CENTRAL HUDSON GAS & ELECTRIC CORPORATION
CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
NIAGARA MOHAWK POWER CORPORATION

APPENDICES TO

ROSETON/DANSKAMMER POINT GENERATING STATIONS

AQUATIC ECOLOGY STUDIES

1971 – 1972

OCTOBER 1973

QUIRK, LAWLER AND MATUSKY ENGINEERS
ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS
415 ROUTE 303
TAPPAN, NEW YORK 10983

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INTRODUCTION

The information presented herein are Appendices A through F to the report "Roseton/Danskammer Point Generating Stations, Aquatic Ecology Studies, 1971-1972". The appendices consist of information not presented in the main report and are titled as follows:

Appendix A - Roseton/Danskammer Point Plankton Data, 1971-1972

Appendix B - Roseton/Danskammer Point Benthos Data, 1971-1972

Appendix C - Statistical Analysis of Roseton Benthos Data

Appendix D - Roseton/Danskammer Point Fish Data, 1971-1972

Appendix E - Roseton/Danskammer Point Larval Fish Data, 1971-1972

Appendix F - Methods of Chemical Analyses of Water Samples

APPENDIX A

ROSETON/DANSKAMMER POINT PLANKTON DATA

1971-1972

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

(All densities are expressed as number of organisms per liter.)

STATION: North Control

COLLECTION DATE	8-11-71		10-7-71		10-26-71		11-23-71		12-8-71			
TEMPERATURE - °F	79°		70°		63°		48°		39°			
A. DIATOMS	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells
Achanthes												
Amphiprora sp.							44					
Amphora									140			
Asterionella sp.							572		5180			
Attheya												
Bacillaria							44					
Cocconeis sp.							44					
Coscinodiscus			1400		2765		1980		520			
Cyclotella sp. (a)			5900		10507		18039		15240			
Cyclotella sp. (b)												
Cymbella			100				44					
Diatoma							87		140			
Diploneis												
Epithemia												
Eunotia												
Fragillaria sp.	2		100				264		300			
F. brevistata												
F. crotonensis							44					
Gomphonema												
Gyrosigma			280									
Licmophora			100									
Melosira sp.	105		460		984		4488		960			
M. granulata												
M. moniliformis												
Meridion												
Navicula sp.												
Navicula sp. (a)	2		460				574		80			
Navicula sp. (b)												
Nitzschia					395		176		140			
N. aclcularis												
N. vermicularis												
Stephanodiscus					79		351		600			
Surirella sp.							132					
S. patella					237		176		740			
Synedra			100				351					
Tabellaria							87					
UID Pennate							44					
UID Centrales												
TOTAL	109		8900		14967		27541		24040			
% OF SAMPLE	5.0		89.5		89.6		87.9		90.04			
B. OTHER CHRYSOPHYTA												
Glenodinium												
Mallomonas					79							
Trachelomonas							264		80			
TOTAL					79		264		80			
% OF SAMPLE					.4		.8		.3			

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

(All densities are expressed as number of organisms per liter.)

COLLECTION DATE	8-11-71		10-7-71		10-26-71		11-23-71		12-8-71			
TEMPERATURE - °F	79°		70°		63°		48°		39°			
C. CYANOPHYTA	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clump	Cells
Anabaena sp.	12						87					
A. flos-aquae	14											
Aphanizomenon-flos-aquae	1049											
Chroococcus sp.	33				632		396		220			
Colimneticus												
Coelosphaerium												
Gleocapsa like												
Gomphosphaeria												
Merismopedia												
Microcystis sp.	326				316							
Maeruginosa												
Oscillatoria sp.	112						87		80			
O. chlorina							44					
O. phormidium												
O. tenuis												
O. nigra												
Phormidium												
Spirulina												
Aphanocapsa	163						132		80			
TOTAL	1709		0		948		746		380			
% OF SAMPLE	78.3		0		5.7		2.5		1.42			

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

Station -

(All densities are expressed as number of organisms per liter.)

OLLECTION DATE	8-11-71		10-7-71		10-26-71		11-23-71		12-8-71			
EMPERATURE - °F	79°		70°		63°		48°			39°		
CHLOROPHYTA	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells
Actinastrum	16						594		140			
Ankistrodesmus	2											
Chlamydomonas							264					
Closterium												
C. gracile							87					
Crucigenia quadrata							44					
Dictyopshaerium												
D. erenbergianum							572		220			
Eudorina sp.												
E. elegans												
Golenkinia												
Micractinium sp.												
M. pusillum							44					
Mougeotia sp.	261											
Pandorina												
Pediastrum duplex	28				474		176		220			
P. biradiatum												
P. obtusum												
P. simplex	40		280						80			
P. tetras							44					
Phacus sp.	2											
Scenedesmus sp.	12				158							
S. armatus									140			
S. denticulatus							176					
S. dimorphus							44		440			
S. quadricauda			380				440		960			
Sphaerocystis sp.							132					
Spirogyra sp.	2											
Staurastrum			380									
Ulothrix												
UID Green	2						176					
Tetrastrum Staurogeniaeforme					79							
TOTAL	365		1040		711		2793		2200			
% OF SAMPLE	16.7		10.5		4.3		8.8		8.24			
E. TOTAL ORGANISM DENSITY	2183		9940		16705		31344		26700			

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

(All densities are expressed as number of organisms per liter.)

STATION: South Control

COLLECTION DATE	8-11-71		10-7-71		10-26-71		11-23-71		12-8-71			
TEMPERATURE - °F	79°		70°		63°		48°		39°			
A. DIATOMS	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells
Achanthes												
Amphiprora sp.							74					
Amphora							222		100			
Asterionella sp.							296		2160			
Attheya												
Bacillaria							74					
Cocconeis sp.					140				100			
Coscinodiscus			560		2340		3108		1760			
Cyclotella sp. (a)			4000		9200		16870		24120			
Cyclotella sp. (b)												
Cymbella					140				100			
Diatoma									420			
Diploneis												
Epithemia												
Eunotia												
Fragillaria sp.			140				740		320			
F. brevistata							222					
F. crotonensis												
Gomphonema												
Gyrosigma			280									
Licmophora												
Melosira sp.	22				880		5772		2700			
M. granulata			280									
M. moniliformis												
Meridion							74		100			
Navicula sp.												
Navicula sp. (a)	9						444		520			
Navicula sp. (b)												
Nitzschia					140		296		100			
N. aclcularis												
N. vermicularis												
Stephanodiscus			1660		440		222		1240			
Su irella sp.							370		100			
S. patella					140		518		620			
Synedra							370		100			
Tabellaria												
UID Pennate							222					
UID Centrales												
TOTAL	31		6920		13420		29894		34580			
% OF SAMPLE	1.0		83.2		80.8		83.7		97			
B. OTHER CHRYSOPHYTA												
Glenodinium												
Mallomonas					140		148					
Trachelomonas					140							
TOTAL					280		148					
% OF SAMPLE					1.7		.4					

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

(All densities are expressed as number of organisms per liter.)

STATION: South Control

COLLECTION DATE	8-11-71		10-7-71		10-26-71		11-23-71		12-8-71			
TEMPERATURE - °F	79°		70°		63°		48°		39°			
C. CYANOPHYTA	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clump	Cells
Anabaena sp.	9						74					
A. flos-aquae	9											
Aphanizomenon-flos-aquae	1171											
Chroococcus sp.					300		1110		200			
Colimneticus	32		140									
Coelosphaerium												
Gleocapsa like												
Gomphosphaeria												
Merismopedia												
Microcystis sp.	376		140		140							
Maeruginosa												
Oscillatoria sp.	64				140		148					
O. chlorina												
O. phormidium							666					
O. tenuis							74					
O. nigra							296					
Phormidium												
Spirulina	2											
Aphanocapsa	250						74					
UID Bluegreens							148					
TOTAL	1913		280		580		2590		200			
% OF SAMPLE	91.0		3.4		3.5		7.3		1.0			

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

Station - South Control

(All densities are expressed as number of organisms per liter.)

OLLECTION DATE	8-11-71		10-7-71		10-26-71		11-23-71		12-8-71			
EMPERATURE - °F	79°		70°		63°		48°			39°		
CHLOROPHYTA	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells
Actinastrum	2				580		222		100			
Ankistrodesmus												
Chlamydomonas												
Closterium												
C. gracile												
Crucigenia quadrata							296					
Dictyopshaerium												
D. erenbergianum							962					
Eudorina sp.												
E. elegans												
Golenkinia												
Micractinium sp.												
M. pusillum									100			
Mougeotia sp.	97											
Pandorina												
Pediastrum duplex	22		280		740		518		100			
P. biradiatum												
P. obtusum					140							
P. simplex	29		140				198		200			
P. tetras					140							
Phacus sp.												
Scenedesmus sp.	13											
S. armatus												
S. denticulatus					140		74					
S. dimorphus												
S. quadricauda			560		580		740		320			
Sphaerocystis sp.												
Spirogyra sp.												
Staurastrum			140									
Ulothrix												
TOTAL	163		1120		2320		3084		820			
% OF SAMPLE	8		13.4		14		8.6		2			
E. TOTAL ORGANISM DENSITY	2107		8320		16600		35716		35600			

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

(All densities are expressed as number of organisms per liter.)

STATION: South East

COLLECTION DATE	6/13/72		7/9/72		7/20/72		8/8/72		8/23/72		9/29/72	
TEMPERATURE - °F	68°		71°		76°				76°		70.5°	
A. DIATOMS	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells
Achanthes												
Amphiprora sp.												
Amphora												
Asterionella sp.			548	4072					148	148		
Attheya									148	148		
Bacillaria												
Cocconeis sp.			78	78					148	148		
Coscinodiscus	459	459	313	313	914	914	7366	7366	6963	6963	9210	9210
Cyclotella sp. (a)	4526	4526	6734	6734	2629	3429	3069	4297	15556	16297	4789	4789
Cyclotella sp. (b)												
Cymbella									148	148		
Diatoma	131	131	157	157	114	114			741	741		
Diploneis							153	153				
Epithemia	66	66							148	148		
Eunotia	66	66										
Fragillaria sp.							153	11048				
F. brevistata												
F. crotonensis												
Gomphonema												
Gyrosigma												
Licmophora												
Melosira sp.	66	66	940	8065	343	6859	153	307	593	2815		
M. granulata												
M. moniliformis												
Meridion									148	445		
Navicula sp.	131	131	157	157			153	153	296	296		
Navicula sp. (a)			78	78								
Navicula sp. (b)												
Nitzschia												
N. aclcularis												
N. vermicularis												
Stephanodiscus	197	197	78	78	229	229					553	553
Su irella sp.												
S. patella	590	590	235	235			307	307	741	741	553 1105	553 1105
Synedra					114	114			296	296		
Tabellaria												
UID Pennate												
UID Centrales												
Pennate	66	66							148	148		
Uid Unicell	197	197										
TOTAL	6495	6495	9318	19967	4343	11659	11354	23631	26222	29482	16210	16210
% OF SAMPLE	94.28	79.19	85.0	59.6	67.86	35.79	89.17	57.46	85.5	24.0	87.99	18.18
B. OTHER CHRYSOPHYTA												
Glenodinium												
Mallomonas												
Trachelomonas					114	114						
Dino Flagellate			78	78	229	229	153	153				
TOTAL			78	78	343	343	153	153				
% OF SAMPLE			.7	.2	5.36	1.05	1.20	.37				

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

Station - South East

(All densities are expressed as number of organisms per liter.)

COLLECTION DATE	6/13/72		7/9/72		7/20/72		8/8/72		8/23/72		9/29/72	
TEMPERATURE - °F	68°		71°		76°				76°		70.5°	
C. CYANOPHYTA	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clump	Cells
Anabaena sp.												
A. flos-aquae												
Aphanizomenon-flos-aquae												
Chroococcus sp.			313	2349	686	3429	307	1535				
Colimneticus												
Coelosphaerium												
Gleocapsa like												
Gomphosphaeria												
Merismopedia												
Microcystis sp.					114	800	153	6598			553	42919
Maeruginosa												
Oscillatoria sp.			313	4150	229	2172			148	3111		
O. chlorina												
O. phormidium												
O. tenuis												
O. nigra												
Phormidium												
Spirulina												
UID Cell	66	66										
~~Aphanocapsa~~									148	3111		
UID Bluegreen									296	46371		
TOTAL	66	66	626	6499	1029	6401	460	8133	592	52593	553	42919
% OF SAMPLE	.96	.80	5.7	19.4	16.08	19.65	3.61	19.78	1.9	42.8	3.00	48.14

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

Station - South East

(All densities are expressed as number of organisms per liter.)

COLLECTION DATE	6/13/72		7/9/72		7/20/72		8/8/72		8/23/72		9/29/72	
TEMPERATURE - °F	68°		71°		76°				76°		70.5°	
CHLOROPHYTA	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells
Actinastrum			78	626								
Ankistrodesmus												
Chlamydomonas												
Closterium												
C. gracile												
Crucigenia quadrata												
Dictyopshaerium					114	7544						
D. erenbergianum												
Eudorina sp.					114	3429			148	3408	553	17867
E. elegans												
Golenkinia												
Micractinium sp.					114	1829						
M. pusillum												
Mougeotia sp.												
Pandorina												
Pediastrum duplex												
P. biradiatum			157	2506					445	15408		
P. obtusum											553	9763
P. simplex			78	1253			460	7366	889	10963		
P. tetras	131	1050	78	626			153	1228				
Phacus sp.	66	66										
Scenedesmus sp.												
S. armatus												
S. denticulatus			78	313	229	914						
S. dimorphus												
S. quadricauda	131	525	392	1566			153	614	1185	4741	553	2395
Sphaerocystis sp.												
Spirogyra sp.												
Staurastrum									148	148		
Ulothrix					114	457						
UNICELL			78	78								
UID FILAMENT									1037	6074		
TOTAL	328	1641	939	6968	685	14173	766	9208	3852	40742	1659	30025
% OF SAMPLE	4.76	20.01	8.6	20.8	10.70	43.51	6.02	22.39	12.6	33.2	9.01	33.68
E. TOTAL ORGANISM DENSITY	6889	8202	10961	33512	6400	32576	12733	41125				

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

Station - South East

(All densities are expressed as number of organisms per liter.)

STATION:

COLLECTION DATE	10/26/72											
TEMPERATURE - °F	58.5											
A. DIATOMS	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells
Achanthes												
Amphiprora sp.												
Amphora												
Asterionella sp.												
Attheya	880	880										
Bacillaria												
Cocconeis sp.												
Coscinodiscus	6603	6603										
Cyclotella sp. (a)	18268	18929										
Cyclotella sp. (b)												
Cymbella	880	880										
Diatoma												
Diploneis												
Epithemia												
Eunotia												
Fragillaria sp.												
F. brevistata												
F. crotonensis												
Gomphonema												
Gyrosigma												
Licmophora												
Melosira sp.	880	1651										
M. granulata												
M. moniliformis												
Meridion												
Navicula sp.												
Navicula sp. (a)												
Navicula sp. (b)												
Nitzschia												
N. aclcularis												
N. vermicularis												
Stephanodiscus	1651	1651										
Su irella sp.												
S. patella	880	880										
Synedra												
Tabellaria												
UID Pennate	1651	1651										
UID Centrales												
TOTAL	31693	33125										
% OF SAMPLE	63.2	11.2										
B. OTHER CHRYSOPHYTA												
Glenodinium												
Mallomonas												
Trachelomonas												
TOTAL												
% OF SAMPLE												

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

Station - South East

(All densities are expressed as number of organisms per liter.)

COLLECTION DATE	10/26/72											
TEMPERATURE - °F	58.5°											
C. CYANOPHYTA	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clump	Cells
Anabaena sp.												
A. flos-aquae												
Aphanizomenon-flos-aquae												
Chroococcus sp.	2421	19809										
Colimneticus												
Coelosphaerium												
Gleocapsa like	880	3302										
Gomphosphaeria												
Merismopedia												
Microcystis sp.	1651	73513										
Maeruginosa												
Oscillatoria sp.	880	21570										
O. chlorina												
O. phormidium												
O. tenuis												
O. nigra												
Phormidium	880	9024										
Spirulina												
TOTAL	6712	127218										
% OF SAMPLE	13.4	43.2										

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

Station - South East

(All densities are expressed as number of organisms per liter.)

COLLECTION DATE	10/26/72											
TEMPERATURE - °F	58.5°											
CHLOROPHYTA	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells
Actinastrum												
Ankistrodesmus												
Chlamydomonas												
Closterium												
C. gracile												
Crucigenia quadrata												
Dictyopshaerium	1651	74394										
D. erenbergianum												
Eudorina sp.												
E. elegans												
Golenkinia												
Micractinium sp.												
M. pusillum												
Mougeotia sp.												
Pandorina												
Pediastrum duplex												
P. biradiatum												
P. obtusum												
P. simplex	880	21570										
P. tetras	880	2421										
Phacus sp.												
Scenedesmus sp.												
S. armatus	880	1651										
S. denticulatus												
S. dimorphus												
S. quadricauda	3302	13206										
Sphaerocystis sp.												
Spirogyra sp.												
Staurastrum												
Ulothrix												
UID Filamentous	880	7483										
UID Clump	1651	11885										
UID Unicellulae	1651	1651										
TOTAL	11775	134261										
% OF SAMPLE	23.5	45.6										
E. TOTAL ORGANISM DENSITY	50180	294604										

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

(All densities are expressed as number of organisms per liter.)

