	88.07	0	.00
TD	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
WP	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2030
SAMPLE END TIME - 2045
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000080
WATER TEMPERATURE(C)- 20.5
CONDUCTIVITY (UMHOS)- 270
TIDE STAGE - E
WATER HEIGHT (M) - 2.51

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
WP	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2113
SAMPLE END TIME - 2128
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 11.3550
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .7570

INVENTORY NUMBER - 000081
WATER TEMPERATURE(C)- 20.5
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - E
WATER HEIGHT (M) - 2.69

	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
CYP	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13
SB	0	.00	0	.00	1	88.07	0	.00	0	.00	1	88.07
WP	0	.00	0	.00	2	176.13	0	.00	0	.00	2	176.13

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2200
SAMPLE END TIME - 2215
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000082
WATER TEMPERATURE(C)- 20.5
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - E
WATER HEIGHT (M) - 2.84

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	12	873.39	0	.00	0	.00	12	873.39
TD	0	.00	1	72.78	0	.00	0	.00	0	.00	1	72.78
WP	0	.00	0	.00	2	145.56	0	.00	0	.00	2	145.56

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2245
SAMPLE END TIME - 2300
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000083
WATER TEMPERATURE(C)- 19.0
CONDUCTIVITY (UMHOS)- 250
TIDE STAGE - E
WATER HEIGHT (M) - 2.90

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	14	1018.95	0	.00	0	.00	14	1018.95
ASO	0	.00	0	.00	1	72.78	0	.00	0	.00	1	72.78
SB	0	.00	0	.00	1	72.78	0	.00	0	.00	1	72.78
WP	1	72.78	0	.00	1	72.78	0	.00	0	.00	1	72.78

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2330
SAMPLE END TIME - 2345
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/19
SAMPLE VOLUME (CU.M.) - 13.7396
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - .9160

INVENTORY NUMBER - 000084
WATER TEMPERATURE(C)- 19.5
CONDUCTIVITY (UMHOS)- 240
TIDE STAGE - E
WATER HEIGHT (M) - 3.00

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	5	363.91	0	.00	0	.00	5	363.91
CYP	0	.00	0	.00	1	72.78	0	.00	0	.00	1	72.78
TD	0	.00	0	.00	0	.00	1	72.78	0	.00	0	.00
WP	0	.00	0	.00	1	72.78	0	.00	0	.00	1	72.78

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 1950
SAMPLE END TIME - 2005
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/23
SAMPLE VOLUME (CU.M.) - 16.4648
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.0977

INVENTORY NUMBER - 000085
WATER TEMPERATURE(C)- 23.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - F
WATER HEIGHT (M) - 2.44

	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
CYP	0	.00	0	.00	1	60.74	0	.00	0	.00	1	60.74
MOR	0	.00	0	.00	2	121.47	0	.00	0	.00	2	121.47
SB	0	.00	0	.00	1	60.74	0	.00	0	.00	1	60.74

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2125
SAMPLE END TIME - 2140
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/23
SAMPLE VOLUME (CU.M.) - 16.4648
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.0977

INVENTORY NUMBER - 000086
WATER TEMPERATURE(C)- 22.0
CONDUCTIVITY (UMHOS)- 210
TIDE STAGE - F
WATER HEIGHT (M) - 2.41

SPECIES	EGG		YOLK-SAC		POST YOLK-SAC		JUVENILE		UID LIFE STAGE		TOTAL LARVAE**	
	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	3	182.21	0	.00	0	.00	3	182.21
WP	0	.00	0	.00	2	121.47	0	.00	0	.00	2	121.47

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION- RI
SAMPLE START TIME - 2225
SAMPLE END TIME - 2240
SAMPLE DURATION(MIN) - 15

SAMPLE COLLECTION DATE - 80/06/23
SAMPLE VOLUME (CU.M.) - 16.4648
TEST VELOCITY (CPS) - .0
PUMP RATE (CU.M/MIN) - 1.0977

INVENTORY NUMBER - 000087
WATER TEMPERATURE(C)- 22.0
CONDUCTIVITY (UMHOS)- 260
TIDE STAGE - F
WATER HEIGHT (M) - 2.36

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	2	121.47	0	.00	0	.00	2	121.47

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

ICHTHYOPLANKTON SURVIVAL DATA SHEET
SAMPLE ABUNDANCE AND CONCENTRATION*

SAMPLE COLLECTION LOCATION-	RI	SAMPLE COLLECTION DATE -	80/06/23	INVENTORY NUMBER -	000088
SAMPLE START TIME -	2315	SAMPLE VOLUME (CU.M.) -	16.4648	WATER TEMPERATURE(C)-	22.0
SAMPLE END TIME -	2330	TEST VELOCITY (CPS) -	.0	CONDUCTIVITY (UMHOS)-	210
SAMPLE DURATION(MIN) -	15	PUMP RATE (CU.M/MIN) -	1.0977	TIDE STAGE -	F
				WATER HEIGHT (M) -	2.44

	.....EGG.....		....YOLK-SAC...		.POST YOLK-SAC.		....JUVENILE...		.UID LIFE STAGE		.TOTAL LARVAE**	
SPECIES	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC	NUMBER	CONC
ALOS	0	.00	0	.00	6	364.41	0	.00	0	.00	6	364.41
WP	0	.00	0	.00	1	60.74	0	.00	0	.00	1	60.74

NOTE: * CONCENTRATION IN NO./1000 CU.M.
** LARVAE INCLUDE YOLK-SAC AND POST YOLK-SAC.

APPENDIX - F

INTAKE AND SEAL WELL COLLECTION INFORMATION

LENGTH FREQUENCY DATA

- *Alosa* spp.
- Cyprinidae
- *Morone* spp.
- White perch
- Rainbow smelt
- Striped bass
- Tessellated darter
- Yellow perch

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - ALOS LIFE STAGE - YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE											
	28 MAY 80	29 MAY 80	2 JUN 80	3 JUN 80	4 JUN 80	5 JUN 80	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80
3.1-4.0	1	-	2	-	-	-	-	-	-	-	-	-
4.1-5.0	-	6	-	-	-	-	-	1	-	-	-	-
5.1-6.0	-	1	1	-	1	-	-	-	-	-	-	-
NO.LARVAE MEASURED	1	7	4	0	1	0	0	1	0	0	0	0
NO.LARVAE COLLECTED	1	7	4	0	1	0	0	1	0	0	0	0
NO.SAMPLES	6	6	6	6	6	6	6	6	6	6	6	6
MEAN LENGTH	3.3	4.7	3.3	.0	5.5	.0	.0	4.1	.0	.0	.0	.0
STD DEV	3.30	.52	2.46	NA	5.50	NA	NA	4.10	NA	NA	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - ALOS LIFE STAGE - YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE 18 JUN 80	19 JUN 80	23 JUN 80
3.1-4.0	-	-	-
4.1-5.0	-	-	-
5.1-6.0	-	-	-
NO.LARVAE MEASURED	0	0	0
NO.LARVAE COLLECTED	0	0	0
NO.SAMPLES	6	6	4
MEAN LENGTH	.0	.0	.0
STD DEV	NA	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - ALOS LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE											
	28 MAY 80	29 MAY 80	2 JUN 80	3 JUN 80	4 JUN 80	5 JUN 80	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80
4.1-5.0	-	1	1	-	-	-	-	-	-	-	-	-
5.1-6.0	3	2	6	3	1	-	-	-	-	-	-	-
6.1-7.0	1	6	1	2	2	1	-	1	-	1	-	-
7.1-8.0	3	8	3	1	1	1	-	2	-	-	1	2
8.1-9.0	4	18	1	-	1	1	-	-	-	1	-	1
9.1-10.0	5	13	-	-	-	1	-	-	1	-	1	4
10.1-11.0	4	16	-	1	-	-	-	1	-	2	-	-
11.1-12.0	6	16	1	1	-	-	-	-	-	3	-	-
12.1-13.0	1	4	-	1	-	-	-	-	-	1	1	-
13.1-14.0	-	1	-	1	-	-	3	1	-	1	-	-
14.1-15.0	-	-	-	-	1	1	-	1	1	2	-	-
15.1-16.0	-	-	-	-	-	-	-	1	-	2	-	1
16.1-17.0	-	-	-	-	-	-	-	1	-	-	-	-
17.1-18.0	-	-	-	-	-	-	-	1	-	1	-	1
18.1-19.0	-	-	-	-	-	-	-	-	-	2	-	-
19.1-20.0	-	-	-	-	-	-	-	-	-	-	-	-
20.1-21.0	-	-	-	-	-	-	-	-	-	-	-	1
21.1-22.0	-	-	-	-	-	-	-	-	-	-	-	-
22.1-23.0	-	-	-	-	-	-	-	-	-	-	-	-
23.1-24.0	-	-	-	-	-	-	-	-	-	-	-	-
24.1-25.0	-	-	-	-	-	-	-	-	-	-	-	-
25.1-26.0	-	-	-	-	-	-	-	-	-	-	-	-
26.1-27.0	-	-	-	-	-	-	-	-	-	-	-	-
NO.LARVAE MEASURED	27	85	13	10	6	5	3	9	2	16	3	10
NO.LARVAE COLLECTED	27	85	13	10	6	5	3	9	2	16	3	10
NO.SAMPLES	6	6	6	6	6	6	6	6	6	6	6	6
MEAN LENGTH	9.3	9.6	6.7	8.6	8.1	9.2	13.7	12.3	12.2	13.2	10.1	11.5
STD DEV	2.00	1.92	1.78	3.31	3.21	3.20	.32	4.30	3.54	3.52	2.25	4.61

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - ALOS LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE 18 JUN 80	19 JUN 80	23 JUN 80
4.1-5.0	-	-	-
5.1-6.0	-	-	-
6.1-7.0	-	-	-
7.1-8.0	-	-	-
8.1-9.0	-	-	-
9.1-10.0	-	-	-
10.1-11.0	-	1	-
11.1-12.0	2	-	-
12.1-13.0	-	-	-
13.1-14.0	-	-	-
14.1-15.0	-	-	-
15.1-16.0	1	-	-
16.1-17.0	4	3	-
17.1-18.0	5	-	1
18.1-19.0	3	4	1
19.1-20.0	6	8	4
20.1-21.0	6	4	1
21.1-22.0	1	5	-
22.1-23.0	1	3	2
23.1-24.0	2	2	1
24.1-25.0	-	-	1
25.1-26.0	-	-	-
26.1-27.0	-	1	-
NO.LARVAE MEASURED	31	35	11
NO.LARVAE COLLECTED	31	35	11
NO.SAMPLES	6	6	4
MEAN LENGTH	18.8	19.9	20.9
STD DEV	2.64	2.71	2.17

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - ASD LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE											
	28 MAY 80	29 MAY 80	2 JUN 80	3 JUN 80	4 JUN 80	5 JUN 80	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80
19.1-20.0	-	-	-	-	-	-	-	-	-	-	-	-
20.1-21.0	-	-	-	-	-	-	-	-	-	-	-	-
21.1-22.0	-	-	-	-	-	-	-	-	-	-	-	-
22.1-23.0	-	-	-	-	-	-	1	-	-	1	-	-
23.1-24.0	-	-	-	-	-	-	-	1	1	-	-	-
24.1-25.0	-	-	-	-	-	-	-	-	-	-	-	-
25.1-26.0	-	-	-	-	-	-	-	-	-	1	-	-
26.1-27.0	-	-	-	-	-	-	-	-	-	-	-	-
27.1-28.0	-	-	-	-	-	-	-	-	-	-	-	-
28.1-29.0	-	-	-	-	-	-	-	-	-	-	-	-
29.1-30.0	-	-	-	-	-	-	-	-	-	-	-	-
30.1-31.0	-	-	-	-	-	-	-	-	1	-	-	-
NO.LARVAE MEASURED	0	0	0	0	0	0	1	1	2	2	0	0
NO.LARVAE COLLECTED	0	0	0	0	0	0	1	1	2	2	0	0
NO.SAMPLES	6	6	6	6	6	6	6	6	6	6	6	6
MEAN LENGTH	.0	.0	.0	.0	.0	.0	22.2	23.4	27.2	24.0	.0	.0
STD DEV	NA	NA	NA	NA	NA	NA	22.20	23.40	4.67	2.05	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - ASD LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE 18 JUN 80	19 JUN 80	23 JUN 80
19.1-20.0	1	-	-
20.1-21.0	1	-	-
21.1-22.0	-	-	-
22.1-23.0	-	-	-
23.1-24.0	-	-	-
24.1-25.0	-	-	-
25.1-26.0	1	-	-
26.1-27.0	-	-	-
27.1-28.0	-	-	-
28.1-29.0	-	-	-
29.1-30.0	-	-	-
30.1-31.0	-	-	-
NO.LARVAE MEASURED	3	1	0
NO.LARVAE COLLECTED	3	1	0
NO.SAMPLES	6	6	4
MEAN LENGTH	21.8	.0	.0
STD DEV	3.18	.00	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - CYP LIFE STAGE - YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE											
	28 MAY 80	29 MAY 80	2 JUN 80	3 JUN 80	4 JUN 80	5 JUN 80	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80
4.1-5.0	-	-	-	-	-	1	1	-	1	1	-	-
5.1-6.0	1	1	-	-	2	1	-	-	-	1	-	-
6.1-7.0	-	-	-	-	-	-	-	-	-	1	-	-
NO.LARVAE MEASURED	1	1	0	0	2	2	1	0	1	3	0	0
NO.LARVAE COLLECTED	1	1	0	0	2	2	1	0	1	3	0	0
NO.SAMPLES	6	6	6	6	6	6	6	6	6	6	6	6
MEAN LENGTH	5.1	5.3	.0	.0	5.6	5.2	5.0	.0	4.8	5.6	.0	.0
STD DEV	5.10	5.30	NA	NA	.14	.99	5.00	NA	4.80	.90	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - CYP LIFE STAGE - YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE 18 JUN 80	19 JUN 80	23 JUN 80
4.1-5.0	-	-	-
5.1-6.0	-	-	-
6.1-7.0	-	-	-
NO.LARVAE MEASURED	0	0	0
NO.LARVAE COLLECTED	0	0	0
NO.SAMPLES	6	6	4
MEAN LENGTH	.0	.0	.0
STD DEV	NA	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - CYP LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE											
	28 MAY 80	29 MAY 80	2 JUN 80	3 JUN 80	4 JUN 80	5 JUN 80	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80
5.1-6.0	2	4	-	2	2	-	3	6	2	4	-	-
6.1-7.0	1	6	-	-	-	1	1	2	2	4	-	-
7.1-8.0	-	-	-	-	-	-	-	1	-	-	-	-
8.1-9.0	-	-	-	-	-	-	-	1	-	-	-	-
NO.LARVAE MEASURED	3	10	0	2	2	1	4	10	4	8	0	0
NO.LARVAE COLLECTED	3	10	0	2	2	1	4	10	4	8	0	0
NO.SAMPLES	6	6	6	6	6	6	6	6	6	6	6	6
MEAN LENGTH	5.8	6.2	.0	5.7	5.5	6.1	5.8	6.1	6.0	6.0	.0	.0
STD DEV	.42	.31	NA	.49	.00	6.10	.63	1.15	.66	.39	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - CYP LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE 18 JUN 80	19 JUN 80	23 JUN 80
5.1-6.0	-	2	1
6.1-7.0	1	1	-
7.1-8.0	-	-	-
8.1-9.0	-	-	-
NO.LARVAE MEASURED	1	3	1
NO.LARVAE COLLECTED	1	3	1
NO.SAMPLES	6	6	4
MEAN LENGTH	6.7	5.8	5.5
STD DEV	6.70	.31	5.50

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - MOR LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE											
	28 MAY 80	29 MAY 80	2 JUN 80	3 JUN 80	4 JUN 80	5 JUN 80	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80
4.1-5.0	-	1	-	-	-	-	-	-	-	-	-	-
5.1-6.0	1	-	-	-	-	-	-	-	-	-	-	-
6.1-7.0	-	-	-	-	-	-	-	-	-	-	-	-
7.1-8.0	-	-	-	-	-	-	-	-	-	-	-	-
NO.LARVAE MEASURED	1	1	0	0	0	0	0	0	0	0	0	0
NO.LARVAE COLLECTED	1	1	0	0	0	0	0	0	0	0	0	0
NO.SAMPLES	6	6	6	6	6	6	6	6	6	6	6	6
MEAN LENGTH	6.0	5.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
STD DEV	6.00	5.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - MOR LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE 18 JUN 80	19 JUN 80	23 JUN 80
4.1-5.0	-	-	1
5.1-6.0	-	-	1
6.1-7.0	-	-	-
7.1-8.0	1	-	-
NO.LARVAE MEASURED	1	0	2
NO.LARVAE COLLECTED	1	0	2
NO.SAMPLES	6	6	4
MEAN LENGTH	7.8	.0	5.1
STD DEV	7.80	NA	.71

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - RSM LIFE STAGE - JUVENILE

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE											
	28 MAY 80	29 MAY 80	2 JUN 80	3 JUN 80	4 JUN 80	5 JUN 80	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80
NO.LARVAE MEASURED	0	0	0	0	0	0	0	0	0	0	0	1
NO.LARVAE COLLECTED	0	0	0	0	0	0	0	0	0	0	0	1
NO.SAMPLES	6	6	6	6	6	6	6	6	6	6	6	6
MEAN LENGTH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
STD DEV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	.00

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - RSM LIFE STAGE - JUVENILE

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE 18 JUN 80	19 JUN 80	23 JUN 80
NO.LARVAE MEASURED	0	0	0
NO.LARVAE COLLECTED	0	0	0
NO.SAMPLES	6	6	4
MEAN LENGTH	.0	.0	.0
STD DEV	NA	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - SB LIFE STAGE - YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE											
	28 MAY 80	29 MAY 80	2 JUN 80	3 JUN 80	4 JUN 80	5 JUN 80	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80
2.1-3.0	-	-	-	-	-	4	-	-	-	-	-	-
3.1-4.0	2	-	-	-	1	-	2	1	-	-	-	-
4.1-5.0	3	4	1	1	2	8	-	2	-	-	-	-
5.1-6.0	8	24	1	2	16	6	1	3	1	2	-	-
6.1-7.0	6	5	1	1	2	1	-	-	-	-	-	-
NO.LARVAE MEASURED	19	33	3	4	21	19	3	6	1	2	0	0
NO.LARVAE COLLECTED	19	36	3	4	21	19	3	6	1	2	0	0
NO.SAMPLES	6	6	6	6	6	6	6	6	6	6	6	6
MEAN LENGTH	5.4	5.6	5.4	5.4	5.5	4.7	4.2	4.8	5.8	5.6	.0	.0
STD DEV	.83	.51	1.16	.74	.55	1.07	1.15	.75	5.80	.14	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - SB LIFE STAGE - YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE 18 JUN 80	19 JUN 80	23 JUN 80
2.1-3.0	-	-	-
3.1-4.0	-	-	-
4.1-5.0	-	-	-
5.1-6.0	1	-	-
6.1-7.0	-	-	-
NO.LARVAE MEASURED	1	0	0
NO.LARVAE COLLECTED	1	0	0
NO.SAMPLES	6	6	4
MEAN LENGTH	5.2	.0	.0
STD DEV	5.20	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - SB LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE											
	28 MAY 80	29 MAY 80	2 JUN 80	3 JUN 80	4 JUN 80	5 JUN 80	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80
4.1-5.0	-	-	-	-	-	2	1	-	-	-	-	-
5.1-6.0	2	2	1	1	1	15	-	2	1	1	-	-
6.1-7.0	2	2	-	-	2	3	-	1	-	-	-	-
7.1-8.0	-	2	4	-	-	-	-	-	-	-	-	-
8.1-9.0	-	1	1	1	1	-	-	-	-	-	-	-
9.1-10.0	-	-	-	1	-	1	-	-	-	-	-	-
10.1-11.0	-	-	-	-	-	1	-	-	-	-	-	-
11.1-12.0	-	-	-	-	-	-	-	-	-	-	-	-
12.1-13.0	-	-	-	-	-	-	-	-	-	-	-	-
13.1-14.0	-	-	-	-	-	-	-	-	-	-	-	-
14.1-15.0	-	-	-	-	-	-	-	-	-	-	-	-
15.1-16.0	-	-	-	-	-	-	-	-	-	-	-	-
NO.LARVAE MEASURED	4	7	6	3	4	22	1	3	1	1	0	0
NO.LARVAE COLLECTED	4	8	6	3	4	22	1	3	1	1	0	0
NO.SAMPLES	6	6	6	6	6	6	6	6	6	6	6	6
MEAN LENGTH	6.0	6.9	7.3	8.0	6.7	6.0	4.9	5.9	5.3	5.7	.0	.0
STD DEV	.24	1.21	1.09	1.76	1.46	1.26	4.90	.56	5.30	5.70	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - SB LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE 18 JUN 80	19 JUN 80	23 JUN 80
4.1-5.0	-	-	-
5.1-6.0	-	-	-
6.1-7.0	-	-	1
7.1-8.0	-	-	-
8.1-9.0	-	-	-
9.1-10.0	-	-	-
10.1-11.0	-	-	-
11.1-12.0	-	-	-
12.1-13.0	-	1	-
13.1-14.0	-	-	-
14.1-15.0	-	-	-
15.1-16.0	1	1	-
NO.LARVAE MEASURED	1	2	1
NO.LARVAE COLLECTED	1	2	1
NO.SAMPLES	6	6	4
MEAN LENGTH	15.7	14.1	6.6
STD DEV	15.70	1.84	6.60

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - TD LIFE STAGE - YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE											
	28 MAY 80	29 MAY 80	2 JUN 80	3 JUN 80	4 JUN 80	5 JUN 80	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80
4.1-5.0	1	4	-	-	-	-	-	-	-	-	-	-
5.1-6.0	-	3	-	1	-	1	-	-	-	1	-	-
6.1-7.0	-	1	-	-	-	-	-	-	-	-	-	-
NO.LARVAE MEASURED	1	8	0	1	0	1	0	0	0	1	0	0
NO.LARVAE COLLECTED	1	8	0	1	0	1	0	0	0	1	0	0
NO.SAMPLES	6	6	6	6	6	6	6	6	6	6	6	6
MEAN LENGTH	4.8	5.2	.0	5.3	.0	5.6	.0	.0	.0	6.0	.0	.0
STD DEV	4.80	.57	NA	5.30	NA	5.60	NA	NA	NA	6.00	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - TD LIFE STAGE - YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE 18 JUN 80	19 JUN 80	23 JUN 80
4.1-5.0	-	-	-
5.1-6.0	-	1	-
6.1-7.0	-	-	-
NO.LARVAE MEASURED	0	1	0
NO.LARVAE COLLECTED	0	1	0
NO.SAMPLES	6	6	4
MEAN LENGTH	.0	5.4	.0
STD DEV	NA	5.40	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - TD LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE											
	28 MAY 80	29 MAY 80	2 JUN 80	3 JUN 80	4 JUN 80	5 JUN 80	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80
5.1-6.0	-	1	-	-	-	2	-	1	-	-	-	-
6.1-7.0	-	-	-	-	-	-	1	-	-	2	-	-
NO.LARVAE MEASURED	0	1	0	0	0	2	1	1	0	2	0	0
NO.LARVAE COLLECTED	0	1	0	0	0	2	1	1	0	2	0	0
NO.SAMPLES	6	6	6	6	6	6	6	6	6	6	6	6
MEAN LENGTH	.0	5.9	.0	.0	.0	5.9	6.8	6.0	.0	6.2	.0	.0
STD DEV	NA	5.90	NA	NA	NA	.07	6.80	6.00	NA	.14	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - TD LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE 18 JUN 80	19 JUN 80	23 JUN 80
5.1-6.0	-	-	-
6.1-7.0	-	1	-
NO.LARVAE MEASURED	0	1	0
NO.LARVAE COLLECTED	0	1	0
NO.SAMPLES	6	6	4
MEAN LENGTH	.0	6.4	.0
STD DEV	NA	6.40	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - TD LIFE STAGE - JUVENILE

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE											
	28 MAY 80	29 MAY 80	2 JUN 80	3 JUN 80	4 JUN 80	5 JUN 80	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80
18.1-19.0	-	-	-	-	-	-	-	-	-	-	-	-
NO.LARVAE MEASURED	0	0	0	0	0	0	0	0	0	0	0	0
NO.LARVAE COLLECTED	0	0	0	0	0	0	0	0	0	0	0	0
NO.SAMPLES	6	6	6	6	6	6	6	6	6	6	6	6
MEAN LENGTH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
STD DEV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - TD LIFE STAGE - JUVENILE

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE 18 JUN 80	19 JUN 80	23 JUN 80
18.1-19.0	-	1	-
NO.LARVAE MEASURED	0	1	0
NO.LARVAE COLLECTED	0	1	0
NO.SAMPLES	6	6	4
MEAN LENGTH	.0	18.6	.0
STD DEV	NA	18.60	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - UID LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE											
	28 MAY 80	29 MAY 80	2 JUN 80	3 JUN 80	4 JUN 80	5 JUN 80	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80
NO.LARVAE MEASURED	1	0	0	0	0	0	0	0	0	0	0	0
NO.LARVAE COLLECTED	1	0	0	0	0	0	0	0	0	0	0	0
NO.SAMPLES	6	6	6	6	6	6	6	6	6	6	6	6
MEAN LENGTH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
STD DEV	.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - UID LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE 18 JUN 80	19 JUN 80	23 JUN 80
NO.LARVAE MEASURED	0	0	0
NO.LARVAE COLLECTED	0	0	0
NO.SAMPLES	6	6	4
MEAN LENGTH	.0	.0	.0
STD DEV	NA	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - WP LIFE STAGE - YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE											
	28 MAY 80	29 MAY 80	2 JUN 80	3 JUN 80	4 JUN 80	5 JUN 80	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80
2.1-3.0	4	1	4	1	-	1	-	1	-	-	-	1
3.1-4.0	1	1	4	-	2	-	1	-	-	1	1	-
NO.LARVAE MEASURED	5	2	8	1	2	1	1	1	0	1	1	1
NO.LARVAE COLLECTED	5	2	8	1	2	1	1	1	0	1	1	1
NO.SAMPLES	6	6	6	6	6	6	6	6	6	6	6	6
MEAN LENGTH	2.9	2.9	3.0	2.9	3.8	2.2	3.7	2.2	.0	3.9	3.3	2.6
STD DEV	.59	.64	.39	2.90	.00	2.20	3.70	2.20	NA	3.90	3.30	2.60

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - WP LIFE STAGE - YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE 18 JUN 80	19 JUN 80	23 JUN 80
2.1-3.0	-	-	-
3.1-4.0	-	-	-
NO.LARVAE MEASURED	0	0	0
NO.LARVAE COLLECTED	0	0	0
NO.SAMPLES	6	6	4
MEAN LENGTH	.0	.0	.0
STD DEV	NA	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - WP LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE											
	28 MAY 80	29 MAY 80	2 JUN 80	3 JUN 80	4 JUN 80	5 JUN 80	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80
3.1-4.0	3	1	-	2	4	2	-	-	-	2	-	-
4.1-5.0	8	8	2	-	5	2	1	-	-	1	-	-
5.1-6.0	8	21	-	2	3	-	-	1	1	3	-	-
6.1-7.0	6	14	-	1	9	1	-	3	-	-	-	-
7.1-8.0	1	6	2	1	7	4	-	1	-	1	-	-
8.1-9.0	-	-	-	-	5	4	2	1	1	-	-	-
9.1-10.0	-	-	-	-	1	1	-	-	-	1	-	-
10.1-11.0	-	-	-	-	-	-	-	-	1	-	-	-
11.1-12.0	-	-	-	-	-	-	-	-	-	2	-	-
12.1-13.0	-	-	-	-	-	-	-	-	-	-	-	-
13.1-14.0	-	-	-	-	-	-	-	-	-	-	-	-
14.1-15.0	-	-	-	-	-	-	-	-	-	-	-	-
15.1-16.0	-	-	-	-	-	-	-	-	-	-	-	-
NO.LARVAE MEASURED	26	50	4	6	34	14	3	6	3	10	0	0
NO.LARVAE COLLECTED	26	50	4	6	34	14	3	6	3	10	0	0
NO.SAMPLES	6	6	6	6	6	6	6	6	6	6	6	6
MEAN LENGTH	5.3	5.8	6.0	5.4	6.4	6.9	6.9	6.8	8.1	6.9	.0	.0
STD DEV	1.09	.90	1.56	1.45	1.73	2.03	2.37	1.31	2.57	2.87	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - WP LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE 18 JUN 80	19 JUN 80	23 JUN 80
3.1-4.0	1	-	-
4.1-5.0	3	2	1
5.1-6.0	-	2	-
6.1-7.0	-	-	-
7.1-8.0	-	1	1
8.1-9.0	-	-	-
9.1-10.0	-	1	-
10.1-11.0	2	1	-
11.1-12.0	-	2	-
12.1-13.0	-	-	-
13.1-14.0	-	-	-
14.1-15.0	-	-	-
15.1-16.0	-	-	1
NO.LARVAE MEASURED	6	9	3
NO.LARVAE COLLECTED	6	9	3
NO.SAMPLES	6	6	4
MEAN LENGTH	6.3	8.1	9.3
STD DEV	3.27	2.98	5.99

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - YP LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE											
	28 MAY 80	29 MAY 80	2 JUN 80	3 JUN 80	4 JUN 80	5 JUN 80	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80
5.1-6.0	-	-	-	1	-	-	-	-	-	-	-	-
NO.LARVAE MEASURED	0	0	0	1	0	0	0	0	0	0	0	0
NO.LARVAE COLLECTED	0	0	0	1	0	0	0	0	0	0	0	0
NO.SAMPLES	6	6	6	6	6	6	6	6	6	6	6	6
MEAN LENGTH	.0	.0	.0	5.6	.0	.0	.0	.0	.0	.0	.0	.0
STD DEV	NA	NA	NA	5.60	NA	NA	NA	NA	NA	NA	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RI
SPECIES - YP LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE 18 JUN 80	19 JUN 80	23 JUN 80
5.1-6.0	-	-	-
NO.LARVAE MEASURED	0	0	0
NO.LARVAE COLLECTED	0	0	0
NO.SAMPLES	6	6	4
MEAN LENGTH	.0	.0	.0
STD DEV	NA	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RO
SPECIES - ALOS LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE									
	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80	18 JUN 80	19 JUN 80	23 JUN 80	26 JUN 80
4.1-5.0	-	-	-	1	-	-	-	-	-	-
5.1-6.0	-	-	-	1	-	-	-	-	-	-
6.1-7.0	1	1	-	-	-	-	-	-	-	-
7.1-8.0	-	-	1	-	-	-	-	-	-	-
8.1-9.0	-	-	-	-	2	-	-	-	-	-
9.1-10.0	-	2	-	3	1	-	1	-	-	-
10.1-11.0	1	-	1	4	-	1	-	1	-	-
11.1-12.0	1	-	-	5	4	-	1	-	-	-
12.1-13.0	-	-	2	7	1	1	-	-	-	1
13.1-14.0	1	5	2	10	3	-	-	-	-	-
14.1-15.0	2	11	5	18	2	-	2	1	-	1
15.1-16.0	4	8	3	20	4	1	-	-	-	1
16.1-17.0	2	11	3	7	2	2	-	2	1	-
17.1-18.0	4	10	6	6	3	6	5	6	-	1
18.1-19.0	1	2	2	4	3	3	2	7	7	-
19.1-20.0	-	-	-	-	5	-	3	6	3	-
20.1-21.0	-	-	-	-	2	2	3	10	-	3
21.1-22.0	-	-	-	-	2	2	2	9	-	-
22.1-23.0	-	-	-	-	1	-	3	4	3	-
23.1-24.0	-	-	-	-	-	-	-	1	-	1
24.1-25.0	-	-	-	-	-	-	-	-	-	1
25.1-26.0	-	-	-	-	-	-	-	-	-	-
26.1-27.0	-	-	-	-	-	-	-	1	-	-
NO.LARVAE MEASURED	17	50	25	86	35	18	22	48	14	9
NO.LARVAE COLLECTED	17	50	26	86	35	18	22	51	14	9
NO.SAMPLES	6	6	6	6	6	6	6	6	4	6
MEAN LENGTH	15.0	15.4	15.3	14.3	16.1	17.6	18.6	19.8	19.3	19.0
STD DEV	3.09	2.29	2.64	2.57	3.84	2.85	3.43	2.51	1.73	3.97

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RD
SPECIES - ASD LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE									
	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80	18 JUN 80	19 JUN 80	23 JUN 80	26 JUN 80
15.1-16.0	-	-	1	-	-	-	-	-	-	-
16.1-17.0	-	-	-	-	-	-	-	-	-	-
17.1-18.0	-	-	-	-	-	-	-	-	-	-
18.1-19.0	2	-	-	-	-	-	-	-	-	-
19.1-20.0	-	1	-	-	-	-	-	-	-	-
20.1-21.0	-	-	-	-	-	-	-	-	-	-
21.1-22.0	-	-	-	1	1	-	-	-	-	-
22.1-23.0	-	-	1	1	-	-	-	-	-	-
23.1-24.0	-	1	-	1	-	-	-	-	-	-
24.1-25.0	-	1	1	-	-	-	-	-	1	-
25.1-26.0	-	-	-	-	-	1	-	-	-	-
26.1-27.0	-	-	-	1	-	-	-	-	-	-
27.1-28.0	1	-	-	-	-	-	-	-	-	-
NO.LARVAE MEASURED	3	3	3	4	1	1	0	0	1	0
NO.LARVAE COLLECTED	3	3	3	4	1	1	0	0	1	0
NO.SAMPLES	6	6	6	6	6	6	6	6	4	6
MEAN LENGTH	21.6	22.6	21.0	23.5	21.6	25.7	.0	.0	24.6	.0
STD DEV	5.08	2.29	4.59	2.23	21.60	25.70	NA	NA	24.60	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RD
SPECIES - CYP LIFE STAGE - YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE									
	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80	18 JUN 80	19 JUN 80	23 JUN 80	26 JUN 80
4.1-5.0	-	-	-	2	1	1	-	-	-	-
5.1-6.0	2	2	-	-	-	-	-	-	-	2
6.1-7.0	-	-	-	-	-	-	-	-	-	1
NO.LARVAE MEASURED	2	2	0	2	1	1	0	0	0	3
NO.LARVAE COLLECTED	2	2	0	2	1	1	0	0	0	3
NO.SAMPLES	6	6	6	6	6	6	6	6	4	6
MEAN LENGTH	5.2	5.7	.0	4.7	4.3	5.0	.0	.0	.0	5.6
STD DEV	.07	.00	NA	.00	4.30	5.00	NA	NA	NA	.50

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RD
SPECIES - CYP LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE									
	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80	18 JUN 80	19 JUN 80	23 JUN 80	26 JUN 80
5.1-6.0	3	3	2	2	-	-	-	2	-	-
6.1-7.0	-	1	1	-	-	1	-	-	1	-
7.1-8.0	-	-	-	-	-	-	-	-	-	-
8.1-9.0	-	-	-	-	-	-	-	-	-	2
NO.LARVAE MEASURED	3	4	3	2	0	1	0	2	2	2
NO.LARVAE COLLECTED	3	4	3	2	0	1	0	2	2	2
NO.SAMPLES	6	6	6	6	6	6	6	6	4	6
MEAN LENGTH	5.5	5.8	5.8	5.9	.0	6.5	.0	5.8	3.3	8.9
STD DEV	.32	.51	.35	.21	NA	6.50	NA	.00	4.74	.14

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RD
SPECIES - MOR LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE									
	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80	18 JUN 80	19 JUN 80	23 JUN 80	26 JUN 80
6.1-7.0	-	-	1	-	-	-	-	2	-	-
7.1-8.0	-	-	-	-	-	-	-	-	-	-
8.1-9.0	-	-	-	-	1	-	-	-	-	-
9.1-10.0	-	-	-	1	-	-	-	-	-	-
10.1-11.0	-	-	-	-	-	-	1	-	-	1
NO.LARVAE MEASURED	0	0	1	1	1	0	1	2	0	2
NO.LARVAE COLLECTED	0	0	1	1	1	0	1	2	0	2
NO.SAMPLES	6	6	6	6	6	6	6	6	4	6
MEAN LENGTH	.0	.0	6.9	10.0	9.0	.0	10.2	6.6	.0	5.3
STD DEV	NA	NA	6.90	10.00	9.00	NA	10.20	.49	NA	7.50

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RD
SPECIES - RSM LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE									
	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80	18 JUN 80	19 JUN 80	23 JUN 80	26 JUN 80
24.1-25.0	-	-	1	-	-	-	-	-	-	-
25.1-26.0	-	-	-	-	-	-	-	-	-	-
26.1-27.0	-	-	-	-	-	-	-	-	-	-
27.1-28.0	-	-	-	-	-	-	-	-	-	-
28.1-29.0	1	-	-	-	-	-	-	-	-	-
29.1-30.0	-	-	-	-	-	-	-	-	-	-
30.1-31.0	-	1	-	-	-	-	-	-	-	-
31.1-32.0	-	-	-	-	-	-	-	-	-	-
32.1-33.0	-	-	1	-	-	-	-	-	-	-
NO.LARVAE MEASURED	1	1	2	0	0	0	0	0	0	0
NO.LARVAE COLLECTED	1	1	2	0	0	0	0	0	0	0
NO.SAMPLES	6	6	6	6	6	6	6	6	4	6
MEAN LENGTH	28.5	31.0	28.5	.0	.0	.0	.0	.0	.0	.0
STD DEV	28.50	31.00	5.73	NA	NA	NA	NA	NA	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RD
SPECIES - RSM LIFE STAGE - JUVENILE

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE									
	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80	18 JUN 80	19 JUN 80	23 JUN 80	26 JUN 80
32.1-33.0	-	2	-	-	-	-	-	-	-	-
33.1-34.0	-	-	-	-	-	-	-	-	-	-
34.1-35.0	-	-	-	-	-	-	1	-	-	-
35.1-36.0	-	-	-	-	-	-	-	-	-	-
36.1-37.0	-	-	1	-	-	-	-	-	-	-
NO.LARVAE MEASURED	0	2	1	0	0	0	1	0	0	0
NO.LARVAE COLLECTED	0	2	1	0	0	0	1	0	0	0
NO.SAMPLES	6	6	6	6	6	6	6	6	4	6
MEAN LENGTH	.0	33.0	36.5	.0	.0	.0	35.0	.0	.0	.0
STD DEV	NA	.00	36.50	NA	NA	NA	35.00	NA	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RD
SPECIES - SB LIFE STAGE - YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE									
	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80	18 JUN 80	19 JUN 80	23 JUN 80	26 JUN 80
4.1-5.0	2	3	-	-	-	-	-	-	-	-
5.1-6.0	5	2	3	-	1	-	2	-	-	-
6.1-7.0	-	1	-	-	-	-	1	-	-	-
NO.LARVAE MEASURED	7	6	3	0	2	0	3	0	0	0
NO.LARVAE COLLECTED	7	6	3	0	2	0	3	0	0	0
NO.SAMPLES	6	6	6	6	6	6	6	6	4	6
MEAN LENGTH	5.2	5.4	5.4	.0	2.6	.0	5.9	.0	.0	.0
STD DEV	.60	.65	.20	NA	3.68	NA	.72	NA	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RD
SPECIES - SB LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE									
	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80	18 JUN 80	19 JUN 80	23 JUN 80	26 JUN 80
4.1-5.0	1	-	-	1	-	-	-	-	-	-
5.1-6.0	2	-	-	-	-	-	-	-	-	1
6.1-7.0	-	1	-	1	-	-	-	-	-	1
7.1-8.0	2	1	-	-	-	-	-	-	-	-
8.1-9.0	1	-	2	1	-	-	2	-	1	-
9.1-10.0	1	-	2	1	-	-	-	-	-	-
10.1-11.0	-	1	-	3	1	-	2	-	-	1
11.1-12.0	-	1	3	3	-	-	2	-	-	-
12.1-13.0	1	2	-	2	-	-	-	-	-	1
13.1-14.0	-	1	1	-	-	-	1	-	-	2
14.1-15.0	-	-	-	2	-	-	-	-	-	-
15.1-16.0	-	-	-	-	-	-	-	-	-	1
16.1-17.0	-	-	-	-	-	-	-	-	-	1
17.1-18.0	-	-	-	-	-	-	-	-	-	-
18.1-19.0	-	-	-	-	-	-	-	-	-	1
19.1-20.0	-	-	-	-	-	-	-	1	-	1
NO.LARVAE MEASURED	8	7	8	14	1	0	7	1	1	10
NO.LARVAE COLLECTED	8	7	8	14	1	0	7	1	1	10
NO.SAMPLES	6	6	6	6	6	6	6	6	4	6
MEAN LENGTH	7.7	10.6	10.5	10.7	10.2	.0	10.7	19.9	8.4	13.3
STD DEV	2.43	2.73	1.82	2.62	10.20	NA	1.78	19.90	8.40	4.63

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RD
SPECIES - TD LIFE STAGE - YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE									
	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80	18 JUN 80	19 JUN 80	23 JUN 80	26 JUN 80
4.1-5.0	-	2	1	1	-	-	-	-	-	-
5.1-6.0	-	-	3	1	-	-	-	-	-	-
NO.LARVAE MEASURED	0	2	4	2	0	0	0	0	0	0
NO.LARVAE COLLECTED	0	2	4	2	0	0	0	0	0	0
NO.SAMPLES	6	6	6	6	6	6	6	6	4	6
MEAN LENGTH	.0	4.8	5.4	5.2	.0	.0	.0	.0	.0	.0
STD DEV	NA	.28	.49	.64	NA	NA	NA	NA	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RO
SPECIES - TD LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE									
	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80	18 JUN 80	19 JUN 80	23 JUN 80	26 JUN 80
5.1-6.0	1	1	-	-	-	-	-	1	-	-
6.1-7.0	-	-	1	-	-	-	-	-	-	-
NO.LARVAE MEASURED	1	1	1	0	0	0	0	1	0	0
NO.LARVAE COLLECTED	1	1	1	0	0	0	0	1	0	0
NO.SAMPLES	6	6	6	6	6	6	6	6	4	6
MEAN LENGTH	5.6	5.8	6.4	.0	.0	.0	.0	5.8	.0	.0
STD DEV	5.60	5.80	6.40	NA	NA	NA	NA	5.80	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RD
SPECIES - TD LIFE STAGE - JUVENILE

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE									
	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80	18 JUN 80	19 JUN 80	23 JUN 80	26 JUN 80
15.1-16.0	-	-	-	-	-	-	-	-	-	1
NO.LARVAE MEASURED	0	0	0	0	0	0	0	0	0	1
NO.LARVAE COLLECTED	0	0	0	0	0	0	0	0	0	1
NO.SAMPLES	6	6	6	6	6	6	6	6	4	6
MEAN LENGTH	.0	.0	.0	.0	.0	.0	.0	.0	.0	15.4
STD DEV	NA	NA	NA	NA	NA	NA	NA	NA	NA	15.40

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RD
SPECIES - UID LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE									
	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80	18 JUN 80	19 JUN 80	23 JUN 80	26 JUN 80
25.1-26.0	-	-	-	-	-	-	-	-	1	-
NO.LARVAE MEASURED	0	0	0	0	0	1	0	0	1	0
NO.LARVAE COLLECTED	0	0	0	0	0	1	0	0	1	0
NO.SAMPLES	6	6	6	6	6	6	6	6	4	6
MEAN LENGTH	.0	.0	.0	.0	.0	.0	.0	.0	25.8	.0
STD DEV	NA	NA	NA	NA	NA	.00	NA	NA	25.80	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RD
SPECIES - WP LIFE STAGE - YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE									
	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80	18 JUN 80	19 JUN 80	23 JUN 80	26 JUN 80
2.1-3.0	1	-	-	-	-	-	-	-	-	-
NO.LARVAE MEASURED	1	0	0	0	0	0	0	0	0	0
NO.LARVAE COLLECTED	1	0	0	0	0	0	0	0	0	0
NO.SAMPLES	6	6	6	6	6	6	6	6	4	6
MEAN LENGTH	3.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
STD DEV	3.00	NA	NA	NA	NA	NA	NA	NA	NA	NA

ICHTHYOPLANKTON DATA SHEET
LENGTH FREQUENCY

SAMPLE LOCATION - RD
SPECIES - WP LIFE STAGE - POST-YOLK-SAC

LENGTH INTERVAL (MM)	NUMBER OF FISH PER COLLECTION DATE									
	9 JUN 80	10 JUN 80	11 JUN 80	12 JUN 80	16 JUN 80	17 JUN 80	18 JUN 80	19 JUN 80	23 JUN 80	26 JUN 80
3.1-4.0	1	-	-	-	-	-	-	-	-	-
4.1-5.0	-	1	2	2	1	-	4	1	-	-
5.1-6.0	5	2	6	-	1	-	3	3	2	-
6.1-7.0	-	5	-	-	-	1	2	-	-	-
7.1-8.0	1	2	2	2	-	-	-	2	-	-
8.1-9.0	1	3	2	-	-	-	1	1	1	-
9.1-10.0	-	2	1	1	-	-	-	-	-	1
10.1-11.0	-	-	2	3	-	1	1	1	-	1
11.1-12.0	-	1	1	2	-	-	-	1	-	-
12.1-13.0	-	-	-	-	-	-	1	2	-	1
13.1-14.0	-	-	-	-	-	1	-	-	-	-
NO.LARVAE MEASURED	8	16	16	10	2	3	12	11	3	3
NO.LARVAE COLLECTED	8	16	16	10	2	3	12	11	3	3
NO.SAMPLES	6	6	6	6	6	6	6	6	4	6
MEAN LENGTH	5.9	7.4	7.4	8.9	4.9	10.1	6.7	8.3	6.5	11.0
STD DEV	1.50	1.77	2.33	2.57	.99	3.05	2.78	3.08	1.62	1.60

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EA Report CHG25A

ESTIMATES OF IMPINGEMENT MORTALITY FOR SELECTED FISH SPECIES AT THE DANSKAMMER POINT GENERATING STATION 1975-1980

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CONTENTS

	Page
1. INTRODUCTION	1-1
2. SUMMARY	2-1
3. SITE DESCRIPTION	3-1
3.1 The Waterbody	3-1
3.2 The Plant	3-1
4. MATERIALS AND METHODS	4-1
4.1 Screen Survival Collection Procedures	4-1
4.2 Analytical Methodology	4-4
5. RESULTS	5-1
REFERENCES	
APPENDIX A - SCREEN SURVIVAL OF SELECTED FISH SPECIES AT THE DANSKAMMER POINT PLANT, 1975-1977 AND 1979-1980	
APPENDIX B - CONTROL SURVIVAL (INITIAL AND 84-96 HOUR) AT THE DANSKAMMER POINT PLANT, 1975-1977 AND 1979-1980	

LIST OF FIGURES

Number	Title
3-1	Location of the Danskammer Point plant on the lower Hudson River estuary.
3-2	General overview of the Danskammer Point Generating Station.
4-1	Intake area of Danskammer Point plant where impingement sampling is performed.
4-2	Washwater discharge sampling system with collection apparatus in place at the Danskammer Point plant intake.
5-1	Pooled monthly initial mortality estimates and the mortality range observed across years for impinged young-of-the-year white perch.
5-2	Pooled monthly initial mortality estimates and the mortality range observed across years for impinged yearling and older white perch.
5-3	Pooled monthly initial mortality estimates and the mortality range observed across years for impinged yearling and older Atlantic tomcod.
5-4	Pooled monthly initial mortality estimates and the mortality range observed across years for impinged yearling and older spottail shiner.
5-5	Pooled monthly initial mortality estimates and the mortality range observed across years for impinged young-of-the-year alewife.
5-6	Pooled monthly initial mortality estimates and the mortality range observed across years for impinged young-of-the-year blueback herring.
5-7	Pooled monthly initial mortality estimates and the mortality range observed across years for impinged young-of-the-year gizzard shad.
5-8	Pooled monthly initial mortality estimates and the mortality range observed across years for impinged yearling and older gizzard shad.
5-9	Pooled monthly initial mortality estimates and the mortality range observed across years for impinged young-of-the-year American shad.

