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WATER QUALITY MANAGEMENT STUDIES LAKE SEMINOLE, APRIL-NOVEMBER --ETC (U)

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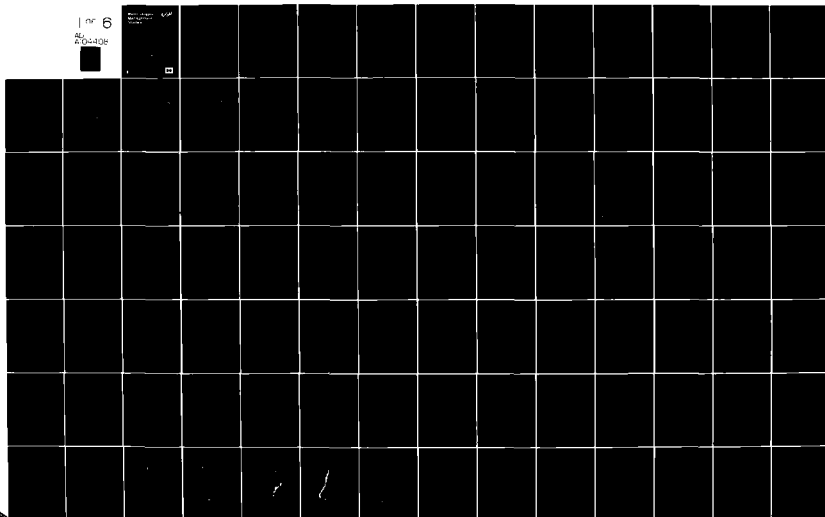
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Water Quality Management Studies

TECHNICAL REPORT ACF 80-10 (FINAL REPORT)

AD A104408

LAKE SEMINOLE
APRIL - NOVEMBER 1978
PHASE I

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This document presents the results of a nine month water quality study in Lake Seminole located partially within each of three states: Georgia, Florida, and Alabama. Meteorological, hydrological, sediment and physical, chemical and biological water quality data were obtained at a total of 19 main sampling stations in Lake Seminole, the Chattahoochee, Flint and Apalachicola Rivers, Spring Creek and Fish Pond Drain during 6 sampling cycles from April through November 1978. Limited sampling and analyses were also performed at 5 special sites. Sampling and analytical methodologies are summarized and a brief review		

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WATER QUALITY MANAGEMENT STUDIES
LAKE SEMINOLE
April-November 1978
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ABSTRACT

This document presents the results of a nine month water quality study in Lake Seminole located partially within each of three states: Georgia, Florida, and Alabama. Meteorological, hydrological, sediment and physical, chemical and biological water quality data were obtained at a total of 19 main sampling stations in Lake Seminole, the Chattahoochee, Flint and Apalachicola Rivers, Spring Creek and Fish Pond Drain during 6 sampling cycles from April through November, 1978. Limited sampling and analyses were also performed at 5 special sites. Sampling and analytical methodologies are summarized and a brief review and analysis of the findings, including identification of major water quality problems and recommendations for future studies, are presented. The detailed results are included in attached appendices. Where appropriate, the data generated were submitted to the EPA's STORET System.

OBJECTIVES

The overall objectives of the Lake Seminole Water Quality Management Study were to a) establish base line conditions for future comparisons; b) identify water quality-environmental problems; c) collect data to allow guidance for reservoir control-discharge water quality relationships; and d) collect data that will provide conditions to facilitate coordination with state agencies to implement watershed pollution control.

Those objectives were met by taking samples for physical, chemical and biological parameters in Lake Seminole and its major tributaries, the Chattahoochee River, and the Flint River as well as the lake's outfall, the Apalachicola River. The samples were analyzed using standard analytical techniques, and the data generated were stored in the Environmental Protection Agency's (EPA) Data Storage and Retrieval (STORET) system.

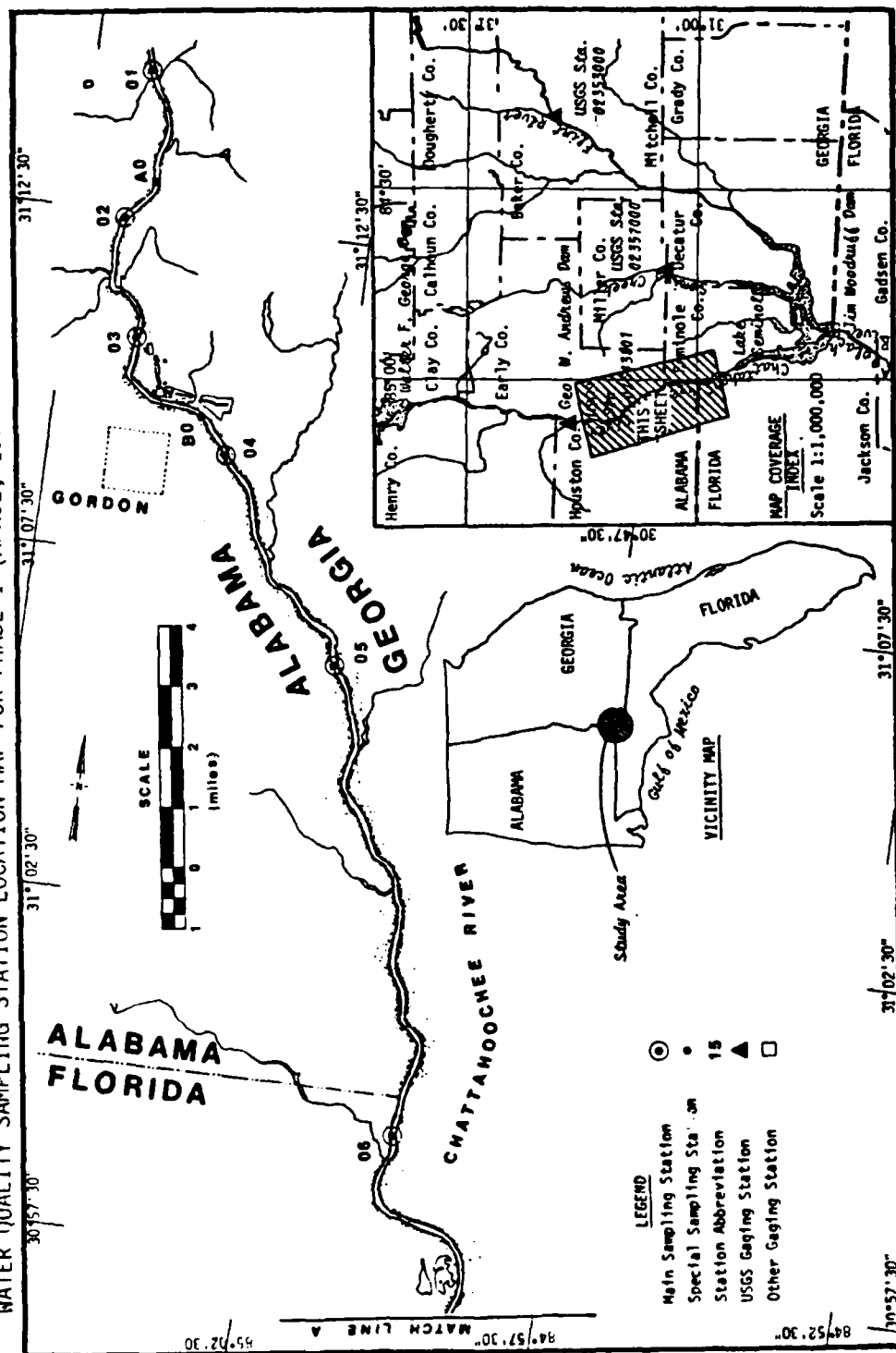
INTRODUCTION

Jim Woodruff Lock and Dam is located on the Apalachicola River at Mile 107.6 (173.2 km.), about 305 meters downstream from the point where the Flint and Chattahoochee Rivers unite to form the Apalachicola River. The structure is an earthfill dam with a concrete fixed-crest spillway, a center channel spillway with 16 vertical lift gates 12.2 m long and 9.3 m high and a side channel navigation lock 25 m wide. The dam crosses the Florida-Georgia border with about 457 meters of the overflow dike being located in Dacatur County, Georgia, and the remainder of the structure being in Gadsden and Jackson Counties, Florida. The primary purposes of the structure are to aid navigation in the Chattahoochee River upstream to the George W. Andrews Lock and Dam at Mile 47 (76 km.), in the Flint River to Bainbridge, GA about 48 km. upstream and downstream in the Apalachicola River, and to generate electric power. Other stated benefits include the regulation of streamflows, public recreation and fish and wildlife conservation. Construction of the project was initiated in September, 1947. The lock was opened for navigation, and impounding of water in the reservoir was begun in May, 1954. The power plant was placed in operation and the pool was considered full when it reach elevation 77 ft. (23 m) msl in February, 1957 (USACOE, 1972).

Lake Seminole, formed by the impoundment behind the Jim Woodruff Dam, is located partially within each of three states: Georgia, Florida, and Alabama as shown in Figure 1. The reservoir has a total drainage basin area upstream of the dam of 44,630 sq. km., of which approximately 51 percent is tributary to the Chattahoochee River and 49 percent tributary to the Flint River. The reservoir consists of two major impoundment arms, the Flint and Chattahoochee, and two minor impoundment arms, Fish Pond Drain and Spring Creek, both of which are tributary to the Flint River Impoundment. The reservoir has a surface area of 152 sq. km. and a total volume of 439 million cubic meters at the normal pool elevation of 77.0 feet (23 m) msl. The pool extends up the Chattahoochee River 75.2 km. to the George W. Andrews Lock and Dam and up the Flint River 76 km. (USACOE, 1972).

The Flint River has a total length of approximately 560 km. and a total drainage basin area of some 21,900 sq. km. The basin extends about 346 km. from north to south and averages roughly 64 km. in width. The headwaters of the Flint River are in the hilly region of the Piedmont Province, in the vicinity of the Atlanta Airport at an elevation of approximately 305 m. Seventy miles downstream from its source the river flows through the Pine Mountain District of the Greenville Plateau. The river through this stretch descends at a rate of approximately 0.04 percent up to the Fall Line at Flint River Mile 286 (460 km.). At the Fall Line the river drops rapidly over a shoal, and for 64 km. downstream. Downstream of Flint River Mile 220 (354 km.) the river flows

FIGURE 1



through the Upper Coastal Plain of southwest Georgia until it joins the Chattahoochee River in the Lake Seminole impoundment (USACOE, 1976).

The average annual flow in the Flint River at Newton, Georgia (see Figure 1, insert) for the period of record 1938-1950 and 1956-1973 is $202 \text{ m}^3/\text{sec}$, with a minimum flow of $22.4 \text{ m}^3/\text{sec}$ which occurred on both Oct. 20, and Nov. 10, 1940 and a maximum flow of $1870 \text{ m}^3/\text{sec}$ which was recorded on March 9, 1966 (USGS, 1979).

The Chattahoochee River has a total length of approximately 1200 km. and a total drainage basin area of 22,700 sq. km. The basin extends about 410 km. from north to south. The headwaters of the Chattahoochee River are in the rugged, wooded Blue Ridge Mountains of Northern Georgia. Downstream from this area the river flows through the hills of the Piedmont Province which range in elevation from 366 m in the foothills of the Appalachian Mountains to approximately 183 m at the Fall Line. Downstream of the Fall Line the river flows through the Upper Coastal Plain until it joins the Flint River in the Lake Seminole Impoundment.

The Walter F. George Lock and Dam, located upstream of the Lake Seminole Impoundment on the Chattahoochee River at Mile 75 (121 km.) is operated as a peaking power plant and as a result there is considerable short term flow variation through the Chattahoochee River Impoundment of Lake Seminole. The average annual flow at Walter F. George Lock and Dam near Columbus, GA (see Figure 1, insert) for the period of record 1929-1978 is $192 \text{ m}^3/\text{sec}$, with a minimum flow of 8.3 cfs which occurred on Oct. 23, and Nov. 14, 1931 and a maximum flow of $4110 \text{ m}^3/\text{sec}$ which occurred on Feb. 26, 1961 (USGS, 1979).

The Apalachicola River, now formed by the discharge from Jim Woodruff Dam, was originally formed by the confluence of the Flint and Chattahoochee Rivers in the extreme southwest corner of Georgia. The river is bounded on both banks by wetlands except for the upper 40 km. stretch which is bounded on the east by the Apalachicola River Bluff formation. The Mariana Lowlands extend from the western bank of the Apalachicola westward past the border of the basin and south to the Western Highlands which cut across the middle-western portion of the basin. The Tallahassee Hills occur on the eastern side of the Apalachicola from the Georgia border southward to the Coastal Lowlands. The Coastal Lowlands comprise the entire lower portion of the basin.

The river below Jim Woodruff dam descends at a rate of approximately 0.009 percent. The power plant at the Jim Woodruff Dam is a "run of the river" plant which operates around the clock except when occasional high flows reduce the available operating head causing the plant to be non-productive. There is no flood control storage available in the reservoir (USACOE, 1972). The average annual flow at the dam is $635.8 \text{ m}^3/\text{sec}$ for the period of record Oct., 1928 to 1977, with a minimum flow of $140 \text{ m}^3/\text{sec}$ which occurred Oct. 27, 1954 and a

maximum discharge of 8300 m³/sec which occurred on March 20, 1929
(USGS, 1978).

METHODS AND TECHNIQUES

Field Procedures

Sampling Site Locations

Sample site locations were specified by the U.S. Army Corps of Engineers (USACOE), Mobile District. The classification of sampling stations for the purpose of specifying field measurement, sediment and/or Corbicula sampling procedures was based in part on the total width of the cross section, the accessibility and submergence of the overbank areas as well as the inundation of the natural levees at normal pool stage. The sampling sites are shown on Figure 1, and their locations and their classifications as to river or lake station are tabulated in Table 1.

Sampling and Analytical Methodology

A complete sampling schedule showing the parameters sampled and sampling dates is shown in Table 2. A summary of the station parameter sampling schedule is shown in Table 3. A summary of the sampling methodologies, including respective maximum allowable holding times, sample container and preservation techniques as well as analytical methodologies employed and reported detection limits for the water quality parameters sampled during the course of this study can be found in Table 4.

Field Measurements

Dissolved oxygen (D.O.), pH, temperature, and specific conductance were measured at each station, one meter below the surface during every sampling cycle. To define the extent of the mixing within the river, D.O., pH, specific conductance and temperature were also sampled at depths of 0.33 meter below the surface and 1.0 meter above the river bed at midstream and within the littoral zone of both river banks at river stations 01 thru 07, 12, 14, 16, 17, 18 and 19 during the first and fourth sampling cycles (4/17-21/1978 and 8/14-17/1978). More extensive sampling including the measurement of Oxidation-Reduction Potential (ORP) at stations 7, 11 and 15 was performed during cycle 4 (8/14-17/1978) in order to develop complete cross sectional isopleths for these parameters. To define stratification, D.O., pH, specific conductance, temperature and ORP were vertically profiled at stations 07, 08, 09, 10, 11, 13 and 15 during the sampling cycles. Secchi disc and 1% light transmission measurements were also measured in situ at each station.

The field instruments used to sample the in situ parameters are listed in Table 4.

TABLE 1

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
SAMPLING STATION NAME, STORET CODE, LOCATION, TYPE AND DESCRIPTION FOR PHASE I
(APRIL, 1978 THROUGH NOVEMBER, 1979)

Station Name Abbrev.	Storet Code	Location	Type	Description
01	13LS01	Chattahoochee River MP 45.5	River	Chattahoochee River, 1.2 miles (1.9 km) downstream of the George W. Andrews Dam
02	13LS02	Chattahoochee River MP 42.6	River	Chattahoochee River, 1.4 miles (2.25 km) downstream of power plant, 1.0 miles (1.6 km) upstream of confluence with Cedar Creek
03	13LS03	Chattahoochee River MP 40.3	River	Chattahoochee River, 0.4 miles (0.64 km) upstream of Great Northern Paper Mill dock
04	13LS04	Chattahoochee River MP 37.5	River	Chattahoochee River, 0.3 miles (0.48 km) upstream of Gordon Landing boat ramp
05	13LS05	Chattahoochee River MP 33.3	River	Chattahoochee River, 0.3 miles (0.48 km) upstream of Navy Yard Landing
06	13LS06	Chattahoochee River MP 25.0	River	Chattahoochee River, 1.1 miles (1.77 km) upstream of Hwy. 91 bridge
07	12LS07	Chattahoochee River MP 11.0	River	Chattahoochee River, 3.2 miles (5.15 km) downstream of channel to Parhamore Landing
08	12LS08	Chattahoochee River 0.2 mile SW MP 9.1	Lake	Chattahoochee River 0.2 miles (0.32 km) southwest of milepoint 9.1; out of main channel
09	13LS09	Lake Seminole-Chattahoochee River Impoundment MUM 4.8	Lake	Lake Seminole - Chattahoochee River Impoundment, 1.0 miles (1.6 km) northeast of the Three Rivers State Park boat ramp
10	12LS10	Lake Seminole-Chattahoochee River Impoundment CAN 3.9	Lake	Lake Seminole - Chattahoochee River Impoundment, 1.5 miles (2.4 km) north of Sneads Landing boat ramp; 0.3 miles (0.16 km) south of can out of the main channel
11	12LS11	Lake Seminole-Chattahoochee River Impoundment MUM 0.6	Lake	Lake Seminole - Chattahoochee River Impoundment, 0.6 miles (0.97 km) north-northwest of the Jim Woodruff Dam lock; MUM 0.6
12	13LS12	Lake Seminole-Fish Pond Drain Impoundment	River	Lake Seminole - Fish Pond Drain Impoundment Arm, 1.8 miles (1.6 km) northeast of the Georgia SR 253 bridge. River mile index mileage to confluence with the Flint River is estimated along the original stream channel.
13	13LS13	Lake Seminole-Flint River Impoundment CAN 5.5	Lake	Lake Seminole - Flint River Impoundment, 0.6 miles (0.97 km) north of the Flint River Park boat ramp; 100 meters north of can 5.5, out of main channel
14	13LS14	Lake Seminole-Spring Creek Impoundment SM SR 253	River	Lake Seminole - Spring Creek Impoundment, 2.0 miles (3.22 km) south southwest of the Georgia SR 253 bridge. River mile index mileage to confluence with the Flint River is estimated along the original stream channel
15	13LS15	Lake Seminole-Flint River Impoundment MP 9.4	Lake	Lake Seminole - Flint River Impoundment, 1.8 miles (2.9 km) west of Hutchinson's Ferry Landing boat ramp

TABLE 1 (continued)
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
SAMPLING STATION NAME, STORET CODE, LOCATION, TYPE AND DESCRIPTION FOR PHASE I
(APRIL, 1978 THROUGH NOVEMBER, 1978)

Station Name Abbrev.	STORET Code	Location	Type	Description
16	13LS16	Flint River MP 24.0	River	Flint River, 0.6 miles (0.97 km) upstream of Fourmile Creek confluence
17	13LS17	Flint River MP 29.0	River	Flint River, 0.5 miles (0.8 km) upstream of Atlantic Coast Line RR bridge (northernmost bridge in Bainbridge)
18	12LS18	Apalachicola River NUN 104.4	River	Apalachicola River, 0.4 miles (0.64 km) downstream of Louisville & Nashville Railroad bridge; NUN 104.4
19	12LS19	Apalachicola River MP 101.5	River	Apalachicola River, 100 meters downstream of southernmost power plant docking post
AO	13LS40	Chattahoochee River MP 43.4	River	Chattahoochee River, 0.6 miles (0.97 km) downstream of power plant
RO	13LS80	Chattahoochee River MP 38.2	River	Chattahoochee River, 100 meters downstream of Great Northern Paper effluent outfall
B1	13LS81	Lake Seminole-Seminole State Park Beach	River	Lake Seminole - Fish Pond Drain Impoundment Arm, 30 meters south of beach area at Seminole State Park. River mile index mileage to the confluence with the Flint River is estimated along the original stream channel
B2	13LS82	Lake Seminole-Chattahoochee Park Beach	Lake	Lake Seminole-Flint River Impoundment, 50 meters west of the boat ramp at Chattahoochee Park
FE	13LSFE	Lake Seminole-Chattahoochee River Impoundment NUN 5.2	River	Lake Seminole - Chattahoochee River Impoundment, 0.8 miles (1.29 km) northeast of NUN 5.2; out of the main channel

TABLE 2
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
WATER QUALITY PARAMETER SAMPLING SCHEDULE FOR PHASE I
(APRIL, 1978 THROUGH NOVEMBER, 1978)

Parameter	Sampling Cycle					
	1	2	3	4	5	6
	Sampling Dates (1978)					
	4/17-21	6/5-7	7/17-20	8/14-17	9/25-27	11/28-30
<u>Meteorological Data</u>						
Air Temperature	X	X	X	X	X	X
Cloud Cover	X	X	X	X	X	X
Wind Velocity	X	X	X	X	X	X
Wind Direction	X	X	X	X	X	X
I. <u>Water Quality Sampling</u>						
<u>Hydrological Data</u>						
Total Depth	X	X	X	X	X	X
Stream Velocity	X	X	X	X	X	X
Wave Height	X	X	X	X	X	X
Current Speed	X	X	X	X	X	X
Current Direction	X	X	X	X	X	X
<u>Physical Data</u>						
<u>Miscellaneous</u>						
Cross-Section Loc	X	X	X	X	X	X
Sample Depth	X	X	X	X	X	X
Secchi Disk Transparency	X	X	X	X	X	X
Depth of 1% Surface Light	X	X	X	X	X	X
<u>Field Measurements</u>						
Water Temperature	X	X	X	X	X	X
Specific Conductance	X	X	X	X	X	X
Oxidation Reduction Potential	X	X	X	X	X	X
Dissolved Oxygen, Electrode	X	X	X	X	X	X
pH	X	X	X	X	X	X
<u>Laboratory Data</u>						
Color	X	X	X	X	X	X
Turbidity, Hach Turbidimeter	X	X	X	X	X	X
Total Filterable Residue	X	X	X	X	X	X
Total Nonfilterable Residue	X	X	X	X	X	X
<u>Chemical Data</u>						
<u>Minerals and Metals</u>						
Alkalinity	X	X	X	X	X	X
Chloride				X		X
Sulfate, Dissolved	X	X	X	X	X	X
Sulfide, Total		X	X	X	X	

TABLE 2 (continued)
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
WATER QUALITY PARAMETER SAMPLING SCHEDULE FOR PHASE I
(APRIL, 1978 THROUGH NOVEMBER, 1978)

Parameter	Sampling Cycle					
	1	2	3	4	5	6
	Sampling Dates (1978)					
	4/17-21	6/5-7	7/17-20	8/14-17	9/25-27	11/28-30
<u>Chemical Data</u>						
<u>Minerals and Metals</u>						
Calcium, Total				X		X
Hardness, Total				X		X
Iron, Dissolved	X	X	X	X	X	X
Iron, Total	X	X	X	X	X	X
Magnesium, Total				X		X
Manganese, Dissolved	X	X	X	X	X	X
Manganese, Total	X	X	X	X	X	X
Potassium, Total				X		X
Sodium, Total				X		X
Zinc, Total	X	X	X	X	X	X
<u>Nutrients</u>						
Carbon, Dissolved Organic	X	X	X	X	X	X
Carbon, Total Organic	X	X	X	X	X	X
Carbon Dioxide	X	X	X	X	X	X
Nitrogen, Total Ammonia	X	X	X	X	X	X
Nitrogen, Nitrate + Nitrite	X	X	X	X	X	X
Nitrogen, Total Inorganic	X	X	X	X	X	X
Nitrogen, Total Kjeldahl				X		X
Nitrogen, Total Organic				X		X
Nitrogen, Total				X		X
Orthophosphate, Dissolved	X	X	X	X	X	X
Phosphorus, Total	X	X	X	X	X	X
<u>Biological Data</u>						
<u>Bacteriological Data</u>						
Fecal Coliform		X	X	X	X	
Fecal Streptococci		X	X	X	X	
FC/FS Ratio		X	X	X	X	
II. <u>Sediment Sampling</u>						
<u>Mechanical Data</u>						
Sieve Analysis				X		
Hydrometer Analysis				X		
<u>Physical & Chemical Data</u>						
<u>Physical Data</u>						
Volatile Solids				X		

TABLE 2 (continued)
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
WATER QUALITY PARAMETER SAMPLING SCHEDULE FOR PHASE I
(APRIL, 1978 THROUGH NOVEMBER, 1978)

Parameter	Sampling Cycle					
	1	2	3	4	5	6
	Sampling Dates (1978)					
	4/17-21	6/5-7	7/17-20	8/14-17	9/26-27	11/28-30
<u>Physical & Chemical Data (continued)</u>						
<u>Miscellaneous Chemical Data</u>						
Carbon, Organic				X		
Nitrogen, Total Kjeldahl				X		
Oil & Grease				X		
Phosphorus, Total				X		
<u>Heavy Metals</u>						
Arsenic				X		
Cadmium				X		
Chromium				X		
Copper				X		
Iron				X		
Lead				X		
Manganese				X		
Mercury				X		
Nickel				X		
Zinc				X		
<u>Chlorinated Hydrocarbons</u>						
Aldrin				X		
Aroclor 1242				X		
Aroclor 1254				X		
Aroclor 1260				X		
Benzene Hexachloride				X		
BHC-Alpha Isomer				X		
BHC-Beta Isomer				X		
BHC-Gamma Isomer				X		
Chlordane				X		
2,4' D				X		
P,P' DDD				X		
P,P' DDE				X		
O,P' DDT				X		
P,P' DDT				X		
Dieldrin				X		
Endothol				X		
Endrin				X		
Endrin Aldehyde				X		
Glyphosphate				X		
Heptachlor				X		
Heptachlor Epoxide				X		
Methoxychlor				X		
Mirex				X		
Pentachlorophenol				X		

TABLE 2 (continued)
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
WATER QUALITY PARAMETER SAMPLING SCHEDULE FOR PHASE I
(APRIL, 1978 THROUGH NOVEMBER, 1978)

Parameter	Sampling Cycle					
	1	2	3	4	5	6
	Sampling Dates (1978)					
	4/17-21	6/5-7	7/17-20	8/14-17	9/25-27	11/28-30
<u>III. Corbicula Tissue Analysis</u>						
<u>Physical & Chemical Data</u>						
<u>Heavy Metals</u>						
Arsenic				X		
Cadmium				X		
Chromium				X		
Lead				X		
Mercury				X		
Selenium				X		
Zinc				X		
<u>Chlorinated Hydrocarbons</u>						
Aldrin				X		
Aroclor 1242				X		
Aroclor 1254				X		
Aroclor 1260				X		
BHC-Alpha Isomer				X		
BHC-Beta Isomer				X		
BHC-Gamma Isomer				X		
Chlordane				X		
P,P' DDD				X		
P,P' DDE				X		
O,P' DDT				X		
P,P' DDT				X		
Dieldrin				X		
Endosulfan Sulfate				X		
Heptachlor				X		
Heptachlor Epoxide				X		
Methoxychlor				X		
Mirex				X		
PCB				X		
Pentachlorophenol				X		
Toxaphene				X		
<u>IV. Biological Data (Composite Samples)</u>						
<u>Algal Growth Potential (Before and After Autoclaving)</u>						
Nitrogen, Total Ammonia	X		X		X	
Nitrogen, Total Kjeldahl	X		X		X	
Nitrogen, Nitrate + Nitrite	X		X		X	
Orthophosphate, Dissolved	X		X		X	
Phosphorus, Total	X		X		X	
pH, Lab	X		X		X	
Specific Conductance	X		X		X	

TABLE 2 (continued)
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
WATER QUALITY PARAMETER SAMPLING SCHEDULE FOR PHASE I
(APRIL, 1978 THROUGH NOVEMBER, 1978)

Parameter	Sampling Cycle					
	1	2	3	4	5	6
	Sampling Dates (1978)					
	4/17-21	6/5-7	7/17-20	8/14-17	9/25-27	11/28-30
IV. Biological Data (Continued)						
<u>Algal Counts</u>						
12-Day Count	X		X		X	
12-Day Count, Std. Dev.	X		X		X	
14-Day Avg. Count	X		X		X	
14-Day Count, Std. Dev.	X		X		X	
<u>Biomass Measurements</u>						
<u>Benthic</u>						
Biomass, Benthic	X	X	X	X	X	X
<u>Euphotic Zone</u>						
ATP-Adenosine Triphosphate	X	X	X	X	X	X
Biomass, Plankton	X	X	X	X	X	X
Chlorophyll-a	X	X	X	X	X	X
Chlorophyll-b	X	X	X	X	X	X
Chlorophyll-c	X	X	X	X	X	X
<u>Macroinvertebrates</u>						
Benthic	X		X		X	
Hester Caddy (P=Placed; R=Retrieved)	P	R	P	R		
<u>Benthic Diversity</u>						
Shannon-Weaver DI (Base 2.0)	X		X		X	
<u>Plankton</u>						
Phytoplankton	X	X	X	X	X	X
Zooplankton	X	X	X	X	X	X

TABLE 3
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
STATION SAMPLING SCHEDULE FOR PHASE I
(APRIL, 1978 THROUGH NOVEMBER, 1978)

Parameters ¹	(A) Main Sampling Stations																		
	01	02	03	04	05	06	07	08	09	10	11	12 ⁹	13	14 ⁸	15	16	17	18 ⁸	19 ⁸
<u>Meteorological Data</u>																			
I. <u>Water Quality Data</u>																			
<u>Hydrological Data</u>																			
<u>Physical Data</u>																			
<u>Miscellaneous</u>																			
<u>Field Measurements</u>																			
1. Surface (or Mid-Depth) ²	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2. Surface and Bottom ³	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3. Vertical Profile							X	X	X	X	X	X	X	X	X	X	X	X	X
4. Complete Cross-Sectional ⁴							X	(4)	X	X	X	X	X	X	X	X	X	X	X
<u>Laboratory Data</u>																			
1. Surface (or Mid-Depth)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2. Bottom ⁵							X	X	X	X	X	X	X	X	X	X	X	X	X
<u>Chemical Data</u>																			
1. Surface (or Mid-Depth)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2. Bottom ⁵							X	X	X	X	X	X	X	X	X	X	X	X	X
<u>Biological Data</u> ⁶ (Bacteria)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
II. <u>Sediment Sampling</u>	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
III. <u>Corbicle</u>	X		X	X				X			X	X	X	X	X	X	X	X	X

TABLE 3 (continued)
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
STATION SAMPLING SCHEDULE FOR PHASE I
(APRIL, 1978 THROUGH NOVEMBER, 1978)

Parameters ¹	(A) Main Sampling Stations																		
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
IV. <u>Biological Data (Composite Samples)</u>																			
<u>Algal Growth Potential</u>						X	X		X	X	X	X	X	X	X	X		X	
<u>Plankton Measurements</u>	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<u>Macroinvertebrates</u>																			
<u>Benthic</u>	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<u>Hester Dandy</u>	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<u>Benthic Diversity</u>	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<u>Plankton</u>	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
(B) Special Stations																			
AD BD B1 B2 FE ⁷																			
<u>Meteorological Data</u>	X	X	X	X	X														
<u>Water Quality Data</u>																			
<u>Hydrological Data</u>	X	X	X	X	X														
<u>Physical Data</u>																			
<u>Miscellaneous</u>																			
<u>Field Measurements</u>	X	X																	
<u>Laboratory Data⁸</u>	X	X																	
<u>Biological Data (Bacteria)</u>			X	X															

TABLE 3 (continued)
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
STATION SAMPLING SCHEDULE FOR PHASE I
(APRIL, 1978 THROUGH NOVEMBER, 1978)

NOTES:

1. See Table 2 for a Complete List of Parameters Sampled.
2. Unless otherwise noted, taken at mid-stream one meter below water surface or at mid-depth where total depth was less than 10 ft.
3. Unless otherwise noted, all parameters except OPP sampled 0.3 meters below water surface and 1 meter above bottom surface at mid-stream and left and right littoral zone during Cycles 1 (4/17-21/1978) and 4 (8/14-17/1978) only.
4. Originally scheduled to be sampled.
5. Unless otherwise noted, taken 1 meter above bottom during Cycles 3 through 6 only.
6. Unless otherwise noted, taken 0.3 meters below water surface.
7. Sampling at Station FF initiated during Cycle 2 (6/5-7/1978).
8. Only Turbidity.
9. See text, Water Quality Sampling, p. 26.

TABLE 4

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
WATER QUALITY PARAMETER STORET CODES, MAXIMUM HOLDING TIMES, PRESERVATION TECHNIQUES,
ANALYTICAL METHODOLOGY AND DETECTION LIMITS FOR PHASE I (APRIL, 1978 THROUGH NOVEMBER, 1978)

STORET Code	Parameter	Holding Time	Container	Preservation Technique	Analytical Methodology	Detection Limit	Units
I. Water Quality Sampling							
<u>Physical Data</u>							
<u>Miscellaneous</u>							
00077	Secchi Disk Transparency	None	--	(in situ)	#13, Secchi disk, 20 cm.	--	m
00034	Depth of 1% Surface Light	None	--	(in situ)	Protonatic Instruments underwater photometer	--	m
<u>Field Measurements</u>							
00010	Water Temperature	None	--	(in situ)	Yellow Springs Instr. D.O. meter, 518	--	°C
00094	Specific Conductance	None	--	(in situ)	Yellow Springs Instr. SCT meter, 33	--	µmho/cm @25°C
00090	Oxidation Reduction Potential	None	--	(in situ)	Photovolt pH meter, 126A & ORP	--	mV
00299	Dissolved Oxygen, Electrode	None	--	(in situ)	Yellow Springs Instr., D.O. meter, 518	0.1	mg/l
00400	pH	None	--	(in situ)	Photovolt pH meter, Model 1269	--	std. units
<u>Laboratory Data</u>							
00080	Color	24 hrs	P,G	4°C	#3, p. 36	--	Pt-Co units
00076	Turbidity	7 days	P,G	4°C	#3, p. 295	(var.)	FTU
00095	Specific Conductance	7 days	P,G	4°C	Yellow Springs Instr. SCT meter, 33	--	µmho/cm @ 25°C
00515	Total Filterable Residue	7 days	P,G	4°C	#1, p. 93	10	mg/l
00530	Total Nonfilterable Residue	7 days	P,G	4°C	#1, p. 94	10	mg/l
<u>Chemical Data</u>							
<u>Minerals and Metals</u>							
00410	Alkalinity, Total	24 hrs	P,G	4°C	#1, p. 278	--	mg as CaCO ₃ /l
00940	Chloride	7 days	P,G	None required	#1, p. 304	1	mg Cl/l
00946	Sulfate, Dissolved	7 days	P,G	4°C	#1, p. 496	1	mg SO ₄ /l
00745	Sulfide, Total	24 hrs	P,G	2 ml 2N zinc acetate /	#1, p. 499	0.1	mg S/l
00916	Calcium, Total	6 mo	P,G	HNO ₃ to pH <2	#3, p. 82, 103	0.1	mg Ca/l
00900	Hardness, Total	6 mo	P,G	Filter on site.	Calculated	0.050	mg as CaCO ₃ /l
01046	Iron, Dissolved	6 mo	P,G	HNO ₃ to pH <2	#3, p. 81, 110	0.050	mg Fe/l
01045	Iron, Total	6 mo	P,G	HNO ₃ to pH <2	#3, p. 82, 110	0.050	mg Fe/l
00927	Magnesium, Total	6 mo	P,G	HNO ₃ to pH <2	#3, p. 82, 114	0.1	mg Mg/l
01056	Manganese, Dissolved	6 mo	P,G	Filter on site.	#3, p. 81, 116	0.050	mg Mn/l
01055	Manganese, Total	6 mo	P,G	HNO ₃ to pH <2	#3, p. 81, 116	0.050	mg Mn/l
00937	Potassium, Total	6 mo	P,G	HNO ₃ to pH <2	#3, p. 82, 143	0.1	mg K/l
00929	Sodium, Total	6 mo	P,G	HNO ₃ to pH <2	#3, p. 82, 147	0.03	mg Na/l
01092	Zinc, Total	6 mo	P,G	HNO ₃ to pH <2	#3, p. 82, 155	0.010	mg Zn/l

TABLE 4 (continued)
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
WATER QUALITY PARAMETER STORET CODES, MAXIMUM HOLDING TIMES, PRESERVATION TECHNIQUES,
ANALYTICAL METHODOLOGY AND DETECTION LIMITS FOR PHASE I (APRIL, 1978 THROUGH NOVEMBER, 1978)

STORET Code	Parameter	Holding Time	Container	Preservation Technique	Analytical Methodology	Detection Limit	Units
<u>I. Water Quality Sampling (continued)</u>							
<u>Nutrients</u>							
00681	Carbon, Dissolved Organic	24 hrs	P, G	4°C, H ₂ SO ₄ to pH <2	#3, p. 236	2.0	mg C/l
00680	Carbon, Total Organic	24 hrs	P, G	4°C, H ₂ SO ₄ to pH <2	#3, p. 236	1.0	mg C/l
00405	Carbon Dioxide				Calculated	--	mg CO ₂ /l
00610	Nitrogen, Total Ammonia	24 hrs	P, G	4°C, H ₂ SO ₄ to pH <2	#3, p. 159	0.01	mg N/l
00630	Nitrogen, Nitrate + Nitrite	24 hrs	P, G	4°C, H ₂ SO ₄ to pH <2	#1, p. 620	0.01	mg N/l
00640	Nitrogen, Total Inorganic				Calculated	--	mg N/l
00625	Nitrogen, Total Kjeldahl	7 days	P, G	4°C, H ₂ SO ₄ to pH <2	#3, p. 175	0.1	mg N/l
00605	Nitrogen, Total Organic				Calculated	--	mg N/l
00600	Nitrogen, Total				Calculated	--	mg N/l
00671	Orthophosphate, Dissolved	24 hrs	P, G	4°C, Filter on site	#3, p. 256	0.01	mg P/l
00655	Phosphorus, Total	7 days	P, G	4°C, H ₂ SO ₄ to pH <2	#3, p. 249, 256	0.01	mg P/l
<u>Biological Data</u>							
<u>Bacteriological Data</u>							
31616	Fecal Coliform	8 hrs	Sterilized	4°C	#1, p. 937	--	MPN/100 ml
31673	Fecal Streptococci	8 hrs	Sterilized	4°C	#1, p. 944	--	MPN/100 ml
<u>II. Sediment Sampling</u>							
<u>Mechanical Data</u>							
<u>Sieve Analysis</u>							
80217	Bed Mt1 (% finer than 25.4 mm)	--	P	None required	#4, D 422-63	--	
80216	Bed Mt1 (% finer than 19.1 mm)	--	P	None required	#4, D 422-63	--	
80214	Bed Mt1 (% finer than 9.52 mm)	--	P	None required	#4, D 422-63	--	
80213	Bed Mt1 (% finer than 4.76 mm)	--	P	None required	#4, D 422-63	--	
80208	Bed Mt1 (% finer than 2.0 mm)	--	P	None required	#4, D 422-63	--	
<u>Physical & Chemical Data</u>							
<u>Physical Data</u>							
<u>Volatile Solids</u>							
		14 days	P	4°C	#5, p. 539	--	% total dry weight
<u>Miscellaneous Chemical Data</u>							
00687	Carbon, Organic	14 days	P	4°C, H ₂ SO ₄	#6	5	gm C/kg dry wt.
00627	Nitrogen, Total Kjeldahl	14 days	P	4°C, H ₂ SO ₄	#5, p. 469	1.0	mg N/kg dry wt.
00557	Oil and Grease	14 days	P	4°C, H ₂ SO ₄	#7, p. 42	50	mg/kg dry wt.
00648	Phosphorus, Total	14 days	P	4°C, H ₂ SO ₄	#8	0.7	mg P/kg dry wt.

TABLE 4 (continued)
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
WATER QUALITY PARAMETER STORET CODES, MAXIMUM HOLDING TIMES, PRESERVATION TECHNIQUES,
ANALYTICAL METHODOLOGY AND DETECTION LIMITS FOR PHASE I (APRIL, 1978 THROUGH NOVEMBER, 1978)

STORET Code	Parameter	Holding Time	Container	Preservation Technique	Analytical Methodology	Detection Limit	Units
II. Sediment Sampling (Continued)							
Heavy Metals							
01003	Arsenic	3 mo	P	HNO ₃	#8	0.1	mg As/kg dry wt.
01028	Cadmium	3 mo	P	HNO ₃	#8	1	mg Cd/kg dry wt.
01029	Chromium	3 mo	P	HNO ₃	#8	2	mg Cr/kg dry wt.
01043	Copper	3 mo	P	HNO ₃	#8	2	mg Cu/kg dry wt.
01170	Iron	3 mo	P	HNO ₃	#8	2	mg Fe/kg dry wt.
01052	Lead	3 mo	P	HNO ₃	#8	8	mg Pb/kg dry wt.
01053	Manganese	3 mo	P	HNO ₃	#8	2	mg Mn/kg dry wt.
71921	Mercury	3 mo	P	HNO ₃	#8	2	ug Hg/kg dry wt.
01068	Nickel	3 mo	P	HNO ₃	#8	3	mg Ni/kg dry wt.
01093	Zinc	3 mo	P	HNO ₃	#8	1	mg Zn/kg dry wt.
Chlorinated Hydrocarbons							
39333	Aldrin	1 mo	G	Freeze	#9	0.1	ug/kg dry wt.
39459	Aroclor 1242	1 mo	G	Freeze	#9	0.1	ug/kg dry wt.
39507	Aroclor 1254	1 mo	G	Freeze	#9	0.1	ug/kg dry wt.
39511	Aroclor 1260	1 mo	G	Freeze	#9	0.1	ug/kg dry wt.
39343	Benzene Hexachloride	1 mo	G	Freeze	#9	0.1	ug/kg dry wt.
39076	BHC-Alpha Isomer	1 mo	G	Freeze	#9	0.1	ug/kg dry wt.
34257	BHC-Beta Isomer	1 mo	G	Freeze	#9	0.1	ug/kg dry wt.
	BHC-Gamma Isomer	1 mo	G	Freeze	#9	0.1	ug/kg dry wt.
39351	Chlordane	1 mo	G	Freeze	#9	0.1	ug/kg dry wt.
39731	2,4 D	1 mo	G	Freeze	#9	0.5	ug/kg dry wt.
39311	P,p' DDE	1 mo	G	Freeze	#9	2	ug/kg dry wt.
39321	P,p' DDE	1 mo	G	Freeze	#9	0.2	ug/kg dry wt.
39306	O,p' DDT	1 mo	G	Freeze	#9	0.1	ug/kg dry wt.
39301	P,p' DDT	1 mo	G	Freeze	#9	0.2	ug/kg dry wt.
39383	Dieldrin	1 mo	G	Freeze	#9	0.2	ug/kg dry wt.
	Endothol	1 mo	G	Freeze	#9	0.1	ug/kg dry wt.
39393	Endrin	1 mo	G	Freeze	#9	0.1	ug/kg dry wt.
34369	Endrin Aldehyde	1 mo	G	Freeze	#9	0.5	ug/kg dry wt.
	Glyphosphate	1 mo	G	Freeze	#9	0.1	ug/kg dry wt.
39413	Heptachlor	1 mo	G	Freeze	#9	0.1	ug/kg dry wt.
39423	Heptachlor Epoxide	1 mo	G	Freeze	#9	1	ug/kg dry wt.
39481	Methoxychlor	1 mo	G	Freeze	#9	0.1	ug/kg dry wt.
39758	Mirex	1 mo	G	Freeze	#9	0.1	ug/kg dry wt.
39061	Penitachlorophenol	1 mo	G	Freeze	#9	0.2	ug/kg dry wt.
39403	Toxaphene	1 mo	G	Freeze	#9	0.1	ug/kg dry wt.
						0.5	ug/kg dry wt.
III. Corbicular Tissue Analysis							
Physical & Chemical Data							
Heavy Metals							
01004	Arsenic	--	P,G	Freeze	#10, p. 30	0.1	mg As/kg wet wt.
71940	Cadmium	--	P,G	Freeze	#10, p. 30	0.05	mg Cd/kg wet wt.
71919	Chromium	--	P,G	Freeze	#10, p. 30	0.1	mg Cr/kg wet wt.
71936	Lead	--	P,G	Freeze	#10, p. 30	0.1	mg Pb/kg wet wt.
71930	Mercury	--	P,G	Freeze	#10, p. 30	0.005	mg Hg/kg wet wt.
01149	Selenium	--	P,G	Freeze	#10, p. 30	0.1	mg Se/kg wet wt.
71938	Zinc	--	P,G	Freeze	#10, p. 30	1.0	mg Zn/kg wet wt.