STATION: North West

COLLECTION DATE	6/13/72		7/9/72		7/20/72		8/8/72		8/23/72		9/29/72	
TEMPERATURE - °F	69°		73°		77°				75°		70.5°	
A. DIATOMS	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells
Achanthes												
Amphiprora sp.												
Amphora												
Asterionella sp.	178	711	503	2413								
Attheya												
Bacillaria												
Cocconeis sp.											749	749
Coscinodiscus			201	201	365	365	5226	5226			9240	9240
Cyclotella sp. (a)	6400	6400	4424	4424	4016	4016	3317	3819	7449	7729	15233	15233
Cyclotella sp. (b)												
Cymbella									279	279		
Diatoma	178	178			243	243	201	201	279	279	2747	2747
Diploneis												
Epithemia												
Eunotia												
Fragillaria sp.	178	1422	101	7039	243	609						
F. brevistata												
F. crotonensis	89	444	201	603								
Gomphonema												
Gyrosigma												
Licmophora												
Melosira sp.	444	711	704	8647	487	2312			1211	3445		
M. granulata												
M. moniliformis												
Meridion												
Navicula sp.			101	101			201	201				
Navicula sp. (a)												
Navicula sp. (b)												
Nitzschia												
N. aclcularis												
N. vermicularis												
Stephanodiscus	89	89	302	1006	609				652	652		
Su irella sp.												
S. patella	356	356	201	201			101	101	652	652	749	749
Synedra	178	178	101	101					279	279	749	749
Tabellaria												
UID Pennate	89	89										
UID Centrales												
Nitzshia sp(a)									652	652		
Nitzshia Vermiculars									279	279		
Penate									652	652		
Sunedra Sp (c)											749	749
TOTAL	8179	10578	6839	24736	5963	8154	9046	9548	15829	18343	30216	30216
% OF SAMPLE	89.32	67.24	80.00	61.65	71.00	20.00	78.93	24.11	76.93	13.91	76.69	17.61
OTHER CHRYSOPHYTA												
Glenodinium			101	101								
Mallomonas												
Trachelomonas	178	178			122	122						
Dino Flagellates					122	122	201	201				
TOTAL	178	178	101	101	244	244	201	201				
% OF SAMPLE	1.94	1.13	1.18	.25	2.90	.60	1.8	.51				

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

(All densities are expressed as number of organisms per liter.) Station - North West

COLLECTION DATE	6/13/72		7/9/72		7/20/72		8/8/72		8/23/72		9/29/72	
TEMPERATURE - °F	69°		73°		77°				75°		70.5°	
C. CYANOPHYTA	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clump	Cells
Anabaena sp.							101	1608				
A. flos-aquae												
Aphanizomenon-flos-aquae											1998	35711
Chroococcus sp.			101	1508	487	2556	704	4020	279	1210	749	5993
Colimneticus												
Coelosphaerium												
Gleocapsa like												
Gomphosphaeria					122	11075						
Merismopedia									279	7729		
Microcystis sp.							201	8141			749	32964
Maeruginosa												
Oscillatoria sp.					365	6207	101	2010				
O. chlorina												
O. phormidium												
O. tenuis												
O. nigra												
Phormidium												
Spirulina												
Aphanocapsa									279	68257		
TOTAL			101	1508	974	19838	1107	15779	837	77196	1696	74668
% OF SAMPLE			1.18	3.76	11.60	48.66	9.66	39.85	4.07	58.55	4.20	11.38

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

Station - North West

(All densities are expressed as number of organisms per liter.)

2/3

OLLECTION DATE	6-13-72		7-9-72		7-20-72		8-8-72		8-23-72		9-29-72	
EMPERATURE - °F	69°		73°		77 °				75°		70.5	
CHLOROPHYTA	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells
Actinastrum	178	1333			122	974						
Ankistrodesmus												
Chlamydomonas												
Closterium												
C. gracile												
Crucigenia quadrata												
Dictyosphaerium												
D. erenbergianum												
Eudorina sp.					122	3894	101	1608	652	8381	749	4995
E. elegans												
Golenkinia												
Micractinium sp.	89	444	201	2413					279	5587		
M. pusillum												
Mougeotia sp.												
Pandorina												
Pediastrum duplex	89	1422	201	3218			302	4824	279	4656	1498	25722
P. biradiatum									279	2514	749	4995
P. obtusum												
P. simplex			201	3218	365	5842	402	6432	279	4377	749	7492
P. tetras												
Phacus sp.												
Scenedesmus sp.												
S. armatus												
S. denticulatus							101	402	279	1210		
S. dimorphus												
S. quadricauda	444	1778	402	1609	365	1460	201	804	1583	5587	2247	8491
Sphaerocystis sp.												
Spirogyra sp.												
Staurastrum			201	201	122	122						
Ulothrix					122	243						
Unicell			101	101								
Uid Clump			201	3017								
Uid Colony									279	4004	1498	14984
TOTAL	800	4977	1508	13777	1218	12535	1107	14070	3909	36316	7490	66679
% OF SAMPLE	8.74	31.63	17.64	34.34	14.50	30.74	9.66	35.53	19.00	27.54	19.01	38.87
E. TOTAL ORGANISM DENSITY	9157	15733	8549	40122	8399	40771	11461	39598	20575	131855	39402	171563

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

(All densities are expressed as number of organisms per liter.)

STATION: North West

COLLECTION DATE	10/26/72											
TEMPERATURE - °F	58.5											
A. DIATOMS	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells
Achanthes	873	873										
Amphiprora sp.												
Amphora	873	873										
Asterionella sp.												
Attheya												
Bacillaria												
Cocconeis sp.												
Coscinodiscus	2183	2183										
Cyclotella sp. (a)	7275	7275										
Cyclotella sp. (b)												
Cymbella												
Diatoma												
Diploneis												
Epithemia												
Eunotia												
Fragillaria sp.	873	2910										
F. brevistata												
F. crotonensis	873	5238										
Gomphonema												
Gyrosigma	873	873										
Licmophora												
Melosira sp.	2910	27645										
M. granulata												
M. moniliformis												
Meridion												
Navicula sp.	1455	1455										
Navicula sp. (a)												
Navicula sp. (b)												
Nitzschia												
N. aclcularis												
N. vermicularis												
Stephanodiscus												
Su irella sp.												
S. patella												
Synedra	873	873										
Tabellaria												
UID Pennate												
UID Centrales												
UID SpinedCentric	2183	34920										
TOTAL	21244	85118										
% OF SAMPLE	65.5	38.4										
B. OTHER CHRYSOPHYTA												
Glenodinium												
Mallomonas												
Trachelomonas												
TOTAL												
% OF SAMPLE												

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

(All densities are expressed as number of organisms per liter.) Station - Northwest

COLLECTION DATE	10/26/72											
TEMPERATURE - °F	58.5°											
C. CYANOPHYTA	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clump	Cells
Anabaena sp.												
A. flos-aquae												
Aphanizomenon-flos-aquae												
Chroococcus sp.												
Colimneticus												
Coelosphaerium												
Gleocapsa like												
Gomphosphaeria												
Merismopedia												
Microcystis sp.												
Maeruginosa												
Oscillatoria sp.												
O. chlorina												
O. phormidium												
O. tenuis												
O. nigra												
Phormidium												
Spirulina												
UID Filamentons	873	15423										
TOTAL	873	15423										
% OF SAMPLE	2.7	6.9										

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

Station - North West

(All densities are expressed as number of organisms per liter.)

OLLECTION DATE	10/26/72											
EMPERATURE - °F	58.5°											
CHLOROPHYTA	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells
Actinastrum												
Ankistrodesmus												
Chlamydomonas												
Closterium												
C. gracile												
Crucigenia quadrata	873	26190										
Dictyopshaerium												
D. erenbergianum												
Eudorina sp.												
E. elegans												
Golenkinia	873	873										
Micractinium sp.												
M. pusillum												
Mougeotia sp.												
Pandorina												
Pediastrum duplex	3783	51798										
P. biradiatum												
P. obtusum												
P. simplex	873	21825										
P. tetras	873	3783										
Phacus sp.												
Scenedesmus sp.												
S. armatus												
S. denticulatus												
S. dimorphus												
S. quadricauda	2183	7275										
Sphaerocystis sp.												
Spirogyra sp.												
Staurastrum												
Ulothrix												
UID Clump	873	9603										
TOTAL	10331	121347										
% OF SAMPLE	31.8	54.7										
E. TOTAL ORGANISM DENSITY	32448	221888										

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

(All densities are expressed as number of organisms per liter.)

STATION: Northeast

COLLECTION DATE	6-13-72		7-9-72		7-20-72		8-8-72		8-23-72		9-29-72	
TEMPERATURE - °F	69.5°		75°		76.5°				76°		70.2°	
A. DIATOMS	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells
Pennate											559	559
Achanthes												
Amphiprora sp.												
Amphora												
Asterionella sp.	250	1348	296	1694								
Attheya												
Bacillaria												
Cocconeis sp.	77	77										
Coscinodiscus	169	169					10918	10918	3969	3969	5308	5308
Cyclotella sp. (a)	6414	6414	2583	2753	2860	2860	4824	6601	12304	12833	11454	11454
Cyclotella sp. (b)												
Cymbella												
Diatoma	366	366					635	635	529	529	279	279
Diploneis												
Epithemia												
Eunotia												
Fragillaria sp.	77	366	85	1609					397	397	279	1117
F. brevistata												
F. crotonensis									132	529		
Gomphonema									132	132		
Gyrosigma												
Licmophora												
Melosira sp.	289	790	551	6649			254	762	926	3572	559	559
M. granulata												
M. moniliformis												
Meridion												
Navicula sp.	77	289					381	381	265	265	1397	1397
Navicula sp. (a)												
Navicula sp. (b)												
Nitzschia												
N. aclcularis												
N. vermicularis												
Stephanodiscus			85	127	124	124					279	279
Su irella sp.												
S. patella	867	867	42	42			127	127	794	794	838	838
Synedra			42	42			254	254	132	132		
Tabellaria												
UID Pennate												
UID Centrales												
UID Unicell	96	96										
Nitzschia sp(a)									132	132	559	559
Nitzschia vermicularis									132	132		
S. Miniscula									132	132		
TOTAL	8682	10782	3684	12916	2984	2984	17093	19678	19976	23548	21511	22249
% OF SAMPLE	90.0	51.0	75.68	56.17	65.58	19.68	87.82	40.68	88.8	34.9	71.30	12.70
B. OTHER CHRYSOPHYTA												
Glenodinium	96	96										
Mallomonas												
Trachelomonas			42	42								
Dino Flagellate			85	85	249	249	381	381				
TOTAL	96	96	127	127	249	249	381	381				
% OF SAMPLE	1.0	.5	2.61	.54	5.72	1.64	1.92	.79				

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

(All densities are expressed as number of organisms per liter.)

COLLECTION DATE	6-13-72		7-9-72		7-20-72		8-8-72		8-23-72		9-29-72	
TEMPERATURE - °F	69.5°		75°		76.5°				76°			
C. CYANOPHYTA	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clump	Cells
Anabaena sp.					124	1865						
A. flos-aquae												
Aphanizomenon-flos-aquae												
Chroococcus sp.	96	2408	212	1567	373	3357	1143	4951			1397	8101
Colimneticus												
Coelosphaerium												
Gleocapsa like									132	529		
Gomphosphaeria							254	17265	132	5027		
Merismopedia			42	1355								
Microcystis sp.	77	2157	42	466							559	34641
Maeruginosa												
Oscillatoria sp.					124	746					279	1955
O. chlorina												
O. phormidium												
O. tenuis												
O. nigra												
Phormidium												
Spirulina												
Aphanocapsa									265	17464	838	46932
UID colonial											279	2794
TOTAL	173	4565	338	3430	621	5968	1397	22216	529	23020	3352	94423
% OF SAMPLE	1.8	21.6	6.94	14.92	14.27	39.34	7.05	45.93	2.4	34.1	11.1	53.65

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

Station - Northeast

(All densities are expressed as number of organisms per liter.)

OLLECTION DATE	6-13-72		7-9-72		7-20-72		8-8-72		8-23-72		9-29-72	
EMPERATURE - °F	69.5°		75°		76.5°					76°		70.2°
CHLOROPHYTA	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells
Actinastrum	212	1733	85	678								
Ankistrodesmus												
Chlamydomonas									132	132		
Closterium									132	132		
C. gracile												
Crucigenia quadrata												
Dictyopshaerium												
D. erenbergianum												
Eudorina sp.							254	3047	265	3704	279	7543
E. elegans												
Golenkinia												
Micractinium sp.			169	1652	124	870						
M. pusillum												
Mougeotia sp.												
Pandorina									132	2911		
Pediastrum duplex	96	1541	42	678					132	2117	1676	23746
P. biradiatum											559	4470
P. obtusum												
P. simplex	96	1541	85	1355	249	3979	127	2031	529	8732	559	12012
P. tetras			42	339					132	1058		
Phacus sp.												
Scenedesmus sp.												
S. armatus												
S. denticulatus							127	508				
S. dimorphus			42	169								
S. quadricauda	193	770	85	339			127	508	529	2117	1117	3911
Sphaerocystis sp.												
Spirogyra sp.												
Staurastrum			42	424							279	279
Ulothrix					124	1119						
Unicell Green	96	96										
Unicell			42	42								
Clumped			127	889								
UID Colony											838	7263
TOTAL	693	5681	719	6523	497	5968	635	6094	1983	20903	5307	59224
% OF SAMPLE	7.2	26.9	14.77	28.37	11.43	39.34	3.21	12.60	8.8	31.0	17.59	33.65
E. TOTAL ORGANISM DENSITY	9644	21124	4868	22996	4351	15169	19806	48369	22488	67471	30170	175996

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

(All densities are expressed as number of organisms per liter.)

STATION: North east

COLLECTION DATE	10-26-72												
TEMPERATURE - °F	58.5°												
A. DIATOMS	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells
Achanthes	787	787										
Amphiprora sp.												
Amphora	787	787										
Asterionella sp.	787	2624										
Attheya												
Bacillaria												
Cocconeis sp.												
Coscinodiscus	4723	4723										
Cyclotella sp. (a)	23091	23616										
Cyclotella sp. (b)												
Cymbella												
Diatoma												
Diploneis												
Epithemia												
Eunotia												
Fragillaria sp.	787	5248										
F. brevistata												
F. crotonensis												
Gomphonema												
Gyrosigma												
Licmophora												
Melosira sp.	1312	5248										
M. granulata												
M. moniliformis												
Meridion												
Navicula sp.	787	787										
Navicula sp. (a)												
Navicula sp. (b)												
Nitzschia	1312	1312										
N. aclcularis												
N. vermicularis												
Stephanodiscus												
Su irella sp.												
S. patella	787	787										
Synedra	2099	2099										
Tabellaria												
UID Pennate												
UID Centrales												
UID Spined Centric	1312	1312										
TOTAL	38571	49330										
% OF SAMPLE	70.3	14.7										
B. OTHER CHRYSOPHYTA												
Glenodinium												
Mallomonas												
Trachelomonas												
TOTAL												
% OF SAMPLE												

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

(All densities are expressed as number of organisms per liter.)

COLLECTION DATE	10-26-72												
TEMPERATURE - °F	58.5°												
C. CYANOPHYTA	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clump	Cells
Anabaena sp.												
A. flos-aquae												
Aphanizomenon-flos-aquae												
Chroococcus sp.	787	2624										
Colimneticus												
Coelosphaerium												
Gleocapsa like												
Gomphosphaeria												
Merismopedia												
Microcystis sp.	787	19680										
Maeruginosa												
Oscillatoria sp.												
O. chlorina												
O. phormidium												
O. tenuis												
O. nigra												
Phormidium												
Spirulina												
Aphanocapsa	787	38048										
UID Filamentous	1312	62451										
TOTAL	4460	122803										
% OF SAMPLE	8.1	36.7										

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

Station - Northeast

(All densities are expressed as number of organisms per liter.)