LIST OF TABLES

Number	Title
5-1	Numbers of fish collected during impingement survival studies (continuous and 2-hour hold screenwash modes) at Danskammer Point plant, 1975-1977 and 1979-1980.
5-2	Monthly mortality estimates for white perch impinged at Danskammer Point plant, based on impingement survival studies conducted during 1975-1977 and 1979-1980.
5-3	Monthly mortality estimates for Atlantic tomcod impinged at Danskammer Point plant, based on impingement survival studies conducted during 1975-1977 and 1979-1980.
5-4	Monthly mortality estimates for spottail shiner impinged at Danskammer Point plant, based on impingement survival studies conducted during 1975-1977 and 1979-1980.
5-5	Monthly mortality estimates for alewife impinged at Danskammer Point plant, based on impingement survival studies conducted during 1975-1977 and 1979-1980.
5-6	Monthly mortality estimates for blueback herring impinged at Danskammer Point plant, based on impingement survival studies conducted during 1975-1977 and 1979-1980.
5-7	Monthly mortality estimates for gizzard shad impinged at Danskammer Point plant, based on impingement survival studies conducted during 1975-1977 and 1979-1980.
5-8	Monthly mortality estimates for American shad impinged at Danskammer Point plant, based on impingement survival studies conducted during 1975-1977 and 1979-1980.
5-9	Monthly mortality estimates for pumpkinseed sunfish impinged at Danskammer Point plant, based on impingement survival studies conducted during 1975-1977 and 1979-1980.
5-10	Monthly mortality estimates for bay anchovy impinged at Danskammer Point plant, based on impingement survival studies conducted during 1975-1977 and 1979-1980.
5-11	Monthly mortality estimates for white catfish impinged at Danskammer Point plant, based on impingement survival studies conducted during 1975-1977 and 1979-1980.
5-12	Monthly mortality estimates for striped bass impinged at Danskammer Point plant, based on impingement survival studies conducted during 1975-1977 and 1979-1980.
5-13	Seasonal mortality estimates for selected fish species collected during impingement survival studies at Danskammer Point plant, 1975-1977 and 1979-1980.

1. INTRODUCTION

Impingement survival studies were performed at the Danskammer Point Generating Station between 1975 and 1980 by Ecological Analysts, Inc. From 1975 to 1977, the studies were designed to assess survival of impinged fish and determine the intake screen operating mode which maximized fish survival. The effects of impingement on fish survival were studied in relation to hold time between screenwashes. In 1979 and 1980, studies of a modified frontwash vertical traveling screen were conducted. These studies compared impingement survival rates at the modified screen with those at the standard screens during continuous and intermittent (2-hour hold) wash modes. For purposes of this report, only data collected at the standard screens during the 1979-1980 studies have been utilized. These studies have been previously presented in EA 1976, 1977a, 1977b, 1978, and 1982.

The studies were conducted during seasons of peak impingement (fall to early spring) with field and analytical emphasis placed on white perch and Atlantic tomcod, the most commonly impinged fish. Less numerous species were studied as they became abundant during impingement collections.

Estimates of impingement mortality for selected species of fish impinged at the Danskammer Point plant are presented herein. Data collected at the conventional traveling screens for the continuous and 2-hour screenwash modes were utilized to calculate both monthly and seasonal impingement mortality rates.

2. SUMMARY

Monthly impingement mortality estimates were calculated for white perch, Atlantic tomcod, spottail shiner, alewife, blueback herring, gizzard shad, American shad, pumpkinseed sunfish, bay anchovy, white catfish, and striped bass. Data collected at the Danskammer Point plant during continuous and 2-hour hold screenwash modes were pooled by month across study years, 1975-1977 and 1979-1980. In addition, seasonal mortality estimates were calculated from the pooled monthly estimates.

Initial mortality for white perch, Atlantic tomcod, spottail shiner, yearling and older alewife, gizzard shad, pumpkinseed sunfish, white catfish, and striped bass was generally low (<30 percent). Initial mortality for blueback herring, young-of-the-year alewife, American shad, and bay anchovy was generally moderate to high (50-100 percent). Mortality observed during the 2-hour hold screenwash mode was slightly higher than mortality observed during the continuous screenwash mode. The variability in pooled mortality estimates across months and the range of monthly mortality estimates across years is low. Instances of apparent high variability can be attributed to small sample size.

Pooled extended (84-96 hour) mortality in almost every case was high, however, these estimates are conservative since they have not been adjusted for control mortality, and therefore include mortality associated with collection, handling, and holding.

3. SITE DESCRIPTION

3.1 THE WATERBODY

The Danskammer Point plant is located on the Hudson River at the extreme northern end of Newburgh Bay, approximately 107 km upstream from the river mouth (Figure 3-1). The river in this area is characterized by a relatively narrow, deep channel. The mean depth of the river in the area of the plant is approximately 15 m at mean low water and maximum depth ranges from about 15 to 21 m.

3.2 THE PLANT

The Danskammer Point plant is composed of four oil-fired units with a total gross generating capacity of 482 MWe. Unit 1 began commercial operation in December 1951, Unit 2 in September 1954, Unit 3 in October 1959, and Unit 4 in September 1967.

Water for the once-through cooling system is drawn from the Hudson River by two pumps each for Units 1, 2, and 3 and by three pumps for Unit 4 (Figure 3-2). The pumps draw water from a common intake canal through twelve 9.5-mm mesh vertical traveling screens. Approach velocities to the screens, while affected by the number of operating cooling water pumps and by tidal conditions, are generally less than 45 cm/second (1.5 ft/second). Cooling water is returned to the Hudson River through three separate shoreline surface discharge pipes.

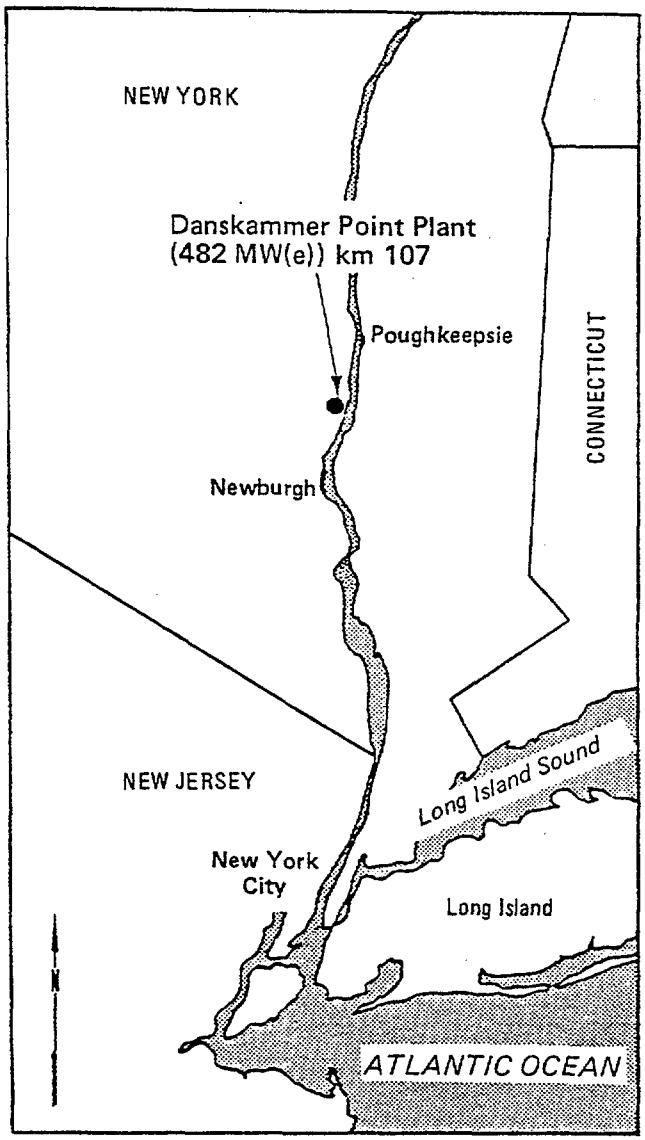


Figure 3-1. Location of the Danskammer Point plant on the lower Hudson River estuary.

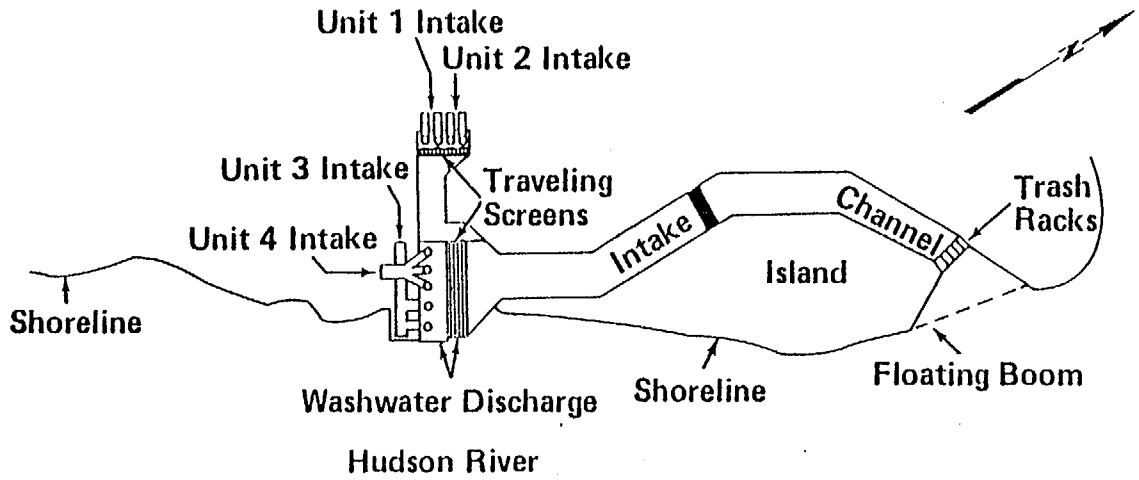


Figure 3-2. General overview of the Danskammer Point Generating Station.

4. MATERIALS AND METHODS

The field procedures used in the Danskammer Point impingement survival studies over the years 1975-1977 and 1979-1980 were reviewed and found to be generally similar throughout the study period. These procedures are described below.

4.1 SCREEN SURVIVAL COLLECTION PROCEDURES

Fish were collected at the point where the screenwash sluiceway for Units 3 and 4 emptied into the Hudson River (Figures 4-1 and 4-2). The flow was directed into a 6-mm mesh collection basket equipped with a flotation collar that allowed the top of the basket to float slightly above the water surface. The duration of collection depended upon the screenwash regime being tested. During all study years, the collection period was 15 minutes for the intermittent wash modes. For the continuous wash mode in 1975-1977, the sample was collected for 60 minutes; while in 1979-1980 two 30-minute replicate collections were made.

The collection basket was retrieved at the end of sampling with an electric winch. During the early studies, fish and debris were concentrated in a 106-liter collection box from which they were removed after sampling. In 1979-1980, fish were concentrated in two water-filled, removable sample trays in the bottom of the basket. Specimens were identified, enumerated, and classified as live, stunned, or dead according to the following criteria:

Live:	Fish able to maintain equilibrium and swim normally.
Stunned:	Fish unable to maintain equilibrium and/or exhibiting abnormal swimming behavior.
Dead:	Fish with no opercular movement.

Dead fish were identified, enumerated, and measured for total length (±1 mm). In 1975-1977, living fish of selected species were transferred to holding pens (30 X 30 X 48 cm with 6-mm bar-mesh sides) placed inside flow-through holding tanks. The tanks contained 1.4 m^3 ambient river water and were maintained with a water flow of about 75 liters/min. The holding tanks in 1979-1980 were 190-liter cylinders in which a circular flow of about 19 liters/min of ambient water was maintained. During the earlier studies (1975-Spring 1976), potassium permanganate ($KMNO_4$) was added periodically to reduce bacterial and fungal infections. Also, during these same studies, fish were fed throughout the extended survival holding period.

Fish were observed at intervals after collection to evaluate latent effects associated with impingement. During the 1975 and spring 1976 studies, the observations were made at 6, 12, 24, 48, 72, and 96 hours; between November 1976 and December 1977 they were made at 6, 12, 18, 36, 60, and 84 hours; and beginning in October 1979 they were made at 12, 18, 36, and 84 hours. All dead fish observed at each observation interval and any fish alive at the final observation were removed, identified, measured, and preserved. Water temperature, conductivity, and dissolved oxygen were monitored during collection of the samples and in the holding facility at each latent effects observation.

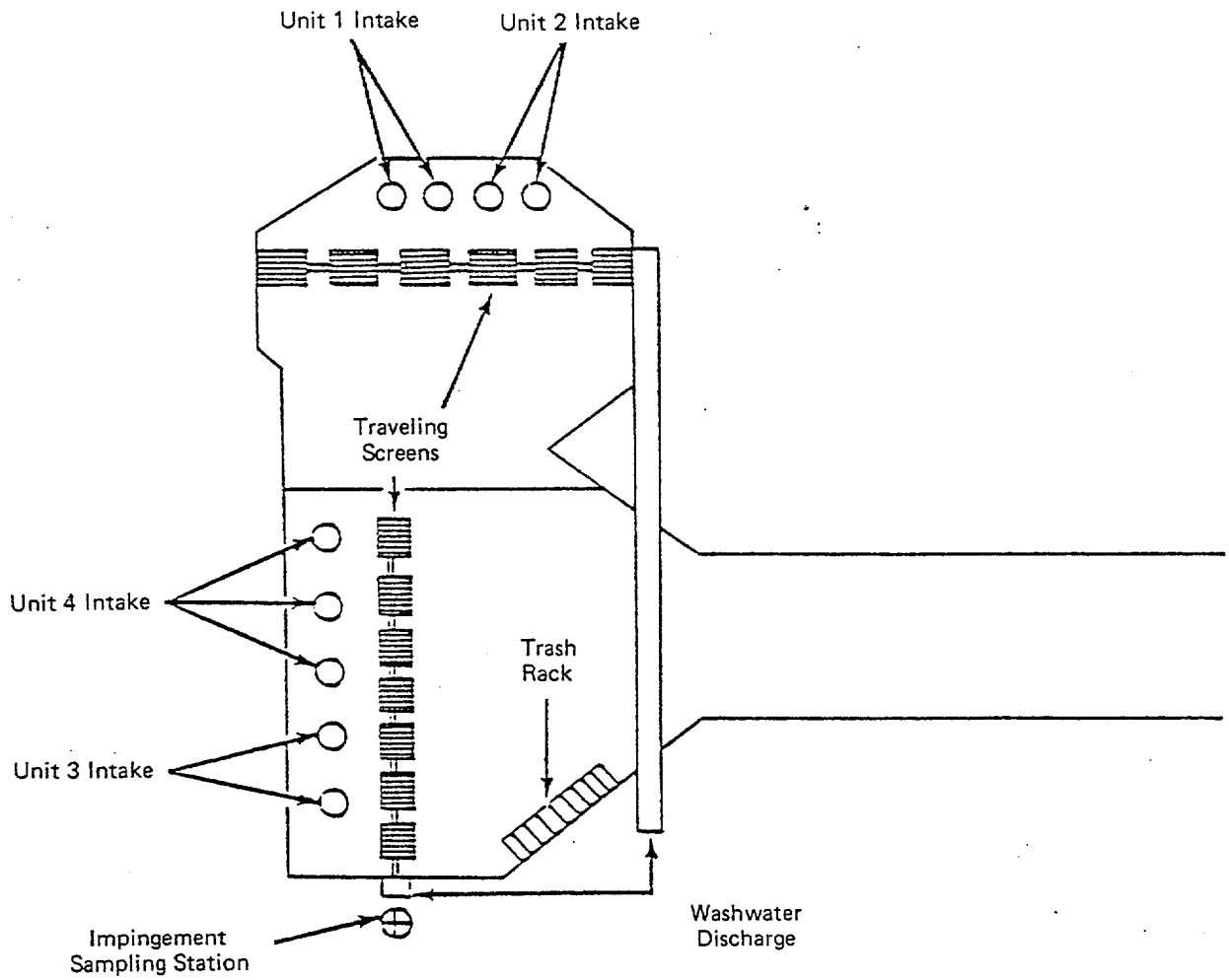


Figure 4-1. Intake area of Danskammer Point plant where impingement sampling is performed.

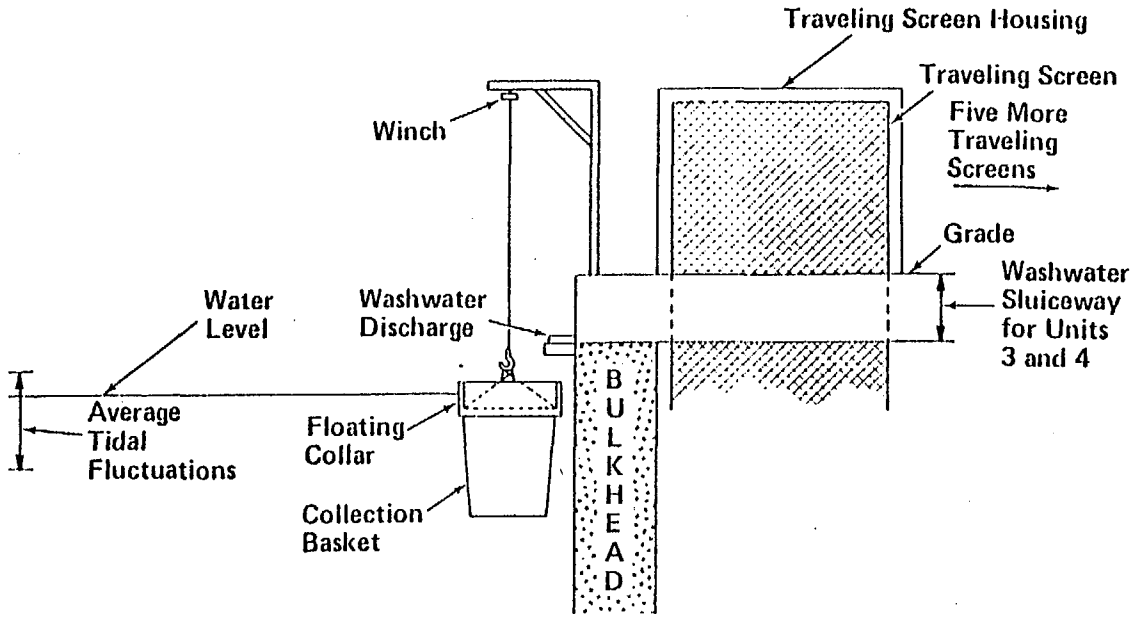


Figure 4-2. Washwater discharge sampling system with collection apparatus in place at the Danskammer Point plant intake.

Occasionally during the 1979-1980 studies when larger than usual numbers of living fish were collected, a subsample was taken of these fish for 84-hour latent effects observations. Initial survival was determined for all collected fishes and the 84-hour survival for the subsample was used to estimate the extended survival for the whole sample. Subsampling was required for only seven samples as the result of large white perch collections.

Control tests were initiated in 1975 to determine the mortality associated with holding stresses. Control fish were collected from the river in the vicinity of the Danskmamer Point plant with seines and/or box traps. Following 96 hours of maintenance for recovery from collection stress, these fish were placed in the holding pens and subjected to the same holding regime as impinged fish. Beginning in the Fall of 1976, control fish were also placed directly into the collection basket and subjected to the washwater discharge for the same exposure period experienced by impinged fish. In 1977, control tests were limited to the collection basket-washwater discharge regime. A further modification of this control test procedure in 1979-1980 resulted in fish being held for 48-96 hours after which they were introduced to the collection basket in 1-minute intervals throughout the 15- or 30-minute screenwash.

4.2 ANALYTICAL METHODOLOGY

In order to arrive at monthly impingement mortality estimates, survival data collected at the standard traveling screens during continuous and 2-hour hold screenwash modes in the years 1975-1977 and 1979-1980 were tabularized and are presented in Appendix A. Samples were pooled within months and the resulting data were pooled across years to arrive at a monthly summary of the number of fish collected, and the proportion surviving (initial and 84-96 hour) during continuous and 2-hour hold modes. Monthly mortality estimates were calculated using the following equations:

$$\text{initial mortality} = 1 - \frac{\text{no. alive + no. stunned}}{\text{no. live + no. stunned + no. dead}}$$

and

$$\text{84-96 hour mortality} = 1 - \frac{\text{no. live* + no. stunned*}}{\text{initial no. live + initial no. stunned + initial no. dead}} .$$

Since, over the course of the study period, monthly field impingement data were often lacking or sample sizes were low, seasonal mortality estimates were also calculated. Monthly data were partitioned into seasonal groups as follows:

Month Group	Season
JAN-FEB	Winter
APR-MAY	Spring
SEP-DEC	Fall

* Number at time of observation.

Seasonal mortality estimates were calculated using the same equations as presented above.

The sources of 1975-1977 and 1979-1980 data were field impingement survival data sheets, computerized tapes of archived data, and annual impingement survival progress reports. The 1975 data was summarized from field data sheets. During the 1975 sampling season, life stages were not assigned, however, length data was collected. Using Texas Instruments' upper length limits for young-of-the-year fish (1977-1979), these length data were interpreted and life stages were assigned for purposes of this report.

Mortality estimates presented in this report are limited to the continuous and 2-hour hold screenwash modes. Primarily, the focus of the studies was directed at periods of high impingement abundance. Normally, periods of high impingement are associated with high detrital loads thus requiring screenwash operation of continuous or 2-hour hold modes. Limited impingement survival data for 4- and 6-hour hold screenwash modes have been presented in earlier reports (EA 1976, 1977a, 1977b).

The mortality estimates have not been adjusted with control data since control data are based on techniques that have changed markedly throughout the period of study; thus, the mortality estimates are conservative. Summary tables of control data collected during continuous and 2-hour hold screenwash mode experiments are presented in Appendix B.

5. RESULTS

Data presented herein deals with eleven selected species of fish. Total numbers of those fish collected during impingement survival studies (continuous and 2-hour hold screenwash modes) at Danskammer Point plant, 1975-1977 and 1979-1980, are presented in Table 5-1. White perch was collected in the greatest number (5,132) during the impingement studies, with both life stages well represented. Atlantic tomcod and spottail shiner sample sizes were the next largest (1,194 and 746, respectively), and were largely composed of yearling and older fish. Alewife and blueback herring followed (742 and 688, respectively) and were for the most part young-of-the-year fish. Gizzard shad (620 fish) were well represented by both life stages, while American shad were mostly young-of-the-year fish. The remaining species were collected in low numbers. Monthly mortality estimates for all eleven species are presented in Tables 5-2 through 5-12. The variability in initial mortality estimates is examined more closely in Figures 5-1 through 5-9. The mortality estimates in those figures are based on data pooled across years, the ranges are based on the spread of actual monthly values across years, and the sample size is indicated in parentheses. In addition, seasonal mortality estimates for each of the eleven species are also provided (Table 5-13). These seasonal estimates may be more appropriate in assessing mortality for certain species-life stages since monthly collections often yielded few fish.

Initial mortality for white perch, Atlantic tomcod, spottail shiner, yearling and older alewife, gizzard shad, pumpkinseed sunfish, white catfish, and striped bass was generally low (<30 percent). Initial mortality for blueback herring, young-of-the-year alewife, American shad, and bay anchovy was generally moderate to high (50-100 percent). Mortality observed during the 2-hour hold screenwash mode was slightly higher than mortality observed during the continuous screenwash mode. The variability in pooled mortality estimates across months and the range of monthly mortality estimates across years is low (Figures 5-1 through 5-9). Instances of apparent high variability can be attributed to small sample sizes.

Pooled extended (84-96 hour) mortality in almost every case was high, however, these estimates are conservative since they have not been adjusted for control mortality, and therefore include mortality associated with collection, handling, and holding.

TABLE 5-1 NUMBERS OF FISH COLLECTED DURING IMPINGEMENT SURVIVAL STUDIES (CONTINUOUS AND 2-HOUR HOLD SCREENWASH MODES) AT DANSKAMMER POINT PLANT, 1975-1977 AND 1979-1980

Species	Young-of-Year		Yearling and Older		Total
	Continuous Mode	2-Hour Hold	Continuous Mode	2-Hour Hold	
White Perch	1,096	1,455	1,312	1,269	5,132
Atlantic tomcod	43	34	315	802	1,194
Spottail shiner	8	20	358	360	746
Alewife	223	446	45	28	742
Blueback herring	240	433	3	12	688
Gizzard shad	132	264	50	174	620
American shad	34	268	5	6	313
Pumpkinseed sunfish	16	58	60	86	220
Bay anchovy	13	138	6	42	199
White catfish	34	66	8	26	134
Striped bass	21	48	9	18	96

TABLE 5-2 MONTHLY MORTALITY ESTIMATES[a] FOR WHITE PERCH IMPINGED AT DANSKAMMER POINT PLANT, BASED ON IMPINGEMENT SURVIVAL STUDIES CONDUCTED DURING 1975-1977 and 1979-1980

		Continuous Mode			2-Hour Hold		
Life Stage	Month	No. Collected	Initial Mortality	84-96 hour Mortality	No. Collected	Initial Mortality	84-96 hour Mortality
Young-of-Year	JAN	5	0.800	1.000	0	--	--
	FEB	4	0.250	1.000	5	0	1.000
	APR	21	0	0.810	29	0.034	0.759
	MAY	101	0.149	0.584	0	--	--
	SEP	43	0.047	0.488	207	0.290	0.952
	OCT	447	0.098	0.626	767	0.113	0.730
	NOV	425	0.101	0.440	389	0.270	0.902
	DEC	50	0.040	0.280	58	0.017	0.862
Yearling and Older	JAN	40	0.125	0.750	26	0.231	0.923
	FEB	13	0	0.769	24	0.125	0.917
	APR	764	0.016	0.416	817	0.031	0.736
	MAY	303	0.066	0.541	47	0.021	0.830
	SEP	27	0	0.481	78	0.205	0.885
	OCT	49	0.184	0.449	200	0.035	0.880
	NOV	104	0	0.212	48	0.125	0.896
	DEC	12	0	0.417	29	0	0.862

(a) Initial mortality = 1 - [(no. live + no. stunned)/(no. live + no. stunned + no. dead)]; 84-96 hour mortality = 1 - [(no. live at observation + no. stunned at observation)/(total no. collected)].

TABLE 5-3 MONTHLY MORTALITY ESTIMATES[a] FOR ATLANTIC TOMCOD IMPINGED AT DANSKAMMER POINT PLANT, BASED ON IMPINGEMENT SURVIVAL STUDIES CONDUCTED DURING 1975-1977 AND 1979-1980

		Continuous Mode			2-Hour Hold		
Life Stage	Month	No. Collected	Initial Mortality	84-96 hour Mortality	No. Collected	Initial Mortality	84-96 hour Mortality
Young-of-Year	JAN	0	--	--	0	--	--
	FEB	0	--	--	0	--	--
	APR	0	--	--	0	--	--
	MAY	4	0.250	NA	0	--	--
	SEP	2	0	NA	0	--	--
	OCT	0	--	--	2	0.500	NA
	NOV	18	0.056	0.111	32	0.094	0.344
	DEC	19	0.105	0.421	0	--	--
Yearling and Older	JAN	175(168)[b]	0.154	0.345	121	0.132	0.306
	FEB	126	0.079	0.262	645	0.031	0.157
	APR	2(1)	0	0	8(6)	0	0.833
	MAY	0	--	--	0	--	--
	SEP	2	0	NA	0	--	--
	OCT	0	--	--	1	1.000	1.000
	NOV	4	0.250	NA	15	0.133	NA
	DEC	6(5)	0	0	12(11)	0.083	0.182

(a) Initial mortality = 1 - [(no. live + no. stunned)/(no. live + no. stunned + no. dead)]; 84-96 hour mortality = 1 - [(no. live at observation + no. stunned at observation)/(total no. collected)].
(b) If latent effects were not examined for all collections, the number of fish collected in tests when latent effects were examined is given in parentheses.
NOTE: NA = data not available.

TABLE 5-4 MONTHLY MORTALITY ESTIMATES[a] FOR SPOTTAIL SHINER IMPINGED AT DANSKAMMER POINT PLANT, BASED ON IMPINGEMENT SURVIVAL STUDIES CONDUCTED DURING 1975-1977 and 1979-1980

		Continuous Mode			2-Hour Hold		
Life Stage	Month	No. Collected	Initial Mortality	84-96 hour Mortality	No. Collected	Initial Mortality	84-96 hour Mortality
Young-of-Year	JAN	0	--	--	0	--	--
	FEB	0	--	--	2	0.500	NA
	APR	2	0	NA	9(1)[b]	0.444	1.000
	MAY	4	0	NA	0	--	--
	SEP	1	0	0	0	--	--
	OCT	1	1.000	1.000	2	1.000	1.000
	NOV	0	--	--	5(1)	0.200	1.000
	DEC	0	--	--	2	0.500	0.500
Yearling and Older	JAN	30(9)	0.133	0.667	17(11)	0.176	0.545
	FEB	24(1)	0.125	0	31	0.129	NA
	APR	132(48)	0.114	0.042	228(67)	0.083	0.448
	MAY	116(4)	0.069	0.250	12	0	0.250
	SEP	4	0	0.250	5	0.600	1.000
	OCT	6	0	0	16(15)	0.125	0.600
	NOV	24(4)	0.417	0.250	23(5)	0.261	1.000
	DEC	22(3)	0.182	0.333	28	0	0.607

(a) Initial mortality = 1 - [(no. live + no. stunned)/(no. live + no. stunned + no. dead)]; 84-96 hour mortality = 1 - [(no. live at observation + no. stunned at observation)/(total no. collected)].

(b) If latent effects were not examined for all collections, the number of fish collected in tests when latent effects were examined is given in parentheses.

NOTE: NA = data not available.

TABLE 5-5 MONTHLY MORTALITY ESTIMATES[a] FOR ALEWIFE IMPINGED AT DANSKAMMER POINT PLANT, BASED ON IMPINGEMENT SURVIVAL STUDIES CONDUCTED DURING 1975-1977 AND 1979-1980

		Continuous Mode			2-Hour Hold		
Life Stage	Month	No. Collected	Initial Mortality	84-96 hour Mortality	No. Collected	Initial Mortality	84-96 hour Mortality
Young-of-Year	JAN	0	--	--	0	--	--
	FEB	0	--	--	0	--	--
	APR	0	--	--	0	--	--
	MAY	0	--	--	0	--	--
	SEP	85	0.259	0.988	154	0.721	1.000
	OCT	106	0.406	0.991	229	0.707	0.996
	NOV	32(29)	0.062	1.000	63	0.857	1.000
	DEC	0	--	--	0	--	--
Yearling and Older	JAN	0	--	--	0	--	--
	FEB	0	--	--	0	--	--
	APR	10(1)	0.100	1.000	3	0	NA
	MAY	16	0.125	NA	5	0.800	NA
	SEP	8	0.375	1.000	8	0.375	1.000
	OCT	9	0.222	1.000	9	0.333	1.000
	NOV	1	0	1.000	3	0.333	1.000
	DEC	1	0	1.000	0	--	--

(a) Initial mortality = 1 - [(no. live + no. stunned)/(no. live + no. stunned + no. dead)]; 84-96 hour mortality = 1 - [(no. live at observation + no. stunned at observation)/(total no. collected)].

NOTE: NA = data not available.

TABLE 5-6 MONTHLY MORTALITY ESTIMATES[a] FOR BLUEBACK HERRING IMPINGED AT DANSKAMMER POINT PLANT, BASED ON IMPINGEMENT SURVIVAL STUDIES CONDUCTED DURING 1975-1977 AND 1979-1980

		Continuous Mode			2-Hour Hold		
Life Stage	Month	No. Collected	Initial Mortality	84-96 hour Mortality	No. Collected	Initial Mortality	84-96 hour Mortality
Young-of-Year	JAN	0	--	--	0	--	--
	FEB	0	--	--	0	--	--
	APR	0	--	--	0	--	--
	MAY	0	--	--	0	--	--
	SEP	84	0.440	1.000	74	0.838	1.000
	OCT	149	0.268	0.987	253	0.739	1.000
	NOV	7	0.571	1.000	106	0.830	1.000
	DEC	0	--	--	0	--	--
Yearling and Older	JAN	0	--	--	0	--	--
	FEB	0	--	--	0	--	--
	APR	0	--	--	0	--	--
	MAY	0	--	--	0	--	--
	SEP	3	0	1.000	7	0.857	1.000
	OCT	0	--	--	5	0.600	1.000
	NOV	0	--	--	0	--	--
	DEC	0	--	--	0	--	--

(a) Initial mortality = 1 - [(no. live + no. stunned)/(no. live + no. stunned + no. dead)]; 84-96 hour mortality = 1 - [(no. live at observation + no. stunned at observation)/(total no. collected)].

TABLE 5-7 MONTHLY MORTALITY ESTIMATES[a] FOR GIZZARD SHAD IMPINGED AT DANSKAMMER POINT PLANT, BASED ON IMPINGEMENT SURVIVAL STUDIES CONDUCTED DURING 1975-1977 AND 1979-1980

		Continuous Mode			2-Hour Hold		
Life Stage	Month	No. Collected	Initial Mortality	84-96 hour Mortality	No. Collected	Initial Mortality	84-96 hour Mortality
Young-of-Year	JAN	0	--	--	0	--	--
	FEB	0	--	--	0	--	--
	APR	0	--	--	0	--	--
	MAY	0	--	--	0	--	--
	SEP	0	--	--	0	--	--
	OCT	16	0.438	1.000	1	0	NA
	NOV	41(17)[b]	0.073	0.529	52(21)	0.135	1.000
	DEC	75(47)	0.027	0.447	211(165)	0.043	0.994
Yearling and Older	JAN	5	0	0.800	3(2)	0	1.000
	FEB	0	--	--	0	--	--
	APR	0	--	--	1	0	NA
	MAY	0	--	--	0	--	--
	SEP	0	--	--	0	--	--
	OCT	0	--	--	1	0	1.000
	NOV	7(3)	0.143	0.333	23(9)	0.174	0.778
	DEC	38(35)	0	0.657	146(138)	0.021	0.971

(a) Initial mortality = 1 - [(no. live + no. stunned)/(no. live + no. stunned + no. dead)]; 84-96 hour mortality = 1 - [(no. live at observation + no. stunned at observation)/(total no. collected)].
(b) If latent effects were not examined for all collections, the number of fish collected in tests when latent effects were examined is given in parentheses.
NOTE: NA = data not available.

TABLE 5-8 MONTHLY MORTALITY ESTIMATES[a] FOR AMERICAN SHAD IMPINGED AT DANSKAMMER POINT PLANT, BASED ON IMPINGEMENT SURVIVAL STUDIES CONDUCTED DURING 1975-1977 and 1979-1980

		Continuous Mode			2-Hour Hold		
Life Stage	Month	No. Collected	Initial Mortality	84-96 hour Mortality	No. Collected	Initial Mortality	84-96 hour Mortality
Young-of-Year	JAN	0	--	--	0	--	--
	FEB	0	--	--	0	--	--
	APR	0	--	--	0	--	--
	MAY	0	--	--	0	--	--
	SEP	11	0.364	1.000	10	0.600	1.000
	OCT	23	0.217	1.000	216	0.653	1.000
	NOV	0	--	--	42	0.738	1.000
	DEC	0	--	--	0	--	--
Yearling and Older	JAN	0	--	--	0	--	--
	FEB	0	--	--	0	--	--
	APR	4	0	NA	4	0	NA
	MAY	0	--	--	0	--	--
	SEP	1	1.000	1.000	2	0.500	1.000
	OCT	0	--	--	0	--	--
	NOV	0	--	--	0	--	--
	DEC	0	--	--	0	--	--

(a) Initial mortality = 1 - [(no. live + no. stunned)/(no. live + no. stunned + no. dead)]; 84-96 hour mortality = 1 - [(no. live at observation + no. stunned at observation)/(total no. collected)].

NOTE: NA = data not available.

TABLE 5-9 MONTHLY MORTALITY ESTIMATES[a] FOR PUMPKINSEED SUNFISH IMPINGED AT DANSKAMMER POINT PLANT, BASED ON IMPINGEMENT SURVIVAL STUDIES CONDUCTED DURING 1975-1977 and 1979-1980

		Continuous Mode			2-Hour Hold		
Life Stage	Month	No. Collected	Initial Mortality	84-96 hour Mortality	No. Collected	Initial Mortality	84-96 hour Mortality
Young-of-Year	JAN	0	--	--	0	--	--
	FEB	0	--	--	0	--	--
	APR	0	--	--	0	--	--
	MAY	0	--	--	0	--	--
	SEP	0	--	--	2	0.500	NA
	OCT	13	0.077	NA	40	0.150	NA
	NOV	1	0	NA	13	0.154	NA
	DEC	2	0	NA	3	0	NA
Yearling and Older	JAN	33	0.061	NA	28	0.071	NA
	FEB	0	--	--	7	0.143	NA
	APR	7	0	NA	17	0	NA
	MAY	15	0.133	NA	1	1.000	1.000
	SEP	1	0	NA	0	--	--
	OCT	0	--	--	16	0.062	NA
	NOV	1	0	NA	9	0	NA
	DEC	3	0	NA	8	0	NA

(a) Initial mortality = 1 - [(no. live + stunned)/(no. live + no. stunned + no. dead)]; 84-96 hour mortality = 1 - [(no. live at observation + no. stunned at observation)/(total no. collected)].

NOTE: NA = data not available.

TABLE 5-10 MONTHLY MORTALITY ESTIMATES[a] FOR BAY ANCHOVY IMPINGED AT DANSKAMMER POINT PLANT, BASED ON IMPINGEMENT SURVIVAL STUDIES CONDUCTED DURING 1975-1977 and 1979-1980

		Continuous Mode			2-Hour Hold		
Life Stage	Month	No. Collected	Initial Mortality	84-96 hour Mortality	No. Collected	Initial Mortality	84-96 hour Mortality
Young-of-Year	JAN	0	--	--	0	--	--
	FEB	0	--	--	0	--	--
	APR	0	--	--	0	--	--
	MAY	0	--	--	0	--	--
	SEP	12	1.000	1.000	76	0.987	1.000
	OCT	1	0	NA	62	0.968	NA
	NOV	0	--	--	0	--	--
	DEC	0	--	--	0	--	--
Yearling and Older	JAN	0	--	--	0	--	--
	FEB	0	--	--	0	--	--
	APR	0	--	--	0	--	--
	MAY	0	--	--	0	--	--
	SEP	6	0.833	1.000	41	0.951	1.000
	OCT	0	--	--	1	1.000	1.000
	NOV	0	--	--	0	--	--
	DEC	0	--	--	0	--	--

(a) Initial mortality = 1 - [(no. live + no. stunned)/(no. live + no. stunned + no. dead)]; 84-96 hour mortality = 1 - [(no. live at observation + no. stunned at observation)/(total no. collected)].

NOTE: NA = data not available.