TABLE 4 (continued)
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
WATER QUALITY PARAMETER STORET CODES, MAXIMUM HOLDING TIMES, PRESERVATION TECHNIQUES,
ANALYTICAL METHODOLOGY AND DETECTION LIMITS FOR PHASE I (APRIL, 1978 THROUGH NOVEMBER, 1978)

STORET Code	Parameter	Holding Time	Container	Preservation Technique	Analytical Methodology	Detection Limit	Units
III. Corbicula Tissue Analysis (continued)							
Chlorinated Hydrocarbons							
39334	Aldrin	1 mo	G, teflon lid wrapped in aluminum foil	Freeze	#11	0.2	ug/kg wet wt.
39497	Aroclor 1242	1 mo	G, teflon lid wrapped in aluminum foil	Freeze	#11	25	ug/kg wet wt.
39512	Aroclor 1254	1 mo	G, teflon lid wrapped in aluminum foil	Freeze	#11	25	ug/kg wet wt.
34670	Aroclor 1260	1 mo	G, teflon lid wrapped in aluminum foil	Freeze	#11	25	ug/kg wet wt.
39074	BHC-Alpha Isomer	1 mo	G, teflon lid wrapped in aluminum foil	Freeze	#11	0.2	ug/kg wet wt.
33252	BHC-Beta Isomer	1 mo	G, teflon lid wrapped in aluminum foil	Freeze	#11	0.2	ug/kg wet wt.
39075	BHC-Gamma Isomer	1 mo	G, teflon lid wrapped in aluminum foil	Freeze	#11	0.1	ug/kg wet wt.
39349	Chlordane	1 mo	G, teflon lid wrapped in aluminum foil	Freeze	#11	0.5	ug/kg wet wt.
39322	P,P' DDE	1 mo	G, teflon lid wrapped in aluminum foil	Freeze	#11	0.5	ug/kg wet wt.
39319	P,P' DDT	1 mo	G, teflon lid wrapped in aluminum foil	Freeze	#11	0.5	ug/kg wet wt.
39317	P,P' DDT	1 mo	G, teflon lid wrapped in aluminum foil	Freeze	#11	0.5	ug/kg wet wt.
39327	Dieldrin	1 mo	G, teflon lid wrapped in aluminum foil	Freeze	#11	0.5	ug/kg wet wt.
39355	Endosulfan Sulfate	1 mo	G, teflon lid wrapped in aluminum foil	Freeze	#11	0.5	ug/kg wet wt.
39414	Heptachlor	1 mo	G, teflon lid wrapped in aluminum foil	Freeze	#11	5	ug/kg wet wt.
39424	Heptachlor Epoxide	1 mo	G, teflon lid wrapped in aluminum foil	Freeze	#11	0.2	ug/kg wet wt.
	Methoxychlor	1 mo	G, teflon lid wrapped in aluminum foil	Freeze	#11	0.2	ug/kg wet wt.
	Mirex	1 mo	G, teflon lid wrapped in aluminum foil	Freeze	#11	5	ug/kg wet wt.
	PCB	1 mo	G, teflon lid wrapped in aluminum foil	Freeze	#11	5	ug/kg wet wt.
39760	Endochlorophenol	1 mo	G, teflon lid wrapped in aluminum foil	Freeze	#11	25	ug/kg wet wt.
39407	Toxaphene	1 mo	G, teflon lid wrapped in aluminum foil	Freeze	#11	5	ug/kg wet wt.

TABLE 4 (continued)

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY

WATER QUALITY PARAMETER STORET CODES, MAXIMUM HOLDING TIMES, PRESERVATION TECHNIQUES

ANALYTICAL METHODOLOGY AND DETECTION LIMITS FOR PHASE I (APRIL, 1978 THROUGH NOVEMBER, 1978)

STORET CODE	Parameter	Holding Time	Container	Preservation Technique	Analytical Methodology	Detection Limit	Units
IV. Biological Data (Composite Samples)							
<u>Algal Growth Potential Before and After Autoclaving</u>							
70992	Nitrogen, Total Ammonia	24 hrs	P.G.	4°C, H ₂ SO ₄ to pH <2	#3, p. 159	0.01	mg N/l
	Nitrogen, Total Kjeldahl	7 days	P.G.	4°C, H ₂ SO ₄ to pH <2	#3, p. 175	0.1	mg N/l
	Nitrogen, Nitrate + Nitrite	24 hrs	P.G.	4°C, H ₂ SO ₄ to pH <2	#1, p. 620	0.01	mg N/l
	Orthophosphate, Dissolved	24 hrs	P.G.	4°C, Filter on site	#3, p. 256	0.01	mg P/l
	Phosphorus, Total	7 days	P.G.	4°C, H ₂ SO ₄ to pH <2	#3, p. 249, 256	0.01	mg P/l
	pH	None	P.G.	4°C	#1, p. 460	--	std. units
	Specific Conductance	None	P.G.	4°C	#12, calculated (mean of 12 and 14 day counts with no nutrients added)	--	umho/cm @ 25°C
	Algal Growth Potential	N/A	N/A	N/A	Coulter Model 7c Particle Counter	--	mg/l
	Algal Counts	N/A	N/A	N/A		10	um ³ /cell
	Biomass Measurements						
<u>Benthic</u>							
	Biomass, Benthic	None	P	10% Formalin, (w/Na ₂ B ₄ O ₇ (sol)) (See Text) to pH 7.0-7.3, Rose Bengal		--	
<u>Euphotic Zone</u>							
70996	ATP-Adenosine Triphosphate	6 mo	Extract Immed	-20°C	#2, p. 1043	10	ng/l
32211	Biomass, Plankton	7 days	P.G.	4°C	#1, p. 1035	1.0	gm/cu m
32212	Chlorophyll-a	30 days	Filter Immed	Frozen, dark	#1, p. 1030, 1032	0.1	ug/l
32214	Chlorophyll-b	30 days	Filter Immed	Frozen, dark	#1, p. 1030, 1032	0.1	ug/l
	Chlorophyll-c	30 days	Filter Immed	Frozen, dark	#1, p. 1030, 1032	0.1	ug/l
<u>Macroinvertebrates</u>							
<u>Benthic</u>							
<u>General</u>							
75006	Bryozoa	None	P	10% Formalin, (w/Na ₂ B ₄ O ₇ (sol)) to pH 7.0-7.3, Rose Bengal	#18 (See Text)	--	No./sq m
75999	Caddis	None	P	10% Formalin, (w/Na ₂ B ₄ O ₇ (sol)) to pH 7.0-7.3, Rose Bengal	#18 (See Text)	1	No./sq m
75918	Chironomus	None	P	10% Formalin, (w/Na ₂ B ₄ O ₇ (sol)) to pH 7.0-7.3, Rose Bengal	#18 (See Text)	1	No./sq m
75021	Chironomidae	None	P	10% Formalin, (w/Na ₂ B ₄ O ₇ (sol)) to pH 7.0-7.3, Rose Bengal	#18 (See Text)	1	No./sq m
75024	Corbicula	None	P	10% Formalin, (w/Na ₂ B ₄ O ₇ (sol)) to pH 7.0-7.3, Rose Bengal	#18 (See Text)	1	No./sq m

TABLE 4 (continued)

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY

WATER QUALITY PARAMETER STORET CODES, MAXIMUM HOLDING TIMES, PRESERVATION TECHNIQUES, ANALYTICAL METHODOLOGY AND DETECTION LIMITS FOR PHASE I (APRIL, 1978 THROUGH NOVEMBER, 1978)

STORET Code	Parameter	Holding Time	Container	Preservation Technique	Analytical Methodology	Detection Limit	Units
<u>Macroinvertebrates</u>							
<u>Benthic (continued)</u>							
75027	Hexagenia	None	P	10% Formalin, (w/Na ₂ B ₄ O ₇ (sol) to pH 7.0-7.3, Rose Bengal	#18 (See Text)	1	No./sq m
75015	Leeches	None	P	10% Formalin, (w/Na ₂ B ₄ O ₇ (sol) to pH 7.0-7.3, Rose Bengal	#18 (See Text)	1	No./sq m
75012	Snails	None	P	10% Formalin, (w/Na ₂ B ₄ O ₇ (sol) to pH 7.0-7.3, Rose Bengal	#18 (See Text)	1	No./sq m
75013	Sponges	None	P	10% Formalin, (w/Na ₂ B ₄ O ₇ (sol) to pH 7.0-7.3, Rose Bengal	#18 (See Text)	1	No./sq m
<u>Hetero Dendy</u>							
General		None	P	10% Formalin, (w/Na ₂ B ₄ O ₇ (sol) to pH 7.0-7.3, Rose Bengal	(See Text)	--	No./sq m
<u>Plankton</u>							
<u>Phytoplankton</u>							
General		None	P	5% Formalin, (w/Na ₂ B ₄ O ₇ (sol) to pH 7.0-7.3, Rose Bengal	#14, 15, 16, 17 (See Text)	1.0	No./ml
71300	Division Chlorophyta	None	P	5% Formalin, (w/Na ₂ B ₄ O ₇ (sol) to pH 7.0-7.3, Rose Bengal	#14, 15, 16, 17 (See Text)	1.0	No./ml
71322	Order Chlorococcales	None	P	5% Formalin, (w/Na ₂ B ₄ O ₇ (sol) to pH 7.0-7.3, Rose Bengal	#14, 15, 16, 17 (See Text)	1.0	No./ml
71320	Order Cladophorales	None	P	5% Formalin, (w/Na ₂ B ₄ O ₇ (sol) to pH 7.0-7.3, Rose Bengal	#14, 15, 16, 17 (See Text)	1.0	No./ml
71308	Order Tetrasporales	None	P	5% Formalin, (w/Na ₂ B ₄ O ₇ (sol) to pH 7.0-7.3, Rose Bengal	#14, 15, 16, 17 (See Text)	1.0	No./ml
71311	Order Ulotrichales	None	P	5% Formalin, (w/Na ₂ B ₄ O ₇ (sol) to pH 7.0-7.3, Rose Bengal	#14, 15, 16, 17 (See Text)	1.0	No./ml
71302	Order Volvocales	None	P	5% Formalin, (w/Na ₂ B ₄ O ₇ (sol) to pH 7.0-7.3, Rose Bengal	#14, 15, 16, 17 (See Text)	1.0	No./ml
71335	Order Zygnematales	None	P	5% Formalin, (w/Na ₂ B ₄ O ₇ (sol) to pH 7.0-7.3, Rose Bengal	#14, 15, 16, 17 (See Text)	1.0	No./ml
71393	Division Chrysophyta	None	P	5% Formalin, (w/Na ₂ B ₄ O ₇ (sol) to pH 7.0-7.3, Rose Bengal	#14, 15, 16, 17 (See Text)	1.0	No./ml
71400	Class Bacillariophyceae	None	P	5% Formalin, (w/Na ₂ B ₄ O ₇ (sol) to pH 7.0-7.3, Rose Bengal	#14, 15, 16, 17 (See Text)	1.0	No./ml
71394	Class Chrysophyceae	None	P	5% Formalin, (w/Na ₂ B ₄ O ₇ (sol) to pH 7.0-7.3, Rose Bengal	#14, 15, 16, 17 (See Text)	1.0	No./ml
71432	Division Cyanophyta	None	P	5% Formalin, (w/Na ₂ B ₄ O ₇ (sol) to pH 7.0-7.3, Rose Bengal	#14, 15, 16, 17 (See Text)	1.0	No./ml

TABLE 4 (continued)

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY

WATER QUALITY PARAMETER STORET CODES, MAXIMUM HOLDING TIMES, PRESERVATION TECHNIQUES, ANALYTICAL METHODOLOGY AND DETECTION LIMITS FOR PHASE I (APRIL, 1978 THROUGH NOVEMBER, 1978)

STORET Code	Parameter	Holding Time	Container	Preservation Technique	Analytical Methodology	Detection Limit	Units
Plankton							
Phytoplankton (continued)							
71410	Order Characiniomales	None	P	5% Formalin, (w/Na2B4O7(sol) to pH 7.0-7.3), Rose Bengal	#14, 15, 16, 17 (See Text)	1.0	No./ml
71431	Order Chlorococcales	None	P	5% Formalin, (w/Na2B4O7(sol) to pH 7.0-7.3), Rose Bengal	#14, 15, 16, 17 (See Text)	1.0	No./ml
71440	Order Monerionales	None	P	5% Formalin, (w/Na2B4O7(sol) to pH 7.0-7.3), Rose Bengal	#14, 15, 16, 17 (See Text)	1.0	No./ml
71477	Division Euplenophyta	None	P	5% Formalin, (w/Na2B4O7(sol) to pH 7.0-7.3), Rose Bengal	#14, 15, 16, 17 (See Text)	1.0	No./ml
71481	Division Pyrrophyta	None	P	5% Formalin, (w/Na2B4O7(sol) to pH 7.0-7.3), Rose Bengal	#14, 15, 16, 17 (See Text)	1.0	No./ml
Zooplankton							
General							
71207	Phylum Arthropoda	None	P	5% Formalin, (w/Na2B4O7(sol) to pH 7.0-7.3), Rose Bengal	(See Text)	0.01	No./L
71210	Larvae Crustacea	None	P	5% Formalin, (w/Na2B4O7(sol) to pH 7.0-7.3), Rose Bengal	(See Text)	0.01	No./L
71291	Order Cladocera	None	P	5% Formalin, (w/Na2B4O7(sol) to pH 7.0-7.3), Rose Bengal	(See Text)	0.01	No./L
71275	Subclass Ostracoda	None	P	5% Formalin, (w/Na2B4O7(sol) to pH 7.0-7.3), Rose Bengal	(See Text)	0.01	No./L
71297	Order Copepoda	None	P	5% Formalin, (w/Na2B4O7(sol) to pH 7.0-7.3), Rose Bengal	(See Text)	0.01	No./L
71261	Phylum Protozoa	None	P	5% Formalin, (w/Na2B4O7(sol) to pH 7.0-7.3), Rose Bengal	(See Text)	0.01	No./L
71259	Class Ciliata	None	P	5% Formalin, (w/Na2B4O7(sol) to pH 7.0-7.3), Rose Bengal	(See Text)	0.01	No./L
71263	Class Sarcodina	None	P	5% Formalin, (w/Na2B4O7(sol) to pH 7.0-7.3), Rose Bengal	(See Text)	0.01	No./L
71270	Phylum Rotifera	None	P	5% Formalin, (w/Na2B4O7(sol) to pH 7.0-7.3), Rose Bengal	(See Text)	0.01	No./L
59999	Zooplankton, Other	None	P	5% Formalin, (w/Na2B4O7(sol) to pH 7.0-7.3), Rose Bengal	(See Text)	0.01	No./L

TABLE 4 (continued)

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
WATER QUALITY PARAMETER STORET CODES,
MAXIMUM HOLDING TIMES, PRESERVATION TECHNIQUES,
ANALYTICAL METHODOLOGY AND DETECTION LIMITS FOR PHASE I
(APRIL, 1978 THROUGH NOVEMBER, 1978)

- NOTES: 1. P = Plastic or G = Glass or N/A = Not Applicable
2. Applies to the portion to be autoclaved
3. Holding time after processing, which shall occur within 7 days after collection. Store at 4°C until processing.

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15. Utermöhl, H. 1958. Zur vervollkommenung der quantitativen phytoplankton - methodik. Mitt. Int. Ver. Limnol. 9:1-38.
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18. Weber, C.I., ed. 1973. Biological field and laboratory methods for measuring the quality of surface waters and effluents. National Environmental Research Center, U.S. Environmental Protection Agency, Cincinnati, OH. 171 pp.

All field instruments (see below) are calibrated against standards or as specified and provided with spare batteries and/or chargers before being sent into the field. In addition, appropriate standard solutions were sent to the field with the instrument. All instruments were rechecked upon return; necessary maintenance and/or provision for storage was accomplished as specified by the instrument manufacturer. When in use, instruments were calibrated prior to beginning a set of measurements and at a minimum of four-hour intervals with a final check at the end. Verification of calibration was run after every 10 samples or if any unusual reading was encountered. Any anomaly was recorded.

<u>Instrument</u>	<u>Routine Calibration</u>
Dissolved Oxygen Meter	Air calibration as specified. Calibrated versus Winkler titration if problems were suspected or after any membrane change.
pH Meter	Battery check and calibration against commercially available certified buffers.
Conductivity Meter	Calibrated daily against KCl solution 0.01 demal as specified in manual. Any deviation in reading from manual specifications was recorded in notes.
Temperature Functions	Checked against mercury thermometer daily. Any deviation was reported in notes.
Current Meter	Circuit check. Daily check of zero. Yearly factory recalibration.

In situ measurements were recorded along with weather conditions in the appropriate section in the field data notes on carbonless duplicate field record as shown in Figure 2. The notes were checked for completeness before leaving each station, and initialed by the observer.

Water Quality Sampling

Unless otherwise noted, water quality sampling followed the schedules summarized in Tables 2 and 3. During the second and subsequent sampling cycles special sampling station FE was located approximately 0.7 km. west of the location originally specified be-

FIGURE 2
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
TYPICAL FIELD DATA RECORD SHEET FOR PHASE I
(APRIL, 1978 THROUGH NOVEMBER, 1978)

WATER AND AIR RESEARCH, INC. 6821 S.W. Archer Road Gainesville, Florida 32602 (904) 372-1500 Job: LS Phase: I	<table style="width: 100%;"> <tr> <td style="width: 30%;">F11 Trip</td> <td style="width: 30%;">Station</td> <td style="width: 40%;">Sheet</td> </tr> <tr> <td>Date 78 / /</td> <td>Time</td> <td>of</td> </tr> <tr> <td>Total Depth (m)</td> <td colspan="2">X-Section Loc (% From R Bank look upstr)</td> </tr> <tr> <td>Observer</td> <td colspan="2"></td> </tr> </table>	F11 Trip	Station	Sheet	Date 78 / /	Time	of	Total Depth (m)	X-Section Loc (% From R Bank look upstr)		Observer		
F11 Trip	Station	Sheet											
Date 78 / /	Time	of											
Total Depth (m)	X-Section Loc (% From R Bank look upstr)												
Observer													
IN SITU PARAMETERS F12													
Cloud Cover (%)	Wind: Speed (MPH)	Dir. (*From N)											
Wave Height (m)	Current: Speed (fps)	Dir. (*From N)											
Secchi Disk (m)	1% Light Pen. Depth (m)	Air Temp. (C)											
Sample Depth (m)	Temp. (°C)	pH											
	Cond. (µmhos/cm)	DO (mg/l) Probe/Wink											
		ORP (mv)											
NET PLANKTON SAMPLES F21													
Grab or Vertical Tow	Oblique Tow	Tow Angle											
		Dist. (m)											
Meter Reading: Start	Stop	Time (sec)											
8 oz jar	4-5% formalin solution												
NESTER DENDY SAMPLES F22													
X-section location (% from R Bank Look Upstr)	Buoy or Float												
Placement Date 78 / /	Retrieval Date 78 / /												
Container Number(s)													
PONAR DREDGE SAMPLES Code F23													
X-Section location (% from R Bank Look upstream)	Depth (m)	Container Number(s)											

cause of the inaccessibility of the original site due to submerged navigation hazards. During the sixth sampling cycle the water level in Lake Seminole was at a record low level. As a result, station 12 in Fish Pond Drain was inaccessible and was therefore not sampled. Due to equipment malfunctions, also during cycle 6, station 18 in the Apalachicola River was sampled 2.4 km. upstream of the original site and adjacent to the east bank instead of at midstream, station 14 in Spring Creek was sampled at a point 2.0 km. downstream of the original site and station 19 in the Apalachicola was not sampled. Therefore, the results for cycle 6 at stations 14 and 18 may not be strictly comparable to the data obtained during previous sampling cycles.

Subsequent to sampling cycle 1 in April, all preservatives were added to the appropriate sample containers, with the exception of containers for spiked metal analyses, prior to being sent into the field. The actual spiking of spiked metal samples was also performed in the field beginning with cycle 2.

Grab Samples. Grab samples for the water quality parameters listed in Table 2 were taken at midstream one meter below the surface or at mid-depth where the station depth was less than ten feet. In addition, to define the effects of stratification, grab samples were taken at midsection one meter above the bottom at sampling sites 07, 09, 10, 11, 13 and 15 (Table 3) for complete analyses from the third through sixth sampling cycles.

The samples were collected with either a 2-liter Wildco-Beta-Plus horizontal style water sampler or a 4-liter Wildco Alpha vertical style water sampler. The samples which require filtration such as dissolved metals, dissolved ortho-phosphate and dissolved organic carbon (DOC) were filtered immediately on the boat according to the method in Table 4. The samples were then distributed to the sample containers with the proper preservative as outlined in Table 4. The sample bottle numbers were recorded on a carbonless duplicate field bottle record as shown in Figure 3. After all the bottles had been recorded and checked, they were stored as specified in Table 4, in coolers either filled with ice at 4°C or filled with dry ice for those samples which had to be frozen immediately.

Preservatives were added to most of the sample containers that require them prior to going to the field. However, the samples for the total and dissolved metals analyses, which require concentrated nitric acid (HNO_3) as a preservative were preserved in the field to reduce the amount of time the undiluted HNO_3 was in contact with the sample container. In addition, the samples used for dissolved organic carbon analyses had their preservative, sulfuric acid (H_2SO_4), added in the field to minimize the risk of organic contamination. Also,

following the first sampling cycle in April, it was noted that the results of the dissolved organic carbon analyses were slightly greater than the corresponding total organic carbon (TOC) values. This was attributed to the use of a cellulose acetate filter in the filtration step. To verify this assumption, organic carbon analyses were run on both filtered and unfiltered deionized water samples. The filtered samples averaged 1.5 mg C/l higher than the unfiltered samples. Since the average difference between DOC and TOC values for the results from the first cycle averaged 1.43 mg C/l, it was concluded that the filter paper used could account for the anomalous results. Thus, on DOC analyses for subsequent sampling cycles, 0.45 μ glass fiber filters were utilized. Nevertheless, despite efforts to prevent any contamination in either the sampling, handling or preservation phases, on a number of samples DOC values were greater than TOC values, although all values were less than 8 mg C/l and in general the differences between DOC and TOC were 1 to 2 mg C/l. In all cases where DOC results were greater than corresponding TOC results, the DOC results were reported as "less than" the stated value.

Composite Samples. Composite samples for chlorophyll a, b, and c, phytoplankton, dry biomass, adenosine triphosphate (ATP), and algal growth potential were obtained by collecting a depth integrated raw water sample from either the euphotic zone, defined as the zone above the 1% light transmission level, in quiescent waters (lake stations) or from the entire water column in more turbulent waters (river stations). Samples were taken using a horizontal beta water sampler at the surface and at one meter intervals until the lower limit was reached as determined above. The samples were then composited and the required aliquots for the various parameters were drawn. When the depth to be composited was greater than seven meters, samples were taken at the surface and equal spaces over the required sampling depth.

Bacteriology Sampling and Analysis

Bacteria grab samples were taken (Table 3) in two 100 ml autoclaved sample bottles at a depth of 0.3 meters below the water's surface. Analyses for fecal coliforms and fecal streptococci were run in the field according to the method shown in Table 4. Precision control was tested by duplicating the first station of each day. Results were considered consistent if the 95 percent confidence intervals for both replicates overlapped.

Sediment Sampling and Analysis

Sediment samples were collected at each station listed in Table 3 and analyzed by the method referenced in Table 4. Each river station sediment sample was composited from approximately equal volumes of each of four separate grab samples, obtained with

FIGURE 3
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
TYPICAL FIELD BOTTLE LIST RECORD FOR PHASE I
(APRIL, 1978 THROUGH NOVEMBER, 1978)

WATER AND AIR RESEARCH, INC. 6821 S.W. Archer Road P.O. Box 1121 Gainesville, Florida 32602 (904) 372-1500		Trip _____ Station _____ Job: LS Phase: I Observer _____		Sheet _____ of _____
DEPTH INTEGRATED SAMPLES Temp _____ pH _____ Cond. _____				
Sample Container	No. Req'd	Preservation Technique	Container Number(s)	
1 qt. plastic jar	1	4-5% formalin soln (phytoplankton)		
1 qt. plastic jar	1	temp. (ATP) filter+scrape +tris+ 1 oz. bottle		
2 liter (H)	1*	filter immed. onto 0.45 GF filter-freeze in dark (Black)		
1/2 liter (P)	1	4°C, dark (biomass) (Black)		
1 gal. polycarbonate	1#	4°C, dark (AGP) (Black)		
2 liter (H)	1#	4°C, dark, H ₂ SO ₄ to pH <2 (AGP) (Red)		
1/4 liter (C)	1#	filter 0.45 washed filter HCl to pH <3 freeze (Green)		
WATER QUALITY SAMPLES <u>F13</u>				
Sample Depth (m) _____		Surface <u> </u> Mid-depth <u> </u> Bottom <u> </u>		
Sample Container	Req'd	Preservation Technique	Container Number(s)	
1 liter (Q)	1*	4°C, Dark (Black)		
2 liter (H)	1*or2#	4°C, H ₂ SO ₄ to pH <2 (Red)		
1/2 liter (P)	1*	HNO ₃ to pH <2 (Blue)		
1/4 liter (C)	1*	4°C, HCl to pH <3, filter on site (wf), freeze (Green)		
1/4 liter (C)	1*	4°C, H ₂ SO ₄ to pH <2, filter on site (Red) (GFF pretreat)		
1/2 liter (P)	1*	HNO ₃ to pH <2, filter on site** (Blue)		
1 liter (Q)	1*	2 ml 2 M ZnAc/1 (Brown)		
1/2 liter (P)	1#	HNO ₃ to pH <2 (Blue)		
2 liter (H)	1#	4°C		
BACTERIOLOGICAL SAMPLES				
Container Number(s) _____				
COMMENTS: *2 if duplicate station				
**HCl to pH 1 if DO <1				
#AGP Station only				
##Split sample station only				

an epoxy coated PonarTM dredge (standard size, 9"/side) from each of four equally spaced locations across the river channel. Each lake station sediment sample was composited from approximately equal volumes of each of four separate grab samples, obtained with an epoxy coated PonarTM dredge, from each of four locations, 90-degrees apart, along the circumference of an imaginary 20-foot diameter circle.

Corbicula Sampling

Corbicula specimens were taken where available utilizing an epoxy coated PonarTM dredge (standard size, 9"/side). A minimum of four grab sampling attempts were made at each of those stations specified in Table 3. Samples were taken at four equally spaced locations across the channel at river stations and at four locations, 90-degrees apart, along an imaginary 20-foot diameter circle at lake stations. Recovered specimens were washed prior to storage as specified in Table 4.

Other Field Sampling & Processing

Field sampling and processing methods for the algal growth potential test, phytoplankton, zooplankton, ATP, macroinvertebrates and macrophytes are discussed in subsequent sections of this report.

Storage and Shipment of Samples

All preserved water and sediment samples were stored as specified in Table 4 in coolers filled either with ice to 40C or with dry ice for freezing. At the end of each sampling day, the samples were sent to the Water and Air Research, Inc. (WAR) lab in Gainesville via special courier, along with copies of the field notes from that day.

Laboratory Procedures

Chemical Parameters

Sample Integrity. The integrity of all samples was maintained from the moment they were received in the laboratory until the data were reported and approved. All samples were "logged in" immediately upon receipt. When feasible, preservation was also checked. Project name, parameters, sample number, and date received were recorded both in the log and on appropriate forms in the project notebook. A control sheet was used to monitor work in progress. Samples were stored as specified according to the analyses to be run, normally either frozen or at 40C.

Samples sent to outside laboratories were also recorded as above. Date and shipping information were recorded in the project notebook. Documentation of shipment was preserved as part of the permanent laboratory record. A tabulation of bottle numbers accompanied any samples so sent. Spiked samples and duplicated samples were routinely included in the shipments as a quality control check. These control samples were not specifically identified to the subcontractor.

Analytical Methods. Chemical analyses of water, sediment, and mollusk tissue as well as bacteriological analyses of water strictly adhered to the procedures listed in Table 4. Any deviation from these specifications has been noted with the reported data.

Notes and Record Keeping. When the samples reached the laboratory, they were "logged in" immediately by date in the permanent laboratory record in a color-coded permanent project notebook. Each station was given a unique four-digit laboratory number. All notes, analysis sheets, printouts and any other lab information relative to the Lake Seminole project were also kept in the project notebook. Verification of the bottle numbers for each station by comparison with the field record was the responsibility of the lab supervisor. A tabulation of sample identification by laboratory code number, bottle number, and station number including the date sampled and the date received became a part of the permanent record. A table was made to monitor the status of the analytical effort on a given set of samples.

Analytical data sheets by analysis were prepared for groups and individual samples. These were marked with the sample identification number(s), project, date sampled, date received, and date analyzed. All analytical readings and calculations appear on these data sheets. These were turned in daily and filed in the appropriate project notebook. Any unusual appearance of the samples or results was recorded on the data sheets. These data became a part of the permanent record. All data sheets were initialed by the analyst and calculator. Recorder printouts such as autoanalyzer charts or fluorometer records were labeled according to parameter, project, date sampled and date analyzed and accompanied the data sheets which have been kept as a part of the permanent record in the project notebooks.

Sub-contracted Analyses. The list of analyses given in Table 5 were sub-contracted. Liason with each sub-contractor assured that the methods specified in Table 4 were followed in every case. Sample integrity records were maintained and spiked and duplicated samples were included in each shipment to provide quality control independent of the sub-contractor. Reports of results including quality control results were entered as a part of the permanent laboratory record. The laboratory supervisor was responsible for monitoring the analytical performance of each sub-contractor.

TABLE 5
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
SUBCONTRACTED WATER QUALITY ANALYSES FOR
PHASE I (APRIL, 1978 THROUGH NOVEMBER, 1978)

<u>Parameter</u>	<u>Subcontractor</u>	<u>Transmission Method</u>
<u>Composite Samples</u>		
Chlorophyll <u>a</u> , <u>b</u> , & <u>c</u>	TSI	Bus
<u>Water Samples</u>		
TOC	CH2M-Hill	Courier
Dissolved Organic Carbon	CH2M-Hill	Courier
Calcium, Magnesium, Sodium and Potassium	TSI	
<u>Sediment Samples</u>		
Mechanical Analysis	TSI	Bus
TOC	CH2M-Hill	Courier
Mercury	TSI	Bus
Arsenic	TSI	Bus
Chlorinated Hydrocarbons, Pesticides	TSI	Bus
<u>Mollusk Tissue</u>		
All Parameters	TSI	Bus
<u>Zooplankton</u>		
Identification of all Taxa	TA	Courier

NOTES:

TSI - Technical Services, Inc., 103-7 Stockton Street, Jacksonville,
Florida, 32201
CH2M-Hill - CH2M-Hill, Southeast, Environmental Laboratories,
7201 N.W. 11th Place, Gainesville, Florida, 32602
TA - Taxonomic Associates, P.O. Box 12379, University Station,
Gainesville, Florida, 32604

Calculation and Reporting of Data. Calculation of the results of analyses was accomplished as soon as possible following completion of the "hands on" work to facilitate assessment of the control exercised by standards, replicates, and spiked samples. This assessment was the responsibility of the laboratory supervisor. All calculations were shown on the analysis sheets as part of the permanent laboratory record.

Checking calculations either by the analyst or the data calculator was standard practice. It was the responsibility of the laboratory supervisor to insure that all data reported had been calculated correctly.

"In-house" data tabulations and data were stored in the project notebooks as a part of the permanent record. Notes pertaining to field data, anomalous results, or deviations from standard methods were appended to finished reports. The accuracy of such reports was the responsibility of the laboratory supervisor.

For each cycle, the complete laboratory data base was tabulated on computer coding sheets and reviewed. These sheets were turned over to the project manager for entry into the data storage-retrieval system. A xerox copy of these sheets was kept in the project notebook as a part of the permanent laboratory record.

Quality Control Assurance

The following paragraphs describe the methods and procedures employed to assure the accuracy of the field measurements and laboratory chemical water analyses results. Short cuts were not permitted and any abnormalities were brought to the attention of the laboratory supervisor immediately. This included any analytical or safety abnormality as well as instrumental malfunction, or problems in replication or spike recovery.

Calibration Checks. These checks were done before using any instrument and the calibration recorded on the analytical data sheet. Daily logs of oven, refrigerator, and incubator temperatures were maintained with this equipment.

Gravimetric Analysis. Accuracy of analytical balances was monitored with a standard weight set (coins) and results were recorded on log sheets. Calibration checks and routine maintenance is done biannually by an established contractor.

Titrimetric Analyses. The method was checked against a standard solution daily. The results were recorded on the data sheet and as part of the accuracy control data.

Colorimetric Analyses. A standard curve of at least 3 points was run daily. More points were run if required. The results of standards were recorded on the data sheet and also as a part of the accuracy record.

Instrumental Analyses. The Atomic Absorption Spectrophotometer and the Technicon Autoanalyzer II had daily calibration curves constructed. Instrument settings were recorded on the data sheet and as a part of the instrument record.

Fluoride electrodes, pH meters, conductivity meters, and turbidimeters were calibrated as necessary and the calibration was checked after every 10 samples. The notation was entered on the data sheet that the calibration was made.

The laboratory deionized water supply's resistance was continuously monitored and maintained at 500,000 OHMS. Deionized water blanks were always included in analyses to control possible contamination from this source.

Precision and Accuracy Control. Shewhart type (USEPA, 1979) precision and accuracy control charts were maintained for all routine laboratory analyses. These charts are updated yearly using the entire data base generated by the laboratory for the preceding year's work. These charts were maintained as a permanent laboratory record.

In this study precision was also monitored by analysis of duplicate samples. A minimum of 10 percent of the total number of samples obtained during a given sampling cycle were split in the field by filling two separate containers from the same grab sample. In general, this was achieved by sampling one station in duplicate on each sampling day. One of this pair of samples was analyzed as the first sample of an analysis run; the other was run as the last analysis. An additional sample was duplicated within a given analytical set. The difference between the field duplicates was compared with the control limits on the quality control chart. If the difference exceeded the warning limits the difference between the in-house duplicate was compared. If the in-house and field differences exceeded the warning limits the whole set of analyses was repeated. If the field duplicates exceeded the warning but the in-house duplicate was in control, each of the field duplicates was run again to verify that the difference was due to sampling rather than analytical procedure.

The results of the field duplicated samples was included in each progress report and as Appendix E in this report. The sample duplicated in-house was recorded on the precision chart.

Daily monitoring of the accuracy of the analytical work was accomplished by comparing the results of recovery of known spikes from replicated spiked samples. One sample in every 10 was spiked and at least one spiked duplicated sample was included on each sample set. The difference between the recovered value for the spike versus the normal spike value was compared with the accuracy chart warning limit. If this value exceeded the warning limits the analysis for the set of samples was repeated. The results of the spike recoveries were recorded on the accuracy chart.

Spiked sample analyses were run for:

- Fluoride
- All nitrogen forms
- All phosphorus forms
- Sulfate
- Chlorides
- All metals.

In addition, two samples each sampling cycle were spiked in the field with iron, manganese, and zinc. Samples for dissolved metals for these same stations were spiked with iron and manganese. The spiked samples for total metals were split with the South Atlantic Division Laboratory (SAD). Results of these metal spike recoveries were included in each progress report.

In addition to the in-house accuracy control, quality control assurance was monitored by splitting two samples per cycle with the SAD laboratory.

Reference Samples. Environmental Protection Agency reference samples for chlorophyll a, b, and c, nutrients, BOD, major ions, and trace metals were analyzed during cycle 3 and the results compared to established values.

Bacteriological Quality Control. Control of the quality of bacteriological media was maintained by careful attention to holding times and conditions for prepared m-fecal coliform broth (96 hours at 40C) and KF-streptococcus agar (one month at 40C). Sterility of sample bottles and equipment was assured by monitoring autoclaving time and temperature. A heat sensitive test strip was included in each set of autoclaved material.

In the field, attention was paid to meeting holding times for bacteriological samples. Incubator temperatures were carefully monitored. One sample each day was analyzed in duplicate.

Algal Growth Potential Test Methodology

The algal assay procedure, bottle test, was performed on water

collected from 11 selected stations (06, 07, 09, 10, 11, 12, 13, 14, 15, 16 and 18) during sampling cycles 1 (4/17-21/1978), 3 (7/17-20/1978) and 5 (9/25-27/1978) in accordance with procedures specified in Miller et al. 1978. Algal growth response was indirectly measured as ash-free dry weight after 12 and 14 days incubation using a Coulter Model Z_f particle counter equipped with a near cell volume computer. The counter and cell volume computer were calibrated in accordance with the manufacturer's procedures using a 4.59 μ diameter organic particle obtained from Coulter Electronics, Inc. All counts were run using a lower threshold of 10 μm^3 to exclude debris. Calibration of the mean cell volume computer was performed each time the instrument was used. Procedures for calibrating Coulter type electronic particle counters are also included in Miller et al. 1978. A gravimetric factor to convert particle volume to ash-free dry weight was determined to be $2.8 \times 10^{-7} \mu\text{g } \mu\text{m}^{-3}$ for Selenastrum capricornutum Printz under the culture conditions used. Five counted, sized suspensions were washed three times by centrifugation, transferred to tared crucible cups and dried at 70°C overnight. After weighing the dried algae, the ash content was determined after heating the material at 500°C for 1 hour. A subculture of this organism supplied from the Pacific Northwest Environmental Research Laboratory (EPA) on 4/4/78, was maintained for use during each of the algal assays.

Depth integrated samples from the euphotic zone in quiescent waters (lake stations) or from the entire water column in more turbulent waters (river stations) were collected as specified earlier. All samples were processed within three days by an autoclaving-filtration procedure to assess the amount of algal biomass which could be grown from all nutrients in the water, including those contained in filterable organisms and other particulate matter (Miller et al. 1978). Background chemical analyses for total Kjeldahl nitrogen, ammonia nitrogen, nitrite plus nitrate nitrogen, as well as dissolved ortho-phosphate and total phosphorus were performed on the samples before and after autoclaving.

The experimental design shown in Table 6 was followed to determine the nutrient availability, the primary growth limiting nutrient(s) (nitrogen, phosphorus, or trace metals) and to determine the presence of toxic substances. This procedure, outlined in Miller et al. 1978, compares the relative growth of the test alga in water spiked according to Table 6 to the growth response of the alga in unspiked lake water. Each combination as well as the lake water control was set up in triplicate for each station.

Phytoplankton Methodology

Phytoplankton was collected from a depth integrated raw water sample from the euphotic zone in quiescent waters (lake stations) or from the entire water column in more turbulent waters (river

TABLE 6
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
BASIC EXPERIMENTAL DESIGN USED TO DEFINE
NUTRIENT LIMITATIONS AND ALGAL GROWTH
POTENTIAL FOR PHASE I (APRIL, 1978
THROUGH NOVEMBER, 1978)

Lake water (not spiked)

Lake water + 0.05 mg P l⁻¹ as K₂HPO₄

Lake water + 1.00 mg N l⁻¹ as NaNO₃

Lake water + 0.05 mg P l⁻¹ + 1.00 mg N l⁻¹

Lake water + 1.00 mg Na₂ EDTA l⁻¹ as Disodium (Ethylenedinitrilo)
tetraacetate

Lake water + 0.05 mg P l⁻¹ + 1.00 mg Na₂ EDTA l⁻¹

Lake water + 1.00 mg N l⁻¹ + 1.00 mg Na₂ EDTA l⁻¹

Lake water + 0.05 mg P l⁻¹ + 1.00 mg N l⁻¹ + 1.00 mg Na₂ EDTA l⁻¹

stations). The water sample was depth integrated with a Van DornTM sampler just below the surface and at one meter depth intervals until the lower limit was reached. If the euphotic zone in quiescent waters or impoundment depth in more turbulent waters was over 7 meters deep, eight samples beginning at the subsurface were equally spaced over the required sampling depth. These were composited and a 1 liter aliquot for the station withdrawn, placed into a pre-numbered 1 liter plastic jar, and preserved with 5 percent buffered formalin (neutralized with sodium tetraborate to a pH of 7.0 to 7.3). The collection number, site, date, and time of collection were recorded for each station in a field notebook along with weather (cloud cover, wind direction, and intensity) and water conditions (surface waves, color, turbidity, and depth) and any unusual observations during sampling.

In the laboratory, the field data were transferred to a permanent log book and the samples checked against this record. Phytoplankton analysis was made by the Utermöhl (1931, 1958) method. Each sample was resuspended with a magnetic stirrer and a known aliquot (usually 20 or 40 mls) was transferred into a standardized plankton sedimentation chamber with a known settling area of 397.6 mm². After 24 hours of settling, the chamber was placed on a Zeiss Invertoscope "D" microscope (magnification to 1000X), and a minimum of 300 organisms (sampling cycles 1, 2 and 3) or 150 organisms (sampling cycles 4, 5 and 6) were enumerated for each sample. Cell counts were made by randomly selecting microscope fields along at least two perpendicular transects of the chamber and counting all cells within each field. For colonies and filaments consisting of a large number of cells, 1/4 or 1/2 of the colony or filament was counted and this resultant number multiplied to obtain the number of cells for the entire colony or filament. Empty algal cells or diatom frustules were not included in the counts. Identified cells were recorded on standardized bench sheets and later converted to number of cells per milliliter for each taxon in the water sample using the following conversion equation:

$$\text{Cells/ml} = \frac{(CA)}{(FMV)}$$

where,

- C = number of cells counted;
- A = area of bottom of the counting chamber (397.6 mm²);
- F = number of fields counted;
- M = area of one microscope field (0.038 mm²); and
- V = volume of aliquot settled.

All organisms were separated and identified to species where possible. The following major standard taxonomic references were used for identification: Heurck, 1896; Hustedt, 1927-1930, 1930, 1931-1959, 1949, 1961-1966; Hanna, 1933; Huber-Pestalozzi and Hustedt, 1942; Smith, 1950; Prescott, 1951; Drouet and Dailey, 1956; Bourrelly, 1966-1970; Patrick and Reimer, 1966, 1975; VanLandingham, 1967-1979;

Drout, 1968, 1973; Whitford and Schumacher, 1973. Other minor references too numerous to list were also used.