COLLECTION DATE	10-26-72											
TEMPERATURE - °F	58.5°											
CHLOROPHYTA	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells
Actinastrum												
Ankistrodesmus												
Chlamydomonas												
Closterium												
C. gracile												
Crucigenia quadrata												
Dictyopshaerium	1312	30963										
D. erenbergianum												
Eudorina sp.												
E. elegans	787	5248										
Golenkinia												
Micractinium sp.	787	39360										
M. pusillum												
Mougeotia sp.												
Pandorina												
Pediastrum duplex	1968	45920										
P. biradiatum												
P. obtusum												
P. simplex	787	14432										
P. tetras												
Phacus sp.												
Scenedesmus sp.												
S. armatus												
S. denticulatus												
S. dimorphus	1312	3936										
S. quadricauda	1968	7872										
Sphaerocystis sp.												
Spirogyra sp.												
Staurastrum												
Ulothrix												
S. Bijnga	787	5248										
UID Filamentous	1312	8659										
UID Clumped Alga	787	787										
TOTAL	11807	162425										
% OF SAMPLE	21.5	48.6										
E. TOTAL ORGANISM DENSITY	54838	334558										

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

Station - South West

(All densities are expressed as number of organisms per liter.)

STATION:

COLLECTION DATE	6/13/72		7/9/72		7/20/72		8/8/72		8/23/72		9/29/72	
TEMPERATURE - °F	69°		70.5°		76°				75°		70.5°	
A. DIATOMS	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells
Achanthes			77	77								
Amphiprora sp.												
Amphora												
Asterionella sp.	125	250	927	6180	137	956					743	743
Attheya									112	112		
Bacillaria												
Cocconeis sp.							112	112				
Coscinodiscus	436	436			1092	1092	6729	6729	4037	4037	5695	5695
Cyclotella sp. (a)	5745	5745	4403	4403	6006	9009	3140	2589	8972	9309	10400	10400
Cyclotella sp. (b)												
Cymbella									112	112		
Diatoma	312	312	77	77	137	137	224	336	112	112	1238	1238
Diploneis												
Epithemia												
Eunotia	62	62										
Fragillaria sp.	62	250			137	546	224	4598	224	2355	1486	4457
F. brevistata												
F. crotonensis			77	2704			112	1234	112	785		
Gomphonema												
Gyrosigma									112	112		
Licmophora												
Melosira sp.	436	2685	1545	14909	683	5324	112	673	224	1570	743	743
M. granulata												
M. moniliformis											743	1238
Meridion												
Navicula sp.			310	310	137	137	112	112	337	337	1486	1486
Navicula sp. (a)												
Navicula sp. (b)												
Nitzschia							112	112				
N. aclcularis												
N. vermicularis												
Stephanodiscus			309	309	273	273			112	112		
Su irella sp.											1981	1981
S. patella	687	687			137	137	336	336	337	337		
Synedra					273	273	112	112			2228	2228
Tabellaria												
UID Pennate												
UID Centrales												
Pennate	62	62										
Nitzschia sp. (a)									337	337		
S Miniscula									112	112		
TOTAL	7927	10489	7725	28969	9012	17884	11325	17943			26743	30209
% OF SAMPLE	94.79	74.67	76.34	51.30	71.72	32.67	81.46	31.74			75.52	27.24
B. OTHER CHRYSOPHYTA												
Glenodinium			77	77								
Mallomonas												
Trachelomonas					137	137						
UID	62	62										
DINO Flagellates					410	410	1122	1122				
TOTAL	62	62	77	77	547	547	1122	1122	15252	19739	-	-
% OF SAMPLE	.74	.44	.76	.14	4.35	1.00	8.07	1.99	82.9	29.3	-	-

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

Station: South West

(All densities are expressed as number of organisms per liter.)

COLLECTION DATE	6/13/72		7/9/72		7/20/72		8/8/72		8/23/73		9/29/72	
TEMPERATURE - °F	69°		70.5°		76°				75°		70.5°	
C. CYANOPHYTA	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clump	Cells
Anabaena sp.							112	1009			743	7429
A. flos-aquae												
Aphanizomenon-flos-aquae												
Chroococcus sp.			309	1931	546	2867	112	112	337	2243		
Colimneticus												
Coelosphaerium							112	13458				
Gleocapsa like									112	449		
Gomphosphaeria												
Merismopedia												
Microcystis sp.	62	749	77	6180								
Maeruginosa												
Oscillatoria sp.			77	2318	410	2867					743	5200
O. chlorina												
O. phormidium												
O. tenuis												
O. nigra												
Phormidium												
Spirulina												
Aphanocapsa					137	1365	112	4262				
UID Bluegreen									112	10094		
UID Unicell									112	112		
TOTAL	62	749	540	10506	1093	7099	448	18841	673	12898	1486	12629
% OF SAMPLE	.74	5.33	5.34	18.61	8.71	12.97	3.22	33.33	3.7	19.1	4.20	11.38

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

Station - South West

(All densities are expressed as number of organisms per liter.)

OLLECTION DATE	6/13/72		7/9/72		7/20/72		8/8/72		8/23/72		9/29/72	
EMPERATURE - °F	69°		70.5°		76°				75°		70.5°	
CHLOROPHYTA	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells
Actinastrum			309	2472					112	897		
Ankistrodesmus												
Chlamydomonas												
Closterium												
C. gracile												
Crucigenia quadrata												
Dictyopshaerium			232	4017	137	11466	336	6729				
D. erenbergianum												
Eudorina sp.					137	4368			112	1682	743	4457
E. elegans												
Golenkinia												
Micractinium sp.			155	2086	273	4505	112	5608	112	3365		
M. pusillum												
Mougeotia sp.												
Pandorina												
Pediastrum duplex	125	1998					112	1794	449	7626	1981	35409
P. biradiatum									112	897		
P. obtusum												
P. simplex			309	4944	137	2184	224	3589	337	9196	743	9904
P. tetras			77	618					112	785		
Phacus sp.												
Scenedesmus sp.												
S. armatus												
S. denticulatus			77	309								
S. dimorphus							112	449				
S. quadricauda	187	749	386	1545	956	3822	112	449	561	1794	2228	8914
Sphaerocystis sp.												
Spirogyra sp.												
Staurastrum			77	77					112	112		
Ulothrix					273	2867						
Unicell			77	77								
UID Clump			155	927								
Filamentous									112	337		
UID Green Clump									337	9084		
UID Colony											1486	9409
TOTAL	312	2747	1777	16918	1913	29212	1008	18618	2468	34775	7181	68093
% OF SAMPLE	3.73	19.56	17.56	29.96	15.22	53.36	7.25	32.94	13.4	51.6	20.28	61.38
E. TOTAL ORGANISM DENSITY	8363	14047	10119	56470	12565	54742	13903	56524	18393	674.2	35410	110931

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

Station: Southwest

(All densities are expressed as number of organisms per liter.)

STATION:

COLLECTION DATE	10/26/72												
TEMPERATURE - °F	58.5												
A. DIATOMS	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells
Achanthes												
Amphiprora sp.												
Amphora												
Asterionella sp.												
Attheya												
Bacillaria												
Cocconeis sp.												
Coscinodiscus	2381	2381										
Cyclotella sp. (a)	16191	16191										
Cyclotella sp. (b)												
Cymbella												
Diatoma												
Diploneis	714	714										
Epithemia												
Eunotia												
Fragillaria sp.												
F. brevistata												
F. crotonensis												
Gomphonema												
Gyrosigma												
Licmophora												
Melosira sp.	3095	4286										
M. granulata												
M. moniliformis												
Meridion												
Navicula sp.												
Navicula sp. (a)												
Navicula sp. (b)												
Nitzschia	714	714										
N. aclcularis	714	714										
N. vermicularis												
Stephanodiscus	714	714										
Su irella sp.												
S. patella	1786	1786										
Synedra	714	714										
Tabellaria												
UID Pennate	1191	1191										
UID Centrales												
TOTAL	28214	29405										
% OF SAMPLE	72.7	22.9										
B. OTHER CHRYSOPHYTA												
Glenodinium												
Mallomonas												
Trachelomonas	714	714										
TOTAL	714	714										
% OF SAMPLE	1.8	.6										

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

Station: Southwest

(All densities are expressed as number of organisms per liter.)

COLLECTION DATE	10/26/72											
TEMPERATURE - °F	58.5°											
C. CYANOPHYTA	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clump	Cells
Anabaena sp.												
A. flos-aquae												
Aphanizomenon-flos-aquae												
Chroococcus sp.	714	10238										
Colimneticus												
Coelosphaerium												
Gleocapsa like												
Gomphosphaeria												
Merismopedia												
Microcystis sp.	1191	28096										
Maeruginosa												
Oscillatoria sp.												
O. chlorina												
O. phormidium												
O. tenuis												
O. nigra												
Phormidium												
Spirulina												
UID Filamentous	714	714										
TOTAL	2619	39048										
% OF SAMPLE	6.7	30.5										

ROSETON/DANSKAMMER POINT
PHYTOPLANKTON SAMPLING RESULTS

Station - Southwest

(All densities are expressed as number of organisms per liter.)

OLLECTION DATE	10/26/72											
EMPERATURE - °F	58.5°											
CHLOROPHYTA	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells	Clumps	Cells
Actinastrum												
Ankistrodesmus												
Chlamydomonas												
Closterium												
C. gracile												
Crucigenia quadrata												
Dictyopshaerium												
D. erenbergianum												
Eudorina sp.												
E. elegans												
Golenkinia												
Micractinium sp.												
M. pusillum												
Mougeotia sp.												
Pandorina												
Pediastrum duplex												
P. biradiatum												
P. obtusum												
P. simplex	1786	26191										
P. tetras												
Phacus sp.												
Scenedesmus sp.												
S. armatus												
S. denticulatus												
S. dimorphus	714	2381										
S. quadricauda	2381	9524										
Sphaerocystis sp.												
Spirogyra sp.												
Staurastrum												
Ulothrix												
UID Filamentous	1191	19762										
UID Unicell	1191	1191										
TOTAL	7263	59049										
% OF SAMPLE	18.7	46.1										
E. TOTAL ORGANISM DENSITY	38810	128216										

ROSETON/DANSKAMMER POINT
ZOOPLANKTON SAMPLING RESULTS

Station - North Control

(All Densities are expressed as Number of Organisms per cubic meter.)

COLLECTION DATE	8/11/71	10/7/71	10/26/71	11/23/71	12/8/71	
TEMPERATURE - °F	79°	70°	62.8°	48°	38.4°	
LENGTH OF TOW - ft		8'	25'	26'	28'	
A. COPEPOD NAUPLII		22,337	12,530	547	572	
% of Total		42.86	40.28	27.57	57.14	
B. COPEPODS						
Calanoid			5,400	34		
Copepod						
Cyclopoid		8,935	2,376	171		
Harpacticoid						
Total Copepods		8,935	7,776	205		
% of Total		17.14	25.00	10.33		
C. ROTIFERS						
Brachionus				239		
Filinia				34		
Kellekottia						
Keratella			1,296	103	143	
Nothulca						
Ploesoma						
Polyarthra						
Testudinella			2,376			
UID			1,728	342	143	
Total Rotifers			5,400	718	286	
% of Total			17.36	36.19	28.57	
D. CLADOCERANS						
Bosmina				514	143	
Daphnia						
Juvenile Bosmina						
Juvenile Leptodora						
Leptodora						
UID		20,848	5,400			
Total Cladocerans		20,848	5,400	514	143	
% of Total		40.00	17.36	25.91	14.29	
E. TOTAL ORGANISM DENSITY		52,120	31,106	1,984	1,001	

ROSETON/DANSKAMMER POINT
ZOOPLANKTON SAMPLING RESULTS

Station - South Control

(All Densities are expressed as Number of Organisms per cubic meter.)

COLLECTION DATE	8/11/71	10/7/71	10/26/71	11/23/71	12/8/71	
TEMPERATURE - °F		70°	63°	48°	38.4°	
LENGTH OF TOW - ft		28'	23'	30'	28'	
A. COPEPOD NAUPLII		3,462	13,354	356	488	
% of Total		34.48	79.41	19.15	42.11	
B. COPEPODS						
Calanoid				27		
Copepod				136		
Cyclopoid		242	247	137		
Harpacticoid						
Total Copepods		242	247	300		
% of Total		24.14	1.47	16.14		
C. ROTIFERS						
Brachionus			247	54		
Filinia						
Kellekottia						
Keratella			124	136	549	
Nothulca						
Ploesoma						
Polyarthra						
Testudinella						
UID			371			
Total Rotifers		1,385	989	548	122	
% of Total		1,385	1,731	734	671	
D. CLADOCERANS		13.80	10.29	39.70	57.89	
Bosmina			1,113	465		
Daphnia						
Juvenile Bosmina						
Juvenile Leptodora						
Leptodora						
UID		2,769	371			
Total Cladocerans		2,769	1,484	465		
% of Total		27.58	8.83	25.01		
E. TOTAL ORGANISM DENSITY		10,039	16,816	1,859	1159	

ROSETON/DANSKAMMER POINT
ZOOPLANKTON SAMPLING RESULTS Station - North West

(All Densities are expressed as Number of Organisms per cubic meter.)

COLLECTION DATE	6/13/72	7/9/72	7/20/72	8/8/72	8/23/72	9/29/72
TEMPERATURE - °F	69 °	69°	75°		75°	70.2°
LENGTH OF TOW - ft	27'	28'	28'	28'	28'	28'
A. COPEPOD NAUPLII	61,306	1,431	7,815	6,772	12,440	7,925
% of Total	64.9	17.0	11.6	73.4	27.8	20.0
B. COPEPODS						
Calanoid	1,135		6,699		4147	7,076
Copepod	7,380	634	1,117	609	8294	
Cyclopoid			558			4528
Harpacticoid						189
Total Copepods	8,515	634	8,374	609	12,441	11,793
% of Total	9.0	7.5	12.4	6.6	27.8	29.8
C. ROTIFERS						
Brachionus	993		558			189
Filinia	142	157				
Kellekottia	710					94
Keratella	9,082	2,227	9490	1,236	10,782	660
Nothulca	852					
Ploesoma	993	634	11,723		829	189
Polyarthra						283
Testudinella						472
UID	2,839	1,111	3908		2,488	
Total Rotifers	15,611	4,129	25,679	1,236	14,099	1,887
% of Total	16.5	49.0	38.0	13.4	31.5	4.8
D. CLADOCERANS						
Bosmina	7,805	1,431	26,374	609	5,806	17,453
Daphnia	142					
Juvenile Bosmina	993	796	995			472
Juvenile Leptodora						
Leptodora			498			94
UID	142					
Total Cladocerans	9,082	2,227	27,867	609	5,806	18,019
% of Total	9.6	26.5	34.4	6.6	13.0	45.5
E. TOTAL ORGANISM DENSITY	94,514	8,421	81,112	9,226	44,786	39,624

ROSETON/DANSKAMMER POINT
ZOOPLANKTON SAMPLING RESULTS Station - North West

(All Densities are expressed as Number of Organisms per cubic meter.)

COLLECTION DATE	10/26/72					
TEMPERATURE - °F	57°					
LENGTH OF TOW - ft	29'					
A. COPEPOD NAUPLII	1,796					
% of Total	25.5					
B. COPEPODS						
Calanoid						
Copepod						
Cyclopoid	1,796					
Harpacticoid						
Total Copepods	1,796					
% of Total	25.5					
C. ROTIFERS						
Brachionus						
Filinia						
Kellekottia						
Keratella	691					
Nothulca						
Ploesoma	138					
Polyarthra	553					
Testudinella	553					
UID	1,243					
Total Rotifers	3,178					
% of Total	45.1					
D. CLADOCERANS						
Bosmina	276					
Daphnia						
Juvenile Bosmina						
Juvenile Leptodora						
Leptodora						
UID						
Total Cladocerans	276					
% of Total	3.9					
E. TOTAL ORGANISM DENSITY	7,046					

ROSETON/DANSKAMMER POINT
ZOOPLANKTON SAMPLING RESULTS

Station - North East

(All Densities are expressed as Number of Organisms per cubic meter.)

COLLECTION DATE	6/13/72	7/9/72	7/20/72	8/8/72	8/23/72	9/29/72
TEMPERATURE - °F	69.5°	69.5°	76°		75°	70.2°
LENGTH OF TOW - ft	28'	28'	28'	28'	27'	
A. COPEPOD NAUPLII	72,644	1,928	35,580	15,551	19,814	10,263
% of Total	57.1	14.5	14.3	55.6	35.2	50.0
B. COPEPODS						
Calanoid	1,733		13,747	5,184	10,428	570
Copepod	25,658	1,928	4,043	1,037		
Cyclopoid		431	1,617		4,171	3991
Harpacticoid						114
Total Copepods	27,418	2,359	19,407	6221	14,599	4,675
% of Total		17.8	7.8	22.2	25.9	22.8
C. ROTIFERS						
Brachionus	630		1,617			114
Filinia	1,418	643				114
Kellekottia	1,418					
Keratella	7,721	1,928	5,660		7,300	798
Nothulca	1,103					
Ploesoma	788	212	67,116		1,043	342
Polyarthra						114
Testudinella						456
UID	2,837	3,426	5,660	2073	2,086	
Total Rotifers	15,915	6,209	80,053	2073	10,429	1,938
% of Total	12.5	46.7	32.1	7.4	18.5	9.4
D. CLADOCERANS						
Bosmina	9455	1,716	100,270	1,037	10,428	2,963
Daphnia	158					
Juvenile Bosmina	1418	1,073	13,747		1,043	114
Juvenile Leptodora						
Leptodora	158			3,110		
UID						570
Total Cladocerans	11,189	2,789	114,017	4,147	11,471	3,649
% of Total	8.8	21.0	45.8	14.8	20.4	17.8
E. TOTAL ORGANISM DENSITY	127,166	13,285	249,057	27,992	56,313	20,525

ROSETON/DANSKAMMER POINT
ZOOPLANKTON SAMPLING RESULTS

Station - North East

(All Densities are expressed as Number of Organisms per cubic meter.)