TABLE 5-11 MONTHLY MORTALITY ESTIMATES[a] FOR WHITE CATFISH IMPINGED AT DANSKAMMER POINT PLANT, BASED ON IMPINGEMENT SURVIVAL STUDIES CONDUCTED DURING 1975-1977 and 1979-1980

		Continuous Mode			2-Hour Hold		
Life Stage	Month	No. Collected	Initial Mortality	84-96 hour Mortality	No. Collected	Initial Mortality	84-96 hour Mortality
Young-of-Year	JAN	0	--	--	0	--	--
	FEB	0	--	--	0	--	--
	APR	8	0.125	NA	13	0.077	NA
	MAY	3	0	NA	0	--	--
	SEP	3(1)[b]	0.333	1.000	15(12)	0.133	1.000
	OCT	4(1)	0	0	32	0	NA
	NOV	15	0	NA	4	0	NA
	DEC	1	0	NA	2	0	NA
Yearling and Older	JAN	2	0	NA	2	0	NA
	FEB	2	0	NA	7	0.143	NA
	APR	0	--	--	3	0	NA
	MAY	0	--	--	0	--	--
	SEP	0	--	--	4	0.250	0.250
	OCT	1	0	NA	4	0	NA
	NOV	2	0	NA	4	0	NA
	DEC	1	0	NA	2	0	NA

(a) Initial mortality = 1 - [(no. live + no. stunned)/(no. live + no. stunned + no. dead)]; 84-96 hour mortality = 1 - [(no. live at observation + no. stunned at observation)/(total no. collected)].
(b) If latent effects were not examined for all collections, the number of fish collected in tests when latent effects were examined is given in parentheses.
NOTE: NA = data not available.

TABLE 5-12 MONTHLY MORTALITY ESTIMATES[a] FOR STRIPED BASS IMPINGED AT DANSKAMMER POINT PLANT, BASED ON IMPINGEMENT SURVIVAL STUDIES CONDUCTED DURING 1975-1977 and 1979-1980

		Continuous Mode			2-Hour Hold		
Life Stage	Month	No. Collected	Initial Mortality	84-96 hour Mortality	No. Collected	Initial Mortality	84-96 hour Mortality
Young-of-Year	JAN	0	--	--	0	--	--
	FEB	0	--	--	0	--	--
	APR	0	--	--	0	--	--
	MAY	0	--	--	0	--	--
	SEP	3	0	0.667	14	0.357	1.000
	OCT	8	0	0.250	23	0.217	0.739
	NOV	4	0	0.500	3(2)	0	0
	DEC	6	0	0.167	8	0	1.000
Yearling and Older	JAN	1	0	1.000	1	0	1.000
	FEB	0	--	--	0	--	--
	APR	0	--	--	1	0	1.000
	MAY	0	--	--	0	--	--
	SEP	4	0.250	0.750	4	0.750	1.000
	OCT	2	0.500	0.500	6	0	1.000
	NOV	0	--	--	0	--	--
	DEC	2	0	0.500	6	0	0.667

(a) Initial mortality = 1 - [(no. live + no. stunned)/(no. live + no. stunned + no. dead)]; 84-96 hour mortality = 1 - [(no. live at observation + no. stunned at observation)/(total no. collected)].
(b) If latent effects were not examined for all collections, the number of fish collected in tests when latent effects were examined is given in parentheses.

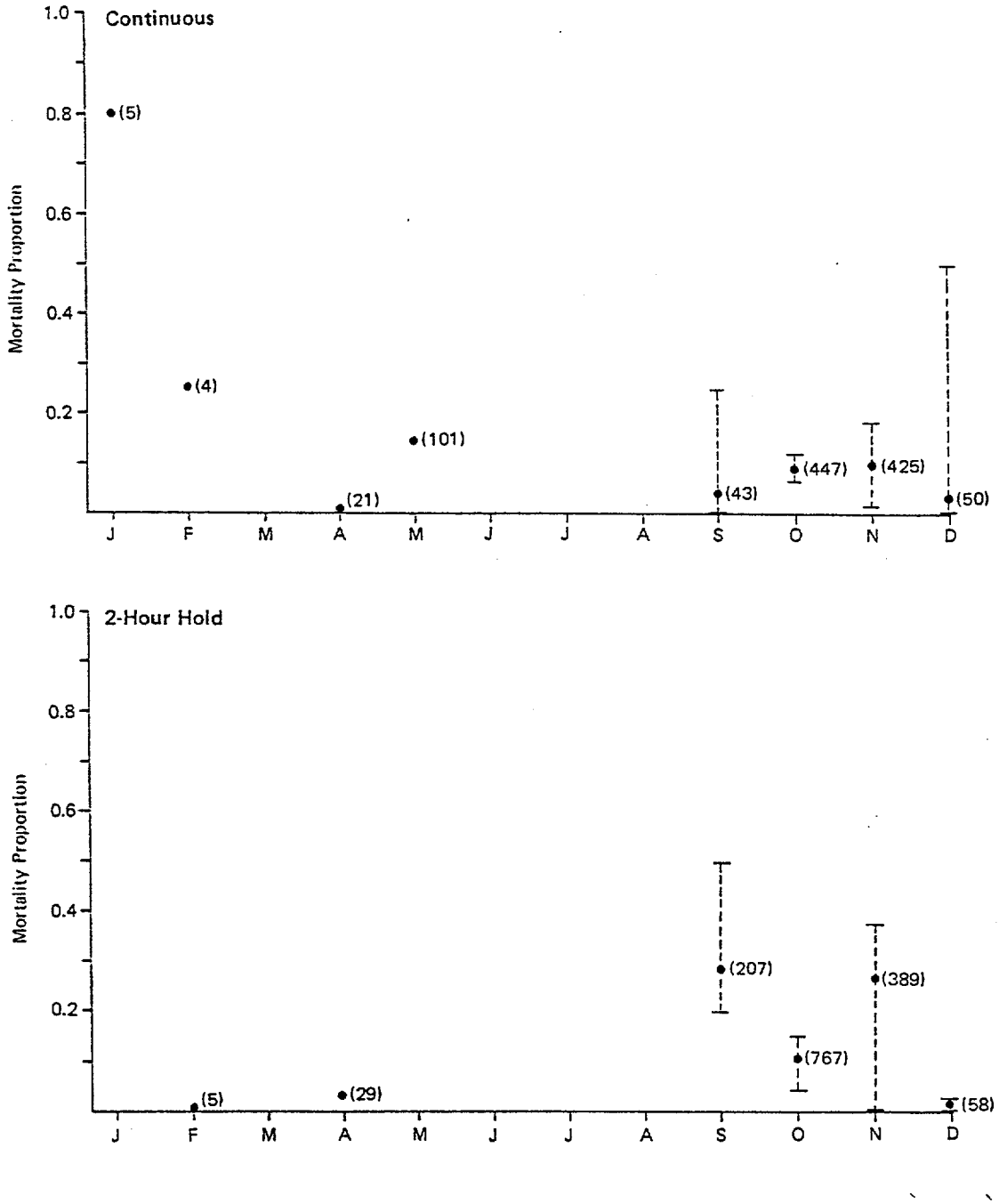


Figure 5-1. Pooled monthly initial mortality estimates and the mortality range observed across years for impinged young-of-the-year white perch.

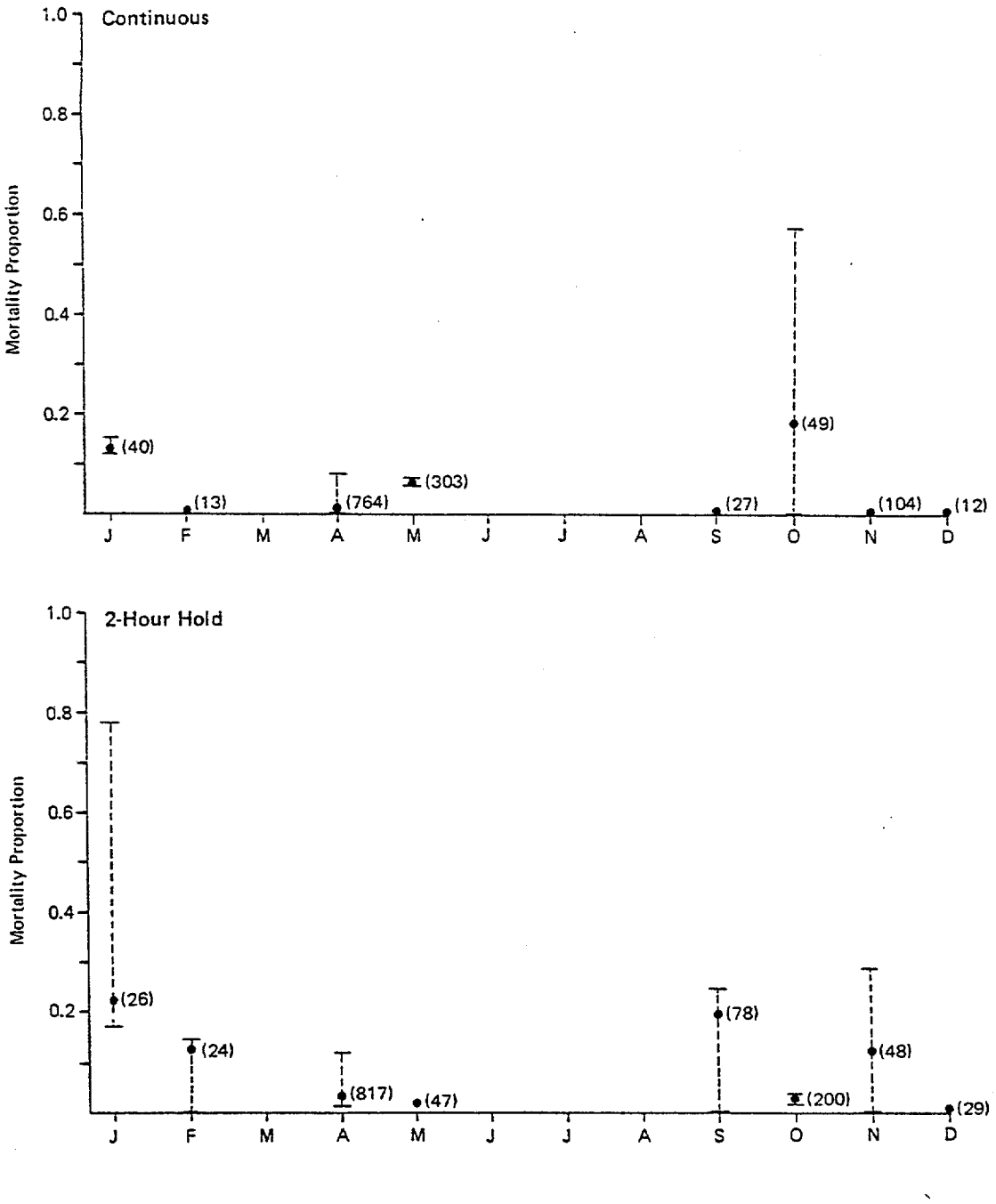


Figure 5-2. Pooled monthly initial mortality estimates and the mortality range observed across years for impinged yearling and older white perch.

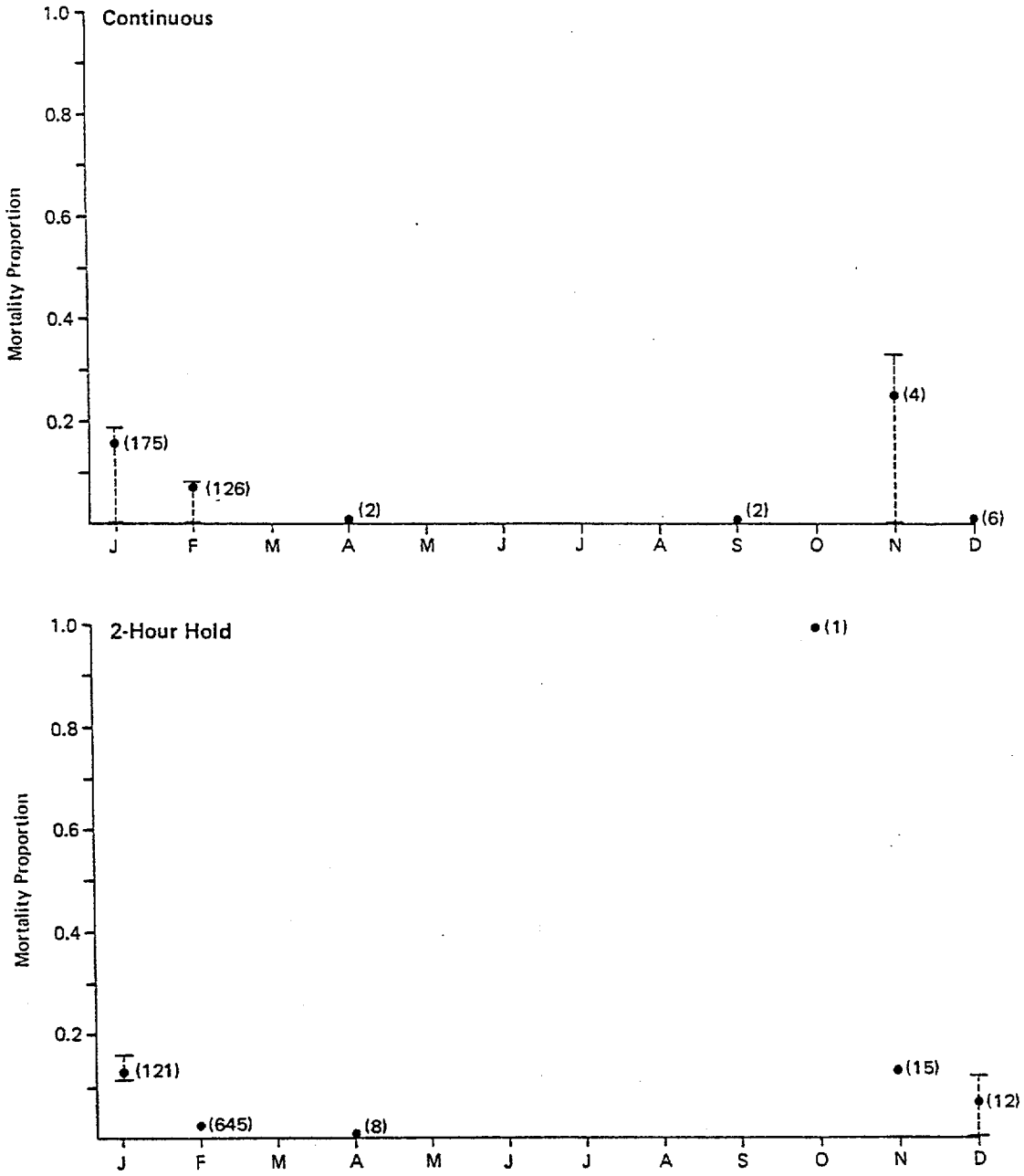


Figure 5-3. Pooled monthly initial mortality estimates and the mortality range observed across years for impinged yearling and older Atlantic tomcod.

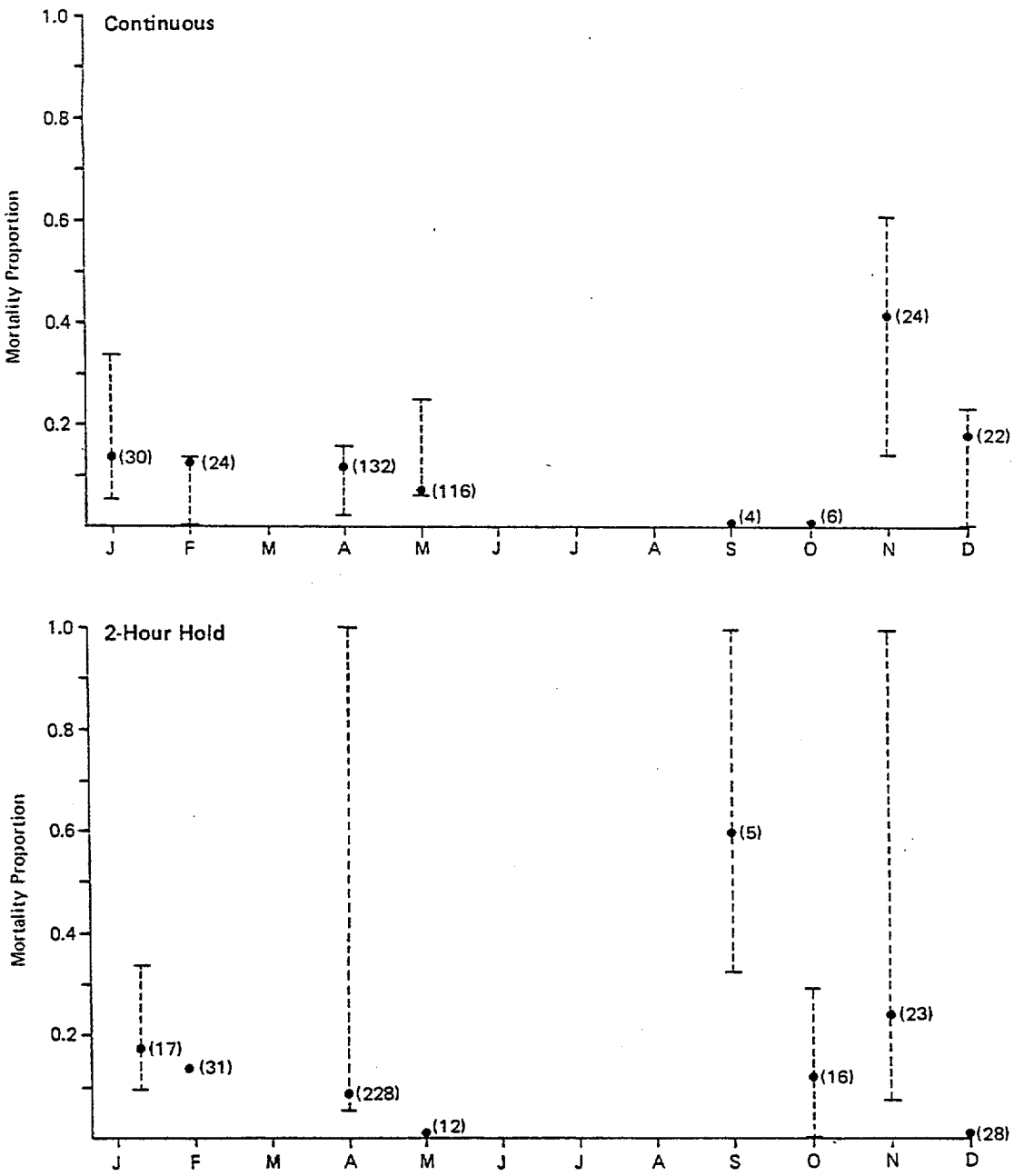


Figure 5-4. Pooled monthly initial mortality estimates and the mortality range observed across years for impinged yearling and older spottail shiner.

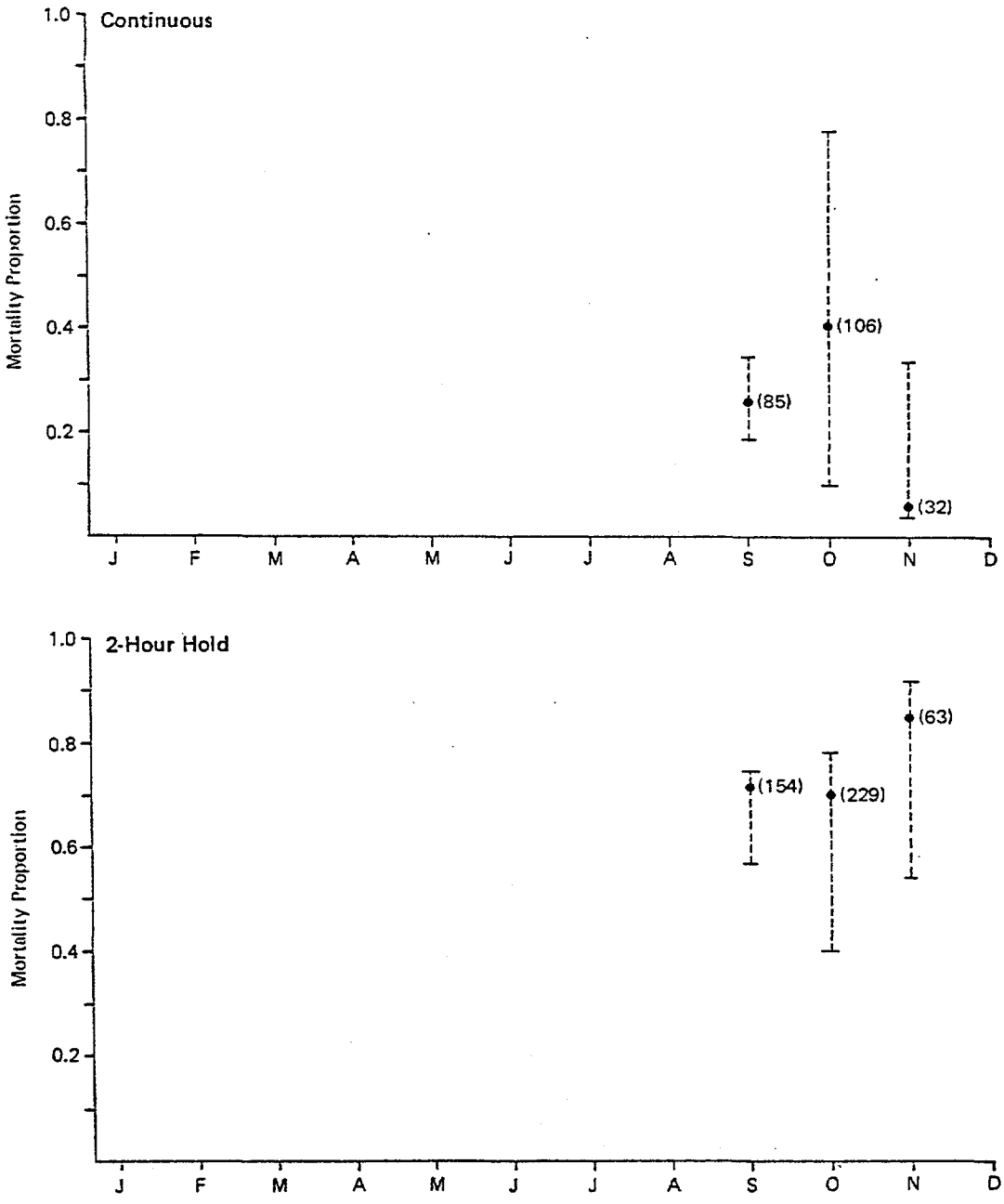


Figure 5-5. Pooled monthly initial mortality estimates and the mortality range observed across years for impinged young-of-the-year alewife.

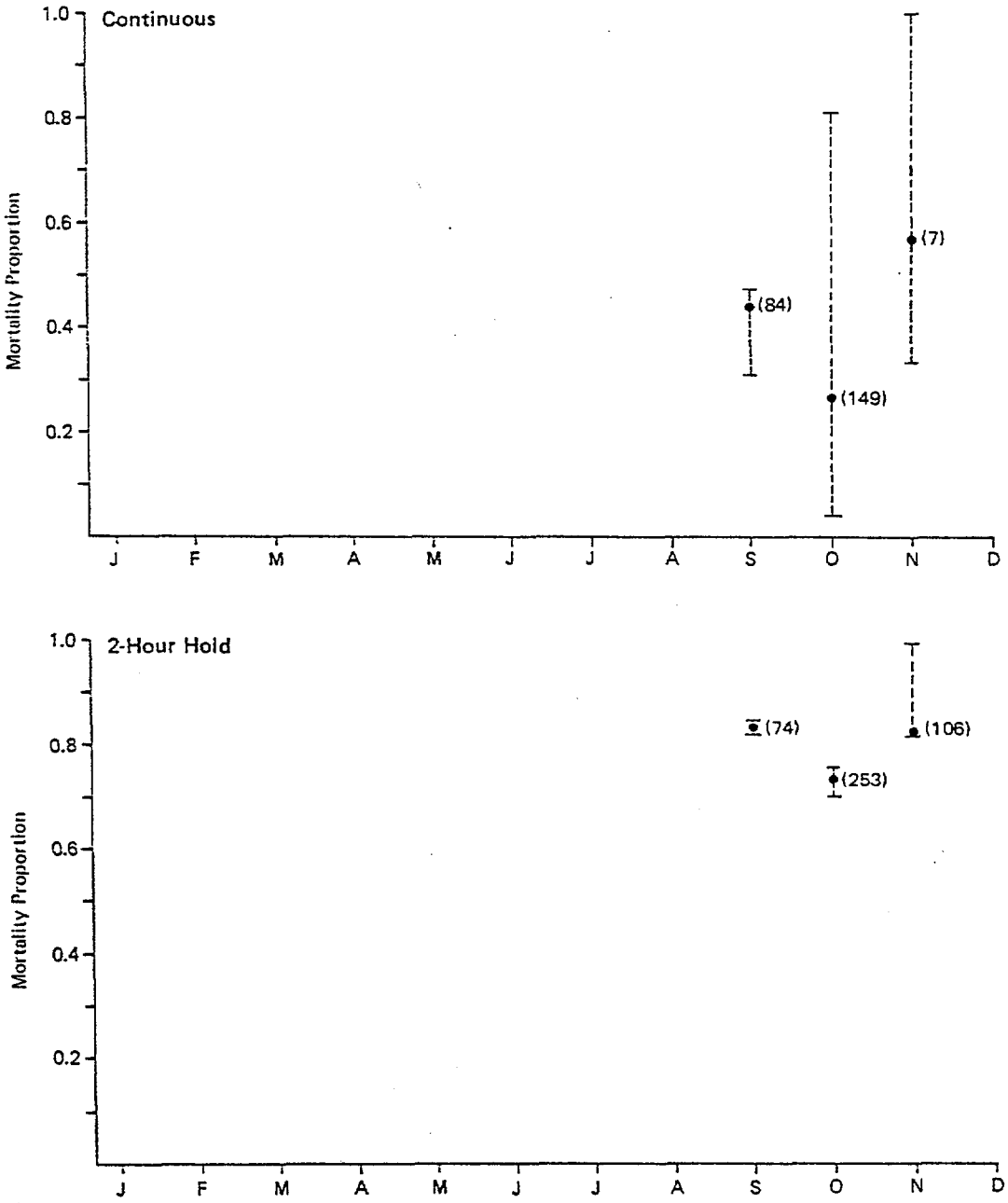


Figure 5-6. Pooled monthly initial mortality estimates and the mortality range observed across years for impinged young-of-the-year blueback herring.

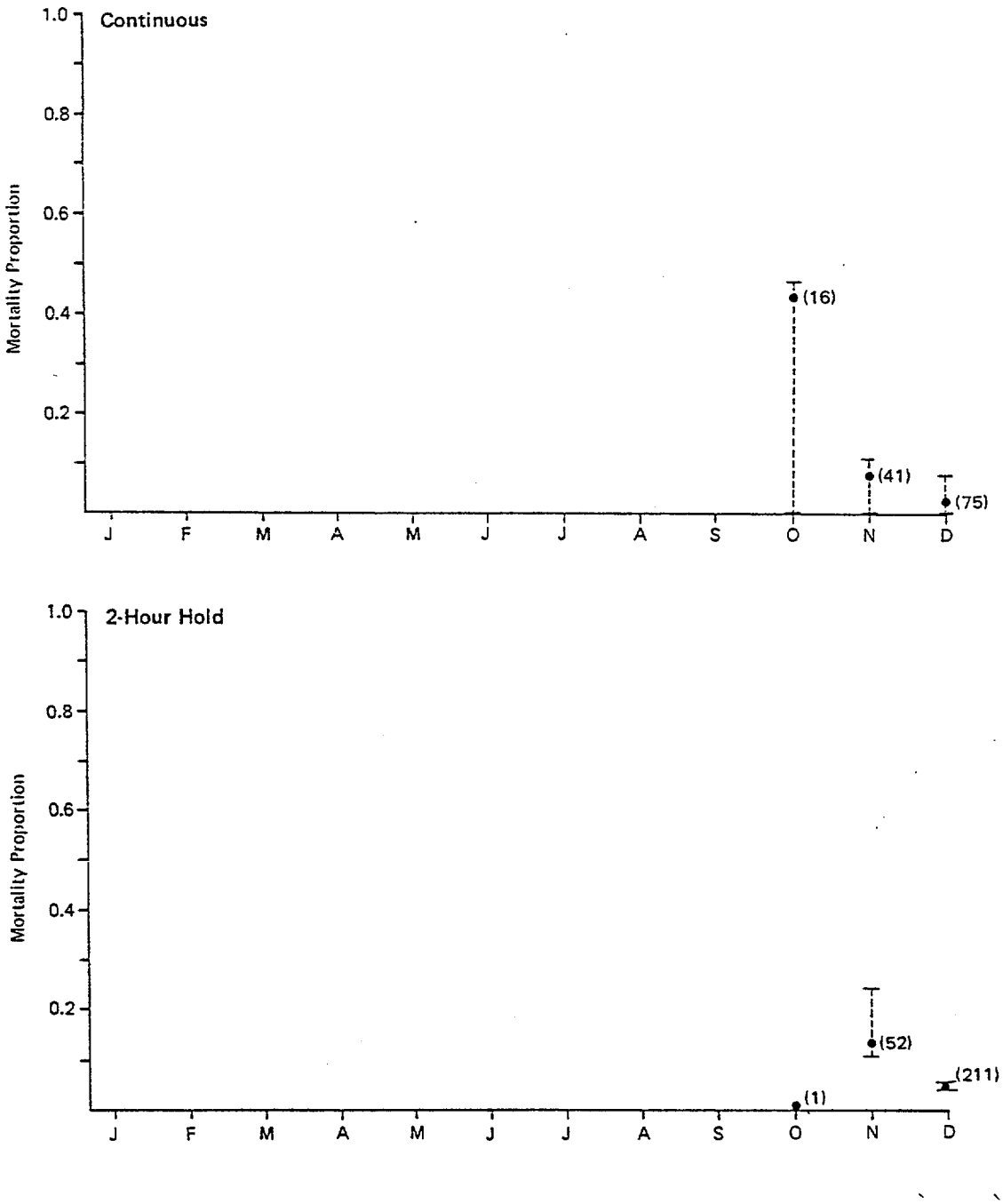


Figure 5-7. Pooled monthly initial mortality estimates and the mortality range observed across years for impinged young-of-the-year gizzard shad.

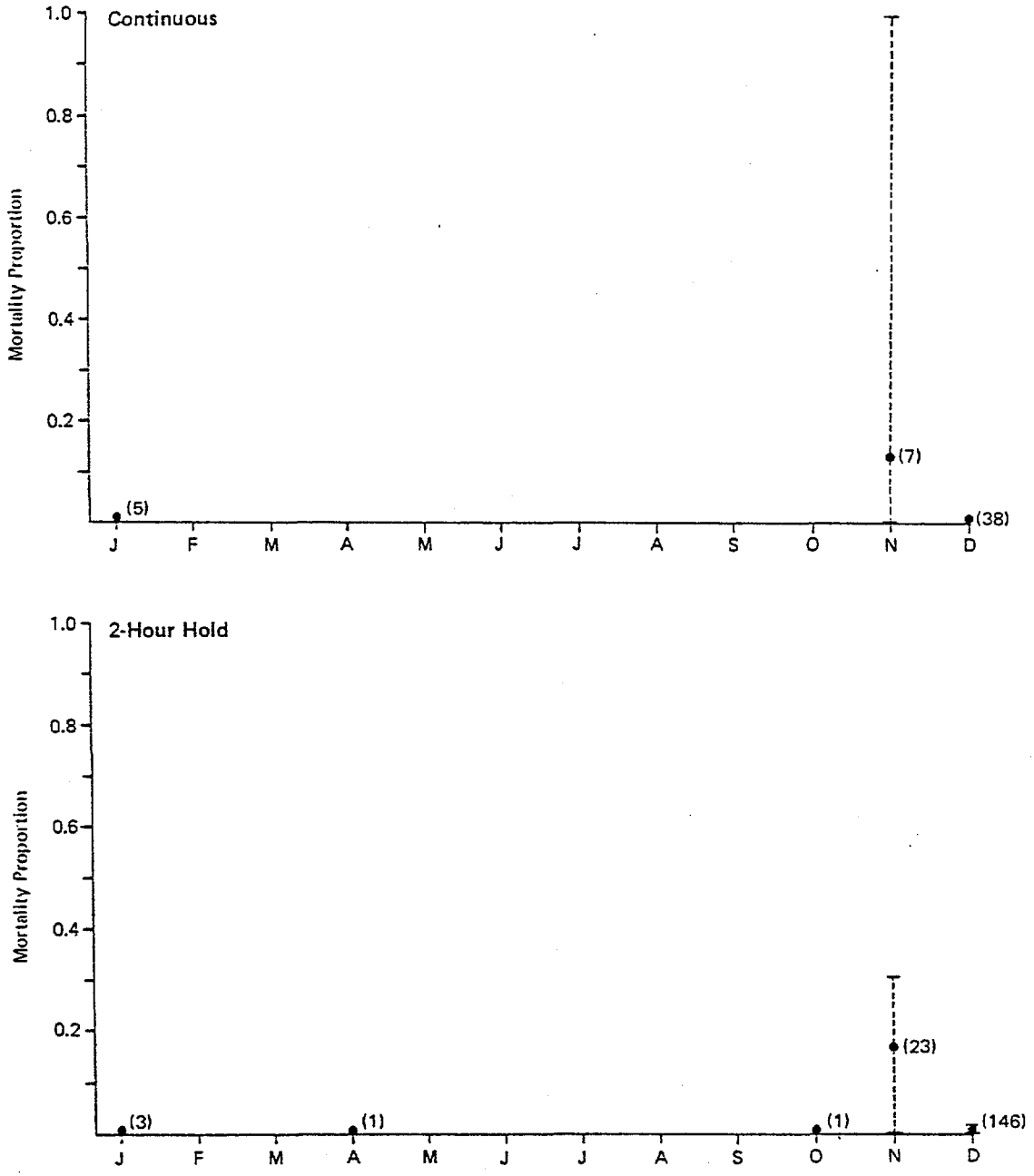


Figure 5-8. Pooled monthly initial mortality estimates and the mortality range observed across years for impinged yearling and older gizzard shad.

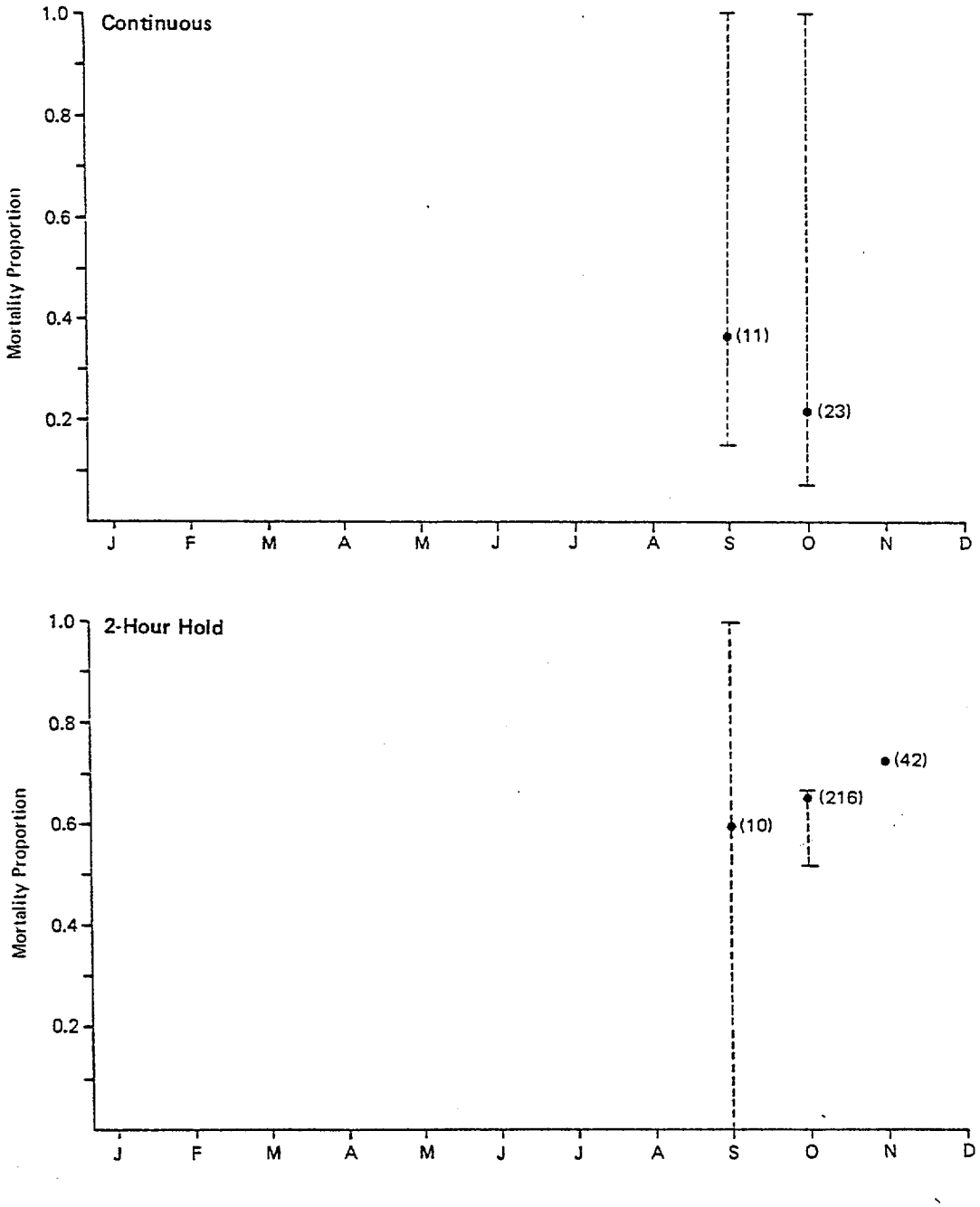


Figure 5-9. Pooled monthly initial mortality estimates and the mortality range observed across years for impinged young-of-the-year American shad.

TABLE 5-13 SEASONAL MORTALITY ESTIMATES[a] FOR SELECTED FISH SPECIES COLLECTED DURING IMPINGEMENT SURVIVAL STUDIES AT DANSKAMMER POINT PLANT, 1975-1977 AND 1979-1980

			Continuous Mode			2-Hour Hold		
Species	Life Stage	Season	No. Collected	Initial Mortality	84-96 hour Mortality	No. Collected	Initial Mortality	84-96 hour Mortality
White Perch	Young-of-Year	Winter	9	0.556	1.000	5	0	1.000
		Spring	122	0.123	0.623	29	0.034	0.759
		Fall	965	0.094	0.520	1,421	0.178	0.815
	Yearling and Older	Winter	53	0.094	0.755	50	0.180	0.920
		Spring	1,067	0.030	0.452	864	0.030	0.741
		Fall	192	0.047	0.323	355	0.082	0.882
Atlantic tomcod	Young-of-Year	Spring	4	0.250	NA	0	--	--
		Fall	39(37)[b]	0.077	0.270	34(32)	0.118	0.344
	Yearling and Older	Winter	301(294)	0.123	0.310	766	0.047	0.18
		Spring	2(1)	0	0	8(6)	0	0.833
		Fall	12(5)	0.083	0	28(12)	0.143	0.250
Spottail shiner	Young-of-Year	Winter	0	--	--	2	0.500	NA
		Spring	6	0	NA	9(1)	0.444	0
		Fall	2	0.500	0.500	9(5)	0.444	0.800
	Yearling and Older	Winter	54(10)	0.130	0.600	48(11)	0.146	0.545
		Spring	248(52)	0.093	0.058	240(79)	0.079	0.418
		Fall	56(17)	0.250	0.176	72(53)	0.153	0.679
Alewife	Young-of-Year	Fall	223(220)	0.300	0.991	446	0.733	0.998
	Yearling and Older	Spring	26(1)	0.115	1.000	8	0.500	NA
		Fall	19	0.263	1.000	20	0.350	1.000

TABLE 5-13 (CONT.)

Species	Life Stage	Season	Continuous Mode			2-Hour Hold		
			No. Collected	Initial Mortality	84-96 hour Mortality	No. Collected	Initial Mortality	84-96 hour Mortality
Blueback herring	Young-of-Year	Fall	240	0.338	0.992	433	0.778	1.000
	Yearling and Older	Fall	3	0	1.000	12	0.750	1.000
Gizzard shad	Young-of-Year	Fall	132(80)	0.091	0.575	264(186)	0.061	0.995
	Yearling and Older	Winter	5	0	0.800	3(2)	0	1.000
		Spring	0	--	--	1	0	NA
		Fall	45(38)	0.022	0.632	170(145)	0.041	0.959
American shad	Young-of-Year	Fall	34	0.265	1.000	268	0.664	1.000
	Yearling and Older	Spring	4	0	NA	4	0	NA
		Fall	1	1.000	1.000	2	0.500	1.000
Pumpkinseed sunfish	Young-of-Year	Fall	16	0.062	NA	58	0.155	NA
	Yearling and Older	Winter	33	0.061	NA	35	0.086	NA
		Spring	22	0.091	NA	18(1)	0.056	1.000
		Fall	5	0	NA	33	0.030	NA
Bay anchovy	Young-of-Year	Fall	13(12)	0.923	1.000	138(76)	0.978	1.000
	Yearling and Older	Fall	6	0.833	1.000	42	0.952	1.000

TABLE 5-13 (CONT.)

Species	Life Stage	Season	Continuous Mode No. Collected	Continuous Mode Initial Mortality	Continuous Mode 84-96 hour Mortality	2-Hour Hold No. Collected	2-Hour Hold Initial Mortality	2-Hour Hold 84-96 hour Mortality
White catfish	Young-of-Year	Spring	11	0.091	NA	13	0.077	NA
		Fall	23(2)	0.043	0.500	53(12)	0.038	1.000
	Yearling and Older	Winter	4	0	NA	14(4)	0.071	0.250
Striped bass	Young-of-Year	Fall	21	0	0.333	48(47)	0.208	0.872
	Yearling and Older	Winter	1	0	1.000	1	0	1.000
		Spring	0	--	--	1	0	1.000
		Fall	8	0.250	0.625	16	0.188	0.875

(a) Initial mortality = 1 - [(no. live + no. stunned)/(no. live + no. stunned + no. dead)]; 84-96 hour mortality = 1 - [(no. live at observation + no. stunned at observation)/(total no. collected)].
(b) If latent effects were not examined for all collections, the number of fish collected in tests when latent fish were examined is given in parentheses.
NOTE: NA = data not available.

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APPENDIX A

SCREEN SURVIVAL OF SELECTED FISH SPECIES AT THE DANSKAMMER POINT PLANT 1975-1977 AND 1979-1980

LIST OF TABLES

Number	Title
A-1	Screen survival of young-of-the-year white perch at the Danskammer Point plant, 1975-1980.
A-2	Screen survival of yearling and older white perch at the Danskammer Point plant, 1975-1980.
A-3	Screen survival of young-of-the-year Atlantic tomcod at the Danskammer Point plant, 1975-1980.
A-4	Screen survival of yearling and older Atlantic tomcod at the Danskammer Point plant, 1975-1980.
A-5	Screen survival of young-of-the-year spottail shiner at the Danskammer Point plant, 1975-1980.
A-6	Screen survival of yearling and older spottail shiner at the Danskammer Point plant, 1975-1980.
A-7	Screen survival of young-of-the-year alewife at the Danskammer Point plant, 1975-1980.
A-8	Screen survival of yearling and older alewife at the Danskammer Point plant, 1975-1980.
A-9	Screen survival of young-of-the-year blueback herring at the Danskammer Point plant, 1975-1980.
A-10	Screen survival of yearling and older blueback herring at the Danskammer Point plant, 1975-1980.
A-11	Screen survival of young-of-the-year gizzard shad at the Danskammer Point plant, 1975-1980.
A-12	Screen survival of yearling and older gizzard shad at the Danskammer Point plant, 1975-1980.
A-13	Screen survival of young-of-the-year American shad at the Danskammer Point plant, 1975-1980.
A-14	Screen survival of yearling and older American shad at the Danskammer Point plant, 1975-1980.
A-15	Screen survival of young-of-the-year pumpkinseed sunfish at the Danskammer Point plant, 1975-1980.
A-16	Screen survival of yearling and older pumpkinseed sunfish at the Danskammer Point plant, 1975-1980.
A-17	Screen survival of young-of-the-year bay anchovy at the Danskammer Point plant, 1975-1980.