Since the classification of diatoms is based primarily on the shape and markings of the cell wall, critical identifications can only be done if the diatoms are cleaned (all organic matter removed); thereby leaving only the silica cell walls. Diatom identification was facilitated by cleaning 30 ml of the initial samples using the hydrogen peroxide method (Werff, 1953; Patrick and Reimer, 1966). This involved placing the aliquot in a 2,000 ml beaker and adding approximately 50 ml of 30 percent hydrogen peroxide. A small amount (0.1 - 0.2 g) of potassium dichromate was added (resulting in a purple solution) and in a few moments an exothermic reaction began. This resulted in a violent heating and boiling of the mixture, which oxidized all of the organic matter within the solution, including that contained within the diatoms.

Upon completion of this aqueous combustion reaction, the solution turned yellow and the mixture was then transferred to a 300 ml tall beaker, filled with distilled water, and allowed to settle 6 - 24 hours. The diatomaceous material settled to the bottom and formed a delicate flocculent layer. The sample was then decanted at least 3 times to remove the chemicals (using distilled water to refill the beaker after each decanting). The cleaned diatoms were then poured into a storage vial and enough alcohol added to make at least a 30 percent solution to inhibit growth of fungi.

Permanent slides were made of the cleaned diatoms with Hyrax mounting medium. Clean #1 cover slips (22 mm sq) were flooded with water containing different concentrations of the suspended diatoms and allowed to air dry at room temperature or on a low temperature hot plate. When dry, the coverslip was heated to 500°C for 5 - 10 minutes and then inverted into a drop of Hyrax on a slide. The slide was then heated for a few minutes at 300 - 400°C until the Hyrax stopped bubbling under the coverslip. This allowed time for the penetration of the diatom frustules by the Hyrax and the evaporation of the solvent. The slide was then allowed to cool while pressing the coverslip down so that it would lie flat on the slide. The Hyrax hardened rapidly and the excess along the edges was scraped off with a razor blade. The slide was then wiped clean with acetone. Initial diatom identifications were made from these slides. If identification difficulties arose in other samples during the study period, portions of these samples were also cleaned and permanent slides made to facilitate diatom identifications.

Voucher specimens of difficult taxa were sent to Dr. C. W. Reimer, Academy of Natural Science of Philadelphia (diatoms) and Dr. J. B. Lackey, Professor Emeritus, University of Florida (green and blue-green algae) for taxonomic verification.

Zooplankton Methodology

Semi-quantitative zooplankton samples were collected from quiescent waters (lake stations) with a single vertical tow through the water column by using a Wisconsin style 0.5 meter diameter, 80 micron mesh weighted plankton net with an attached flowmeter. The tow was performed at a uniform speed of approximately 0.5 meter per second to minimize avoidance reactions and sampling bias. Zooplankton were collected from turbulent waters by taking an oblique tow from near the bottom to the surface while letting the boat drift with the river flow to maintain a tow angle as nearly vertical as possible. The tow angle, time, length of rope let out, and flowmeter readings were recorded. Zooplankton samples were preserved in a final concentration of 5 percent buffered formalin with Rose Bengal added in pre-numbered plastic bottles. The collection number, site, date, and time of collection were recorded for each station in a field notebook, along with weather (cloud cover, wind direction, and intensity) and water conditions (wave height, color, turbidity, and depth) and any unusual observations during sampling.

In the laboratory, the field data were transferred to a permanent log book and the samples were checked against this record. Zooplankton were identified on a compound microscope with a magnification to 400X. They were then enumerated by placing a thoroughly mixed aliquot in a Wards zooplankton counting wheel and examining it at a magnification of 20 - 60X under a stereoscopic microscope. The aliquot size (taken with a Henson-Stempel pipet) varied from 1 - 5 ml depending on the densities of organisms and detritus. All zooplankton within the chamber were identified to genus wherever practicable and enumerated except for the two dominant genera which were identified to species.

The principal taxonomic references utilized were Edmondson, 1959; Brooks, 1957; Deevey & Deevey, 1971; Marsh, 1929; and Voight, 1956.

The number of each taxon in the sample was converted and reported as number per liter using the following conversion equations:

$$\text{Number of organisms/l} = \frac{AC}{BV}$$

where,

- C = organism count (raw data)
- A = volume of the concentrated sample;
- V = volume of water passed through the plankton net; and
- B = volume of the examined aliquot.

The total volume (V) was calculated as a function of the length of the water column which the net passed through:

$$V = \pi r^2 l = (3.14)(0.25 \text{ m})^2 l = 1 (0.196 \text{ m}^2)$$

with l being the length of the water column based on the flowmeter value or the length of rope let out if the flowmeter malfunctioned.

ATP Test Methodology

Sampling and Sample Preparation

At stations 01 through 19, 200 ml or more of water from the depth integrated water sample were filtered through a 0.45 μm membrane filter (Millipore). Upon completion of the filtration, the vacuum was broken just as the last of the water passed through the filter, and the filter was quickly transferred to a 150-ml Pyrex beaker containing 10 ml of boiling 0.02 M Tris buffer. The filter was placed upside down into the Tris and heated for 5 to 10 minutes at 100°C in a water bath. The beaker was then removed from the water bath, the filter scraped with a plastic policeman to loosen the filtrate from the filter into the Tris, and replaced in the boiling water for 5 min. The beaker was then removed from the water bath and cooled rapidly. The filter was held against the side of the beaker and any remaining filtrate scraped off with a plastic policeman. The filter was then discarded. The sample was then transferred to a 1-oz Nalgene (plastic) screw cap bottle, labeled with the bottle # (T___) and volume (mls) filtered, and frozen at -20°C (dry ice in the field).

When the sample was ready to be analyzed, the contents of the bottle were thawed, the sample mixed and then transferred to a centrifuge tube. The volume of sample was recorded and approximately half of the sample was transferred back to the original container (in case of errors such that a redetermination was necessary) and the remainder centrifuged. The tubes were removed from the centrifuge and the supernatant poured into a clean, labeled scintillation vial for transport to the University of Florida for determinations.

Standardization Curve

An ATP standard stock solution was prepared by weighing 119.3 mg of crystalline adenosine 5' - triphosphate-disodium salt using ATP-free glassware. The ATP was dissolved in 100 ml of fresh 0.02 M Tris buffer containing 29.2 mg of EDTA and 120 mg of MgSO_4 (resulting concentration of 1 mg of ATP/ml). This was dispensed in 5.0 ml aliquots in 1-oz Nalgene bottles and stored at -20°C until required.

One ATP stock bottle was thawed and 1.0 ml of the ATP stock solution containing 1 mg of ATP/ml was pipetted into a 1-liter

volumetric flask and brought up to volume with 0.02 M Tris buffer (or pipet 1 ml of stock solution into 100 ml of Tris, mix, and pipet 1 ml of this dilution into 9 ml of Tris to result in the same dilution). This solution contained 1.00 μg ATP/ml. The following serial dilutions were then made:

1.00 $\times 10^{-1}$ μg ATP/ml
1.00 $\times 10^{-2}$ μg ATP/ml
1.00 $\times 10^{-3}$ μg ATP/ml
1.00 $\times 10^{-4}$ μg ATP ml.

The calibration curve was determined by making a minimum of 3 replicate determinations of each of the serial dilutions.

Reagents

Tris Buffer: (0.02 M) (Tris (Hydroxymethyl) Aminomethane) - Dissolve 2.5 g of the buffer crystals in 1 liter of deionized water. Bring to pH 7.75 using HCl (pH meter). Sterilize by autoclaving for 30 min. at 121°C, 15 psi (103 kPa) pressure, and store refrigerated in stoppered flasks.

FLE-50: Firefly Lantern Extract (Luciferase/Luciferin Reaction Mixture) - Reconstitute by adding 35 ml (or 37.5 ml) of low response water to one vial of extract. The luciferase/luciferin reaction mixture must be mixed gently without shaking. Allow to stand at room temperature (23 - 26°C) for one hour. Filter through Whatman #1 filter paper and store in an ice bath for 3 hours before use. Use enzyme preparation within 8 hours of preparation.

Hydrochloric Acid (0.2 N): Add 17.0 ml of HCl (sp. gr. 1.19) to a 1-liter volumetric and bring to volume with water.

ATP-Free Glassware: Rinse chemically clean glassware three times with 0.2 N HCl, rinse three times with Tris buffer, and rinse three times with low-response water.

Low-response Water: Sterile, deionized, ATP-free water may be prepared by treatment in a suitable system involving carbon treatment with deionization, filtration, glass distillation, or sterilization by autoclaving and stored under refrigeration in stoppered flasks.

Determination

One ml of reconstituted firefly lantern extract (35.0 ml low response water/vial of extract) was pipetted into a scintillation vial and the background light emission read. Using a Packard Tri-Carb Model 2002 liquid scintillation spectrometer (gain set at 53, window opening of 50 to 1,000, and set in a repeat count mode, with each

sequence) the normal background emission was 10 to 20 counts or less in the 6-sec counting interval.

Exactly 0.5 ml of the ATP standard or sample extract was added using the micropipette syringe (with new tip each time) and the vial swirled to thoroughly mix the contents. Eleven seconds after the sample addition to the firefly extract, the vial was inserted into the counting chamber and the counting sequence begun. Two samples from the beginning of the run were repeated at the end of each run to determine repeatability and check for decay of the firefly lantern extract during the run. For each cycle in Phase I, samples were analyzed for each of the 19 stations except during cycle 6 in November when stations 12 & 19 could not be sampled due to low water levels and boat problems.

Macroinvertebrate Methodology

Benthic Natural Substrates

Benthic macroinvertebrate grab samples were collected at all nineteen locations. Sampling frequency was as outlined in Table 2. At the riverine stations, one sample was collected in the thalweg and one near each river bank. At lake stations 08, 09, 10, 11 and 13 samples were collected from three locations, taken 120 degrees apart, along an imaginary 20-foot diameter circle.

Benthic macroinvertebrates were collected with a standard size (9"/side) PonarTM dredge. The dredge was lowered from the side of the boat, using a boom and power winch, slowly enough that a minimal "shock wave" was created so as not to disturb the benthos. Once the dredge touched bottom, the closing mechanism was immediately tripped and the dredge quickly raised to the surface. The dredge was then placed in a sieve bucket (US Standard No. 30 mesh) and the sample washed out with a squirt bottle filled with lake (or river) water to reduce the sample volume. The washed sample was then placed in a pre-numbered bottle (wide mouth, plastic, 1-pint or 1-quart).

Upon completion of all replicate sampling at a given station, buffered formalin preservative was added to a concentration of 5-10 percent, depending upon the quantity of detritus present. Rose Bengal was added as an organism stain to facilitate sorting, being added prior to preservation in order that the organisms' respiratory processes increased the amount of staining. The rose bengal was applied as a dry crystal, in a quantity sufficient to stain the sample a dark red, this quantity being variable according to sample size and the amount of detritus in the sample.

Upon return to the lab, the samples were shelved in an orderly manner and their numbers recorded and checked against the numbers in the field notes. Samples which were accidentally misrecorded, or which were otherwise in error, were discarded.

In the laboratory, each sample was carefully washed in a US Standard No. 30 mesh sieve (or smaller, if organism loss was significant) that was partially immersed in a large white plastic pan. This removed formalin, excess Rose Bengal stain, and the remaining silt and clay. The sample was then placed, in manageable aliquots, in a white enamel pan for removal of organisms (sorting). Organisms, were placed in 5 milliliter vials, in 95 percent ethanol. Each vial was labeled with a code representing the project, collection date, type of substrate sampled, collection location, and replicate bottle number. For example:

LSN-3-18E

Project Code and Substrate --	Collection Date --	Station No.
(Lake Seminole,	(third cycle:	(18 East Bank)
Natural Substrate)	July 1978)	

A vial with ethanol was weighed, the sampled organisms were then placed in the vial, and the vial was re-weighed. The difference between the two values was considered "wet weight" biomass. These numbers are high, however, due to the introduction of extra ethanol when inserting the organisms. Limited experiments suggesting errors as high as 25-33 percent were found at stations with relatively low biomass.

Organisms were identified with an American Optical Stereoscopic Microscope (7X to 80X) and a Swift Trinocular Microscope (40X to 400X). Taxonomic references used were Beck (1962), Beck and Beck (1969a and b; 1970), Curry (1958), Hilsenhoff (1975), Mason (1973), Parrish (1968), Roback (1963, 1969), Brinkhurst and Jamieson (1971), Brown (1972), Edmunds, et al. (1976), Holsinger (1972), Thompson (1968), Usinger (1956), Wiggins (1977), and Saether (1977). Taxonomically difficult and ecologically important species were identified or verified by experts in their respective fields: William Beck, Florida A&M University, for Chironomidae and Michael Loden, Louisiana State University for Oligochaeta. Other authorities were consulted for the less frequent taxa, and for specific groups within the Insecta (such as Dr. Minton J. Westfall, University of Florida, for Odonata).

The Chironomidae and Oligochaeta were grouped under low magnification and representative specimens were selected for microslide mounts, from which the identifications were made. Only one organism was mounted per microslide. Chironomids were mounted in polyvinyl-lactophenol, which contains a clearing agent and makes excellent semi-permanent slides. Oligochaetes were permanently mounted in Coverbond™, which does not contain a clearing agent. Organisms can be removed and remounted, if necessary, with either of these mounting media.

The Shannon-Weaver Species Diversity Index, $\bar{H}$ (Odum, 1971) was calculated using the following expression:

$$\bar{H} = \sum_{i=1}^t \left[\frac{n_i}{N} \log_2 \left(\frac{n_i}{N} \right) \right]$$

where n_i = total number of organisms present as taxon i

$$N = \sum_{i=1}^t n_i = \text{total number of organisms present in the sample}$$

t = number of taxa present in the sample

$\bar{H}$ ranges from a minimum of 0.0, occurring when all organisms belong to the same taxon (no diversity), to a maximum of $\log_2 N$, occurring where each organism present belongs to a unique taxon (maximum diversity).

Evenness (e)

If the organisms of a sample are uniformly distributed among the taxa present, the Shannon-Weaver Index assumes the value, $\ln t$, a condition of perfect evenness in the apportionment of individuals among species. The Index of Evenness, e (Odum, 1971) was used to express the actual Shannon-Weaver Index as a fraction of this "ideal" value:

$$e = \frac{\bar{H}_e}{\ln(t)} \quad (\text{defined for } t > 1)$$

where $\bar{H}_e$ = actual Shannon-Weaver Species Diversity Index

t = number of taxa present in the sample

Evenness ranges from 0.0 (minimum evenness) to 1.0 (perfect evenness), and the calculated values are independent of the logarithmic base.

All samples were retained for reference until being sent to the Mobile District COE office at the end of the study. A few chironomid larvae and oligochaetes were donated to Mr. William Beck, Jr., and Dr. Michael Loden, for their taxonomic value.

Hester-Dendy Artificial Substrates

The Hester-Dendy sampler used was that which is recommended for EPA biologists. It consists of fourteen 7.5-cm diameter plates, and twenty-four 2.5-cm diameter spacers, constructed of 0.625-cm thick tempered fiberboard, strung together on a 25-cm eyebolt so that there are 8 single spaces, one double space, two triple spaces and two quadruple spaces between the plates. This sampler has an effective surface area of 0.12 square meter.

Artificial substrates were emplaced at all stations except 08, 10, and 17. The samplers were attached to marker buoys and incubated for a period of six weeks. The sampling frequency is outlined in Table 2. Each sampler was collected by raising it from the water and quickly placing it into a cloth bag, which was then preserved in a 5-gallon RoperTM bucket containing a 10 percent buffered formalin solution. These samplers were not re-used, as it was very difficult to remove the formalin from the fiberboard.

In the laboratory, the cloth bag was everted into a US Standard No. 30 mesh sieve placed in a white enamel pan. The sampler was then removed and disassembled. The bag, sampler, and organisms were rinsed to remove the formalin and accumulated sediments. All organisms were removed and placed in vials containing 95 percent ethanol. Each vial was labeled and the organisms identified as outlined in the previous section.

Shannon-Weaver and Evenness values for the Hester-Dendy macro-invertebrates were calculated as described above.

Macrophytes

Aquatic macrophytes in Lake Seminole were surveyed in June and September, 1978. The macrophyte surveys were conducted to map their extent, to obtain pressed specimens, to collect reference photographs, to develop species lists, and to determine their nuisance potential.

The reservoir was surveyed from a flat-bottomed boat for 3-4 days during each of the two field trips. Included were personnel from WAR and USACOE personnel at Lake Seminole. The vegetation map was

constructed from notes collected during field inspections. Specimens of selected "uncommon to rare" species were collected when in flower. These were pressed and duplicate herbarium sheets were prepared for delivery to the USACOE personnel at Mobile, AL. Reference photographs were taken in 35 mm color slide form and are being held at WAR. Species identifications and lists were made in situ by survey personnel. The primary taxonomic references were Radford, et al. (1964), Long and Lakela (1971), and Fassett (1940). The nuisance potential of aquatic macrophytes in the lake was determined by interviews with USACOE biologists, local residents, USACOE publications (USACOE; 1961, 1971, 1972, 1973, 1974, 1975, 1977a, 1977b, 1978), and by inspection.

The vegetation map was very difficult to construct for several reasons. First, appropriate aerial photography, which is the single most important tool for mapping vegetation, was unavailable. Second, the USGS Quadrangle maps, which were relied upon in lieu of aerial photos, are incorrect in many places, especially concerning the reservoir islands. Third, vegetative diversity is very high. And fourth, mapping the dense periphyton mats occurring in the shallow waters of the Flint River portion of the reservoir is dependent on the use of bottom topography maps, which were unavailable to us.

Several compromises were made as a result of these problems. Shoreline vegetation, usually a mix of several to many species, was not shown in many places since it occurs in too narrow a band to show in the chosen map scale. This problem was most pronounced with the fringe of giant cutgrass around many islands and in the Chattahoochee River. Also, small patches of invading nuisance species, such as Egeria at the Georgia Ranger Station, are too small to show up in the chosen map scale. The periphyton mats are not shown at all.

RESULTS AND DISCUSSION

The following discussion is intended to summarize the data shown in Appendices A through M and highlight the trends and water quality observed during the six sampling cycles of Phase I of the Lake Seminole Water Quality Management Study.

Stream Flows

Data was obtained from the United States Geological Survey (USGS) in Doraville, Georgia, for the Flint River at Newton, Georgia (USGS Station 02353000), the Chattahoochee River through Andrews Lock and Dam (USGS Station 02343801) and Spring Creek near Iron City, Georgia (USGS Station 02357000). The locations of the flow gaging stations are shown on the Map Coverage Index of Figure 1. Data for the flow through Jim Woodruff Lock and Dam were obtained from the U.S. Army Corps of Engineers, Mobile District. The data for Spring Creek and the Flint River represent stream flows outside the actual study area.

A summary of the available stream flow data is given in Appendix A. Monthly average stream flows for which there are data are shown for the Chattahoochee and Flint Rivers, Spring Creek and the flow through Jim Woodruff Lock and Dam. Daily averages for one week prior to and the week of each sampling cycle are also shown. No daily averages were available for Spring Creek.

In general, the data shows wide variations in flow from day to day on the Chattahoochee River due to fluctuations in discharge from Andrews Lock and Dam. The Flint River and Spring Creek are not subject to these wide daily variations. Based on monthly average flows, the Chattahoochee accounted for approximately 60 to 80% of the total flow reaching Lake Seminole.

The period of highest flow occurred during sampling cycle 2 in May. Monthly average flows for May, 1978 were 521 m³/sec at Andrews Lock and Dam on the Chattahoochee, 275 m³/sec on the Flint at Newton, Georgia, and 1005 m³/sec through Jim Woodruff. The period of least flow was November with average flows of 129 m³/sec on the Chattahoochee, 60 m³/sec on the Flint and 221 m³/sec through Jim Woodruff. It should be noted that the pool elevation in Lake Seminole was at the lowest level in its history during the sixth sampling cycle in November, 1978.

Water Quality Data

Complete *in situ* and laboratory water quality results are given in Appendices C and D respectively. In general, water temperatures

were highest during cycle 3 in July. The mean temperature for this cycle for Chattahoochee River stations (01,02,03,04,05,06) was 28.5°C; for Flint River stations (16 and 17), 27°C; for lake stations (08,09,10,11,13,15), 30.2°C; and for stations on the Apalachicola River, 29°C. Station 12, on a wide, shallow, relatively stagnant arm of the reservoir had a water temperature of 30°C during this cycle and station 14 on Spring Creek was 28.5°C. Minimum temperatures were encountered during sampling cycle 6 in November with temperatures at all sites of 18°C - 19°C. At no time during this study was a well defined thermocline evident at any of the lake stations sampled due probably to the shallowness of the reservoir and wind mixing of it. However, during cycle 2 in June and cycle 3 in July, a slight (i.e. 1-2°C) surface warming was apparent at most lake stations. No significant lateral thermal variation was observed during either the first or fourth sampling cycles in April and August, respectively.

The most severe dissolved oxygen depletion occurred during cycle 3 due probably to reduced mixing and increased temperature. Dissolved oxygen during this cycle ranged from 9.9 mg/l one meter below the surface at station 15 down to 3.3 mg/l at a depth of 6.0 meters at station 11 just upstream of the dam (see Figure 1). D.O. levels below the dam on the Apalachicola River were in the 6.0-9.0 mg/l range at all times. No anaerobic conditions were encountered at any sampling sites during any of the sampling cycles. Vertical profiles and D.O. isopleths for cycles 2, 3 and 4 showing the variation in D.O. with depth and cross-section respectively, at a given site are shown in Appendix F. In general, the reservoir stations exhibited a decrease in D.O. with depth during the late summer months; however a marked thermocline did not develop and mixing from top to bottom was not inhibited. No significant lateral or vertical variation in dissolved oxygen was evident at any of the river stations during either the first or fourth sampling cycles in April and August, respectively, with the exception of station 14 in Spring Creek during August. The variation found at this station was probably due to the lack of current and mixing.

At station 1 (just below the George W. Andrews Lock & Dam) the D.O. ranged from above 9.0 in both April and November to a low of 7.0 at midstream in August. At station 18 (just below the Jim Woodruff Lock & Dam) the D.O. ranged from above 8.4 in April and November to a low of 6.3 in July at midstream.

pH values for all stations during all the sampling cycles were in the 6.0 - 9.0 unit range. No significant vertical variation in pH was observed at any of the lake stations sampled during the study. During the fourth sampling cycle in August a slight lateral variation in pH of 0.3 and 0.4 and a more pronounced vertical variation of 1.6 and 1.8 was apparent at stations 11 and 15, respectively, again probably due to the lack of current and mixing at these reservoir stations. No significant lateral or vertical variation in pH was evident at any of the river stations during either cycle 1 in April or 4 in August.

All oxidation-reduction potentials (O.R.P.) in this report have been referenced to the Pt/H₂,H system. In general, O.R.P.'s ranged from about +300 mV to about +600 mV for all stations during all sampling cycles. An exception to this trend was station B0, just below the Great Southern Land and Paper Company outfall on the Chattahoochee River, Mile 38.2. Here the O.R.P. dropped sharply during cycles 2,3,5, and 6 to values ranging from +60 to +290 mV. According to the values in Appendix D, the slight variation in other parameters measured at this station (water temperature, conductivity, dissolved oxygen, and pH) do not correspond or account for the changes in O.R.P.

Turbidity over all the cycles was highest for the Chattahoochee stations with a mean value of 23.6 FTU. The mean value for the Flint River stations was 7.7 FTU, the reservoir stations, 14.8 FTU and the Apalachicola stations, 14.7 FTU. Turbidity at station 12 on Fish Pond Drain averaged 2.6 FTU and station 14 on Spring Creek averaged 9.1 FTU. Suspended solids concentrations, secchi disc, and % light transmission exhibited the same general areal trends as turbidity.

Specific conductance, total dissolved solids (T.D.S.) and alkalinity all followed the same general areal patterns during the entire study period. All three parameters were lowest at the Chattahoochee River sampling sites (01-06), and generally higher on the Flint River arm of the reservoir. Station 14 on Spring Creek yielded the highest values for all three parameters for all the sampling cycles. The values for all stations and all cycles for specific conductance, T.D.S. and alkalinity were in ranges that would be expected in this type of system.

Total iron concentrations were fairly high at times compared to EPA criterion (U.S. EPA, 1976) and exhibited several areal and chronological trends. In all cases, the total iron was composed primarily of insoluble forms. Concentrations in the Chattahoochee were highest during cycle 1 and 2 in the spring, with values ranging from 1.5 mg/l to 5.0 mg/l. There was a general downward trend after the second cycle until cycle 5 in September where the lows ranged from 0.2 mg/l to 0.5 mg/l. Cycle 6 in November showed the beginning of another upward trend. Concentrations in the Flint River were highest during the first and fourth sampling cycles with values ranging from 1.3 mg/l to 2.0 mg/l, and lowest during the fifth cycle in September with values around 0.2 mg/l. Concentrations in the reservoir followed the same general trends as those in the Chattahoochee. Spring Creek and Fish Pond Drain had much lower concentrations. In the Apalachicola River the concentrations were again highest during cycle 1 and ranged from 1.7 mg/l to 2.3 mg/l. The concentrations then declined to low values of 0.2 mg/l to 0.3 mg/l during cycle 5 in September. It should be noted that concentrations of total iron at most of the stations during the spring and early summer months exceeded the suggested EPA criterion of 1.0 mg/l for fresh water aquatic life (U.S. EPA, 1976).

Concentrations of manganese and zinc were low at all times with concentrations never exceeding 0.2 mg/l. There were no obvious areal patterns. Neither Georgia nor Alabama have numerical criteria for zinc or manganese.

Total inorganic nitrogen (TIN), composed primarily of nitrate-nitrite, was highest on the Flint River stations during the entire phase, with values of TIN ranging from 0.30 mg/l to 0.75 mg/l. The Chattahoochee River and the reservoir stations were highest in the spring, decreased over the summer, and rose again in the fall. Values in the Chattahoochee ranged from lows of 0.08 mg/l in the fall to a high of 0.53 mg/l in the spring. In the Apalachicola River, values followed the same trend with high concentrations ranging from 0.39 mg/l to 0.45 mg/l during cycle 1 to low concentrations of 0.08 mg/l to 0.14 mg/l in September at stations 18 and 19, respectively. Total phosphorus values were generally highest during June and July and lowest in the fall. In June, the values were highest in the Chattahoochee River stations (mean of 0.23 mg/l) but in July they were higher in the reservoir stations (mean of 0.25 mg/l). In the Apalachicola River, the values were comparable to those in the reservoir with the values at station 19 being only slightly higher during cycles 1-3. Station 12 on Fish Pond Drain had extremely low values of both TIN and total P and station 14 on Spring Creek showed low total phosphorus, but high TIN. Dissolved orthophosphate values comprised a low percentage of the total phosphorus concentration; usually less than 20%. Total Kjeldahl nitrogen as measured on cycles 4-6 showed no significant areal variations.

Due to the limited sampling dates for other water quality parameters such as potassium, sodium, and organic nitrogen, discussion will be delayed for these until the Phase II Annual Report when comparisons can be better substantiated. Further comparisons and discussion will be made for all parameters also in the Phase II report after the second year of data collection.

Bacteriology

Bacteriology results are included in Appendix D. Samples were collected for Fecal Coliform and Fecal Streptococci during the third through sixth sampling cycles for all the water quality sampling stations plus two stations near public park facilities, B1 and B2. Due to equipment malfunctions, bacteriological results are missing or incomplete for stations 01 through 06 and 12 from the second sampling cycle in June, and for station 16 from the fifth sampling cycle in September. Although a complete set of data was not obtained, enough data was obtained

to establish several trends. Generally the Chattahoochee stations were rather low in fecal coliforms with most stations under 100/100 ml. Stations 05 and 06 near the lower end of the Chattahoochee were higher with values ranging from 100/100 ml to 600/100 ml. The Flint River stations were significantly higher; especially during cycle 2 when the count reached 2500/100 ml. Reservoir stations as well as Spring Creek, Fish Pond Drain and stations B1 and B2 were all low in coliforms. State standards for coliforms are 1000/100 ml in Georgia for waters classified for fishing and 200/100 ml in Florida for Class II waters, (Recreation - Propagation and Management of Fish and Wildlife) so coliform counts did exceed these standards several times throughout the study. Fecal strep counts tended to be highest on the Apalachicola and Chattahoochee and low in the reservoir itself along with Spring Creek and on the Flint River. Fecal coliform to fecal strep ratios as shown in Appendix D tend to indicate that human sources of contamination predominate on the Flint; and agricultural sources on the Chattahoochee.

Sediments

Complete surface sediment data and gradation curves are presented in Appendix L.

Physically, the sediments in the Chattahoochee, Flint and Apalachicola Rivers can be considered sand. Sediments in the reservoir itself range from sand at station 10 to loam at station 11. A physical description and classification of the sediment at each station is presented in Table 7. Generally, values for volatile solids and total organic carbon (TOC) tended to depend on the physical nature of the sediments. Those stations which were composed primarily of sand were low in volatile solids and TOC. The stations with a somewhat higher percentage of silts and clays, which are characterized as loamy sands and sandy loams and loam, such as stations 07, 09, 11, 13, 14, and 15 had higher values for volatile solids and TOC. Similarly, oil and grease and nutrient levels (measured by total Kjeldahl nitrogen (TKN) and total phosphorus) were higher at those stations characterized as sandy loam or loam.

Metals analyses were run on the sediments for Cu, Fe, Pb, Mn, Hg, Cd, Ni, Zn, As and Cr. The highest values for these parameters were found at station 14 in Spring Creek (see Appendix L) with concentrations for all the metals except arsenic ranging from 4 to 10 times higher than anywhere else in the study area. The reason for these higher levels is presently unknown.

Pesticide concentrations were generally below detection limits although levels of PCB and 2-4D were found at some stations. Station 03 on the Chattahoochee and station 09 in the reservoir showed the

TABLE 7
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
DESCRIPTION AND CLASSIFICATION OF SEDIMENTS FOR PHASE I (APRIL, 1978 THROUGH NOVEMBER, 1978)

Station	%Sand (.05- 2mm)	%Silt (.002- .05mm)	%Clay (<.002 mm)	U.S.D.A. Textural Classification [Chow, 1964]	D ₆₀ 2 (mm)	D ₁₀ 3 (mm)	U ⁴	%Gravel (>#4 Sieve)	%Fines (<#200 Sieve)
01	75	25	0	Loamy Sand	1.5	0.16	9.4	20.0	0.83
02	70.3	4.1	0.9	Sand	1.2	0.08	15.0	12.6	8.05
03	73.8	0.3	0	Sand	1.3	0.14	9.3	19.2	0.3
04	84.3	7.8	1.2	Sand	0.33	0.05	6.6	3.1	19.6
05	79	1.2	1.3	Sand	0.95	0.1	9.5	17.4	3.0
06	93.3	2.8	1.2	Sand	0.73	0.09	8.1	0.3	5.7
07	85.5	8.5	3.5	Loamy Sand	0.28	0.04	7.0	0	16.2
08	92.5	4.7	2.4	Sand	0.62	0.08	7.8	0	7.0
09	62	31	7	Sandy Loam	0.15	0.003	50	0	41.8
10	91	7	2	Sand	0.19	0.05	3.8	0	14.8
11	41	36	23	Loam	0.05	0.001	50	0	66.5
12	89	7	4	Sand	0.30	0.07	4.3	0	10.5
13	80	14	6	Loamy Sand	0.30	0.01	30	1.1	19.4
14	76	14	10	Sandy Loam	0.70	0.002	350	0	25.0
15	78	12	10	Sandy Loam	0.21	0.002	105	0	25.0
16	88	9	7	Sand	1.0	0.03	33.3	5.4	12.1
17	98	1	1	Sand	0.35	0.08	4.4	0.1	6.0
18	100	0	0	Sand	9.0	0.5	18	61.7	0.36
19	99	1	0	Sand	1.5	0.25	6.0	15.5	1.8

NOTES:

- 1 Sand includes all particles >0.05 mm.
- 2 D₆₀ = diameter at which 60% of the particles are finer than the value shown.
- 3 D₁₀ = diameter at which 10% of the particles are finer than the value shown.
- 4 $U = D_{60}/D_{10}$ = uniformity coefficient.

highest concentrations of both PCB (AR1260) and 2-4D as follows:

	<u>Station 03</u>	<u>Station 09</u>
PCB(AR1260)	419 ppb	365 ppb
2-4D	569 ppb	275 ppb

PCB(AR1260) was generally highest in the Chattahoochee River stations (mean 188 $\mu\text{g/kg}$ for stations 1-6) and also high in the Apalachicola River (mean 172 $\mu\text{g/kg}$ for stations 18 and 19) compared to the other stations. Values in the Flint River, Fish Pond Drain, and Spring Creek were all less than 1.5 $\mu\text{g/kg}$. The levels of 2,4D were also highest in the Chattahoochee River stations (mean 118 $\mu\text{g/kg}$) and at station 9 as noted above. The values for the remaining stations were all below 6 $\mu\text{g/kg}$. Again, the reason for this concentration distribution is presently unknown partially due to the limited sampling dates.

Corbicula

Corbicula were found at stations 08, 12, 15, 16 and 19 during cycle 4 in August. Heavy metals analyses were run on all five samples. Chlorinated hydrocarbon analyses were conducted only on the samples from stations 12 and 19 because these were the only sites where sufficient Corbicula were found. The results of these analyses are shown in Appendix K. Heavy metal concentrations in Corbicula tissues ranged from just above to 2.3 times the detection limit for selenium to 44-65 times the detection limit for lead. Tissue heavy metals concentrations exhibited very poor correlations with corresponding sediment metals concentrations, i.e. all $r^2 < 0.70$. Of the seven heavy metals for which tissue analyses were performed, a Food and Drug Administration (FDA) Action Level has been established only for mercury, 1.0 ppm for shellfish, approximately an order of magnitude above the highest observed tissue concentration. Of the 18 chlorinated hydrocarbons analyzed only two, chlordane and endosulfan sulfate, were detected in Corbicula tissues from either of the two sites where sufficient sample volume was obtained. An FDA Action Level for fish of 0.3 ppm has been established for chlordane. This level is over 7 times the highest level observed (FDA, 1979).

Algal Growth Potential

The ability of the waters of Lake Seminole to support algal growth was measured three times during Phase I of the project. Eleven stations (Table 3) were analyzed during cycle 1 (April), cycle 3 (July), and cycle 5 (September). The complete data base including background water quality analyses of the nitrogen and phosphorus forms and concentrations occurring in the samples assayed for algal growth potential are shown in Appendix G. The AGP results submitted to the Environmental

Protection Agency's Data Storage and Retrieval System (STORET Code 70988) consists of the mean of the average of the 12 day and 14 day growth in the unspiked water. Due to poor growth of test algae after day 10 in the Algal Growth Potential test for the third sampling cycle in July, the test had to be concluded and was rerun. For assays of stations 12, 13 and 15 some of the EDTA spiked replicates were omitted due to insufficient sample volume. In addition, two replicates at station 12 were inadvertently omitted from the counting procedure (see Appendix G). In general the chemical analyses showed that dissolved ortho-phosphate was released from the condensed phosphate fraction during autoclaving. Total soluble inorganic nitrogen (TSIN) also increased slightly in many of the samples due to autoclaving. Most of these increases were due to ammonia released from the organic nitrogen fraction. Total Kjeldahl nitrogen and total phosphorus decreased slightly in most samples after processing.

In general, the condensed phosphorus and organic nitrogen fraction was not used for algal growth. Results of the replicated spiked and unspiked samples counted at 12 and at 14 days agreed within the ± 20 percent precision considered acceptable for the results of this type of assay.

Table 8 summarizes the overall mean algal growth potential and primary limiting nutrient as determined by analysis of nitrate, ortho-phosphate and EDTA spikes. The algal biomass produced in the unspiked lake water is indicative of moderately high to high productivity as defined by Miller *et al.* 1974. These authors surveyed algal growth potential in 49 lakes and set up four categories of relative productivity based on algal growth potential:

Low	0 - 0.1 mg l ⁻¹
Moderate	0.11 - 0.8 mg l ⁻¹
Moderate High	0.8 - 6.0 mg l ⁻¹
High	6.0 - 20.0 mg l ⁻¹

Comparing the algal growth potential categories with trophic state as defined by other characteristics, Miller *et al.* 1974 found that lakes with moderately high or high algal growth potential were classed as eutrophic.

The algal growth potential in the reservoir proper (stations 09, 10, 11, 13, and 15) decreased over the course of the summer. Algal growth potential at station 18, below the dam, followed the pattern of the reservoir stations. Stations 12 and 14, located in relatively isolated areas of the reservoir showed a much lower algal growth potential than the reservoir or the river stations.

The stations located upstream in both the Flint (station 16) and Chattahoochee (stations 06 and 07) Rivers generally had higher algal growth potentials than the stations located in the main body of the reservoir. Station 16, located below the city of Bainbridge, GA, had

TABLE 8
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
SUMMARY OF ALGAL GROWTH POTENTIAL RESULTS FOR
PHASE I (APRIL, 1978 THROUGH NOVEMBER, 1978)

Station Number	Algal Growth Potential (mg l ⁻¹) ¹ and Primary Limiting Nutrient(s) (N or P) ²		
	Cycle 1	Cycle 3	Cycle 5
	April 17-21, 1978	July 17-20, 1978	Sept. 25-27, 78
06	9.53(P)	5.89(N)	7.66(P)
07	8.89(P)	6.19(N)	8.27(N)
09	7.81(P)	4.94(N,P)	4.39(N)
10	8.41(P)	3.47(N)	3.12(N)
11	9.75(P)	5.63(N)	2.81(N)
12	1.45(P)	2.36(P)	1.44(N)
13	11.4(P)	5.22(P)	4.77(P)
14	3.62(P)	2.40(P)	2.11(P)
15	14.9(P)	5.16(P)	8.94(P)
16	13.4(P)	14.7(P)	23.9(N)
18	10.3(P)	5.72(P)	3.29(N)

NOTES:

1. Mean of both 12 and 14 day counts with no nutrients added.
2. (N) = Limited by total soluble inorganic nitrogen
(P) = Limited by available phosphorus

the highest overall algal growth potential of all stations. No toxic responses were evident in the algal assay data at this station even though other biological population measurements (phytoplankton, ATP, zooplankton) suggest that a toxic impact may limit plankton population development in the reach below Bainbridge. If a toxic factor is present at station 16 it is apparently removed by autoclaving and/or filtration.

The results of nitrate, phosphate and EDTA spiked tests show that trace metals do not limit algal growth response. Areal differentiation of the primary limiting nutrient occurred during the course of the summer. During the spring the entire reservoir was phosphorus limited. As shown in Table 8 many areas became nitrogen limited over the course of the summer months. At the present time, the reason for this is uncertain.

Phytoplankton

In general, the Lake Seminole phytoplankton counts show what one would expect (Fogg, 1975) in an impoundment system. During the April sampling period, the water temperature ranged from 18 to 23°C. Diatoms made up the largest percentage (77%) of the phytoplankton association with Melosira distans being the most abundant (Appendix H). Asterionella formosa, which prefers cooler water (Werner, 1977), was also found during April (Appendix H).

As the water temperature increased during the summer (27 to 30°C during the August and September sampling periods) there was a shift in the algal plankton association from diatoms which prefer temperatures below 30°C to blue-green algae which can grow well above 34°C (Werner, 1977). During both August and September, blue-green algae made up 76 percent of the plankton association (Table 9). During this time of the year, there was also a shift from phosphorus to inorganic nitrogen being the limiting factor at many stations (Table 8). Many of the blue-green algae found are capable of nitrogen fixation and would be able to grow well even where nitrogen was limiting.

During the sampling periods, no algal blooms of only one or two species were observed. The lack of a spring and/or fall phytoplankton bloom may have been the result of the high turbidity in the rivers since this is a known effect of high turbidity (Werner, 1977). Instead there was a gradual phytoplankton increase from an average of 1,951 cells/ml in April to 14,729 cells/ml in September. Generally, the reservoir stations (09, 10, 11, and 13) had higher numbers of cells/ml than these overall averages. Stations 01, 02, and 03 on the Chattahoochee River had higher population densities than average also, probably due to high algal densities in the reservoir upstream of these stations. At the other extreme, stations 16 and particularly 17 had drastically lower than average phytoplankton densities (Table

TABLE 9
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
SUMMARY OF PHYTOPLANKTON COUNTS BY MAJOR DIVISION FOR PHASE I
(APRIL, 1978 THROUGH NOVEMBER, 1978)

Taxa	Cycle 1 April 17-21, 1978		Cycle 2 June 5-7, 1978		Cycle 3 July 17-20, 1978		Cycle 4 Aug. 14-17, 1978		Cycle 5 Sept. 25-27, 1978		Cycle 6 Nov. 28-30, 1978	
	Cells/ml ¹	Percent ²	Cells/ml	Percent	Cells/ml	Percent	Cells/ml	Percent	Cells/ml	Percent	Cells/ml	Percent
CHLOROPHYTA	6,360	17	16,973	19	36,753	20	35,227	14	48,048	17	40,614	36
CHRYSOCHYTA	28,812	78	32,976	38	19,141	11	24,790	10	16,461	6	31,053	27
Chrysobryceae	354	1	85	<1	46	<1	260	<1	254	<1	147	<1
Bacillariophyceae	28,453	77	32,668	37	18,913	10	24,351	9	16,110	6	30,815	27
CYANOPHYTA	1,790	5	36,445	42	123,261	68	196,257	76	214,048	76	41,199	36
EUGLENOPHYTA	83	<1	168	<1	410	<1	326	<1	390	<1	252	<1
PYRRHOPHYTA	19	<1	552	1	656	<1	655	<1	901	<1	502	<1
TOTALS	37,064	100	87,114	100	180,221	99	257,255	100	279,848	99	113,620	99

NOTES.

1. Cumulative cell density (Cells/ml) for all stations per cycle.
2. Percent of total cumulative cell density for all stations per cycle.

10). The reason for this is unknown but could suggest either a toxic response from materials entering the Flint River upstream or the Flint River may normally have low phytoplankton populations. A study to further investigate this is currently being proposed.

Of the diatom species found, most were characteristic of water with a pH near 7.0 (Partick and Reimer, 1966, 1975). Only a few frustules of genera characteristic of low pH (acidic water) such as Eunotia, Tabellaria, and Pinnularia were found. These were probably washed into the system from a tributary or in runoff.

A complete listing of phytoplankton cell densities by taxa at each station is given in Appendix H.

Zooplankton

The results of the Lake Seminole zooplankton counts are shown in Appendix I. The data show the distribution of various taxonomic groups and population size at 19 stations within the study site as shown on Figure 1. Table 11 is a summary of the number of taxa and population density at each station during the survey.

The summary table shows evidence of an impact at stations 16 and 17 similar to that shown for phytoplankton. There is a marked reduction in zooplankton at these two stations with station 17 generally having fewer organisms than station 16. As with the phytoplankton, a study to further investigate these low zooplankton densities is currently being proposed.