COLLECTION DATE	10/26/72					
TEMPERATURE - °F	58.1°					
LENGTH OF TOW - ft	22'					
A. COPEPOD NAUPLII	2,521					
% of Total	41.9					
B. COPEPODS						
Calanoid	582					
Copepod						
Cyclopoid	194					
Harpacticoid						
Total Copepods	776					
% of Total	12.9					
C. ROTIFERS						
Brachionus						
Filinia						
Kellekottia						
Keratella	776					
Nothulca						
Ploesoma						
Polyarthra	776					
Testudinella	388					
UID	582					
Total Rotifers	2,522					
% of Total	41.9					
D. CLADOCERANS						
Bosmina	194					
Daphnia						
Juvenile Bosmina						
Juvenile Leptodora						
Leptodora						
UID						
Total Cladocerans	194					
% of Total	3.2					
E. TOTAL ORGANISM DENSITY	6,013					

ROSETON/DANSKAMMER POINT
ZOOPLANKTON SAMPLING RESULTS

Station - South West

(All Densities are expressed as Number of Organisms per cubic meter.)

COLLECTION DATE	6/13/72	7/9/72	7/20/72	8/8/72	8/23/72	9/29/72
TEMPERATURE - °F	69°	69°	75°		76°	70.5°
LENGTH OF TOW - ft	30'	28'	28'	28'	28'	28'
A. COPEPOD NAUPLII	66,260	769	5,702	8234	15,281	13,262
% of Total	65.8	17.9	25.0	43.5	29.7	45.9
B. COPEPODS						
Calanoid			4,147	2473	7641	680
Copepod	5,529	612		816	6946	
Cyclopoid	683	309	259		2084	8,161
Harpacticoid						
Total Copepods	6,212	921	4,406	3289	16,671	8,841
% of Total	6.2	21.4	19.3	17.4	32.4	30.6
C. ROTIFERS						
Brachionus	683	152	259		695	
Filinia	2,754					
Kellekottia	2,071	152				
Keratella	10,353	460	3,110		5,557	680
Nothulca	683					
Ploesoma	1,387	460	3,369			170
Polyarthra						
Testudinella						510
UID	4824	769	1,814		695	170
Total Rotifers	22,755	1,993	8,552		6,947	1,530
% of Total	22.6	46.3	37.5		13.5	5.3
D. CLADOCERANS						
Bosmina	4,825	309	3,369	1,742	12,503	5,271
Daphnia	683					
Juvenile Bosmina		309	778			
Juvenile Leptodora						
Leptodora						
UID						
Total Cladocerans	15,508	618	4,147	1,742	12,503	5,271
% of Total	5.5	14.4	18.2	15.4	24.3	18.2
E. TOTAL ORGANISM DENSITY	100,735	4,301	22,807	11,322	51,402	28,904

ROSETON/DANSKAMMER POINT
ZOOPLANKTON SAMPLING RESULTS Station - South West

(All Densities are expressed as Number of Organisms per cubic meter.)

COLLECTION DATE	10/26/72					
TEMPERATURE - °F	57.5°					
LENGTH OF TOW - ft	29'					
A. COPEPOD NAUPLII	2,887					
% of Total	24.6					
B. COPEPODS						
Calanoid	412					
Copepod						
Cyclopoid	3,505					
Harpacticoid						
Total Copepods	3,917					
% of Total						
C. ROTIFERS						
Brachionus						
Filinia						
Kellekottia						
Keratella	412					
Nothulca						
Ploesoma	412					
Polyarthra	412					
Testudinella	619					
UID	1,856					
Total Rotifers	3,711					
% of Total	31.6					
D. CLADOCERANS						
Bosmina	1,237					
Daphnia						
Juvenile Bosmina						
Juvenile Leptodora						
Leptodora						
UID						
Total Cladocerans	1,237			-		
% of Total	10.5					
E. TOTAL ORGANISM DENSITY	11,752					

ROSETON/DANSKAMMER POINT
ZOOPLANKTON SAMPLING RESULTS

Station - South East

(All Densities are expressed as Number of Organisms per cubic meter.)

COLLECTION DATE	6/13/72	7/9/72	7/20/72	8/8/72	8/23/72	9/29/72
TEMPERATURE - °F	68°	71°	75°		76°	NO SAMPLE
LENGTH OF TOW - ft	20'	25'	26'	27'	25'	
A. COPEPOD NAUPLII	184,906	6,038	7,815	8,234	21,713	
% of Total	62.6	21.4	11.6	43.5	17.7	
B. COPEPODS						
Calanoid	13,208	1,240	6,699	2473	8941	
Copepod	52,830	2,787	1,117	816	11,495	
Cyclopoid		618	558		1,277	
Harpacticoid					1,277	
Total Copepods	66,038	4,645	8374	3289	22,990	
% of Total	22.4	16.5	12.4	17.4	18.8	
C. ROTIFERS						
Brachionus	2830	464	558			
Filinia	1887					
Kellekottia	5660					
Keratella	6604	1,858	9,490		10,218	
Nothulca	1887					
Ploesoma	1887	2,787	11,723			
Polyarthra						
Testudinella						
UID	12,264	1,393	3,908		1,277	
Total Rotifers	33,019	6,502	25,679		11,495	
% of Total	11.2	23.1	38.0		9.4	
D. CLADOCERANS						
Bosmina	10,377	6,813	22,887	5,761	54,920	
Daphnia	943					
Juvenile Bosmina		4,180	2,791	1,657	10,218	
Juvenile Leptodora						
Leptodora						
UID					1,277	
Total Cladocerans	11,320	10,993	25,678	7,418	66,415	
% of Total	3.8	39.0	38.0	39.2	54.2	
E. TOTAL ORGANISM DENSITY	295,283	28,178	67,546	18,941	122,613	

ROSETON/DANSKAMMER POINT
ZOOPLANKTON SAMPLING RESULTS

Station - South East

(All Densities are expressed as Number of Organisms per cubic meter.)

COLLECTION DATE	10/26/72					
TEMPERATURE - °F	57°					
LENGTH OF TOW - ft	28'					
A. COPEPOD NAUPLII	5,484					
% of Total	41.8					
B. COPEPODS						
Calanoid	1,192					
Copepod						
Cyclopoid	2,861					
Harpacticoid						
Total Copepods	4,053					
% of Total	30.9					
C. ROTIFERS						
Brachionus						
Filinia						
Kellekottia						
Keratella	1,192					
Nothulca						
Ploesoma						
Polyarthra	238					
Testudinella	715					
UID	715					
Total Rotifers	2,860					
% of Total	21.8					
D. CLADOCERANS						
Bosmina	715					
Daphnia						
Juvenile Bosmina						
Juvenile Leptodora						
Leptodora						
UID						
Total Cladocerans	715					
% of Total	5.5					
E. TOTAL ORGANISM DENSITY	13,112					

APPENDIX B

ROSETON/DANSKAMMER POINT BENTHOS DATA

1971-1972

ROSETON/DANSKAMMER POINT BENTHOS DATA

TRANSECT:	NORTH CONTROL						MAX Δ T						.75 Δ T						SOUTH CONTROL					
STATION DEPTHS:	1		2		3		1		2		3		1		2		3		1		2		3	
"Fall" 10/6/71	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg
Acari	2	0.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Amphipoda	--	--	--	--	1	0.05	1	0.14	--	--	--	--	--	--	--	--	1	0.18	--	--	1	0.28	--	--
Diptera	8	4.46	5	2.46	2	2.45	5	0.54	7	2.39	3	1.72	6	4.76	5	4.81	6	7.82	7	4.54	3	3.26	1	0.84
Gastropoda																								
Hirudinea	1	3.53	--	--	1	3.47	--	--	--	--	--	--	--	--	--	--	1	9.22	--	--	--	--	--	--
Isopoda	--	--	--	--	--	--	3	5.28	1	5.56	1	1.06	--	--	--	--	1	2.84	--	--	1	0.05	1	3.81
Chiridotea alymra																								
Cyathura polita																								
Oligochaeta	11	5.87	12	3.92	8	13.67	--	--	5	9.71	19	35.43	6	15.75	9	54.98	11	31.09	21	50.82	7	0.20	1	1.06
Pelecypoda																								
Polychaeta	--	--	--	--	--	--	--	--	1	22.23	1	16.54	--	--	--	--	--	--	--	--	--	--	--	--
Nereidae																								
Manayunki																								
Turbellaria																								
Others:	1	0.22	1	0.15	--	--	1	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	0.24
Barnacle																								
Hydra																								
Trichoptera																								
UID insect																								
TOTAL:	23	34.58	18	6.53	12	19.64	10	6.16	14	39.89	24	54.75	11	20.51	14	59.71	20	51.15	28	55.36	12	3.79	4	5.9

ROSETON/DANSKAMMER POINT BENTHOS DATA

TRANSECT:	NORTH CONTROL						MAX Δ T						.75 Δ T						SOUTH CONTROL					
STATION DEPTHS:	1		2		3		1		2		3		1		2		3		1		2		3	
SUMMER 8/17/72	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg
Acari	--	--	--	--	01	0.12	--	--	--	--	--	--	--	--	--	--	01	3.22	--	--	--	--	01	0.08
Amphipoda	01	0.14	07	1.28	24	4.88	09	2.14	07	2.98	37	8.24	05	1.90	*30	27.38	04	1.05	02	0.11	26	17.41	35	8.05
Diptera	02	1.29	07	5.09	10	6.14	11	3.39	09	7.69	04	1.93	10	3.94	*11	11.71	10	4.67	38	5.84	20	4.01	05	1.
Gastropoda	--	--	--	--	01	0.51	01	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hirudinea	--	--	01	2.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopoda	01	1.31	--	--	--	--	--	--	03	14.14	06	9.17	01	0.14	--	--	--	--	--	--	03	10.37	07	15.5
Chiridotea alymra	--	--	--	--	--	--	--	--	02	3.49	03	5.46	--	--	--	--	--	--	--	--	--	--	01	0.6
Cyathura polita	--	--	--	--	--	--	--	--	01	10.65	03	3.71	--	--	--	--	--	--	--	--	--	--	06	14.
Oligochaeta	50	53.53	79	89.31	69	32.15	118	178.35	185	154.44	37	8.04	48	100.31	*56	101.32	45	69.24	54	67.61	46	21.67	23	9.95
Pelecypoda	07	3.07	03	0.75	06	3.26	05	1.32	13	3.95	06	0.50	--	--	*02	0.70	01	2.20	07	11.54	03	0.87	--	--
Polychaeta	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	01	<0.05	01	0.06	--	--
Nereidae																								
Manayunki	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	01	<0.05	01	0.06	--	--
Turbellaria	--	--	--	--	01	0.08	24	6.63	04	0.68	02	0.49	04	1.25	*01	0.08	02	0.35	04	0.70	04	1.26	02	1.08
Others:																								
Barnacle																								
Hydra																								
Trichoptera	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	01	1.10	--	--	--	--
UID insect																								
TOTAL:	61	59.34	97	99.25	112	47.14	168	191.93	221	183.88	92	28.37	68	107.54	100	141.19	63	80.73	107	86.95	103	55.70	73	36.0

ROSETON/DANSKAMMER POINT BENTHOS DATA

TRANSECT:	NORTH CONTROL						MAX Δ T						.75 Δ T						SOUTH CONTROL					
STATION DEPTHS:	1		2		3		1		2		3		1		2		3		1		2		3	
Fall 10/18/72	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg
Acari	--	--	04	0.66	02	0.22	01	0.10	--	--	--	--	01	0.23	--	--	--	--	02	0.21	--	--	01	0.05
Amphipoda	01	<0.05	07	1.18	13	3.66	05	0.45	07	2.26	25	4.48	02	0.46	10	2.39	15	5.46	--	--	02	0.09	20	4.08
Diptera	15	5.86	11	9.22	13	10.29	07	Δ1.64	3.3	Δ3.69	14	Δ3.32	34	Δ6.23	07	1.12	07	Δ1.17	23	Δ7.77	15	Δ4.96	13	6.57
Gastropoda	01	0.10	--	--	01	<0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	01	0.44	01	<0.05
Hirudinea	01	0.10	01	1.97	05	11.45	--	--	--	--	--	--	--	--	01	27.12	--	--	--	--	--	--	--	--
Isopoda	--	--	--	--	01	0.67	03	9.97	02	11.17	07	12.06	01	1.99	02	0.70	10	12.98	01	4.43	--	--	06	12.5
Chiridotea alymra	--	--	--	--	--	--	--	--	--	--	--	--	--	--	02	0.70	01	0.52	--	--	--	--	--	--
	--	--	--	--	01	0.67	1	5.29	01	1.20	04	--	01	1.99	--	--	09	12.46	--	--	--	--	--	--
Cyathura polita	--	--	--	--	--	--	02	4.68	01	9.97	03	--	--	--	--	--	--	--	01	4.43	--	--	06	12.5
Oligochaeta	21	11.45	35	34.84	60	41.93	118	116.75	124	41.97	28	8.19	15	4.41	24	28.70	30	43.80	79	9.35	16	11.14	29	32.6
Pelecypoda	08	2.41	04	1.38	12	2.63	07	1.72	15	2.21	10	1.70	01	0.05	01	<0.05	03	0.74	02	0.23	01	0.19	01	0.2
Polychaeta	--	--	--	--	01	0.74	--	--	01	3.23	--	--	--	--	--	--	--	--	02	7.15	--	--	--	--
Nereidae	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	01	7.10	--	--	--	--
Manayunki	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	01	0.05	--	--	--	--
Turbellaria	02	0.76	--	--	05	0.46	11	1.84	02	0.30	02	0.32	02	0.20	01	0.05	01	0.25	01	0.18	02	0.49	04	1.96
Others:																								
Barnacle																								
Hydra																								
Trichoptera	--	--	--	--	--	--	--	--	--	--	01	0.16	01	0.14	--	--	--	--	01	0.36	--	--	01	0.2
UID insect	01	<0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	01	0.7
TOTAL:	50	20.78	62	49.25	113	72.10	153	132.47	184	64.83	87	30.23	57	13.71	47	60.18	66	64.40	111	29.68	37	17.39	77	58.9

ROSETON/DANSKAMMER POINT BENTHOS DATA

TRANSECT:	NORTH CONTROL						MAX Δ T						.75 Δ T						SOUTH CONTROL					
STATION DEPTHS:	1		2		3		1		2		3		1		2		3		1		2		3	
WINTER 12/12/72	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg
Acari	01	0.22	01	0.10	--	--	--	--	01	0.57	--	--	--	--	--	--	01	0.08	--	--	01	0.09	02	0.23
Amphipoda	--	--	05	0.54	02	3.72	--	--	01	0.17	02	3.47	01	0.55	01	0.57	--	--	--	--	01	0.06	14	16.77
Diptera	20	--	12	--	11	--	34	--	08	--	50	--	07	--	11	--	24	--	15	--	17	--	06	--
Gastropoda		--																						
Hirudinea	01	3.59	01	2.60	01	1.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopoda	--	--	--	--	--	--	--	--	01	3.30	06	17.77	01	0.16	--	--	--	--	02	2.70	--	--	08	21.10
Chiridotea alymra	--	--	--	--	--	--	--	--	01	3.30	01	4.11	--	--	--	--	--	--	--	--	--	--	01	3.75
Cyathura polita	--	--	--	--	--	--	--	--	--	--	05	13.66	01	0.16	--	--	--	--	02	2.70	--	--	07	17.35
Oligochaeta	43	--	45	--	53	--	34	--	62	--	298	--	25	--	35	--	59	--	49	--	48	--	44	--
Pelecypoda	02	1.04	02	0.63	10	4.20	01	0.11	15	6.53	11	2.72	--	--	--	--	10	5.83	--	--	01	0.05	01	0.05
Polychaeta	--	--	--	--	--	--	01	0.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nereidae																								
Manayunki																								
Turbellaria	14	3.09	01	0.09	02	0.56	11	4.38	05	0.96	15	4.82	--	--	04	1.62	01	0.19	--	--	03	0.88	16	4.15
Others:																								
Barnacle	--	--	--	--	--	--	01	<0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydra	--	--	--	--	--	--	--	--	--	--	01	0.05	--	--	--	--	--	--	--	--	--	--	--	--
Trichoptera	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UID insect	--	--	--	--	--	--	01	<0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL:	81		67		79		83		93		383		34		51		95		68		71		91	