LIST OF TABLES (CONT.)

Number	Title
A-18	Screen survival of yearling and older bay anchovy at the Danskammer Point plant, 1975-1980.
A-19	Screen survival of young-of-the-year white catfish at the Danskammer Point plant, 1975-1980.
A-20	Screen survival of yearling and older white catfish at the Danskammer Point plant, 1975-1980.
A-21	Screen survival of young-of-the-year striped bass at the Danskammer Point plant, 1975-1980.
A-22	Screen survival of yearling and older striped bass at the Danskammer Point plant, 1975-1980.

TABLE A-1. SCREEN SURVIVAL OF YOUNG-OF-THE-YEAR WHITE PERCH AT THE DANSKAMMER POINT PLANT, 1975-1980

			Continuous Mode				2-Hour Hold				
			Initial		84-96-Hour		Initial			84-96-Hour	
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	0	-	-	-	-	-	-	-	-	-
	1977	5	1	0.200	0	0	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
FEB	1977	4	3	0.750	0	0	5	5	1.000	0	0
	1980	0	-	-	-	-	0	-	-	-	-
APR	1976	0	-	-	-	-	0	-	-	-	-
	1977	21	21	1.000	4	0.190	29	28	0.965	7	0.241
	1980	0	-	-	-	-	0	-	-	-	-
MAY	1977	101	86	0.851	42	0.416	-	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
SEP	1975	4	3	0.750	1	0.250	190	134	0.705	7	0.037
	1979	13	13	1.000	7	0.538	2	1	0.500	0	0
	1980	26	25	0.962	14	0.538	15	12	0.800	3	0.200
OCT	1975	256	225	0.879	5	0.020	-	-	-	-	-
	1979	137	128	0.934	118	0.861	332	316	0.952	133	0.401
	1980	54	50	0.926	44	0.815	435	364	0.837	74	0.170
NOV	1976	199	163	0.819	48	0.241	258	161	0.624	24	0.093
	1977	29	27	0.931	18	0.621	40	36	0.900	8	0.200
	1979	130	128	0.985	116	0.892	12	12	1.000	2	0.167
	1980	67	64	0.955	56	0.836	79	75	0.949	4	0.051
DEC	1976	2	1	0.500	0	0	-	-	-	-	-
	1977	8	8	1.000	4	0.500	31	30	0.968	4	0.129
	1980	40	39	0.975	32	0.800	27	27	1.000	4	0.148

NOTE: Initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-2. SCREEN SURVIVAL OF YEARLING AND OLDER WHITE PERCH AT THE DANSKAMMER POINT PLANT, 1975-1980

			Continuous Mode					2-Hour Hold			
			Initial		84-96-Hour			Initial		84-96-Hour	
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	0	-	-	-	-	-	-	-	-	-
	1977	7	6	0.857	1	0.143	3	1	0.333	0	0
	1980	33	29	0.879	9	0.273	23	19	0.826	2	0.087
FEB	1977	7	7	1.000	1	0.143	21	18	0.857	2	0.095
	1980	6	6	1.000	2	0.333	3	3	1.000	0	0
APR	1976	99	91	0.919	21	0.212	71	62	0.873	15	0.211
	1977	320	318	0.994	110	0.344	385	381	0.990	126	0.327
	1980	345	343	0.994	315	0.913	361	349	0.967	75	0.208
MAY	1977	275	257	0.934	120	0.436	-	-	-	-	-
	1980	28	26	0.929	19	0.679	47	46	0.979	8	0.170
SEP	1975	0	-	-	-	-	44	33	0.750	2	0.045
	1979	3	3	1.000	1	0.333	1	1	1.000	1	1.000
	1980	24	24	1.000	13	0.542	33	28	0.848	6	0.182
OCT	1975	17	8	0.470	1	0.059	-	-	-	-	-
	1979	12	12	1.000	12	1.000	46	45	0.978	6	0.130
	1980	20	20	1.000	14	0.700	154	148	0.961	18	0.117
NOV	1976	17	17	1.000	11	0.647	17	12	0.706	1	0.059
	1977	18	18	1.000	13	0.722	5	5	1.000	2	0.400
	1979	28	28	1.000	25	0.893	3	3	1.000	1	0.333
	1980	41	41	1.000	33	0.805	23	22	0.956	1	0.043
DEC	1976	2	2	1.000	0	0	-	-	-	-	-
	1977	1	1	1.000	0	0	9	9	1.000	3	0.333
	1980	9	9	1.000	7	0.778	20	20	1.000	1	0.050

NOTE: Initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-3. SCREEN SURVIVAL OF YOUNG-OF-THE-YEAR ATLANTIC TOMCOD AT THE DANSKAMMER POINT PLANT, 1975-1980

			Continuous Mode				2-Hour Hold				
			Initial		84-96-Hour		Initial			84-96-Hour	
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	--
FEB	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
APR	1976	0	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
MAY	1977	2	1	0.500	NA	NA	-	-	-	-	-
	1980	2	2	1.000	NA	NA	0	-	-	-	-
SEP	1975	0	-	-	-	-	0	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	2	2	1.000	NA	NA	0	-	-	-	-
OCT	1975	0	-	-	-	-	-	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	2	1	0.500	NA	NA
NOV	1976	18	17	0.944	16	0.889	32	29	0.906	21	0.656
	1977	0	-	-	-	-	0	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
DEC	1976	19	17	0.895	11	0.579	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-

NOTE: NA = data not available; initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-4. SCREEN SURVIVAL OF YEARLING AND OLDER ATLANTIC TOMCOD AT THE DANSKAMMER POINT PLANT, 1975-1980

			Continuous Mode					2-Hour Hold			
			Initial		84-96-Hour			Initial		84-96-Hour	
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	7	7	1.000	NA	NA	-	-	-	-	-
	1977	120	102	0.850	88	0.733	71	63	0.887	54	0.760
	1980	48	39	0.812	22	0.458	50	42	0.840	30	0.600
FEB	1977	122	112	0.918	89	0.729	645	625	0.969	544	0.843
	1980	4	4	1.000	4	1.000	0	-	-	-	-
APR	1976	1	1	1.000	NA	NA	0	-	-	-	-
	1977	1	1	1.000	1	1.000	6	6	1.000	1	0.167
	1980	0	-	-	-	-	2	2	1.000	NA	NA
MAY	1977	0	-	-	-	-	-	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
SEP	1975	0	-	-	-	-	0	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	2	2	1.000	NA	NA	0	-	-	-	-
OCT	1975	0	-	-	-	-	-	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	1	0	0	0	0
NOV	1976	0	-	-	-	-	0	-	-	-	-
	1977	3	2	0.667	NA	NA	15	13	0.867	NA	NA
	1979	1	1	1.000	NA	NA	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
DEC	1976	0	-	-	-	-	-	-	-	-	-
	1977	1	1	1.000	NA	NA	4	4	1.000	2	0.500
	1980	5	5	1.000	5	1.000	8(7)	7	0.875	7	1.000

NOTE: NA = data not available; numbers in parentheses are basis for 84-96 hour survival estimate; initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-5. SCREEN SURVIVAL OF YOUNG-OF-THE-YEAR SPOTTAIL SHINER AT THE BANSKAMMER POINT PLANT, 1975-1980

		Continuous Mode				2-Hour Hold			
			Initial	84-96-Hour			Initial	84-96-Hour	
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	NA	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
FEB	1977	0	-	-	-	-	2	1	0.500	NA	NA
	1980	0	-	-	-	-	0	-	-	-	-
APR	1976	NA	-	-	-	-	1	0	0	0	0
	1977	2	2	1.000	NA	NA	8	5	0.625	NA	NA
	1980	0	-	-	-	-	0	-	-	-	-
MAY	1977	4	4	1.000	NA	NA	-	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
SEP	1975	0	-	-	-	-	0	-	-	-	-
	1979	1	1	1.000	1	1.000	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
OCT	1975	1	0	0	0	0	-	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	2	0	0	0	0
NOV	1976	0	-	-	-	-	4	4	1.000	NA	NA
	1977	0	-	-	-	-	0	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	1	0	0	0	0
DEC	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	1	0	0	0	0
	1980	0	-	-	-	-	1	1	1.000	1	1.000

NOTE: NA = data not available; initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-6. SCREEN SURVIVAL OF YEARLING AND OLDER SPOTTAIL SHINER AT THE DANSKAMMER POINT PLANT, 1975-1980

			Continuous Mode					2-Hour Hold			
			Initial		84-96-Hour			Initial		84-96-Hour	
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	NA	-	-	-	-	-	-	-	-	-
	1977	21	20	0.952	NA	NA	6	4	0.667	NA	NA
	1980	9	6	0.667	3	0.333	11	10	0.909	5	0.454
FEB	1977	23	20	0.870	NA	NA	31	27	0.871	NA	NA
	1980	1	1	1.000	1	1.000	0	-	-	-	-
APR	1976	1	0	0	0	0	3	0	0	0	0
	1977	84	71	0.845	NA	NA	161	148	0.919	NA	NA
	1980	47	46	0.979	46	0.979	64	61	0.953	37	0.578
MAY	1977	112	105	0.938	NA	NA	-	-	-	-	-
	1980	4	3	0.750	3	0.750	12	12	1.000	9	0.750
SEP	1975	0	-	-	-	-	2	0	0	0	0
	1979	0	-	-	-	-	0	-	-	-	-
	1980	4	4	1.000	3	0.750	3	2	0.667	0	0
OCT	1975	0	-	-	-	-	-	-	-	-	-
	1979	1	1	1.000	1	1.000	9	9	1.000	5	0.556
	1980	5	5	1.000	5	1.000	7(6)	5	0.714	1	0.167
NOV	1976	7	6	0.857	NA	NA	5	3	0.600	NA	NA
	1977	13	5	0.385	NA	NA	13	12	0.923	NA	NA
	1979	4	3	0.750	3	0.750	3	2	0.667	0	0
	1980	0	-	-	-	-	2	0	0	0	0
DEC	1976	17	13	0.765	NA	NA	-	-	-	-	-
	1977	2	2	1.000	NA	NA	15	15	1.000	8	0.533
	1980	3	3	1.000	2	0.667	13	13	1.000	3	0.231

NOTE: NA = data not available; numbers in parentheses are basis for 84-96 hour survival estimate; initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-7. SCREEN SURVIVAL OF YOUNG-OF-THE-YEAR ALEWIFE AT THE DANSKAMMER POINT PLANT, 1975-1980

			Continuous Mode				2-Hour Hold				
			Initial		84-96-Hour		Initial			84-96-Hour	
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
FEB	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
APR	1976	0	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
MAY	1977	0	-	-	-	-	-	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
SEP	1975	43	35	0.814	0	0	103	29	0.282	0	0
	1979	4	3	0.750	0	0	7	3	0.429	0	0
	1980	38	25	0.658	1	0.026	44	11	0.250	0	0
OCT	1975	45	10	0.222	0	0	-	-	-	-	-
	1979	31	28	0.903	0	0	49	29	0.592	0	0
	1980	30	25	0.833	1	0.033	180	38	0.211	1	0.006
NOV	1976	0	-	-	-	-	0	-	-	-	-
	1977	3	2	0.667	NA	NA	0	-	-	-	-
	1979	29	28	0.966	0	0	11	5	0.454	0	0
	1980	0	-	-	-	-	52	4	0.077	0	0
DEC	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-

NOTE: NA = data not available; initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-8. SCREEN SURVIVAL OF YEARLING AND OLDER ALEWIFE AT THE DANSKAMMER POINT PLANT, 1975-1980

		Continuous Mode				2-Hour Hold			
			Initial		84-96 Hour		Initial		84-96 Hour
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
FEB	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
APR	1976	0	-	-	-	-	0	-	-	-	-
	1977	9	8	0.889	NA	NA	2	2	1.000	NA	NA
	1980	1	1	1.000	0	0	1	1	1.000	NA	NA
MAY	1977	16	14	0.875	NA	NA	-	-	-	-	-
	1980	0	-	-	-	-	5	1	0.200	NA	NA
SEP	1975	0	-	-	-	-	4	2	0.500	0	0
	1979	1	0	0	0	0	0	-	-	-	-
	1980	7	5	0.714	0	0	4	3	0.750	0	0
OCT	1975	2	0	0	0	0	-	-	-	-	-
	1979	1	1	1.000	0	0	2	2	1.000	0	0
	1980	6	6	1.000	0	0	7	4	0.571	0	0
NOV	1976	0	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1979	0	-	-	-	-	2	2	1.000	0	0
	1980	1	1	1.000	0	0	1	0	0	0	0
DEC	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	-	-	-	-	-
	1980	1	1	1.000	0	0	0	-	-	-	-

NOTE: NA = data not available; initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-9. SCREEN SURVIVAL OF YOUNG-OF-THE-YEAR BLUEBACK HERRING AT THE DANSKAMMER POINT PLANT, 1975-1980

			Continuous Mode					2-Hour Hold			
			Initial		84-96 Hour			Initial		84-96 Hour	
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
FEB	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
APR	1976	NA	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
MAY	1977	0	-	-	-	-	-	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
SEP	1975	61	32	0.524	0	0	51	8	0.157	0	0
	1979	16	11	0.687	0	0	23	4	0.174	0	0
	1980	7	4	0.571	0	0	0	-	-	-	-
OCT	1975	22	4	0.182	0	0	-	-	-	-	-
	1979	84	64	0.762	2	0.024	91	27	0.297	0	0
	1980	43	41	0.953	0	0	162	39	0.241	0	0
NOV	1976	0	-	-	-	-	1	0	0	0	0
	1977	1	0	0	0	0	0	-	-	-	-
	1979	3	2	0.667	0	0	3	0	0	0	0
	1980	3	1	0.333	0	0	102	18	0.176	0	0
DEC	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-

NOTE: NA = data not available; initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-10. SCREEN SURVIVAL OF YEARLING AND OLDER BLUEBACK HERRING AT THE DANSKAMMER POINT PLANT, 1975-1980

			Continuous Mode					2-Hour Hold			
			Initial		84-96-Hour			Initial		84-96-Hour	
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
FEB	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
APR	1976	NA	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
MAY	1977	0	-	-	-	-	-	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
SEP	1975	1	1	1.000	0	0	4	1	0.250	0	0
	1979	1	1	1.000	0	0	0	-	-	-	-
	1980	1	1	1.000	0	0	3	0	0	0	0
OCT	1975	0	-	-	-	-	-	-	-	-	-
	1979	0	-	-	-	-	1	1	1.000	0	0
	1980	0	-	-	-	-	4	1	0.250	0	0
NOV	1976	0	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
DEC	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-

NOTE: NA = data not available; initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-11. SCREEN SURVIVAL OF YOUNG-OF-THE-YEAR GIZZARD SHAD AT THE DANSKAMMER POINT PLANT, 1975-1980

			Continuous Mode					2-Hour Hold			
			Initial		84-96-Hour			Initial		84-96-Hour	
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	NA	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
FEB	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
APR	1976	NA	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
MAY	1977	0	-	-	-	-	-	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
SEP	1975	0	-	-	-	-	0	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
OCT	1975	15	8	0.533	0	0	-	-	-	-	-
	1979	1	1	1.000	0	0	0	-	-	-	-
	1980	0	-	-	-	-	1	1	1.000	NA	NA
NOV	1976	9	8	0.889	NA	NA	4	3	0.750	NA	NA
	1977	15	14	0.933	NA	NA	27	24	0.889	NA	NA
	1979	1	1	1.000	1	1.000	0	-	-	-	-
	1980	16	15	0.938	7	0.438	21	18	0.857	0	0
DEC	1976	2	2	1.000	NA	NA	-	-	-	-	-
	1977	26	24	0.923	NA	NA	46	44	0.956	NA	NA
	1980	47	47	1.000	26	0.553	165	158	0.958	1	0.006

NOTE: NA = data not available; initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-12. SCREEN SURVIVAL OF YEARLING AND OLDER GIZZARD SHAD AT THE DANSKAMMER POINT PLANT, 1975-1980

			Continuous Mode					2-Hour Hold			
			Initial		84-96-Hour			Initial		84-96-Hour	
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	NA	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	1	1	1.000	NA	NA
	1980	5	5	1.000	1	0.200	2	2	1.000	0	0
FEB	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
APR	1976	NA	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	1	1	1.000	NA	NA
	1980	0	-	-	-	-	0	-	-	-	-
MAY	1977	0	-	-	-	-	-	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
SEP	1975	0	-	-	-	-	0	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
OCT	1975	0	-	-	-	-	-	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	1	1	1.000	0	0
NOV	1976	1	0	0	0	0	13	9	0.692	NA	NA
	1977	4	4	1.000	NA	NA	1	1	1.000	NA	NA
	1979	0	-	-	-	-	0	-	-	-	-
	1980	2	2	1.000	2	1.000	9	9	1.000	2	0.222
DEC	1976	0	-	-	-	-	-	-	-	-	-
	1977	3	3	1.000	NA	NA	8	8	1.000	NA	NA
	1980	35	35	1.000	12	0.343	138	135	0.978	4	0.029

NOTE: NA = data not available; initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-13. SCREEN SURVIVAL OF YOUNG-OF-THE-YEAR AMERICAN SHAD AT THE DANSKAMMER POINT PLANT, 1975-1980

			Continuous Mode				2-Hour Hold				
			Initial		84-96-Hour		Initial			84-96-Hour	
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
FEB	1977	0	-	-	-	-	-	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
APR	1976	NA	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
MAY	1977	0	-	-	-	-	-	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
SEP	1975	3	1	0.333	0	0	6	3	0.500	0	0
	1979	7	6	0.857	0	0	1	1	1.000	0	0
	1980	1	0	0	0	0	3	0	0	0	0
OCT	1975	3	0	0	0	0	-	-	-	-	-
	1979	14	13	0.928	0	0	25	12	0.480	0	0
	1980	6	5	0.833	0	0	191	63	0.330	0	0
NOV	1976	0	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	42	11	0.262	0	0
DEC	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-

NOTE: NA = data not available; initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-14. SCREEN SURVIVAL OF YEARLING AND OLDER AMERICAN SHAD AT THE DANSKAMMER POINT PLANT, 1975-1980

			Continuous Mode					2-Hour Hold			
			Initial		84-96-Hour			Initial		84-96-Hour	
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
FEB	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
APR	1976	NA	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	4	4	1.000	NA	NA	4	4	1.000	NA	NA
MAY	1977	0	-	-	-	-	-	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
SEP	1975	0	-	-	-	-	1	1	1.000	0	0
	1979	0	-	-	-	-	0	-	-	-	-
	1980	1	0	0	0	0	1	0	0	0	0
OCT	1975	0	-	-	-	-	-	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
NOV	1976	0	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
DEC	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-

NOTE: NA = data not available; initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-15. SCREEN SURVIVAL OF YOUNG-OF-THE-YEAR EUROPEAN SMELT AT THE DANSKAMMER POINT PLANT, 1975-1980

			Continuous Mode				2-Hour Hold				
			Initial		84-96-Hour		Initial			84-96-Hour	
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	NA	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
FEB	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
APR	1976	0	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
MAY	1977	0	-	-	-	-	-	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
SEP	1975	0	-	-	-	-	0	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	2	1	0.500	NA	NA
OCT	1975	0	-	-	-	-	-	-	-	-	-
	1979	7	7	1.000	NA	NA	9	8	0.889	NA	NA
	1980	6	5	0.833	NA	NA	31	26	0.839	NA	NA
NOV	1976	0	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	2	2	1.000	NA	NA
	1979	1	1	1.000	NA	NA	1	1	1.000	NA	NA
	1980	0	-	-	-	-	10	8	0.800	NA	NA
DEC	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	2	2	1.000	NA	NA
	1980	2	2	1.000	NA	NA	1	1	1.000	NA	NA

NOTE: NA = data not available; initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-16. SCREEN SURVIVAL OF YEARLING AND OLDER PUMPKINSEED SUNFISH AT THE DANSKAMMER POINT PLANT, 1975-1980

		Continuous Mode				2-Hour Hold			
			Initial		84-96 Hour		Initial		84-96 Hour
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	NA	-	-	-	-	-	-	-	-	-
	1977	6	6	1.000	NA	NA	4	4	1.000	NA	NA
	1980	27	25	0.926	NA	NA	24	22	0.917	NA	NA
FEB	1977	0	-	-	-	-	7	6	0.857	NA	NA
	1980	0	-	-	-	-	0	-	-	-	-
APR	1976	0	-	-	-	-	0	-	-	-	-
	1977	4	4	1.000	NA	NA	15	15	1.000	NA	NA
	1980	3	3	1.000	NA	NA	2	2	1.000	NA	NA
MAY	1977	14	12	0.857	NA	NA	-	-	-	-	-
	1980	1	1	1.000	NA	NA	1	0	0	0	0
SEP	1975	0	-	-	-	-	0	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	1	1	1.000	NA	NA	0	-	-	-	-
OCT	1975	0	-	-	-	-	-	-	-	-	-
	1979	0	-	-	-	-	3	2	0.667	NA	NA
	1980	0	-	-	-	-	13	13	1.000	NA	NA
NOV	1976	0	-	-	-	-	1	1	1.000	NA	NA
	1977	0	-	-	-	-	0	-	-	-	-
	1979	1	1	1.000	NA	NA	1	1	1.000	NA	NA
	1980	0	-	-	-	-	7	7	1.000	NA	NA
DEC	1976	2	2	1.000	NA	NA	-	-	-	-	-
	1977	0	-	-	-	-	2	2	1.000	NA	NA
	1980	1	1	1.000	NA	NA	6	6	1.000	NA	NA

NOTE: NA = data not available; initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-17. SCREEN SURVIVAL OF YOUNG-OF-THE-YEAR BAY ANCHOVY AT THE DANSKAMMER POINT PLANT, 1975-1980

			Continuous Mode					2-Hour Hold			
			Initial		84-96-Hour			Initial		84-96-Hour	
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
FEB	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
APR	1976	NA	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
MAY	1977	0	-	-	-	-	-	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
SEP	1975	4	0	0	0	0	64	1	0.016	0	0
	1979	0	-	-	-	-	0	-	-	-	-
	1980	8	0	0	0	0	12	0	0	0	0
OCT	1975	0	-	-	-	-	-	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	1	1	1.000	NA	NA	62	2	0.032	NA	NA
NOV	1976	0	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
DEC	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-

NOTE: NA = data not available; initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-18. SCREEN SURVIVAL OF YEARLING AND OLDER BAY ANCHOVY AT THE DANSKAMMER POINT PLANT, 1975-1980

			Continuous Mode					2-Hour Hold			
			Initial		84-96-Hour			Initial		84-96-Hour	
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
FEB	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
APR	1976	NA	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
MAY	1977	0	-	-	-	-	-	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
SEP	1975	4	1	0.250	0	0	28	2	0.071	0	0
	1979	0	-	-	-	-	0	-	-	-	-
	1980	2	0	0	0	0	13	0	0	0	0
OCT	1975	0	-	-	-	-	-	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	1	0	0	0	0
NOV	1976	0	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
DEC	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-

NOTE: NA = data not available; initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-19. SCREEN SURVIVAL OF YOUNG-OF-THE-YEAR WHITE CATFISH AT THE DANSKAMMER POINT PLANT, 1975-1980

			Continuous Mode					2-Hour Hold			
			Initial		84-96-Hour			Initial		84-96-Hour	
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	NA	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
FEB	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
APR	1976	0	-	-	-	-	NA	-	-	-	-
	1977	8	7	0.875	NA	NA	13	12	0.923	NA	NA
	1980	0	-	-	-	-	0	-	-	-	-
MAY	1977	3	3	1.000	NA	NA	-	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
SEP	1975	1	0	0	0	0	12	12	1.000	0	0
	1979	0	-	-	-	-	0	-	-	-	-
	1980	2	2	1.000	NA	NA	3	1	0.333	NA	NA
OCT	1975	1	1	1.000	1	1.000	-	-	-	-	-
	1979	2	2	1.000	NA	NA	7	7	1.000	NA	NA
	1980	1	1	1.000	NA	NA	25	25	1.000	NA	NA
NOV	1976	1	1	1.000	NA	NA	1	1	1.000	NA	NA
	1977	11	11	1.000	NA	NA	2	2	1.000	NA	NA
	1979	1	1	1.000	NA	NA	0	-	-	-	-
	1980	2	2	1.000	NA	NA	1	1	1.000	NA	NA
DEC	1976	1	1	1.000	NA	NA	-	-	-	-	-
	1977	0	-	-	-	-	2	2	1.000	NA	NA
	1980	0	-	-	-	-	0	-	-	-	-

NOTE: NA = data not available; initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-20 SCREEN SURVIVAL OF YEARLING AND OLDER WHITE CATFISH AT THE DANSKAMMER POINT PLANT, 1975-1980

			Continuous Mode				2-Hour Hold				
			Initial		84-96-Hour		Initial			84-96-Hour	
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	NA	-	-	-	-	-	-	-	-	-
	1977	2	2	1.000	NA	NA	2	2	1.000	NA	NA
	1980	0	-	-	-	-	0	-	-	-	-
FEB	1977	2	2	1.000	NA	NA	7	6	0.857	NA	NA
	1980	0	-	-	-	-	0	-	-	-	-
APR	1976	0	-	-	-	-	NA	-	-	-	-
	1977	0	-	-	-	-	2	2	1.000	NA	NA
	1980	0	-	-	-	-	1	1	1.000	NA	NA
MAY	1977	0	-	-	-	-	-	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
SEP	1975	NA	-	-	-	-	4	3	0.750	3	0.750
	1979	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
OCT	1975	NA	-	-	-	-	-	-	-	-	-
	1979	0	-	-	-	-	1	1	1.000	NA	NA
	1980	1	1	1.000	NA	NA	3	3	1.000	NA	NA
NOV	1976	0	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1979	2	2	1.000	NA	NA	1	1	1.000	NA	NA
	1980	0	-	-	-	-	3	3	1.000	NA	NA
DEC	1976	1	1	1.000	NA	NA	-	-	-	-	-
	1977	0	-	-	-	-	1	1	1.000	NA	NA
	1980	0	-	-	-	-	1	1	1.000	NA	NA

NOTE: NA = data not available; initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-21. SCREEN SURVIVAL OF YOUNG-OF-THE-YEAR STRIPED BASS AT THE DANSKAMMER POINT PLANT, 1975-1980

			Continuous Mode				2-Hour Hold				
			Initial		84-96-Hour		Initial			84-96-Hour	
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
FEB	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
APR	1976	0	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
MAY	1977	0	-	-	-	-	-	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
SEP	1975	0	-	-	-	-	10	7	0.700	0	0
	1979	0	-	-	-	-	0	-	-	-	-
	1980	3	3	1.000	1	0.333	4	2	0.500	0	0
OCT	1975	0	-	-	-	-	-	-	-	-	-
	1979	0	-	-	-	-	2	2	1.000	1	0.500
	1980	8	8	1.000	6	0.750	21	16	0.762	5	0.238
NOV	1976	0	-	-	-	-	1	1	1.000	NA	NA
	1977	0	-	-	-	-	1	1	1.000	0	0
	1979	0	-	-	-	-	0	-	-	-	-
	1980	4	4	1.000	2	0.500	1	1	1.000	0	0
DEC	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	5	5	1.000	0	0
	1980	6	6	1.000	5	0.833	3	3	1.000	0	0

NOTE: NA = data not available; initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

TABLE A-22. SCREEN SURVIVAL OF YEARLING AND OLDER STRIPED BASS AT THE DANSKAMMER POINT PLANT, 1975-1980

			Continuous Mode					2-Hour Hold			
			Initial		84-96-Hour			Initial		84-96-Hour	
Month	Year	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving	No. Collected	No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
JAN	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	1	1	1.000	0	0	1	1	1.000	0	0
FEB	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
APR	1976	0	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	1	1	1.000	0	0
MAY	1977	0	-	-	-	-	-	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
SEP	1975	2	1	0.500	0	0	2	1	0.500	0	0
	1979	0	-	-	-	-	1	0	0	0	0
	1980	2	2	1.000	1	0.500	1	0	0	0	0
OCT	1975	1	0	0	0	0	-	-	-	-	-
	1979	0	-	-	-	-	2	2	1.000	0	0
	1980	1	1	1.000	1	1.000	4	4	1.000	0	0
NOV	1976	0	-	-	-	-	0	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1979	0	-	-	-	-	0	-	-	-	-
	1980	0	-	-	-	-	0	-	-	-	-
DEC	1976	0	-	-	-	-	-	-	-	-	-
	1977	0	-	-	-	-	0	-	-	-	-
	1980	2	2	1.000	1	0.500	6	6	1.000	2	0.333

NOTE: Initial proportion surviving = no. live + no. stunned/no. live + no. stunned + no. dead; 84-96 hour proportion surviving = no. live + no. stunned at time of observation/total no. collected.

ATTACHMENT B

CONTROL SURVIVAL
(INITIAL AND 84-96 HOUR)
AT THE DANSKAMMER POINT PLANT
1975-1977 AND 1979-1980

LIST OF TABLES

Number	Title
B-1	White perch control survival (initial and 84-96 hour) at the Danskammer Point plant, 1975-1977 and 1979-1980.
B-2	Atlantic tomcod control survival (initial and 84-96 hour) at the Danskammer Point plant, 1975-1977 and 1979-1980.
B-3	Spottail shiner control survival (initial and 84-96 hour) at the Danskammer Point plant, 1975-1977 and 1979-1980.
B-4	Alewife control survival (initial and 84-96 hour) at the Danskammer Point plant, 1975-1977 and 1979-1980.
B-5	Blueback herring control survival (initial and 84-96 hour) at the Danskammer Point plant, 1975-1977 and 1979-1980.
B-6	Gizzard shad control survival (initial and 84-96 hour) at the Danskammer Point plant, 1975-1977 and 1979-1980.
B-7	American shad control survival (initial and 84-96 hour) at the Danskammer Point plant, 1975-1977 and 1979-1980.
B-8	Striped bass control survival (initial and 84-96 hour) at the Danskammer Point plant, 1975-1977 and 1979-1980.

TABLE B-1 WHITE PERCH CONTROL SURVIVAL (INITIAL AND 84-96 HOUR) AT THE DANSKAMMER POINT PLANT, 1975-1977 AND 1979-1980[a]

Date	Life Stage	Duration (Minutes)	No. Exposed	Initial		84-96 Hour	
				No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
SEP 1975	Young-of-the-year	(b)	5	--	--	5	1.000
	Yearling and older	(c)	2	--	--	2	1.000
OCT 1975	Young-of-the-year	(c)	5	--	--	5	1.000
	Yearling and older	(c)	15	--	--	15	1.000
APR 1976	Yearling and older	(b)	18	--	--	18	1.000
	Yearling and older	(c)	34	--	--	34	1.000
NOV 1976	Young-of-the-year	15	4	4	1.000	3	0.750
	Young-of-the-year	60	7	7	1.000	7	1.000
	Yearling and older	15	2	2	1.000	2	1.000
	Yearling and older	60	3	3	1.000	3	1.000
APR 1977	Young-of-the-year	15	28	28	1.000	20	0.714
	Young-of-the-year	60	25	25	1.000	23	0.920
	Yearling and older	15	37	37	1.000	34	0.919
	Yearling and older	60	46	46	1.000	43	0.935
MAY 1977	Yearling and older	60	114	114	1.000	87	0.763
NOV 1977	Young-of-the-year	15	10	10	1.000	10	1.000
	Young-of-the-year	60	17	17	1.000	17	1.000
	Yearling and older	15	17	17	1.000	17	1.000
	Yearling and older	60	35	35	1.000	35	1.000

(a) Includes control data collected during continuous and 2-hour hold screenwash experiments only.
(b) Fish held as holding controls during 2-hour hold screenwash experiments.
(c) Fish held as holding controls during continuous screenwash experiments.

TABLE B-1 (CONT.)

Date	Life Stage	Duration (Minutes)	No. Exposed	Initial		84-96 Hour	
				No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
DEC 1977	Young-of-the-year	15	20	20	1.000	20	1.000
	Young-of-the-year	60	20	20	1.000	20	1.000
	Yearling and older	60	2	2	1.000	2	1.000
SEP 1979	Young-of-the-year	15	38	38	1.000	38	1.000
	Young-of-the-year	30	36	36	1.000	36	1.000
	Yearling and older	15	2	2	1.000	2	1.000
	Yearling and older	30	10	10	1.000	10	1.000
OCT 1979	Young-of-the-year	15	89	89	1.000	83	0.933
	Young-of-the-year	30	89	89	1.000	89	1.000
	Yearling and older	15	4	4	1.000	4	1.000
	Yearling and older	30	5	5	1.000	5	1.000
NOV 1979	Young-of-the-year	15	10	10	1.000	10	1.000
	Young-of-the-year	30	20	20	1.000	20	1.000
	Yearling and older	15	7	7	1.000	7	1.000
	Yearling and older	30	9	9	1.000	9	1.000
FEB 1980	Yearling and older	15	44	44	1.000	38	0.864
	Yearling and older	30	47	47	1.000	44	0.936
APR 1980	Yearling and older	15	61	61	1.000	59	0.967
	Yearling and older	30	50	50	1.000	50	1.000
MAY 1980	Yearling and older	15	80	80	1.000	71	0.888
	Yearling and older	30	83	83	1.000	82	0.988
SEP 1980	Young-of-the-year	15	21	21	1.000	21	1.000
	Young-of-the-year	30	14	14	1.000	14	1.000
	Yearling and older	30	4	4	1.000	4	1.000

TABLE B-1 (CONT.)

Date	Life Stage	Duration (Minutes)	No. Exposed	Initial		84-96 Hour	
				No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
OCT 1980	Young-of-the-year	15	56	56	1.000	54	0.964
	Young-of-the-year	30	51	51	1.000	51	1.000
	Yearling and older	15	29	29	1.000	29	1.000
	Yearling and older	30	26	26	1.000	25	0.962
NOV 1980	Young-of-the-year	15	31	31	1.000	29	0.935
	Young-of-the-year	30	10	10	1.000	8	0.800
	Yearling and older	15	20	20	1.000	19	0.950
	Yearling and older	30	10	10	1.000	10	1.000
DEC 1980	Young-of-the-year	15	33	33	1.000	29	0.879
	Young-of-the-year	30	15	15	1.000	13	0.867
	Yearling and older	15	12	12	1.000	11	0.917
	Yearling and older	30	33	33	1.000	28	0.848

TABLE B-2 ATLANTIC TOMCOD CONTROL SURVIVAL (INITIAL AND 84-96 HOUR) AT THE DANSKAMMER POINT PLANT, 1975-1977 AND 1979-1980[a]

Date	Life Stage	Duration (Minutes)	No. Exposed	Initial		84-96 Hour	
				No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
NOV 1976	Yearling and older	60	20	20	1.000	20	1.000
DEC 1976	Yearling and older	60	10	10	1.000	10	1.000
JAN 1977	Yearling and older	15	28	28	1.000	28	1.000
	Yearling and older	60	30	30	1.000	30	1.000
FEB 1977	Yearling and older	15	96	96	1.000	95	0.990
	Yearling and older	60	60	60	1.000	59	0.983
JAN 1980	Yearling and older	15	50	42	0.840	30	0.600
	Yearling and older	30	48	39	0.812	22	0.458
FEB 1980	Yearling and older	15	21	21	1.000	21	1.000
	Yearling and older	30	18	18	1.000	18	1.000

(a) Includes control data collected during continuous and 2-hour hold screenwash experiments only.

TABLE B-3 SPOTTAIL SHINER CONTROL SURVIVAL (INITIAL AND 84-96 HOUR) AT THE DANSKAMMER POINT PLANT, 1975-1977 AND 1979-1980(a)

Date	Life Stage	Duration (Minutes)	No. Exposed	Initial		84-96 Hour	
				No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
NOV 1977	Yearling and older	15	20	20	1.000	20	1.000
	Yearling and older	60	40	40	1.000	40	1.000
DEC 1977	Yearling and older	15	20	20	1.000	20	1.000
	Yearling and older	60	21	21	1.000	21	1.000
SEP 1979	Young-of-the-year	15	20	20	1.000	20	1.000
OCT 1979	Young-of-the-year	15	2	2	1.000	2	1.000
	Young-of-the-year	30	23	23	1.000	22	0.956
	Yearling and older	15	8	8	1.000	8	1.000
	Yearling and older	30	11	11	1.000	11	1.000
NOV 1979	Yearling and older	15	2	2	1.000	2	1.000
	Yearling and older	30	4	4	1.000	4	1.000
JAN 1980	Yearling and older	15	17	17	1.000	17	1.000
FEB 1980	Yearling and older	15	3	3	1.000	3	1.000
APR 1980	Yearling and older	15	80	80	1.000	80	1.000
	Yearling and older	30	60	60	1.000	60	1.000
MAY 1980	Yearling and older	15	53	53	1.000	53	1.000
	Yearling and older	30	74	74	1.000	74	1.000

(a) Includes control data collected during continuous and 2-hour hold screenwash experiments only.

TABLE B-3 (CONT.)

Date	Life Stage	Duration (Minutes)	No. Exposed	Initial		84-96 Hour	
				No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
SEP 1980	Young-of-the-year	15	1	1	1.000	1	1.000
	Young-of-the-year	30	3	3	1.000	3	1.000
	Yearling and older	15	3	3	1.000	3	1.000
	Yearling and older	30	6	6	1.000	6	1.000
OCT 1980	Young-of-the-year	15	8	8	1.000	8	1.000
	Young-of-the-year	30	11	11	1.000	11	1.000
	Yearling and older	15	44	44	1.000	43	0.977
	Yearling and older	30	44	44	1.000	43	0.977
NOV 1980	Young-of-the-year	30	7	7	1.000	7	1.000
	Yearling and older	30	3	3	1.000	3	1.000
DEC 1980	Young-of-the-year	15	4	4	1.000	4	1.000
	Young-of-the-year	30	13	13	1.000	13	1.000
	Yearling and older	15	14	14	1.000	14	1.000
	Yearling and older	30	20	20	1.000	20	1.000

TABLE B-4 ALEWIFE CONTROL SURVIVAL (INITIAL AND 84-96 HOUR) AT THE DANSKAMMER POINT PLANT, 1975-1977 AND 1979-1980[a]

Date	Life Stage	Duration (Minutes)	No. Exposed	Initial		84-96 Hour	
				No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
SEP 1980	Young-of-the-year	15	15	15	1.000	13	0.867
	Young-of-the-year	30	2	2	1.000	2	1.000

(a) Includes control data collected during continuous and 2-hour hold screenwash experiments only.

TABLE B-5 BLUEBACK HERRING CONTROL SURVIVAL (INITIAL AND 84-96 HOUR) AT THE DANSKAMMER POINT PLANT, 1975-1977 AND 1979-1980[a]

Date	Life Stage	Duration (Minutes)	No. Exposed	Initial		84-96 Hour	
				No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
SEP 1979	Young-of-the-year	15	6	6	1.000	0	0
	Young-of-the-year	30	3	3	1.000	0	0
OCT 1979	Young-of-the-year	15	85	85	1.000	20	0.235
	Young-of-the-year	30	91	90	0.989	18	0.198
OCT 1980	Young-of-the-year	15	4	4	1.000	4	1.000
	Yearling and older	30	2	2	1.000	2	1.000
NOV 1980	Young-of-the-year	15	21	21	1.000	9	0.429
DEC 1980	Young-of-the-year	15	2	2	1.000	1	0.500

(a) Includes control data collected during continuous and 2-hour hold screenwash experiments only.

TABLE B-6 GIZZARD SHAD CONTROL SURVIVAL (INITIAL AND 84-96 HOUR) AT THE DANSKAMMER POINT PLANT, 1975-1977 AND 1979-1980[a]

Date	Life Stage	Duration (Minutes)	No. Exposed	Initial		84-96 Hour	
				No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
NOV 1980	Young-of-the-year	15	1	1	1.000	1	1.000
	Young-of-the-year	30	2	2	1.000	2	1.000
	Yearling and older	30	11	11	1.000	11	1.000
DEC 1980	Young-of-the-year	15	43	43	1.000	26	0.605
	Young-of-the-year	30	14	14	1.000	6	0.428
	Yearling and older	15	40	40	1.000	33	0.825
	Yearling and older	30	18	18	1.000	16	0.889

(a) Includes control data collected during continuous and 2-hour hold screenwash experiments only.

TABLE B-7 AMERICAN SHAD CONTROL SURVIVAL (INITIAL AND 84-96 HOUR) AT THE DANSKAMMER POINT PLANT, 1975-1977 AND 1979-1980[a]

Date	Life Stage	Duration (Minutes)	No. Exposed	Initial		84-96 Hour	
				No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
SEP 1979	Young-of-the-year	15	21	20	0.952	4	0.190
	Young-of-the-year	30	22	21	0.954	5	0.227
OCT 1979	Young-of-the-year	15	19	19	1.000	4	0.210
	Young-of-the-year	30	1	1	1.000	0	0
NOV 1979	Young-of-the-year	30	1	1	1.000	0	0
SEP 1980	Young-of-the-year	30	3	3	1.000	3	1.000
OCT 1980	Young-of-the-year	15	83	83	1.000	65	0.783
	Young-of-the-year	30	80	80	1.000	68	0.850
NOV 1980	Young-of-the-year	15	19	19	1.000	6	0.316
	Young-of-the-year	30	7	7	1.000	1	0.143
DEC 1980	Young-of-the-year	15	1	1	1.000	0	0
	Young-of-the-year	30	3	3	1.000	0	0

(a) Includes control data collected during continuous and 2-hour hold screenwash experiments only.

TABLE B-8 STRIPED BASS CONTROL SURVIVAL (INITIAL AND 84-96 HOUR) AT THE DANSKAMMER POINT PLANT, 1975-1977 AND 1979-1980[a]

Date	Life Stage	Duration (Minutes)	No. Exposed	Initial		84-96 Hour	
				No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
SEP 1975	Young-of-the-year	(b)	41	--	--	6	0.146
	Yearling and older	(b)	2	--	--	2	1.000
	Young-of-the-year	(c)	3	--	--	0	0
OCT 1975	Yearling and older	(c)	3	--	--	2	0.667
NOV 1977	Young-of-the-year	60	5	5	1.000	5	1.000
	Yearling and older	15	2	2	1.000	2	1.000
	Yearling and older	60	2	2	1.000	2	1.000
SEP 1979	Young-of-the-year	15	1	1	1.000	1	1.000
OCT 1979	Yearling and older	15	1	1	1.000	1	1.000
NOV 1979	Young-of-the-year	15	1	1	1.000	1	1.000
FEB 1980	Yearling and older	15	1	1	1.000	1	1.000
	Yearling and older	30	1	1	1.000	1	1.000
SEP 1980	Young-of-the-year	15	4	4	1.000	4	1.000
	Young-of-the-year	30	5	5	1.000	4	0.800
OCT 1980	Young-of-the-year	15	18	18	1.000	12	0.667
	Young-of-the-year	30	10	10	1.000	7	0.700

(a) Includes control data collected during continuous and 2-hour hold screenwash experiments only.
(b) Fish held as holding controls during 2-hour hold screenwash experiments.
(c) Fish held as holding controls during continuous screenwash experiments.

TABLE B-8 (CONT.)