Zooplankton were most abundant during cycle 5 in September with a mean station concentration of 96 organisms/l. Phytoplankton densities were also greatest during this month (Table 9). During cycles 3 through 6, the Rotifera comprised 50-91 percent of the total zooplankton populations. In April and June however, cladocerans comprised 56 and 32 percent, respectively, of the total zooplankton populations and were the most abundant.

Considering the total number of species shown in Table 11, there is little variation in the number of taxa found at each station during the year.

Immature copepods represented the most abundant form of arthropods. Bosmia and Diaphanosoma were the predominant genera of cladocerans found during the year.

TABLE 10
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
SUMMARY OF PHYTOPLANKTON COUNTS BY STATION FOR PHASE I (APRIL, 1978 THROUGH NOVEMBER, 1978)

Sta. No.	Cycle 1 April 17-21, 1978 - 300 Unit Count				Cycle 2 June 5-7, 1978 - 300 Unit Count			
	Units/ Count	Cells/ Count	Cells/ ml.	No. 1 Taxa	Units/ Count	Cells/ Count	Cells/ ml.	No. 1 Taxa
01	301	501	3,230	24	305	496	4,326	26
02	303	506	2,450	32	315	588	3,746	22
03	303	593	2,541	23	307	453	2,342	25
04	305	449	2,299	22	304	505	2,587	27
05	303	511	1,884	13	303	462	1,259	25
06	304	534	1,738	11	303	481	1,514	32
07	304	469	1,807	24	307	509	1,478	25
08	302	550	1,974	15	301	467	1,878	27
09	303	559	2,331	40	302	1,507	11,944	33
10	304	519	1,995	41	303	1,476	17,947	18
11	302	544	2,544	41	303	932	9,195	29
12	302	610	2,824	55	304	4,263	15,377	50
13	303	524	2,152	53	302	839	2,306	44
14	303	414	1,247	59	302	695	1,724	43
15	303	235	249	61	302	1,338	2,232	35
16	1012	273	379	41	1003	277	244	39
17	902	184	175	49	833	184	164	34
18	302	458	2,241	39	302	796	3,854	31
19	303	510	3,064	38	302	602	3,178	33

- NOTES: 1. See Appendix H.
2. Less than 300 units counted per sample due to paucity of organisms and much silt in sample.
3. Less than 150 units counted per sample due to paucity of organisms and much silt in sample.
4. Minimum of 300 units changed to 150 units via WAR letter to COE on October 10, 1978.
5. No sample collected due to low water conditions and boat and motor problems.

TABLE 10 (continued)

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY SUMMARY OF PHYTOPLANKTON COUNTS BY STATION FOR PHASE I (APRIL, 1978 THROUGH NOVEMBER, 1978)									
Sta. No.	Cycle 3 July 17-20, 1978 - 300 Unit Count					Cycle 4 Aug. 14-17, 1978 - 150 Unit Count			
	Units/ Count	Cells/ Count	Cells/ ml.	No. 1 Taxa		Units/ Count	Cells/ Count	Cells/ ml.	No. Taxa
01	303	1,008	10,539	44		151	1,026	17,883	39
02	305	943	10,067	41		152	950	17,742	39
03	304	756	7,056	39		153	933	21,217	43
04	304	947	10,319	47		155	733	12,773	51
05	302	1,125	8,916	44		151	966	21,964	43
06	304	881	4,305	41		151	897	14,654	43
07	302	1,121	9,769	52		151	1,116	17,156	50
08	302	1,445	8,682	47		150	791	13,262	45
09	315	1,089	12,942	49		151	945	17,653	47
10	301	1,132	12,335	49		152	1,171	22,680	52
11	302 ²	2,867	31,240	49		151	1,047	23,803	48
12	151 ²	371	901	35		151	530	1,246	41
13	304	2,094	15,418	63		333	1,576	27,471	41
14	302	573	1,569	58		151	354	1,515	44
15	302	1,901	16,032	45		152	442	6,794	32
16	304	436	860	44		151 ³	471	698	51
17	202 ²	465	698	42		125 ³	164	144	43
18	302	1,895	11,658	48		151	747	10,848	41
19	303	1,607	7,115	47		151	587	6,979	37

NOTES: 1. See Appendix H.

2. Less than 300 units counted per sample due to paucity of organisms and much silt in sample.
3. Less than 150 units counted per sample due to paucity of organisms and much silt in sample.
4. Minimum of 300 units changed to 150 units via WAR letter to COE on October 10, 1978.
5. No sample collected due to low water conditions and boat and motor problems.

TABLE 10 (continued)
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
SUMMARY OF PHYTOPLANKTON COUNTS BY STATION FOR PHASE I (APRIL, 1978 THROUGH NOVEMBER, 1978)

Sta. No.	Cycle 5 Sept. 25-27, 1978 - 150 Unit Count				Cycle 6 Nov. 28-30, 1978 - 150 Unit Count			
	Units/ Count	Cells/ Count	Cells/ ml.	No.1 Taxa	Units/ Count	Cells/ Count	Cells/ ml.	No.1 Taxa
01	156	959	21,806	40	152	890	12,574	40
02	151	989	24,631	34	152	628	9,955	45
03	152	913	28,087	30	152	524	7,023	49
04	151	756	15,203	43	153	581	5,836	46
05	153	831	24,143	35	153	442	4,913	38
06	155	544	8,623	45	151	560	8,368	42
07	153	632	10,016	40	151	418	7,535	51
08	152	744	13,414	45	151	372	5,893	38
09	156	709	13,726	51	155	522	9,097	37
10	152	1,084	37,797	40	152	459	11,431	46
11	152	1,095	28,630	48	160 ₅	322	11,229	40
12	152	752	2,582	49	-	-	-	-
13	164	803	23,330	34	154	289	6,870	20
14	151	246	1,101	46	153	404	3,524	39
15	152	698	9,606	29	151	235	2,562	13
16	152	224	1,391	29	153	215	361	35
17	153	236	688	34	151	127	163	32
18	153	587	9,901	46	154 ₅	347	6,483	27
19	153	538	5,621	46	-	-	-	-

NOTES:

1. See Appendix H.
2. Less than 300 units counted per sample due to paucity of organisms and much silt in sample.
3. Less than 150 units counted per sample due to paucity of organisms and much silt in sample.
4. Minimum of 300 units changed to 150 units via WAR letter to COE on October 10, 1978.
5. No sample collected due to low water conditions and boat and motor problems.

TABLE 11

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
SUMMARY OF ZOOPLANKTON ORGANISM CONCENTRATIONS AND NUMBER OF TAXA OBSERVED
AT EACH STATION SAMPLED DURING PHASE I (APRIL, 1978 THROUGH NOVEMBER, 1978)

Sta. No.	Cycle 1 April 17-21		Cycle 2 June 5-7		Cycle 3 July 17-20		Cycle 4 Aug. 14-17		Cycle 5 Sept. 25-27		Cycle 6 Nov. 28-30	
	No. 1 Org.	No. 2 Taxa	No. 1 Org.	No. 2 Taxa	No. 1 Org.	No. 2 Taxa	No. 1 Org.	No. 2 Taxa	No. 1 Org.	No. 2 Taxa	No. 1 Org.	No. 2 Taxa
01	43	13	8	14	44	13	68	17	104	15	41	16
02	68	18	5	13	62	15	25	15	89	16	65	18
03	55	11	17	10	27	17	34	19	273	12	51	20
04	32	12	5	7	57	12	22	18	76	18	36	16
05	53	10	8	21	30	15	40	17	134	18	61	17
06	47	10	5	20	37	14	15	17	57	15	69	15
07	29	10	7	15	01	14	38	18	72	11	16	18
08	9	10	11	17	173	14	23	17	80	15	12	19
09	46	10	26	13	92	18	94	19	120	15	38	19
10	27	15	181	15	100	20	62	15	146	16	64	15
11	74	16	77	16	139	19	111	19	97	19	77	16
12	22	13	22	11	34	11	11	13	83	22	--(3)	--(3)
13	8	16	171	17	02	14	208	17	164	16	391	13
14	3	11	16	19	6	19	5	15	16	16	--(4)	--(4)
15	3	25	33	13	53	14	10	17	152	12	62	10
16	2	13	1	13	0.15	0	4	16	2	16	0.26	7
17	0.67	6	0.15	3	0.31	4	0.49	11	3	10	0.14	5
18	79	14	54	15	90	20	37	25	83	15	--(4)	--(4)
19	69	17	66	16	22	20	15	18	70	14	--(4)	--(4)

NOTES: 1. Number of organisms per liter.

2. See Appendix I.

3. Not sampled due to low water levels.

4. Not sampled due to equipment failure (i.e., boat motor problems)

ATP Test Results

The ATP concentration from the depth integrated water sample at each station ranged from 5 ng/l to 563 ng/l. The highest value was found at station 13 during the June 1978 sampling period. The ATP results are shown in Table 12.

Comparison of phytoplankton densities (Table 10) to ATP concentrations (Table 12) at each station shows that the correlation between them is poor. This is because of the great difference in cell size of the organisms. A diatom such as Navicula cryptocephala may be 40 μ long and 18 μ wide in contrast to a blue-green alga such as Microcystis incerta which has spherical 1 μ diameter cells making up each colonial unit. Therefore, one Navicula cell would contain a much greater amount of ATP than a Microcystis cell. For example, at station 12 on the June 1978 trip the cells/ml number is high while the ATP concentration is low. However, upon looking at the organisms at station 12 on this date, it is found that the dominant organisms were Aphanocapsa delicatissima and Merismopedia glauca both of which have very small cells.

Since the test includes ATP from phytoplankton, zooplankton, and bacteria it is reasonable not to expect a good correlation with any one of these separately or with total chlorophyll. Taken all together however, the trend in ATP concentration tends to follow the trends for phytoplankton, zooplankton and chlorophyll. Generally, the highest ATP concentrations were found at the reservoir stations during the summer. Moderate to high values were also found in the Chattahoochee and Apalachicola Rivers with the lowest concentrations found in the Flint River and at station 12.

Macroinvertebrates

The macroinvertebrate sampling results are summarized in Appendix J. The Chattahoochee River (stations 01 through 07) supports sparse populations of a few species of benthos adapted for a shifting sand environment. These were dominated by Corbicula and turbellarians, with chironomids and oligochaetes being consistently present although in low numbers. The oligochaetes were primarily tubificids and a new species of Enchytraeidae (Loden, 1980). The Flint River stations (16 and 17) were also characterized by shifting sands, however, the species associations were different. These were dominated by Corbicula, with oligochaetes, chironomids and turbellarians as sub-dominants. The oligochaetes were primarily tubificids and naidids. Benthic macroinvertebrate populations in the Flint River did not exhibit the depressed characteristics recorded for zooplankton and phytoplankton.

The open-water, "reservoir" stations (08, 09, 10, 11, 13, and 15) have substrates composed mostly of silt, clay, and detritus. Here the dominant benthic organisms were Hexagenia, tubificids and chironomids. Corbicula and Chaoborus were also common.

TABLE 12

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
SUMMARY OF ADENOSINE TRIPHOSPHATE (ATP) CONCENTRATIONS (ng/l)* FOR PHASE I
(APRIL, 1978 THROUGH NOVEMBER, 1978)

Station	Cycle 1 April 17-21	Cycle 2 June 5-7	Cycle 3 July 17-20	Cycle 4 Aug. 14-17	Cycle 5 Sept. 25-27	Cycle 6 Nov. 28-30
01	88	113	168	71	302	76
02	82	< 95	72	129	96	80
03	65	< 95	60	113	113	59
04	141	91	101	92	91	63
05	180	< 95	56	83	160	66
06	100	< 95	104	78	152	90
07	84	102	401	71	79	93
08	78	117	78	90	163	95
09	150	504	59	104	165	126
10	80	496	73	122	141	105
11	82	402	35	72	150	127
12	29	26	39	34	225	*
13	79	563	29	105	168	136
14	58	63	37	86	100	129
15	57	130	471	328	240	96
16	< 33	31	87	64	76	39
17	39	34	5	< 59	68	35
18	< 65	92	75	77	162	115
19	165	217	42	67	40	*

* Not sampled due to low water level and boat problems.

Apalachicola River stations 18 and 19 were located within a gravel bed, a substrate much more conducive to benthic productivity than the sands and silts of the other stations. This area was dominated by Corbicula and Potamya flava. Chironomids, oligochaetes, and turbellarians are also very abundant.

Station 12 was located in a wide, shallow, relatively stagnant area, with a silty sediment high in detritus and dense, submerged aquatic macrophytes. The dominant benthos were Corbicula, oligochaetes, and chironomids. Hexagenia was present but uncommon. It is likely that macroinvertebrates were much denser here than the benthic data indicate, as the abundant aquatic macrophytes could easily support more macroinvertebrates than the sediments.

Station 14 is similar to the reservoir stations in that it has silty sediments high in detritus, and the benthos was dominated by Hexagenia, tubificids, and chironomids, with Corbicula and Chaoborus being common. The number of taxa was much higher, however, possibly due to the very dense submerged macrophytes.

Evenness and Shannon-Weaver diversity values (base 2) were computed for the benthos and are shown in Table 13. The data from the three samples collected at each station were combined and the values computed from that. The values ranged from 0.33 to 3.24. Comparisons between stations show that the diversities for the Chattahoochee River stations were relatively low for stations 01 through 06 and ranged from 0.55 to 1.69 with an overall mean of 1.09. The highest diversity was found at station 14 (Spring Creek) and ranged from 2.65 to 3.24 with an overall mean of 3.03. The remaining stations had moderate diversities including the reservoir stations which had moderate diversities during April but lower diversities in July and September. Evenness values paralleled diversity; where diversity was relatively high, evenness was relatively high, and where diversity was low, evenness was low. "Biomass" estimates also paralleled diversity values.

Of the total 32 Hester-Dendy artificial substrate samplers placed during Phase I work, only nine were recovered. All but one had densities around 5000 or less organisms per square meter, or about 650 organisms per sampling unit (see Table J7 & J8). The exception occurred at Station 18 (cycle 4), where total density was almost 17,000 organisms per square meter. Due to the lack of sampler recovery in the reservoir and in the Chattahoochee River, it is unknown how this high density compares to levels in these areas. It is assumed that it is high due to abundant food (plankton) in the reservoir during August (see Tables 9 & 11) just upstream of station 18. The diversity values of two of the samplers were low (less than 1.7), while the remainder ranged from 2.0 to 3.3 (Table 14).

TABLE 13
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
SUMMARY OF BENTHIC MACROINVERTEBRATE SHANNON-WEAVER
SPECIES DIVERSITY (BASE 2) AND EVENNESS FOR PHASE I (APRIL, 1978 THROUGH NOVEMBER, 1978)

Station	Cycle 1 (April 17-21, 1978)		Cycle 3 (July 17-20, 1978)		Cycle 5 (September 25-27, 1978)	
	Shannon- Weaver Diversity Index	Evenness	Shannon- Weaver Diversity Index	Evenness	Shannon- Weaver Diversity Index	Evenness
01	1.407	0.606	0.551	0.551	1.051	0.374
02	1.420	0.473	0.953	0.411	1.227	0.528
03	0.872	0.550	1.250	0.394	0.576	0.182
04	1.227	0.528	0.591	0.254	0.627	0.223
05	1.179	0.590	1.365	0.486	0.803	0.286
06	1.154	0.447	1.693	0.534	1.650	0.460
07	2.795	0.841	2.143	0.579	1.381	0.416
08	1.452	0.726	1.708	0.514	1.353	0.366
09	2.427	0.677	0.608	0.176	1.905	0.500
10	2.792	0.841	1.416	0.409	1.454	0.518
11	2.298	0.664	1.353	0.427	2.505	0.677
12	2.718	0.593	1.985	0.626	2.551	0.564
13	2.760	0.706	1.526	0.441	0.744	0.248
14	2.653	0.767	3.239	0.681	3.202	0.681
15	2.617	0.707	1.990	0.575	1.330	0.474
16	2.428	0.505	2.247	0.484	2.456	0.614
17	0.991	0.625	2.079	0.520	2.401	0.576
18	0.329	0.142	2.083	0.482	2.733	0.596
19	2.218	0.668	2.135	0.494	1.756	0.449

TABLE 14
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
SUMMARY OF HESTER-DENDY MACROINVERTEBRATE
SHANNON-WEAVER SPECIES DIVERSITY (BASE 2) AND EVENNESS FOR PHASE I
(APRIL, 1978 THROUGH NOVEMBER, 1978)

Station	Cycle 2 June 5-7, 1978		Cycle 4 Aug. 14-17, 1978	
	Shannon-Weaver Species Diversity		Shannon-Weaver Species Diversity	
	Index	Evenness	Index	Evenness
01	--	--	--	--
02	--	--	--	--
03	--	--	--	--
04	--	--	--	--
05	--	--	--	--
06	--	--	--	--
07	3.101	0.717	--	--
09	--	--	--	--
11	--	--	--	--
12	2.367	0.712	--	--
13	2.001	0.512	--	--
14	--	--	3.327	0.770
15	3.048	0.718	--	--
16	--	--	1.685	0.390
18	2.935	0.751	1.312	0.395
19	2.934	0.751	--	--

NOTE:

(--) Indicates Hester-Dendy Artificial Substrate Sampler was not recovered.

Macrophytes

Aquatic macrophytes are probably the most conspicuous feature of Lake Seminole. Reservoir personnel have identified over 700 taxa of macrophytes from aquatic situations. Approximately 73 taxa were recorded in this survey to be common to abundant (Appendix M). They cover an estimated 40.1 percent of the area of the reservoir (Table 15). They have become a severe nuisance in many locations such as access channels and boat ramps. The distribution of aquatic macrophytes in Lake Seminole is shown in Figure 4 and categorized by location in Table 16.

Submersed vegetation occurs almost everywhere the water is transparent enough to allow sunlight to penetrate to the bottom. Emergent vegetation occurs almost everywhere the water is shallow enough for them to become established. Where the water is too turbid or too deep, floating plants have the potential to become very dense. Intensive spraying of herbicides during 1978 kept the floating plants to a minimum. However, in the Flint River where hyacinths were reduced by herbicide spraying, broken patches of floating algal mats were present over large areas. Spraying has also been conducted over the last few years in a number of small access channels and canals. In every instance, though, aquatic macrophytes were quickly re-established, and by the middle of the following growing season the macrophytes were once again of nuisance proportions. For this reason, and due to the very high costs, spraying has been conducted generally only on selected areas of high cultural use such as boat ramps and access channels. The morphometry of the reservoir and the relatively high nutrient inputs virtually assure that aquatic macrophytes will be a major management problem for the remainder of the reservoir's life.

TABLE 15
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
ESTIMATED COVERAGE OF AQUATIC MACROPHYTE ON
LAKE SEMINOLE FROM 1961 THROUGH 1978

<u>Year</u>	<u>Estimated Coverage (Acres)</u>	<u>Percent of Total (%)</u>
1961	6,897	18.4
1971	9,709	25.9
1972	5,542	14.8
1973	14,076	37.5
1974	15,126	40.3
1975	20,580	54.9
1977	23,075	61.5
1978	15,001	40.1

NOTE:

1. Values for 1961 through 1977 are estimated total acreages of the 49 most common taxa found by the U. S. Army Corps of Engineers personnel at Lake Seminole, in their series of General Aquatic Plant Surveys of Lake Seminole. 1978 values are total coverage of all aquatic macrophytes found by Water and Air Research, Inc. Differences in methodologies probably accounts for the reduction shown for 1978.

TABLE 16
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
COVERAGE OF AQUATIC MACROPHYTES ON LAKE SEMINOLE,
CATEGORIZED BY LOCATION SURVEYED.

<u>Location</u>	<u>Acreage of Abundant¹ Vegetation</u>	<u>Acreage of Intermittent² Vegetation</u>	<u>Total Acreage of Aquatic Macrophytes by Area</u>
Chattahoochee River Area	1,432	905	2,328
Flint River Area	121	1,148	1,269
Apalachicola River Area	0 ³	0	0
Reservoir Area	4,890	2,930	7,820
Spring Creek Area	2,179	96	2,275
<u>Fish Pond Drain</u>	<u>1,309</u>	<u>0</u>	<u>1,309</u>
Totals	9,922	5,079	15,001

NOTES:

- 1 Abundant: macrophytes cover 10 percent or more of the substrate area.
- 2 Intermittent: macrophytes cover less than 10 percent of the substrate area, usually in scattered clumps.
- 3 No intermittent vegetation; substrate either bare or abundantly vegetated.

FIGURE 4
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
DISTRIBUTION OF AQUATIC MACROPHYTES DURING PHASE I
(APRIL, 1978 THROUGH NOVEMBER, 1978)

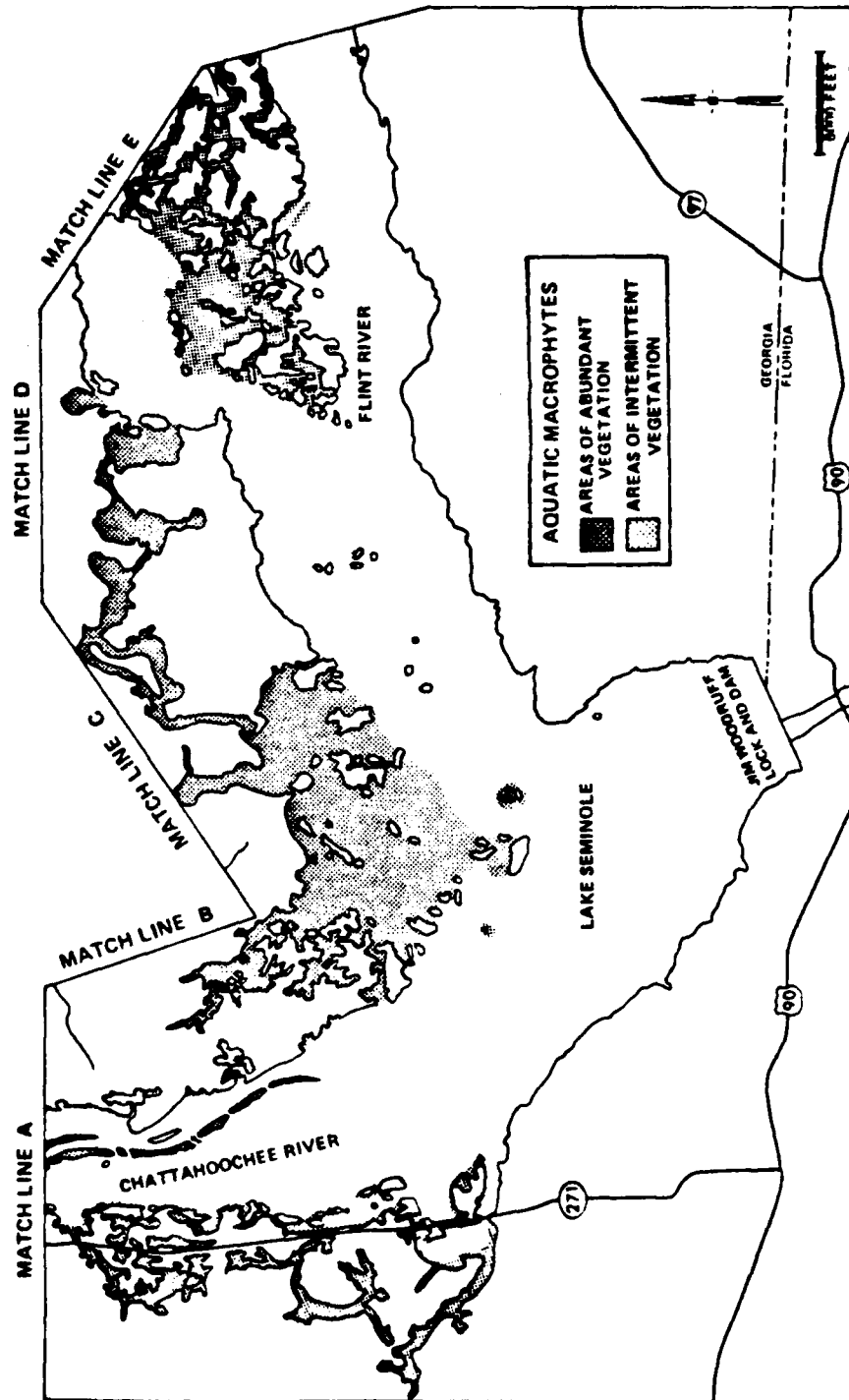
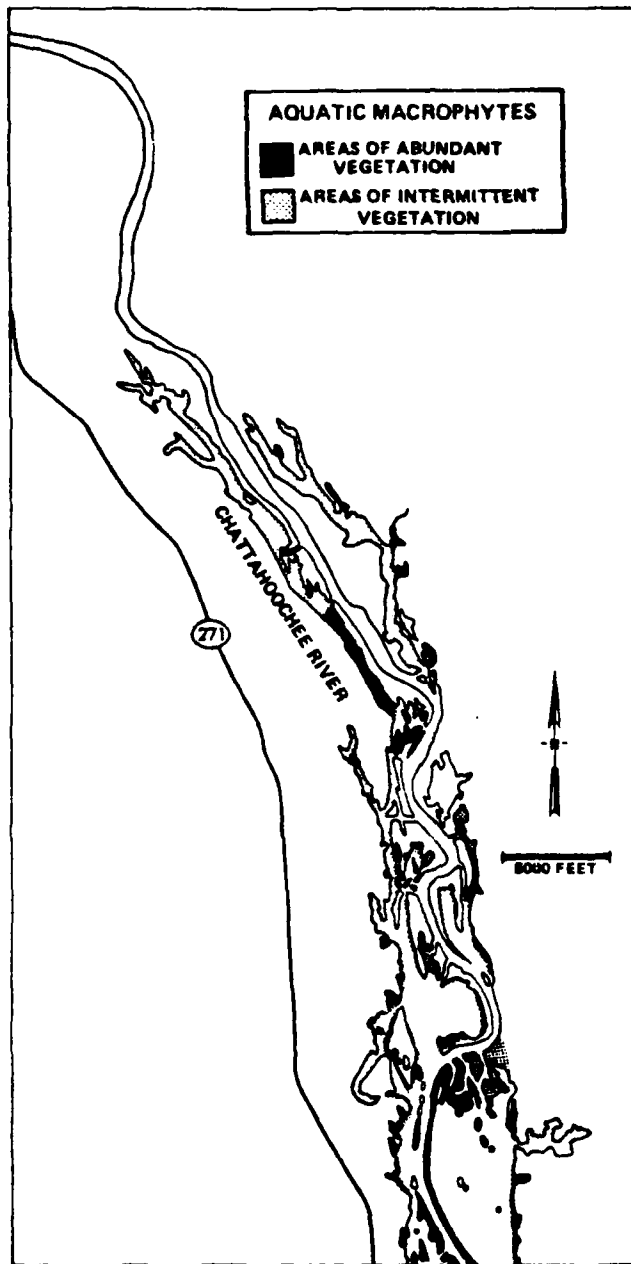


FIGURE 4 (continued)



MATCH LINE A

FIGURE 4 (continued)

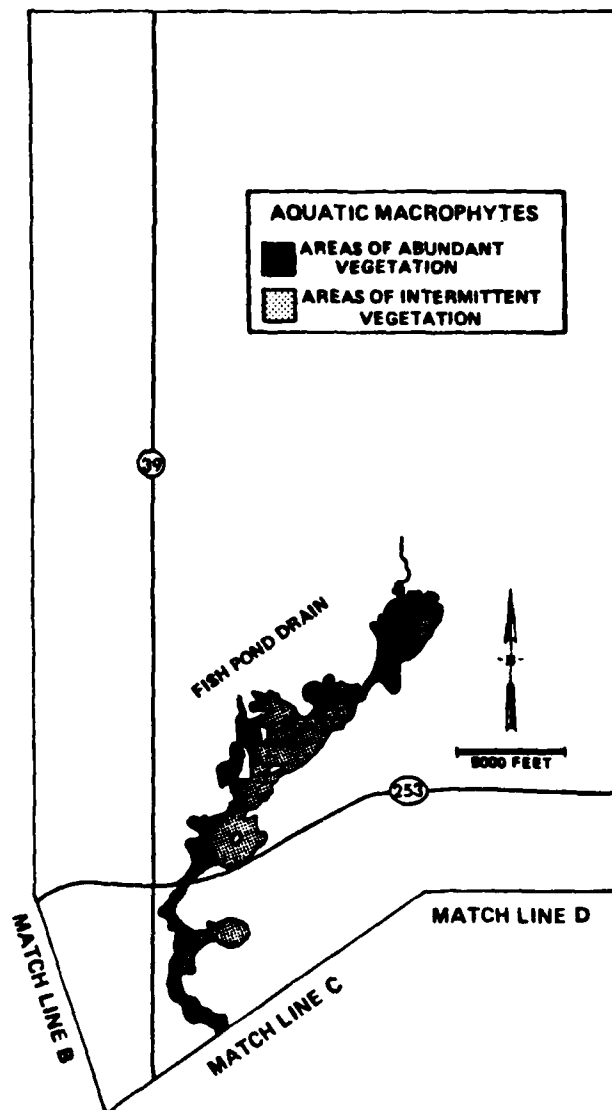


FIGURE 4 (continued)

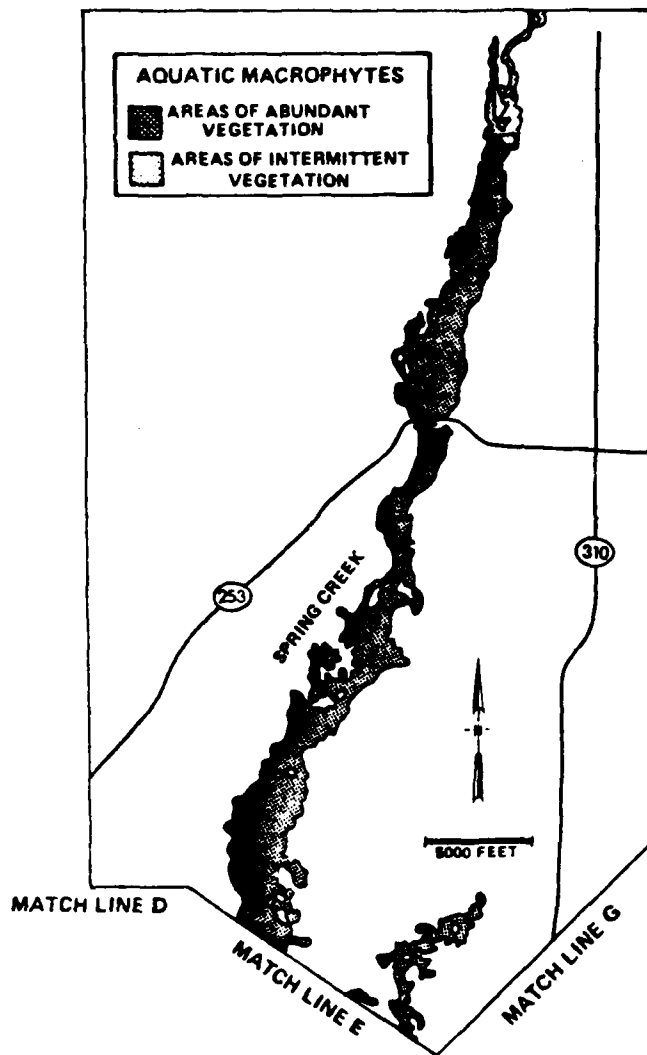
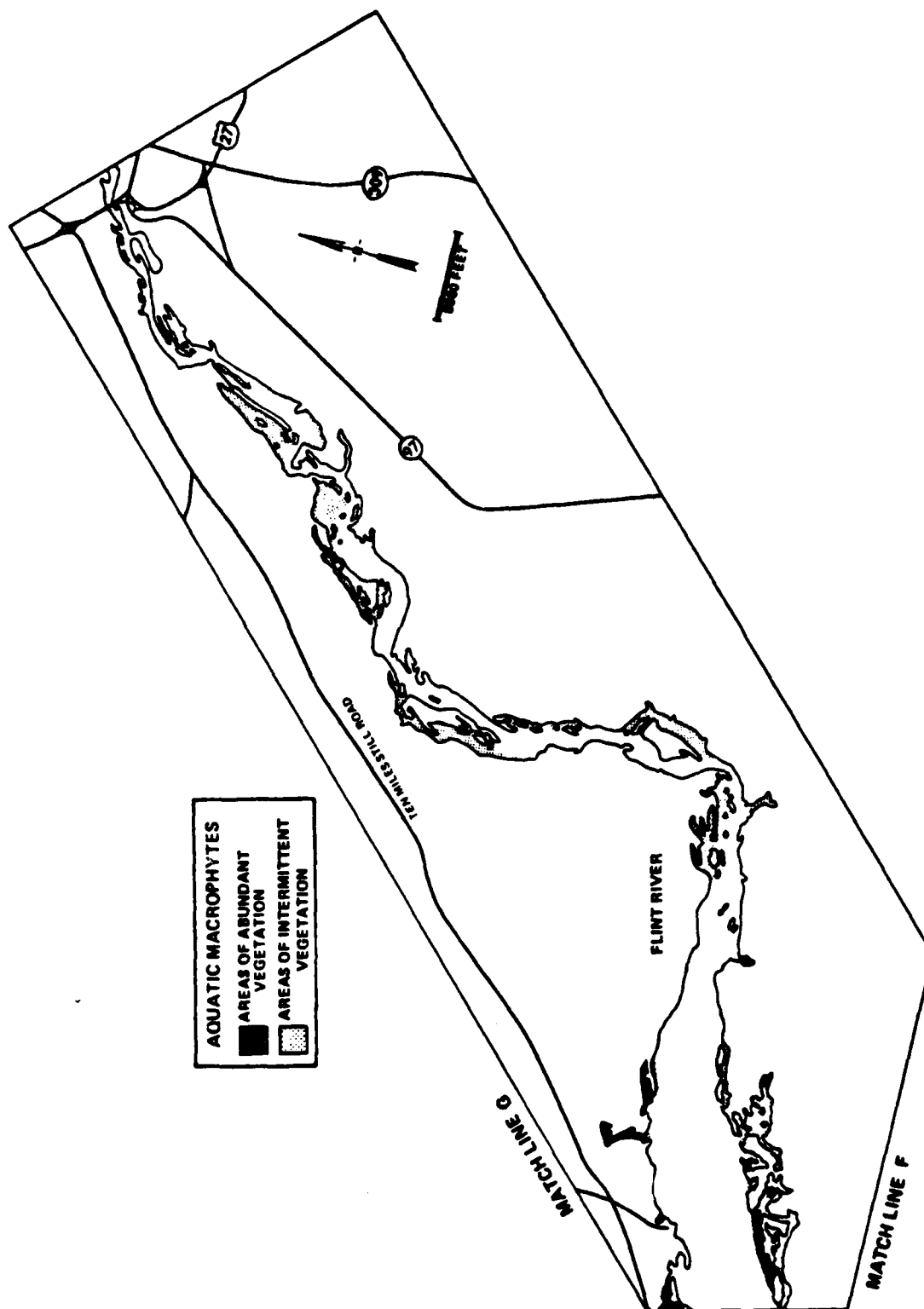


FIGURE 4 (continued)



SUMMARY

The purpose of Phase I of the Lake Seminole Water Quality Management Study was the establishment of a comprehensive water quality, sediment, and biological data base at various sites within the impoundment, in the backwater stretches of the major tributaries, and immediately downstream of the outfall on the Apalachicola River. This data base is to be utilized for the combined purposes of future reference, guidance in the improvement of reservoir operations, facilitation of coordination with state agencies in the implementation of watershed pollution control measures, and identification of significant water quality problems.

Meteorological, hydrological, water quality, sediment, and biological data were obtained at a total of 19 main sampling stations in Lake Seminole, the Chattahoochee River, the Flint River, Spring Creek, Fish Pond Drain, and the Apalachicola River during 6 sampling cycles from April 17, 1978 through November 30, 1978. Limited sampling and analyses were also performed at 5 special sampling sites at various times during the course of this study. Biological sampling included bacteria, phytoplankton, zooplankton, macroinvertebrates, and aquatic plants.

Average monthly flows through the impoundment ranged from 221 m³/sec during November to 1005 m³/sec during May. During the study period, the Chattahoochee River accounted for 60-80 percent of the flow into the impoundment. As a result of operational procedures at the Walter F. George Lock and Dam on the Chattahoochee River upstream of Lake Seminole, flows through the Chattahoochee River impoundment arm exhibited considerable short term variation.

In general, each of the major impoundment arms of Lake Seminole tended to be well-mixed both laterally and vertically. Little lateral variation and essentially no vertical stratification was observed in temperature, dissolved oxygen, pH, or oxidation-reduction potentials during either spring (April) or summer (August) sampling cycles during which extensive *in situ* sampling was performed. Although surface warming at most lake stations was evident during the early summer (June and July), the shallowness of the impoundment prevented the development of a well-defined thermocline.

Average turbidity levels in the Chattahoochee River were approximately three times those in the Flint River with suspended solids, Secchi disk, and percent light transmittance exhibiting the same general areal pattern over the course of the study. Concentrations of most of the other inorganic water quality parameters, except nutrients, showed no significant areal or chronological patterns. Concentrations of all sampled metals, except iron, were generally low

with no obvious areal patterns. Concentrations of total iron at most stations during the spring and early summer months exceeded the EPA criterion of 1.0 mg/l for freshwater aquatic life.

Total inorganic nitrogen ranged from 0.30 to 0.75 mg/l at Flint River stations to 0.08 to 0.53 mg/l at Chattahoochee River stations with highest concentrations in the spring, decreasing to a mid- or late-summer minimum and increasing again in the fall. Total phosphorus concentrations were generally highest during June and July and lowest in the fall. In June, the values were highest in the Chattahoochee River stations (mean of 0.23 mg/l) but in July they were higher in the reservoir stations (mean of 0.25 mg/l). In the Apalachicola River, the values were comparable to those in the reservoir with the values at station 19 being only slightly higher during cycles 1-3. In general, based on nutrient content, the waters of Lake Seminole tended to be moderately high to highly productive with respect to the production of algal biomass. On the basis of potential algal production alone, the system would be classed as eutrophic. During the spring, the system was phosphorus limited, with many areas becoming nitrogen limited as the summer progressed. Trace metals did not appear to limit algal growth.

Phytoplankton populations were characteristic of a system of this type. Algal blooms consisting of only one or two dominant species were not observed and may be a result of the relatively high turbidity of the system. Algal populations tended to increase gradually during the study from an average of 2000 cells/ml during April to over 14,500 cells/ml in September, with the corresponding shift in the plankton associations from diatoms to blue-green algae attributable to temperature as well as nutrient content. In general, the lake stations and the uppermost Chattahoochee River stations tended to exhibit higher than average cell densities. Stations 16 and 17 on the Flint River had extremely low phytoplankton densities. It is presently unknown if this is a toxic response or if these low densities are simply normal for the Flint River.

Zooplankton assemblages exhibited little variation in the number of taxa found at each station during the year. However, zooplankton densities were greatest during cycle 5 in September (overall mean of 96.3 organisms/l). At stations 16 and 17 there was a reduction in zooplankton densities similar to that shown for phytoplankton. Generally, station 17 had fewer organisms than station 16 and a study to further investigate the low zooplankton and phytoplankton concentrations is currently being proposed since the reason for these low densities is unknown. Copepods and cladocerans represented the most abundant arthropods with immature copepods being the most common.

The bacteriological quality in Lake Seminole ranged from good in the upper Chattahoochee River stations and at the lake stations where fecal coliform levels were generally below 100/100 ml, to poor at station 17 in the Flint River in the vicinity of Bainbridge where fecal coliform concentrations in excess of 2,500/100 ml were observed in June. The fecal coliform to fecal streptococci ratios tend to indicate that human sources of contamination predominated in the Flint River and agricultural sources predominated in the Chattahoochee River.

ATP concentrations tended to follow the same general trends as phytoplankton, zooplankton, and chlorophyll. However, due in part to differences in total biomass, only a poor correlation existed between individual assemblages.

Bottom sediments ranged from relatively clean sands in the Chattahoochee, Flint, and Apalachicola Rivers to sand and sandy loams in the impoundment itself. The organic and nutrient contents tended to be related to the percent fines. Heavy metals concentrations were generally low. The concentration of most of the pesticides analyzed were below detectable limits, although levels of the polychlorinated biphenyls (PCB) Aroclor 1254 and 1260 and the herbicide 2-4 D were found in sediments taken at most stations in the Chattahoochee River and impoundment at concentrations as high as 753 $\mu\text{g/kg}$ dry weight, 419 $\mu\text{g/kg}$ dry weight, and 569 $\mu\text{g/kg}$ dry weight, respectively.

Benthic macroinvertebrate populations tended to be closely associated with the nature of the supporting substrate. Chattahoochee and Flint River stations exhibited sparse populations adapted to a shifting sand environment, although the species associations were dissimilar. Lake stations supported populations adapted to a substrate composed of finer sands, silts, and clays. The sampling sites in the Apalachicola River were characterized by a coarser, more productive substrate. Benthic diversities ranged from relatively low in the Chattahoochee River to moderate in the Flint and Apalachicola Rivers with the diversities in the reservoir varying seasonally from moderate to low, with lowest diversities occurring towards late summer. Evenness and biomass tended to closely parallel diversity. Recovered *Corbicula* were analyzed for 7 heavy metals and 18 pesticides although sufficient tissue was obtained at only two stations for complete pesticide analyses.

Aquatic macrophytes constituted the most conspicuous feature of Lake Seminole. They were a severe nuisance in a number of locations such as access channels and boat ramps. Emergent and/or floating macrophytes covered over 40 percent of the total reservoir surface area and nearly 100 percent of the surface area with a depth less than 2 meters. Approximately 73 taxa were identified during this study as being either common or abundant.

RECOMMENDATIONS FOR FUTURE STUDIES

The following are areas which deserve consideration for future studies.

1. Macrophytes

Aquatic macrophytes are well established on over 40 percent of Lake Seminole, and cover almost 100 percent of the portion that is less than two meters deep. Since the macrophytes are not limited by nutrients or grazing, it is likely that they will continue to increase in extent until blocked by riverine currents or water too turbid to transmit sunlight. Even then, expansion may continue although at a reduced rate, since siltation continues to slowly fill the reservoir. Also, aquatic vegetation increases the rate of siltation (and organic matter deposition), thus increasing the rate of macrophyte expansion. Through this process, aquatic macrophytes may eventually cover the entire lentic portion of the reservoir.

This situation is a result of several factors: (1) The reservoir is generally very shallow, and in most places the water is sufficiently transparent to allow insolation to penetrate to the bottom of the water column. (2) The availability of nutrients to macrophytes from upstream sources is essentially unlimited. (3) The number of macrophyte species is so diverse, that even if a "perfect" herbicide could be developed to completely eliminate a species from the reservoir, there are dozens of species that would be able to quickly invade and repopulate the area. This is readily borne out by the experiences of reservoir personnel (D. Vickers, pers. comm.), where choked access channels were sprayed one year for Species A, and the following year they were choked with Species B.

Past management practices have been limited to small areas of high user demand due to the high economic costs. In 1978, for example, about 1,080 acres were sprayed or chopped for an estimated total cost of \$76,095. This is an average cost of \$70.46 per acre. Also, only a small portion of the areas needing plant control were treated. Lake Seminole Reservoir personnel are now asking for \$195,700 to treat 2,000 acres in 1979 (\$98.35 per acre), and \$309,525 to treat 3,050 acres in 1980 (\$101.48 per acre).