ROSETON/DANSKAMMER POINT BENTHOS DATA

TRANSECT:	NORTH CONTROL						MAX Δ T						.75 Δ T						SOUTH CONTROL					
STATION DEPTHS:	1		2		3		1		2		3		1		2		3		1		2		3	
WINTER 12/7/71	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg
Acari	2	0.61	1	0.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	0.09	--	--
Amphipoda	--	--	--	--	18	95.42	--	--	3	15.66	2	2.64	--	--	--	--	1	0.79	--	--	1	1.43	7	19.80
Diptera	25	7.61	46	20.43	46	14.31	31	17.86	21	11.20	11	14.20	13	10.15	11	9.81	11	14.20	16	12.17	24	23.30	25	26.54
Gastropoda	--	--	1	11.33	3	27.18	--	--	1	0.17	--	--	--	--	--	--	--	--	1	6.41	--	--	--	--
Hirudinea	--	--	1	1.62	1	3.55	--	--	--	--	--	--	--	--	--	--	1	10.23	--	--	--	--	1	2.31
Isopoda	--	--	--	--	4	37.00	--	--	1	7.74	--	--	--	--	1	2.81	--	--	--	--	1	6.37	4	20.92
Chiridotea alymra	--																							
Cyathura polita																								
Oligochaeta	21	39.31	89	57.49	140	56.79	16	2.35	34	21.20	7	18.93	10	13.02	41	29.53	12	42.30	9	15.56	39	40.42	13	20.85
Pelecypoda	--	--	17	48.22	39	22.90	2	3.18	6	4.97	7	5.46	--	--	1	0.49	4	7.77	--	--	1	107.63	2	1.15
Polychaeta	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nereidae																								
Manayunki																								
Turbellaria	--	--	4	1.29	29	19.27	2	0.71	7	3.69	2	0.80	1	0.20	--	--	6	3.24	3	0.93	4	1.90	6	0.83
Others:																								
Barnacle																								
Hydra																								
Trichoptera																								
UID insect																								
TOTAL:	48	47.53	159	140.47	280	276.42	51	24.10	73	64.63	29	42.03	24	23.37	54	41.64	35	78.53	29	35.07	71	181.14	58	92.70

ROSETON/DANSKAMMER POINT BENTHOS DATA

TRANSECT:	NORTH CONTROL						MAX Δ T						.75 Δ T						SOUTH CONTROL					
STATION DEPTHS:	1		2		3		1		2		3		1		2		3		1		2		3	
Spring 6/20/72	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg	#	mg
Acari	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	01	0.76	--	--	--	--
Amphipoda	01	0.06	03	2.88	12	22.99	--	--	17	13.81	06	8.01	04	1.07	01	1.08	02	0.60	02	0.87	27	25.32	12	10.64
Diptera	02	0.25	07	14.11	04	1.15	04	3.01	12	14.95	03	3.86	08	2.67	04	2.77	03	4.04	05	5.97	09	3.25	02	12.16
Gastropoda	--	--	--	--	01	<0.05	--	--	01	<0.05	--	--	--	--	--	--	--	--	01	20.33	01	1.37	--	--
Hirudinea	--	--	-1	<0.05	--	--	--	--	01	<0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopoda	--	--	--	--	01	6.34	--	--	--	--	--	--	01	0.84	02	2.29	--	--	--	--	01	2.26	07	22.77
Chiridotea alymra																								
Cyathura polita	--	--	--	--	--	--	--	--	--	--	--	--	01	0.84	01	2.24	--	--	--	--	01	2.26	07	22.77
Oligochaeta	32	72.18	229	107.15	26	8.89	221	200.56	665	656.44	62	24.48	98	67.67	145	194.02	51	76.05	32	44.26	116	34.41	124	9.89
Pelecypoda	02	2.11	01	<0.05	03	1.13	06	1.33	09	14.10	06	9.85	--	--	--	--	--	--	02	0.79	02	0.40	--	--
Polychaeta	01	0.07	--	--	--	--	--	--	--	--	--	--	--	--	01	0.27	01	0.18	--	--	--	--	--	--
Nereidae																								
Manayunki	01	0.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Turbellaria	--	--	--	--	--	--	--	--	--	--	01	<0.05	--	--	--	--	01	<0.05	--	--	--	--	01	0.50
Others:																								
Barnacle																								
Hydra																								
Trichoptera																								
UID insect	--	--	--	--	--	---	--	-- -	--	--	--	--	01	<0.05	--	- --	--	--	--	--	--	--	01	3.84
TOTAL:	38	74.67	241	124.24	47	40.55	231	204.90	705	699.40	78	46.26	112	72.30	153	200.43	58	80.92	43	72.98	156	67.01	47	59.68

APPENDIX C

STATISTICAL ANALYSIS OF ROSETON BENTHOS DATA

STATISTICAL ANALYSIS OF ROSETON BENTHOS DATA

Statistical analyses of the Roseton 1971-1972 benthos data is presented in this section. A three factor analysis of variance (Anova) design was utilized in analyzing benthos data. The purpose of this analysis is to determine how much of the variation among observations is due to variation in each factor influencing the character being studied. In the present study the relative effects of three random factors:

1. time;
2. depth, and
3. station

were examined with respect to the density (character) of oligochaetes, dipteran larvae, mollusks (gastropods and pelecypods) and the total benthic fauna.

In the Anova tables presented below a (*) denotes that the effect is significant at the .05 critical level and a (**) denotes the effect is significant at the .01 critical level. The Student-Newman-Keuls tests non-significant sets of means are underlined. The means of the non-transformed data are presented in parenthesis above the log transformed means.

A. Oligochaetes

1. Anova Results

Factors: A = Depth B = Date C = Transect

SOURCE	D.F.	M.S.	F	APPROPRIATE TEST
A	2	.944	4.538*	MS A/MS ABC
B	5	3.551	17.072**	MS B/MS ABC
C	3	.807	3.879*	MS C/MS ABC
A x B	10	.365	1.755	MS AB/MS ABC
A x C	6	.206	.990	MS AC/MS ABC
B x C	15	.279	1.341	MS BC/MS ABC
A x B x C	30	.208	1.891*	MS ABC/MS Error
Error	72	.110		
Total	143			

There was a significant second order interaction effect. This indicates that the interaction of any two factors differs depending on the level of the third factor. All the main effects were found to be significant which means the discharge densities differed with depth, time and transect.

2. Student-Neuman-Keuls

(a) For Depths

Depth 10'	Depth 30'	Depth 20'
$\bar{X}1$	$\bar{X}2$	$\bar{X}3$
(46.8)	(45.4)	(91.3)
1.392	1.407	1.642

These results indicate that 20' depth had a higher oligochaete density than either 10' depth or 30' depth. Therefore there were no general increases or decreases with depth.

(b) For Dates

Fall 1971	Winter 1971	Fall 1972	Winter 1972	Summer 1972	Spring 1972
$\bar{X}1$	$\bar{X}2$	$\bar{X}3$	$\bar{X}4$	$\bar{X}5$	$\bar{X}6$
(8.83)	(35.6)	(47.7)	(61.9)	(67.3)	(145.7)
.778	1.353	1.532	1.623	1.745	1.853

Oligochaete increased significantly between Fall and Winter 1972 and between Winter of 1971 and Spring of 1972. After this oligochaete densities fell off and were significantly less in Fall 1972 than in Spring 1972. This may suggest a general seasonal trend.

(c) For Transects

S.C.	.75 ΔT	N.C.	Max ΔT
$\bar{X}1$	$\bar{X}2$	$\bar{X}3$	$\bar{X}4$
(38.7)	(39.5)	(56.6)	(109.9)
1.329	1.380	1.564	1.654

These results indicate that the transect (N.C. and Max ΔT) had significantly higher densities than the (S.C. and .75 ΔT) transects.

B. Dipteran Larvae

1. Anova Results

Factors: A = Depth B = Date C = Transect

SOURCE	D.F.	M.S.	F.	APPROPRIATE TEST
A	2	.289	2.079	MS A/MS ABC
B	5	1.825	13.129**	MS B/MS ABC
C	3	.231	1.662	MS C/MS ABC
A x B	10	.155	1.115	MS AB/MS ABC
A x C	6	.212	1.525	MS AC/MS ABC
B x C	15	.103	.741	MS BC/MS ABC
A x B x C	30	.139	1.655*	MS ABC/MS Error
Error	72	.084		
Total	143			

The second order interaction effect was significant. Dipterans were found to differ significantly only with date.

2. Student-Neuman-Keuls Analysis

(a) For Dates

Spring 1972	Fall 1971	Summer 1972	Fall 1972	Winter 1972	Winter 1971
$\bar{X}1$	$\bar{X}2$	$\bar{X}3$	$\bar{X}4$	$\bar{X}5$	$\bar{X}6$
(4.9)	(4.4)	(9.2)	(15.7)	(17.6)	(23.1)
.334	.594	.881	1.11	1.15	1.284

These results show that the highest dipteran larvae densities occurred during the Winter months and the lowest during the Spring months.

C. Mollusks

1. Anova Results

Factors: A = Depth B = Date C = Transect

SOURCE	D.F.	M.S.	F.	APPROPRIATE TEST
A	2	.561	.1536	MS A/MS AB+MS AC-MS ABC
B	4	1.782	.525	MS B/MS AB
C	3	2.712	7.639*	MS C/MS AC
A x B	8	3.393	35.34*	MS AB/MS ABC
A x C	6	.355	3.69*	MS AC/MS ABC
B x C	12	.138	1.438	MS BC/MS ABC
A x B x C	24	.096	1.079	MS ABC/MS Error
Error	60	.089		
Total	119			

There were significant first order interaction effects for depth with date and depth with transect. This indicates that distributions with depth are effected by date and transect. Mollusks differed significantly only with transect.

2. Student-Neuman-Keuls Analysis

(a) For Stations

.75 ΔT	S.C.	N.C.	Max ΔT
$\bar{X}1$	$\bar{X}2$	$\bar{X}3$	$\bar{X}4$
(1.33)	(1.47)	(7.9)	(7.46)
.207	.284	.716	.804

Mollusks density was significantly higher at the stations (N.C. and Max ΔT) transect.

D. Total Fauna

1. Anova Results

Factors A = Depth B = Date C = Transect

SOURCE	D.F.	M.S.	F.	APPROPRIATE TEST
A	2	.280	1.029	MS A/MS AB
B	5	2.649	9.529**	MS B/MS AB
C	3	.566	7.075**	MS C/MS ABC
A x B	10	.278	3.195*	MS AB/MS ABC
A x C	6	.059	.678	MS AC/MS ABC
B x C	15	.142	1.632	MS BC/MS ABC
A x B x C	30	.087	2.071**	MS ABC/MS Error
Error	72	.042		
Total	143			

The second order interaction effect was significant. The distribution of the total fauna with depth is significantly influenced by date. Two main effects found to be significant, i.e. date and transect.

2. Student-Neuman-Keuls Analysis

(a) For dates

Fall 1971	Winter 1971	Fall 1972	Winter 1972	Summer 1972	Spring 1972
$\bar{X}1$	$\bar{X}2$	$\bar{X}3$	$\bar{X}4$	$\bar{X}5$	$\bar{X}6$
(14.8)	(74.9)	(85.8)	(98.0)	(103.1)	(162.1)
.778	1.353	1.532	1.623	1.745	1.853

These results indicated that the Fall and Winter of 1972 had significantly higher total faunal densities than the Fall or Winter of 1971. The Spring and Summer of 1972 had greater faunal densities than any of the Fall or Winter months.

Total faunal densities are lowest in the Fall, begin to increase through Winter, reach maximum densities in the Spring and decrease in density through the Fall.

(b) For Transect

.75 ΔT	S.C.	N.C.	Max ΔT
(57.9)	(66.4)	(86.6)	(148.4)
1.654	1.683	1.783	1.931

The results indicate that the Max T Transect has a significantly higher total faunal density than all the other transects. The remaining three transects did not differ significantly from one another in total faunl density.

APPENDIX D

ROSETON/DANSKAMMER POINT FISH DATA

1969-1972

COLLECTION METHOD ABBREVIATIONS

ABBREVIATION	
BGN EXP	Experimental bottom gill net
BGN 3"	Bottom gill net with 3 inch stretched mesh
BGN 5"	Bottom gill net with 5 inch stretched mesh
BT	Bottom trawl
FN	Fyke net
S	Seine-50 foot
S 100'	Seine-100 foot
SGN EXP	Experimental surface gill net
SGN 3"	Surface gill net with 3 inch stretched mesh
SGN 5"	Surface gill net with 5 inch stretched mesh
ST	Surface trawl

SAMPLING STATION ABBREVIATIONS

Abbreviation	Station	Description
DC	Danskammer Cove	Cove just north of Danskammer Generating Plant.
DCS	Danskammer Cove Shallows	5-10 foot depth in cove
DCD	Danskammer Cove Deep	20-40 foot depth in cove
DD	Danskammer Discharge	Discharge of Danskammer Plant
DI	Danskammer Intake	North intake of Danskammer Plant
DID	Danskammer Intake Discharge	Channel adjacant to Plant
NH	New Hamburg	5-10 foot depth in cove above New Hamburg.
NHCH	New Hamburg Channel	Channel adjacent to shallow station.
PI	Pollepel Island	5-10 foot depth above Pollepel Island
PICH	Pollepel Island Channel	Channel Adjacent to shallow station.
RC	Roseton Control	North of plant at 40-50 foot depth on west side.
RD	Roseton Discharge	
RE	Roseton East	Directly across from Roseton plant on east shore.
RI	Roseton Intake	
RID	Roseton Intake Discharge	30-40 foot depth adjacent to plant. After June 13, 1972 tows were done south of plant.

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

1969

DANSKAMMER DISCHARGE STATION

DATE	8/13	8/20	8/27	9/3	9/10	9/17	9/24	10/1	10/8	10/15	10/22
METHOD	S	S	S	S	S	S	S	S	S	S	S
NUMBER OF SEINES	6	1	1	1	1	1	3	2	1	2	2
SPECIES											
ALEWIFE			2								
AM SHAD											
BB HERRING										44	
WHITE PERCH	472	100	44	10	28	84	68	1196	18	164	1120
STRIPED BASS	82	20	2	2	244	176	104	1256	36	180	3380
AM EEL	6	4		2	4	8		12		8	
ATL. STURGEON											
HOGCHOKER											
SPOTTAIL SHINER	4					20				32	
WHITE CATFISH	14	4							2	4	
TES. DARTER	130	40	4	24		4		30		48	
BROWN BULLHEAD	146	16				8		4			
TOMCOD											
GOLDFISH	82	64	4	10		8		16		4	
BD. KILLIFISH		6	4	22		8				12	
BLUEGILL	14					4	8	10			
CARP							8	2			
GOLDEN SHINER		30	10					2			
BAY ANCHOVY											
PUMKINSEED	10					80	88	62		44	80
YELLOW PERCH											
RBOW. SMELT											
WHITE SUCKER											
RBR. SUNFISH											
BLACK CRAPPIE											
GIZZARD SHAD											
MENHADEN											
BLUEFISH											
ATL. NEEDLEFISH											
LM BASS											40
UID SHINER											
CRAYFISH											
BLUECRAB											
F. STICKLEBACK						4					
CREVALLE JACK								20			

Number of each species given in terms of number per 5000 square feet of area seined.