Date	Life Stage	Duration (Minutes)	No. Exposed	Initial		84-96 Hour	
				No. Alive	Proportion Surviving	No. Alive	Proportion Surviving
NOV 1980	Young-of-the-year	15	4	4	1.000	2	0.500
	Young-of-the-year	30	3	3	1.000	2	0.667
DEC 1980	Young-of-the-year	15	10	10	1.000	9	0.900
	Young-of-the-year	30	4	4	1.000	4	1.000
	Yearling and older	15	1	1	1.000	1	1.000

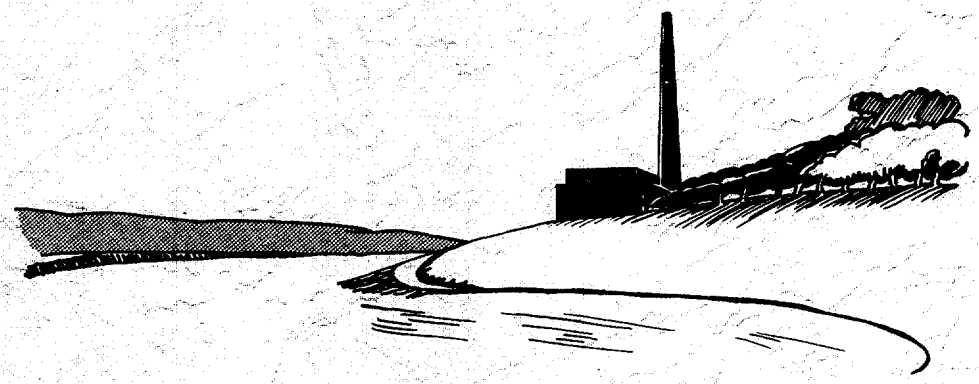
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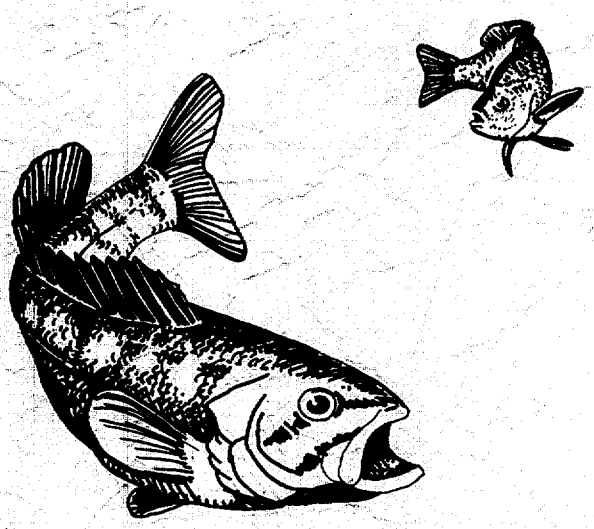
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Roseton Generating Station Entrainment Survival Studies

1980 ANNUAL REPORT





Prepared for:

Central Hudson Gas & Electric Corporation

ECOLOGICAL ANALYSTS, INC.

EA Report CHG02K

ROSETON GENERATING STATION
ENTRAINMENT SURVIVAL STUDIES
1980 ANNUAL REPORT

Prepared for

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April 1983

CONTENTS

		Page
1.	INTRODUCTION	1-1
2.	SUMMARY	2-1
3.	METHODS AND MATERIALS	3-1
	3.1 Sample Collection and Field Processing	3-1
	3.2 Laboratory Processing	3-11
	3.3 Data Analysis	3-12
4.	RESULTS	4-1
	4.1 Species Composition and Length Frequency	4-1
	4.2 Initial Survival	4-6
	4.2.1 Gear Comparison - Plankton Flume Versus Pump/Larval Table	4-13
	4.3 Extended Survival	4-18
	4.4 Entrainment Survival	4-18

REFERENCES

APPENDIX A - DIRECT RELEASE EXPERIMENTS

APPENDIX B - LENGTH-FREQUENCY OF STRIPED BASS, WHITE PERCH, AND CLUPEIDS COLLECTED AT INTAKE AND DISCHARGE SAMPLING STATIONS AT THE ROSETON PLANT, 1980

APPENDIX C - SPECIES COMPOSITION AND NUMBERS OF ICHTHYOPLANKTON COLLECTED IN POST-SAMPLING COLLECTION GEAR WASH AT INTAKE AND DISCHARGE SAMPLING STATION AT THE ROSETON PLANT, 1980

APPENDIX D - GEAR OPERATING PARAMETERS AND PLANT OPERATIONAL PARAMETERS DURING THE ENTRAINMENT SURVIVAL STUDY CONDUCTED AT THE ROSETON GENERATING STATION, 26 MAY - 31 JULY 1980

APPENDIX E - INITIAL SURVIVAL OF STRIPED BASS, WHITE PERCH, AND CLUPEIDS COLLECTED BETWEEN 4 JUNE AND 31 JULY AT THE ROSETON GENERATING STATION, 1980

APPENDIX F - ICHTHYOPLANKTON FOUND IN THE ERROR ANALYSIS OF SAMPLES COLLECTED DURING THE ENTRAINMENT SURVIVAL STUDY CONDUCTED AT THE ROSETON GENERATING STATION, 26 MAY - 31 JULY 1980

LIST OF FIGURES

Number	Title
3-1	Schematic plan of the cooling water system at the Roseton Generating Station (not drawn to scale) with location of five sampling stations.
3-2	Diagram of discharge diffuser flume location and positioning of intake hose connection to diffuser port during the entrainment survival study conducted in the Roseton Generating Station, 26 May - 31 July 1980.
3-3	Design of the larval table collection system used in the Roseton Generating Station entrainment survival study, 1980.
3-4	Design of the collection flume used in the pumpless and rear-draw samplers during the entrainment survival study, Roseton Generating Station, 1980.
3-5	Design of ichthyoplankton sampling flumes and support structure used during entrainment survival studies at the Roseton Generating Station, 1980.
3-6	Schematic drawing of the sampling hose intake at the Roseton plant discharge diffuser.
4-1	Length frequency of striped bass collected at each station during the entrainment survival study conducted at the Roseton Generating Station, 26 May - 31 July 1980.
4-2	Length frequency of white perch collected at each station during the entrainment survival study conducted at the Roseton Generating Station, 26 May - 31 July 1980.
4-3	Length frequency of clupeids (excluding American shad) collected at each station during the entrainment survival study conducted at the Roseton Generating Station, 26 May - 31 July 1980.
4-4	Initial survival as a function of length for striped bass collected at five stations during entrainment survival sampling at the Roseton Generating Station, 26 May - 31 July 1980.
4-5	Initial survival as a function of length for white perch collected at five stations during entrainment survival sampling at the Roseton Generating Station, 26 May - 31 July 1980.
4-6	Initial survival as a function of length for clupeids (excluding American shad) collected at five stations during entrainment survival sampling at the Roseton Generating Station, 26 May - 31 July 1980.
4-7	Initial survival as a function of length for striped bass collected in discharge samples with average flow rate between 500 and 1,400 lpm at the Roseton Generating Station, 4 June - 31 July 1980.

LIST OF FIGURES (CONT.)

Number	Title
4-8	Initial survival as a function of length for white perch collected in discharge samples with average flow rate between 500 and 1,500 lpm at the Roseton Generating Station, 4 June - 31 July 1980.
4-9	Initial survival as a function of length for clupeids (excluding American shad) collected in discharge samples with average flow rate between 500 and 1,400 lpm at the Roseton Generating Station, 4 June - 31 July 1980.
4-10	Extended survival of clupeid post yolk-sac larvae collected at stations RIP and RDP at the Roseton Generating Station, 26 May - 31 July 1980.
4-11	Extended survival of clupeid post yolk-sac larvae collected at stations RIF, RDF, and RDD at the Roseton Generating Station, 26 May - 31 July 1980.
A-1	The relationship between the number of pumps operating and the ratio of actual to expected recapture of striped bass larvae released at the Roseton plant, 1980.
D-1	Average intake temperature, discharge temperature, and number of circulating water pumps operating during the entrainment survival study conducted at the Roseton Generating Station, 26 May - 31 July 1980.
D-2	Larval flume flow rates for samples collected at Station RDF at the Roseton Generating Station, 26 May - 31 July 1980.
D-3	Pump/larval table flow rates for samples collected at Station RDP at the Roseton Generating Station, 26 May - 31 July 1980.
D-4	Larval flume flow rates for samples collected at Station RDD at the Roseton Generating Station, 26 May - 31 July 1980.

LIST OF TABLES

Number	Title
3-1	Number of samples collected by date during the entrainment survival study conducted at the Roseton Generating Station, 26 May - 31 July 1980.
4-1	Species composition of ichthyoplankton collected during the entrainment survival study conducted at the Roseton Generating Station, 26 May - 31 July 1980.
4-2	Initial survival of each taxon collected during entrainment survival studies at the Roseton Generating Station, 26 May - 31 July 1980.
4-3	Results of a contingency table analysis testing the interaction between initial survival, sampling station, and length for striped bass, white perch, and clupeids (excluding American shad) collected in discharge samples with average flow rate between 500 and 1,400 liters per minute at the Roseton Generating Station, 4 June - 31 July 1980.
4-4	Normalized extended survival of selected ichthyoplankton collected during entrainment survival studies at the Roseton Generating Station, 26 May - 31 July 1980.
4-5	Entrainment survival (S_e) estimates for discrete length and discharge temperature intervals for striped bass, white perch, and clupeids (excluding American shad) collected at stations RIP and RDP at the Roseton Generating Station, 26 May - 31 July 1980.
4-6	Estimated entrainment survival (S_e) by life stage for striped bass, white perch, and clupeids based on sampling with the pump/larval table at the Roseton Generating Station, 26 May - 31 July 1980.
A-1	Expected and actual recovery at the Roseton plant discharge of striped bass following release at the intake.
A-2	Survival of hatchery-reared striped bass from direct release experiments at the Roseton plant, June 1980.
A-3	Through-plant survival of hatchery-reared striped bass post yolk-sac larvae from direct release experiments at the Roseton plant, June 1980.
B-1	Length frequency distribution of striped bass collected at the Roseton plant, 1980.
B-2	Length frequency distribution of striped bass collected at the Roseton plant, 1980.
B-3	Length frequency distribution of white perch collected at the Roseton plant, 1980.

LIST OF TABLES (CONT.)

Number	Title
B-4	Length frequency distribution of white perch collected at the Roseton plant, 1980.
B-5	Length frequency distribution of clupeids collected at the Roseton plant, 1980.
B-6	Length frequency distribution of clupeids collected at the Roseton plant, 1980.
C-1	Species composition and numbers of ichthyoplankton collected from the post-sample larval table rinse at intake station RIP of the Roseton plant, 1980.
C-2	Species composition and numbers of ichthyoplankton collected from the post-sample larval flume rinse at intake station RIF of the Roseton plant, 1980.
C-3	Species composition and numbers of ichthyoplankton collected from the post-sample larval table rinse at discharge station RDP of the Roseton plant, 1980.
C-4	Species composition and numbers of ichthyoplankton collected from the post-sample larval flume rinse at discharge station RDF of the Roseton plant, 1980.
C-5	Species composition and numbers of ichthyoplankton collected from the post-sample larval flume rinse at discharge station RDD of the Roseton plant, 1980.
D-1	Summary of pump/larval table and plankton flume operating parameters during the entrainment survival study conducted at the Roseton Generating Station, 26 May - 31 July 1980.
E-1	Initial survival of striped bass, white perch, and clupeids (excluding American shad) collected in discharge samples with flow rate 500-1,400 liters per minute at the Roseton Generating Station, 4 June - 31 July 1980.
F-1	Total number of ichthyoplankton found in the error analysis procedure to determine onsite sorting efficiency during the entrainment survival study conducted at the Roseton Generating Station, 26 May - 31 July 1980.

1. INTRODUCTION

The principal objective of the 1980 ichthyoplankton entrainment studies was to determine survival rates of ichthyoplankton that passed through the condenser cooling system at the Roseton Generating Station. Included in this objective was an assessment of the discharge diffuser effects on ichthyoplankton survival. All entrained organisms initially passed through the 9.5-mm bar mesh traveling screens at the plant intake structure. Collections were taken at the plant's intake, discharge sealwell, and a discharge diffuser port using two different sampling gear, a pump/larval table and a plankton flume. After collection, initial and extended survival observations (up to 48 hours) were performed. Entrainment effects were measured by comparing ichthyoplankton survival at the discharge with that at the intake, which served as the control. The 1980 entrainment study was a continuation of work performed by Ecological Analysts, Inc. in 1975, 1976, and 1977 (EA 1976a, 1978a, 1978b, 1980a). The 1980 studies emphasized analysis of survival as a function of: (1) total discharge temperature (thermal exposure), (2) plant operating conditions, (3) the length of entrained ichthyoplankton, and (4) sampling gear.

The early developmental stages of striped bass (Morone saxatilis), white perch (M. americana), and herrings (Clupeidae) were the target taxa. Survival determinations were also made for other infrequently collected taxa such as Cyprinidae (minnows and carps) and tessellated darter (Etheostoma olmstedi).

2. SUMMARY

Intake and discharge sampling was conducted at the Roseton plant from 26 May to 31 July 1980 for the purposes of evaluating entrainment survival of fish eggs, larvae, and early juveniles. Sampling was conducted at five stations; two with the conventional pump/larval table (stations RIP and RDP) and three with a new sampling gear, the plankton flume (stations RIF, RDF, and RDD), designed to minimize mortality due to sampling stress.

Cluepids (alewife and blueback herring), striped bass, and white perch were the most abundant taxa collected. Post yolk-sac larvae was the most abundant life stage collected followed by yolk-sac larvae and juveniles. Few eggs of any species were encountered probably due to the passing of the spawning season for white perch, striped bass, and cluepids, historically the most abundant species.

Most striped bass collected measured less than 12 mm and appeared to have similar size distributions between intake and discharge collections. White perch also were predominantly less than 12 mm although discharge samples contained a higher proportion of larger larvae than the intake samples. This was attributed to either gear avoidance or vertical stratification by the larger more mobile white perch larvae. Clupeid sizes ranged from 6 to over 24 mm with most collected between 15 and 21 mm. They displayed similar size distribution patterns for intake and discharge collections.

Initial survival rates for striped bass and white perch were similar for intake and discharge collections and generally increased with size of the larvae. This similarity in survival rates at the intake and discharge suggests that sampling stress is a greater source of mortality than entrainment is for these two species. For clupeids, survival rates also appeared to increase with length but then abruptly decreased over 24 mm. Survival rates were higher at the intake stations than at the discharge for this taxa. In general, entrainment appeared to be a significant factor affecting survival for the more sensitive clupeids. Clupeids greater than 24 mm appeared to be particularly sensitive to sampling stress but better able to survive the entrainment process. Finally, no relationship between initial survival and number of circulating water pumps operating was evident for any of the three taxa.

To determine differences in survival between the two types of sampling gear, a comparison of initial survival rates at the three discharge stations was conducted for striped bass, white perch, and clupeids. Data used for this comparison was subsetted to include only samples that were collected during similar gear operation. These results yielded evidence of a strong positive relationship between mortality and length for striped bass and white perch and between mortality and sampling station for clupeids. Again, length appeared to be the main influencing factor affecting survival for striped bass and white perch. Although for clupeids, sampling gear seemed to be the main factor influencing survival at the three discharge stations. Survival was highest at either one of the two flume stations in all cases where comparisons were made. This suggests that striped bass, white perch, and particularly the clupeids experienced less sampling mortality in the plankton flume than in the pump/larval table during this study.

To investigate possible latent mortality due to entrainment, survival of control and entrained ichthyoplankton was monitored for a 48-hour period. These results provide no evidence of latent entrainment effects for either striped bass or white perch and indicate that initial survival is the most appropriate measure of entrainment effects for these two species. On the other hand, for clupeids, valid estimates of entrainment survival must incorporate a latent component since extended survival at the discharge stations was significantly lower than at the intake stations. However, this component could be limited to a 12-hour examination since latent survival rates appear to become nearly equal past this interval.

Estimates of initial entrainment survival (S_e) were calculated using initial survival rates for intake and discharge station samples collected with a pump/larval table. Sampling difficulties at the intake station with the plankton flume precluded estimation of entrainment survival based on that gear. In general, initial entrainment survival for striped bass and white perch was higher for the larger larval stages, whereas for clupeids, there did not appear to be any relationship between survival and size of the larvae. In addition, entrainment survival was typically better at lower discharge temperatures. Life stage specific survival estimates for striped bass and white perch were generally high ($\geq$67 percent), whereas initial survival for the more delicate clupeids was consistently much lower. As previously noted, clupeids appeared to be subject to significant latent effects. Incorporation of these latent effects would produce lower estimates of entrainment survival for this taxa, however, the exact magnitude of this reduction is unclear due to low control survival for this taxa. The pattern observed in these life stage specific survival estimates was quite similar to that of predicted entrainment survival based on laboratory-derived thermal mortality equations. Overall, the results of the entrainment survival studies conducted at the Roseton plant during 1980 exhibited patterns of survival similar to that observed in previous studies at this plant.

Appendixes A-F in this report include results of direct release experiments; length frequency of striped bass, white perch, and clupeids; ichthyoplankton collected in the post-sample rinse; gear and plant operating parameters; results of a discharge sampling gear comparison; and number of larvae found during error analysis.

3. METHODS AND MATERIALS

3.1 SAMPLE COLLECTION AND FIELD PROCESSING

Sampling was carried out at the Roseton plant in 1980 during 26 May - 31 July, the usual period of peak entrainment for striped bass, white perch, and clupeids. Sampling was typically conducted four nights a week from 1600 to 0200 EDT (Table 3-1). This time period was selected because previous abundance studies at Roseton had indicated that the organisms were more abundant at night (EA 1980a). During the study, plant operation of generating units and circulating water pumps (CWPs) varied. Unit 2 was offline until 9 June, although the unit's condensers were opened after 4 June to permit operation of three and four CWPs during the direct release experiments (Appendix A). During entrainment survival sampling, two CWPs were operated from 26 May to 3 June, three CWPs were operated from 4 June to 7 July and from 21 July to 31 July, and four CWPs were operated from 8 July to 18 July.

In 1980, sampling was conducted at two intake and three discharge stations at the Roseton plant (Figure 3-1). The intake stations (Roseton Intake Pump/Larval Table [RIP] and Roseton Intake Flume [RIF]) were located in the vicinity of the No. 1B circulating water pump forebay. Two stations (Roseton Discharge Pump/Larval Table [RDP] and Roseton Discharge Flume [RDF]) were sampled from the discharge sealwell (an air expansion chamber). Sampling was conducted at a third discharge station (Roseton Discharge Diffuser Flume [RDD]) that was connected to a submerged discharge diffuser port located approximately 200 m from the sealwell (Figure 3-2).

At two stations, one at the intake (Station RIP) and one at the discharge (Station RDP), ichthyoplankton were collected by using a pump/larval table system identical to that used in previous studies at Roseton (EA 1976a, 1978a, 1978b, 1980a). Sampling at these two stations was discontinued after 24 July due to low numbers of ichthyoplankton collected. The pump used to deliver the sample to the larval table was a 10.2-cm (4-in.) Midland Midwhirl induction-type pump with a recessed impeller commonly used in fish hatcheries and fruit processing operations. This pump was designed to minimize damage to the pumped material. The larval table, approximately 8.2-m long, 1.2-m wide, and 0.6-m deep (Figure 3-3), consisted at the front end (closest to pump) of an expansion section (wide-box-like structure) which received, spread, and reduced the flow of water from the pump. At the end of the expansion section, two inclined 505 µm-mesh screens diverted organisms, debris, and a fraction of the water into a collection section containing a recessed filtering collection box. At the end of each sampling interval, a valve was opened to transfer all filtered material in the collection box through a length of 3.0-cm tygon tubing into a sample transportation container. The container was then transferred to the laboratory and served as a sorting tray. Beneath the collection box were pipes that directed the flow of water through a valve (termed Q2 valve) that could be adjusted to control the rate that water flowed through the screened areas of the collection box. Water, after being filtered by the inclined screens in the upper portion of the table, flowed over a discharge weir and back into the river. To insure that all organisms were removed from the larval table, just prior to the conclusion of a sample, a gentle spray of filtered ambient water was used to rinse the entire length of the larval table and this rinsed material was included within the sample container.

TABLE 3-1 NUMBER OF SAMPLES COLLECTED BY DATE DURING THE ENTRAINMENT SURVIVAL STUDY CONDUCTED AT THE ROSETON GENERATING STATION 26 MAY - 31 JULY 1980

Date	Station RIE	RIE	RDE	RDE	RDD
26 MAY	4	1	3	0	1
27 MAY	5	6	6	0	3
28 MAY	7	6	6	0	5
29 MAY	5	5	5	0	6
2 JUN	0	2	2	0	1
3 JUN	2	3	3	0	2
4 JUN	3	3	3	2	2
5 JUN	3	3	3	2	2
7 JUN	0	0	1	0	0
8 JUN	0	0	0	1	0
9 JUN	6	3	6	5	0
10 JUN	8	5	8	8	5
11 JUN	9	9	9	9	8
12 JUN	8	7	8	8	7
16 JUN	10	8	10	10	10
17 JUN	10	10	10	10	8
18 JUN	10	6	10	10	9
19 JUN	10	9	10	10	10
23 JUN	9	9	10	10	11
24 JUN	10	10	10	11	9
25 JUN	10	10	9	9	10
26 JUN	10	10	10	8	10
30 JUN	10	9	10	10	10
1 JUL	10	10	10	9	3
2 JUL	10	10	10	10	7
3 JUL	8	10	9	10	9
7 JUL	10	2	8	0	10
8 JUL	9	8	9	7	7
9 JUL	8	9	10	8	10
10 JUL	10	9	10	10	10
14 JUL	10	10	10	7	8
15 JUL	8	8	8	9	9
16 JUL	10	8	10	8	5
17 JUL	10	10	10	10	10
21 JUL	10	6	10	6	4
22 JUL	9	5	10	6	6
23 JUL	10	10	10	9	10
24 JUL	8	9	10	10	8
28 JUL	0	9	0	10	9
29 JUL	0	10	0	10	10
30 JUL	0	10	0	8	9
31 JUL	0	10	0	10	0
Total	289	296	295	280	271

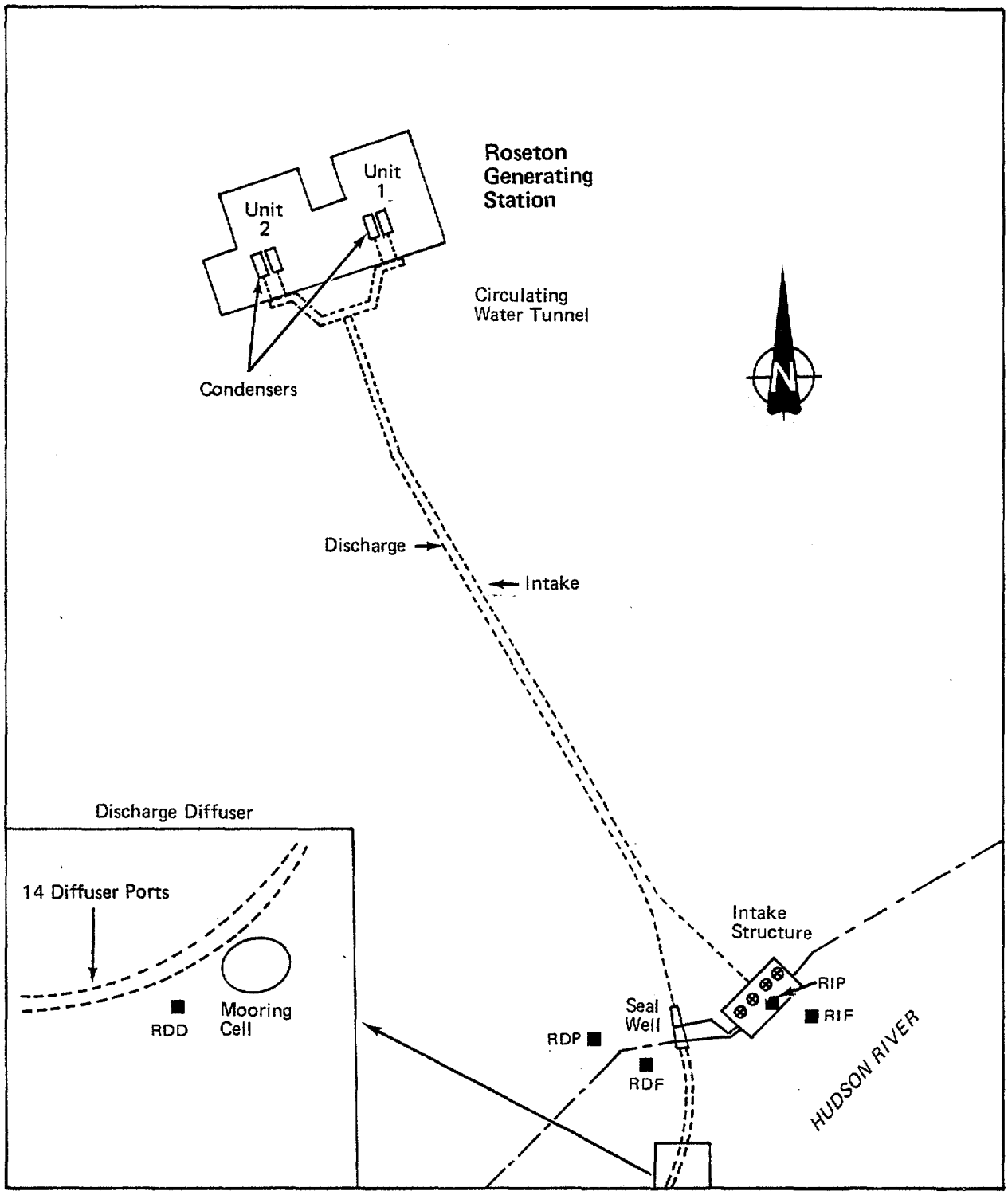


Figure 3-1. Schematic plan of the cooling water system at the Roseton Generating Station (not drawn to scale) with location of five sampling stations.

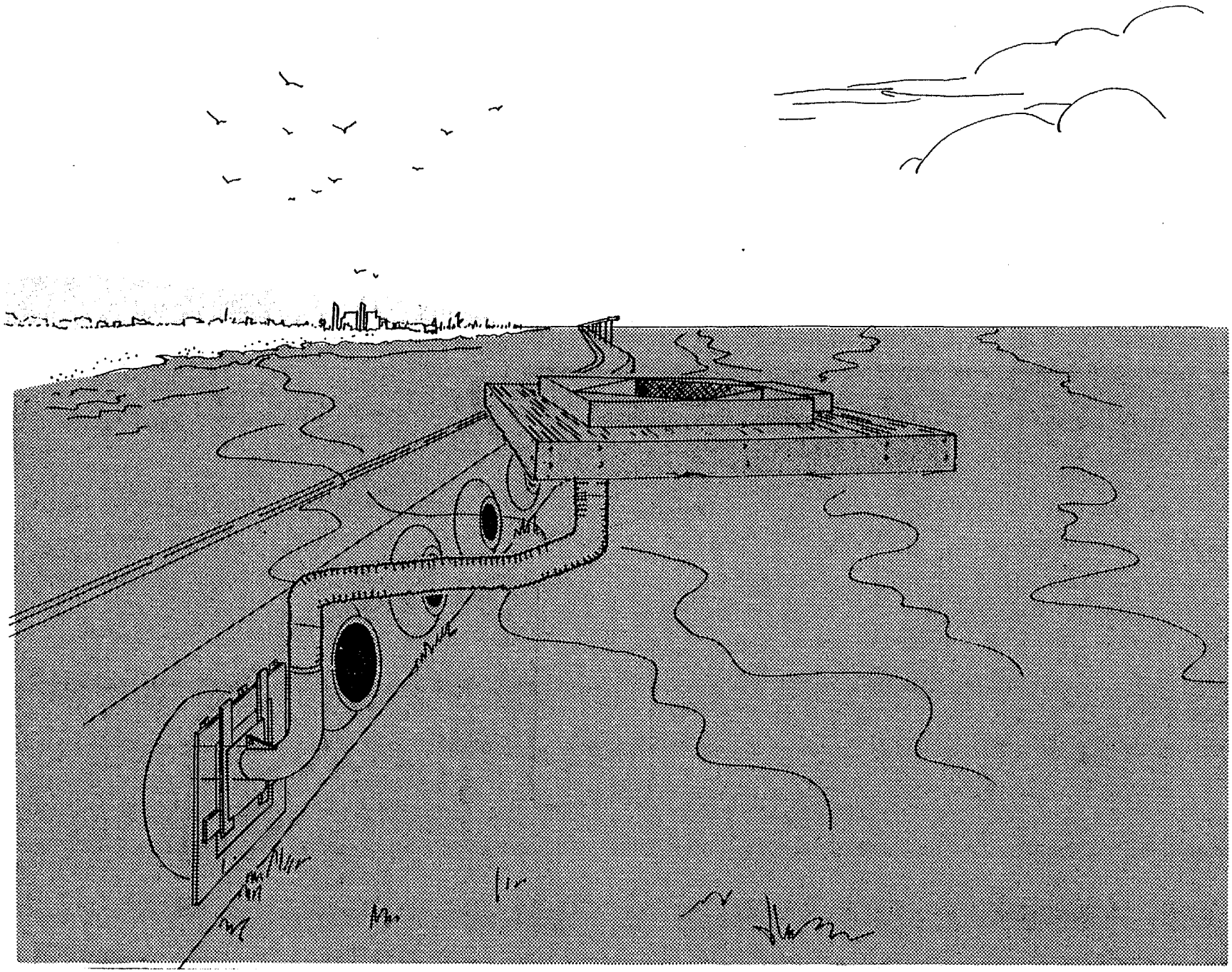


Figure 3-2. Diagram of discharge diffuser flume location and positioning of intake hose connection to diffuser port during the entrainment survival study conducted in the Roseton Generating Station, 26 May – 31 July, 1980.

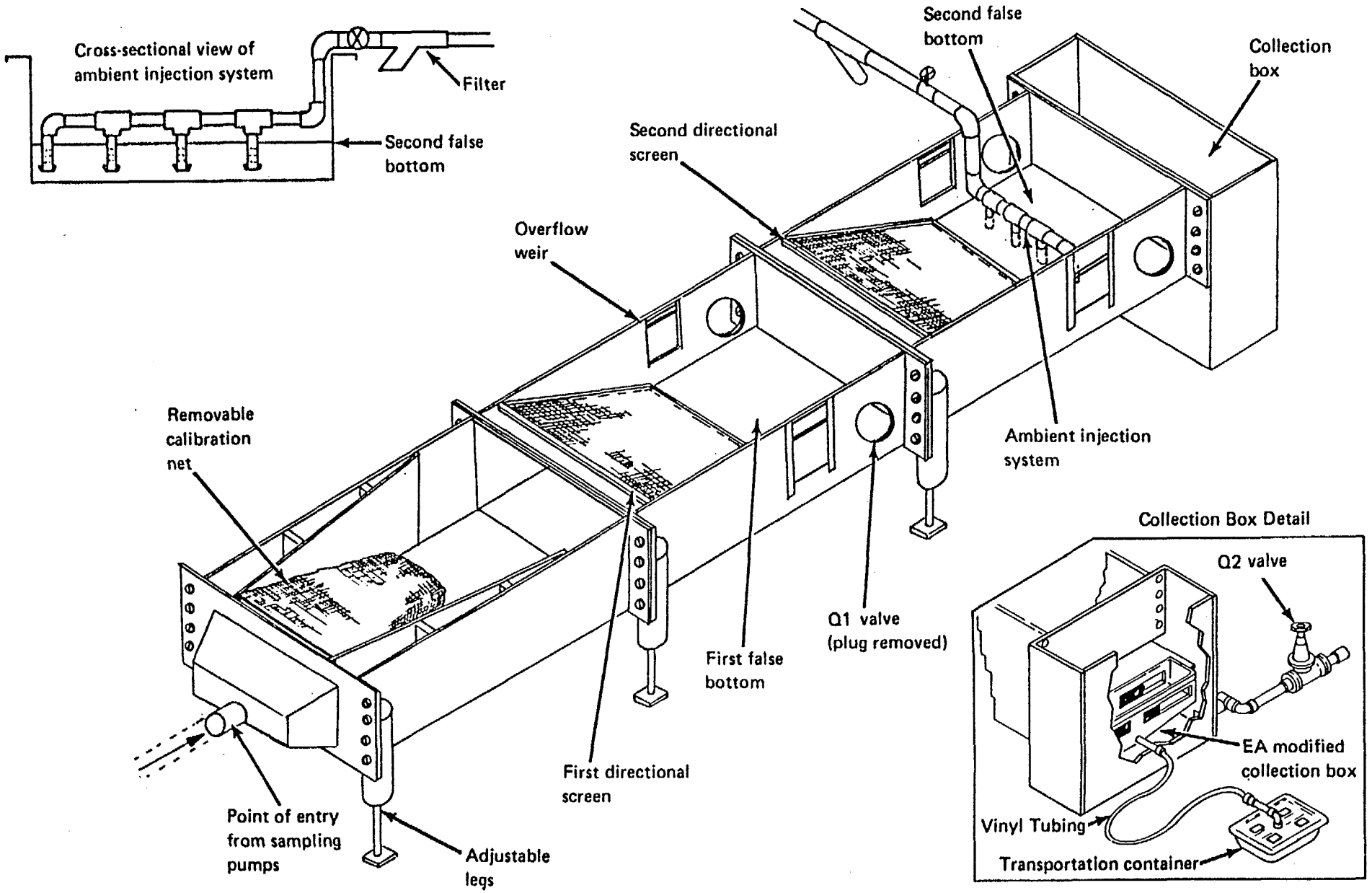


Figure 3-3. Design of the larval table collection system used in the Roseton Generating Station entrainment survival study, 1980.

At three stations in 1980, innovative, state-of-the-art entrainment survival sampling gear was used. This gear, the plankton sampling flume (Figure 3-4), was designed to reduce sampling stress on sensitive ichthyoplankton stages by eliminating potential mechanical effects associated with passage through a sample collection pump. This gear was deployed at an intake station (Station RIF), at one discharge sealwell station (Station RDF), and at the discharge diffuser station (Station RDD).

The design of the ichthyoplankton sampling flume was similar to the pump/larval table employed for these studies. The front portion of the flume consisted of a flow expansion section which spread and reduced water flow. Beginning at the midpoint and extending to the end of the expansion section were two vertical 505-μm screens angled toward the center of the table at the rear. These screens filtered the sample water, diverted organisms, debris, and a small fraction of water into a collection section equipped with a recessed filtering collection box. Beneath the collection box were drain pipes connected to a 3.8-cm Q2 water pump. This pump, which was operated at a constant rate (40 gpm), was used to regulate the flow of water which passed through the collection box screens and to concentrate organisms in the collection box area. The major structural differences between the larval table and plankton sampling flume were that the flume's length was 2.4 m as compared to 8.2 m for the larval table, and that water was filtered through two vertical screens (Figure 3-4) instead of two horizontal screens as in the larval table (Figure 3-3).

The dimensions of the two flumes employed at the discharge (stations RDF and RDD) were both 0.6-m deep and 1.2-m wide as are the larval tables. The flume at the intake was 1.2-m deep. The reason for the additional depth in the intake flume (Station RIF) was related to the mode of sample delivery. At the start of a sampling interval, water was introduced into the raft-mounted intake flume (Figure 3-5) by removing a 15.2-cm stopper from the inlet and submerging the flume approximately 0.6 m below the water surface thereby creating a head differential between water outside the flume and water entering the flume. The additional depth of this flume was needed to allow for the possibility of flume movement within the raft well and potential escape of sample water. The greater depth eliminated this problem because any splashing sample water would remain in the flume. The head differential was maintained by pumping filtered water out of the flume from two standpipes fitted with vertical slots and located behind each filtering screen. The slotted standpipe prevented the development of high velocity areas (potentially causing mortality) immediately in the vicinity of the standpipe. The pumping of water from behind the vertical screens was termed a "rear draw" design. This configuration allowed sample water to enter the flume for the sample duration (15 minutes) at the end of which the pump was stopped and the flume inlet closed. Water flow through the flume was controlled by regulating the rate at which water was pumped out of the flume. Flow rates were regulated to approximate the flow of water through the flume at the diffuser station (Appendix Table D-1).

The two flumes deployed at the discharge (stations RDF and RDD) utilized the flow of water created by the plant's circulating water pumps (CWP) to induce flow into the flumes. Water flow to the discharge sealwell flume (Station RDF) was provided through a siphon from the sealwell. The water level in the sealwell was generally 0.8-1.0 meters higher than the river, which created a head differential between the two water levels. A siphon system was set up to bring sample water from the sealwell to the discharge sealwell flume which was

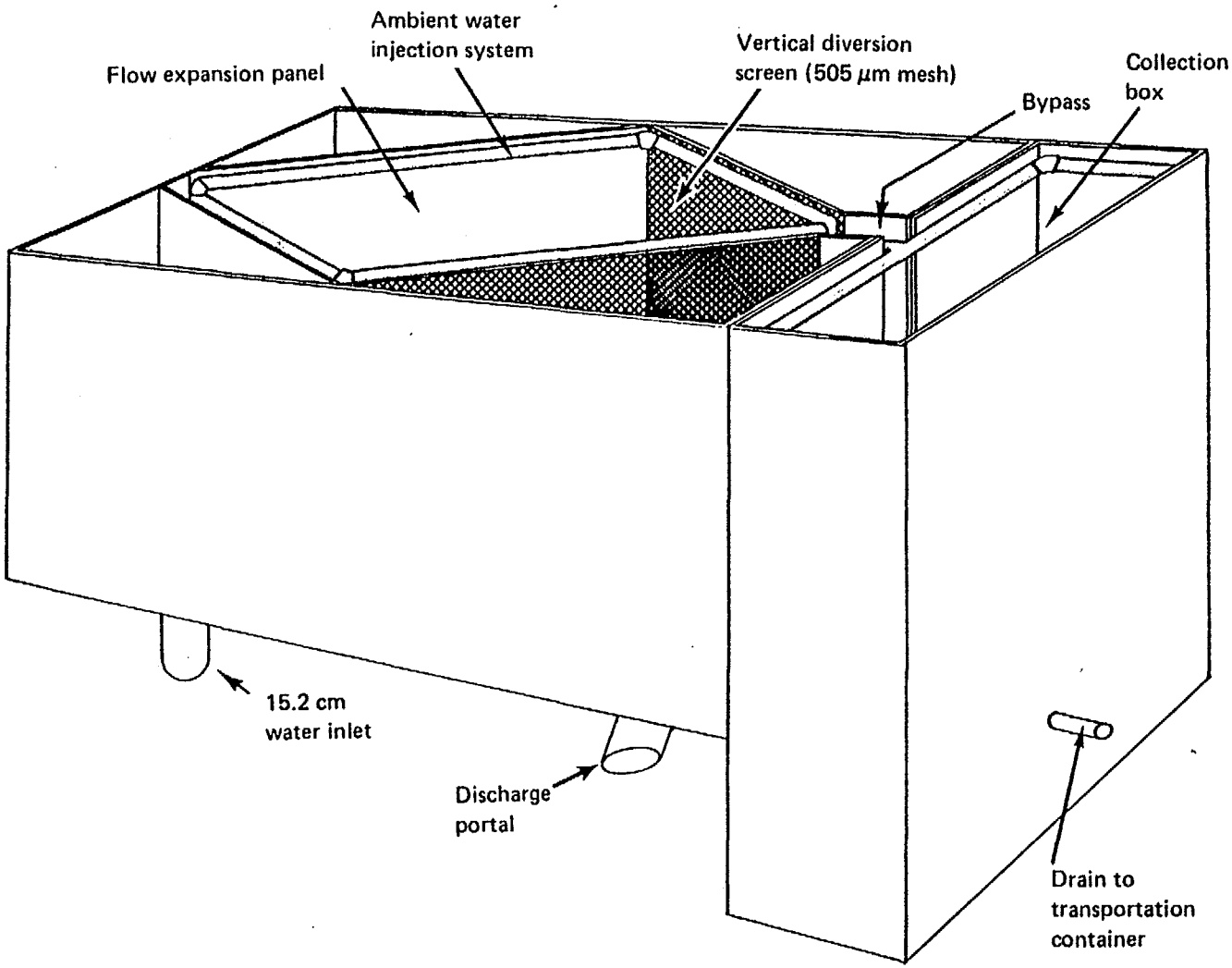


Figure 3-4. Design of the collection flume used in the pumpless and rear-draw samplers during the entrainment survival study, Roseton Generating Station, 1980.

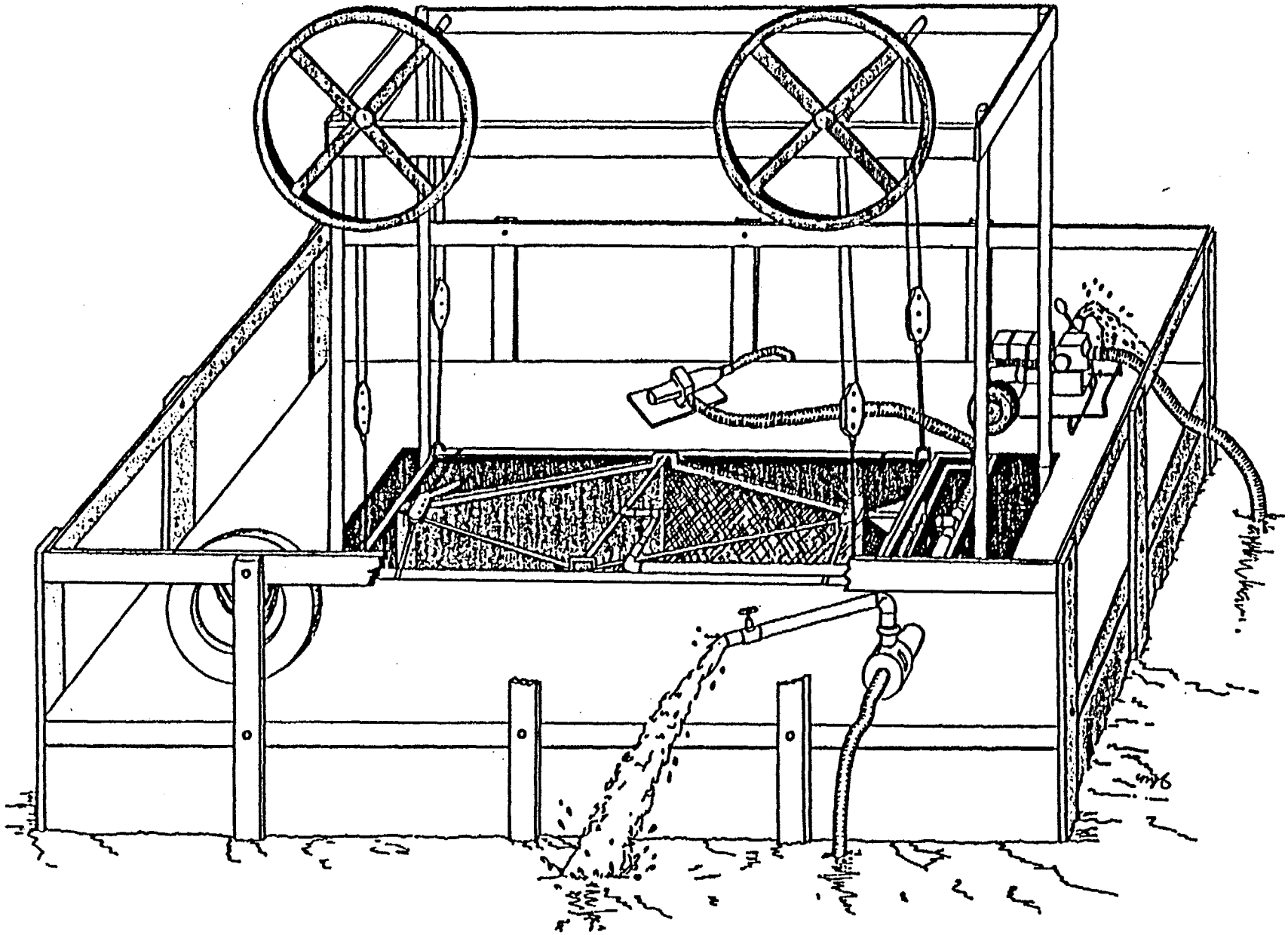


Figure 3-5. Design of ichthyoplankton sampling flumes and support structure used during entrainment survival studies at the Roseton Generating Station, 1980.

located at river water level. Siphoning, which was obtainable only during 3 and 4 circulating pump operation (commencing on 4 June) provided a continuous flow of up to 1,500 liters per minute. The siphon flow was bypassed away from the flume when not required for sampling. A fraction of the siphon flow was sometimes diverted to maintain desired through-screen velocities (<0.15 ft/sec). The discharge diffuser flume (Station RDD) was connected directly to the second, running south from the mooring cell (Figure 3-1), of 14 discharge diffuser ports via a 15.2-cm hose (Figure 3-6). The rate of flow through the discharge diffuser flume was dependent upon the number of CWPs in operation at the time of sampling. When the possibility of flume overflow occurred due to high input velocities, the flume was raised. The additional head sufficiently slowed the flow of sample water entering the Station RDD flume to eliminate the potential for overflow.