Clearly, these expensive measures can provide only temporary relief from the symptoms of greater problems. It is quite possible that a more lasting and less expensive solution(s) exists. Water level drawdowns, for instance, have proven very beneficial in various lakes in Florida. The Lake Seminole Reservoir is a far more complex system physically than the average lake, however. A combination of several

kinds of treatments may be necessary in this shallow, nutrient-rich and most botanically diverse reservoir.

2. Intensive Study of Flint River

Analysis of the data, throughout Phase I, identified a marked reduction in phytoplankton, zooplankton, chlorophyll, and ATP levels in the Flint River at miles 24 and 29 (stations 16 and 17, respectively) near Bainbridge, Georgia. It would appear that the river is continuously stressed from a source upstream from station 17 unless the Flint River naturally has low plankton densities. Since station 17 represents the northern extremity of the present study, the limits of these conditions were not defined. The cause of this stress is unknown, but it does not appear to be physical in nature -- no gradients were observed with temperature, dissolved oxygen, conductivity, or pH from stations 15 through 17. Therefore, a study should be conducted to determine the cause, extent, and magnitude of this possible environmental impact, which is identified by the plankton density decreases.

This has the potential for an ideal study that would result in the full identification of a specific environmental impact. It is hoped that this project can be implemented as soon as possible so that the proposed studies can be integrated into the ongoing project and that the cause-effect relationships of this impact can be established.

PARTICIPATING STUDY TEAM
Water and Air Research, Inc.

A project team of engineers, biologists, chemists, and technicians conducted the study. The overall project manager was Dr. J. H. Sullivan, Jr., with the assistance of Mr. R. Blum, Mr. B. Bailey and Mr. J. Nichols in logistics, data analysis and field activities. Dr. H. D. Putnam served as coordinator and advisor for the biological activities. Mr. B. Pruitt and Mr. M. Hein were responsible for the field and in-house biologic efforts with the assistance of Ms. P. Dickinson.

Mr. B. Bailey was responsible for the coordination of field water quality sampling and reporting. Analytical procedures were supervised by Ms. C. Hackett and Dr. M. Keirn with the assistance of Ms. Maria Neves, Mr. L. Larson, Mr. P. Nathanson, Mr. M. Timpe and Ms. P. Dickinson. Dr. M. Keirn coordinated the Algal Growth Potential test work. Mr. J. Nichols supervised and coordinated all the computerized data handling with the assistance of Mr. M. Timpe. Field personnel included Mr. R. Blum, Mr. B. Bailey, Mr. B. Pruitt, Mr. M. Hein, Mr. M. Timpe and Mr. M. Putnam. The final copy was produced by Ms. J. Dorsey, Ms. P. Paschall, Ms. D. Nickelson and Ms. C. Pagnozzi.

U. S. Army Corps of Engineers

Mobile District

Mr. Joseph Boda, Environmental Engineer, was the contract manager responsible for contractual compliance, data reliability, and final report acceptability. Dr. Diane Findley, Ecologist, provided biological support to substantiate data accuracy and report quality.

South Atlantic Division Laboratory

Mr. James Nowland, Chemist, and Mr. Herbert Miller, Jr., Chemist provided assistance on chemical data reliability.

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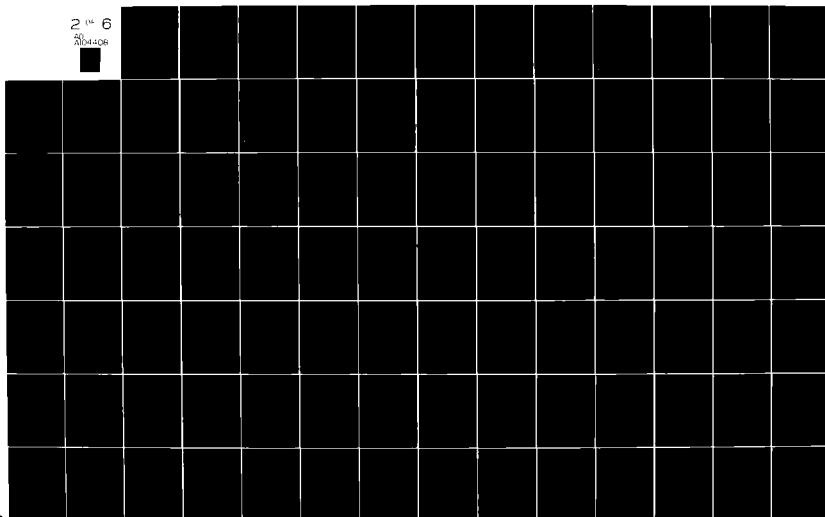
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APPENDIX A
STREAM FLOWS

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TABLE A-1
STREAM FLOWS - MONTHLY AVERAGES (cfs)

	Chattahoochee ¹ River at Andrews Lock & Dam	Flint River ¹ at Newton, Ga.	Spring Creek ¹ near Iron City, Ga.	Jim ² Woodruff Lock & Dam
April	10906	7349	NA	24777
May	18383	9711	NA	35488
June	8850	4468	NA	17181
July	6086	2821	NA	11860
August	11769	4311	440	18979
September	7679	2047	NA	10920
October	6482	2118	43	9439
November (through 5th)	4554	2114	33	7821

Source:

¹USGS, Water Resources Division, Doraville, Georgia

²U.S. Corps of Engineers, Mobile, Alabama

Note: NA = Data not available.

TABLE A-2
DAILY AVERAGE STREAM FLOWS (cfs)
CYCLE 1

	Chattahoochee ¹ River at Andrews Lock & Dam	Flint River ¹ at Newton, Ga.	Jim Woodruff ² Lock & Dam
April 9	1850	6160	12395
10	6330	4460	14478
11	6880	4990	14481
12	7000	5280	14595
13	23100	5360	32431
14	31800	7470	43877
15	12700	9460	35549
16	2380	10300	21042
17	11800	10500	21340
18	18400	10400	41645
19	31520	10100	46749
20	30700	10200	53337
21	23200	10500	42192
22	10900	10500	27461

Source:

¹USGS, Water Resources Division, Doraville, Georgia

²U.S. Corps of Engineers, Mobile, Alabama

Note: Daily Average Flows were not available for Spring Creek.

TABLE A-3
DAILY AVERAGE STREAM FLOWS (cfs)
CYCLE 2

		Chattahoochee ¹ River at Andrews Lock & Dam	Flint River ¹ at Newton, Ga.	Jim Woodruff ² Lock & Dam
May	28	962	3690	13417
	29	9500	3340	14087
	30	10310	4530	14001
	31	10292	5190	14127
June	1	10332	500	14659
	2	10531	4070	16971
	3	2255	4360	18947
	4	3817	5070	16991
	5	13231	6220	17060
	6	12639	6160	19891
	7	10349	6260	28056
	8	16758	5600	26296
	9	24823	5310	33345
	10	9446	5430	31549

Source:

¹USGS, Water Resources Division, Doraville, Georgia

²U.S. Corps of Engineers, Mobile, Alabama

Note: Daily Average Flows were not available for Spring Creek.

TABLE A-4
DAILY AVERAGE STREAM FLOWS (cfs)
CYCLE 3

		Chattahoochee ¹ River at Andrews Lock & Dam	Flint River ¹ at Newton, Ga.	Jim Woodruff ² Lock & Dam
July	9	1062	2500	11190
	10	8660	2370	11604
	11	9268	2620	11536
	12	9352	2860	11287
	13	9284	2870	10904
	14	9144	2830	11632
	15	1461	2770	11606
	16	1003	3150	10899
	17	8110	3640	10920
	18	9390	4560	11413
	19	6470	4250	13902
	20	5187	3650	13980
	21	7277	3520	11493
	22	2040	3560	11863

Source:

¹USGS, Water Resources Division, Doraville, Georgia

²U.S. Corps of Engineers, Mobile, Alabama

Note: Daily Average Flows were not available for Spring Creek.

TABLE A-5
DAILY AVERAGE STREAM FLOW (cfs)
CYCLE 4

		Chattahoochee ¹ River at Andrews Lock & Dam	Flint River ¹ at Newton, Ga.	Jim Woodruff ² Lock & Dam
Aug.	6	1231	3940	11168
	7	12200	3530	14189
	8	11700	4110	14130
	9	13000	3450	23713
	10	21300	4160	25798
	11	23500	4420	28836
	12	12700	5950	24004
	13	2470	7010	20660
	14	12400	7120	22189
	15	11900	7640	25036
	16	15100	7280	24517
	17	15100	6570	23261
	18	15200	5370	26195
	19	6940	4156	18788

Source:

¹USGS, Water Resources Division, Doraville, Georgia

²U.S. Corps of Engineers, Mobile, Alabama

Note: Daily Average Flows were not available for Spring Creek.

TABLE A-6
DAILY AVERAGE STREAM FLOW (cfs)
CYCLE 5

	Chattahoochee ¹ River at Andrews Lock & Dam	Flint River ¹ at Newton, Ga.	Jim Woodruff ² Lock & Dam
Sept. 17	4600	1730	10579
18	9980	1950	10578
19	9970	2300	10563
20	10200	2380	10582
21	8220	2360	10029
22	4000	2480	9870
23	964	2410	9444
24	1377	1900	9870
25	8185	1680	9444
26	8998	1800	9654
27	8767	1610	9582
28	8792	1570	9368
29	8690	1670	9329
30	1601	1690	9350

Source:

¹USGS, Water Resources Division, Doraville, Georgia

²U.S. Corps of Engineers, Mobile, Alabama

Note: Daily Average Flows were not available for Spring Creek.

TABLE A-7
DAILY AVERAGE STREAM FLOW (cfs)
CYCLE 6

		Chattahoochee ¹ River at Andrews Lock & Dam	Flint River ¹ at Newton, Ga.	Jim Woodruff ² Lock & Dam
Nov.	19	1000	NA	7579
	20	4170		7475
	21	6030		7352
	22	5830		7575
	23	6030		7575
	24	5990		7332
	25	2500		7390
	26	928		7254
	27	3890		7349
	28	6420		7432
	29	6140		7461
	30	6220		7695
Dec.	1	4000		NA
	2	986		NA

Source:

¹USGS, Water Resources Division, Doraville, Georgia

²U.S. Corps of Engineers, Mobile, Alabama

Note: Daily average flows were not available for Spring Creek or the Flint River.

APPENDIX B
METEOROLOGICAL DATA

LIST OF TABLES

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TABLE B-1

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I. CYCLE 1
 MISCELLANEOUS DATA

PARAMETER NAME (UNITS)	STATION 01 4/17/78	STATION 02 4/18/78	STATION 03 4/19/78	STATION 04 4/19/78	STATION 05 4/17/78	STATION 06 4/18/78	STATION 07 4/17/78
METEOROLOGICAL DATA							
CLOUD COVER (PERCENT)	20.	100.	100.	100.	30.	100.	0.
WIND VELOCITY (MPH)	5.0	5.0	0.0	0.0	5.0	7.5	7.5
WIND DIRECTION (DEG FM TRUE N. CW)	160	210	--	--	150	180	240

PARAMETER NAME (UNITS)	STATION 08 4/19/78	STATION 09 4/19/78	STATION 10 4/20/78	STATION 11 4/20/78	STATION 12 4/20/78	STATION 13 4/20/78	STATION 14 4/20/78
METEOROLOGICAL DATA							
CLOUD COVER (PERCENT)	0.	0.	1.	0.	10.	2.	5.
WIND VELOCITY (MPH)	10.0	5.0	10.0	5.0	7.5	7.5	5.0
WIND DIRECTION (DEG FM TRUE N. CW)	250	240	300	340	300	280	310

PARAMETER NAME (UNITS)	STATION 15 4/21/78	STATION 16 4/21/78	STATION 17 4/21/78	STATION 18 4/19/78	STATION 19 4/19/78	STATION 20 4/17/78
METEOROLOGICAL DATA						
CLOUD COVER (PERCENT)	0.	0.	0.	0.	0.	30.
WIND VELOCITY (MPH)	5.0	5.0	5.0	10.0	10.0	10.0
WIND DIRECTION (DEG FM TRUE N. CW)	260	0	0	220	210	170

TABLE B-2a

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 COPPS OF ENGINEERS (CONTRACT DACW01-79-C-0101) PHASE I, CYCLE 2
 MISCELLANEOUS DATA

PARAMETER NAME (UNITS)	STATION 01 6/ 7/78	STATION 02 6/ 7/78	STATION 03 6/ 7/78	STATION 04 6/ 7/78	STATION 05 6/ 7/78	STATION 06 6/ 7/78
METEOROLOGICAL DATA						
AIR TEMPERATURE (DEG C)	32.0	31.0	31.0	28.0	31.0	29.0
CLOUD COVER (PERCENT)	50	70	70	50	20	20
WIND VELOCITY (MPH)	7.5	7.5	5.0	5.0	7.5	5.0
WIND DIRECTION (DEG FM TRUE N. CW)	160	190	210	170	150	180
						140
PARAMETER NAME (UNITS)	STATION 08 6/ 6/78	STATION 09 6/ 6/78	STATION 10 6/ 6/78	STATION 11 6/ 6/78	STATION 12 6/ 7/78	STATION 13 6/ 5/78
METEOROLOGICAL DATA						
AIR TEMPERATURE (DEG C)	29.0	33.0	33.0	29.0	32.0	29.0
CLOUD COVER (PERCENT)	100	80	80	70	30	95
WIND VELOCITY (MPH)	7.5	0.0	0.0	5.0	2.5	5.0
WIND DIRECTION (DEG FM TRUE N. CW)	190	--	--	20	200	190
						220
PARAMETER NAME (UNITS)	STATION 15 6/ 5/78	STATION 16 6/ 5/78	STATION 17 6/ 5/78	STATION 18 6/ 6/78	STATION 19 6/ 6/78	STATION 20 6/ 7/78
METEOROLOGICAL DATA						
AIR TEMPERATURE (DEG C)	28.0	29.0	28.0	30.0	30.0	31.0
CLOUD COVER (PERCENT)	95	95	95	50	60	50
WIND VELOCITY (MPH)	5.0	7.5	2.5	0.0	0.0	5.0
WIND DIRECTION (DEG FM TRUE N. CW)	230	240	330	--	--	210
						140

TABLE B-2b

PARAMETER NAME (UNITS)	STATION D1 6/ 5/78	STATION R2 6/ 5/78	STATION F2 6/ 6/78
METEOROLOGICAL DATA			
AIR TEMPERATURE (DEG C)	27.0	27.0	33.0
CLOUD COVER (PERCENT)	70.	85.	90.
WIND VELOCITY (MPH)	5.0	2.5	0.5
WIND DIRECTION (DEG FM TRUE N. CW)	230	30	--

TABLE B-3a

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
 CORPUS OF ENGINEERS (CONTRACT DACW11-79-C-3101) PHASE 1, CYCLE 3

MISCELLANEOUS DATA

PARAMETER NAME (UNITS)	STATION 01 7/17/78	STATION 02 7/13/78	STATION 03 7/19/78	STATION 04 7/13/78	STATION 05 7/13/78	STATION 06 7/20/78	STATION 07 7/20/78
METEOROLOGICAL DATA							
AIR TEMPERATURE (DEG C)	33.0	32.0	32.0	33.0	32.0	26.0	29.0
CLOUD COVER (PERCENT)	10	20	10	4	0	0	5
WIND VELOCITY (MPH)	5.0	5.0	3.0	0.0	0.0	2.5	10.0
WIND DIRECTION (DEG FM TRUE N. CW)	130	30	--	--	--	20	70
PARAMETER NAME (UNITS)	STATION 08 7/18/78	STATION 09 7/18/78	STATION 10 7/18/78	STATION 11 7/13/78	STATION 12 7/13/78	STATION 13 7/17/78	STATION 14 7/13/78
METEOROLOGICAL DATA							
AIR TEMPERATURE (DEG C)	32.0	33.0	32.0	31.0	29.0	34.0	30.0
CLOUD COVER (PERCENT)	60	50	30	30	100	10	40
WIND VELOCITY (MPH)	12.0	10.0	0.0	0.0	0.0	0.0	2.5
WIND DIRECTION (DEG FM TRUE N. CW)	230	180	--	--	--	--	10
PARAMETER NAME (UNITS)	STATION 15 7/17/78	STATION 16 7/17/78	STATION 17 7/17/78	STATION 18 7/13/78	STATION 19 7/19/78	STATION 20 7/19/78	STATION 21 7/13/78
METEOROLOGICAL DATA							
AIR TEMPERATURE (DEG C)	32.0	30.0	29.0	31.0	29.0	32.0	33.0
CLOUD COVER (PERCENT)	60	50	70	40	0	10	10
WIND VELOCITY (MPH)	0.0	0.0	0.0	0.0	0.0	2.5	0.0
WIND DIRECTION (DEG FM TRUE N. CW)	--	--	--	--	--	350	--

TABLE B-3b

PARAMETER NAME (UNITS)	STATION R1 7/16/73	STATION R2 7/17/73	STATION R3 7/19/73
METEOROLOGICAL DATA			
AIR TEMPERATURE (DEG C)	29.0	33.0	31.0
CLOUD COVER (PERCENT)	10	20	40
WIND VELOCITY (MPH)	0.0	0.0	7.1
WIND DIRECTION (DEG FM TRUE N. CW)	--	--	140

TABLE B-4a

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I, CYCLE 4

MISCELLANEOUS DATA

PARAMETER NAME (UNITS)	STATION 01 8/17/78	STATION 02 8/17/78	STATION 03 8/17/78	STATION 04 8/17/78	STATION 05 8/17/78	STATION 06 8/17/78	STATION 07 8/16/78
METEOROLOGICAL DATA							
AIR TEMPERATURE (DEG C)	31.0	32.0	32.0	33.0	33.0	33.0	34.0
CLOUD COVER (PERCENT)	5.0	10.0	50.0	60.0	80.0	40.0	50.0
WIND VELOCITY (MPH)	5.0	2.5	0.0	0.0	0.0	0.0	0.0
WIND DIRECTION (DEG FM TRUE N. CW)	80	120	--	--	--	--	--
PARAMETER NAME (UNITS)	STATION 08 8/16/78	STATION 09 8/16/78	STATION 10 8/15/78	STATION 11 8/16/78	STATION 12 8/15/78	STATION 13 8/14/78	STATION 14 8/15/78
METEOROLOGICAL DATA							
AIR TEMPERATURE (DEG C)	32.5	32.0	32.0	32.0	31.0	29.0	33.0
CLOUD COVER (PERCENT)	50.0	50.0	20.0	40.0	50.0	90.0	80.0
WIND VELOCITY (MPH)	5.0	0.0	0.0	0.0	0.0	7.5	12.5
WIND DIRECTION (DEG FM TRUE N. CW)	160	--	0	--	--	270	220
PARAMETER NAME (UNITS)	STATION 15 8/14/78	STATION 16 8/14/78	STATION 17 8/14/78	STATION 18 8/16/78	STATION 19 8/16/78	STATION 20 8/17/78	STATION 21 8/17/78
METEOROLOGICAL DATA							
AIR TEMPERATURE (DEG C)	31.0	32.0	31.0	31.0	32.0	32.0	29.0
CLOUD COVER (PERCENT)	90.0	60.0	0.0	0.0	60.0	10.0	0.0
WIND VELOCITY (MPH)	5.0	0.0	0.0	0.0	0.0	5.0	5.0
WIND DIRECTION (DEG FM TRUE N. CW)	230	--	--	--	--	150	90

TABLE B-4b

PARAMETER NAME (UNITS)	STATION B1 8/14/78	STATION B2 8/15/78	STATION FE 8/16/78
METEOROLOGICAL DATA			
AIR TEMPERATURE (DEG C)	31.0	31.0	33.0
CLOUD COVER (PERCENT)	60	60	40
WIND VELOCITY (MPH)	2.5	5.0	2.5
WIND DIRECTION (DEG FM TRUE N. CW)	220	190	230

TABLE B-5a

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY ***
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I, CYCLE 5
 MISCELLANEOUS DATA

PARAMETER NAME (UNITS)	STATION 01 9/27/78	STATION 02 9/27/78	STATION 03 9/27/78	STATION 04 9/27/78	STATION 05 9/27/78	STATION 06 9/27/78	STATION 07 9/27/78
METEOROLOGICAL DATA							
AIR TEMPERATURE (DEG C)	27.0	28.0	29.0	29.0	30.0	30.0	29.0
CLOUD COVER (PERCENT)	100	95	100	100	95	95	95
WIND VELOCITY (MPH)	5.0	5.0	5.0	0.0	5.0	5.0	7.5
WIND DIRECTION (DEG FM TRUE N. CW)	140	300	320	--	310	300	40
PARAMETER NAME (UNITS)	STATION 08 9/26/78	STATION 09 9/26/78	STATION 10 9/26/78	STATION 11 9/26/78	STATION 12 9/26/78	STATION 13 9/26/78	STATION 14 9/27/78
METEOROLOGICAL DATA							
AIR TEMPERATURE (DEG C)	31.0	29.0	29.0	29.0	30.0	32.0	26.0
CLOUD COVER (PERCENT)	90	95	95	95	90	70	100
WIND VELOCITY (MPH)	5.0	7.5	12.5	7.5	7.5	--	5.0
WIND DIRECTION (DEG FM TRUE N. CW)	50	40	50	110	30	--	100
PARAMETER NAME (UNITS)	STATION 15 9/25/78	STATION 16 9/25/78	STATION 17 9/25/78	STATION 18 9/26/78	STATION 19 9/26/78	STATION 20 9/27/78	STATION 21 9/27/78
METEOROLOGICAL DATA							
AIR TEMPERATURE (DEG C)	32.0	31.0	30.0	29.0	28.0	28.0	29.0
CLOUD COVER (PERCENT)	60	90	90	100	95	95	100
WIND VELOCITY (MPH)	5.0	0.0	0.0	0.0	0.0	0.0	0.0
WIND DIRECTION (DEG FM TRUE N. CW)	60	--	--	--	--	--	--

TABLE B-5b

PARAMETER NAME (UNITS)	STATION R1 9/25/78	STATION R2 9/25/78	STATION R3 9/26/78
METEOROLOGICAL DATA			
AIR TEMPERATURE (DEG C)	30.0	30.0	29.0
CLOUD COVER (PERCENT)	70.	80.	95.
WIND VELOCITY (MPH)	5.0	5.0	10.0
WIND DIRECTION: (DEG FM TRUE N. CW)	100	60	60

TABLE B-6

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 COMPS OF FATHREES (CONTRACT DACW01-78-C-3101) PHASE 1, CYCLE 5
 MISCELLANEOUS DATA

PARAMETER NAME (UNITS)	STATION 01 11/29/78	STATION 02 11/29/78	STATION 03 11/29/78	STATION 04 11/29/78	STATION 05 11/29/78	STATION 06 11/29/78	STATION 07 11/30/78
METEOROLOGICAL DATA							
AIR TEMPERATURE (DEG C)	22.0	22.0	22.0	23.0	22.0	22.0	19.0
CLOUD COVER (PERCENT)	100	100	100	100	100	100	100
WIND VELOCITY (MPH)	0.0	0.0	0.0	0.0	0.0	7.5	0.0
WIND DIRECTION (DEG FM TRUE N. CW)	--	--	--	--	--	260	--
PARAMETER NAME (UNITS)	STATION 08 11/30/78	STATION 09 11/29/78	STATION 10 11/24/78	STATION 11 11/29/78	STATION 13 11/28/78	STATION 14 11/30/78	STATION 15 11/28/78
METEOROLOGICAL DATA							
AIR TEMPERATURE (DEG C)	20.0	20.0	21.0	20.0	21.0	--	21.0
CLOUD COVER (PERCENT)	100	100	100	100	75	100	100
WIND VELOCITY (MPH)	7.5	5.0	7.5	7.5	2.5	--	5.0
WIND DIRECTION (DEG FM TRUE N. CW)	320	340	10	350	60	--	350
PARAMETER NAME (UNITS)	STATION 16 11/28/78	STATION 17 11/29/78	STATION 19 11/30/78	STATION 20 11/29/78	STATION 20 11/29/78	STATION 25 11/29/78	STATION 26 11/29/78
METEOROLOGICAL DATA							
AIR TEMPERATURE (DEG C)	21.0	20.0	20.0	22.0	22.0	20.0	20.0
CLOUD COVER (PERCENT)	100	100	100	100	100	100	100
WIND VELOCITY (MPH)	0.0	5.0	0.0	0.0	0.0	0.0	0.0
WIND DIRECTION (DEG FM TRUE N. CW)	--	320	--	--	--	330	--

APPENDIX C
IN SITU DATA

LIST OF TABLES

<u>TABLE</u>	<u>DESCRIPTION</u>	<u>PAGE NO.</u>
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TABLE C-1a

U.S. LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I, CYCLE 1
 WATER QUALITY SAMPLING RESULTS

PARAMETER NAME (UNITS)	STATION 01 4/17/78	STATION 01 4/17/78	STATION 01 4/17/78	STATION 01 4/17/78	STATION 01 4/17/78	STATION 01 4/17/78
HYDROLOGICAL DATA						
TOTAL DEPTH (METERS)	8.0	9.0	9.0	9.0	9.0	7.0
WAVE HEIGHT (METERS)	--	--	--	--	--	--
CURRENT SPEED (FPS)	--	0.01	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	330	--	--	--	--
PHYSICAL DATA						
MISCELLANEOUS DATA						
X-SECTION LOC (XFROM R-BK LK UPST)	25.	50.	50.	50.	50.	75.
SAMPLE DEPTH (METERS)	0.3	7.0	0.3	1.0	0.0	0.3
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--	--
FIELD MEASUREMENTS						
WATER TEMPERATURE (DEG C)	18.0	17.0	19.0	19.0	19.0	18.0
SPIC CONDUCTANCE, FLD (UMHO/CM 25C)	60.	60.	51.	51.	50.	50.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	9.1	9.1	9.2	9.3	9.4	9.0
PH (STD UNITS)	7.60	7.30	7.30	7.70	7.40	7.40

TABLE C-1b

PARAMETER NAME (UNITS)	STATION 01 4/17/78	STATION 02 4/18/78	STATION 02 4/18/78	STATION 02 4/18/78	STATION 02 4/18/78	STATION 02 4/18/78	STATION 02 4/18/78	STATION 02 4/18/78
HYDROLOGICAL DATA								
TOTAL DEPTH (METERS)	7.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0
WAVE HEIGHT (METERS)	--	--	--	0.04	--	--	--	--
CURRENT SPEED (FPS)	--	--	--	2.0	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	30	--	--	--	--
PHYSICAL DATA								
MISCELLANEOUS DATA								
X-SECTION LOC (24PCW R-BK LK UPST)	75.	25.	25.	50.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	6.0	0.3	2.0	--	0.3	--	1.0	2.0
SFCCH DISK TRANSPARENCY (METERS)	--	--	--	0.5	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	1.2	--	--	--	--
FIELD MEASUREMENTS								
WATER TEMPERATURE (DEG C)	18.0	19.0	19.0	--	17.0	17.0	19.0	19.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	65.	62.	63.	--	62.	62.	62.	62.
CALCIATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	9.1	8.6	9.6	--	8.5	8.5	8.5	8.5
PH (STD UNITS)	7.50	7.10	7.10	--	7.35	7.35	7.25	7.20

TABLE C-1c

PARAMETER NAME (UNITS)	STATION 02 4/18/78	STATION 02 4/18/78	STATION 03 4/18/78	STATION 03 4/18/78	STATION 03 4/18/78	STATION 03 4/18/78	STATION 03 4/18/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	3.0	3.0	5.0	5.0	5.0	4.0	4.0
WAVE HEIGHT (METERS)	--	--	--	--	0.03	--	--
CURRENT SPEED (FPS)	--	--	--	--	2.3	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	20	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LINC (REF OM R-BK LK UPST)	75.	75.	25.	25.	50.	50.	50.
SAMPLE DEPTH (METERS)	0.3	2.0	0.3	4.0	--	0.3	1.0
SECT#1 DISK TRANSPARENCY (METERS)	--	--	--	--	0.5	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	1.2	--	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	18.5	18.5	19.0	18.5	--	19.0	19.0
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	62.	62.	51.	63.	--	61.	61.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	9.6	8.7	9.1	9.0	--	8.4	8.4
PH (STD UNITS)	7.15	7.13	7.43	7.40	--	7.40	7.20

TABLE C-1d

PARAMETER NAME (UNITS)	STATION 03 4/18/78	STATION 03 4/18/78	STATION 03 4/18/78	STATION 03 4/18/78	STATION 04 4/18/78	STATION 04 4/18/78	STATION 04 4/18/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	4.0	5.0	5.0	6.0	6.0	6.0	6.0
WAVE HEIGHT (METERS)	--	--	--	--	--	0.05	--
CURRENT SPEED (FPS)	--	--	--	--	--	2.7	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	321	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
W-SECTION LOC (FROM R-RAK LK UPST)	50-	75-	75-	25-	25-	30-	50-
SAMPLE DEPTH (METERS)	3.0	0.3	3.0	0.3	5.0	--	0.3
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	--	--	0.5	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--	1.1	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	19.0	19.0	19.0	19.5	19.5	--	19.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	61-	62-	62-	70-	70-	--	60-
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	8.3	8.9	8.9	9.2	9.1	--	8.9
PH (STD UNITS)	7.20	7.10	7.20	7.20	7.20	--	7.00

TABLE C-1e

PARAMETER NAME (UNITS)	STATION 04 4/18/78	STATION 04 4/18/78	STATION 04 4/13/78	STATION 04 4/14/78	STATION 05 4/17/78	STATION 05 4/17/78
HYDROLOGICAL DATA						
TOTAL DEPTH (METERS)	6.0	6.0	5.0	5.0	7.0	5.0
WAVE HEIGHT (METERS)	--	--	--	--	--	0.01
CURRENT SPEED (FPS)	--	--	--	--	--	3.0
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	340
PHYSICAL DATA						
MISCELLANEOUS DATA						
X-SECTION LOC (XFROM R-8K LK UPST)	50.	50.	75.	75.	25.	50.
SAMPLE DEPTH (METERS)	1.0	5.0	0.3	4.0	0.3	--
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	--	--	0.4
DEPTH OF 1X SURFACE LIGHT (METERS)	--	--	--	--	--	--
FIELD MEASUREMENTS						
WATER TEMPERATURE (DEG C)	19.0	19.0	19.5	19.5	20.0	--
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	70.	70.	61.	61.	70.	--
Oxidation REDUCTION POTENTIAL (MV)	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	9.0	9.1	9.0	9.0	9.1	--
FM (STD UNITS)	7.10	7.30	7.20	7.20	7.30	--

TABLE C-1f

PARAMETER NAME (UNITS)	STATION 05 4/17/78	STATION 05 4/17/78	STATION 05 4/17/78	STATION 05 4/17/78	STATION 05 4/17/78	STATION 05 4/17/78
HYDROLOGICAL DATA						
TOTAL DEPTH (METERS)	6.0	6.0	6.0	7.0	6.0	6.0
WAVE HEIGHT (METERS)	--	--	--	--	--	--
CURRENT SPEED (FPS)	--	--	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--
PHYSICAL DATA						
MISCELLANEOUS DATA						
X-SECTION LOC (INFRON R-BK LK UPST)	50.	50.	50.	75.	25.	25.
SAMPLE DEPTH (METERS)	0.3	1.0	5.0	6.0	0.3	5.0
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--	--
FIELD MEASUREMENTS						
WATER TEMPERATURE (DEG C)	20.0	20.0	19.0	19.0	19.0	19.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	69.	69.	69.	71.	69.	69.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	9.0	9.0	9.9	9.7	8.0	8.8
PH (STD UNITS)	7.30	7.40	7.30	7.10	7.30	7.40

TABLE C-1g

PARAMETER NAME (UNITS)	STATION 06 4/18/78	STATION 06 4/18/78	STATION 06 4/18/78	STATION 06 4/19/78	STATION 06 4/19/78	STATION 06 4/19/78	STATION 06 4/19/78	STATION 07 4/19/78
HYDROLOGICAL DATA								
TOTAL DEPTH (METERS)	6.0			6.0				2.0
WAVE HEIGHT (METERS)	0.05							--
CURRENT SPEED (FPS)	2.2							--
CURRENT DIRECTION (DEG FM TRUE N)	360							--
PHYSICAL DATA								
MISCELLANEOUS DATA								
X-SECTION LOC (REFRM R-BK LK UPST)	50.			50.				10.
SAMPLE DEPTH (METERS)	--			1.0				0.3
SECTH DISK TRANSPARENCY (METERS)	0.6			--				--
DEPTH OF 1X SURFACE LIGHT (METERS)	1.1			--				--
FIELD MEASUREMENTS								
WATER TEMPERATURE (DEG C)	--			19.0				19.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	--			70.				70.
OXIDATION REDUCTION POTENTIAL (MV)	--			--				600
DISSOLVED OXYGEN, ELECTRODE (MG/L)	--			9.0				9.9
PH (STD UNITS)	--			7.10				7.00

TABLE C-1h

PARAMETER NAME (UNITS)	STATION 07 4/19/78	STATION 07 4/19/78	STATION 07 4/19/78	STATION 07 4/19/78	STATION 07 4/19/78	STATION 07 4/19/78	STATION 07 4/19/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	2.0	5.0	5.0	5.0	5.0	5.0	2.0
WAVE HEIGHT (METERS)	--	0.02	--	--	--	--	--
CURRENT SPEED (FPS)	--	1.7	--	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	10	--	--	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LUC (1/8"CM R-BK LK UPST)	10.	50.	50.	50.	50.	50.	75.
SAMPLE DEPTH (METERS)	1.0	--	--	1.0	--	--	1.0
SECCO DISK TRANSPARENCY (METERS)	--	0.5	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	1.3	--	--	--	--	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	18.0	--	18.0	19.0	19.0	19.0	19.5
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	62.	--	63.	63.	63.	65.	71.
Oxidation Reduction Potential (mV)	480	--	440	480	480	460	460
DISSOLVED OXYGEN, ELECTRODE (MG/L)	8.9	--	8.9	8.8	8.8	9.0	9.0
PH (STD UNITS)	7.10	--	7.23	7.00	7.00	7.10	7.10

TABLE C-11

PARAMETER NAME (UNITS)	STATION OR 4/19/78	STATION OR 4/19/78	STATION OR 4/19/78	STATION OR 4/19/78	STATION OR 4/19/78	STATION OR 4/19/78	STATION OR 4/19/78	STATION OR 4/19/78
HYDROLOGICAL DATA								
TOTAL DEPTH (METERS)	2.0	2.0	2.0	6.0	6.0	6.0	6.0	5.0
WAVE HEIGHT (METERS)	0.03	--	--	0.15	--	--	--	--
CURRENT SPEED (FPS)	1.6	--	--	--	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	20	--	--	--	--	--	--	--
PHYSICAL DATA								
MISCELLANEOUS DATA								
X-SECTION LOC (FROM K-AK LK UPST)	50.	50.	50.	50.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	--	0.3	1.0	--	0.3	1.0	--	5.0
SECCHI DISK TRANSPARENCY (METERS)	0.6	--	--	0.5	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	1.1	--	--	1.4	--	--	--	--
FIELD MEASUREMENTS								
WATER TEMPERATURE (DEG C)	--	21.0	21.0	--	20.0	20.0	20.0	20.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	--	AR.	AR.	--	70.	1.	72.	72.
OXIDATION REDUCTION POTENTIAL (MV)	--	450	430	--	510	400	450	450
DISSOLVED OXYGEN, ELECTRODE (MG/L)	--	8.8	8.8	--	8.3	9.1	9.2	9.2
PH (STD UNITS)	--	7.30	7.10	--	7.03	7.13	7.13	7.13

TABLE C-1j

PARAMETER NAME (UNITS)	STATION 10 4/20/78	STATION 10 4/20/78	STATION 10 4/20/78	STATION 10 4/20/78	STATION 11 4/20/78	STATION 11 4/20/78	STATION 11 4/20/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	2.6	2.6	2.6	2.6	7.0	7.0	7.0
WAVE HEIGHT (METERS)	0.10	--	--	--	0.20	--	--
CURRENT SPEED (FPS)	0.0	--	--	--	0.3	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (FROM P-BK LK UPST)	50.	50.	50.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	--	0.4	0.4	1.0	1.6	0.3	1.0
SECCHI DISK TRANSPARENCY (METERS)	0.4	--	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	1.1	--	--	--	1.1	--	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	--	16.0	19.0	18.0	--	19.5	19.5
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	--	500	500	500	--	710	710
CALCULATION REDUCTION POTENTIAL (MV)	--	500	500	500	--	460	460
DISSOLVED OXYGEN, ELECTRODE (MG/L)	--	8.0	9.0	8.0	--	8.0	9.0
FM (STD UNITS)	--	6.70	6.70	6.70	--	7.10	7.10

TABLE C-1k

PARAMETER NAME (UNITS)	STATION 11 4/20/78	STATION 12 4/23/79	STATION 12 4/23/78	STATION 12 4/20/79	STATION 12 4/20/79	STATION 12 4/20/78
HYDROLOGICAL DATA						
TOTAL DEPTH (METERS)	7.0	3.0	3.0	1.2	1.2	1.4
WAVE HEIGHT (METERS)	--	--	--	0.02	--	--
CURRENT SPEED (FPS)	--	--	--	0.0	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--
PHYSICAL DATA						
MISCELLANEOUS DATA						
X-SECTION LJC (SPECIM R-RK LK UPST)	40.	30.	30.	60.	60.	40.
SAMPLE DEPTH (METERS)	6.0	0.3	2.0	--	0.3	0.3
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	> 1.2	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	> 1.2	--	--
FIELD MEASUREMENTS						
WATER TEMPERATURE (DEG C)	19.0	22.0	22.0	--	22.0	22.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	70.	100.	100.	--	60.	100.
Oxidation Reduction Potential (MV)	490	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.2	9.0	9.0	--	9.2	9.2
PH (STD UNITS)	7.10	7.60	7.20	--	7.30	7.00

TABLE C-11

PARAMETER NAME (UNITS)	STATION 12 4/20/78	STATION 13 4/20/78	STATION 13 4/20/78	STATION 13 4/20/78	STATION 13 4/20/78	STATION 14 4/20/78	STATION 14 4/20/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	1.4	5.5	5.5	5.5	5.5	3.0	3.0
RAVE HEIGHT (METERS)	--	0.20	--	--	--	--	--
CURRENT SPEED (FPS)	--	0.0	--	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC. (X=FROM R-OK LK UPST)	90.	30.	30.	30.	30.	30.	30.
SAMPLE DEPTH (METERS)	0.7	--	0.3	1.0	4.5	0.3	2.0
SECHI DISK TRANSPARENCY (METERS)	--	0.7	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	2.3	--	--	--	--	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	22.0	--	21.0	21.0	20.5	20.5	20.5
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	100.	--	95.	95.	80.	145.	145.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	460	440	470	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	8.2	--	8.2	8.2	7.7	7.5	7.4
FM 1STD UNITS)	--	--	7.50	7.40	7.50	7.70	7.70

TABLE C-1m

PARAMETER NAME (UNITS)	STATION 14 4/20/78	STATION 14 4/20/78	STATION 14 4/20/78	STATION 14 4/20/78	STATION 14 4/20/78	STATION 14 4/20/78	STATION 15 4/21/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	3.0	3.0	3.0	3.0	3.0	3.0	4.0
NAVE HEIGHT (METERS)	0.03	--	--	--	--	--	--
CURRENT SPEED (FPS)	0.0	--	--	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LTC (XFROM R-RK LK UPST)	50.	50.	50.	50.	75.	75.	35.
SAMPLE DEPTH (METERS)	--	0.3	--	1.0	0.3	2.0	0.3
SECCHI DISK TRANSPARENCY (METERS)	0.8	--	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	2.0	--	--	--	--	--	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	--	20.5	20.5	20.5	20.5	20.0	21.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	--	142.	142.	142.	145.	145.	145.
CATACATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	470
DISSOLVED OXYGEN, ELECTRODE (MG/L)	--	7.6	7.4	7.6	7.6	7.1	7.5
PH (STD UNITS)	--	7.70	7.70	7.50	7.70	7.70	7.30

TABLE C-1n

PARAMETER NAME (UNITS)	STATION 15 4/21/78	STATION 15 4/21/78	STATION 15 4/21/78	STATION 15 4/21/78	STATION 15 4/21/78	STATION 15 4/21/78
HYDROLOGICAL DATA						
TOTAL DEPTH (METERS)	6.0	10.0	10.0	10.0	10.0	3.0
WAVE HEIGHT (METERS)	--	3.02	--	--	--	--
CURRENT SPEED (FPS)	--	0.0	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--
PHYSICAL DATA						
MISCELLANEOUS DATA						
X-SECTION LOC (NRCM R-BK LK UPST)	35.	50.	50.	50.	50.	65.
SAMPLE DEPTH (METERS)	5.0	--	1.0	--	9.0	2.0
SECCOT DISK TRANSPARENCY (METERS)	--	0.7	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	1.5	--	--	--	--
FIELD MEASUREMENTS						
WATER TEMPERATURE (DEG C)	20.5	--	21.0	21.0	21.5	20.5
SPIC CONDUCTANCE, FLD (UMH/CM 25C)	96.	--	90.	90.	89.	95.
OXIDATION REDUCTION POTENTIAL (MV)	240	--	490	460	470	470
DISSOLVED OXYGEN, ELECTRODE (M/L)	7.2	--	7.3	7.1	7.1	7.3
PM (STD UNITS)	7.30	--	7.10	7.20	7.50	7.10

TABLE C-10

PARAMETER NAME (UNITS)	STATION 16 4/21/78	STATION 16 4/21/78	STATION 16 4/21/78	STATION 16 4/21/78	STATION 16 4/21/78	STATION 16 4/21/78	STATION 16 4/21/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	5.0	5.0	7.0	7.0	7.0	7.0	4.0
PAVE HEIGHT (METERS)	--	--	0.02	--	--	--	--
CURRENT SPEED (FPS)	--	--	1.3	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	100	--	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (XFROM K-BK LK UPST)	20.	20.	50.	50.	50.	50.	63.
SAMPLE DEPTH (METERS)	0.3	4.0	--	0.3	1.0	6.0	0.3
SECTION DISK TRANSPARENCY (METERS)	--	--	1.0	--	--	--	--
DEPTH OF 1X SURFACE LIGHT (METERS)	--	--	2.1	--	--	--	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	20.5	20.5	--	20.5	20.5	20.5	20.5
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	95.	99.	--	96.	96.	99.	96.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.5	7.5	--	7.5	7.4	7.4	7.7
PH (STD) UNITS	7.40	7.30	--	7.10	7.30	7.40	7.20

TABLE C-1p

PARAMETER NAME (UNITS)	STATION 16 4/21/78	STATION 17 4/21/78	STATION 17 4/21/78	STATION 17 4/21/78	STATION 17 4/21/78	STATION 17 4/21/78	STATION 17 4/21/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	4.0	5.0	5.0	7.0	7.0	7.0	7.0
WAVE HEIGHT (METERS)	--	--	--	--	--	--	--
CURRENT SPEED (FPS)	--	--	--	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	140	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
SECTION LOC (FROM R-BK LK UPST)	65	10	10	50	50	50	50
SAMPLE DEPTH (METERS)	3.0	0.1	4.0	--	0.1	1.0	4.0
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	0.9	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	1.9	--	--	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	20.5	20.0	20.0	20.0	20.0	20.0	20.0
SPEC CONDUCTANCE FLD (UMHO/CM 25C)	98	95	95	--	95	--	97
CALCULATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	--
DISSOLVED OXYGEN. ELECTRODE (MG/L)	7.6	7.8	7.7	7.9	7.9	7.7	7.7
PH (STD UNITS)	7.20	7.20	7.30	7.30	7.30	7.20	7.30