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

MAY 12,18&19, 1971

	5/12				5/18 & 19			
STATION	RE	RE	RI	RI	RID	RC	RI	RD
METHOD	SGN EXP	BGN EXP	SGN EXP	BGN EXP	BT	BT	SGN EXP	BGN EXP
DURATION (MIN)	60	60	75	75	9	20	240	60
SPECIES								
ALEWIFE					1			NO
AM SHAD								
BB HERRING								CATCH
WHITE PERCH	10	4	1	6	17	10	3	
STRIPED BASS								
AM EEL					2	1		
ATL. STURGEON								
HOGCHOKER								
SPOTTAIL SHINER					1	1		
WHITE CATFISH								
TES. DARTER								
BROWN BULLHEAD								
TOMCOD								
GOLDFISH								
BD. KILLIFISH								
BLUEGILL								
CARP								
GOLDEN SHINER								
BAY ANCHOVY								
PUMKINSEED								
YELLOW PERCH								
RBOW. SMELT								
WHITE SUCKER								
RBR. SUNFISH								
BLACK CRAPPIE								
GIZZARD SHAD								
MENHADEN								
BLUEFISH								
ATL. NEEDLEFISH								
LM BASS								
UID SHINER								
CRAYFISH								
BLUECRAB								

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

MAY 26, 1971

STATION	RID	RC	RC	RC	RD	RD	RI	RI
METHOD	BT	BT	SGN EXP	BGN EXP	SGN EXP	BGN EXP	SGN EXP	BGN EXP
DURATION (MIN)	30	25	60	65	60	60	90	90
SPECIES								
ALEWIFE			NO	NO	NO			
AM SHAD								
BB HERRING			CATCH	CATCH	CATCH			
WHITE PERCH	10	10				1		2
STRIPED BASS								
AM EEL								
ATL. STURGEON								
HOGCHOKER		1						
SPOTTAIL SHINER	2	1				1	1	2
WHITE CATFISH								
TES. DARTER								
BROWN BULLHEAD								
TOMCOD								
GOLDFISH								
BD. KILLIFISH								
BLUEGILL								
CARP								
GOLDEN SHINER								
BAY ANCHOVY								
PUMKINSEED								
YELLOW PERCH								
RBOW. SMELT								
WHITE SUCKER								
RBR. SUNFISH								
BLACK CRAPPIE	1							
GIZZARD SHAD								
MENHADEN								
BLUEFISH								
ATL. NEEDLEFISH								
LM BASS								
UID SHINER								
CRAYFISH	1							
BLUECRAB								

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

JUNE 2, 1971

STATION	RID	RC	RC	RC	RD	RD	RI	RI
METHOD	BT	BT	SGN EXP	BGN EXP	SGN EXP	BGN EXP	SGN EXP	BGN EXP
DURATION (MIN)	30	25	65	65	60	60	60	60
SPECIES								
ALEWIFE					NO			
AM SHAD								
BB HERRING					CATCH			
WHITE PERCH	9	1	1	4		2	5	1
STRIPED BASS								
AM EEL								
ATL. STURGEON								
HOGCHOKER	1							
SPOTTAIL SHINER	8	1		4				1
WHITE CATFISH				3				
TES. DARTER								
BROWN BULLHEAD	3							
TOMCOD								
GOLDFISH								
BD. KILLIFISH								
BLUEGILL								
CARP								
GOLDEN SHINER								
BAY ANCHOVY								
PUMKINSEED								
YELLOW PERCH								
RBOW. SMELT								
WHITE SUCKER								
RBR. SUNFISH								
BLACK CRAPPIE								
GIZZARD SHAD								
MENHADEN								
BLUEFISH								
ATL. NEEDLEFISH								
LM BASS								
UID SHINER								
CRAYFISH								
BLUECRAB								

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

JUNE 8, 1971

STATION	RID	RC	RC	RC	RD	RD	RI	RI
METHOD	BT	BT	SGN EXP	BGN EXP	SGN EXP	BGN EXP	SGN EXP	BGN EXP
DURATION (MIN)	15	25	70	60	85	90	75	75
SPECIES								
ALEWIFE							NO	NO
AM SHAD								
BB HERRING			5	1	4		CATCH	CATCH
WHITE PERCH	35	5	2	8	2	3		
STRIPED BASS	1							
AM EEL								
ATL. STURGEON								
HOGCHOKER	1	2						
SPOTTAIL SHINER	13			3		1		
WHITE CATFISH					1			
TES. DARTER	3							
BROWN BULLHEAD	2							
TOMCOD	1	1						
GOLDFISH								
BD. KILLIFISH								
BLUEGILL								
CARP								
GOLDEN SHINER								
BAY ANCHOVY								
PUMKINSEED								
YELLOW PERCH								
RBOW. SMELT								
WHITE SUCKER								
RBR. SUNFISH								
BLACK CRAPPIE								
GIZZARD SHAD								
MENHADEN								
BLUEFISH								
ATL. NEEDLEFISH								
LM BASS								
UID SHINER								
CRAYFISH								
BLUECRAB								

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

JUNE 22, 1971

STATION	DC	RID	RC	RC	RC	RD	RD	RI	RI
METHOD	S	BT	BT	SGN EXP	BGN EXP	SGN EXP	BGN EXP	SGN EXP	BGN EXP
DURATION (MIN)		20	20	60	60	70	90	70	90
SPECIES									
ALEWIFE			NO						
AM SHAD									
BB HERRING			CATCH	1	1				
WHITE PERCH		9		1	4	3	1	3	1
STRIPED BASS									
AM EEL									
ATL. STURGEON									
HOGCHOKER		6							
SPOTTAIL SHINER	2	2		1	1				
WHITE CATFISH									
TES. DARTER									
BROWN BULLHEAD									
TOMCOD		3							
GOLDFISH									
BD. KILLIFISH									
BLUEGILL									
CARP									
GOLDEN SHINER									
BAY ANCHOVY									
PUMKINSEED									
YELLOW PERCH									
RBOW. SMELT									
WHITE SUCKER									
RBR. SUNFISH									
BLACK CRAPPIE									
GIZZARD SHAD									
MENHADEN									
BLUEFISH									
ATL. NEEDLEFISH									
LM BASS									
UID SHINER									
CRAYFISH									
BLUECRAB									

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

JULY 13, 1971

STATION	RC	RC	RC	RI	RI
METHOD	BT	SGN EXP	BGN EXP	SGN EXP	BGN EXP
DURATION (MIN)	15	120	120	205	205
SPECIES					
ALEWIFE	5	NO			
AM SHAD					
BB HERRING	4	CATCH			
WHITE PERCH	44		12	1	2
STRIPED BASS	24				
AM EEL					
ATL. STURGEON	2				
HOGCHOKER	3				
SPOTTAIL SHINER					
WHITE CATFISH	1				
TES. DARTER					
BROWN BULLHEAD					
TOMCOD	3				
GOLDFISH					
BD. KILLIFISH					
BLUEGILL					
CARP					
GOLDEN SHINER					
BAY ANCHOVY					
PUMKINSEED					
YELLOW PERCH					
RBOW. SMELT					
WHITE SUCKER					
RBR. SUNFISH					
BLACK CRAPPIE					
GIZZARD SHAD					
MENHADEN					
BLUEFISH					
ATL. NEEDLEFISH					
LM BASS					
UID SHINER					
CRAYFISH					
BLUECRAB					

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

AUGUST 8 & 11, 1971

	8/8	8/11			
STATION	RC	RID	RC	RID	RC
METHOD	BT	BT	BT	ST	ST
DURATION (MIN)		10	6	15	14
SPECIES					
ALEWIFE	51	7	73		
AM SHAD					
BB HERRING			6	92	330
WHITE PERCH	92	1	3		
STRIPED BASS	10		1		
AM EEL					
ATL. STURGEON					
HOGCHOKER					
SPOTTAIL SHINER	1				
WHITE CATFISH					
TES. DARTER					
BROWN BULLHEAD	1				
TOMCOD					
GOLDFISH			1		
BD. KILLIFISH					
BLUEGILL					
CARP					
GOLDEN SHINER					
BAY ANCHOVY				1	2
PUMKINSEED					
YELLOW PERCH					
RBOW. SMELT					
WHITE SUCKER					
RBR. SUNFISH					
BLACK CRAPPIE					
GIZZARD SHAD					
MENHADEN					
BLUEFISH					
ATL. NEEDLEFISH					
LM BASS					
UID SHINER					
CRAYFISH					
BLUECRAB					

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

	SEPTEMBER 9, 1971				OCTOBER 6, 1971			
STATION	RID	RC	RID	RC	RID	RC	RID	RC
METHOD	BT	BT	ST	ST	BT	BT	ST	ST
DURATION (MIN)	15	12	12	10	15	15	25	25
SPECIES								
ALEWIFE	1	13		NO	3	1		
AM SHAD			1				4	1
BB HERRING	13		1	CATCH			7	11
WHITE PERCH	24	6			27	15		
STRIPED BASS	8	2				1	4	3
AM EEL								
ATL. STURGEON		1						
HOGCHOKER	1							
SPOTTAIL SHINER								
WHITE CATFISH								
TES. DARTER								
BROWN BULLHEAD	1							
TOMCOD					2	3		
GOLDFISH		1						
BD. KILLIFISH								
BLUEGILL	1							
CARP								
GOLDEN SHINER								
BAY ANCHOVY								
PUMKINSEED								
YELLOW PERCH								
RBOW. SMELT								
WHITE SUCKER								
RBR. SUNFISH								
BLACK CRAPPIE								
GIZZARD SHAD								
MENHADEN								
BLUEFISH								
ATL. NEEDLEFISH								
LM BASS								
UID SHINER								
CRAYFISH	7							
BLUECRAB								

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

	November 2, 1971				November 23, 1971				December 8, 1971			
STATION	RID	RC	RID	RC	RID	RC	RID	RC	RID	RC	RID	RC
METHOD	BT	BT	ST	ST	BT	BT	ST	ST	BT	BT	ST	ST
DURATION (MIN)	25	27	25	25	15	15	25	25	20	20	30	25
SPECIES												
ALEWIFE					2							
AM SHAD	1						1					
BB HERRING	1	1	12	7			14	51				
WHITE PERCH	10	8			2				28	4		3
STRIPED BASS				1	1			2			1	
AM EEL		1										
ATL. STURGEON		1								1		
HOGCHOKER					1							
SPOTTAIL SHINER				1								
WHITE CATFISH		1										
TES. DARTER												
BROWN BULLHEAD												
TOMCOD	12	11			1	1			1			
GOLDFISH												
BD. KILLIFISH												
BLUEGILL												
CARP												
GOLDEN SHINER												
BAY ANCHOVY												
PUMKINSEED												
YELLOW PERCH												
RBOW. SMELT		25										
WHITE SUCKER												
RBR. SUNFISH												
BLACK CRAPPIE												
GIZZARD SHAD												
MENHADEN												
BLUEFISH												
ATL. NEEDLEFISH												
LM BASS												
UID SHINER												
CRAYFISH					1							
BLUECRAB												

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

APRIL 28, 1972

STATION	RE	RE	RID	RID	RID	RID
METHOD	SGN 3"	SGN 5"	SGN 3"	BGN 5"	SGN 5"	BT
DURATION (MIN)	95	150	90	85	140	13
SPECIES						
ALEWIFE	74		146	1		1
AM SHAD		4		1	1	
BB HERRING	11		14			
WHITE PERCH			1			1
STRIPED BASS			1			
AM EEL						
ATL. STURGEON						
HOGCHOKER						
SPOTTAIL SHINER						
WHITE CATFISH						
TES. DARTER						
BROWN BULLHEAD						
TOMCOD						
GOLDFISH						
BD. KILLIFISH						
BLUEGILL						
CARP						
GOLDEN SHINER						
BAY ANCHOVY						
PUMKINSEED						
YELLOW PERCH						
RBOW. SMELT						
WHITE SUCKER						
RBR. SUNFISH						
BLACK CRAPPIE						
GIZZARD SHAD						
MENHADEN						
BLUEFISH						
ATL. NEEDLEFISH						
LM BASS						
UID SHINER						
CRAYFISH						
BLUECRAB						

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

MAY 2 & 24, 1972

	5/2				5/24				
STATION	RID	RC	RID	RC	RC RID	RC RID	RID	RC	RID
METHOD	BT	BT	ST	ST	BGN 3"	BGN 5"	BT	BT	ST
DURATION (MIN)	25	15	35	25	90	150	9	12	20
SPECIES									
ALEWIFE	NO			NO	53				
AM SHAD						1			
BB HERRING	CATCH			CATCH	32				29
WHITE PERCH		2	1				11	24	
STRIPED BASS									
AM EEL		1						4	
ATL. STURGEON							1	1	
HOGCHOKER							3	6	
SPOTTAIL SHINER							1	11	2
WHITE CATFISH								1	
TES. DARTER									
BROWN BULLHEAD									
TOMCOD									
GOLDFISH									
BD. KILLIFISH									
BLUEGILL									
CARP									
GOLDEN SHINER									
BAY ANCHOVY									
PUMKINSEED									
YELLOW PERCH									
RBOW. SMELT									
WHITE SUCKER									
RBR. SUNFISH									
BLACK CRAPPIE									
GIZZARD SHAD									
MENHADEN									
BLUEFISH									
ATL. NEEDLEFISH									
LM BASS									
UID SHINER									
CRAYFISH									
BLUECRAB									

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

JUNE 13, 1972

STATION	RC RID	RC RID	DC	RID	RC	RID	RC
METHOD	SGN 5"	SGN 3"	S	BT	BT	ST	ST
DURATION (MIN)	320	150		20	16	20	20
SPECIES							
ALEWIFE		12	NO			NO	NO
AM SHAD	1						
BB HERRING			CATCH				
WHITE PERCH				9	3	CATCH	CATCH
STRIPED BASS	3	1					
AM EEL							
ATL. STURGEON					1		
HOGCHOKER				3	8		
SPOTTAIL SHINER				1	5		
WHITE CATFISH							
TES. DARTER							
BROWN BULLHEAD				2	1		
TOMCOD							
GOLDFISH							
BD. KILLIFISH							
BLUEGILL							
CARP							
GOLDEN SHINER							
BAY ANCHOVY							
PUMKINSEED							
YELLOW PERCH							
RBOW. SMELT							
WHITE SUCKER							
RBR. SUNFISH							
BLACK CRAPPIE							
GIZZARD SHAD							
MENHADEN							
BLUEFISH							
ATL. NEEDLEFISH							
LM BASS							
UID SHINER							
CRAYFISH							
BLUECRAB							

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

JUNE 27, 1972

STATION	DC	DD	RID	RC	DC
METHOD	S	S	BT	BT	FN
DURATION (MIN)			18	18	540
SPECIES					
ALEWIFE					
AM SHAD					
BB HERRING					
WHITE PERCH	2		43	6	11
STRIPED BASS					
AM EEL					
ATL. STURGEON					
HOGCHOKER			10	3	
SPOTTAIL SHINER	22	3	2		31
WHITE CATFISH					
TES. DARTER					
BROWN BULLHEAD	1		1		3
TOMCOD			2		
GOLDFISH	1				
BD. KILLIFISH	3				35
BLUEGILL	2	2			2
CARP		3			
GOLDEN SHINER		2			
BAY ANCHOVY					
PUMPKINSEED					18
YELLOW PERCH					4
RAINBOW SMELT					
WHITE SUCKER					
RBR. SUNFISH					3
BLACK CRAPPIE					
GIZZARD SHAD					
MENHADEN					
BLUEFISH					
ATL. NEEDLEFISH					
LM BASS					
UID SHINER					
CRAYFISH					
BLUECRAB					

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

JULY 9 & 20, 1972

STATION	7/9 DC	DD	DC	DD	RID.	7/20 RC	RID	RC	DC
METHOD	S	S	S	S (1	BT	BT	ST	ST	FN
DURATION (MIN)					15	15	20	20	1305
SPECIES									
ALEWIFE									
AM SHAD									
BB HERRING				1			23	7	
WHITE PERCH	7	4			83	71			54
STRIPED BASS					1				
AM EEL		1	1		2	1			2
ATL. STURGEON									
HOGCHOKER					2	2			
SPOTTAIL SHINER	3	6	1		5				
WHITE CATFISH	1								
TES. DARTER	5								
BROWN BULLHEAD	3				2	1			4
TOMCOD					21	89			
GOLDFISH	1				9	5			1
BD. KILLIFISH	4								1
BLUEGILL									
CARP		1							
GOLDEN SHINER		7	3	1					
BAY ANCHOVY									
PUMKINSEED	1		3						26
YELLOW PERCH									
RBOW. SMELT									
WHITE SUCKER					1				
RBR. SUNFISH									1
BLACK CRAPPIE		1							1
GIZZARD SHAD									
MENHADEN									
BLUEFISH									
ATL. NEEDLEFISH									
LM BASS									
UID SHINER									
CRAYFISH					2				
BLUECRAB									
F. STICKLEBACK	2								

1) TWO SEINES

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

AUGUST 8, 1972

STATION	DC	DD	RE	RID	RC	RID	RC	DC
METHOD	S	S	S	BT	BT	ST	ST	FN
DURATION (MIN)				15	15	20	20	435
SPECIES								
ALEWIFE								
AM SHAD		NO	1					
BB HERRING	1		6		1	93	55	
WHITE PERCH	1	CATCH		16	25			6
STRIPED BASS				1				
AM EEL	1				1			
ATL. STURGEON					2			
HOGCHOKER				2				
SPOTTAIL SHINER	3				2			16
WHITE CATFISH				3	1			
TES. DARTER					1			
BROWN BULLHEAD				1	3			
TOMCOD								
GOLDFISH								
BD. KILLIFISH								6
BLUEGILL								
CARP								
GOLDEN SHINER	5							
BAY ANCHOVY						614	186	
PUMKINSEED								3
YELLOW PERCH								
RBOW. SMELT								
WHITE SUCKER								
RBR. SUNFISH								
BLACK CRAPPIE								
GIZZARD SHAD								
MENHADEN								
BLUEFISH								
ATL. NEEDLEFISH								
LM BASS								
UID SHINER								
CRAYFISH				4				
BLUECRAB								

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

AUGUST 23, 1972

STATION	DC	DD	RE	RID	RC	RID	RC	DC
METHOD	S	S	S	BT	BT	ST	ST	FN
DURATION (MIN)				20	15	25	25	575
SPECIES								
ALEWIFE				1				
AM SHAD		18	2			1		
BB HERRING		88				5	1	
WHITE PERCH	1			198	100			4
STRIPED BASS								
AM EEL				5				
ATL. STURGEON					1			
HOGCHOKER				7	6			
SPOTTAIL SHINER	1			32	3			1
WHITE CATFISH				5	54			
TES. DARTER								
BROWN BULLHEAD				6	2			1
TOMCOD				26	13			
GOLDFISH				1				
BD. KILLIFISH	1							
BLUEGILL								1
CARP		1						
GOLDEN SHINER		1						
BAY ANCHOVY						113	61	
PUMKINSEED								6
YELLOW PERCH								2
RBOW. SMELT								
WHITE SUCKER								
RBR. SUNFISH								
BLACK CRAPPIE								2
GIZZARD SHAD								
MENHADEN								
BLUEFISH								
ATL. NEEDLEFISH								
LM BASS								
UID SHINER								
CRAYFISH				5				
BLUECRAB								

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS.