A primary objective in the operation of all five sampling devices was to maintain the cross-sectional rate of filtration (through-screen velocity) through the filtering screens $\leq$0.15 ft/sec to minimize abrasion of the organisms. This was successfully accomplished at all but one station. At Station RIF, during the first three weeks of sampling, crews experienced difficulty in maintaining the intake flume at the predetermined depth in the raft well. The flume occasionally floated up, and as a result the head differential decreased and the rate of filtration increased for unknown time periods during some samples. All samples where measurements exceeded the 0.15 ft/sec rate of filtration by .05 ft/sec or greater were voided. However, these measurements (depth of sample water in the flow expansion portion) were routinely taken only once during the first 5 minutes of the 15-minute sampling interval. Therefore, some Station RIF samples have been processed and the results included in the data base even though the filtration rate may have exceeded 0.15 ft/sec. A more effective hold down was developed by the fourth week and the problem was no longer experienced.

An ambient water injection system was used at all five sampling stations. This system was designed to minimize the thermal exposure (time-temperature) by reducing the delta-T by about 50 percent in the sampling gear at the discharge site. Mitigation of thermal exposure was necessary because normal through-plant transit time is about 10 minutes, as compared to 40 minutes of exposure (typically) in the larval table or flume (sampling time plus table draining time). Water at ambient temperature was pumped from the river through an inline (505-µm) filter and into the injection system. The nozzles of the injection system were designed to diffuse the cooler ambient water into the heated discharge water at a rate of approximately 75 liters per minute. The flow of ambient water into the injector was started at the beginning of sampling and continued for the duration of the collection (15 minutes). The use of an ambient injection system has been shown to reduce the delta-T in the collection box by 42-47 percent (EA 1978c). For the three ichthyoplankton sampling flumes, this system also served as a continuous wash to gently remove organisms and debris from vertical screen panels.

Between collections the tables and flumes were thoroughly washed (post-sample rinse) with a vigorous spray from a garden hose to remove any remaining detritus or organisms. Table washes were concentrated into a codend container and preserved with 10 percent buffered formalin for subsequent examination.

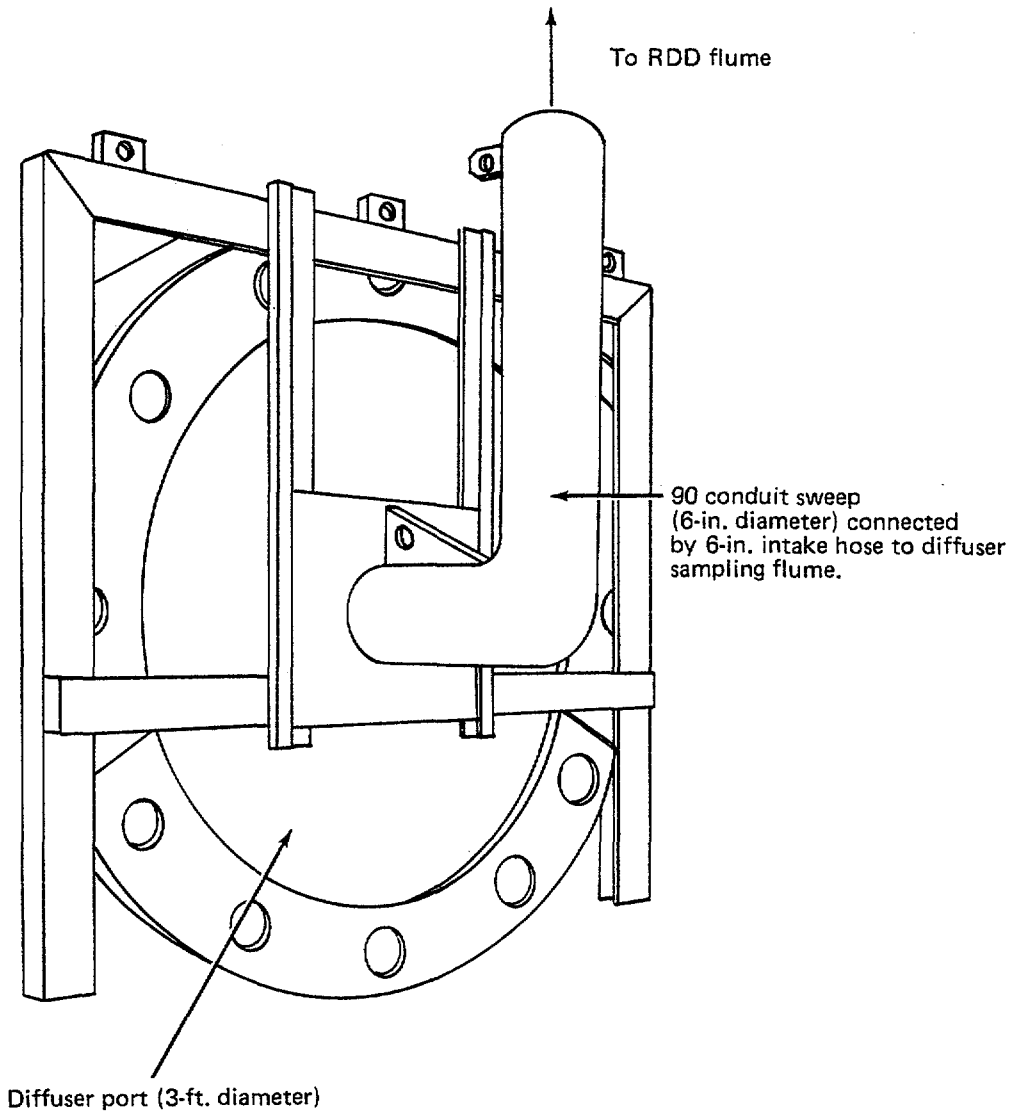


Figure 3-6. Schematic drawing of the sampling hose intake at the Roseton plant discharge diffuser.

These washes served as a quality control measure to assure efficient organism removal. Any organisms found in these washes were identified and enumerated (Appendix C) but not used for any survival analyses and were included in the species composition.

Field Processing

Intake and discharge samples were sorted simultaneously in an onsite laboratory. Samples were thoroughly sorted until all live, stunned, and dead organisms were removed. At the conclusion of the sorting, the remaining detritus was preserved and transferred to EA's Central Laboratory in Middletown, New York. Error analysis was then performed to determine sorting efficiency. Any organisms found in the error analysis were counted but not included in survival estimates or species composition (Appendix F). Larval and juvenile fish were classified as live, stunned, or dead on the basis of the following criteria:

Live - swimming vigorously, no orientation problems, behavior normal.

Stunned - swimming abnormally, struggling, no movement except in response to gentle probing.

Dead - no vital life signs; no body or opercular movement, no response to gentle probing.

Fragments of organisms were included in the dead count if 50 percent or more of an organism was found. These criteria were chosen to avoid counting two pieces of the same organism as two separate organisms.

Larvae that were either live or stunned were carefully transferred to holding containers (0.9-liter glass Mason or similar jars) with live and stunned fish placed in separate containers. Care was exercised to separate the very small larvae from the larger larvae or juveniles to reduce the possibility of predation or cannibalism. A maximum of five larvae was placed in each container which was aerated and maintained in an ambient water (intake temperature) trough. Initially, dead specimens were preserved for later identification. Live and stunned organisms from the initial sort were examined at 3, 6, 12, 24, and 48 hours after sample collection. Larvae were not fed during the holding period and no fungicide was applied to the holding containers. At each check, dead organisms were removed from the holding jars and preserved in formalin for later identification. All organisms alive after 48 hours were also preserved.

3.2 LABORATORY PROCESSING

Species and life stage determinations were made at EA's Central Laboratory by reference to the available literature (see Reference section) and reference collection. Total length (TL) to the nearest mm of up to 25 organisms of each taxon and life stage per sample was measured in the laboratory with an ocular or stage micrometer. Quality assurance procedures in the field and laboratory consisted of a color-coded labeling system for jars and vials and records of

the number of live and dead at each check time. Quality and consistency of the survival studies was also assured by strict adherence to standard operating procedures (EA 1980b).

3.3 DATA ANALYSIS

In 1980, some fish could not be identified to a life stage because key characteristics were damaged or not apparent. The proportion of fish not identifiable to life stage was relatively small (<7 percent). These fish were excluded from all survival analyses.

The effects of entrainment were measured by comparing initial survival at the discharge with initial intake survival, which served as a control. Initial survival was calculated as the ratio of organisms found alive to the total number collected both alive and initially dead:

$$P_I \text{ or } P_D = \frac{\text{Initial number alive (live and stunned)}}{\text{Total number collected}}$$

where

P_I = proportion surviving at the intake

P_D = proportion surviving at the discharge.

Furthermore, to facilitate a gear comparison between the gear used at the three discharge stations, initial survival proportions for striped bass, white perch, and clupeids were analyzed with a log-likelihood ratio test (G-test; Sokal and Rohlf 1969). This test incorporated data which were subsetted to include only those samples collected when the average flow rate through the gear was between 500 and 1,400 liters per minute (Appendix D). These rates were chosen after a careful examination of the range of flow rates to insure that all samples were collected during similar gear operation. These data were also limited to samples collected from 4 June 1980 to 31 July 1980 since sampling at Station RDF did not begin until 4 June.

Although initial survival estimates were based on all organisms initially collected, extended survival was calculated for those organisms initially classified as live or stunned and monitored throughout the 48-hour period subsequent to collection (normalized survival). Extended survival was therefore based on an initial normalized proportion surviving of 1.0, as follows:

$$P_{I_i} \text{ or } P_{D_i} = \frac{\text{Number alive (live or stunned) at observation time (i)}}{\text{Total number initially alive (live or stunned)}}$$

where

P_{I_i} = normalized proportion surviving at the intake at observation time i

P_{D_i} = normalized proportion surviving at the discharge at observation time i.

Differences in extended survival distribution between stations were tested with Gehan's non-parametric test (Gross and Clark 1975). The probability of Type I error (α level) was maintained at 0.05 throughout all comparisons. No test was performed when the sample size was less than 10 organisms at any station.

For entrainment survival (S_e) estimation, the non-normalized initial survival of all collected organisms was evaluated. Survival at the discharge station is the result of the conditional probabilities of surviving the entrainment process and the sampling process. Assuming there is no interaction between the two stresses:

$$P_D = P_s \times P_e$$

where

P_s = probability of surviving sampling

P_e = probability of surviving entrainment.

The intake survival (P_I) was used as an estimate of P_s, and entrainment survival, S_e, was quantified by use of the equation:

$$S_e\ (\%) = P_e = \frac{P_D}{P_I} \times 100.$$

The value of S_e represents the percentage of organisms that survived passage through the plant's circulating water system.

4. RESULTS

Ichthyoplankton entrainment survival sampling conducted at the Roseton Generating Station from 26 May - 31 July 1980 resulted in the total collection of 1,431 samples at five stations; Roseton Intake Pump/Larval Table (RIP), Roseton Intake Flume (RIF), Roseton Discharge Pump/Larval Table (RDP), Roseton Discharge Flume (RDF), and Roseton Discharge Diffuser Flume (RDD). Average volume sampled ranged from $10.7m^3$ (Station RIP) to $15.5m^3$ (Station RDP). During sampling, water temperature ranged from 17.0 C to 29.0 C at the intake and from 21.5 C to 34.5 C at the discharge (Appendix D).

4.1 SPECIES COMPOSITION AND LENGTH FREQUENCY

A total of 4,965 fish eggs and larvae, representing 17 taxa, were collected in all samples (Table 4-1). The most abundant taxa collected was clupeids (predominantly alewife and blueback herring and excluding American shad), representing 43.5 percent of the total catch. Striped bass and white perch were the next most abundant species, together comprising 37.9 percent of the total catch. American shad (n=178) represented 3.6 percent of the total catch. Combined, these four taxa made up more than 85 percent of the ichthyoplankton collected. Other species collected included bay anchovy, minnows and carps, and tessellated darter although in too few numbers to provide for meaningful survival analyses. Post yolk-sac larvae were the most frequently collected life stage for all abundant taxa, whereas significant numbers of yolk-sac larvae were taken only for striped bass (n=568). Only 46 eggs (42 bullhead and 4 striped bass) were collected probably due to the actual egg spawning season having passed for white perch and clupeids, historically the most abundant in terms of spring egg collections at Roseton and Danskammer (EA 1976b, 1978d).

Almost all striped bass collected measured less than 12 mm with most between 6-9 mm (Figure 4-1). For striped bass, length-frequency distributions for intake and discharge stations were very similar, although most of the larvae were collected at stations RIP and RDP (Figure 4-1 and Appendix B).

Most white perch collected also measured less than 12 mm, however, a size difference between intake and discharge collections was evident (Figure 4-2). In general, the discharge samples contained a greater proportion of larger individuals than the intake stations (Figure 4-2 and Appendix B). This pattern suggests a possible size stratification or possible avoidance of the gear by the larger, more mobile white perch at the intake.

Clupeids displayed a wide range of sizes in the collections at all stations. Lengths predominantly ranged from 6 to over 24 mm with most fish between 15 and 21 mm (Figure 4-3). This pattern suggests an earlier spawn than for either striped bass or white perch and hence larger sizes during the sampling period. The wide size range could be attributed to the prolonged spawning season of the clupeids with the alewife spawning first followed by blueback herring shortly thereafter. For the clupeids, similar length distribution patterns were noted for both intake and discharge collections (Figure 4-3 and Appendix B).

TABLE 4-1 SPECIES COMPOSITION OF ICHTHYOPLANKTON COLLECTED DURING THE ENTRAINMENT SURVIVAL STUDY CONDUCTED AT THE ROSETON GENERATING STATION: 24 MAY - 31 JULY 1980

	STATION																							
	RIF*				RDF*				RDD*				RIF*				RDF*				TOTAL			
TAXON	YSL	EYSL	JUV	UID	YSL	EYSL	JUV	UID	YSL	EYSL	JUV	UID	YSL	EYSL	JUV	UID	YSL	EYSL	JUV	UID	YSL	EYSL	JUV	UID
Clupeids (excluding American shad)	0	287	0	0	0	350	8	0	0	361	9	0	0	531	39	3	0	554	20	1	0	2083	76	4
Striped bass	101	83	0	0	36	72	8	0	55	95	3	0	174	164	16	0	202	260	17	0	568	674	44	0
White perch	3	69	0	0	1	105	4	0	4	126	8	0	3	128	4	0	1	136	5	0	12	564	21	0
Unidentified Morone	0	6	0	19	4	15	1	11	0	9	1	35	1	21	0	54	0	19	0	49	5	70	2	168
Bay Anchovy	0	9	0	0	0	29	0	0	0	29	0	0	0	7	1	0	0	9	0	0	0	83	1	0
Carps and Minnows	17	6	0	0	7	9	0	0	4	13	1	0	15	25	0	0	12	17	0	0	60	70	1	0
American shad	0	4	0	0	0	32	1	0	0	9	1	0	0	38	2	0	0	74	17	0	0	157	21	0
Rainbow smelt	0	5	0	0	0	4	0	0	0	0	2	0	0	8	9	0	0	9	3	0	0	26	14	0
Tessellated darter	5	3	0	0	0	0	2	0	1	7	3	0	6	13	0	0	8	3	2	0	20	26	7	0
Sunfishes	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Killifishes	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	2	0	0	2	3	0
Yellow perch	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	3	0	0
Atlantic silverside	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0
Brown bullhead	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0
Unidentified perch	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	0	0	5	0	0	0
American eel	0	0	1	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	5	0	0	1	8	0
Unidentified	0	0	0	22	0	0	0	10	0	0	0	29	0	0	0	65	0	0	0	41	0	0	0	167
Total	127	474	1	41	48	616	26	21	64	649	29	64	200	940	72	122	227	1082	72	91	666	3761	200	339

* RIF = Roseton Intake Flume
RDF = Roseton Discharge Flume (Seawall)
RDD = Roseton Discharge Diffuser Flume
RIP = Roseton Intake Pump/Larval Table
RDP = Roseton Discharge Pump/Larval Table (Seawall).

NOTE: Includes larvae collected in the post-sample rinse.

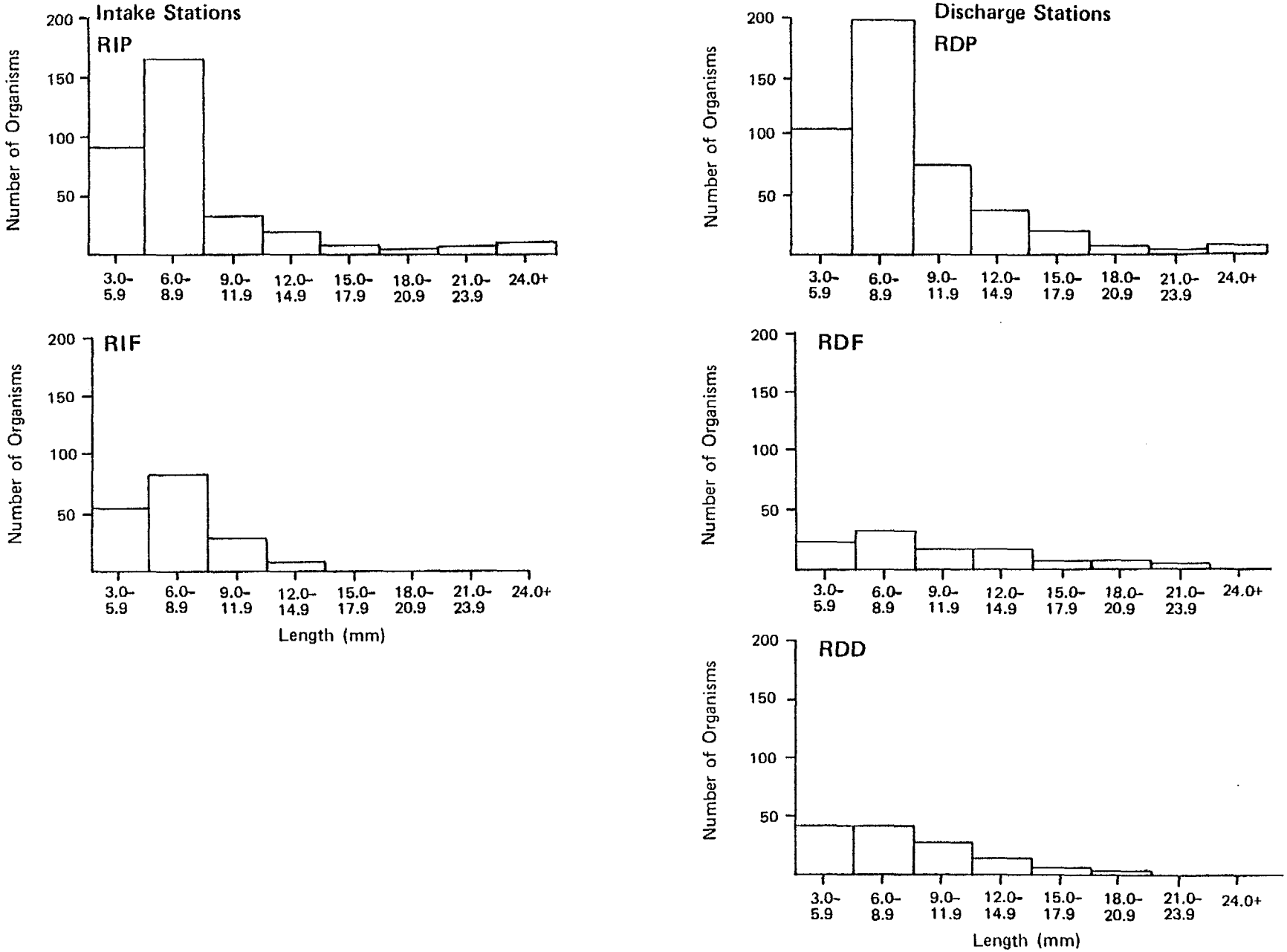


Figure 4-1. Length frequency of striped bass collected at each station during the entrainment survival study conducted at the Roseton Generating Station, 26 May – 31 July, 1980.

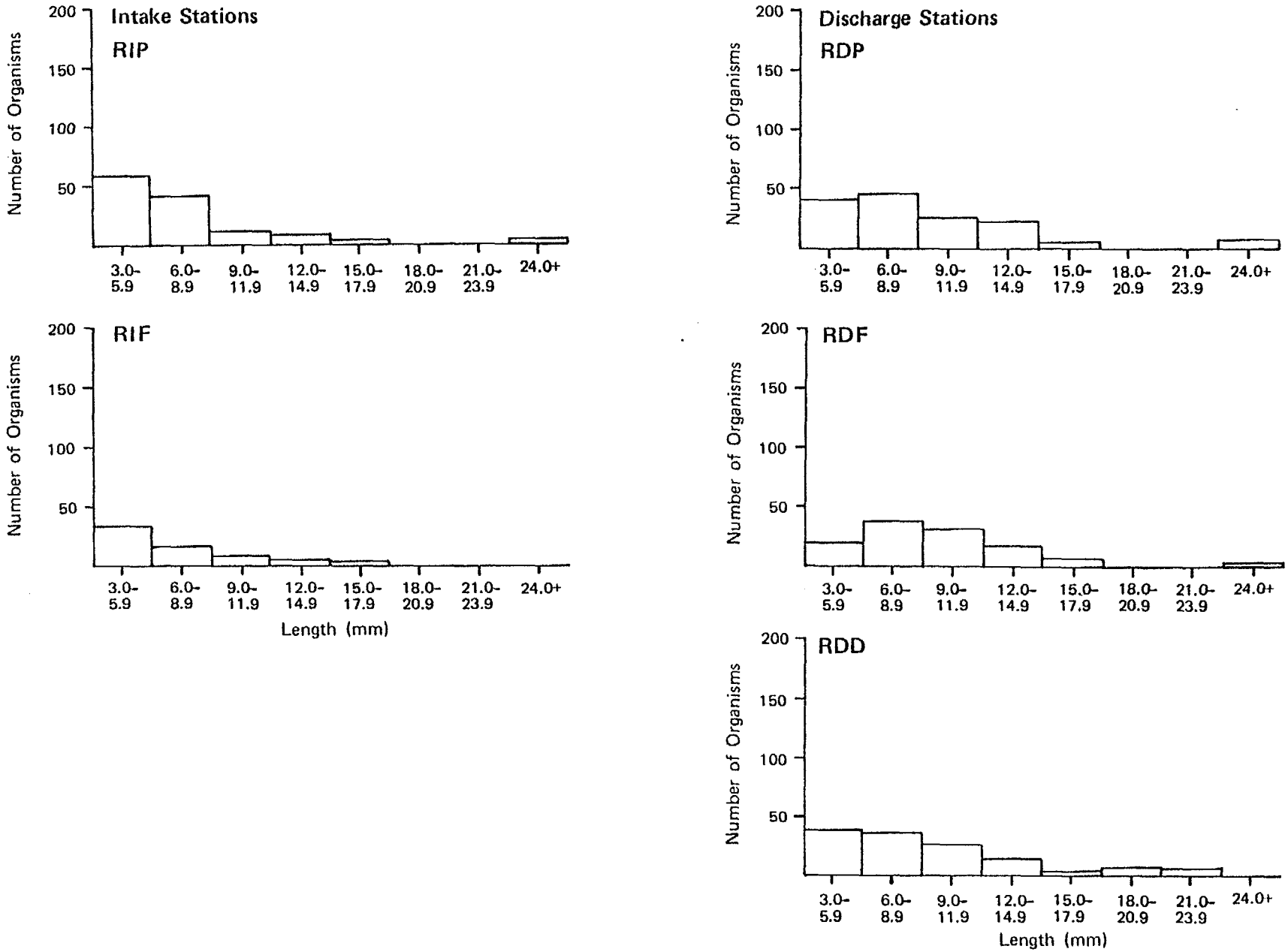


Figure 4-2. Length frequency of white perch collected at each station during the entrainment survival study conducted at the Roseton Generating Station, 26 May – 31 July, 1980.

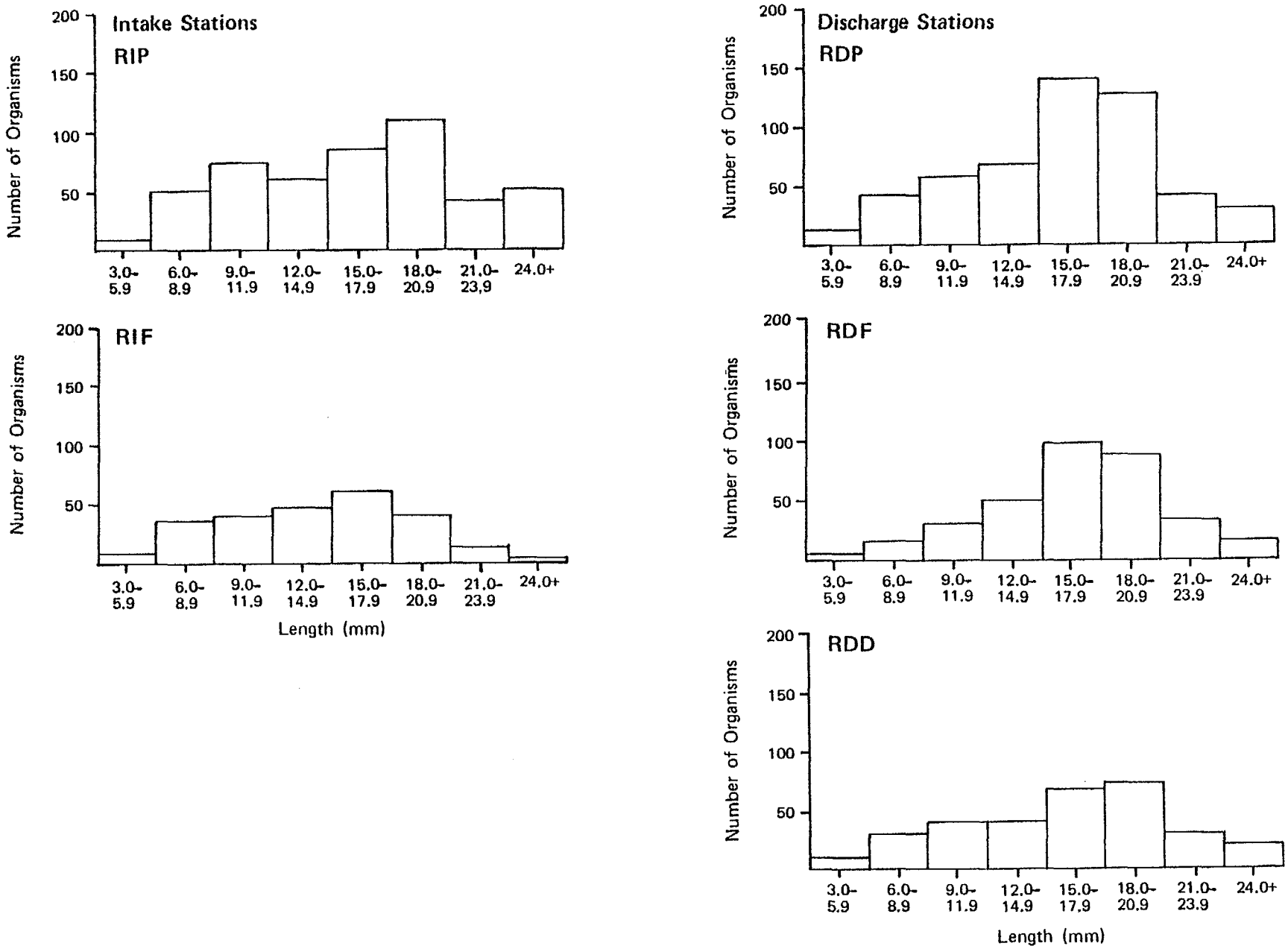


Figure 4-3. Length frequency of clupeids (excluding American shad) collected at each station during the entrainment survival study conducted at the Roseton Generating Station, 26 May – 31 July, 1980.

American shad were collected predominantly at stations RIP and RDP. Most larvae (64.4 percent) measured over 24.0 mm suggesting an earlier spawn by the American shad than for either striped bass, white perch, or other clupeids collected. The larger sizes of the shad could also be attributed to the relatively large shad hatching size at 7-10 mm (Lippson and Moran 1974).

4.2 INITIAL SURVIVAL

Estimates of initial survival (Table 4-2) were generally lowest for those species considered delicate (clupeids, bay anchovy) and much higher for the relatively hardy species (Morone sp., carp and minnows, and tessellated darter). For those few species for which all life stages were collected, initial survival was typically lowest for yolk-sac larvae and highest for the juvenile life stage. This pattern is consistent with past field and laboratory studies which have also indicated that survival generally increases with larval growth and development (EA 1978e, 1979).

Initial survival rates for Station RIF were lower than the other intake Station RIP with the exception of clupeids which displayed higher survival at Station RIF. In fact, initial survival at Station RIF was often even lower than for the discharge stations despite the fact that this gear was specifically designed to minimize sampling stress. Undoubtedly, these unexpected results reflect the sampling difficulties at this station previously discussed (Chapter 3). Consequently, these estimates cannot be viewed as valid measures of control survival for that sampling gear.

To investigate the factors influencing initial survival, initial survival rates were calculated for each sampling station and selected length intervals of the three key taxa: striped bass, white perch, and clupeids (excluding American shad). With few exceptions, survival rates among all five sampling stations for striped bass (Figure 4-4) and white perch (Figure 4-5) were generally similar and increasing with length. Initial survival at the intake was not consistently higher than at the discharge suggesting that mortality due to entrainment is relatively small compared to mortality due to sampling stress for these two species. This appears to be particularly true for the younger, more sensitive larvae.

For clupeids, an examination of the plot of length versus initial survival revealed a general increase with length until >24 mm when an abrupt decrease occurred in four out of the five sampling stations (Figure 4-6). This change might be attributed to a decrease in the ability of the larvae to survive sampling or entrainment stresses and associated temperature stress as they grow to 24 mm or greater.

Initial survival was consistently higher for intake stations than discharge stations for clupeids, suggesting that entrainment is a significant source of mortality for this taxa. It appears that clupeids are more sensitive to the entrainment experience than either striped bass or white perch. This was true until the >24 mm size where the difference among stations was much smaller; and as noted, overall survival was lower than for the smaller larvae. This suggests that larger clupeid larvae (>24 mm) appear better able to survive the entrainment process but are more sensitive to sampling stresses. At Station

TABLE 4-2 INITIAL SURVIVAL OF EACH TAXON COLLECTED DURING ENTRAINMENT SURVIVAL STUDIES AT THE ROSETON GENERATING STATION, 26 MAY - 31 JULY 1980

Taxon	Station(a)	Yolk-Sac Larvae		Post-Yolk-Sac Larvae		Juveniles	
		No. of Fish	Proportion Surviving	No. of Fish	Proportion Surviving	No. of Fish	Proportion Surviving
Striped bass	RIP	173	0.353	164	0.524	16	1.000
	RIF	92	0.326	81	0.383	0	---
	RDP	200	0.310	260	0.462	17	0.706
	RDF	36	0.306	71	0.606	8	0.875
	RDD	51	0.235	94	0.489	3	1.000
White perch	RIP	3	0	126	0.452	4	0.750
	RIF	2	0	68	0.368	0	---
	RDP	1	0	135	0.304	5	0.800
	RDF	1	0	105	0.590	4	0.750
	RDD	3	0	126	0.373	8	0.875
Unidentified Morone	RIP	1	0	21	0.095	0	---
	RIF	0	---	6	0	0	---
	RDP	0	---	19	0.105	0	---
	RDF	4	0	15	0.267	1	1.000
	RDD	0	---	9	0.333	1	1.000
Clupeids (excluding American shad)	RIP	0	---	528	0.295	38	0.368
	RIF	0	---	284	0.525	0	---
	RDP	0	---	548	0.067	20	0
	RDF	0	---	350	0.220	8	0.250
	RDD	0	---	354	0.306	9	0.222
American shad	RIP	0	---	38	0.421	2	0.500
	RIF	0	---	4	0.750	0	---
	RDP	0	---	74	0.243	17	0
	RDF	0	---	32	0.313	1	1.000
	RDD	0	---	9	0.111	1	0
Silversides	RIP	0	---	1	1.000	0	---
	RDF	0	---	0	---	0	---
	RDP	0	---	0	---	0	---
	RDF	0	---	0	---	0	---
	RDD	0	---	0	---	0	---

(a) RIP = Roseton Intake Pump/Larval Table
RIF = Roseton Intake Flume
RDP = Roseton Discharge Pump/Larval Table (Sealwell)
RDF = Roseton Discharge Flume (Sealwell)
RDD = Roseton Discharge Diffuser Flume.

TABLE 4-2 (CONT.)

Taxon	Station(s)	Yolk-Sac Larvae		Post-Yolk-Sac Larvae		Juveniles	
		No. of Fish	Proportion Survivins	No. of Fish	Proportion Survivins	No. of Fish	Proportion Survivins
Unidentified percids	RIP	1	0	0	---	0	---
	RIF	0	---	0	---	0	---
	RDP	3	0	0	---	0	---
	RDF	0	---	0	---	0	---
	RDD	0	---	0	---	0	---
Brown bullhead	RIP	0	---	0	---	0	---
	RIF	1	1.000	0	---	0	---
	RDP	0	---	0	---	1	0
	RDF	0	---	0	---	1	1.000
	RDD	0	---	0	---	0	---
American eel	RIP	0	---	0	---	1	1.000
	RIF	0	---	0	---	1	1.000
	RDP	0	---	0	---	5	1.000
	RDF	0	---	0	---	0	---
	RDD	0	---	0	---	1	1.000
Bay anchovy	RIP	0	---	7	0	1	0
	RIF	0	---	9	0.222	0	---
	RDP	0	---	9	0.111	0	---
	RDF	0	---	29	0	1	0
	RDD	0	---	28	0.036	0	---
Tesselated darter	RIP	6	0.167	13	0.923	0	---
	RIF	5	0.400	3	0.667	0	---
	RDP	7	0.143	3	0.667	2	0.500
	RDF	0	---	0	---	2	1.000
	RDD	0	---	7	0.857	3	0.667
Rainbow smelt	RIP	0	---	8	0.125	9	0.667
	RIF	0	---	5	0.400	0	---
	RDP	0	---	9	0	3	0
	RDF	0	---	4	0	0	---
	RDD	0	---	0	---	2	0
Carps and minnows	RIP	15	0.067	25	0.720	0	---
	RIF	17	0.059	6	0.330	0	---
	RDP	11	0	17	0.588	0	---
	RDF	7	0	9	0.556	0	---
	RDD	4	0.250	13	0.615	1	1.000

TABLE 4-2 (CONT.)

Taxon	Station(s)	Yolk-Sac Larvae		Post-Yolk-Sac Larvae		Juveniles	
		No. of Fish	Proportion Surviving	No. of Fish	Proportion Surviving	No. of Fish	Proportion Surviving
Yellow perch	RIF	0	---	2	1.000	0	---
	RIF	0	---	0	---	0	---
	RDF	0	---	1	0	0	---
	RDF	0	---	0	---	0	---
	RDD	0	---	0	---	0	---
Killifishes	RIF	0	---	1	1.000	0	---
	RIF	0	---	1	1.000	0	---
	RDF	0	---	0	---	2	1.000
	RDF	0	---	0	---	1	1.000
	RDD	0	---	0	---	0	---

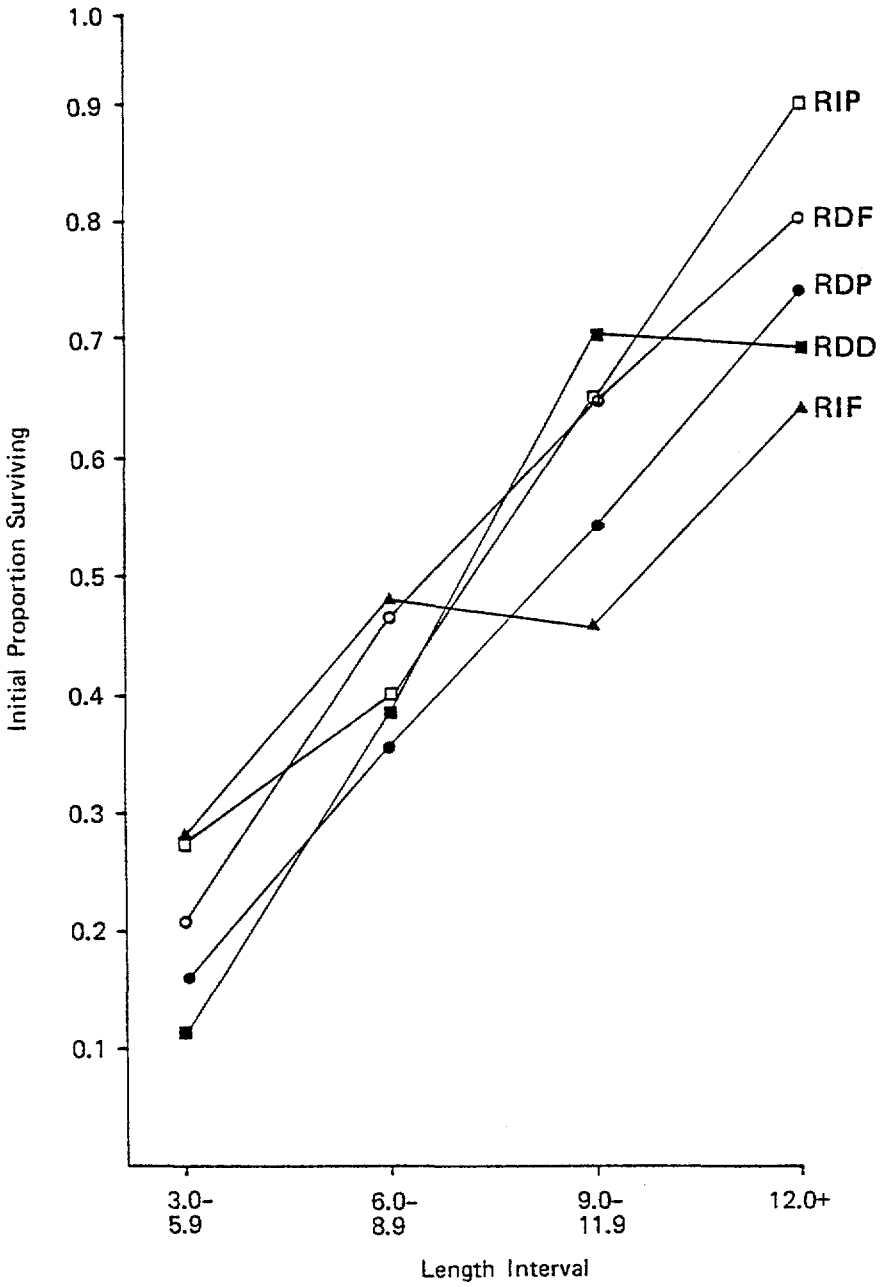


Figure 4-4. Initial survival as a function of length for striped bass collected at five stations during entrainment survival sampling at the Roseton Generating Station, 26 May – 31 July, 1980.

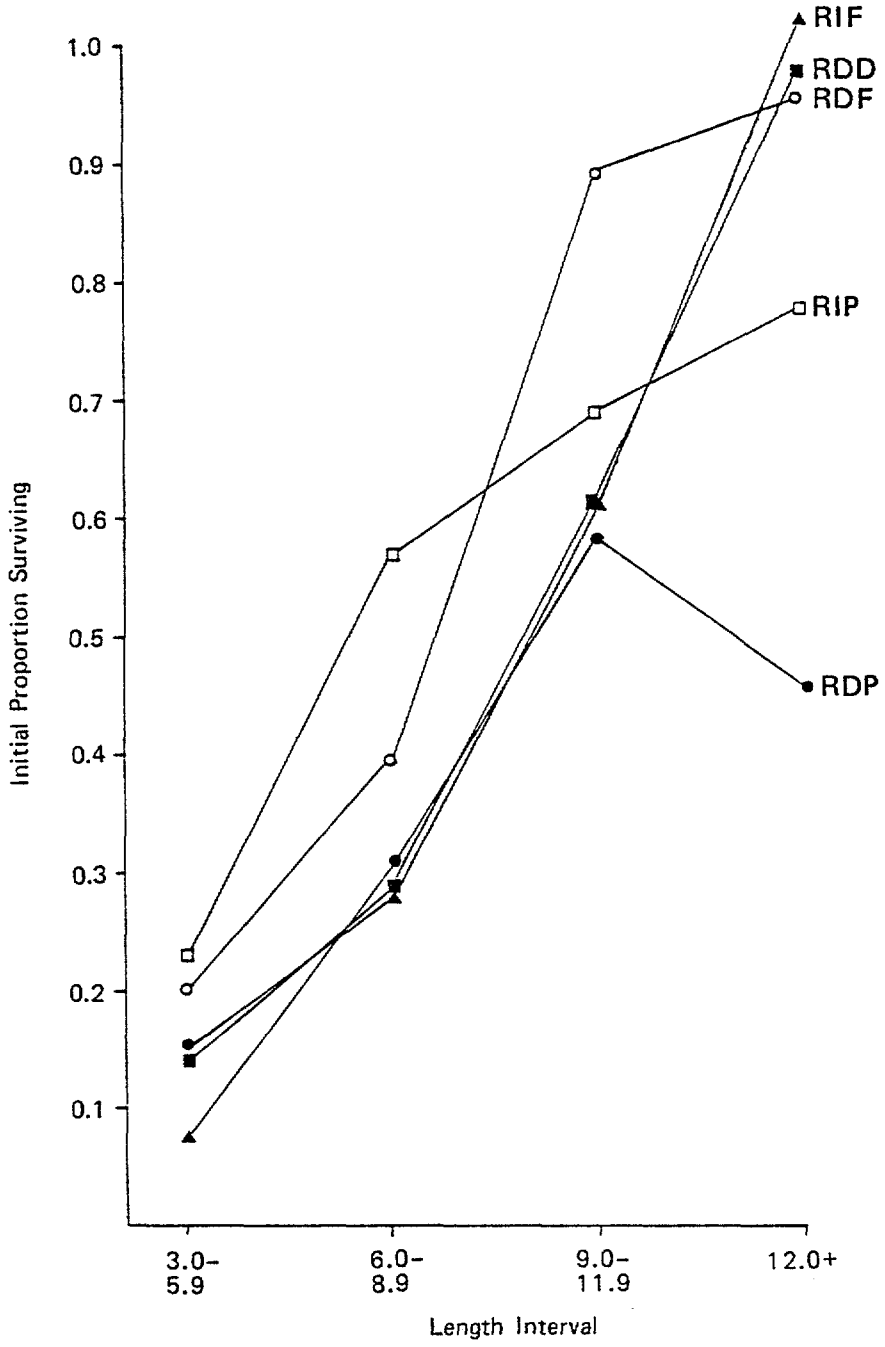


Figure 4-5. Initial survival as a function of length for white perch collected at five stations during entrainment survival sampling at the Roseton Generating Station, 26 May – 31 July, 1980.