TABLE C-1q

PARAMETER NAME (UNITS)	STATION 17 4/21/78	STATION 17 4/21/78	STATION 1A 4/19/78	STATION 1A 4/19/78	STATION 1A 4/19/78	STATION 1A 4/19/78	STATION 1A 4/19/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	2.0	2.0	7.0	7.0	7.0	7.0	7.0
RAVE HEIGHT (METERS)	--	--	--	--	0.23	--	--
CURRENT SPEED (FPS)	--	--	--	--	3.0	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	20	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (FROM R-BK LK UPST)	90.	90.	25.	25.	50.	50.	50.
SAMPLE DEPTH (METERS)	0.3	1.0	0.3	5.0	--	0.3	1.0
SECHI DISK TRANSPARENCY (METERS)	--	--	--	--	0.5	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	1.1	--	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	20.0	20.0	21.0	21.0	--	21.4	21.5
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	95.	95.	95.	95.	--	50.	90.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.8	7.8	8.6	8.6	--	8.7	8.7
PH (STD UNITS)	7.20	7.20	7.30	7.30	--	7.50	7.40

TABLE C-1r

PARAMETER NAME (UNITS)	STATION 18 4/19/78	STATION 19 4/19/78	STATION 19 4/19/78	STATION 19 4/19/78	STATION 19 4/19/78	STATION 19 4/19/78	STATION 19 4/19/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	7.0	7.0	7.0	5.0	5.0	9.0	9.0
WAVE HEIGHT (METERS)	--	--	--	--	--	0.12	--
CURRENT SPEED (FPS)	--	--	--	--	--	3.5	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	0	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION L/C (XFROM R-IK LK UNST)	50.	90.	90.	20.	20.	50.	50.
SAMPLE DEPTH (METERS)	6.0	0.3	6.0	0.3	0.3	0.5	0.3
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--	1.2	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	21.5	21.0	21.0	21.0	23.0	--	21.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	90.	89.	85.	110.	111.	--	100.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	8.7	8.5	9.4	8.3	8.3	--	8.8
FM (STD UNITS)	7.40	7.30	7.30	7.30	7.30	--	7.40

TABLE C-1s

PARAMETER NAME (UNITS)	STATION 19 4/19/78	STATION 19 4/19/78	STATION 19 4/19/78	STATION 19 4/19/78	STATION 19 4/19/78
HYDROLOGICAL DATA					
TOTAL DEPTH (METERS)					
WAVE HEIGHT (METERS)	4.0	3.0	3.0		4.0
CURRENT SPEED (FPS)	--	--	--		0.01
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--		3.2
PHYSICAL DATA					
MISCELLANEOUS DATA					
X-SECTION LOC (REFC R-BK LK UPST)	50.	50.	90.		50.
SAMPLE DEPTH (METERS)	1.0	7.0	0.3		--
SECTION DISK TRANSPARENCY (METERS)	--	--	--		--
DEPTH OF IX SURFACE LIGHT (METERS)	--	--	--		--
FIELD MEASUREMENTS					
WATER TEMPERATURE (DEG C)	21.5	21.5	21.5		19.0
SPEC CONDUCTANCE, FLD (UMHD/CN 25CI)	105.	108.	90.		65.
OXIDATION REDUCTION POTENTIAL (MV)					530
DISSOLVED OXYGEN, ELECTRODE (MG/L)	8.8	8.7	9.0		9.2
PM (STD UNITS)	7.30	7.20	7.40		7.40

TABLE C-1t

PARAMETER NAME (UNITS)	STATION NO 4/17/78
HYDROLOGICAL DATA	
TOTAL DEPTH (METERS)	4.0
PAVE HEIGHT (METERS)	--
CURRENT SPEED (FPS)	--
CURRENT DIRECTION (DEG FM TRUE N)	--
PHYSICAL DATA	
MISCELLANEOUS DATA	
X-SECTION LOC (XFROM P-BK LK UPST)	50.
SAMPLE DEPTH (METERS)	1.0
SECCHI DISK TRANSPARENCY (METERS)	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--
FIELD MEASUREMENTS	
WATER TEMPERATURE (DEG C)	19.0
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	75.
OXIDATION REDUCTION POTENTIAL (MV)	380
DISSOLVED OXYGEN, ELECTRODE (MG/L)	9.3
PH (STD UNITS)	7.60

TABLE C-2a

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I, CYCLE 2

WATER QUALITY SAMPLING RESULTS

PARAMETER NAME (UNITS)	STATION 01 6/ 7/78	STATION 01 6/ 7/78	STATION 02 6/ 7/78	STATION 02 6/ 7/78	STATION 03 6/ 7/78	STATION 03 6/ 7/78	STATION 04 6/ 7/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	5.0	5.0	4.0	4.0	5.0	5.0	4.0
WAVE HEIGHT (METERS)	0.02	--	0.00	--	0.02	--	0.03
CURRENT SPEED (FPS)	3.0	--	3.0	--	2.5	--	3.5
CURRENT DIRECTION (DEG FM TRUE N)	330	--	30	--	20	--	320
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (XFROM R-BK LK UPST)	50.	50.	50.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	--	1.0	--	1.0	--	1.0	--
SECCOM DISK TRANSPARENCY (METERS)	0.4	--	0.3	--	0.2	--	0.3
DEPTH OF 1% SURFACE LIGHT (METERS)	1.6	--	0.9	--	0.8	--	0.9
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	--	24.0	--	23.0	--	24.0	--
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	--	50.	--	60.	--	60.	--
CALCULATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	--	7.3	--	8.0	--	7.3	--
PH (STD UNITS)	--	7.50	--	7.00	--	6.90	--

TABLE C-2b

PARAMETER NAME (UNITS)	STATION 04 6/ 7/78	STATION 05 6/ 7/78	STATION 05 6/ 7/78	STATION 05 6/ 7/78	STATION 06 6/ 7/78	STATION 07 6/ 6/78	STATION 07 6/ 6/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	4.0	5.0	5.0	6.0	6.0	8.0	9.0
WAVE HEIGHT (METERS)	--	0.03	--	--	--	0.10	--
CURRENT SPEED (FPS)	--	0.3	--	--	--	2.0	--
CURRENT DIRECTION (DEG FM TRUE N)	--	340	--	--	--	10	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (REFRM P-BK LK UPST)	50.	50.	50.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	--	1.0	--	1.0	--	1.0
SECCMT DISK TRANSPARENCY (METERS)	--	0.1	--	--	--	0.2	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	0.5	--	--	--	0.6	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	24.0	--	24.0	--	24.0	--	25.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	61.	--	70.	--	65.	--	69.
CALCULATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	470
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.6	--	6.8	--	6.9	--	7.5
PH (STD UNITS)	7.20	--	6.90	--	6.90	--	7.00

TABLE C-2c

PARAMETER NAME (UNITS)	STATION 07 6/ 6/78	STATION 07 6/ 6/78	STATION 07 6/ 6/78	STATION 07 6/ 6/78	STATION 07 6/ 6/78	STATION 07 6/ 6/78	STATION 07 6/ 6/78	STATION 07 6/ 6/78	STATION 07 6/ 6/78	STATION 07 6/ 6/78
HYDROLOGICAL DATA										
TOTAL DEPTH (METERS)	8.0	8.0	9.0	3.0	3.0	3.0	3.0	3.0	3.0	6.0
WAVE HEIGHT (METERS)	--	--	--	0.01	--	--	--	--	--	0.00
CURRENT SPEED (FPS)	--	--	--	0.5	--	--	--	--	--	0.0
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	60	--	--	--	--	--	--
PHYSICAL DATA										
MISCELLANEOUS DATA										
X-SECTION LOC (XRFON R-DK LK UPST)	50.	50.	50.	50.	50.	50.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	3.0	5.0	7.0	--	1.0	--	--	--	--	0.5
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	--	--	--	--	--	--	1.0
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--	--	--	--	--	--
FIELD MEASUREMENTS										
WATER TEMPERATURE (DEG C)	25.0	24.0	24.0	--	25.0	--	--	--	--	--
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	70.	70.	70.	--	71.	--	--	--	--	--
OXIDATION REDUCTION POTENTIAL (MV)	480	480	480	--	490	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.2	7.1	7.0	--	7.1	--	--	--	--	--
PH (STD UNITS)	7.00	7.00	7.00	--	7.00	--	--	--	--	--

TABLE C-2d

PARAMETER NAME (UNITS)	STATION 09 6/ 6/78	STATION 09 6/ 6/76	STATION 07 6/ 6/73	STATION 09 6/ 6/78	STATION 07 5/ 6/78	STATION 10 6/ 6/79	STATION 10 6/ 6/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	6.0	6.0	6.0	6.0	6.0	2.0	2.0
WAVE HEIGHT (METERS)	--	--	--	--	--	0.00	--
CURRENT SPEED (FPS)	--	--	--	--	--	0.0	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (XFROM P-BK LK UPST)	50.	50.	50.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	2.0	3.0	4.0	5.0	--	0.3
SIGHT RISK TRANSPARENCY (METERS)	--	--	--	--	--	0.5	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--	1.1	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	26.0	25.0	25.0	25.0	25.0	--	26.0
SPEC CONDUCTANCE FLD (UMHO/CM 25C)	87.	87.	87.	89.	90.	--	85.
CALCATION REDUCTION POTENTIAL (MV)	440	430	430	440	450	--	300
DISSOLVED OXYGEN: ELECTRODE (MG/L)	6.5	6.5	6.4	6.2	6.1	--	7.2
PH (STD UNITS)	7.30	7.10	7.10	7.10	7.10	--	7.30

TABLE C-2e

PARAMETER NAME (UNITS)	STATION 10 6/ 6/78	STATION 11 6/ 6/78	STATION 11 6/ 6/78	STATION 11 6/ 6/78	STATION 11 6/ 6/78	STATION 11 6/ 6/78	STATION 11 6/ 6/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	2.0	6.0	6.0	6.0	6.0	6.0	5.0
WAVE HEIGHT (METERS)	--	--	--	--	--	--	--
CURRENT SPEED (FPS)	--	0.02	--	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	0.0	--	--	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (FROM P-OK LK UPST)	50.	90.	90.	90.	90.	90.	90.
SAMPLE DEPTH (METERS)	1.0	--	1.0	3.0	4.0	5.0	--
SECCHI DISK TRANSPARENCY (METERS)	--	1.0	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	2.3	--	--	--	--	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	26.0	26.0	25.0	25.0	25.0	25.0	25.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	95.	128.	113.	113.	113.	113.	95.
Oxidation Reduction Potential (MV)	430	400	410	410	410	410	440
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.2	7.1	6.4	6.0	6.0	5.4	5.6
PH (STD UNITS)	7.50	7.60	7.60	7.60	7.60	7.10	7.00

TABLE C-2f

PARAMETER NAME (UNITS)	STATION 12 6/ 7/79	STATION 12 6/ 7/79	STATION 13 6/ 5/78	STATION 13 6/ 5/78	STATION 13 6/ 5/78	STATION 13 6/ 5/78	STATION 13 6/ 5/78	STATION 13 6/ 5/78
HYDROLOGICAL DATA								
TOTAL DEPTH (METERS)	1.2	1.2	5.0	5.0	5.0	5.0	5.0	5.0
WAVE HEIGHT (METERS)	0.01	--	0.05	--	--	--	--	--
CURRENT SPEED (FPS)	0.0	--	0.0	--	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--	--
PHYSICAL DATA								
MISCELLANEOUS DATA								
X-SECTION LOC (XFCM P-RK LK UPST)	50.	50.	30.	30.	30.	30.	30.	30.
SAMPLE DEPTH (METERS)	--	0.6	--	0.3	1.0	2.0	3.0	--
SECCHI DISK TRANSPARENCY (METERS)	1.2	--	1.1	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	1.2	--	3.0	--	--	--	--	--
FIELD MEASUREMENTS								
WATER TEMPERATURE (DEG C)	--	30.0	--	27.0	28.0	27.0	27.0	27.0
SPEC CONDUCTANCE FLD (UMHO/CM 25C)	--	100.	--	147.	147.	147.	147.	147.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	340	370	370	370
DISSOLVED OXYGEN ELECTRODE (MG/L)	--	9.2	--	9.1	9.0	7.7	7.0	7.0
PH (STD UNITS)	--	8.70	--	--	8.00	7.90	7.90	7.90

TABLE C-2g

PARAMETER NAME (UNITS)	STATION 13 6/ 5/78	STATION 14 6/ 5/78	STATION 14 6/ 5/78	STATION 15 6/ 5/78	STATION 15 6/ 5/78	STATION 15 6/ 5/78	STATION 15 6/ 5/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	5.0	3.0	3.0	10.0	10.0	10.0	10.0
WAVE HEIGHT (METERS)	--	0.04	--	--	--	--	--
CURRENT SPEED (FPS)	--	0.0	--	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LUC (AFROM R-OK LK UPST)	30.	50.	50.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	4.0	--	1.0	0.3	1.0	1.0	3.0
SOCCHI DISK TRANSPARENCY (METERS)	--	1.4	--	--	--	--	--
DEPTH OF LX SURFACE LIGHT (METERS)	--	3.0	--	--	--	--	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	26.0	--	24.0	27.0	27.0	24.0	24.0
SPEC CONDUCTANCE, FLO (UMHO/CM 25C)	150.	--	103.	135.	135.	140.	140.
Oxidation Reduction Potential (mv)	370	--	--	--	410	410	410
DISSOLVED OXYGEN, ELECTRODE (MG/L)	6.2	--	8.6	9.6	9.4	7.1	7.1
PH (STD UNITS)	7.30	--	7.90	--	7.80	7.40	7.40

TABLE C-2h

PARAMETER NAME (UNITS)	STATION 15 6/ 5/78	STATION 15 6/ 5/78	STATION 15 6/ 5/78	STATION 15 6/ 5/78	STATION 16 6/ 5/78	STATION 16 6/ 5/78	STATION 17 6/ 5/78	STATION 17 6/ 5/78
HYDROLOGICAL DATA								
TOTAL DEPTH (METERS)	10.0	10.0	10.0	10.0	7.0	7.0	7.0	7.0
WAVE HEIGHT (METERS)	--	--	--	--	0.00	0.01	--	--
CURRENT SPEED (FPS)	--	--	--	--	0.5	2.0	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	100	140	--	--
PHYSICAL DATA								
MISCELLANEOUS DATA								
X-SECTION LOC (NFROM R-RK LK UPST)	50.	50.	50.	50.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	5.0	7.0	7.0	9.0	--	1.0	--	1.0
SECOND DISK TRANSPARENCY (METERS)	--	--	--	--	1.2	1.1	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	2.5	1.8	--	--
FIELD MEASUREMENTS								
WATER TEMPERATURE (DUG C)	26.0	26.0	26.0	26.0	--	26.0	--	25.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	140.	135.	135.	135.	--	130.	--	115.
CALCATION REDUCTION POTENTIAL (MV)	410	410	410	420	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.0	6.3	6.3	6.4	--	7.0	--	6.9
PH (STD UNITS)	7.20	7.10	7.10	7.10	--	7.30	--	7.30

TABLE C-21

PARAMETER NAME (UNITS)	STATION 18 6/ 5/78	STATION 1A 6/ 6/78	STATION 1Q 6/ 6/78	STATION 1Q 6/ 6/78	STATION 1Q 6/ 6/78	STATION 1Q 6/ 6/78	STATION 1Q 6/ 6/78	STATION 1Q 6/ 6/78	STATION 1Q 6/ 6/78	STATION 1Q 6/ 6/78
HYDROLOGICAL DATA										
TOTAL DEPTH (METERS)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
NAVE HEIGHT (METERS)	0.01	--	0.00	--	--	0.04	--	--	0.01	0.01
CURRENT SPEED (FPS)	3.0	--	3.0	--	--	2.5	--	--	3.0	3.0
CURRENT DIRECTION (DEG FM TRUE N)	20	--	360	--	--	20	--	--	330	330
PHYSICAL DATA										
MISCELLANEOUS DATA										
R-SECTION LOC (REFRM R-BK LK UPST)	50.	50.	50.	50.	50.	90.	90.	90.	20.	20.
SAMPLE DEPTH (METERS)	--	1.0	--	--	--	--	--	--	--	--
SECURI DISK TRANSPARENCY (METERS)	0.6	--	0.6	--	--	--	--	--	--	--
DEPTH OF IX SURFACE LIGHT (METERS)	2.0	--	1.4	--	--	--	--	--	--	--
FIELD MEASUREMENTS										
WATER TEMPERATURE (DEG C)	--	26.0	--	--	--	--	--	--	24.1	--
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	--	130.	--	--	--	--	--	--	60.	--
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	--	--	420	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	--	7.3	--	--	--	--	--	--	7.7	--
PH (STD UNITS)	--	7.50	--	--	--	--	--	--	7.00	--

TABLE C-2j

PARAMETER NAME (UNITS)	STATION B0 5/ 7/78	STATION H1 6/ 5/78	STATION B2 6/ 5/78	STATION FE 6/ 5/78	STATION FE 6/ 6/78
HYDROLOGICAL DATA					
TOTAL DEPTH (METERS)	5.0	2.0	5.0	2.0	2.0
BAV. HT LGHT (METERS)	--	0.02	0.00	0.00	--
CURRENT SPEED (FPS)	--	0.0	0.0	0.0	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--
PHYSICAL DATA					
MISCELLANEOUS DATA					
X-SECTION LUC (XFLM P-RK LK UPST)	20.	--	--	15.	15.
SAMPLE DEPTH (METERS)	1.0	--	--	--	1.0
SECCO DISK TRANSPARENCY (METERS)	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--
FIELD MEASUREMENTS					
WATER TEMPERATURE (DEG C)	24.0	--	--	--	27.0
SPEC CONDUCTANCE, FLD (UMMO/CM 25C)	78.	--	--	--	85.
OXIDATION REDUCTION POTENTIAL (MV)	160	--	--	--	440
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.1	--	--	--	8.1
PH (STD UNITS)	7.00	--	--	--	7.90

TABLE C-3a

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I, CYCLE 3
 WATER QUALITY SAMPLING RESULTS

PARAMETER NAME (UNITS)	STATION 01 7/16/78	STATION 01 7/16/78	STATION 02 7/17/78	STATION 03 7/19/78	STATION 03 7/19/78	STATION 03 7/19/78
HYDROLOGICAL DATA						
TOTAL DEPTH (METERS)	4.0	4.0	3.0	6.0	4.0	5.0
RAVE HEIGHT (METERS)	0.31	0.31	--	0.02	--	0.01
CURRENT SPEED (FPS)	1.3	1.3	--	1.3	--	2.5
CURRENT DIRECTION (DEG FROM TRUE N)	330	30	--	20	--	320
PHYSICAL DATA						
MISCELLANEOUS DATA						
X-SECTION LUC (1/8" OR 5/16" LK UPST)	50.	50.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	--	1.0	1.0	--	1.0	--
SECCHI DISK TRANPARANCY (METERS)	0.3	--	--	0.9	--	0.7
DEPTH OF 1% SURFACE LIGHT (METERS)	2.1	--	--	2.3	--	1.5
FIELD MEASUREMENTS						
WATER TEMPERATURE (DEG C)	--	24.0	28.5	--	20.0	--
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	--	66.	67.	--	69.	--
OXYGEN PRODUCTION POTENTIAL (MV)	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	--	9.3	7.0	--	9.5	--
PH (STD UNITS)	--	7.35	7.40	--	7.60	--

TABLE C-3b

PARAMETER NAME (UNITS)	STATION 04 7/19/78	STATION 05 7/19/78	STATION 03 7/19/78	STATION 04 7/20/78	STATION 05 7/20/78	STATION 07 7/20/78	STATION 07 7/20/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	5.0	5.0	5.0	5.0	5.0	7.0	7.0
WAVE HEIGHT (METERS)	--	0.01	--	0.01	--	0.00	--
CURRENT SPEED (FMS)	--	2.0	--	0.5	--	1.3	--
CURRENT DIRECTION (DEG FM TRUE N)	--	340	--	360	--	10	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LDC (REF-CM P-RK LK UPST)	50.	50.	50.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	--	1.0	--	1.0	--	1.0
SECHIT DISK TRANSPARENCY (METERS)	--	0.5	--	0.6	--	0.7	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	1.0	--	1.5	--	1.7	--
FIELD MEASUREMENTS							
BATCH TEMP. (AYUE - 100 C)	29.5	--	29.5	--	24.0	--	27.0
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	75.	--	70.	--	77.	--	83.
CATIONIC REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	410
DISSOLVED OXYG N. ELECTRODE (MG/L)	7.7	--	7.0	--	6.0	--	7.2
PH (STD UNITS)	7.70	--	7.50	--	7.10	--	7.20

TABLE C-3c

PARAMETER NAME (UNITS)	STATION 07 7/20/73	STATION 07 7/20/74	STATION 07 7/20/73	STATION 09 7/19/79	STATION 09 7/18/79	STATION 08 7/19/74	STATION 03 7/19/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	7.0	7.0	7.0	3.0	3.0	3.0	3.0
AWE HEIGHT (METERS)	--	--	--	0.5	--	--	0.70
CURRENT SPEED (FPS)	--	--	--	--	--	--	0.0
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	220	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
SECTION LOG (REFLECTOR LK UNITS)	50.	50.	50.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	3.0	5.0	6.3	--	1.0	2.0	--
SCOTT DISK TRANSPARENCY (METERS)	--	--	--	0.4	--	--	0.7
DEPTH OF LX SURFACE LIGHT (METERS)	--	--	--	1.6	--	--	1.7
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	29.0	29.0	29.0	--	20.0	20.0	--
DEG CONDUCTIVITY, FLD (UMH/CM 25C)	73.	47.	47.	--	43.	47.	--
CALCULATION REDUCTION POTENTIAL (MV)	410	410	400	--	350	400	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	6.7	6.2	5.3	--	7.4	6.0	--
FM (STD UNITS)	7.20	7.20	7.20	--	7.30	7.20	--

TABLE C-3d

PARAMETER NAME (UNITS)	STATION 00 7/14/73	STATION 02 7/14/73	STATION 02 7/14/73	STATION 03 7/13/73	STATION 10 7/13/73	STATION 10 7/13/73	STATION 10 7/13/73	STATION 10 7/13/73
HYDROLOGICAL DATA								
TOTAL DEPTH (METERS)	5.0	5.0	5.0	5.0	2.0	2.0	2.0	2.0
WAVE HEIGHT (METERS)	--	--	--	--	0.00	--	--	--
CURRENT SPEED (FPS)	--	--	--	--	0.0	--	--	--
CURRENT DIRECTION (DEG FN TRUE N)	--	--	--	--	--	--	--	--
PHYSICAL DATA								
MISCELLANEOUS DATA								
X-SECTION LOC (NORTH A-HK LK UPST)	50	50	50	50	50	50	50	50
SAMPLE DEPTH (METERS)	1.0	2.0	3.0	4.0	5.0	1.0	1.5	1.5
CURRENT DISK TRANSMISSION (METERS)	--	--	--	--	0.4	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	1.4	--	--	--
FIELD MEASUREMENTS								
WATER TEMPERATURE (DEG C)	31.0	29.5	29.0	29.0	--	30.0	29.0	29.0
SATC CONDUCTIVITY, FLD (UMH/CM 25C)	90	90	90	90	--	90	90	90
OXIDATION REDUCTION POTENTIAL (MV)	410	40	400	--	--	370	320	320
DISSOLVED OXYGEN, ELECTRODE (MG/L)	9.7	7.6	6.3	5.9	--	4.6	3.4	3.4
PH (STD UNITS)	7.40	7.60	7.30	--	--	9.00	7.70	7.70

TABLE C-3e

PARAMETER NAME (UNITS)	STATION 11 7/14/79	STATION 11 7/14/78	STATION 11 7/13/78	STATION 11 7/14/79	STATION 11 7/10/79	STATION 11 7/10/78	STATION 11 7/10/78	STATION 12 7/12/78
HYDROLOGICAL DATA								
TOTAL DEPTH (METERS)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	1.2
AWE HEIGHT (METERS)	0.02	--	--	--	--	--	--	0.00
CURRENT SP. D. (FPS)	0.0	--	--	--	--	--	--	1.0
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--	--
PHYSICAL DATA								
MISCELLANEOUS DATA								
SECTION LOG (RECY 2-PK LK UPST)	80.	80.	80.	80.	80.	80.	80.	59.
SAMPLE DEPTH (METERS)	--	1.0	2.0	3.0	4.0	5.0	5.0	--
SECHI DISK TRANSPARENCY (METERS)	1.0	--	--	--	--	--	--	> 1.2
DEPTH OF 1% SURFACE LIGHT (METERS)	3.0	--	--	--	--	--	--	> 1.2
FIELD MEASUREMENTS								
WATER TEMPERATURE (°C)	--	30.0	29.0	29.0	28.5	24.5	24.5	--
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	--	125.	120.	110.	102.	102.	102.	--
OXIDATION REDUCTION POTENTIAL (MV)	--	350	--	300	--	370	370	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	--	8.6	6.0	5.0	4.5	3.3	3.3	--
PH (STD UNITS)	--	8.30	--	7.80	--	7.50	7.50	--

TABLE C-3f

PARAMETER NAME (UNITS)	STATION 12 7/15/78	STATION 13 7/17/78	STATION 13 7/17/78	STATION 13 7/17/78	STATION 13 7/17/78	STATION 13 7/17/78	STATION 13 7/17/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	1.2	5.0	5.0	6.0	5.0	6.0	5.0
WAVE HEIGHT (METERS)	--	0.01	--	--	--	--	--
CURRENT SPEED (FPS)	--	0.3	--	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (45CM T-9K LK UPST)	50.	30.	30.	30.	30.	30.	30.
TABLE DEPTH (METERS)	0.5	--	1.0	2.0	3.0	4.0	5.0
SCOTT DISK TRANSPARENCY (METERS)	--	1.2	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	4.0	--	--	--	--	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	30.0	--	31.0	30.0	30.3	29.0	29.0
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	93.	--	150.	159.	150.	155.	150.
CALCULATION REDUCTION POTENTIAL (MV)	--	--	315	--	330	--	360
DISSOLVED OXYGEN, ELECTRODE (MG/L)	6.7	--	9.6	7.3	6.7	5.2	3.0
FM (STD UNITS)	7.80	--	8.10	--	8.70	--	7.00

TABLE C-3g

PARAMETER NAME (UNITS)	STATION 14 7/19/78	STATION 14 7/19/78	STATION 15 7/17/78	STATION 15 7/17/78	STATION 15 7/17/78	STATION 15 7/17/78
HYDROLOGICAL DATA						
TOTAL DEPTH (METERS)	4.5	4.5	8.0	8.0	8.0	4.0
WAVE HEIGHT (METERS)	0.01	--	--	--	--	--
CURRENT SPEED (KTS)	0.0	--	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--
PHYSICAL DATA						
MISCELLANEOUS DATA						
X-SECTION LOC (1/8" CM F-BK LK UPST)	50.	50.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	--	1.0	--	1.0	3.0	7.0
WHEEL DISK TRANSPARENCY (METERS)	2.0	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	4.0	--	--	--	--	--
FIELD MEASUREMENTS						
WATER TEMPERATURE (°C)	--	28.5	31.0	31.0	29.0	29.0
SPEC CONDUCTANCE FLD (UMH/CM 25°C)	--	200.	150.	150.	140.	150.
CATHODE REDUCTION POTENTIAL (MV)	--	--	300	300	330	382
DISSOLVED OXYGEN ELECTRODE (MG/L)	--	9.0	9.9	9.9	5.5	3.6
PH (STD UNIT)	--	7.80	8.10	8.10	8.10	7.80

TABLE C-3h

PARAMETER NAME (UNITS)	STATION 1A 7/17/78	STATION 1B 7/17/78	STATION 17 7/17/79	STATION 1A 7/18/79	STATION 1B 7/18/79	STATION 12 7/19/78
HYDROLOGICAL DATA						
TOTAL DEPTH (METERS)	5.0	5.0	4.0	4.0	4.0	3.0
WAVE HEIGHT (METERS)	0.00	--	0.00	0.01	--	0.01
CURRENT SPEED (FPS)	0.0	--	0.3	2.3	--	1.3
CURRENT DIRECTION (DEG FM TRUE N)	100	--	140	20	--	360
PHYSICAL DATA						
MISCELLANEOUS DATA						
X-SECTION LOG (36 INCH 4-INCH LK UPST)	50	50	50	50	50	50
SAMPLE DEPTH (METERS)	--	1.0	1.0	--	1.0	--
SCOTT DISK TRANSPARENCY (METERS)	1.4	--	1.8	0.5	--	0.9
DEPTH OF 1% SURFACE LIGHT (METERS)	4.7	--	3.3	1.5	--	1.8
FIELD MEASUREMENTS						
WATER TEMPERATURE (DEG C)	--	27.0	27.0	--	26.0	--
SPEC CONDUCTANCE FLD (UMHO/CM 25C)	--	142	135	--	120	--
CALCIATION ELECTRODE POTENTIAL (MV)	--	--	--	--	--	--
DISSOLVED OXYGEN (MG/L)	--	7.2	7.2	--	6.3	--
PH (STD UNIT)	--	7.70	7.60	--	7.60	--

TABLE C-3†

PARAMETER NAME (UNITS)	STATION 10 7/18/78	STATION A0 7/19/78	STATION A1 7/19/78	STATION R0 7/19/78	STATION R0 7/19/78	STATION P1 7/18/78	STATION R2 7/17/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	4.0	3.0	3.0	6.0	6.0	3.0	3.0
NAVAL HEIGHT (METERS)	--	0.01	--	--	--	0.02	0.02
CURRENT SPEED (FPS)	--	1.0	--	--	--	0.0	0.0
CURRENT DIRECTION (DEG FM TRUE N)	--	20	--	310	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
EXPOSITION LWC (REFLECTOR LK UPST)	50.	90.	90.	20.	20.	--	--
WATER DEPTH (METERS)	1.0	--	1.0	--	1.0	--	--
WIND SPEED TRANSPARENCY (METERS)	--	--	--	--	--	--	--
DEPTH OF IN SURFACE LIGHT (METERS)	--	--	--	--	--	--	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	29.0	--	29.0	--	29.0	--	--
SPEC CONDUCTANCE, FLD (UMH/CM, 25C)	120.	--	64.	--	103.	--	--
REDUCTION REDUCTION POTENTIAL (MV)	--	--	510	--	40	--	--
DISSOLVED OXYGEN, N. ELECTRODE (MG/L)	5.0	--	7.9	--	7.8	--	--
PH (STD UNITS)	7.30	--	7.00	--	7.20	--	--

TABLE C-3j

PARAMETER NAME (UNITS)	STATION FE 7/18/78	STATION FE 7/19/78
HYDROLOGICAL DATA		
TOTAL DEPTH (METERS)	3.0	3.0
AIRY HEIGHT (METERS)	0.00	--
CURRENT SP. ID (FPS)	0.0	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--
PHYSICAL DATA		
MISCELLANEOUS DATA		
X-SECTION LOC (X=FROM R-RK LK UPST)	15	15
CANAL DEPTH (METERS)	--	1.0
COCCHI DISK TRANSPARENCY (METERS)	--	--
DEPTH OF 12 SURFACE LIGHT (METERS)	--	--
FIELD MEASUREMENTS		
WATER TEMPERATURE (DEG C)	--	31.5
20°C CONDUCTANCE FWD (UMH/CM 25C)	--	98
CALIBRATION POTENTIAL POTENTIAL (MV)	--	373
DISSOLVED OXYGEN ELECTRODE (MG/L)	--	9.2
FM (STD UNITS)	--	9.60

TABLE C-4a

U.S. LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
 CORPS OF ENGINEERS (CONTRACT DAC01-78-C-0101) PHASE 1, CYCLE 4
 WATER QUALITY SAMPLING RESULTS

PARAMETER NAME (UNITS)	STATION 01 8/17/78	STATION 01 8/17/78	STATION 01 8/17/78	STATION 01 8/17/78	STATION 01 8/17/78	STATION 01 8/17/78	STATION 01 8/17/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	3.0	3.0	6.0	6.0	6.0	6.0	5.0
WAVE HEIGHT (METERS)	--	--	0.01	--	--	--	--
CURRENT SPEED (FPS)	--	--	3.0	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE °)	--	--	330	--	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (REFRM R-BK LK UPST)	10.	10.	50.	50.	50.	50.	90.
SAMPLE DEPTH (METERS)	0.3	2.0	--	0.3	1.0	5.0	0.3
SECT-I DISK TRANSPARENCY (METERS)	--	--	0.9	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	1.9	--	--	--	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	28.0	28.0	--	28.5	28.0	28.0	28.0
SP-1 CONDUCTANCE, FLR (UMH/CM 25C)	75.	75.	--	75.	75.	75.	75.
Oxidation Reduction Potential (MV)	--	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.4	7.4	--	7.0	7.0	7.2	7.2
PH (STD UNITS)	7.10	6.90	--	6.90	6.90	6.90	7.00

TABLE C-4b

PARAMETER NAME (UNITS)	STATION 01 8/17/78	STATION 02 8/17/78	STATION 02 8/17/78	STATION 02 8/17/78	STATION 02 8/17/78	STATION 02 8/17/78
HYDROLOGICAL DATA						
TOTAL DEPTH (METERS)	5.0	5.0	5.0	6.0	6.0	6.0
WAVE HEIGHT (METERS)	--	--	--	--	--	--
CURRENT SPLFC (FPS)	--	--	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	30	--	--
PHYSICAL DATA						
MISCELLANEOUS DATA						
X-SECTION LOC (X FROM R-DK LK UPST)	90.	10.	10.	50.	50.	50.
SAMPLE DEPTH (METERS)	4.0	0.3	4.0	0.3	1.0	5.0
SECCP1 DISK TRANSPARENCY (METERS)	--	--	--	0.9	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	1.9	--	--
FIELD MEASUREMENTS						
WATER TEMPERATURE (DEG C)	29.0	28.0	28.0	20.0	28.0	28.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	78.	75.	80.	75.	75.	80.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.2	7.4	7.4	7.5	7.5	7.5
PH (STD UNITS)	7.00	7.20	7.10	7.10	7.10	7.00

TABLE C-4c

PARAMETER NAME (UNITS)	STATION 02 8/17/78	STATION 02 8/17/78	STATION 03 8/17/78	STATION 03 8/17/78	STATION 03 8/17/78	STATION 03 8/17/78
HYDROLOGICAL DATA						
TOTAL DEPTH (METERS)	5.0	5.0	6.0	6.0	6.0	6.0
WAVE HEIGHT (METERS)	--	--	--	--	--	--
CURRENT SPEED (FPS)	--	--	--	0.04	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	20	--	--
PHYSICAL DATA						
MISCELLANEOUS DATA						
X-SECTION LOC (FROM R-OK LK UPST)	90	90	10	50	50	50
SAMPLE DEPTH (METERS)	0.3	4.0	0.3	--	0.3	1.0
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	0.9	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	2.0	--	--
FIELD MEASUREMENTS						
WATER TEMPERATURE (DEG C)	28.0	28.0	28.0	--	28.0	28.0
SPIC CONDUCTANCE, FLD (UMHO/CM 25C)	75	90	75	--	75	75
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.4	7.4	7.8	7.8	7.8	7.8
PH (STD UNIT)	7.10	7.00	7.00	--	7.10	7.10

TABLE C-4d

PARAMETER NAME (UNITS)	STATION 03 8/17/78	STATION 01 8/17/79	STATION 03 8/17/78	STATION 03 8/17/78	STATION 04 8/17/79	STATION 04 8/17/79	STATION 04 8/17/78	STATION 04 8/17/78
HYDROLOGICAL DATA								
TOTAL DEPTH (METERS)	6.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
WAVE HEIGHT (METERS)	--	--	--	--	--	--	0.3	--
CURRENT SPEED (FPS)	--	--	--	--	--	--	2.5	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	320	--
PHYSICAL DATA								
MISCELLANEOUS DATA								
X-SECTION LOC (XTROM R-DK LK UPST)	50.	90.	90.	10.	10.	10.	50.	50.
SAMPLE DEPTH (METERS)	--	0.3	4.0	0.3	4.0	4.0	0.7	0.3
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--	--	1.7	--
FIELD MEASUREMENTS								
WATER TEMPERATURE (DEG C)	28.0	28.0	28.5	29.0	29.0	29.0	--	28.5
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	75.	75.	80.	90.	90.	90.	--	90.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.8	7.5	7.6	7.2	7.1	7.1	--	7.3
PT (STD UNITS)	7.10	7.10	7.10	7.20	7.00	7.00	--	7.20

TABLE C-4e

PARAMETER NAME (UNITS)	STATION 04 8/17/78	STATION 04 8/17/78	STATION 04 8/17/78	STATION 04 8/17/78	STATION 05 8/17/78	STATION 05 8/17/78	STATION 05 8/17/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	5.0	5.0	5.0	5.0	4.0	4.0	9.0
WAVE HEIGHT (METERS)	--	--	--	--	--	--	0.00
CURRENT SPEED (FPS)	--	--	--	--	--	--	2.5
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	340
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (XFROM R-DK LK UPST)	50.	50.	90.	90.	10.	10.	50.
SAMPLE DEPTH (METERS)	1.0	4.0	0.3	4.0	0.3	3.0	--
SILICHL DISK TRANSPARENCY (METERS)	--	--	--	--	--	--	0.7
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--	--	1.5
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	28.5	28.5	28.5	28.5	28.5	28.5	--
SPFC CONDUCTANCE, FLD (UMH/CM 25C)	90.	90.	75.	80.	85.	85.	--
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.1	7.2	7.4	7.4	7.0	7.0	--
PH (STD UNITS)	7.10	7.00	7.20	7.00	7.10	7.10	--

TABLE C-4f

PARAMETER NAME (UNITS)	STATION 05 9/17/78	STATION 05 8/17/78	STATION 05 8/17/78	STATION 05 8/17/78	STATION 05 8/17/78	STATION 06 8/17/78	STATION 06 8/17/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	9.0	9.0	9.0	4.0	4.0	0.01	6.0
WAVE HEIGHT (METERS)	--	--	--	--	--	2.5	--
CURRENT SPEED (FPS)	--	--	--	--	--	0	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (FROM R-OK LK UPST)	50.	50.	50.	90.	90.	5.	10.
SAMPLE DEPTH (METERS)	0.3	1.0	8.0	3.0	3.0	--	0.3
SPEECH DISK TRANSPARENCY (METERS)	--	--	--	--	--	1.0	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--	2.2	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	29.0	29.0	29.0	29.0	29.0	--	29.0
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	80.	90.	90.	85.	85.	--	85.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.0	7.0	7.0	7.2	7.0	--	7.3
PH (STD UNITS)	7.10	7.10	7.00	7.10	7.10	--	7.10

TABLE C-4g

PARAMETER NAME (UNITS)	STATION 06 8/17/78	STATION 06 8/17/78	STATION 06 8/17/78	STATION 06 8/17/78	STATION 06 8/17/78	STATION 06 8/17/78	STATION 06 8/17/78	STATION 07 8/16/78
HYDROLOGICAL DATA								
TOTAL DEPTH (METERS)	6.0	6.0	6.0	6.0	5.0	5.0	5.0	4.0
NAVF HLIGHT (METERS)	--	--	--	--	--	--	--	--
CURRENT SPEED (FPS)	--	--	--	--	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--	--
PHYSICAL DATA								
MISCELLANEOUS DATA								
X-SECTION LOC (XFROM R-DK LK UPST)	10.	50.	50.	50.	90.	90.	90.	20.
SAMPLE DEPTH (METERS)	5.0	0.3	1.0	5.0	3.3	3.3	4.0	1.0
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--	--	--	--
FIELD MEASUREMENTS								
WATER TEMPERATURE (DEG C)	29.5	29.0	22.0	28.5	29.5	29.5	28.5	29.0
SP/C CONDUCTANCE, FLD (UMHO/CM 25C)	90.	85.	85.	90.	85.	85.	85.	90.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	--	300
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.2	6.8	6.9	7.0	7.3	7.3	7.3	7.0
PM (STD UNITS)	7.00	7.30	7.20	7.20	7.10	7.10	7.03	7.20

TABLE C-4h

PARAMETER NAME (UNITS)	STATION 07 8/16/78	STATION 07 8/16/78	STATION 07 8/16/78	STATION 07 8/16/78	STATION 07 8/16/78	STATION 07 8/16/78	STATION 07 8/16/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	4.0	6.0	6.0	6.0	6.0	6.0	8.0
WAVE HEIGHT (METERS)	--	--	--	--	--	--	--
CURRENT SPEED (FPS)	--	--	--	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (XFPDM R-BK LK UPST)	20.	40.	40.	40.	40.	60.	60.
SAMPLE DEPTH (METERS)	3.0	1.0	3.0	3.0	5.0	1.0	3.0
SFLCH1 DISK TRANSPARENCY (METERS)	--	--	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--	--	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	29.0	29.0	29.0	29.0	29.0	29.0	29.0
SP/CL CONDUCTANCE FLD (UMH)/CM 25C)	90	90	90	90	90	90	90
OXIDATION REDUCTION POTENTIAL (MV)	370	380	370	400	440	440	390
DISSOLVED OXYGEN, ELECTRODE (MG/L)	6.9	6.8	6.8	6.8	6.7	6.8	6.8
PH (STD UNITS)	7.00	7.20	7.10	7.00	7.00	7.20	7.00

TABLE C-4i

PARAMETER NAME (UNITS)	STATION 07 8/16/78	STATION 07 8/16/78	STATION 07 8/16/78	STATION 07 H/16/78	STATION 07 9/16/78	STATION 07 A/16/78	STATION OR R/16/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)							2.0
WAVE HEIGHT (METERS)	R.0	B.0	B.0	A.0	A.0	A.0	0.00
CURRENT SPEED (FPS)	--	--	--	--	--	--	.07
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	60
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (#FROM R-RK LK UPST)							
SAMPLE DEPTH (METERS)	60.	60.	80.	80.	80.	80.	50.
SECCO-I DISK TRANSPARENCY (METERS)	5.0	7.0	1.0	3.0	5.0	7.0	U.7
DEPTH OF IX SURFACE LIGHT (METERS)	--	--	--	--	--	--	1.6
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	29.0	29.0	29.0	29.0	29.0	29.0	--
SPEC CONDUCTANCE, FLD (UMHM/CN 25C)	90.	90.	90.	90.	90.	92.	--
OXIDATION REDUCTION POTENTIAL (MV)	370	380	420	460	400	390	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	6.8	6.7	7.0	6.9	6.8	6.7	--
PM (STD UNITS)	7.00	7.00	7.20	7.00	7.00	7.00	--