SEPTEMBER 29, 1972

STATION	DC	DD	RE	RID	RC	RID	RC	DC
METHOD	S	S	S	BT	BT	ST	ST	FN
DURATION (MIN)				15	18	30	30	360
SPECIES								
ALEWIFE							1	
AM SHAD	2	13	31			3	4	
BB HERRING	22	90	12			139	18	
WHITE PERCH		10		9	70	1		
STRIPED BASS		73						
AM EEL				1	1			
ATL. STURGEON								
HOGCHOKER				4	57		2	
SPOTTAIL SHINER	4	1			2			2
WHITE CATFISH		4		1	4			
TES. DARTER								
BROWN BULLHEAD					3			
TOMCOD				48	171			
GOLDFISH					3			
BD. KILLIFISH								
BLUEGILL			1					
CARP								
GOLDEN SHINER		1						
BAY ANCHOVY						163	20	
PUMKINSEED	1		2					2
YELLOW PERCH								3
RBOW. SMELT								
WHITE SUCKER								
RBR. SUNFISH	1	1						
BLACK CRAPPIE								
GIZZARD SHAD								
MENHADEN						1		
BLUEFISH								
ATL. NEEDLEFISH								
LM BASS								
UID SHINER		1	2					
CRAYFISH								
BLUECRAB				2				

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULT

OCTOBER 2,11 & 18, 1972

	10/2		10/11			10/18	
STATION	PI	DD	PI	NH	DD	PI	NH
METHOD	BT	S	BT	BT	S	BT	BT
DURATION (MIN)	10		7	7		5	7
SPECIES							
ALEWIFE	98		2			18	
AM SHAD	5	10					
BB HERRING	75	40		1	5	22	
WHITE PERCH	596	9	332			187	42
STRIPED BASS	15	61	4		4	2	3
AM EEL	1						
ATL. STURGEON							
HOGCHOKER	4		5				
SPOTTAIL SHINER	16	7	7	2	3	78	19
WHITE CATFISH	1						
TES. DARTER	16		11			3	
BROWN BULLHEAD	3		1			1	
TOMCOD	4		10				
GOLDFISH	1				1	2	
BD. KILLIFISH					1		
BLUEGILL		1					
CARP			1				
GOLDEN SHINER			1		2	1	
BAY ANCHOVY	620		1				
PUMKINSEED	4		6	8		31	
YELLOW PERCH						1	
RBOW. SMELT							
WHITE SUCKER		1					
RBR. SUNFISH			1				
BLACK CRAPPIE					1		
GIZZARD SHAD					1		
MENHADEN	1						
BLUEFISH	1						
ATL. NEEDLEFISH		1					
LM BASS							
UID SHINER							
CRAYFISH			2			1	
BLUECRAB			1			1	

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

OCTOBER 26, 1972

STATION	DC	DD	RE	RID	RC	RID	RC
METHOD	S	S	S	BT	BT	ST	ST
DURATION (MIN)				15	15	15	15
SPECIES							
ALEWIFE							
AM SHAD		1	3		1	1	1
BB HERRING			158			3	1
WHITE PERCH	5	24		11	14		
STRIPED BASS		9					
AM EEL					1		
ATL. STURGEON							
HOGCHOKER				5			1
SPOTTAIL SHINER	6			2		1	
WHITE CATFISH				2	2		
TES. DARTER	5						
BROWN BULLHEAD							
TOMCOD				41	21		
GOLDFISH							
BD. KILLIFISH							
BLUEGILL	1	1					
CARP							
GOLDEN SHINER		1					
BAY ANCHOVY					2	2	
PUMKINSEED	3						
YELLOW PERCH							
RBOW. SMELT					1		1
WHITE SUCKER							
RBR. SUNFISH							
BLACK CRAPPIE							
GIZZARD SHAD							
MENHADEN			1				
BLUEFISH							
ATL. NEEDLEFISH							
LM BASS							
UID SHINER							
CRAYFISH				1			
BLUECRAB							

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

OCTOBER 26, 1972

STATION	DID	DCD	DCS	DID	DI	DI	DI	DI
METHOD	BT	BT	BT	ST	SGN EXP 3"	BGN EXP 3"	SGN EXP	BGN EXP
DURATION (MIN)	20	18	8	24	160	405	500	490
SPECIES								
ALEWIFE		1	2			NO		
AM SHAD				3				
BB HERRING			11	12		CATCH		
WHITE PERCH	1	106	13		1			1
STRIPED BASS			1		1		1	1
AM EEL		1						
ATL. STURGEON								
HOGCHOKER	1	2						
SPOTTAIL SHINER	1	18	171		4			
WHITE CATFISH	1	11						
TES. DARTER			4					
BROWN BULLHEAD			2					
TOMCOD	28	14						
GOLDFISH			2					
BD. KILLIFISH			1					
BLUEGILL			1					
CARP								
GOLDEN SHINER			6					
BAY ANCHOVY	1	2						
PUMKINSEED			30					
YELLOW PERCH			1					
RBOW. SMELT	1	2						
WHITE SUCKER								
RBR. SUNFISH								
BLACK CRAPPIE								
GIZZARD SHAD								
MENHADEN								
BLUEFISH								
ATL. NEEDLEFISH								
LM BASS								
UID SHINER								
CRAYFISH								
BLUECRAB								

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

NOVEMBER 1 & 16, 1972

	11/1			11/16		
STATION	DD	PI	NH	DD	PI	NHCH
METHOD	S	BT	BT	S	BT	BT
DURATION (MIN)		7	7		7	7
SPECIES						
ALEWIFE		1	56			
AM SHAD	2					
BB HERRING						
WHITE PERCH	2	3	26	1	158	
STRIPED BASS			2			
AM EEL						2
ATL. STURGEON						3
HOGCHOKER					3	
SPOTTAIL SHINER		6	103			2
WHITE CATFISH		1	2			
TES. DARTER			3		1	
BROWN BULLHEAD			2		1	
TOMCOD					4	29
GOLDFISH			1			
BD. KILLIFISH						
BLUEGILL			1			
CARP						
GOLDEN SHINER	1		5	5		
BAY ANCHOVY			1			
PUMKINSEED			51			
YELLOW PERCH		1				
RBOW. SMELT						
WHITE SUCKER						
RBR. SUNFISH						
BLACK CRAPPIE						
GIZZARD SHAD	5			12		
MENHADEN						
BLUEFISH						
ATL. NEEDLEFISH						
LM BASS			2			
UID SHINER						
CRAYFISH						
BLUECRAB						

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

DECEMBER 5, 1972

STATION	DC	DD	RE	RID	RC	RID	RC	DC
METHOD	S	S	S	BT	BT	ST	ST	FN
DURATION (MIN)				15	15	15	22	360
SPECIES								
ALEWIFE			NO			NO	NO	
AM SHAD								
BB HERRING			CATCH			CATCH	CATCH	
WHITE PERCH								
STRIPED BASS								
AM EEL								
ATL. STURGEON				1				
HOGCHOKER								
SPOTTAIL SHINER	3	1						2
WHITE CATFISH								
TES. DARTER								
BROWN BULLHEAD								
TOMCOD				11	8			
GOLDFISH								
BD. KILLIFISH	1							
BLUEGILL								
CARP								
GOLDEN SHINER	2	1						
BAY ANCHOVY								
PUMKINSEED								
YELLOW PERCH								
RBOW. SMELT								
WHITE SUCKER								
RBR. SUNFISH								
BLACK CRAPPIE								
GIZZARD SHAD								
MENHADEN								
BLUEFISH								
ATL. NEEDLEFISH								
LM BASS								
UID SHINER								
CRAYFISH								
BLUECRAB								

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

DECEMBER 8 & 19, 1972

	12/8		12/19		
STATION	DD	PI	DD	PICH	NHCH
METHOD	S 100'	BT	S 100'	BT	BT
DURATION (MIN)		7		7	7
SPECIES					
ALEWIFE					
AM SHAD					
BB HERRING					
WHITE PERCH			3		
STRIPED BASS					
AM EEL					
ATL. STURGEON					
HOGCHOKER					
SPOTTAIL SHINER	1	3	6		
WHITE CATFISH					
TES. DARTER		1			
BROWN BULLHEAD		2			
TOMCOD		3		41	21
GOLDFISH					
BD. KILLIFISH					
BLUEGILL					
CARP			6		
GOLDEN SHINER					
BAY ANCHOVY					
PUMKINSEED					
YELLOW PERCH		1			
RBOW. SMELT					
WHITE SUCKER					
RBR. SUNFISH					
BLACK CRAPPIE					
GIZZARD SHAD			2		
MENHADEN					
BLUEFISH					
ATL. NEEDLEFISH					
LM BASS					
UID SHINER					
CRAYFISH					
BLUECRAB					

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

DECEMBER 20, 1972

STATION	DID	DCD	DCD	DCS	DCS	DC	DD
METHOD	BT	BT	BT	BT	BT	S 100'	S 100'
DURATION (MIN)	8	7	7	6	6		
SPECIES							
ALEWIFE							
AM SHAD							
BB HERRING							
WHITE PERCH							
STRIPED BASS							
AM EEL							
ATL. STURGEON							
HOGCHOKER							
SPOTTAIL SHINER		2		20	4		1
WHITE CATFISH		1		1			
TES. DARTER	4	1	4	1			
BROWN BULLHEAD							
TOMCOD	15	51	70	23	2		
GOLDFISH				2	2		
BD. KILLIFISH						3	
BLUEGILL							
CARP							2
GOLDEN SHINER							
BAY ANCHOVY							
PUMKINSEED						1	
YELLOW PERCH							
RBOW. SMELT							
WHITE SUCKER							
RBR. SUNFISH							
BLACK CRAPPIE							
GIZZARD SHAD							
MENHADEN							
BLUEFISH							
ATL. NEEDLEFISH							
LM BASS							
UID SHINER							
CRAYFISH							
BLUECRAB							

ROSETON/DANSKAMMER POINT FISH SAMPLING RESULTS

DECEMBER 28, 1972

STATION	DID	DCD	DCD	DCS	DCS (1	DC	DD	DD	DD
METHOD	BT	BT	BT	BT	BT	S100'	S 100'	S 100'	S 100'
DURATION (MIN)	7	7	7	7	9				
SPECIES									
ALEWIFE									
AM SHAD									
BB HERRING									
WHITE PERCH									
STRIPED BASS									
AM EEL									
ATL. STURGEON									
HOGCHOKER									
SPOTTAIL SHINER		1		23	3				
WHITE CATFISH		1					1		1
TES. DARTER		1	1		1				
BROWN BULLHEAD									
TOMCOD	29	670	1288	80	563				
GOLDFISH				27					
BD. KILLIFISH									
BLUEGILL									
CARP									
GOLDEN SHINER								1	
BAY ANCHOVY									
PUMKINSEED				2					
YELLOW PERCH				1					
RBOW. SMELT									
WHITE SUCKER									
RBR. SUNFISH									
BLACK CRAPPIE									
GIZZARD SHAD									
MENHADEN									
BLUEFISH									
ATL. NEEDLEFISH									
LM BASS									
UID SHINER						1	11	3	2
CRAYFISH									
BLUECRAB									

1) Trawl started in shallow water, but finished in deep water.

APPENDIX E

ROSETON/DANSKAMMER POINT LARVAL FISH DATA

1971-1972

ROSETON EAST LARVAL SAMPLES 1972

(Regular River)

DEPTH	DATE	TIME	METER REVOLUTION	VOLUME STRAINED m^3	NUMBER OF LARVAE	NUMBER OF LARVA PER $1000m^3$	WHITE PERCH	STRIPED BASS	ALOSA	BAY ANCHOVY	OTHERS
0' (S)	5/24/72	1835-1840	2320	68.3	3	44	0	15	29	0	0
50'(B)	"	"	1800	53.0	56	1057	358	170	509	0	19
0' (S)	6/7/73	1535-1540	2310	68.0	243	3574	721	0	2794	0	59
25'(M)	"	"	2010	59.2	154	2601	2061	0	541	0	0
50'(B)	"	"	1980	58.3	81	1389	480	0	463	0	446
0' (S)	6/15/72	1551-1556	1860	54.8	58	1058	18	0	1040	0	0
25' (M)	"	"	1860	54.8	103	1880	1387	0	474	0	18
50'(B)	"	"	2110	62.1	10	161	64	32	64	0	0
0' (S)	6/29/72	1317-1322	2030	59.8	19	318	0	0	301	0	17
25'(M)	"	"	1770	52.1	2	38	38	0	0	0	0
50'(B)	"	"	2580	76.0	1	13	0	0	0	0	13
0' (S)	7/13/72	1403-1408	2500	73.6	3	41	0	0	41	0	0
25'(M)	"	"	2050	60.4	6	99	50	0	0	0	50
50'(B)	"	"	2130	62.7	0	0	0	0	0	0	0

ROSETON EAST LARVAL SAMPLES 1972
(Regular River)

DEPTH	DATE	TIME	METER REVOLUTION	VOLUME STRAINED m^3	NUMBER OF LARVAE	NUMBER OF LARVA PER $1000m^3$	WHITE PERCH	STRIPED BASS	ALOSA	BAY ANCHOVY	OTHERS
0'(S)	7/27/72	1128-1133	2670	78.6	0	0	0	0	0	0	0
25'(M)	"	"	2550	75.1	0	0	0	0	0	0	0
50'(B)	"	"	2730	80.4	5	62	25	0	12		25
0' (S)	8/10/72	1312-1317	1850	54.5	0	0	0	0	0	0	0
25'(M)	"	"	1780	52.4	0	0	0	0	0	0	0
50'(B)	"	"	1750	51.5	0	0	0	0	0	0	0

ROSETON WEST LARVAL SAMPLES 1972
(Regular River)

DEPTH	DATE	TIME	METER REVOLUTION	VOLUME STRAINED m^3	NUMBER OF LARVAE	NUMBER OF LARVA PER $1000m^3$	WHITE PERCH	STRIPED BASS	ALOSA	BAY ANCHOVY	OTHERS
0' (S)	5/24/72	1802-1807	2010	59.2	1	17	0	0	17	0	0
40'(B)	"	"	1620	47.7	12	252	42	42	168	0	0
0'(S)	6/7/72	1503-1508	1690	49.8	64	1285	221	0	1064	0	0
20'(M)	"	"	1650	48.6	25	514	288	0	185	0	2
40'(B)	"	"	1120	33.0	28	848	636	0	212	0	0
0' (S)	6/15/72	1531-1536	1740	51.2	61	1191	20	0	1172	0	0
20'(M)	"	"	1790	52.7	157	2979	588	0	2391	0	0
40'(B)	"	"	1400	41.2	17	413	73	0	340	0	0
0' (S)	6/29/72	1256-1301	1820	53.6	290	5410	0	0	5410	0	0
20'(M)	"	"	2120	62.4	1	16	0	0	16	0	0
40'(B)	"	"	1790	52.7	0	0	0	0	0	0	0
0'(S)	7/13/72	1340-1345	2120	62.4	5	80	0	0	48	0	32
20'(M)	"	"	2120	62.4	3	48	16	0	16	0	16
40'(B)	"	"	2120	62.4	0	0	0	0	0	0	0

ROSETON WEST LARVAL SAMPLES 1972
(Regular River)

DEPTH	DATE	TIME	METER REVOLUTION	VOLUME STRAINED m^3	NUMBER OF LARVAE	NUMBER OF LARVA PER $1000m^3$	WHITE PERCH	STRIPED BASS	ALOSA	BAY ANCHOVY	OTHERS
0' (S)	7/27/72	1152-1157	2460	72.5	0	0	0	0	0	0	0
20'(M)	"	"	2530	74.5	0	0	0	0	0	0	0
40'(B)	"	"	2710	79.8	0	0	0	0	0	0	0
0'(S)	8/10/72	1253-1258	2140	63.0	0	0	0	0	0	0	0
20'(M)	"	"	2130	62.7	0	0	0	0	0	0	0
40'(B)	"	"	2150	63.3	1	16	16	0	0	0	0

ROSETON LARVAL SAMPLING 1971
Roseton West

DEPTH	DATE	TIME	METER REVOLUTION	VOLUME STRAINED m^3	NUMBER OF LARVAE	NUMBER OF LARVA PER $1000m^3$
0'(S)	5/12/71	1303-1308	2510	73.9	0	0
8'(M)	5/12/71	1400-1405	2650	78.0	1	13
0'(S)	5/12/71	1459-1504	3478	102.4	7	68
10'(B)	5/12/71	1555-1600	2100	61.8	3	48
0'(S)	5/19/71	1240-1245	2500*	73.6*	3	41*
10'	5/19/71	1302-1310	4000	117.8*	2	17*
0'(S)	5/19/71	1337-1344	3500	103.1*	4	39*
10'	5/19/71	1359-1407	4000	117.8*	6	51*
0'-10'	5/26/71	1310-1316	2770	81.6	53	650
0'	6/8/71	1049-1054	2450	72.2	14	194
0'	6/22/71	1130-1135	3510	103.4	301	2912
0'	7/13/71	0943-0948	2050	60.4	4	66
0'	8/11/71	0910-0915	4580	134.9	0	0

*No meter readings recorded for these samples. Values determined using an approximate figure of 500 meter revolutions per minute.