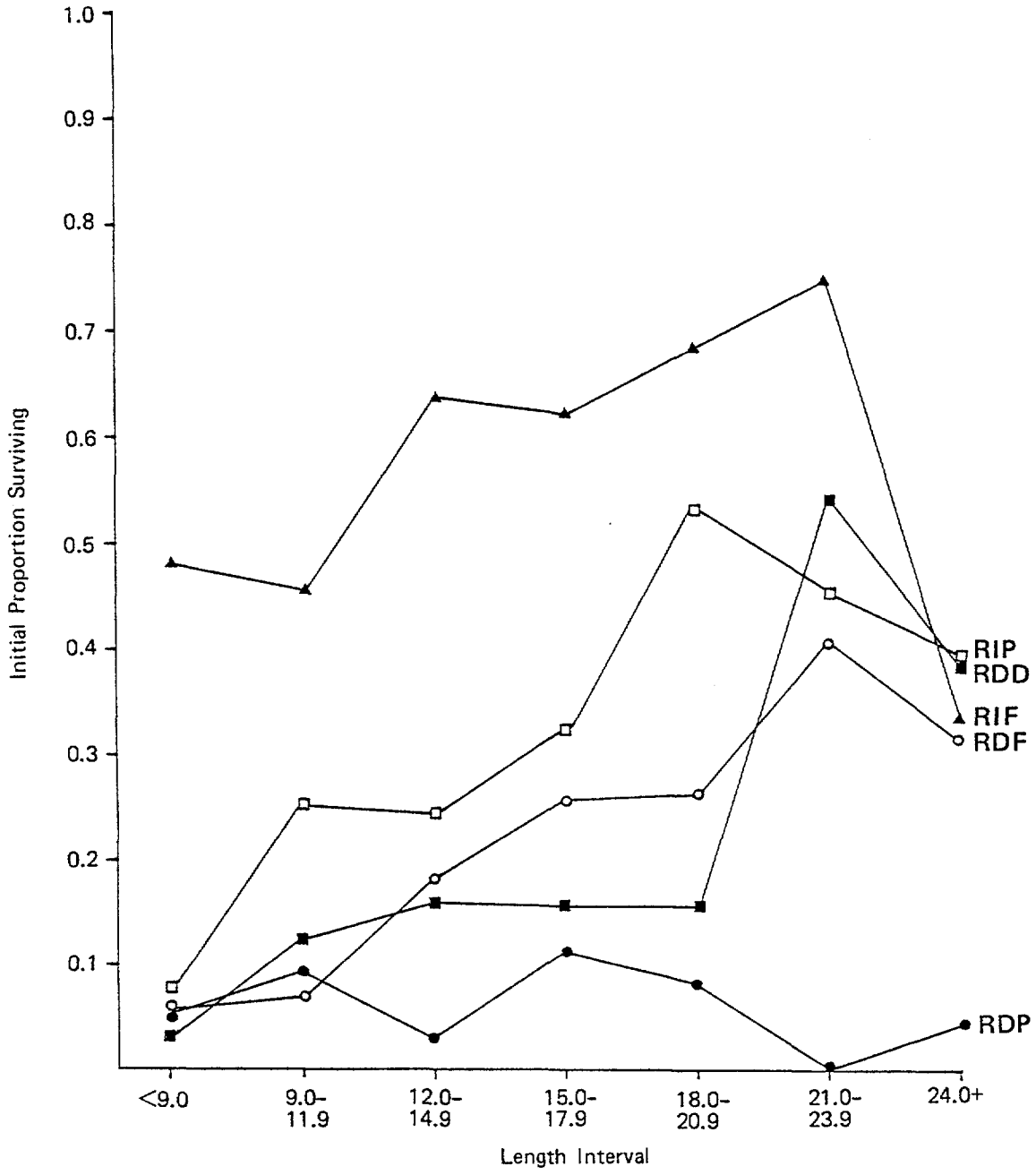


Figure 4-6. Initial survival as a function of length for clupeids (excluding American shad) collected at five stations during entrainment survival sampling at the Roseton Generating Station, 26 May – 31 July, 1980.

RDP, very low clupeid survival probably was caused by the combination of entrainment and sampling stress associated with the pump/larval table. Overall, low discharge survival for the larger larvae might be caused by the addition of thermal stress as the season progresses and water temperatures increase.

American shad post yolk-sac larvae displayed low survival (0.243) at Station RDP and was 0.421 at Station RIP (Table 4-2). Meaningful length analysis could only be performed at Station RDP due to low sample sizes at the four other stations. At Station RDP, survival increased with length until 24.0 mm when survival decreased from a high of 0.33 to 0.20. This pattern is similar to that observed for the other clupeids when survival generally increased with length and usually began to decrease at 24.0 mm.

Comparison of initial survival during periods of 2 and 3 circulating water pump operation at stations RDD and RDP (at Station RDF, too few fish were collected at 2 or 4 CWP operation to be included in the analysis) were made to assess the effect of pump mode on mechanical mortality. These comparisons were made using samples when discharge temperatures were less than 30 C to avoid possible thermal effects. The results of this comparison did not indicate a significant pump mode effect for either striped bass ($G=0.2$, $P \leq 0.05$), white perch ($G=1.4$, $P \leq 0.05$), or clupeids ($G=0.6$, $P \leq 0.05$) indicating that any differences between the two pump modes were not sufficient to affect entrainment survival.

4.2.1 Gear Comparison - Plankton Flume Versus Pump/Larval Table

To investigate the possible effects of sampling gear on estimates of entrainment survival, comparisons of initial survival were made among the three discharge stations for striped bass, white perch, and clupeids using the subsetted data base previously described (500-1400 liters per minute). Two of the stations (RDF and RDD) were sampled with the new plankton flume designed to minimize sampling stress and the other station (RDP) was sampled with the conventional pump/larval table.

The results of this comparison (Table 4-3) indicated that the strongest significant comparison was between mortality and length for both striped bass and white perch demonstrating the overriding effect of larval length on initial survival at all three stations for these two species. For white perch, the three-way interaction and the comparison between sampling station and mortality were also significant. The relationship between mortality and sampling site was the strongest comparison for clupeids although the relationship between mortality and length was also significant.

These patterns were also evident in the plots of initial survival vs. length for selected length intervals at each station (Figures 4-7 through 4-9). It was interesting to note that, although not consistently significant, initial survival was higher at both flume stations in 12 out of the 15 length-specific comparisons made, and in no case was initial survival at the pump/larval table station highest. These results indicate that initial survival was generally higher for the plankton flume; a pattern most pronounced with the delicate clupeid larvae. Reasons for the higher survival in the plankton flume may be related to the lack of pump induced sampling stress with the flume or higher flow rates associated with pump collection.

TABLE 4-3 RESULTS OF A CONTINGENCY TABLE ANALYSIS TESTING THE INTERACTION BETWEEN INITIAL SURVIVAL, SAMPLING STATION, AND LENGTH FOR STRIPED BASS, WHITE PERCH, AND CLUPEIDS (EXCLUDING AMERICAN SHAD) COLLECTED IN DISCHARGE SAMPLES WITH AVERAGE FLOW RATE BETWEEN 500 AND 1,400 LITERS PER MINUTE AT THE ROSETON GENERATING STATION, 4 JUNE - 31 JULY 1990

Comparison	Striped Bass	White Perch	Clupeids
Overall Independence	97.26*	119.71*	112.19*
Mortality vs. Station	3.56	13.59*	63.38*
Station vs. Length	7.45	5.18	11.72
Mortality vs. Length	82.68*	81.98*	17.30*
Three-Way Interaction	3.56	18.96*	19.78

NOTE: * = P ≤0.05.

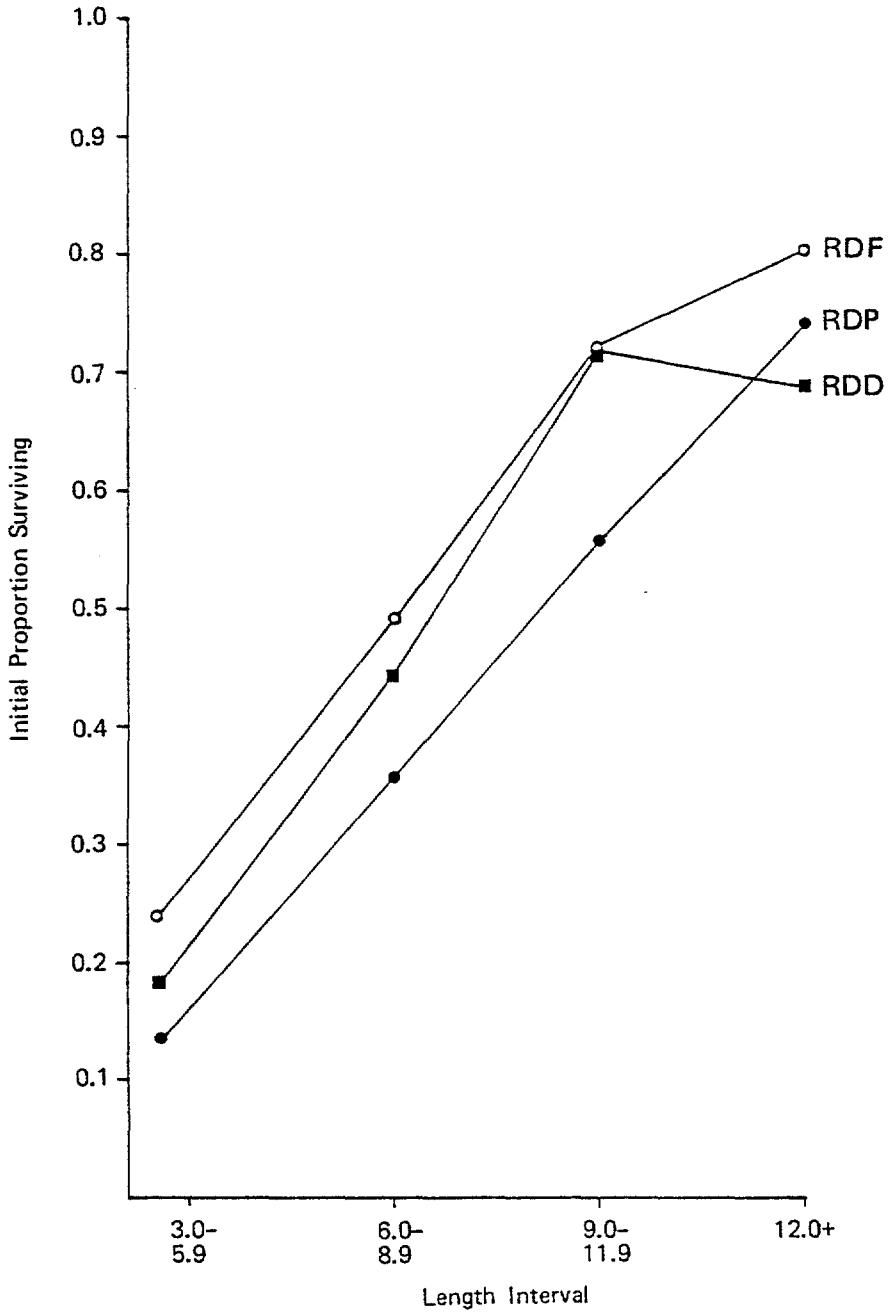


Figure 4-7. Initial survival as a function of length for striped bass collected in discharge samples with average flow rate between 500 and 1400 lpm at the Roseton Generating Station, 4 June – 31 July 1980.

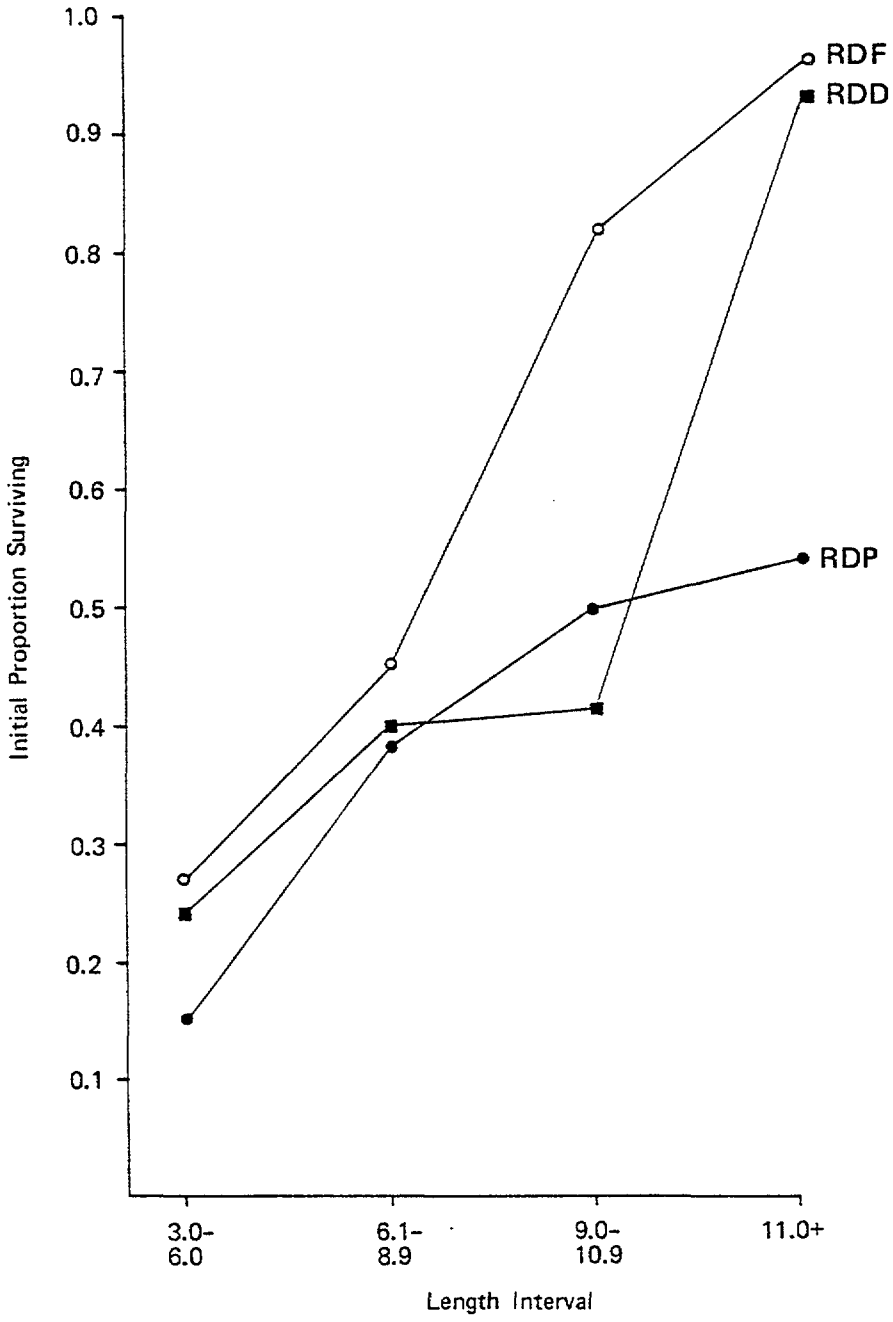


Figure 4-8. Initial survival as a function of length for white perch collected in discharge samples with average flow rate between 500 and 1400 lpm at the Roseton Generating Station, 4 June – 31 July 1980.

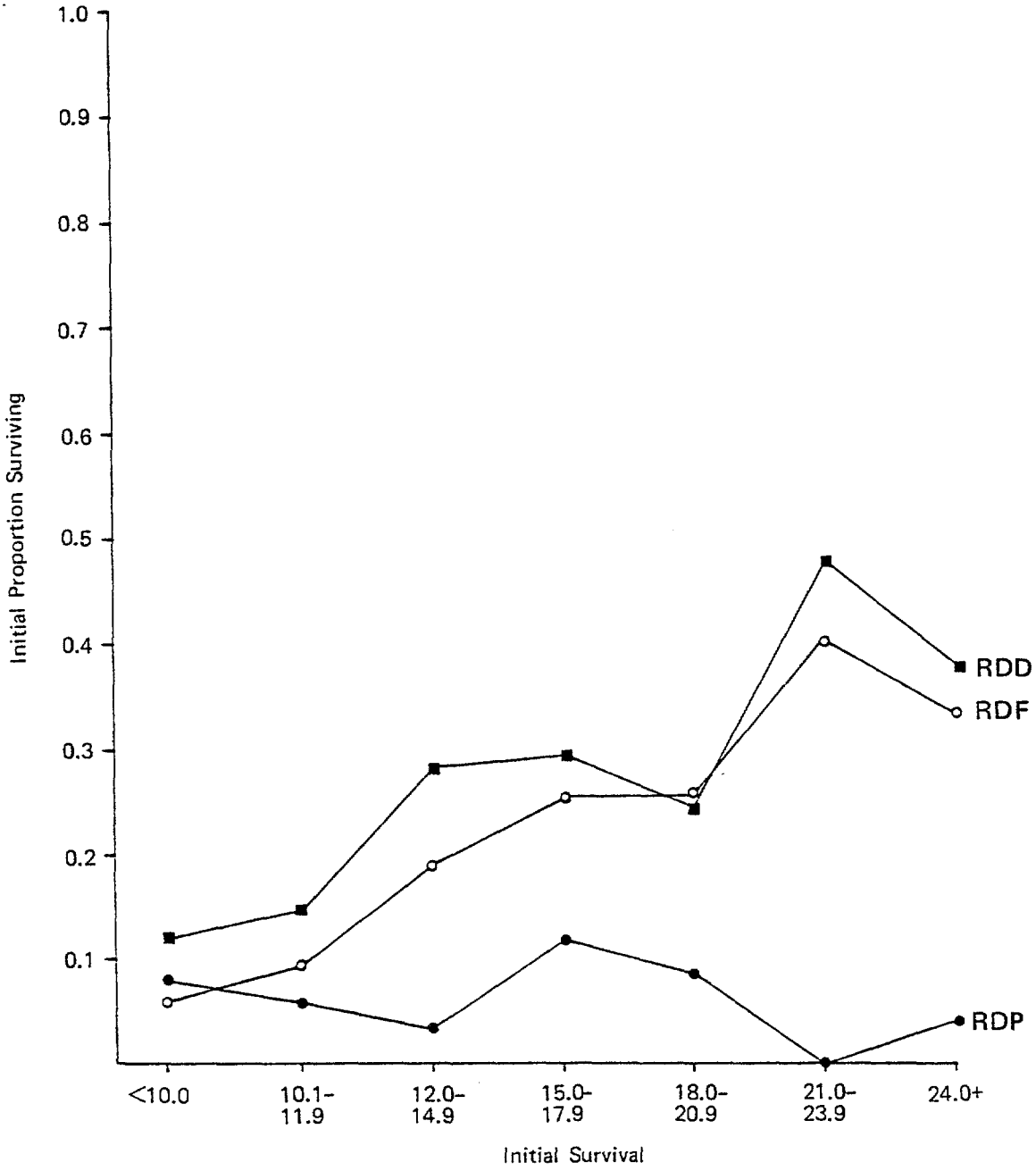


Figure 4-9. Initial survival as a function of length for clupeids (excluding American shad) collected in discharge samples with average flow rate between 500 and 1400 lpm at the Roseton Generating Station, 4 June – 31 July, 1980.

4.3 EXTENDED SURVIVAL

Normalized 48-hour extended survival rates for striped bass, white perch, and clupeids displayed a rapid decrease in survival during the first six hours for both control and entrained samples (Table 4-4). Striped bass and white perch exhibited relatively high (0.600-0.938) survival at the 3-hour interval at both the intake and discharge stations. By the 48-hour interval, survival had decreased to a low of 0.098 for striped bass yolk-sac larvae collected at Station RIP and to a high of 0.938 for striped bass juveniles collected at Station RIP. Extended survival of clupeids at the 3-hour interval ranged from 0.108 at Station RDP to 0.537 at Station RIF. Extended survival at 48 hours decreased to a low of 0 at Station RIP and a high of 0.027 at Station RIF.

Extended survival proportions of striped bass, white perch, and clupeids for each of the discharge stations were compared to the corresponding intake stations using Gehan's non-parametric test (Gross and Clark 1975). Significant differences were noted for 7 out of the the 13 comparisons. However, in only three of these cases were the discharge survival rates consistently lower than the intake (Table 4-4). They all occurred for clupeid post yolk-sac larvae. For striped bass yolk-sac larvae and post yolk-sac larvae and white perch post yolk-sac larvae, extended survival at the discharge was consistently higher than at the intake.

These results do not provide any strong evidence for latent mortality due to power plant entrainment for either Morone species. On the other hand, the results do support an indication of decreased extended survival due to entrainment for clupeids. The differences in extended survival between intake and discharge stations for this taxa were most dramatic in the early observation periods and became much less so later (Figures 4-10 and 4-11). In fact, an examination of extended survival rates for all three taxa suggests that determination of latent mortality is only required for a 6- or 12-hour interval at which point most rates appear to level off. Furthermore, this study indicates that for striped bass and white perch, initial survival is the most appropriate measure of entrainment effects, whereas the results suggest that for clupeids a latent component should be incorporated into any estimate of entrainment survival. However, for this study, estimation of the magnitude of latent effects for clupeids was not possible due to low control survival.

4.4 ENTRAINMENT SURVIVAL

Estimates of entrainment survival were calculated from initial survival rates for the intake and discharge station samples collected with the pump/larval table. Estimates of entrainment survival based on plankton flume sampling were not calculated due to sampling difficulties at the intake (control) station as previously described.

To investigate patterns in entrainment survival, estimates were calculated for distinct length and discharge temperature intervals for each of the three species (Table 4-5). In general, entrainment survival for striped bass and white perch appeared to increase with length, whereas for clupeids, there did not appear to be any relationship between entrainment survival and length. This pattern is similar to that observed for the initial survival estimates. In all but 4 of the 19 cases where survival estimates were available for the

TABLE 4-4 NORMALIZED EXTENDED SURVIVAL OF SELECTED ICHTHYOPLANKTON COLLECTED DURING ENTRAINMENT SURVIVAL STUDIES AT THE ROSETON GENERATING STATION, 26 MAY - 31 JULY 1980

Taxon	Life Stage	Station(a)	Initial No. Alive	Survival Proportions — Time After Collection (Hours) 3	6	12	24	48	Z(b)
Clupeids (excluding American shad)	PYSL	RIP	156	0.352	0.115	0.038	0.006	0.000	
		RDP	37	0.108	0.027	0.027	0.027	0.027	-2.85(c)
		RIF	149	0.537	0.248	0.074	0.040	0.027	
		RDF	77	0.377	0.143	0.013	0.013	0.013	-2.47(c)
		RDD	83	0.265	0.145	0.060	0.024	0.012	-3.60(c)
Striped bass	YSL	RIP	61	0.770	0.541	0.377	0.213	0.098	
		RDP	62	0.823	0.565	0.339	0.274	0.161	-0.67
		RIF	30	0.767	0.667	0.333	0.133	0.100	
		RDF	11	0.818	0.545	0.545	0.545	0.182	0.91
		RDD	12	0.912	0.667	0.500	0.417	0.333	1.21
	PYSL	RIP	86	0.744	0.547	0.500	0.407	0.349	
		RDP	120	0.808	0.692	0.583	0.526	0.483	-2.05(c)
		RIF	31	0.774	0.484	0.387	0.387	0.323	
		RDF	43	0.907	0.860	0.674	0.628	0.558	2.70(c)
		RDD	46	0.804	0.739	0.609	0.565	0.522	1.75
	JUV	RIP	16	0.938	0.938	0.938	0.938	0.938	
		RDP	12	0.917	0.917	0.917	0.917	0.917	0.22
White perch	PYSL	RIP	57	0.719	0.421	0.263	0.228	0.175	
		RDP	41	0.634	0.463	0.341	0.293	0.268	1.53
		RIF	25	0.600	0.400	0.320	0.320	0.280	
		RDF	62	0.823	0.661	0.581	0.532	0.500	2.35(c)
		RDD	47	0.745	0.638	0.638	0.638	0.617	2.26(c)

(a) RIP = Roseton Intake Pump/Larval Table
RIF = Roseton Intake Flume
RDP = Roseton Discharge Pump/Larval Table (Sealwell)
RDF = Roseton Discharge Flume (Sealwell)
RDD = Roseton Discharge Diffuser Flume

(b) Test statistic for differences in survival distributions based on Gehan's non-parametric test (Gross and Clark 1975).

(c) Indicates significance at $\alpha = 0.05$ under the null hypothesis that the extended survival distributions are similar. Critical value for Z is $Z \geq 1.96$.

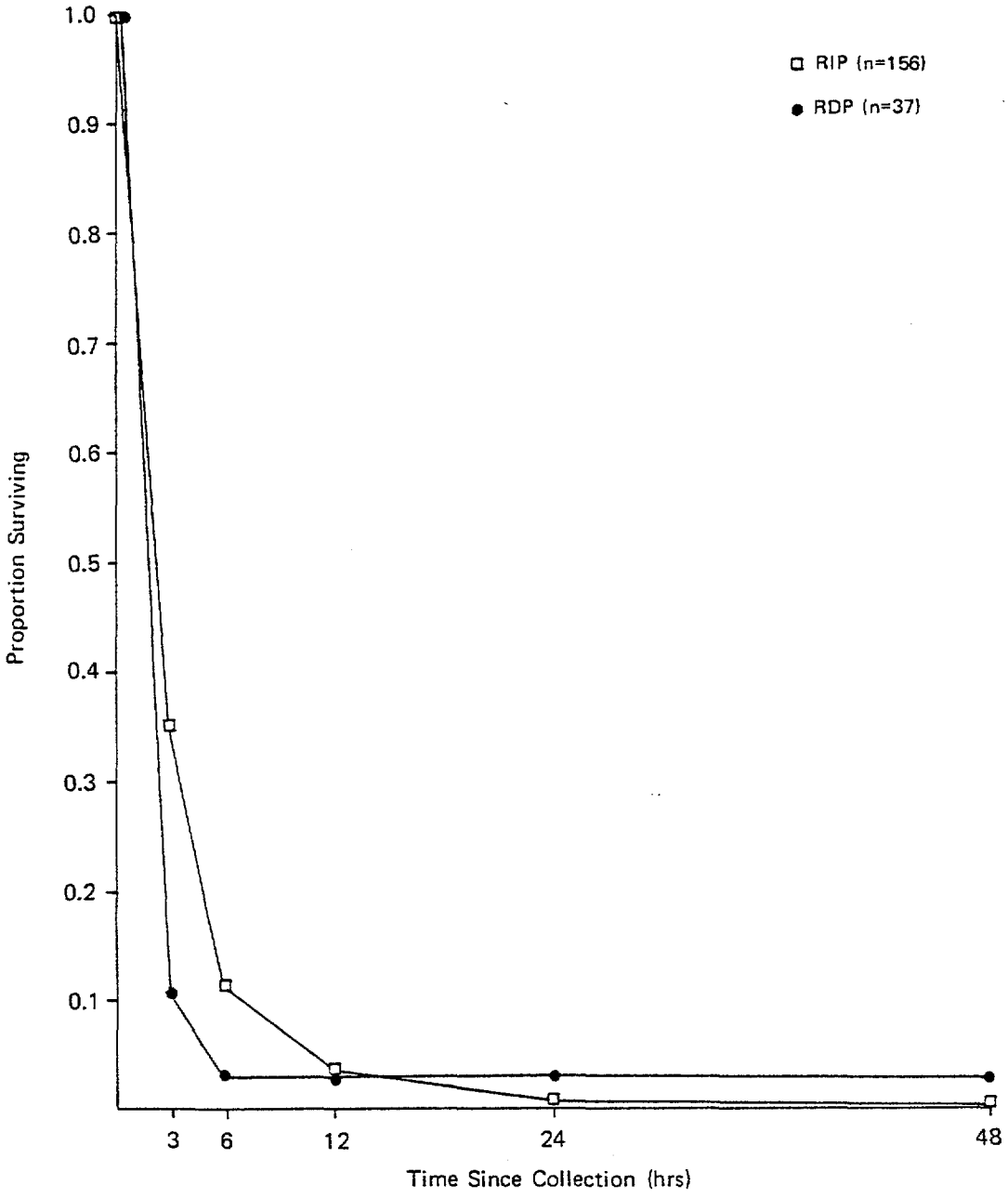


Figure 4-10. Extended survival of clupeid post yolk-sac larvae collected at stations RIP and RDP at the Roseton Generating Station, 26 May – 31 July, 1980.

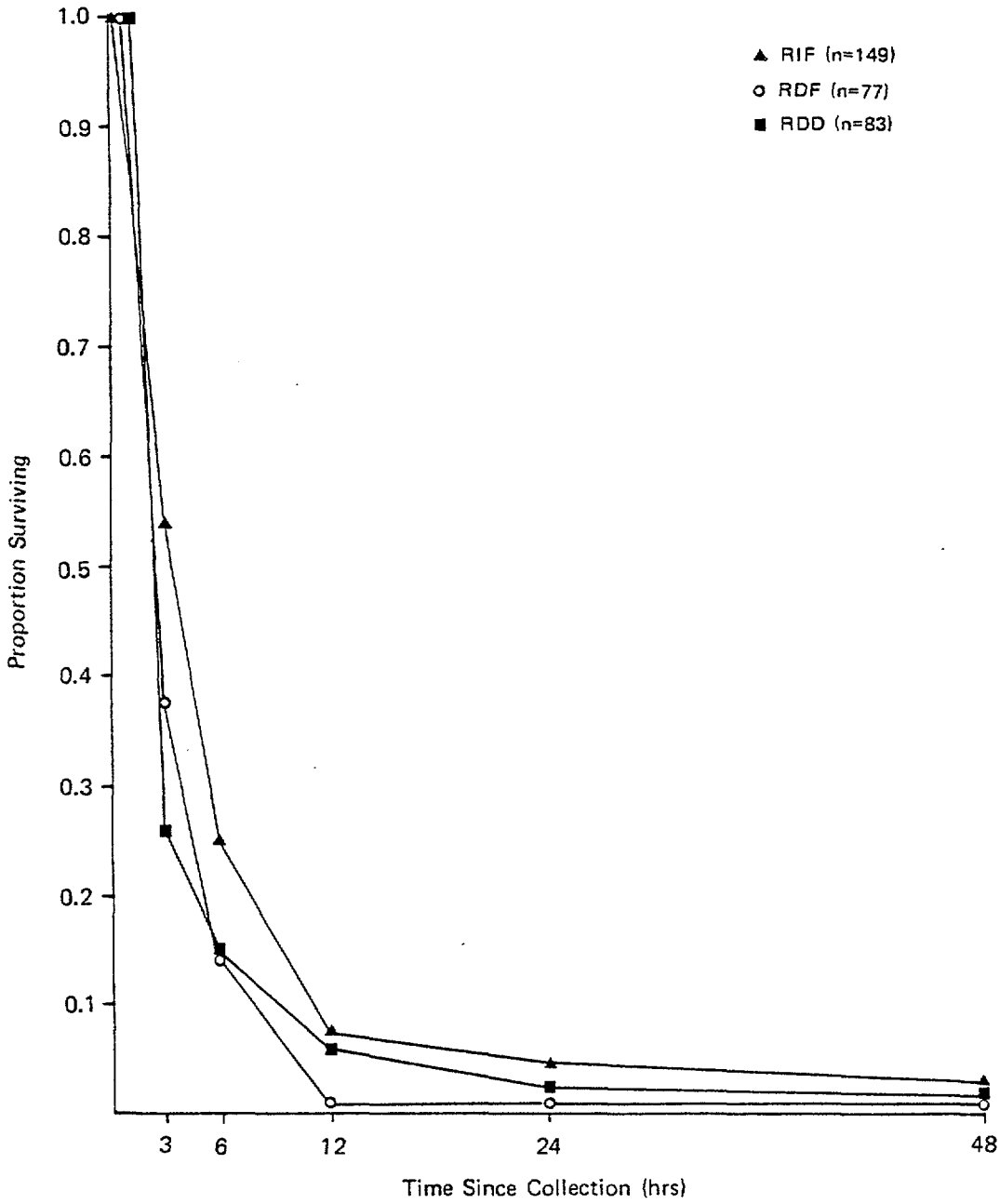


Figure 4-11. Extended survival of clupeid post yolk-sac larvae collected at stations RIF, RDF and RDD at the Roseton Generating Station, 26 May – 31 July, 1980.

TABLE 4-5 ENTRAINMENT SURVIVAL (Se) ESTIMATES FOR DISCRETE LENGTH AND DISCHARGE TEMPERATURE INTERVALS FOR STRIPED BASS, WHITE PERCH, AND CLUPEIDS (EXCLUDING AMERICAN SHAD) COLLECTED AT STATIONS RIP* AND RDP* AT THE ROSETON GENERATING STATION, 26 MAY - 31 JULY 1980

Length Interval (mm)	RIP No. Coll.	Striped Bass ≤30 C N	Striped Bass ≤30 C Se	Striped Bass 30-32.9 C N	Striped Bass 30-32.9 C Se	RIP No. Coll.	White Perch ≤30 C N	White Perch ≤30 C Se	White Perch 30-32.9 C N	White Perch 30-32.9 C Se	RIP No. Coll.	Clupeids ≤30 C N	Clupeids ≤30 C Se	Clupeids 30-32.9 C N	Clupeids 30-32.9 C Se
3.0-5.9	87	105	0.576	0	---	56	35	0.371	5	0.000	5	9	0.000	0	---
6.0-8.9	166	190	0.926	8	0.309	44	34	0.467	11	0.801	49	41	0.598	3	0.000
9.0-11.9	32	64	0.809	10	0.915	12	19	0.948	6	0.499	73	49	0.392	5	0.000
12.0-14.9	18	31	1.036	8	0.964	8	13	0.717	8	0.500	61	58	0.069	12	0.370
15.0-17.9	8	10	0.700	12	0.667	1	0	---	1	0.000	83	124	0.345	18	0.342
18.0-20.9	3	1	1.000	4	0.500	0	0	---	0	---	113	106	0.180	21	0.000
21.0-23.9	4	1	0.000	1	1.000	0	0	---	0	---	45	30	0.000	14	0.000
24.0+	10	2	1.000	4	0.750	1	1	1.000	1	0.000	49	20	0.129	7	0.000

* RIP = Roseton Intake Pump/Larval Table
RDP = Roseton Discharge Pump/Larval Table (Sealwell).

Pys

6-23.9 Pys Clups

≥24 juv Clups

two discharge temperature intervals, survival was equal to or higher for the lower discharge temperature interval (<30 C). The relationships between entrainment survival vs. discharge temperature and length observed for this study are consistent with the results of previous laboratory studies which have demonstrated that mortality due to thermal stress is dependent upon larval length as well as exposure temperature (EA 1978e).

Entrainment survival estimates by species and life stage for 1980 ranged from 0 for juvenile clupeids to greater than 100 percent for juvenile white perch (Table 4-6). No estimates were possible for white perch and clupeid yolk-sac larvae as no clupeid yolk-sac larvae were collected and no yolk-sac white perch were collected alive at either the intake station (RIP) or discharge station (RDP). Entrainment survival (S_e) for striped bass and white perch was generally high (>67 percent), whereas survival for the more delicate clupeids was consistently lower. As previously noted, total entrainment survival for clupeids is undoubtedly lower than that estimated from initial survival due to latent effects. However, how much lower could not be accurately determined due to low control survival.

The pattern of entrainment survival calculated based on this study was similar to that of predicted entrainment survival based on laboratory-derived thermal mortality equations for Morone sp. (EA 1981). Only for striped bass post yolk-sac larvae was the estimate considerably different. The predicted values were, however, consistently lower than those calculated from the field study although the magnitude of the difference was generally small. The reason for this difference is unknown but possibly due to one of the following factors. First, mechanical mortality rates used for the predictive equations could be over-estimated. Second, survival from thermal stress could be higher in the wild than under artificial laboratory conditions. Third, it is possible that mechanical stress kills naturally weaker individuals leaving the surviving population with a higher proportion of stronger, more tolerant ones. If this were true, groups exposed to mechanical stress may have a higher mean survival rate due to subsequent thermal stress than groups not previously exposed to mechanical stress. Finally, the observed differences could merely reflect actual year to year variability in entrainment survival rates.

TABLE 4-6 ESTIMATED ENTRAINMENT SURVIVAL (Se) BY LIFE STAGE FOR STRIPED BASS, WHITE PERCH, AND CLUPEIDS BASED ON SAMPLING WITH THE PUMP/LARVAL TABLE AT THE POSITOM GENERATING STATION 16 MAY - 31 JULY 1980

Species	Life Stage	Initial Survival(a) Station RIP(a)	Initial Survival(a) Station RDP(a)	Calculated Entrainment Survival	Predicted Entrainment Survival(b)
Striped Bass	YSL	0.353 (173)	0.310 (200)	0.878	0.800
	PYSL	0.524 (164)	0.462 (260)	0.882	0.838
	JUV	1.000 (16)	0.706 (17)	0.706	0.668
White Perch	YSL	0.000 (3)	0.000 (1)	--	0.800
	PYSL	0.452 (126)	0.304 (135)	0.673	0.549
	JUV	0.750 (4)	0.800 (5)	1.067	0.811
Clupeid	YSL	--	--	--	N/A
	PYSL	0.295 (528)	0.067 (548)	0.227	N/A
	JUV	0.368 (38)	0.000 (20)	0.000	N/A

(a) RIP = Roseton Intake Pump/Larval Table
RDP = Roseton Discharge Pump/Larval Table (Sealwell)
(b) Based on predictive thermal mortality equations (EA 1981).

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APPENDIX A. DIRECT RELEASE EXPERIMENTS

A.1 INTRODUCTION

During the first week of June in 1980, a special study involving the release of large numbers of striped bass post yolk-sac larvae was conducted at the Roseton intake. The larvae were released during 2-, 3-, and 4-circulating water pump operation in order to evaluate the effects of different pump modes on striped bass entrainment survival.

In all cases, releases were conducted when discharge temperatures were less than 30 C so that all mortality measured could be attributed to mechanical stress (Jinks et al. 1978).

A.2 METHODS AND MATERIALS

Striped bass larvae used in the experiments were obtained from spawning adult Hudson River striped bass at the Texas Instruments' hatchery in Verplanck, New York. Test organisms were transferred from the hatchery to the Roseton plant site and acclimated to ambient water conditions for at least two hours.

Six releases of larvae were conducted, from 2 to 6 June using 15- to 20-day old larvae. Before and after each release, a sample was taken at each of the discharge stations to obtain an estimate of the naturally occurring striped bass in the cooling water flow. All recapture counts were adjusted to remove the estimated number of naturally occurring organisms present.

Control sampling at the intake pump/larval table and intake flume stations was conducted by releasing approximately 50 live organisms into the front of the sample flume thereby by-passing the intake hose. No affect was assumed to be attributable to passage through the 6-in. diameter hose. Estimates of the number of larvae released during each experiment were calculated based on the average number of larvae in 5 one-pint aliquots collected from the release tank by siphoning with a piece of tygon tubing while the container (30 gallons) was gently stirred.

All test organisms were released at middepth approximately 10 feet in front of the intake traveling screens by using a 30-gallon tank fitted with 10 feet of 2-in. PVC pipe. Two minutes from the time of release, sampling was started simultaneously at the three discharge stations and continued for 15 minutes. Sampling gear and methods of collection were identical to those described in Chapter 2.

The expected number (N_D) of organisms collected at each discharge sampling station was calculated as follows:

$$N_D = N_R \times \frac{V_s}{V_p}$$

where

N_R = Estimated number of larvae released
V_S = volume of water in sample (15 minutes)
V_P = volume of water flowing through the plant (15 minutes).

A.3 RESULTS AND DISCUSSION

The proportion of the expected number of larvae actually recaptured varied considerably, ranging from 0.1 to 1.2, with an overall recovery proportion of 0.65 (Table A-1). This relatively low proportion recaptured can be potentially attributed to numerous factors including avoidance of the sampling gear, destruction within the plant, and/or errors in estimation of volumes pumped by the plant. Patterns in the recaptured proportion indicate a consistently higher rate at Station RDP than at the other two stations (Figure A-1). This difference may be due to the larger sample volumes and consequent higher intake hose velocities associated with the pump/larval table at Station RDP. In addition to station differences, the recapture rate increased with an increasing number of pumps operated. This was noticeable at all stations and may be due to the increased plant flows with a resultant reduction in avoidance of the sampling gear.

Initial survival averaged greater than 94 percent at the intake flume station and was consistently higher than initial survival at the intake pump/larval table station which averaged 70 percent (Table A-2). Initial survival at the three discharge stations was quite variable and showed no consistent pattern. On the three days when both flume and larval table samples were collected, the highest initial survival was always at one of the two flume stations. However, on 6 June, survival was extremely low (22 percent) at Station RDD; considerably lower than observed in the larval table sample. Survival was also extremely low at Station RDF on 4 June.

Estimated entrainment survival rates ranged from 15 to 100 percent and showed a pattern similar to that of the initial survival at the discharge stations (Table A-3). There was no noticeable effect of pump mode on the estimated entrainment survival. Over all pump modes, estimated entrainment survival for the striped bass post yolk-sac larvae released was 60 percent at Station RDF, 67 percent at Station RDD, and 63 percent at Station RDP.

TABLE A-1 EXPECTED AND ACTUAL RECOVERY AT THE ROSETON PLANT DISCHARGE OF STRIPED BASS FOLLOWING RELEASE AT THE INTAKE

Release Date	Life Stage/Age	Discharge Station	Volume Sampled (m3)	Volume Through Plant (m3)	Estimated No. Released	Expected Number Recovered	Actual Number Recovered	Corrected For Background Larvae(a)	Proportion Recaptured
2 June	Post yolk-sac larvae/15 days	RDD	13.0	21,319	154,170±39,946(b)	94	26	25	.266
3 June	Post yolk-sac larvae/17 days	RDF	20.7	21,319	156,048±39,019	152	61	58	.382
		RDD	14.0	21,319	156,048±39,019	102	12	10	.098
4 June	Post yolk-sac larvae/18 days	RDF	7.0	31,854	104,784±22,075	23	21	20	.870
5 June	Post yolk-sac larvae/19 days	RDF	14.3	31,854	82,080±11,068	37	41	35	.946
		RDD	11.0	31,854	82,080±11,068	28	14	9	.321
		RDF	12.0	31,854	82,080±11,068	31	22	17	.548
6 June	Post yolk-sac/ 20 days	RDF	16.6	36,397	75,216±7,140	34	42	41	1.206
		RDD	14.0	36,397	75,216±7,140	29	23	22	0.759
		RDF	12.0	36,397	75,216±7,140	25	18	18	0.720
	Mass balance	RDF	15.3	36,397	105,648±6,867	44	38	37	0.841
		RDD	12.0	36,397	105,648±6,867	35	26	26	0.743
		RDF	11.0	36,397	105,648±6,867	32	24	24	0.750
								Average =	0.650

(a) Excludes the number of naturally occurring striped bass entrained.
(b) Ninety-five percent confidence interval.