TABLE C-4j

PARAMETER NAME (UNITS)	STATION 09 8/16/78	STATION 09 8/16/78	STATION 09 8/16/78	STATION 09 8/16/78	STATION 09 8/16/78	STATION 09 8/16/78	STATION 09 8/16/78	STATION 10 8/15/78
HYDROLOGICAL DATA								
TOTAL DEPTH (METERS)	2.0	6.0	6.0	6.0	6.0	6.0	6.0	1.8
WAVE HEIGHT (METERS)	--	0.01	--	--	--	--	--	0.00
CURRENT SPEED (FPS)	--	3.0	--	--	--	--	--	0.0
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--	--
PHYSICAL DATA								
MISCELLANEOUS DATA								
X-SECTION LOC (YFROM R-RK LK UPST)	50.	50.	50.	50.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	--	1.0	1.0	3.0	5.0	6.0	--
SECCHI DISK TRANSPARENCY (METERS)	--	0.9	--	--	--	--	--	1.0
DEPTH OF 1% SURFACE LIGHT (METERS)	--	1.5	--	--	--	--	--	1.5
FIELD MEASUREMENTS								
WATER TEMPERATURE (DEG C)	28.5	--	29.0	28.5	28.5	28.5	28.5	--
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	85.	--	85.	85.	85.	85.	85.	--
Oxidation REDUCTION POTENTIAL (MV)	440	--	410	440	440	440	440	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	6.6	--	7.8	6.8	6.8	6.7	6.7	--
PH (STD UNITS)	7.60	--	8.00	7.40	7.40	7.10	7.10	--

TABLE C-4k

PARAMETER NAME (UNITS)	STATION 10 8/15/78	STATION 10 8/15/78	STATION 11 8/16/78	STATION 11 8/16/78	STATION 11 8/16/78	STATION 11 8/16/78	STATION 11 8/16/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	1.8	1.8	3.0	3.0	10.0	10.0	10.0
WAVE HEIGHT (METERS)	--	--	--	--	--	--	--
CURRENT SPEED (FPS)	--	--	--	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (X FROM R-0K LK UPST)	50.	50.	20.	20.	40.	40.	40.
SAMPLE DEPTH (METERS)	0.3	1.0	1.0	2.0	1.0	3.0	5.0
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--	--	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	30.0	30.0	30.0	29.5	30.0	29.5	28.0
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	90.	77.	140.	140.	140.	130.	130.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	330	320	310	340	360
DISSOLVED OXYGEN, ELECTRODE (MG/L)	9.4	8.8	8.8	8.6	9.0	8.8	6.8
PH (STD UNIT)	8.10	7.90	9.10	9.00	9.00	9.00	7.80

TABLE C-41

PARAMETER NAME (UNITS)	STATION 11 8/16/78	STATION 11 8/16/78	STATION 11 8/16/78	STATION 11 8/16/78	STATION 11 8/16/78	STATION 11 8/16/78	STATION 11 8/16/78	STATION 11 8/16/78
HYDROLOGICAL DATA								
TOTAL DEPTH (METERS)	10.0	10.0	6.0	6.0	6.0	6.0	6.0	6.0
NAVI. HEIGHT (METERS)	--	--	0.01	--	--	--	--	--
CURRENT SPEED (FPS)	--	--	0.0	--	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--	--
PHYSICAL DATA								
MISCELLANEOUS DATA								
X-SECTION LOC (AFROM R-OK LK UPST)	40.	40.	60.	60.	60.	60.	60.	60.
SAMPLE DEPTH (METERS)	7.0	9.0	--	1.0	3.0	3.0	3.0	90.
SPLCH DISK TRANSPARENCY (METERS)	--	--	1.1	--	--	--	--	1.0
DEPTH OF 1X SURFACE LIGHT (METERS)	--	--	2.5	--	--	--	--	--
FIELD MEASUREMENTS								
WATER TEMPERATURE (DEG C)	28.0	27.5	--	30.0	28.0	28.0	28.0	30.0
SPCL CONDUCTANCE, FLD (UMHO/CM 25C)	135.	140.	--	100.	85.	85.	85.	100.
OXIDATION REDUCTION POTENTIAL (MV)	350	350	--	360	320	360	360	310
DISSOLVED OXYGEN, ELCTRODE (MG/L)	5.8	5.4	--	7.6	5.6	5.0	5.0	8.4
PH (STD UNITS)	7.30	7.30	--	8.80	8.10	7.20	7.20	8.80

TABLE C-4m

PARAMETER NAME (UNITS)	STATION 11 8/16/79	STATION 11 8/16/78	STATION 12 8/15/78	STATION 12 8/15/78	STATION 12 8/15/78	STATION 12 8/15/78	STATION 12 8/15/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	6.0	6.0	3.0	3.0	3.0	1.3	1.3
WAVE HEIGHT (METERS)	--	--	--	--	--	0.00	--
CURRENT SPEED (FPS)	--	--	--	--	--	0.0	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (YFROM R-9K LK UPST)	80.	80.	20.	20.	20.	50.	50.
SAMPLE DEPTH (METERS)	3.0	5.0	0.3	0.3	2.0	--	0.3
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	--	--	> 1.3	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--	> 1.3	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	29.0	29.0	30.0	30.0	30.0	--	30.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	85.	95.	90.	90.	90.	--	95.
Oxidation Reduction Potential (MV)	340	360	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.4	6.2	8.0	8.0	8.0	--	8.2
PH (STD UNITS)	8.00	8.20	8.10	8.10	8.10	--	8.30

TABLE C-4n

PARAMETER NAME (UNITS)	STATION 12 8/15/78	STATION 12 8/15/78	STATION 12 8/15/78	STATION 13 8/14/78	STATION 13 8/14/78	STATION 13 8/14/78	STATION 13 8/14/78	STATION 13 8/14/78
HYDROLOGICAL DATA								
TOTAL DEPTH (METERS)	1.3	1.3	1.3	5.0	5.0	5.0	5.0	5.0
WAVE HEIGHT (METERS)	--	--	--	0.20	--	--	--	--
CURRENT SPEED (FPS)	--	--	--	0.0	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--	--
PHYSICAL DATA								
MISCELLANEOUS DATA								
X-SECTION LOC (XTMOM R-BK LK UPST)	50.	80.	80.	30.	30.	30.	30.	30.
SAMPLE DEPTH (METERS)	1.0	0.3	1.0	--	1.0	2.0	3.0	3.0
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	1.1	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	1.9	--	--	--	--
FIELD MEASUREMENTS								
WATER TEMPERATURE (DEG C)	30.0	30.0	30.0	--	30.0	28.5	28.5	28.5
SPLC CONDUCTANCE, FLD (UMHO/CM 25C)	95.	95.	90.	--	130.	128.	137.	137.
Oxidation Reduction Potential (MV)	--	--	--	--	330	--	350	350
Dissolved Oxygen, Electrode (MG/L)	8.1	8.6	8.6	--	10.4	9.4	9.0	9.0
PH (STD UNITS)	8.30	8.70	8.70	--	9.00	--	8.80	8.80

TABLE C-40

PARAMETER NAME (UNITS)	STATION 13 8/14/78	STATION 14 8/15/78	STATION 14 8/15/78	STATION 14 8/15/78	STATION 14 8/15/78	STATION 14 8/15/78	STATION 14 8/15/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	5.0	3.0	3.0	5.0	5.0	5.0	5.0
WAVE HEIGHT (METERS)	--	--	--	0.00	--	--	--
CURRENT SPEED (FPS)	--	--	--	0.0	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (XFROM R-OK LK UPST)	30.	30.	30.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	4.0	0.3	2.0	--	0.3	1.0	4.0
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	0.8	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	1.5	--	--	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	29.0	29.0	27.0	--	28.0	27.5	27.0
SP/C CONDUCTANCE, FLD (UMH)/CM 25C)	130	140.	160.	--	127.	127.	129.
OXIDATION REDUCTION POTENTIAL (MV)	340	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.6	7.6	6.6	--	5.7	5.8	5.7
PH (STD UNITS)	8.20	7.60	7.40	--	7.00	7.00	7.00

TABLE C-4p

PARAMETER NAME (UNITS)	STATION 14 9/15/78	STATION 14 8/15/78	STATION 15 8/14/78	STATION 15 8/14/79	STATION 15 8/14/78	STATION 15 8/14/78
HYDROLOGICAL DATA						
TOTAL DEPTH (METERS)						
WAVE HEIGHT (METERS)	4.0	4.0	3.0	7.0	7.0	7.0
CURRENT SPEED (FPS)	--	--	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--
PHYSICAL DATA						
MISCELLANEOUS DATA						
X-SECTION LOC (W/IN R-BK LK UPST)	80.	80.	15.	35.	35.	35.
SAMPLE DEPTH (METERS)	0.3	3.0	2.0	1.0	3.0	5.0
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--	--
FIELD MEASUREMENTS						
WATER TEMPERATURE (DEG C)	28.0	27.0	28.0	28.5	28.0	28.0
SPLC CONDUCTANCE, FLD (UMH/CM 25C)	150.	133.	129.	125.	125.	125.
Oxidation Reduction Potential (MV)	--	--	350	320	350	360
DISSOLVED OXYGEN, ELECTRODE (MG/L)	8.4	7.0	8.8	9.2	7.8	7.2
PH (STD UNITS)	7.90	7.30	8.70	8.80	7.70	7.40

TABLE C-4q

PARAMETER NAME (UNITS)	STATION 15 8/14/78	STATION 15 8/14/78	STATION 15 8/14/78	STATION 15 8/14/78	STATION 15 8/14/78	STATION 15 8/14/78	STATION 15 8/14/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	7.0	8.0	8.0	8.0	8.0	8.0	7.0
WAVE HEIGHT (METERS)	--	--	--	--	--	--	--
CURRENT SPEED (FPS)	--	0.0	--	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (X FROM R-OK LK UPST)	35.	50.	50.	50.	50.	50.	65.
SAMPLE DEPTH (METERS)	6.0	--	--	--	--	--	1.0
SPECCHI DISK TRANSPARENCY (METERS)	--	0.9	--	--	--	--	--
DEPTH OF 1X SURFACE LIGHT (METERS)	--	2.5	--	--	--	--	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	28.0	28.5	28.0	28.0	28.0	28.0	29.0
SPEC CONDUCTANCE, FLD (UMH)/CM 25C)	125.	120.	120.	120.	120.	130.	120.
OXIDATION REDUCTION POTENTIAL (MV)	350	350	380	380	340	390	340
DISSOLVED OXYGEN, ELECTRODL (MG/L)	7.0	9.4	8.2	8.2	7.6	6.4	8.4
PH (STD UNITS)	7.40	8.70	7.60	7.60	7.40	7.30	8.50

TABLE C-4r

PARAMETER NAME (UNITS)	STATION 15 8/14/78	STATION 15 8/14/78	STATION 15 8/14/78	STATION 15 8/14/78	STATION 15 8/14/78	STATION 15 8/14/78	STATION 15 8/14/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	7.0	7.0	7.0	8.0	8.0	8.0	8.0
NAVE HEIGHT (METERS)	--	--	--	--	--	--	--
CURRENT SPEED (FPS)	--	--	--	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (FROM R-11K LK UPST)	65.	65.	65.	85.	85.	85.	85.
SAMPLE DEPTH (METERS)	3.0	5.0	6.0	1.0	3.0	5.0	7.0
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--	--	--
FILLE MEASUREMENTS							
WATER TEMPERATURE (DEG C)	28.0	28.0	28.0	29.0	28.0	28.0	28.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	125.	127.	127.	120.	120.	125.	124.
OXIDATION REDUCTION POTENTIAL (MV)	390	350	350	390	380	370	360
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.6	7.0	6.8	8.2	7.6	7.2	6.8
PH (STD UNITS)	7.70	7.50	7.40	8.60	8.00	7.50	7.40

TABLE C-4s

PARAMETER NAME (UNITS)	STATION 16 8/14/78	STATION 16 8/14/78	STATION 16 8/14/78	STATION 16 8/14/78	STATION 16 8/14/78	STATION 16 8/14/78	STATION 16 8/14/78	STATION 16 8/14/78
HYDROLOGICAL DATA								
TOTAL DEPTH (METERS)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	6.0
WAVE HEIGHT (METERS)	--	--	--	--	--	--	--	--
CURRENT SPEED (FPS)	--	--	--	--	--	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--	--
PHYSICAL DATA								
MISCELLANEOUS DATA								
X-SECTION LOC (FROM R-RK LK UPST)	10.3	10.3	10.3	10.3	10.3	10.3	10.3	90.3
SAMPLE DEPTH (METERS)	--	--	--	--	--	--	--	--
SECT-I DISK TRANSPARENCY (METERS)	--	--	--	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--	--	--	--
FIELD MEASUREMENTS								
WATER TEMPERATURE (DEG C)	28.0	28.0	28.0	28.0	28.0	28.0	28.0	30.0
SPFC CONDUCTANCE, FLD (UMHO/CM 25C)	90.0	90.0	90.0	90.0	90.0	90.0	90.0	98.0
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.0	6.6	7.0	7.0	7.0	6.6	6.6	8.3
PH (STD UNITS)	7.50	7.40	7.50	7.50	7.50	7.50	7.50	7.60

TABLE C-4t

PARAMETER NAME (UNITS)	STATION 15 8/14/78	STATION 17 8/14/78	STATION 17 8/14/78	STATION 17 8/14/78	STATION 17 8/14/78	STATION 17 8/14/78
HYDROLOGICAL DATA						
TOTAL DEPTH (METERS)	6.0	6.0	6.0	4.0	4.0	4.0
WAVE HEIGHT (METERS)	--	--	--	--	--	--
CURRENT SPEED (FPS)	--	--	--	0.00	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	1.8	--	--
PHYSICAL DATA						
MISCELLANEOUS DATA						
X-SECTION LOC (%FROM P-BK LK UPST)	20.	20.	20.	50.	50.	50.
SAMPLE DEPTH (METERS)	5.0	0.3	5.0	0.3	1.0	3.0
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	0.7	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	1.3	--	--
FIELD MEASUREMENTS						
WATER TEMPERATURE (DEG C)	28.0	28.0	28.3	--	28.0	28.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	103.	85.	90.	--	90.	90.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	6.8	6.6	6.6	6.8	6.4	6.6
PH (STD UNITS)	7.40	7.10	7.00	--	6.90	6.80

TABLE C-4u

PARAMETER NAME (UNITS)	STATION 17 8/14/78	STATION 17 8/14/78	STATION 18 8/16/78	STATION 18 8/16/78	STATION 18 8/16/78	STATION 18 8/16/78	STATION 18 8/16/78	STATION 18 8/16/78	STATION 18 8/16/78
HYDROLOGICAL DATA									
TOTAL DEPTH (METERS)	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
WAVE HEIGHT (METERS)	--	--	--	--	--	--	--	--	--
CURRENT SPEED (FPS)	--	--	--	--	0.02	0.02	--	--	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	3.0	3.0	--	--	--
PHYSICAL DATA									
MISCELLANEOUS DATA									
X-SECTION LOC (FROM R-UK LK UPST)	80.	80.	10.	10.	50.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	0.3	1.0	0.3	4.0	--	--	0.3	--	1.0
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	--	0.9	0.9	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	2.0	2.0	--	--	--
FIELD MEASUREMENTS									
WATER TEMPERATURE (DEG C)	28.0	28.0	29.0	29.0	--	--	29.0	29.0	29.0
SP/C CONDUCTANCE, FLD (UMHO/CM 25C)	87.	89.	110.	112.	--	--	105.	105.	105.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	6.8	6.4	7.6	7.8	--	--	8.0	8.0	9.0
PH (STD UNITS)	7.00	7.00	7.50	7.50	--	--	7.50	7.50	7.50

TABLE C-4v

PARAMETER NAME (UNITS)	STATION 18 8/16/78	STATION 18 8/16/78	STATION 19 8/16/78	STATION 19 8/16/78	STATION 19 8/16/78	STATION 19 8/16/78
HYDROLOGICAL DATA						
TOTAL DEPTH (METERS)	5.0	5.0	4.0	4.0	5.0	5.0
WAVE HEIGHT (METERS)	--	--	--	--	0.02	--
CURRENT SPEED (FPS)	--	--	--	--	7.5	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	360	--
PHYSICAL DATA						
MISCELLANEOUS DATA						
X-SECTION LOC (FROM R-RK LK UPST)	50.	90.	20.	20.	50.	50.
SAMPLE DEPTH (METERS)	4.0	4.0	0.3	0.3	--	0.3
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	--	0.9	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	1.1	--
FIELD MEASUREMENTS						
WATER TEMPERATURE (DEG C)	29.0	29.0	29.0	29.0	--	29.0
SPIC CONDUCTANCE, FLD (UMH/CM 25C)	104.	110.	120.	120.	--	112.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	8.0	8.0	7.2	7.2	--	7.6
PH (STD UNITS)	7.50	7.60	7.50	7.40	--	7.10

TABLE C-4w

PARAMETER NAME (UNITS)	STATION 10 8/16/78	STATION 10 8/16/78	STATION 19 8/16/78	STATION AC 8/17/78	STATION AO 8/17/78	STATION HO 8/17/78
HYDROLOGICAL DATA						
TOTAL DEPTH (METERS)	5.0	5.0	5.0	5.0	5.0	5.0
WAVE HEIGHT (METERS)	--	--	--	0.03	--	0.00
CURRENT SPEED (FPS)	--	--	--	3.0	--	3.0
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	20	--	J30
PHYSICAL DATA						
MISCELLANEOUS DATA						
X-SECTION LOC (XFPOM R-DK LK UPST)	50.	50.	80.	90.	90.	20.
SAMPLE DEPTH (METERS)	1.0	4.0	0.3	--	1.0	--
SFECCHI DISK TRANSPARENCY (METERS)	--	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--	--
FIELD MEASUREMENTS						
WATER TEMPERATURE (DEG C)	20.0	20.0	20.0	--	20.0	--
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	115.	118.	108.	--	75.	--
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	370	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.5	7.4	7.6	--	7.4	--
PH (STD UNITS)	7.10	7.10	7.20	--	7.10	--

TABLE C-4x

PARAMETER NAME (UNITS)	STATION B0 8/17/78	STATION B1 8/14/78	STATION B2 8/15/78	STATION FE 8/16/78	STATION FE 8/16/78
HYDROLOGICAL DATA					
TOTAL DEPTH (METERS)	5.0	2.0	3.0	5.0	5.0
NAVE HEIGHT (METERS)	--	0.03	0.00	0.01	--
CURRENT SPEED (FPS)	--	0.0	0.0	0.0	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--
PHYSICAL DATA					
MISCELLANEOUS DATA					
X-SOLUTION LOC (SPRCH R-BK LK UPST)	20.	--	--	--	--
SAMPLE DEPTH (METERS)	1.0	--	--	--	1.0
SECCHI DISK TRANSPARENCY (METERS)	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--
FIELD MEASUREMENTS					
WATER TEMPERATURE (DEG C)	28.5	--	--	--	30.0
SPIC CONDUCTIVITY, FLD (UMHO/CM 25C)	80.	--	--	--	90.
Oxidation Reduction Potential (MV)	330	--	--	--	390
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.2	--	--	--	7.4
PP (STD UNITS)	6.50	--	--	--	7.40

TABLE C-5a

W. LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I, CYCLE 5
 WATER QUALITY SAMPLING RESULTS

PARAMETER NAME (UNITS)	STATION 01 9/27/78	STATION 01 9/27/78	STATION 02 9/27/78	STATION 02 9/27/78	STATION 03 9/27/78	STATION 03 9/27/78	STATION 04 9/27/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	4.0	4.0	4.0	4.0	5.0	5.0	4.0
RAV. HEIGHT (METERS)	0.02	0.01	0.01	0.01	0.01	0.01	0.03
CURRENT SPEED (FPS)	2.0	2.5	2.5	2.5	2.0	2.0	2.0
CURRENT DIRECTION (DEG FM TRUE N)	330	30	30	30	20	20	320
PHYSICAL DATA							
MISCELLANEOUS DATA							
REFLECTION LOC. (W/FEET R-HK LK UPST)	50.	50.	50.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.4	1.0	1.0	1.0	1.0	1.0	1.0
SECCHI DISK TRANSPARENCY (METERS)	2.8	2.4	2.4	2.4	2.2	2.2	1.5
DEPTH OF 1% SURFACE LIGHT (METERS)	2.8	2.4	2.4	2.4	2.2	2.2	1.5
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG. C)	--	27.5	--	27.5	--	27.0	--
SPEC. CONDUCTANCE, FLD (UMH/CM 25C)	--	40.	--	80.	--	90.	--
Oxidation Reduction Potential (mV)	--	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	--	8.0	--	9.1	--	8.1	--
PH (STD. UNITS)	--	7.20	--	7.30	--	7.50	--

TABLE C-5b

PARAMETER NAME (UNITS)	STATION 04 9/27/78	STATION 05 9/27/78	STATION 07 9/27/78	STATION 06 9/27/78	STATION 08 9/27/78	STATION 09 9/27/78	STATION 10 9/27/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	4.0	4.0	4.0	5.0	5.0	9.0	9.0
AVG. HEIGHT (METERS)	--	0.01	--	0.01	--	0.02	--
CORRECTION (CM)	--	1.0	--	2.0	--	1.0	--
CURRENT DEPTH (0.5 CM TRUE H)	--	3.0	--	0	--	1.0	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
PROJECTION L/C (FROM P-BK LK UPST)	50.	50.	50.	50.	50.	50.	50.
CABLE DEPTH (METERS)	1.0	--	1.0	--	1.0	--	1.0
SCCCHI DISK TRANSDUCER (METERS)	--	1.0	--	1.0	--	1.0	--
DEPTH OF 1X SURFACE LIGHT (METERS)	--	1.0	--	1.0	--	1.0	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	28.0	--	28.0	--	27.5	--	27.5
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	85.	--	90.	--	100.	--	90.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	380
DISSOLVED OXYGEN, N (MG/L)	7.4	--	7.6	--	7.2	--	7.2
PH (STD UNITS)	7.60	--	7.50	--	7.50	--	7.20

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WATER AND AIR RESEARCH INC GAINESVILLE FL

F/G B/A

WATER QUALITY MANAGEMENT STUDIES LAKE SEMINOLE, APRIL-NOVEMBER --ETC(U)

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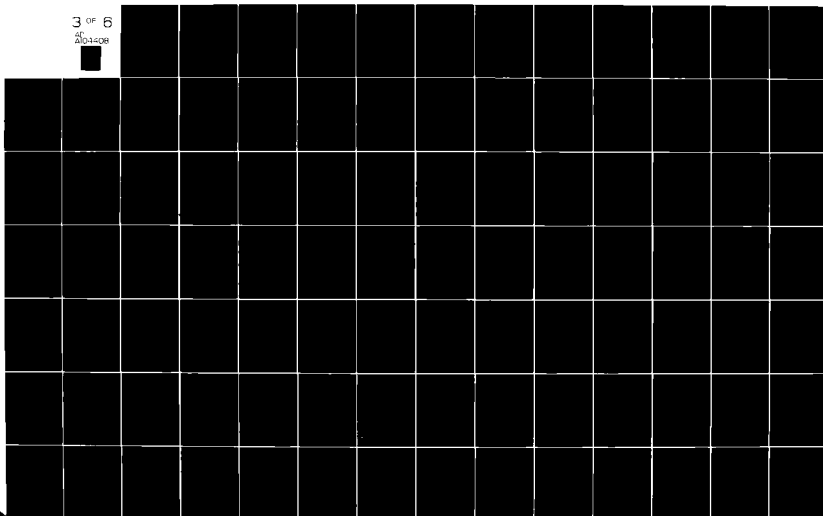


TABLE C-5c

PARAMETER NAME (UNITS)	STATION 37 0/27/78	STATION 07 9/27/78	STATION 37 9/27/78	STATION 03 9/26/78	STATION 03 9/26/78	STATION 28 9/26/78	STATION 37 9/26/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)			9.0	4.0	4.0	4.0	6.0
WAVE HEIGHT (METERS)	8.0	9.0	--	0.05	--	--	0.20
CURRENT SPEED (FPS)	--	--	--	0.1	--	--	0.0
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	0	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
SECTION LIG (REFLECTOR BK LK UPST)	50.	50.	50.	50.	50.	50.	50.
WAVE DEPTH (METERS)	3.0	5.0	7.0	--	1.0	3.0	--
SECTION DISK TRANSPARENCY (METERS)	--	--	--	1.1	--	--	0.8
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	2.0	--	--	2.8
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	27.5	27.5	27.0	--	28.5	28.0	--
SPEC CONDUCTIVITY FLD (UMHO/CM 25C)	90.	98.	95.	--	100.	100.	--
OXIDATION REDUCT (M.D) POTENTIAL (MV)	360	340	350	--	440	510	--
DISSOLVED OXYG N. ELECTRODE (MG/L)	7.0	7.1	7.4	--	7.2	6.8	--
PH (STD UNITS)	7.20	7.20	7.20	--	7.40	7.20	--

TABLE C-5d

PARAMETER NAME (UNITS)	STATION 02 9/26/79	STATION 03 9/26/79	STATION 10 9/26/79	STATION 10 9/26/79	STATION 11 9/26/79	STATION 11 9/26/79
HYDROLOGICAL DATA						
TOTAL DEPTH (METERS)	6.0	6.0	5.0	1.0	5.0	5.0
WAVE HEIGHT (METERS)	--	--	--	0.20	0.20	--
CURRENT DEPTH (METERS)	--	--	--	0.0	0.0	--
CURRENT DEPTH (DEG FM TRUE N)	--	--	--	--	--	--
PHYSICAL DATA						
MISCELLANEOUS DATA						
SECTION LOG (METER P-RK LK UPST)	5.0	5.0	5.0	5.0	6.0	6.0
SAMPLE DEPTH (METERS)	1.0	3.0	5.0	5.0	5.0	1.0
SECTION DISK TRANSPARENCY (METERS)	--	--	--	0.7	0.0	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	> 1.0	2.4	--
FIELD MEASUREMENTS						
WATER TEMPERATURE (DEG C)	28.5	28.0	24.0	--	--	28.5
COND CONDUCTIVITY, FLD (UMH/CM 25C)	95	95	95	--	--	145
REDUCTION REDUCTION POTENTIAL (MV)	410	420	410	--	--	410
DISSOLVED OXYGEN, FLD (MG/L)	7.6	7.6	7.4	--	--	7.6
PH (STD UNITS)	7.50	7.50	7.30	--	--	9.10

TABLE C-5e

PARAMETER NAME (UNITS)	STATION 11 9/26/79	STATION 11 9/26/78	STATION 11 9/26/78	STATION 12 9/26/78	STATION 12 9/26/79	STATION 13 9/25/79	STATION 13 9/25/79
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	5.0	5.0	5.0	0.6	0.6	4.0	4.0
WAVE HEIGHT (METERS)	--	--	--	--	--	--	--
CURRENT SPEED (FPS)	--	--	--	--	--	0.02	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (NEAR F-RK LK UPST)	60.	60.	60.	50.	50.	30.	30.
SAMPLE DEPTH (METERS)	2.0	3.0	4.0	--	0.3	--	1.0
SECCHI DISK T AND PARANECY (METERS)	--	--	--	--	--	1.0	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--	2.4	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (°C)	28.5	28.5	28.5	--	30.0	--	29.0
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	130.	135.	135.	--	0.3	--	100.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	110
DISSOLVED OXYGEN, FLUORESC (MG/L)	7.4	7.3	7.3	--	0.4	--	2.4
PH (STD UNITS)	--	--	7.60	--	8.50	--	9.00

TABLE C-5f

PARAMETER NAME (UNITS)	STATION 13 9/25/74	STATION 13 9/25/78	STATION 13 9/27/78	STATION 14 9/27/74	STATION 15 9/25/74	STATION 15 9/25/78
HYDROLOGICAL DATA						
TOTAL DEPTH (METERS)	6.0	6.0	4.0	4.0	8.0	8.0
AIR WIGHT (METERS)	--	--	--	--	--	--
CURRENT SPEED (FPS)	--	--	0.00	0.00	0.01	0.00
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--	--	--
PHYSICAL DATA						
MISCELLANEOUS DATA						
X-SECTION LOC (INFROM P-RK LK UPST)	30.	30.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	3.0	5.0	1.0	1.0	1.0	3.0
CHLOROPHYLL TRANSPARENCY (METERS)	--	--	--	--	1.2	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	3.0	--	2.3	--
FIELD MEASUREMENTS						
WATER TEMPERATURE (DEG C)	29.0	28.5	--	25.5	29.0	29.0
DOEC CONDUCTANCE, FLD (UMHO/CM 25C)	165.	173.	--	210.	162.	162.
Oxidation REDUCTIVITY POTENTIAL (MV)	370	370	--	--	310	340
DISSOLVED OXYGEN, ELECTRODE (MG/L)	8.0	7.4	--	7.6	8.2	7.4
PH (STD UNITS)	8.90	8.20	--	7.50	8.40	1.00

TABLE C-5g

PARAMETER NAME (UNITS)	STATION 15 9/25/78	STATION 15 9/25/78	STATION 15 9/25/78	STATION 16 9/25/78	STATION 17 9/25/78	STATION 17 9/25/78	STATION 17 9/25/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	8.0	8.0	6.0	6.0	6.0	6.0	4.0
WAVE HEIGHT (METERS)	--	--	0.00	--	--	--	0.02
CURRENT SPEED (FPS)	--	--	0.2	--	--	--	2.0
CURRENT DIRECTION (DEG FH TRUE N)	--	--	100	--	--	--	20
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION L/C (INFROM K-RK LR UPST)	50.	50.	50.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	5.0	7.0	--	1.0	--	--	--
SECHI DISK TRANSPARENCY (METERS)	--	--	1.7	--	2.6	--	1.1
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	4.3	--	5.9	--	2.4
FIELD MEASUREMENTS							
WATER TEMPERATURE (D'G C)	28.0	28.0	--	28.0	--	27.0	--
SPEC CONDUCTANCE, FLO (UMHO/CM 25C)	165.	170.	--	145.	--	140.	--
OXYLATION PRODUCTION POT-NTIAL (MV)	350	320	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.5	7.4	--	7.1	--	7.8	--
PH (STD UNITS)	8.00	8.00	--	8.20	--	7.50	--

TABLE C-5h

PARAMETER NAME (UNITS)	STATION 1A 9/26/78	STATION 1B 9/26/78	STATION 1C 9/26/78	STATION A0 9/27/78	STATION A1 9/27/78	STATION R0 9/27/78	STATION R1 9/27/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	4.0	5.0	6.0	3.0	3.0	3.0	3.0
WAVE HEIGHT (METERS)	--	0.01	--	3.01	--	0.00	--
CURRENT SPEED (FPS)	--	2.5	--	2.0	--	2.0	--
CURRENT DIRECTION (DEG FN TRUE N)	--	0	--	20	--	330	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (FROM R-RK LK UPST)	50.	50.	50.	90.	90.	20.	20.
SAMPLE DEPTH (METERS)	1.0	--	1.0	--	--	--	1.0
SECT DISK TRANSPARENCY (METERS)	--	1.3	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	2.8	--	--	--	--	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	28.5	--	28.0	--	27.5	29.0	29.0
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	135.	--	130.	--	40.	90.	90.
CALCULATION REDUCTION POTENTIAL (MV)	--	--	--	--	450	--	--
DISSOLVED OXYGEN, N. ELECTRODE (MG/L)	7.0	--	6.0	--	8.2	7.0	7.0
PH (STD UNITS)	7.50	--	7.30	--	7.30	--	7.50

TABLE C-5i

PARAMETER NAME (UNITS)	STATION BI 9/25/78	STATION B2 9/25/78	STATION FE 9/26/78	STATION FF 9/26/78
HYDROLOGICAL DATA				
TOTAL DEPTH (METERS)	2.0	2.0	2.0	2.0
RAVE HEIGHT (METERS)	0.03	0.03	0.20	--
CURRENT SPEED (FPS)	0.0	--	0.0	--
CURRENT DIRECTION (DEG FM TRUE N)	--	--	--	--
PHYSICAL DATA				
MISCELLANEOUS DATA				
K-STATION LOC (REFM E-BK LK UPST)	--	--	15.	15.
SAMPLE DEPTH (METERS)	--	--	--	1.0
SPECTR PLUR TRANSPARENCY (METERS)	--	--	--	--
DEPTH OF 1X SURFACE LIGHT (METERS)	--	--	--	--
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	--	--	--	24.0
SPFC CONDUCTANCE: FLD (UMH/CM 25C)	--	--	--	0.5
Oxidation Reduction POTENTIAL (MV)	--	--	--	420
DISSOLVED OXYG N: ELECTRODE (MG/L)	--	--	--	7.5
PH (STD UNITS)	--	--	--	7.50

TABLE C-6a

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DAC401-79-C-0101) PHASE 1, CYCLE 5
 WATER QUALITY SAMPLING RESULTS

PARAMETER NAME (UNITS)	STATION 01 11/29/78	STATION 01 11/29/78	STATION 02 11/29/78	STATION 03 11/29/78	STATION 03 11/29/78	STATION 04 11/29/78
HYDROLOGICAL DATA						
TOTAL DEPTH (METERS)	3.0	3.0	3.0	3.0	3.0	4.0
WAVE HEIGHT (METERS)	0.00	0.00	--	0.00	--	0.00
CURRENT SPEED (FPS)	1.0	1.0	--	1.2	--	1.7
PHYSICAL DATA						
MISCELLANEOUS DATA						
X-SECTION LDC (NEEDLE R-RK LK UNITS)	50.	50.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	--	1.0	1.0	--	1.0	--
SECCHI DISK TRANSPARENCY (METERS)	0.9	--	0.9	0.9	--	0.9
DEPTH OF 1% SURFACE LIGHT (METERS)	2.6	--	2.5	1.2	--	2.2
FIELD MEASUREMENTS						
WATER TEMPERATURE (DEG C)	--	18.0	--	--	18.0	--
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	--	181.	--	--	180.	--
Oxidation Reduction Potential (MV)	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	--	9.1	--	--	9.4	--
PH (STD UNITS)	--	7.00	--	--	7.20	--

TABLE C-6b

PARAMETER NAME (UNITS)	STATION 34 11/29/78	STATION 05 11/29/78	STATION 06 11/29/78	STATION 07 11/30/78	STATION 07 11/30/78
HYDROLOGICAL DATA					
TOTAL DEPTH (METERS)	4.0	3.5	4.0	4.0	4.5
WAVE HEIGHT (METERS)	--	--	0.01	--	0.00
CURRENT SPEED (FPS)	--	1.3	1.3	--	1.3
PHYSICAL DATA					
MISCELLANEOUS DATA					
X-SECTION LOC (XFROM P-RK LK UPST)	50.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.3	1.0	--	1.3	1.0
SECCO DISK TRANSPARENCY (METERS)	--	0.9	0.8	3.9	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	2.4	1.8	--	--
FIELD MEASUREMENTS					
WATER TEMPERATURE (DEG C)	18.0	19.0	--	19.0	19.0
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	86.	102.	--	101.	112.
CALCIATION REDUCTION POTENTIAL (MV)	--	--	--	--	170
DISSOLVED OXYGEN, ELECTRODE (MG/L)	9.3	8.6	--	8.2	9.4
PH (STD UNITS)	7.20	7.20	--	7.20	7.10

TABLE C-6C

PARAMETER NAME (UNITS)	STATION 07	STATION 07	STATION 07	STATION 09	STATION 0A	STATION OR	STATION 00
	11/30/78	11/30/78	11/30/78	11/30/79	11/30/79	11/30/79	11/29/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	6.5	6.5	6.5	3.5	3.5	3.5	6.0
WAVE HEIGHT (METERS)	--	--	--	--	--	--	0.05
CURRENT SPEED (FPS)	--	--	--	--	--	--	0.0
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SECTION LOC (XFROM R-BK LK UPST)	50.	50.	50.	--	--	--	50.
SAMPLE DEPTH (METERS)	3.0	5.0	5.0	1.0	2.0	3.0	0.4
SECOND DISK TRANSPARENCY (METERS)	--	--	--	--	--	--	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	--	--	--	1.2
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	19.0	19.0	19.0	19.0	19.0	19.0	--
SPEC CONDUCTANCE, FLD (UMH/C/M 25C)	112.	112.	360	117.	117.	117.	--
OXYGEN REDUCTION POTENTIAL (MV)	--	--	--	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	8.3	8.2	8.2	8.1	7.9	7.9	--
pH (STD UNITS)	--	7.10	--	7.30	--	7.30	--

TABLE C-6d

PARAMETER NAME (UNITS)	STATION 09 11/29/78	STATION 09 11/29/78	STATION 09 11/29/78	STATION 10 11/28/78	STATION 10 11/28/78	STATION 11 11/28/79	STATION 11 11/29/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	6.0	6.0	6.0	1.0	1.0	5.0	5.0
AIR HEIGHT (METERS)	--	--	--	0.04	--	0.02	--
CURRENT SPEED (FPS)	--	--	--	0.0	--	0.0	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
SECTION LDC (FROM R-BK LK UPST)	50.	50.	50.	50.	50.	85.	85.
SECTION DEPTH (METERS)	1.0	3.0	5.0	--	0.5	--	1.0
SECCI DISK TRANSPARENCY (METERS)	--	--	--	0.7	--	0.9	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	--	--	0.9	--	1.6	--
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	18.5	18.0	18.0	--	18.5	--	18.5
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	124	118.	112.	--	97.	--	117.
CALCIUM REDUCTION POTENTIAL (MV)	390	--	370	--	403	--	420
DISSOLVED OXYGEN, ELECTRODE (MG/L)	6.8	7.0	7.2	--	8.4	--	9.4
PH (STD UNITS)	7.10	--	7.00	--	7.40	--	7.70

TABLE C-6e

PARAMETER NAME (UNITS)	STATION 11 11/29/78	STATION 11 11/28/78	STATION 11 11/28/78	STATION 11 11/28/78	STATION 11 11/28/78	STATION 11 11/28/78	STATION 11 11/28/78	STATION 11 11/28/78	STATION 11 11/28/78	STATION 11 11/28/78
HYDROLOGICAL DATA										
TOTAL DEPTH (METERS)	5.0	5.0	4.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
WAVE HEIGHT (METERS)	--	--	0.03	--	--	--	--	--	--	--
CURRENT SPEED (FPS)	--	--	0.0	--	--	--	--	--	--	--
PHYSICAL DATA										
MISCELLANEOUS DATA										
X-SECTION LOC (FROM R-RK LK UPST)	85.	45.	90.	90.	90.	90.	90.	90.	90.	90.
SAMPLE DEPTH (METERS)	3.0	4.0	--	--	1.0	3.0	3.0	3.0	3.0	3.0
SECCO DISK TRANSPARENCY (METERS)	--	--	1.1	--	--	--	--	--	--	--
DEPTH OF IX SURFACE LIGHT (METERS)	--	--	2.7	--	--	--	--	--	--	--
FIELD MEASUREMENTS										
WATER TEMPERATURE (DEG C)	18.5	18.5	--	18.5	18.5	18.5	18.5	18.5	18.5	18.5
SEC CONDUCTANCE, FLD (UMH/CM 25C)	117.	113.	--	149.	149.	149.	149.	149.	149.	149.
CALCIATION REDUCTION POTENTIAL (MV)	--	410	--	420	420	420	420	420	420	420
DISSOLVED OXYGEN, ELECTRODE (MG/L)	8.1	7.0	--	8.0	8.0	8.0	8.0	8.0	8.0	8.0
PH (STD UNITS)	--	7.70	--	7.90	7.90	7.90	7.90	7.90	7.90	7.90

TABLE C-6f

PARAMETER NAME (UNITS)	STATION 14 11/30/78	STATION 15 11/28/78	STATION 15 11/28/78	STATION 15 11/28/78	STATION 15 11/28/78	STATION 16 11/28/78	STATION 17 11/28/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	--	6.0	7.0	6.0	7.0	6.0	7.0
AVER. HEIGHT (METERS)	--	0.00	0.00	--	0.00	--	--
CURRENT SPEED (FPS)	--	0.0	0.0	--	0.0	--	0.0
PHYSICAL DATA							
MISCELLANEOUS DATA							
X-SLITCH LOC. (AFROM R-RK LK UPST)	--	50.	50.	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	--	1.0	--	--	1.0	--
SECCHI DISK TRANSPARENCY (METERS)	--	1.0	--	--	2.2	--	1.0
DEPTH OF 1% SURFACE LIGHT (METERS)	--	2.4	--	--	5.0	--	> 5.
FIELD MEASUREMENTS							
WATER TEMPERATURE (DEG C)	19.0	--	19.5	18.5	--	19.0	--
SPEC. CONDUCTANCE, FLD (UMH/CM 25C)	140.	--	145.	143.	--	141.	--
OXIDATION REDUCTION POTENTIAL (MV)	--	--	440	450	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	8.6	--	9.5	9.2	--	9.1	--
PH (STD UNITS)	7.30	--	7.90	7.80	--	7.30	--

TABLE C-6g

PARAMETER NAME (UNITS)	STATION 17 11/28/74	STATION 1A 11/10/78	STATION 1A 11/30/78	STATION A0 11/29/78	STATION A0 11/29/78	STATION R0 11/29/78	STATION R0 11/29/78
HYDROLOGICAL DATA							
TOTAL DEPTH (METERS)	5.0	2.0	2.0	3.0	3.0	3.0	3.0
WAVE HEIGHT (METERS)	--	--	--	0.22	--	0.00	--
CURRENT SPEED (FPS)	--	--	--	1.03	--	0.8	--
PHYSICAL DATA							
MISCELLANEOUS DATA							
DIRECTION LOC (REFCM R-BK LK UPST)	50.	5.	5.	90.	90.	5.	5.
WIND DEPTH (METERS)	1.0	--	1.0	--	1.0	--	1.0
CURRENT CLIK TRANSPARENCY (METERS)	--	1.0	--	0.9	--	0.6	--
DEPTH OF 1% SURFACE LIGHT (METERS)	--	> 2.0	--	2.2	--	1.1	--
FIELD MEASUREMENTS							
TEMPERATURE (DEG C)	18.0	--	19.0	--	19.0	--	19.0
CONDUCTANCE, FLD (UMH/CM 25C)	185.	--	122.	--	180.	--	103.
POTENTIAL REDUCTION POTENTIAL (MV)	--	--	--	--	370	--	200
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.4	--	9.0	--	9.4	--	9.1
PH (STD UNITS)	7.20	--	7.60	--	7.00	--	4.60

TABLE C-6h

PARAMETER NAME (UNITS)	STATION FS 11/29/78	STATION FF 11/29/78
HYDROLOGICAL DATA		
TOTAL DEPTH (METERS)	3.0	3.0
WAVE HEIGHT (METERS)	0.02	--
CURRENT SPEED (FPS)	0.0	--
PHYSICAL DATA		
MISCELLANEOUS DATA		
A-SECTION LOC (FROM R-RK LK UPST)	40.	40.
SAMPLE DEPTH (METERS)	--	1.0
SPECTRI DISK TRANSPARENCY (METERS)	0.6	--
DEPTH OF 1% SURFACE LIGHT (METERS)	1.0	--
FIELD MEASUREMENTS		
WATER TEMPERATURE (DEG C)	--	18.5
SPHC CONDUCTANCE, FLD (UMHO/CM 25C)	--	120.
Oxidation Reduction Potential (MV)	--	370
DISSOLVED OXYGEN, ELECTRODE (MG/L)	--	6.6
PM (STD UNITS)	--	7.00

APPENDIX D
WATER QUALITY SAMPLING RESULTS

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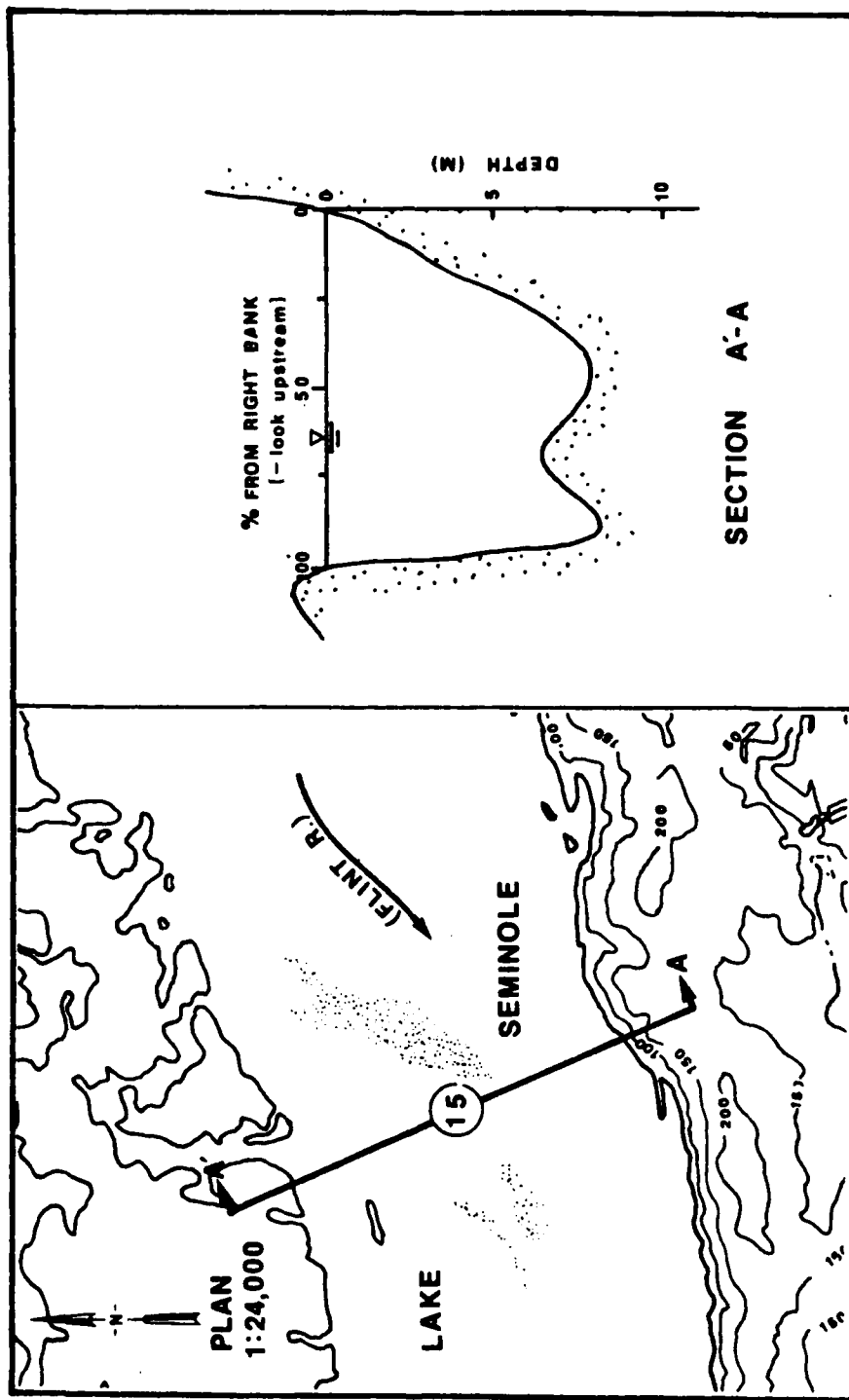


FIGURE D-1. TYPICAL PLAN AND CROSS SECTION OF A LAKE SEMINOLE SAMPLING STATION.