ROSETON LARVAL SAMPLING 1971

Roseton North Control

DEPTH	DATE	TIME	METER REVOLUTION	VOLUME STRAINED m^3	NUMBER OF LARVAE	NUMBER OF LARVA PER $1000m^3$
0-10'	5/26/71	1400-1406	3290	96.9	48	495
23-50'	6/8/71	1355-1400	3382	99.6	3	30
0'	6/22/71	1420-1425	2830	83.4	312	3743
0'	7/13/71	1600-1605	2370	69.8	0	0
0'	8/11/71	1050-1055	3740	110.2	0	0

APPENDIX F

METHODS OF
CHEMICAL ANALYSES OF WATER SAMPLES

APPENDIX F

CHEMICAL ANALYSES OF WATER

Parameter	Sensitivity	Method Used	Sample Volume Required	Preservation	Instruments Used
Biochemical Oxygen Demand (BOD) (mg/l)	To 5 mg/l but depending upon seed and blank	Standard Methods (page 489)	Up to 300 mls for undiluted samples; up to 500 ml total	No preservatives. Chill to 3 - 4°C immediately. Maximum holding period is 6 hours. Use BOD incubator bottles.	Incubator
Chemical Oxygen Demand (COD) (mg/l)	To 5 mg/l	Standard Methods: dichromate reflux method (page 495)	20 mls	Acidify to pH of 2 to 3 with about 2 ml concentrated H_2SO_4 per liter. Hold up to 7 days.	Reflux apparatus
Chlorophyll a (Chl-a) (µg/l)	Approximately 0.5 µg/l	1. Standard Methods: Chlorophyll a method (page 748) 2. IBP spectrophotometric method (IBP Handbook, page 117)	1 liter	1. May be stored frozen for up to 30 days in brown containers (for periphyton only). 2. Extract immediately; store extract in dark; dessication less than 12 hours.	Bausch & Lomb spectrophotometer 20#332961-101
Chl-a,-b,-c	Approximately 0.5 µg/l	Extraction as for Chl-a, as in Standard Methods.			

APPENDIX F

CHEMICAL ANALYSES OF WATER (Cont'd)

Parameter	Sensitivity	Method Used	Sample Volume Required	Preservation	Instruments Used
Nitrogen, Ammonia (NH_3-N) (mg/l N)	1. To 1.0 mg/l 2. To 0.05 mg/l	Standard Methods: 1. Kjeldahl distillation method (page 224) and titration 2. Nesslerization method (page 226)	1. 500 to 1,000 mls 2. 100 mls	Chill to 4°C and add 0.8 mls concentrated H_2SO_4 per liter; hold only up to 7 days.	1. Kjeldahl apparatus 2. Spectrophotometer: Bausch & Lomb 20#332961-101
Nitrogen, Organic (mg/l N)	To 1.0 mg/l	Standard Methods calculated as the difference between total minus ammonia nitrogen (page 244)	500 mls	Total Kjeldahl nitrogen analyses should be conducted immediately. Otherwise add about 0.8 mls concentrated H_2SO_4 per liter for holding up to 1 day.	Kjeldahl apparatus
Orthophosphates (Ortho P) (mg/l P)	To 0.003 mg/l	Standard Methods: stannous chloride method (page 530)	100 mls	Refrigerate immediately at 3 - 4° C. Add 40 mg $HgCl_2$ per liter and 125 mg NaCl per liter for 1 day storage.	Bausch & Lomb spectrophotometer 20#332961-101
Total Phosphorus (TP) (mg/l P)	To 0.003 mg/l	Standard Methods: 1. Persulfate digestion method (page 526) 2. Stannous chloride method (page 530)	100 mls	None required. Use glass containers. Almost no limit to storage time.	1. Digestion apparatus 2. Bausch & Lomb spectrophotometer 20#332961-101

APPENDIX F

CHEMICAL ANALYSES OF WATER (Contd)

Parameter	Sensitivity	Method Used	Sample Volume Required	Preservation	Instruments Used
Silicon (Si) (mg/l)	1. To 0.2 mg/l 2. To 2 mg/l	Standard Methods: 1. Atomic absorption spectroscopy 2. Molybdosilicate method (page 303)	1. 20 mls 2. 50 mls	None: collect in polyethylene or other non-glass bottles.	1. Perkin-Elmer AAS103 2. Bausch & Lomb spectrophotometer 20#332961-101
Suspended Solids (TSS) (mg/l)	To 20 mg/l	Standard Methods: gravimetric method (page 587)	50 mls	Store in completely filled resistant glass bottles for up to 7 days.	Oven and filtering apparatus
Total Solids (TS) (mg/l)	To 10 mg/l	Standard Methods: gravimetric method (page 535)	100 mls	Same as above.	Oven and filtering apparatus
Turbidity (Tur) (JTU)	To 0.02 JTU	1. Absorbance method (non-standard); spectrophotometric 2. Standard Methods: nephelometric method (page 350)	50 mls*	Store in dark up to 24 hours only. For longer storage add 1 gram $HgCl_2$ per liter of sample. Prolonged storage is not recommended. EPA recommends holding up to 7 days, no preservative.	1. Bausch & Lomb spectrophotometer 20#332961-101 2. Hach turbidity meter model 2100
Nitrate Nitrogen (NO_3-N) (mg/l N)	To 0.1 mg/l	Standard Methods: brucine method (page 461)	10 mls	Store at 3 - 4°C with 40 mg $HgCl_2$ per liter for up to 7 days.	Bausch & Lomb spectrophotometer water baths

APPENDIX F

CHEMICAL ANALYSES OF WATER (Cont'd)

Parameter	Sensitivity	Method Used	Sample Volume Required	Preservation	Instruments Used
Total Dissolved Solids (TDS) (mg/l)	To 5 mg/l	Calculated as the difference between total solids and suspended solids (see above)	150 mls	Store in completely filled resistant glass bottles.	Oven and filtering apparatus
pH (no units)	0.01	Standard Methods: glass electrodes (page 276)	50 mls*	No preservatives. Measure as soon as possible. Store between 0 and 10°C.	Beckman SS-2 pH meter glass and reference electrodes
Color (COL) (color units)	To 1 color unit	Standard Methods: color comparison method (page 160)	50 mls*	No preservatives. Measure as soon as possible. Refrigerate at 4°C for storing up to 24 hours.	
Specific Conductance at 25°C (SpC) (µmhos/cm)	To 0.4 µmhos/cm	Standard Methods	400 mls	No preservatives. Constant temperature should be maintained if possible. Maximum holding time one week.	Conductivity meter - Beckman - conductivity bridge model RC16B2
Temperature (T) (°F)			*	(Field measurement)	Montedoro-Whitney thermistor °F model TF 20
Carbon Dioxide, Free (CO_2) (mg/l)		Standard Methods: sodium carbonate titrimetric method (page 92)	100 mls	Fill bottle completely to top.	

APPENDIX F

CHEMICAL ANALYSES OF WATER (Cont'd)

Parameter	Sensitivity	Method Used	Sample Volume Required	Preservation	Instruments Used
Alkalinity (Alk) (mg/l as $CaCO_3$)	To that level equivalent to 0.01 pH units	Standard Methods: potentiometric titration (page 52)	100 mls	Collect samples in polyethylene or pyrex bottles. Samples should be run in less than 1 day.	Beckman SS-2 pH meter and electrodes
Acidity (Ac) (mg/l as $CaCO_3$)	To that level equivalent to 0.01 pH units	Standard Methods: potentiometric titration (page 50)	100 mls	Same as above.	Beckman SS-2 pH meter and electrodes
Total Hardness (TH) (mg/l as $CaCO_3$)	1. To 0.01 mg/l 2. To 10 mg/l	1. Atomic absorption spectroscopy of calcium and magnesium metals and subsequent extrapolation of values to mg/l as $CaCO_3$ 2. Standard Methods: EDTA titrimetric method (page 179)	1. 20 mls 2. 25 mls	Sample may require dilution to prevent loss of hardness by precipitation.	1. Perkin Elmer AAS103
Dissolved Oxygen (DO) (mg/l)	1. To 0.05 mg/l 2. From 15 mg/l to 0.05 mg/l	Standard Methods: 1. Azide modification of the iodometric method (page 477) 2. Membrane electrode method (page 484)	300 mls	Sample must not aerated or agitated; initiate analysis immediately.	2. Yellow Springs instrument model 51A
Volatile Suspended Solids (VSS) (mg/l)	To 20 mg/l	Standard Methods: gravimetric method (page 538)	100 mls	Store in completely filled resistant glass bottles for up to 7 days.	550°C furnace

APPENDIX F

CHEMICAL ANALYSES OF WATER (Cont'd)

Parameter	Sensitivity	Method Used	Sample Volume Required	Preservation	Instruments Used
Total Volatile Matter (TVS) (mg/l)	To 10 mg/l	Standard Methods: gravimetric method (page 536)	100 mls	Store in completely filled resistant glass bottles for up to 7 days.	550°C furnace
Phenols (Phl) (mg/l)	To 0.0005 mg/l	Standard Methods: direct photometric method (page 507)	500 mls	Analyze within 4 hours; otherwise preserve the sample by reducing the pH to 4.0 with H_3PO_4 and then add 1 gm $CuSO_4 \cdot 5H_2O$ per liter of sample; store samples between 5 and 10°C.	Bausch & Lomb spectrophotometer 20#332961-101 distilling/condensing apparatus
Chloride (Cl) (mg/l)	To 0.02 mg/l	Standard Methods: mercuric nitrate method (page 97)	100 mls	No special handling or preservation requirements.	
Sulfate (SO_4) (mg/l)	To 1 mg/l	Standard Methods: turbidimetric method (page 334)	100 mls	Store at low temperatures. Do not allow pH to rise above 8.0 since at high pH sulfite→sulfate. Treat heavily polluted samples with formaldehyde.	Bausch & Lomb spectrophotometer 20#332961-101
Oil and Grease (O&G) (mg/l)		Standard Methods: Soxhlet extraction method (page 409)	1 liter	Collect in wide-mouth pyrex bottles calibrated to hold measured volumes. Analyze as soon as possible; otherwise preserve with 2 ml	Soxhlet extraction apparatus

(continued)

APPENDIX F

CHEMICAL ANALYSES OF WATER (Cont'd)

Parameter	Sensitivity	Method Used	Sample Volume Required	Preservation	Instruments Used
Oil and Grease *(continued)*				concentrated H_2SO_4 per liter liquid or 1 ml concentrated H_2SO_4 per 80 grams sludge.	
Total Inorganic Carbon (TIC) (mg/l)	To 1 mg/l	Standard Methods: combustion infrared method (page 257)	Sample size is limited only in that it be representative	Collect sample by filling bottle completely to top to avoid loss of CO_2. Analyze as soon as possible (or see TOC below).	Beckman model IR-215A and total carbon analyzer
Total Organic Carbon (TOC) (mg/l)	To 1 mg/l	Standard Methods: combustion infrared method for all carbon and subtraction of inorganic carbon to determine total organic carbon (page 257)	Same as above	If samples cannot be analyzed immediately, add concentrated HCl to pH of 2 and store preferably in brown glass bottles.	Beckman model IR-215A and total carbon analyzer
Mercury (Hg) (mg/l)	To 0.0002 mg/l	Flameless atomic absorption spectroscopy	100 mls	Polyethylene bottles. Acidify to 1% acid with high purity HNO_3. Maximum holding period 6 months.	Perkin Elmer AAS 103 with mercury analyzer
Metals (mg/l)		Standard Methods: atomic absorption spectroscopy	10 mls/metal analyzed	Polyethylene bottles. Acidify to 1% acid with high purity HNO_3. Maximum holding period 6 months.	Perkin Elmer AAS 103
Aluminum (Al)	0.02 mg/l				
Beryllium (Be)	0.002 mg/l				
Barium (Ba)	0.03 mg/l				
(continued)					

APPENDIX F

CHEMICAL ANALYSES OF WATER (Cont'd)

Parameter	Sensitivity	Method Used	Sample Volume Required	Preservation	Instruments Used
Metals (mg/l) *(continued)*					
Cadmium (Cd)	0.002 mg/l				
Calcium (Ca)	0.002 mg/l				
Chromium (Cr)	0.008 mg/l				
Cobalt (Co)	0.015 mg/l				
Copper (Cu)	0.005 mg/l				
Iron (Fe)	0.01 mg/l				
Lead (Pb)	0.03 mg/l				
Magnesium (Mg)	0.0001 mg/l				
Manganese (Mn)	0.008 mg/l				
Mercury (Hg)	0.001 mg/l				
Molybdenum (Mo)	0.02 mg/l				
Nickel (Ni)	0.02 mg/l				
Potassium (K)	0.004 mg/l				
Silver (Ag)	0.002 mg/l				
Sodium (Na)	0.001 mg/l				
Thallium (Tl)	0.07 mg/l				
Tin (Sn)	0.02 mg/l				
Titanium (Ti)	0.15 mg/l				
Vanadium (V)	0.16 mg/l				
Antimony (Sb)	0.07 mg/l				
Arsenic (As) (µg/l)	1. To 1 µg/l 2. To 1 µg/l	Standard Methods: 1. Silver diethyldithiocarbamate method (page 62) 2. Mercuric bromide stain method (page 64)	1. 35 mls 2. Up to 1 liter	No specific handling or preservation requirements.	1. Arsine generator and absorption tube and Bausch & Lomb spectrophotometer 20#33291-101 2. Arsine generator only

APPENDIX F

CHEMICAL ANALYSES OF WATER (Cont'd)

Parameter	Sensitivity	Method Used	Sample Volume Required	Preservation	Instruments Used
Selenium (Se) (µg/l)	1. To 1 µg/l 2. To 1 µg/l	Standard Methods: 1. Diaminobenzidine method (page 296) 2. Distillation and diaminobenzidine method (page 298)	1. 1 liter 2. 1 liter	No specific handling or preservation requirements.	1. Bausch & Lomb spectrophotometer 20#33291-101 centrifuge 2. All of the above plus distillation assembly
Fecal Coliform (FCOL) (numbers of communities per 100 ml)	To 1 community per 100 ml	Standard Methods: membrane filter procedure (page 684)	100 mls, but less for higher contamination	Sterilized glassware and equipment are a must. Leave ample air space in bottles. Fingers, etc., must not touch bottle caps or necks. Transport in iced coolers. No sample is worth running after 30 hours.	Incubator 44.5°C
Settleable Residue (SettR) (m/l)	To 1 ml/l	Standard Methods Imhoff cone method (page 539)	1 liter*	Resistant glass or plastic to which particles do not adhere. Samples containing Fe and Mn should be filled full and analyzed promptly.	Imhoff cone
Cyanide (Cn) (mg/l)	1. To 0.1 mg/l Cn 2. To 0.1 mg/l Cn	Standard Methods: 1. Distillation and titration method (pages 397 and 402)	2 - 400 mls but limited by a maximum of 500 mg CN^-	Analyze as soon as possible. Otherwise pH to 11.0 with NaOH and store in cool place.	1. Cyanide distillation apparatus 2. Cyanide distillation apparatus and Bausch & Lomb spectrophotometer

APPENDIX F

CHEMICAL ANALYSES OF WATER (Cont'd)

Parameter	Sensitivity	Method Used	Sample Volume Required	Preservation	Instruments Used
Ferri- and Ferro-Cyanide (FerCn) (mg/l)	Same as above	Either of the above methods is used twice, once with and once without use of mercuric chloride and magnesium chloride reagents; the difference in results is ferri- and ferro-cyanide	Twice as much sample is needed as for cyanide alone.	Same as above.	Same as above
Fluoride (F) (mg/l)	To 0.1 mg/l	Separation by distillation and detection by electrode method	300 mls	Polyethylene bottles preferred. Glass containers will require special precaution in washing those which previously contained fluoride solutions.	Distillation apparatus Beckman SS02 pH meter reference and fluoride electrodes, stopwatch

*May be reused.