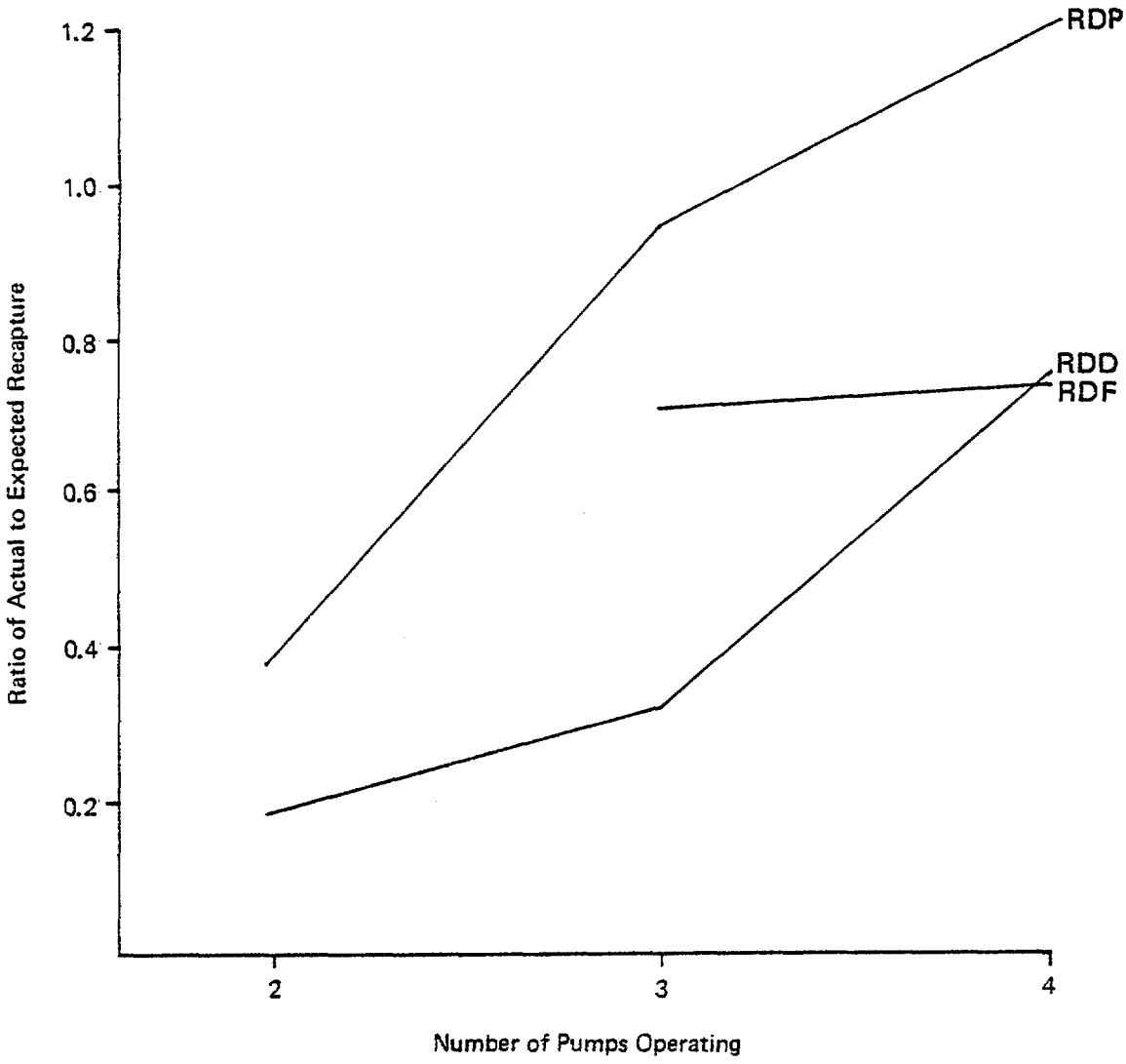


Figure A-1. The relationship between the number of pumps operating and the ratio of actual to expected recapture of striped bass larvae released at the Roseton plant, 1980.

TABLE A-2 SURVIVAL OF HATCHERY-REARED STRIPED BASS FROM DIRECT RELEASE EXPERIMENTS AT THE ROSETON ELANI, JUNE 1980

Date	Life Stage/Age	Mean Length (mm)	Station(a)	No. of Fish Collected	Initial	48-Hr
2 June	Post yolk-sac larvae/ 15 days	7.8±0.69	RIP	44	0.61	0.05
			RIF	47	0.94	0.48
			RDD	26	0.77	0.12
3 June	Post yolk-sac larvae/ 17 days	8.4±0.64	RIF	20	0.95	0.40
			RDP	60	0.28	0.13
			RDD	12	1.00	0.33
4 June	Post yolk-sac larvae/ 18 days	8.61±1.98	RIP	47	0.66	0.36
			RIF	49	0.96	0.67
			RDF	21	0.14	0.00
5 June	Post yolk-sac larvae/ 19 days	8.8±0.62	RIP	41	0.88	0.44
			RIF	40	0.98	0.56
			RDP	41	0.51	0.12
			RDD	14	0.71	0.57
			RDF	22	0.73	0.59
6 June	Post yolk-sac larvae/ 20 days	8.8±0.62	RIP	38	0.66	0.26
			RIF	37	0.89	0.65
			RDP	42	0.60	0.14
			RDD	23	0.22	0.09
			RDF	18	0.83	0.44

(a) Sampling limited to three stations on 2-4 June due to gear operational difficulties.

TABLE A-3 THROUGH-PLANT SURVIVAL OF HATCHERY-REARED STRIPED BASS POST YOLK-SAC LARVAE FROM DIRECT RELEASE EXPERIMENTS AT THE ROSETON PLANT, JUNE 1980

Date	Station	No. of Circulating Water Pumps Operating	No. of Fish Collected	Proportion Alive Initial	Se (%)
2 June	RIF	2	47	0.94	82
	RDD		26	0.77	
3 June	RIF	2	20	0.95	
	RDD		12	1.00	100
4 June	RIF	3	49	0.96	
	RDF		21	0.14	15
5 June	RIP		41	0.88	
	RDP	3	41	0.51	58
	RIF		40	0.98	
	RDD	3	14	0.71	72
	RDF	3	22	0.73	74
6 June	RIP		38	0.66	
	RDP	4	42	0.60	91
	RIF		37	0.89	
	RDD	4	23	0.22	25
	RDF	4	18	0.83	93

APPENDIX B

LENGTH-FREQUENCY OF STRIPED BASS, WHITE PERCH, AND CLUPEIDS COLLECTED AT INTAKE AND DISCHARGE SAMPLING STATIONS AT THE ROSETON PLANT, 1980

TABLE B-1. LENGTH FREQUENCY DISTRIBUTION OF STRIPED BASS COLLECTED AT THE BOSTON PLANT, 1980

Sampling Week	N	X	SD	Length Intervals (mm) 0.0 2.9	3.0 5.9	6.0 8.9	9.0 11.9	12.0 14.9	15.0 17.9	18.0 20.9	21.0 23.9	24.0 999.9	Range MIN	Range MED	Range MAX
BIE															
26 MAY 80	146	5.8	0.7	0	51	95	0	0	0	0	0	0	4.0	6.0	8.0
2 JUN 80	62	6.5	1.9	0	25	24	13	0	0	0	0	0	4.0	6.0	11.0
9 JUN 80	60	9.1	3.4	0	6	24	13	14	3	0	0	0	5.0	8.5	17.0
16 JUN 80	26	7.9	3.6	0	5	15	3	1	1	0	1	0	5.0	7.0	21.0
23 JUN 80	15	12.2	6.7	0	0	6	2	2	2	1	0	2	6.0	9.0	27.0
30 JUN 80	10	21.7	6.1	0	0	1	0	0	1	1	2	5	7.0	23.5	28.0
7 JUL 80	8	20.0	8.4	0	0	1	1	0	1	1	1	3	6.0	20.5	32.0
14 JUL 80	1	12.0	0.0	0	0	0	0	1	0	0	0	0	12.0	12.0	12.0
21 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
28 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
BDE															
26 MAY 80	164	5.9	0.8	0	53	110	1	0	0	0	0	0	4.0	6.0	9.0
2 JUN 80	88	7.0	2.1	0	32	37	17	2	0	0	0	0	4.0	6.0	13.0
9 JUN 80	123	8.9	2.9	0	18	39	41	21	4	0	0	0	4.0	9.0	15.0
16 JUN 80	24	10.5	4.2	0	2	8	5	3	5	1	0	0	5.0	10.0	18.0
23 JUN 80	33	13.8	3.8	0	0	3	6	9	10	4	0	1	6.0	14.0	24.0
30 JUN 80	11	15.3	4.8	0	0	0	2	4	3	0	1	1	9.0	14.0	25.0
7 JUL 80	7	16.1	8.4	0	0	1	3	0	0	0	1	2	8.0	11.0	30.0
14 JUL 80	2	26.5	0.5	0	0	0	0	0	0	0	0	2	26.0	26.5	27.0
21 JUL 80	1	28.0	0.0	0	0	0	0	0	0	0	0	1	28.0	28.0	28.0
28 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0

NOTE: N = number of length; X = mean length; SD = standard deviation;
MIN = shortest length; MED = median length; and MAX = greatest length.

TABLE B-2. LENGTH FREQUENCY DISTRIBUTION OF STRIPED BASS COLLECTED AT THE ROSETON PLANT, 1980

Sampling Week	N	X	SD	Length Intervals (mm) 0.0 2.9	3.0 5.9	6.0 8.9	9.0 11.9	12.0 14.9	15.0 17.9	18.0 20.9	21.0 23.9	24.0 999.9	Range MIN	Range MED	Range MAX
RIE															
26 MAY 80	54	5.9	0.9	0	17	37	0	0	0	0	0	0	4.0	6.0	8.0
2 JUN 80	60	6.5	2.0	0	28	21	10	1	0	0	0	0	4.0	6.0	14.0
9 JUN 80	17	9.4	2.4	0	1	4	8	4	0	0	0	0	5.0	9.0	13.0
16 JUN 80	5	6.8	1.3	0	1	4	0	0	0	0	0	0	5.0	7.0	8.0
23 JUN 80	18	8.9	2.4	0	0	9	6	3	0	0	0	0	6.0	8.5	14.0
30 JUN 80	2	10.0	1.4	0	0	0	2	0	0	0	0	0	9.0	10.0	11.0
7 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
14 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
21 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
28 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
RDE															
26 MAY 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
2 JUN 80	31	7.4	2.4	0	8	11	10	2	0	0	0	0	3.0	7.0	12.0
9 JUN 80	45	7.4	2.5	0	14	18	9	4	0	0	0	0	4.0	7.0	13.0
16 JUN 80	9	13.2	3.5	0	0	1	0	5	2	1	0	0	6.0	13.0	20.0
23 JUN 80	16	12.6	4.7	0	2	2	0	8	2	1	1	0	5.0	13.0	22.0
30 JUN 80	5	16.2	5.0	0	0	0	1	1	0	2	1	0	9.0	18.0	23.0
7 JUL 80	1	23.0	0.0	0	0	0	0	0	0	0	1	0	23.0	23.0	23.0
14 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
21 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
28 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
RDD															
26 MAY 80	48	5.3	0.7	0	29	19	0	0	0	0	0	0	4.0	5.0	7.0
2 JUN 80	28	8.1	2.4	0	4	12	9	3	0	0	0	0	5.0	8.0	12.0
9 JUN 80	29	8.5	2.7	0	6	7	12	4	0	0	0	0	4.0	10.0	13.0
16 JUN 80	11	9.6	4.5	0	3	3	0	2	3	0	0	0	5.0	7.0	15.0
23 JUN 80	16	13.2	3.2	0	0	2	2	7	4	1	0	0	7.0	13.5	20.0
30 JUN 80	3	11.0	2.6	0	0	1	0	2	0	0	0	0	8.0	12.0	13.0
7 JUL 80	3	10.3	1.2	0	0	0	3	0	0	0	0	0	9.0	11.0	11.0
14 JUL 80	2	12.0	2.8	0	0	0	1	1	0	0	0	0	10.0	12.0	14.0
21 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
28 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0

NOTE: N = number of lengths; X = mean length; SD = standard deviation; MIN = shortest length; MED = median length; and MAX = greatest length.

TABLE B-3. LENGTH FREQUENCY DISTRIBUTION OF WHITE PERCH COLLECTED AT THE BOSTON PLANT, 1980

Sampling Week	N	X	SD	Length Intervals (mm) 0.0 2.9	3.0 5.9	6.0 8.9	9.0 11.9	12.0 14.9	15.0 17.9	18.0 20.9	21.0 23.9	24.0 999.9	Range MIN	MED	MAX
BIE															
26 MAY 80	37	4.9	1.2	0	28	9	0	0	0	0	0	0	3.0	5.0	8.0
2 JUN 80	23	6.7	1.7	0	4	16	3	0	0	0	0	0	3.0	7.0	10.0
9 JUN 80	35	6.7	2.3	0	15	12	6	2	0	0	0	0	4.0	6.0	13.0
16 JUN 80	14	5.9	2.3	0	7	5	1	1	0	0	0	0	4.0	5.5	12.0
23 JUN 80	1	14.0	0.0	0	0	0	0	1	0	0	0	0	14.0	14.0	14.0
30 JUN 80	4	7.0	2.3	0	1	2	1	0	0	0	0	0	5.0	6.0	11.0
7 JUL 80	7	13.7	5.3	0	1	0	1	3	1	0	0	1	5.0	14.0	24.0
14 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
21 JUL 80	1	12.0	0.0	0	0	0	0	1	0	0	0	0	12.0	12.0	12.0
28 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
BDE															
26 MAY 80	20	5.3	0.9	0	13	7	0	0	0	0	0	0	4.0	5.0	7.0
2 JUN 80	14	7.2	2.1	0	4	4	6	0	0	0	0	0	4.0	6.5	10.0
9 JUN 80	42	7.5	2.7	0	13	15	10	4	0	0	0	0	3.0	6.0	13.0
16 JUN 80	30	8.2	3.4	0	8	10	4	8	0	0	0	0	4.0	6.0	14.0
23 JUN 80	11	8.1	3.0	0	1	6	3	0	1	0	0	0	4.0	7.0	15.0
30 JUN 80	9	9.6	3.1	0	1	3	1	4	0	0	0	0	5.0	11.0	13.0
7 JUL 80	8	15.1	7.1	0	0	1	1	4	0	0	0	2	7.0	12.5	27.0
14 JUL 80	1	14.0	0.0	0	0	0	0	1	0	0	0	0	14.0	14.0	14.0
21 JUL 80	4	20.3	11.5	0	0	0	0	2	1	0	0	1	12.0	14.5	40.0
28 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0

NOTE: N = number of lengths; X = mean length; SD = standard deviation; MIN = shortest length; MED = median length; and MAX = greatest length.

TABLE B-4 LENGTH FREQUENCY DISTRIBUTION OF WHITE PERCH COLLECTED AT THE ROSETON PLANT, 1980

Sampling Week	N	X	SD	Length Intervals (mm) 0.0 2.9	3.0 5.9	6.0 8.9	9.0 11.9	12.0 14.9	15.0 17.9	18.0 20.9	21.0 23.9	24.0 999.9	Range MIN	MED	MAX
RIE															
26 MAY 80	34	4.8	1.1	0	26	8	0	0	0	0	0	0	3.0	5.0	7.0
2 JUN 80	8	6.2	1.9	0	3	4	1	0	0	0	0	0	4.0	6.0	9.0
9 JUN 80	10	7.4	4.1	0	4	3	1	1	1	0	0	0	4.0	6.0	15.0
16 JUN 80	3	7.0	3.5	0	2	0	1	0	0	0	0	0	5.0	5.0	11.0
23 JUN 80	7	7.6	3.4	0	3	2	1	1	0	0	0	0	4.0	7.0	13.0
30 JUN 80	2	9.5	4.9	0	0	1	0	1	0	0	0	0	6.0	9.5	13.0
7 JUL 80	2	8.0	1.4	0	0	1	1	0	0	0	0	0	7.0	8.0	9.0
14 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
21 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
28 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
RDE															
26 MAY 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
2 JUN 80	3	7.7	1.2	0	0	2	1	1	0	0	0	0	6.0	8.5	9.0
9 JUN 80	46	7.8	2.7	0	11	17	12	6	0	0	0	0	3.0	7.0	13.0
16 JUN 80	26	7.1	2.4	0	6	14	4	2	0	0	0	0	4.0	6.0	12.0
23 JUN 80	18	10.5	3.5	0	3	1	8	3	3	0	0	0	5.0	10.0	17.0
30 JUN 80	5	9.0	2.1	0	0	3	1	1	0	0	0	0	7.0	8.0	12.0
7 JUL 80	4	15.5	4.1	0	0	0	1	3	0	0	0	1	10.0	12.0	26.0
14 JUL 80	1	12.0	0.0	0	0	0	1	0	0	0	0	0	11.0	12.0	16.0
21 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
28 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
RDD															
26 MAY 80	26	5.3	1.0	0	16	10	0	0	0	0	0	0	4.0	5.0	7.0
2 JUN 80	11	7.3	1.8	0	3	4	4	0	0	0	0	0	5.0	7.0	10.0
9 JUN 80	27	7.0	2.7	0	8	11	6	2	0	0	0	0	3.0	6.0	12.0
16 JUN 80	37	7.1	2.9	0	12	13	8	4	0	0	0	0	4.0	6.0	13.0
23 JUN 80	12	8.7	3.3	0	4	1	3	4	0	0	0	0	5.0	10.0	13.0
30 JUN 80	3	11.3	0.6	0	0	0	2	1	0	0	0	0	11.0	11.0	12.0
7 JUL 80	8	14.1	3.3	0	0	0	2	3	1	2	0	0	11.0	13.0	19.0
14 JUL 80	4	21.3	13.0	0	0	0	1	1	0	1	0	1	11.0	17.0	40.0
21 JUL 80	2	25.0	14.1	0	0	0	0	0	1	0	0	1	15.0	25.0	35.0
28 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0

NOTE: N = number of lengths; X = mean length; SD = standard deviation; MIN = shortest length; MED = median length; and MAX = greatest length.

TABLE B-5. LENGTH FREQUENCY DISTRIBUTION OF CLUPEIDS COLLECTED AT THE BOSTON PLANT, 1980

Sampling Week	N	X	SD	Length Intervals (cm) 0.0 2.9	3.0 5.9	6.0 8.9	9.0 11.9	12.0 14.9	15.0 17.9	18.0 20.9	21.0 23.9	24.0 999.9	Range MIN	Range MED	Range MAX
BIP															
26 MAY 80	93	9.0	2.3	0	4	40	35	13	1	0	0	0	5.0	9.0	18.0
2 JUN 80	20	11.5	3.1	0	1	3	4	10	2	0	0	0	5.0	12.5	17.0
9 JUN 80	141	16.5	3.1	0	0	2	12	15	52	52	7	1	7.0	17.0	25.0
16 JUN 80	147	16.6	4.2	0	0	4	20	22	25	49	23	4	8.0	18.0	32.0
23 JUN 80	32	21.2	3.2	0	0	0	1	1	2	6	11	11	10.0	21.0	28.0
30 JUN 80	26	25.3	6.8	0	0	0	1	0	1	5	2	17	11.0	25.5	43.0
7 JUL 80	16	35.8	13.0	0	0	0	0	0	0	1	1	14	19.0	30.5	58.0
14 JUL 80	2	35.0	18.4	0	0	0	0	0	0	0	1	1	22.0	35.0	48.0
21 JUL 80	1	45.0	0.0	0	0	0	0	0	0	0	0	1	45.0	45.0	45.0
28 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
BDE															
26 MAY 80	49	8.5	2.0	0	1	25	20	3	0	0	0	0	5.0	8.0	13.0
2 JUN 80	18	10.2	3.8	0	4	2	5	3	4	0	0	0	5.0	11.0	15.0
9 JUN 80	226	15.7	3.1	0	3	5	16	35	95	69	3	0	4.0	16.0	23.0
16 JUN 80	157	16.8	4.7	0	1	11	12	22	34	45	26	6	5.0	12.0	32.0
23 JUN 80	34	19.2	3.1	0	0	0	0	4	6	10	13	1	12.0	20.0	24.0
30 JUN 80	24	23.0	8.7	0	0	1	1	2	3	3	1	13	6.0	24.0	40.0
7 JUL 80	7	25.7	6.2	0	0	0	0	1	0	0	0	6	13.0	26.0	33.0
14 JUL 80	4	26.3	14.6	0	0	0	1	0	0	0	1	2	10.0	25.0	45.0
21 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
28 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0

NOTE: N = number of lengths; X = mean length; SD = standard deviation; MIN = shortest length; MED = median length; and MAX = greatest length.

TABLE B-6. LENGTH FREQUENCY DISTRIBUTION OF CLUPEIDS COLLECTED AT THE BOSETON PLANT, 1980

Sampling Week	N	X	SD	Length Intervals (mm) 0.0 2.9	3.0 5.9	6.0 8.9	9.0 11.9	12.0 14.9	15.0 17.9	18.0 20.9	21.0 23.9	24.0 999.9	Range MIN	MED	MAX
BIE															
26 MAY 80	68	8.6	2.1	0	1	33	24	10	0	0	0	0	5.0	8.5	13.0
2 JUN 80	22	12.0	3.5	0	1	3	4	8	6	0	0	0	5.0	12.5	16.0
9 JUN 80	112	15.2	3.4	0	2	3	13	18	45	29	1	1	5.0	15.0	24.0
16 JUN 80	34	16.4	5.0	0	0	3	4	6	5	7	8	1	7.0	17.0	25.0
23 JUN 80	15	18.1	3.1	0	0	0	0	3	2	7	2	1	13.0	19.0	24.0
30 JUN 80	3	16.0	6.1	0	0	0	0	2	0	0	1	0	12.0	13.0	23.0
7 JUL 80	1	19.0	0.0	0	0	0	0	0	0	1	0	0	19.0	19.0	19.0
14 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
21 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
28 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
BDE															
26 MAY 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
2 JUN 80	5	11.8	4.4	0	0	1	2	1	0	1	0	0	7.0	11.0	19.0
9 JUN 80	167	15.2	3.3	0	1	8	12	33	75	35	3	0	5.0	16.0	22.0
16 JUN 80	114	17.0	4.4	0	0	6	13	11	17	43	20	4	6.0	18.0	25.0
23 JUN 80	19	19.4	4.0	0	0	0	1	1	3	5	6	3	10.0	20.0	25.0
30 JUN 80	15	21.5	6.7	0	1	0	0	0	2	3	3	6	5.0	22.0	32.0
7 JUL 80	4	14.5	3.3	0	0	0	0	2	1	1	0	0	12.0	13.5	19.0
14 JUL 80	5	34.6	20.0	0	0	0	0	2	0	0	0	3	14.0	14.0	14.0
21 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
28 JUL 80	1	51.0	0.0	0	0	0	0	0	0	0	0	1	51.0	51.0	51.0
BDD															
26 MAY 80	40	8.9	2.3	0	4	16	14	6	0	0	0	0	5.0	8.5	14.0
2 JUN 80	9	12.6	3.5	0	0	2	1	3	2	1	0	0	8.0	13.0	18.0
9 JUN 80	116	15.0	3.8	0	3	7	10	19	42	34	1	0	4.0	16.0	23.0
16 JUN 80	104	16.9	4.3	0	0	2	14	14	18	34	19	3	7.0	18.0	25.0
23 JUN 80	26	19.5	4.6	0	0	2	0	0	6	4	10	4	8.0	21.0	27.0
30 JUN 80	9	28.2	6.8	0	0	0	0	0	0	0	0	9	24.0	25.0	45.0
7 JUL 80	8	21.8	7.3	0	0	0	1	0	2	0	1	4	9.0	23.5	31.0
14 JUL 80	3	26.0	9.5	0	0	0	0	0	1	0	0	2	16.0	27.0	35.0
21 JUL 80	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
28 JUL 80	1	33.0	0.0	0	0	0	0	0	0	0	0	1	33.0	33.0	33.0

NOTE: N = number of lengths; X = mean length; SD = standard deviation; MIN = shortest length; MED = median length; and MAX = greatest length.

APPENDIX C

SPECIES COMPOSITION AND NUMBERS OF ICHTHYOPLANKTON COLLECTED IN POST-SAMPLING COLLECTION GEAR WASH AT INTAKE AND DISCHARGE SAMPLING STATION AT THE ROSETON PLANT, 1980

TABLE C-1 SPECIES COMPOSITION AND NUMBERS OF ICHTHYOPLANKTON COLLECTED FROM THE POST-SAMPLE LARVAL TABLE RINSE AT INTAKE STATION RIP OF THE BOSTON PLANT, 1980

Taxon	Life Stage	Number Collected in Codend
Clupeids	Post yolk-sac larvae	3
	Juveniles	1
Striped bass	Yolk-sac larvae	1
White perch	Post yolk-sac larvae	2
Morone spp.	Unidentified	1

TABLE C-2 SPECIES COMPOSITION AND NUMBERS OF ICHTHYOPLANKTON COLLECTED FROM THE POST-SAMPLE LARVAL FLUME RINSE AT INTAKE STATION RIF OF THE ROSEION PLANT, 1980

Taxon	Life Stage	Number Collected in Codend
Clupeids	Post yolk-sac larvae	3
Striped bass	Yolk-sac larvae	9
	Post yolk-sac larvae	2
White perch	Yolk-sac larvae	1
	Post yolk-sac larvae	1
Morone spp.	Unidentified	1
Unidentified	Unidentified	2

TABLE C-3 SPECIES COMPOSITION AND NUMBERS OF ICHTHYOPLANKTON COLLECTED FROM THE POST-SAMPLE LARVAL TABLE RINSE AT DISCHARGE STATION RDP OF THE ROSEION PLANT, 1980

Taxon	Life Stage	Number Collected in Codend
Clupeids	Post yolk-sac larvae	6
Striped bass	Yolk-sac larvae	2
White perch	Post yolk-sac larvae	1
Morone spp.	Unidentified	3
Carps and minnows	Yolk-sac larvae	1
Tessellated darter	Yolk-sac larvae	1
Perches and darters	Yolk-sac larvae	1
Unidentified	Unidentified	1

TABLE C-4 SPECIES COMPOSITION AND NUMBERS OF ICHTHYOPLANKTON COLLECTED FROM THE POST-SAMPLE LARVAL FLUME RINSE AT DISCHARGE STATION RDF OF THE ROSEION PLANT, 1980

Taxon	Life Stage	Number Collected in Codend
Striped bass	Post yolk-sac larvae	1

TABLE C-5 SPECIES COMPOSITION AND NUMBERS OF ICHTHYOPLANKTON COLLECTED FROM THE POST-SAMPLE LARVAL FLUME RINSE AT DISCHARGE STATION RDD OF THE ROSEION PLANT, 1980

Taxon	Life Stage	Number Collected in Codend
Clupeids	Post yolk-sac larvae	7
Striped bass	Yolk-sac larvae	4
	Post yolk-sac larvae	1
White perch	Yolk-sac larvae	1
Morone spp.	Unidentified	2
Tessellated darter	Yolk-sac larvae	1
Unidentified	Unidentified	1

APPENDIX D

GEAR OPERATING PARAMETERS AND PLANT OPERATIONAL PARAMETERS DURING THE ENTRAINMENT SURVIVAL STUDY CONDUCTED AT THE ROSETON GENERATING STATION, 26 MAY - 31 JULY 1980

TABLE D-1 SUMMARY OF PUMP/LARVAL TABLE AND PLANKTON FLUME OPERATING PARAMETERS DURING THE ENTRAINMENT SURVIVAL STUDY CONDUCTED AT THE BOSTON GENERATING STATION, 26 MAY - 31 JULY 1980

Station	Type of Gear	No. of Samples Collected	Average Volume/ Sample (m3)	Total Volume Sampled (m3)	Flowmeter(a) Range (l/min)	Pump(a) Tachometer Reading (rpm)
RIP	Pump/Larval Table	289	10.7	3086.7	400-1025	850-1200
RIF	Plankton Flume (Rear-Draw)	296(b)	15.1	4463.2	300-1600	1100-2000
RDP	Pump/Larval Table	295	15.5	4568.7	525-1550	700-1800
RDF	Plankton Flume	280	14.0	3914.0	200-1750	----
RDD	Plankton Flume	271	12.8	3466.7	200-1900	----

(a) Flowmeter and pump tachometer readings recorded initially, 5 minutes into sample, 10 minutes into sample, and at sample conclusion.
(b) Includes one sample with missing values for all parameters.

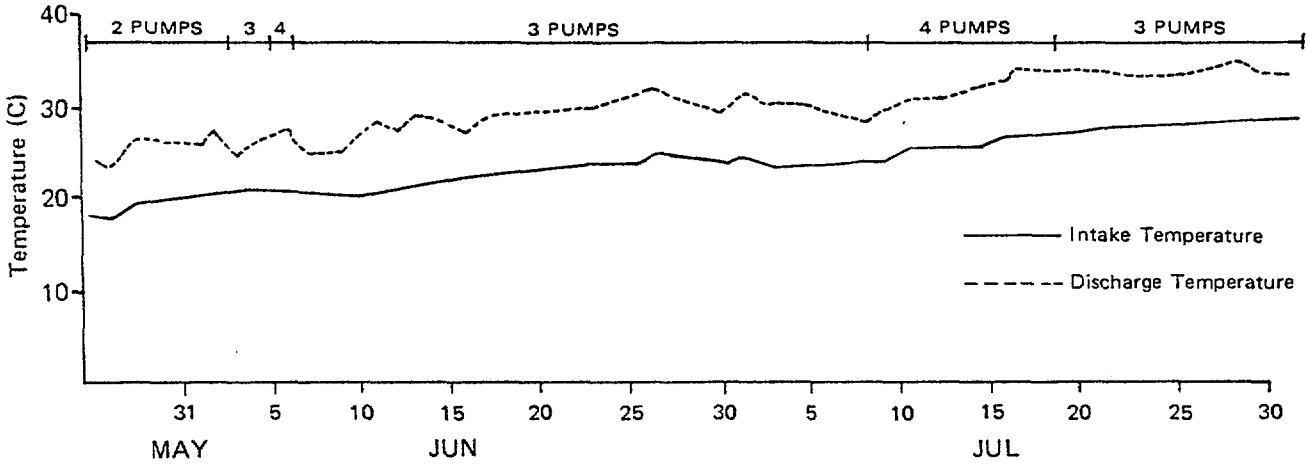


Figure D-1. Average intake temperature, discharge temperature and number of circulating water pumps operating during the entrainment survival study conducted at the Roseton Generating Station, 26 May – 31 July 1980.

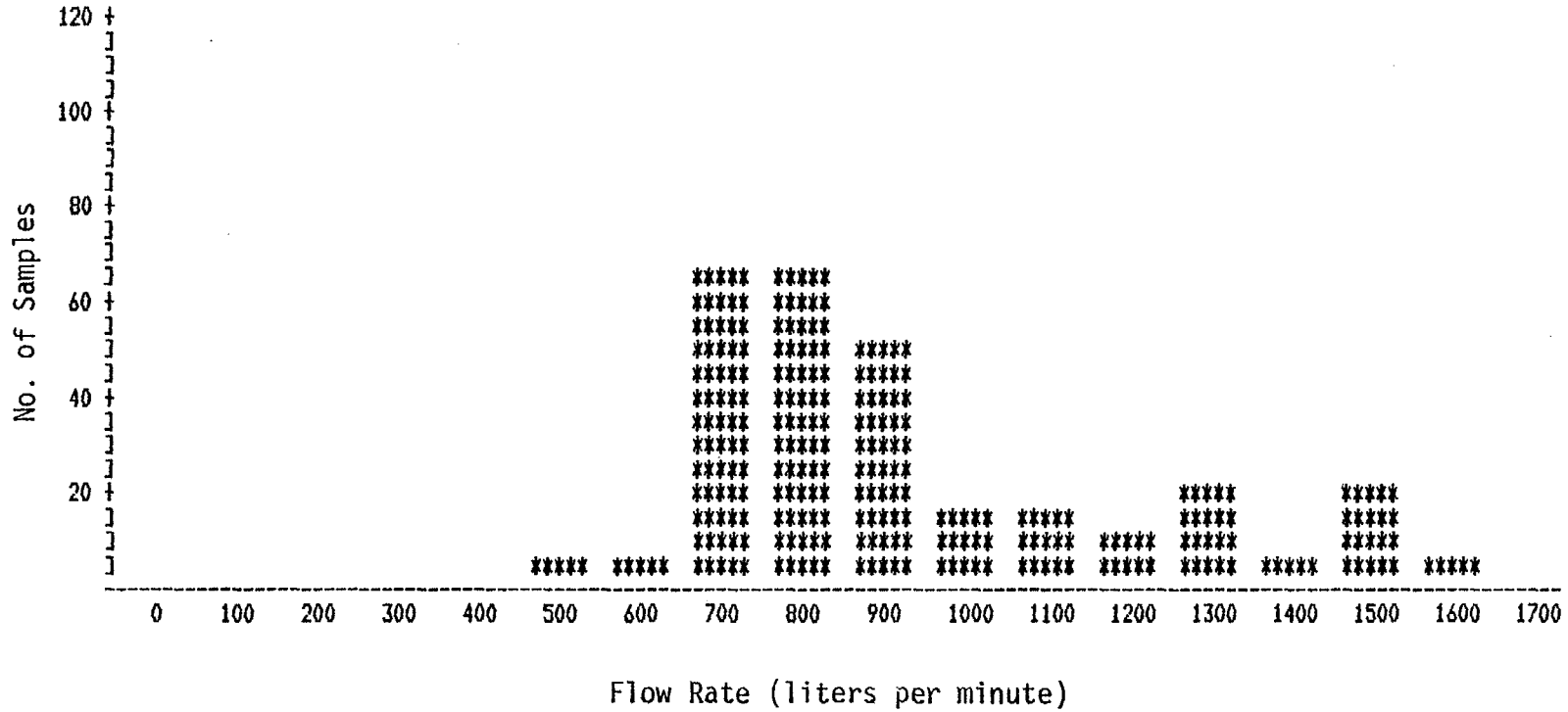


Figure D-2. Larval flume flow rates for samples collected at Station RDF at the Roseton Generating Station, 26 May - 31 July 1980.

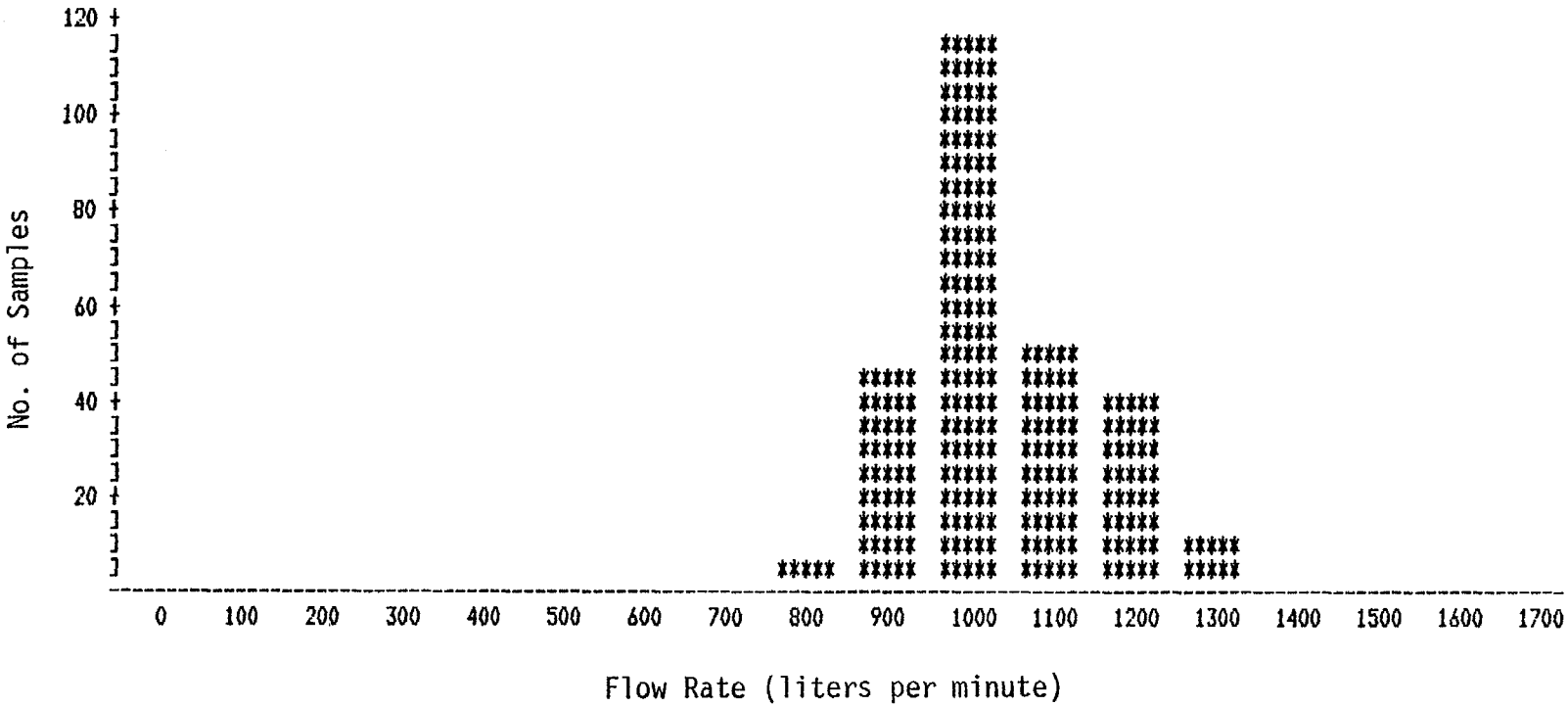


Figure D-3. Pump/larval table flow rates for samples collected at Station RDP at the Roseton Generating Station, 26 May - 31 July 1980.

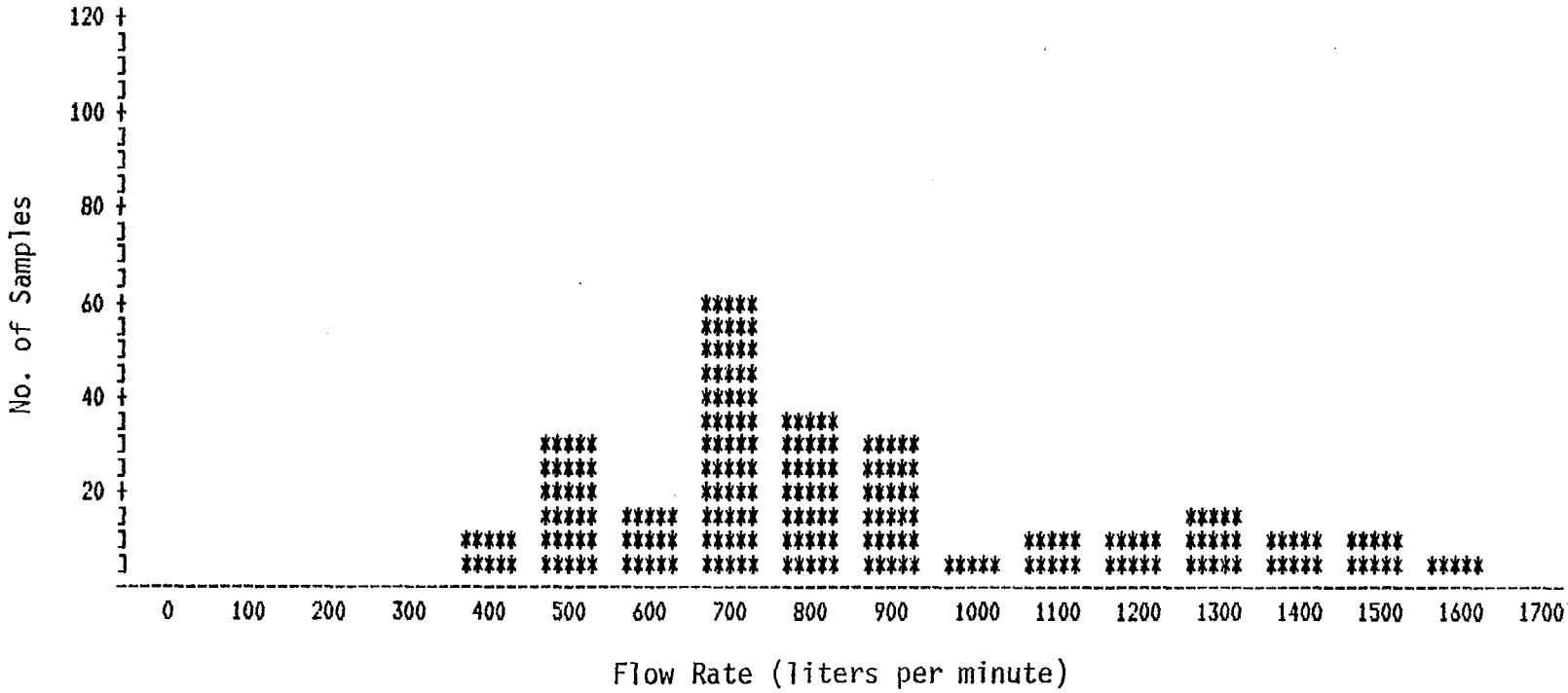


Figure D-4. Larval flume flow rates for samples collected at Station RDD at the Roseton Generating Station, 26 May - 31 July 1980.

APPENDIX E

INITIAL SURVIVAL OF STRIPED BASS, WHITE PERCH, AND CLUPEIDS COLLECTED BETWEEN 4 JUNE AND 31 JULY AT THE ROSETON GENERATING STATION, 1980

TABLE E-1 INITIAL SURVIVAL OF STRIPED BASS, WHITE PERCH, AND CLUPEIDS (EXCLUDING AMERICAN SHAD) COLLECTED IN DISCHARGE SAMPLES WITH FLOW RATE 500-1,400 LITERS PER MINUTE AT THE ROSETON GENERATING STATION, 4 JUNE - 31 JULY 1980

Taxon	Station(a)	Yolk-Sac Larvae		Post-Yolk-Sac Larvae		Juveniles	
		Number of Fish	Proportion Surviving	Number of Fish	Proportion Surviving	Number of Fish	Proportion Surviving
Striped bass	RDF	62	0.210	198	0.540	17	0.706
	RDF	33	0.333	66	0.652	8	0.875
	RDD	21	0.381	59	0.576	3	1.000
White perch	RDF	0	---	106	0.330	5	0.800
	RDF	1	0.000	103	0.592	4	0.750
	RDD	3	0.000	88	0.443	6	1.000
Clupeids (Excluding American shad	RDF	0	---	482	0.068	20	0.000
	RDF	0	---	345	0.223	6	0.333
	RDD	0	---	277	0.267	8	0.250

(a) RDF = Roseton Discharge Pump/Larval Table (Sealwell)
RDF = Roseton Discharge Flume (Sealwell)
RDD = Roseton Discharge Diffuser Flume.

APPENDIX F

ICHTHYOPLANKTON FOUND IN THE ERROR ANALYSIS OF SAMPLES COLLECTED DURING THE ENTRAINMENT SURVIVAL STUDY CONDUCTED AT THE ROSETON GENERATING STATION, 26 MAY - 31 JULY 1980

TABLE F-1 TOTAL NUMBER OF ICHTHYOPLANKTON* FOUND IN THE ERROR ANALYSIS PROCEDURE TO DETERMINE ONSITE SORTING EFFICIENCY DURING THE ENTRAINMENT SURVIVAL STUDY CONDUCTED AT THE ROSETON GENERATING STATION, 26 MAY - 31 JULY 1980

	Station				
	BIB	BIE	BDB	BDD	BDE
Total Ichthyoplankton	39	11	19	3	7

* Organisms not included in species composition or survival estimates.