TABLE D-1a

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DACW31-74-C-0101) PHASE I, CYCLE 1
 WATER QUALITY SAMPLING RESULTS

Grab Samples

PARAMETER NAME (UNITS)	STATION 01 4/17/79	STATION 02 4/18/79	STATION 03 4/18/79	STATION 04 4/18/79
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (XFROM R-BK LK UPST)	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	19.0	19.0	19.0	19.0
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	51.	62.	51.	70.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	9.3	8.5	9.3	9.0
PH (STD UNITS)	7.70	7.25	7.20	7.10
LABORATORY DATA				
CCLOP (PT-CO UNITS)	55.	50.	50.	50.
TURBIDITY, HACH TURBIDIMETER (FTU)	25.00	23.00	24.00	14.00
TOTAL FILTERABLE RESIDUE (MG/L)	48.	60.	62.	62.
TOTAL NONFILTERABLE RESIDUE (MG/L)	10.	< 10.	22.	35.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	14.	16.	16.	17.
SULFATE, DISSOLVED (MG SO_4/L)	5.	4.	4.	5.
IRON, DISSOLVED (UG Fe/L)	250	150	150	150
IRON, TOTAL (UG Fe/L)	1710	1570	2190	1030
MANGANESE, DISSOLVED (UG Mn/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG Mn/L)	80	70	90	90
ZINC, TOTAL (UG Zn/L)	30	30	30	50
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 8.	< 8.	< 7.	< 8.
CARBON, TOTAL ORGANIC (MG C/L)	8.	6.	4.	4.
CARBON DIOXIDE (MG CO_2/L)	0.6	1.9	2.1	2.8
NITROGEN, TOTAL AMMONIA (MG N/L)	0.00	0.11	0.10	0.12
NITROGEN, NITRATE+NITRITE (MG N/L)	0.22	0.27	0.45	0.27
NITROGEN, TOTAL INORGANIC (MG N/L)	0.31	0.33	0.36	0.39
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	< 0.01	0.01	0.01	0.01
PHOSPHORUS, TOTAL (MG P/L)	0.03	0.03	0.05	0.07

TABLE D-1b

PARAMETER NAME (UNITS)	STATION 05 4/17/78	STATION 06 4/18/78	STATION 07 4/19/78	STATION 08 4/19/78
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (450CM R-0X LK UPST)	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	20.0	19.0	19.0	21.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	69.	70.	63.	44.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	480	430
DISSOLVED OXYGEN, ELECTRODE (MG/L)	0.0	9.0	9.8	9.9
PH (STD UNITS)	7.40	7.10	7.00	7.10
LABORATORY DATA				
CCLER (PT-CO UNITS)	60.	60.	47.	50.
TURBIDITY, HACH TURBIDIMETER (FTU)	28.00	24.00	23.00	29.00
TOTAL FILTERABLE RESIDUE (MG/L)	56.	65.	52.	56.
TOTAL NONFILTERABLE RESIDUE (MG/L)	17.	12.	< 10.	20.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	15.	20.	15.	17.
SULFATE, DISSOLVED (MG SO_4/L)	4.	6.	6.	6.
IRON, DISSOLVED (UG Fe/L)	150	200	150	200
IRON, TOTAL (UG Fe/L)	1990	1840	1950	2130
MANGANESE, DISSOLVED (UG Mn/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG Mn/L)	100	60	70	90
ZINC, TOTAL (UG Zn/L)	30	30	30	30
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 9.	< 7.	< 8.	< 7.
CARBON, TOTAL ORGANIC (MG C/L)	6.	5.	6.	6.
CARBON DIOXIDE (MG CO_2/L)	1.2	3.4	3.2	2.8
NITROGEN, TOTAL AMMONIA (MG N/L)	0.07	0.12	0.10	0.10
NITROGEN, NITRATE+NITRITE (MG N/L)	0.32	0.29	0.27	0.27
NITROGEN, TOTAL INORGANIC (MG N/L)	0.39	0.41	0.37	0.37
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.02	0.01	0.01	0.01
PHOSPHORUS, TOTAL (MG P/L)	0.03	0.06	0.04	0.05

TABLE D-1c

PARAMETER NAME (UNITS)	STATION 00 4/19/78	STATION 10 4/20/79	STATION 11 4/20/79	STATION 12 4/20/79
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (XFROM A-BK LK UPST)	50.	50.	90.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	0.5
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	23.0	19.0	17.5	22.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	71.	59.	71.	88.
OXIDATION REDUCTION POTENTIAL (mV)	500	500	450	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	8.3	8.0	9.0	8.2
PH (STD UNITS)	7.10	6.70	7.10	7.50
LABORATORY DATA				
COLOR (PT-CO UNITS)	60.	55.	50.	14.
TURBIDITY, NACH TURBIDIMETER (FTU)	30.00	35.00	26.00	2.20
TOTAL FILTERABLE RESIDUE (MG/L)	60.	57.	59.	69.
TOTAL NONFILTERABLE RESIDUE (MG/L)	18.	17.	14.	< 10.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO3/L)	19.	16.	23.	42.
SULFATE, DISSOLVED (MG SO4/L)	4.	5.	5.	< 1.
IRON, DISSOLVED (UG FE/L)	200	150	200	50
IRON, TOTAL (UG FE/L)	1660	2090	1770	120
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	70	70	80	100
ZINC, TOTAL (UG ZN/L)	30	30	30	20
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 8.	< 8.	< 7.	8.
CARBON, TOTAL ORGANIC (MG C/L)	7.	7.	7.	9.
CARBON DIOXIDE (MG CO2/L)	3.1	6.5	3.9	1.4
NITROGEN, TOTAL AMMONIA (MG N/L)	0.09	0.02	0.06	0.09
NITROGEN, NITRATE+NITRITE (MG N/L)	0.29	0.29	0.27	< 0.01
NITROGEN, TOTAL INORGANIC (MG N/L)	0.37	0.30	0.33	< 0.09
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.01	< 0.01	< 0.01	< 0.01
PHOSPHORUS, TOTAL (MG P/L)	0.05	0.14	0.09	0.02

TABLE D-1d

PARAMETER NAME (UNITS)	STATION 13 4/20/78	STATION 14 4/20/78	STATION 15 4/21/78	STATION 16 4/21/78
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (FROM S-BK LK UPST)	30.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	21.0	20.5	21.0	20.5
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	95.	142.	90.	65.
OXIDATION REDUCTION POTENTIAL (MV)	490	--	460	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	8.2	7.5	7.1	7.4
PH (STD UNITS)	7.40	7.50	7.20	7.30
LABORATORY DATA				
COLOR (PT-CO UNITS)	50.	65.	60.	60.
TURBIDITY, MACH TURBIDIMETER (FTU)	13.00	16.00	13.00	11.00
TOTAL FILTERABLE RESIDUE (MG/L)	72.	112.	72.	65.
TOTAL NONFILTERABLE RESIDUE (MG/L)	< 10.	< 10.	< 10.	11.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	38.	69.	32.	34.
SULFATE, DISSOLVED (MG SO_4/L)	1.	< 1.	1.	< 1.
IRON, DISSOLVED (UG Fe/L)	350	250	400	400
IRON, TOTAL (UG Fe/L)	1320	820	1300	1550
MANGANESE, DISSOLVED (UG Mn/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG Mn/L)	60	< 50	70	110
ZINC, TOTAL (UG Zn/L)	20	10	10	20
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 8.	< 10.	< 8.	< 8.
CARBON, TOTAL ORGANIC (MG C/L)	5.	8.	6.	6.
CARBON DIOXIDE (MG CO_2/L)	3.1	4.5	4.1	3.5
NITROGEN, TOTAL AMMONIA (MG N/L)	0.03	0.07	0.12	0.07
NITROGEN, NITRATE+NITRITE (MG N/L)	0.30	0.21	0.32	0.35
NITROGEN, TOTAL INORGANIC (MG N/L)	0.33	0.28	0.44	0.42
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.02	< 0.01	0.03	0.02
PHOSPHORUS, TOTAL (MG P/L)	0.07	0.03	0.03	0.07

TABLE D-1e

PARAMETER NAME (UNITS)	STATION 17 4/21/78	STATION 18 4/17/78	STATION 19 4/16/78
PHYSICAL DATA			
MISCELLANEOUS DATA			
X-SECTION LOC (APPROX 5-30 LK UPST)	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0
FIELD MEASUREMENTS			
WATER TEMPERATURE (DEG C)	20.0	21.5	21.5
SPEC CONDUCTANCE, FLD (UMHJ/CM 25C)	95.	90.	105.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.7	8.7	8.8
PH (STD UNITS)	7.20	7.40	7.30
LABORATORY DATA			
COLOR (PT-CO UNITS)	60.	70.	60.
TURBIDITY, NACH TURBIDIMETER (FTU)	11.00	37.00	30.00
TOTAL FILTERABLE RESIDUE (MG/L)	69.	72.	75.
TOTAL NONFILTERABLE RESIDUE (MG/L)	< 10.	15.	11.
CHEMICAL DATA			
MINERALS AND METALS			
ALKALINITY, TOTAL (MG CaCO_3/L)	34.	25.	32.
SULFATE, DISSOLVED (MG SO_4/L)	1.	5.	4.
IRON, DISSOLVED (UG Fe/L)	400	150	200
IRON, TOTAL (UG Fe/L)	1390	2260	1730
MANGANESE, DISSOLVED (UG Mn/L)	< 50	< 50	< 50
MANGANESE, TOTAL (UG Mn/L)	80	90	80
ZINC, TOTAL (UG Zn/L)	40	20	30
NUTRIENTS			
CARBON, DISSOLVED ORGANIC (MG C/L)	8.	< 8.	< 7.
CARBON, TOTAL ORGANIC (MG C/L)	9.	7.	6.
CARBON DIOXIDE (MG CO_2/L)	4.5	2.0	3.3
NITROGEN, TOTAL AMMONIA (MG N/L)	0.10	0.12	0.13
NITROGEN, NITRATE+NITRITE (MG N/L)	0.35	0.27	0.32
NITROGEN, TOTAL INORGANIC (MG N/L)	0.45	0.39	0.45
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.02	0.02	0.02
PHOSPHORUS, TOTAL (MG P/L)	0.05	0.07	0.06

TABLE D-2a

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DACW01-73-C-0101) PHASE I, CYCLE 2
 WATER QUALITY SAMPLING RESULTS

Grab Samples

PARAMETER NAME (UNITS)	STATION 01 6/ 7/78	STATION 02 6/ 7/78	STATION 03 6/ 7/78	STATION 04 6/ 7/78
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (XFROM P-BK LK UPST)	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	24.0	23.0	24.0	24.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	60.	60.	60.	61.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.3	8.0	7.3	7.6
PH (STD UNITS)	7.50	7.00	6.90	7.20
LABORATORY DATA				
COLOR (PT-CO UNITS)	90.	95.	120.	100.
TURBIDITY, NACH TURBIDIMETER (FTU)	50.00	40.00	75.00	60.00
TOTAL FILTERABLE RESIDUE (MG/L)	58.	62.	59.	70.
TOTAL NONFILTERABLE RESIDUE (MG/L)	17.	29.	103.	50.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	13.	15.	14.	18.
SULFATE, DISSOLVED (MG SO_4/L)	5.	4.	4.	6.
SULFIDE, TOTAL (MG S/L)	--	< 0.1	--	< 0.1
IRON, DISSOLVED (UG FE/L)	230	210	170	160
IRON, TOTAL (UG FE/L)	2130	2440	3050	3930
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	60
MANGANESE, TOTAL (UG MN/L)	90	90	110	130
ZINC, TOTAL (UG ZN/L)	30	30	50	30
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 10.	< 12.	< 10.	9.
CARBON, TOTAL ORGANIC (MG C/L)	8.	8.	9.	11.
CARBON DIOXIDE (MG CO_2/L)	0.8	3.0	3.3	2.2
NITROGEN, TOTAL AMMONIA (MG N/L)	0.09	0.11	0.10	0.08
NITROGEN, NITRATE+NITRITE (MG N/L)	0.36	0.42	0.36	0.36
NITROGEN, TOTAL INORGANIC (MG N/L)	0.45	0.53	0.46	0.44
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.02	0.02	0.02	0.02
PHOSPHORUS, TOTAL (MG P/L)	0.15	0.14	0.25	0.22

TABLE D-2b

PARAMETER NAME (UNITS)	STATION 05 6/ 7/79	STATION 06 6/ 7/78	STATION 07 6/ 6/78	STATION 09 6/ 6/78
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (XFFOM A-BK LK UPST)	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	24.0	24.0	25.0	25.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	70.	65.	60.	71.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	470	490
DISSOLVED OXYGEN, ELECTRODE (MG/L)	6.8	6.9	7.5	7.1
PH (STD UNITS)	6.90	6.90	7.00	7.00
LABORATORY DATA				
CODCP (PT-CO UNITS)	150.	120.	100.	110.
TURBIDITY, NACH TURBIDIMETER (FTU)	120.00	160.00	90.00	90.00
TOTAL FILTERABLE RESIDUE (MG/L)	118.	104.	79.	91.
TOTAL NONFILTERABLE RESIDUE (MG/L)	63.	119.	25.	26.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO3/L)	17.	16.	17.	16.
SULFATE, DISSOLVED (MG SO4/L)	5.	4.	4.	3.
SULFIDE, TOTAL (MG S/L)	< 0.1	< 0.1	< 0.1	< 0.1
IRON, DISSOLVED (UG FE/L)	130	150	150	130
IRON, TOTAL (UG FE/L)	4990	5010	4280	4150
MANGANESE, DISSOLVED (UG MN/L)	60	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	140	150	70	80
ZINC, TOTAL (UG ZN/L)	30	40	70	50
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	10.	10.	10.	9.
CARBON, TOTAL ORGANIC (MG C/L)	12.	11.	11.	11.
CARBON DIOXIDE (MG CO2/L)	4.1	3.8	3.3	3.5
NITROGEN, TOTAL AMMONIA (MG N/L)	0.08	0.10	0.11	0.08
NITROGEN, NITRATE+NITRITE (MG N/L)	0.14	0.33	0.34	0.33
NITROGEN, TOTAL INORGANIC (MG N/L)	0.42	0.43	0.45	0.41
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.02	0.02	0.03	0.02
PHOSPHORUS, TOTAL (MG P/L)	0.28	0.34	0.04	0.09

TABLE D-2c

PARAMETER NAME (UNITS)	STATION 09 6/ 6/74	STATION 10 6/ 6/78	STATION 11 5/ 6/78	STATION 12 6/ 7/78
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (XFROM P-BK LK UPST)	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	0.6
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	26.0	26.0	26.0	30.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	87.	85.	128.	100.
OXIDATION REDUCTION POTENTIAL (MV)	440	430	400	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	6.5	7.2	7.1	9.2
PH (STD UNITS)	7.30	7.50	7.60	8.70
LABORATORY DATA				
COLOR (PT-CO UNITS)	65.	65.	35.	15.
TURBIDITY, NACH TURBIDIMETER (FTU)	30.00	24.00	6.50	4.20
TOTAL FILTERABLE RESIDUE (MG/L)	75.	86.	88.	49.
TOTAL NONFILTERABLE RESIDUE (MG/L)	< 10.	12.	< 10.	< 10.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO3/L)	25.	22.	50.	34.
SULFATE, DISSOLVED (MG SO4/L)	6.	6.	2.	< 1.
SULFIDE, TOTAL (MG S/L)	< 0.1	< 0.1	< 0.1	< 0.1
IRON, DISSOLVED (UG FE/L)	330	250	190	50
IRON, TOTAL (UG FE/L)	1410	1430	620	140
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	80	90	< 50	150
ZINC, TOTAL (UG ZN/L)	50	50	10	10
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 10.	8.	7.	< 12.
CARBON, TOTAL ORGANIC (MG C/L)	9.	10.	8.	9.
CARBON DIOXIDE (MG CO2/L)	2.4	1.3	2.4	0.1
NITROGEN, TOTAL AMMONIA (MG N/L)	0.04	0.05	0.05	0.03
NITROGEN, NITRATE+NITRITE (MG N/L)	0.34	0.27	0.36	<0.01
NITROGEN, TOTAL INORGANIC (MG N/L)	0.38	0.32	0.42	<0.04
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	<0.01	<0.01	<0.01	<0.01
PHOSPHORUS, TOTAL (MG P/L)	0.00	0.10	0.09	0.02

TABLE D-2d

PARAMETER NAME (UNITS)	STATION 13 6/ 5/78	STATION 14 6/ 5/78	STATION 15 6/ 5/78	STATION 14 6/ 5/78
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (XFROM F-BK LK UPST)	30.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	28.0	26.0	27.0	28.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	147.	195.	135.	130.
OXIDATION REDUCTION POTENTIAL (MV)	340	--	410	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	9.0	8.5	8.4	7.0
PH (STD UNITS)	8.00	7.90	7.80	7.30
LABORATORY DATA				
COLOR (PT-CO UNITS)	31.	16.	36.	44.
TURBIDITY, NACH TURBIDIMETER (FTU)	4.30	3.00	6.90	9.00
TOTAL FILTERABLE RESIDUE (MG/L)	94.	121.	95.	91.
TOTAL NONFILTERABLE RESIDUE (MG/L)	14.	12.	12.	12.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CA/CO ₃ /L)	61.	93.	55.	54.
SULFATE, DISSOLVED (MG SO ₄ /L)	1.	< 1.	2.	2.
SULFIDE, TOTAL (MG S/L)	< 0.1	< 0.1	< 0.1	< 0.1
IRON, DISSOLVED (UG FE/L)	90	90	150	260
IRON, TOTAL (UG FE/L)	350	160	740	950
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	< 50	< 50	50	< 50
ZINC, TOTAL (UG ZN/L)	20	10	30	50
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	7.	< 9.	6.	6.
CARBON, TOTAL ORGANIC (MG C/L)	8.	8.	7.	5.
CARBON DIOXIDE (MG CO ₂ /L)	1.1	2.3	1.7	5.2
NITROGEN, TOTAL AMMONIA (MG N/L)	0.05	0.03	0.03	0.11
NITROGEN, NITRATE+NITRITE (MG N/L)	0.26	0.42	0.45	0.44
NITROGEN, TOTAL INORGANIC (MG N/L)	0.31	0.45	0.48	0.75
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	<0.01	0.01	<0.01	0.05
PHOSPHORUS, TOTAL (MG P/L)	0.07	0.04	0.10	0.13

TABLE D-2e

PARAMETER NAME (UNITS)	STATION 17 6/ 5/78	STATION 18 5/ 6/78	STATION 19 5/ 6/78
PHYSICAL DATA			
MISCELLANEOUS DATA			
X-SECTION LOC (XFROM R-BK LK UPST)	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0
FIELD MEASUREMENTS			
WATER TEMPERATURE (DEG C)	25.0	26.0	26.0
SPEC CONDUCTANCE, FLO (UMHO/CM 25C)	115.	130.	121.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	6.0	7.3	6.1
PH (STD UNITS)	7.30	7.50	7.40
LABORATORY DATA			
COLOR (PT-CO UNITS)	50.	35.	55.
TURBIDITY, NACH TURBIDIMETER (FTU)	8.90	21.00	17.00
TOTAL FILTERABLE RESIDUE (MG/L)	93.	83.	93.
TOTAL NONFILTERABLE RESIDUE (MG/L)	17.	14.	< 10.
CHEMICAL DATA			
MINERALS AND METALS			
ALKALINITY, TOTAL (MG CaCO ₃ /L)	49.	42.	45.
SULFATE, DISSOLVED (MG SO ₄ /L)	2.	5.	4.
SULFIDE, TOTAL (MG S/L)	< 0.1	< 0.1	< 0.1
IRON, DISSOLVED (UG FE/L)	410	140	140
IRON, TOTAL (UG FE/L)	1090	1200	1310
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	< 50	90	120
ZINC, TOTAL (UG ZN/L)	40	40	40
NUTRIENTS			
CARBON, DISSOLVED ORGANIC (MG C/L)	< 6.	5.	6.
CARBON, TOTAL ORGANIC (MG C/L)	6.	6.	8.
CARBON DIOXIDE (MG CO ₂ /L)	4.7	2.5	3.4
NITROGEN, TOTAL AMMONIA (MG N/L)	0.00	0.10	0.11
NITROGEN, NITRATE+NITRITE (MG N/L)	0.58	0.31	0.30
NITROGEN, TOTAL INORGANIC (MG N/L)	0.67	0.41	0.41
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.06	<0.01	<0.01
PHOSPHORUS, TOTAL (MG P/L)	0.12	0.12	0.19

TABLE D-3a

STATION 01 INITIAL WATER QUALITY MANAGEMENT STUDY OF
 CORPS (EPA) (CONTRACT DAKA-1-75-2-010) PHASE 1, CYCLE 1
 WATER QUALITY SAMPLING RESULTS

Grab Samples

PARAMETER NAME (UNITS)	STATION 01 7/1/79	STATION 02 7/1/79	STATION 03 7/10/79	STATION 04 7/10/79
PHYSICAL DATA				
MISCELLANEOUS DATA				
WATER TEMPERATURE (DEG C)	24.0	28.0	27.0	26.5
WIND DIRECTION, FLD (DMM/24 HRS)	55	67	67	75
OXIDATION-REDUCTION POTENTIAL (MV)	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	9.3	7.3	8.5	7.7
PH (STD UNITS)	7.35	7.50	7.50	7.70
LABORATORY DATA				
COLOR (PT-CO UNITS)	30	30	30	40
TURBIDITY, NACH TURBIDIMETER (FTU)	7.50	4.50	11.00	12.00
TOTAL FILTERABLE RESIDUE (MG/L)	54	48	45	61
TOTAL NONFILTERABLE RESIDUE (MG/L)	< 10	< 10	15	27
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	17	17	17	23
SULFATE, DISSOLVED (MG SO_4/L)	5	5	5	7
SULFIDE, TOTAL (MG S^2/L)	< 0.1	< 0.1	< 0.1	< 0.1
IRON, DISSOLVED (UG Fe/L)	60	< 50	60	50
IRON, TOTAL (UG Fe/L)	690	670	880	960
MANGANESE, DISSOLVED (UG Mn/L)	< 50	< 50	< 50	120
MANGANESE, TOTAL (UG Mn/L)	150	130	180	220
ZINC, TOTAL (UG Zn/L)	20	50	30	70
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	7	5	6	5
CARBON, TOTAL ORGANIC (MG C/L)	7	6	6	6
CARBON DIOXIDE (MG CO_2/L)	1.4	0.2	0.9	0.7
NITROGEN, TOTAL AMMONIA (MG N/L)	0.05	0.06	0.05	0.05
NITROGEN, NITRATE+NITRITE (MG N/L)	0.13	0.11	0.10	0.09
NITROGEN, TOTAL INORGANIC (MG N/L)	0.18	0.17	0.15	0.14
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	< 0.01	0.01	< 0.01	< 0.01
PHOSPHORUS, TOTAL (MG P/L)	0.04	0.11	0.09	0.17

TABLE D-3b

PARAMETER NAME (UNITS)	STATION 07 7/11/79	STATION 07 7/20/79	STATION 07 7/20/79	STATION 07 7/20/79
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LCG (FROM --PK LK UPST)	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (D.G. C)	25.4	28.1	28.0	23.0
SPEC. CONDUCTANCE, FLD (UMH/CM 25C)	70.	77.	33.	57.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	410	400
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.0	6.0	7.2	5.3
PH (STC UNITS)	7.50	7.10	7.20	7.20
LABORATORY DATA				
COLOR (PT-CO UNITS)	42.	55.	39.	32.
TURBIDITY, NACH TURBIDIMETER (FTU)	22.00	17.00	5.50	7.40
TOTAL FILTERABLE RESIDUE (MG/L)	48.	65.	63.	60.
TOTAL NONFILTERABLE RESIDUE (MG/L)	27.	< 10.	< 10.	< 10.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	19.	21.	23.	24.
SULFATE, DISSOLVED (MG SO_4/L)	7.	6.	7.	7.
SULFIDE, TOTAL (MG S/L)	< 0.1	< 0.1	< 0.1	< 0.1
IRON, DISSOLVED (UG FE/L)	60	70	70	60
IRON, TOTAL (UG FE/L)	1140	630	390	500
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	130	70	100	100
ZINC, TOTAL (UG ZN/L)	30	30	40	30
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	8.	< 6.	< 6.	5.
CARBON, TOTAL ORGANIC (MG C/L)	6.	5.	5.	5.
CARBON DIOXIDE (MG CO_2/L)	1.1	3.1	2.7	2.9
NITROGEN, TOTAL AMMONIA (MG N/L)	0.00	0.00	0.00	0.05
NITROGEN, NITRATE+NITRITE (MG N/L)	0.04	0.11	0.17	0.14
NITROGEN, TOTAL INORGANIC (MG N/L)	0.14	0.17	0.23	0.21
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	< 0.01	< 0.01	< 0.01	< 0.01
PHOSPHORUS, TOTAL (MG P/L)	0.17	0.00	0.24	0.00

TABLE D-3c

PARAMETER NAME (UNITS)	STATION 01 7/15/78	STATION 02 7/15/78	STATION 09 7/19/78	STATION 13 7/19/78
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (MEASUREMENT POINT)	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	4.0	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	22.0	31.0	22.0	30.0
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	94.	90.	92.	90.
OXIDATION REDUCTION POTENTIAL (MV)	350	410	--	370
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.4	8.7	5.0	4.6
PH (STD UNITS)	7.30	7.90	--	9.00
LABORATORY DATA				
COLOR (PT-CO UNITS)	50.	47.	50.	47.
TURBIDITY, NACH TURBIDIMETER (FTU)	7.40	6.40	7.70	7.40
TOTAL FILTERABLE RESIDUE (MG/L)	53.	58.	52.	54.
TOTAL NONFILTERABLE RESIDUE (MG/L)	11.	12.	21.	< 10.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	29.	29.	25.	25.
SULFATE, DISSOLVED (MG SO_4/L)	8.	7.	7.	8.
SULFIDE, TOTAL (MG S/L)	< 0.1	< 0.1	< 0.1	< 0.1
IRON, DISSOLVED (UG FE/L)	90	100	100	90
IRON, TOTAL (UG FE/L)	630	350	900	630
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	120	120	140	100
ZINC, TOTAL (UG ZN/L)	60	20	10	40
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	6.	6.	6.	7.
CARBON, TOTAL ORGANIC (MG C/L)	6.	7.	7.	7.
CARBON DIOXIDE (MG CO_2/L)	2.5	0.7	2.3	0.5
NITROGEN, TOTAL AMMONIA (MG N/L)	0.12	0.07	0.05	0.03
NITROGEN, NITRATE+NITRITE (MG N/L)	0.11	0.03	0.04	0.02
NITROGEN, TOTAL INORGANIC (MG N/L)	0.23	0.03	0.10	0.05
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.01	< 0.01	< 0.01	0.01
PHOSPHORUS, TOTAL (MG P/L)	0.05	0.10	0.04	0.15

TABLE D-3d

PARAMETER NAME (UNITS)	STATION 11 7/17/78	STATION 11 7/17/78	STATION 12 7/17/78	STATION 13 7/17/78
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOG (EACH 1000 LK UNIT)	50.	80.	50.	30.
SAMPLE DEPTH (METERS)	1.0	5.0	0.0	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	30.0	28.5	30.0	31.0
SPEC CONDUCTANCE, FC (UMH/CM 25C)	183.	102.	90.	150.
OXIDATION REDUCTION POTENTIAL (MV)	350	370	--	310
DISSOLVED OXYGEN, ELECTRODE (MG/L)	5.5	3.3	6.7	5.6
PH (STD UNITS)	6.30	7.50	7.40	8.40
LABORATORY DATA				
COLOR (PT-CO UNITS)	20.	60.	14.	17.
TURBIDITY, NACH TURBIDIMETER (FTU)	4.00	9.40	0.80	2.40
TOTAL FILTERABLE RESIDUE (MG/L)	68.	64.	55.	43.
TOTAL NONFILTERABLE RESIDUE (MG/L)	< 10.	13.	13.	< 10.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	49.	33.	32.	62.
SULFATE, DISSOLVED (MG SO_4/L)	3.	5.	< 1.	2.
SULFIDE, TOTAL (MG S^2/L)	< 0.1	< 0.1	< 0.1	< 0.1
IRON, DISSOLVED (UG Fe/L)	60	70	< 50	< 50
IRON, TOTAL (UG Fe/L)	540	670	80	200
MANGANESE, DISSOLVED (UG Mn/L)	< 50	60	< 50	< 50
MANGANESE, TOTAL (UG Mn/L)	90	100	< 50	< 50
ZINC, TOTAL (UG Zn/L)	30	40	160	40
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	5.	4.	6.	6.
CARBON, TOTAL ORGANIC (MG C/L)	5.	5.	7.	6.
CARBON DIOXIDE (MG CO_2/L)	0.5	1.0	0.0	0.2
NITROGEN, TOTAL AMMONIA (MG N/L)	0.04	0.00	0.00	0.07
NITROGEN, NITRATE+NITRITE (MG N/L)	0.00	0.00	< 0.01	0.13
NITROGEN, TOTAL INORGANIC (MG N/L)	0.12	0.13	< 0.00	0.20
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	< 0.01	< 0.01	0.01	< 0.01
PHOSPHORUS, TOTAL (MG P/L)	0.22	0.14	0.00	0.50

TABLE D-3e

PARAMETER NAME (UNITS)	STATION 12 7/17/78	STATION 15 7/17/78	STATION 15 7/17/78	STATION 15 7/17/78
PHYSICAL DATA				
MISCELLANEOUS DATA				
ATRACTING LEC (FROM P-HK LK UNIT)	20.	50.	50.	50.
CABLE DEPTH (METERS)	8.0	1.0	1.0	7.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	25.0	25.0	31.0	21.0
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	150.	200.	150.	150.
OXIDATION REDUCTION POTENTIAL (MV)	340	--	300	382
DISSOLVED OXYGEN, ELECTRODE (MG/L)	3.0	9.0	9.0	3.5
PH (STD UNITS)	9.00	7.00	9.00	7.50
LABORATORY DATA				
COOLCH (PT-CO UNITS)	21.	14.	20.	17.
TURBIDITY, HACH TURBIDIMETER (FTU)	8.30	2.40	3.00	5.50
TOTAL FILTERABLE RESIDUE (MG/L)	21.	100.	99.	102.
TOTAL NONFILTERABLE RESIDUE (MG/L)	14.	< 10.	< 10.	10.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	52.	91.	63.	63.
SULFATE, DISSOLVED (MG SO_4/L)	2.	1.	2.	3.
SULFIDE, TOTAL (MG S/L)	< 0.1	< 0.1	< 0.1	< 0.1
IRON, DISSOLVED (UG FE/L)	< 50	< 50	< 50	< 50
IRON, TOTAL (UG FE/L)	780	150	80	420
MANGANESE, DISSOLVED (UG MN/L)	90	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	210	< 50	170	120
ZINC, TOTAL (UG ZN/L)	20	20	20	20
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	4.	5.	4.	4.
CARBON, TOTAL ORGANIC (MG C/L)	4.	5.	7.	4.
CARBON DIOXIDE (MG CO_2/L)	1.2	2.1	0.3	1.5
NITROGEN, TOTAL AMMONIA (MG N/L)	0.14	0.05	0.07	0.05
NITROGEN, NITRATE+NITRITE (MG N/L)	0.25	0.54	0.24	0.14
NITROGEN, TOTAL INORGANIC (MG N/L)	0.41	0.60	0.31	0.19
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	< 0.01	< 0.01	< 0.01	0.01
PHOSPHORUS, TOTAL (MG P/L)	0.16	0.37	0.47	0.75

TABLE D-3f

PARAMETER NAME (UNITS)	STATION 17 7/17/73	STATION 17 7/17/73	STATION 16 7/18/73	STATION 15 7/19/73
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOG (X-SECTION MARK LK UPST)	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (25°C)	27.0	27.0	27.0	27.0
SPEC CONDUCTANCE, FLD (UMH/CM 25°C)	152.	135.	120.	120.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.2	7.2	6.3	5.6
PH (STD UNITS)	7.70	7.60	7.60	7.30
LABORATORY DATA				
COLOR (PT-CO UNITS)	21.	24.	37.	37.
TURBIDITY, NACH TURBIDIMETER (FTU)	3.60	4.30	7.60	9.60
TOTAL FILTERABLE RESIDUE (MG/L)	64.	84.	71.	94.
TOTAL NONFILTERABLE RESIDUE (MG/L)	< 10.	< 10.	10.	13.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CACCO ₃ /L)	57.	50.	43.	37.
SULFATE, DISSOLVED (MG SO ₄ /L)	1.	2.	7.	7.
SULFIDE, TOTAL (MG S/L)	< 0.1	< 0.1	< 0.1	< 0.1
IRON, DISSOLVED (UG FE/L)	60	70	< 50	< 50
IRON, TOTAL (UG FE/L)	450	510	650	860
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	< 50	< 50	160	170
ZINC, TOTAL (UG ZN/L)	30	30	10	30
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	4.	4.	5.	4.
CARBON, TOTAL ORGANIC (MG C/L)	4.	5.	6.	5.
CARBON DIOXIDE (MG CO ₂ /L)	2.2	2.7	2.0	3.6
NITROGEN, TOTAL AMMONIA (MG N/L)	0.05	0.05	0.00	0.10
NITROGEN, NITRATE+NITRITE (MG N/L)	0.57	0.52	0.12	0.14
NITROGEN, TOTAL INORGANIC (MG N/L)	0.62	0.57	0.21	0.24
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.03	0.04	< 0.01	< 0.01
PHOSPHORUS, TOTAL (MG P/L)	< 0.01	0.12	0.07	0.21

TABLE D-4a

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DACW31-73-C-0101) PHASE I, CYCLE 4

WATER QUALITY SAMPLING RESULTS

Grab Samples

PARAMETER NAME (UNITS)	STATION 01 8/17/78	STATION 02 8/17/78	STATION 03 8/17/78	STATION 04 8/17/78
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (XFROM R-OK LK UPST)	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	28.0	28.0	28.0	28.5
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	75.	75.	75.	90.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.0	7.5	7.8	7.1
PH (STD UNITS)	6.90	7.10	7.10	7.10
LABORATORY DATA				
COLOR (PT-CO UNITS)	47.	55.	50.	55.
TURBIDITY, NACH TURBIDIMETER (FTU)	6.50	5.50	5.50	5.60
TOTAL FILTERABLE RESIDUE (MG/L)	59.	46.	42.	55.
TOTAL NONFILTERABLE RESIDUE (MG/L)	14.	18.	14.	22.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	18.	17.	17.	20.
CHLORIDE (MG CL/L)	4.	4.	4.	4.
SULFATE, DISSOLVED (MG SO_4/L)	5.	6.	5.	8.
SULFIDE, TOTAL (MG S/L)	< 0.1	< 0.1	< 0.1	< 0.1
CALCIUM, TOTAL (MG CA/L)	4.1	6.0	5.1	6.0
HARDNESS, TOTAL (MG CaCO_3/L)	21.9	27.3	23.6	30.9
IRON, DISSOLVED (UG FE/L)	90	90	< 50	50
IRON, TOTAL (UG FE/L)	780	950	860	970
MAGNESIUM, TOTAL (MG MG/L)	2.8	3.0	2.6	3.9
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	130	140	120	150
POTASSIUM, TOTAL (MG K/L)	1.6	1.6	1.6	1.6
SODIUM, TOTAL (MG NA/L)	4.37	4.27	4.37	5.93
ZINC, TOTAL (UG ZN/L)	30	20	70	20
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 8.	5.	< 8.	7.
CARBON, TOTAL ORGANIC (MG C/L)	5.	5.	5.	7.
CARBON DIOXIDE (MG CO_2/L)	4.2	2.5	2.5	2.9
NITROGEN, TOTAL AMMONIA (MG N/L)	0.09	0.10	0.11	0.09
NITROGEN, NITRATE+NITRITE (MG N/L)	0.11	0.14	0.12	0.11
NITROGEN, TOTAL INORGANIC (MG N/L)	0.20	0.24	0.23	0.20
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.5	0.5	0.5	0.5
NITROGEN, TOTAL ORGANIC (MG N/L)	0.4	0.4	0.4	0.4
NITROGEN, TOTAL (MG N/L)	0.6	0.6	0.6	0.6
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	< 0.01	< 0.01	< 0.01	0.01
PHOSPHORUS, TOTAL (MG P/L)	0.05	0.05	0.05	0.05

TABLE D-4b

PARAMETER NAME (UNITS)	STATION 05 9/17/78	STATION 06 8/17/78	STATION 07 8/16/79	STATION 07 9/16/79
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (XFROM P-3K LK UPST)	50.	50.	20.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	7.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	29.0	29.0	29.0	29.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	80.	65.	96.	90.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	380	390
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.0	6.9	7.0	6.7
PH (STD UNITS)	7.10	7.20	7.20	7.00
LABORATORY DATA				
COLOR (PT-CO UNITS)	55.	50.	55.	50.
TURBIDITY, NACH TURBIDIMETER (FTU)	9.30	5.40	13.00	16.00
TOTAL FILTERABLE RESIDUE (MG/L)	49.	52.	70.	75.
TOTAL NONFILTERABLE RESIDUE (MG/L)	19.	17.	16.	--
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	20.	21.	21.	22.
CHLORIDE (MG CL/L)	4.	4.	4.	4.
SULFATE, DISSOLVED (MG SO_4/L)	7.	6.	6.	6.
SULFIDE, TOTAL (MG S/L)	< 0.1	< 0.1	< 0.1	< 0.1
CALCIUM, TOTAL (MG CA/L)	4.3	4.3	7.4	7.9
HARDNESS, TOTAL (MG CaCO_3/L)	27.3	14.7	28.6	30.3
IRON, DISSOLVED (UG FE/L)	< 50	< 50	140	120
IRON, TOTAL (UG FE/L)	1110	1000	930	2120
MAGNESIUM, TOTAL (MG MG/L)	4.1	1.0	2.5	2.6
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	160	130	80	90
POTASSIUM, TOTAL (MG K/L)	1.6	1.7	1.6	1.4
SODIUM, TOTAL (MG NA/L)	5.23	5.07	5.07	5.20
ZINC, TOTAL (UG ZN/L)	10	10	10	10
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 6.	5.	< 7.	< 7.
CARBON, TOTAL ORGANIC (MG C/L)	5.	6.	6.	6.
CARBON DIOXIDE (MG CO_2/L)	2.9	2.5	2.5	2.4
NITROGEN, TOTAL AMMONIA (MG N/L)	0.26	0.05	0.05	0.04
NITROGEN, NITRATE+NITRITE (MG N/L)	0.11	0.30	0.18	0.16
NITROGEN, TOTAL INORGANIC (MG N/L)	0.17	0.35	0.23	0.20
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.5	0.6	0.5	0.5
NITROGEN, TOTAL ORGANIC (MG N/L)	0.4	0.6	0.5	0.5
NITROGEN, TOTAL (MG N/L)	0.6	0.9	0.7	0.7
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.03	< 0.01	0.02	< 0.01
PHOSPHORUS, TOTAL (MG P/L)	0.05	0.06	0.05	0.05

TABLE D-4c

PARAMETER NAME (UNITS)	STATION 09 8/16/78	STATION 09 8/16/78	STATION 09 8/16/78	STATION 10 9/15/78
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (XFROM R-RK LK UPST)	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	6.0	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	28.5	29.0	--	30.0
SPFC CONDUCTANCE, FLD (UMHO/CM 25C)	85.	85.	--	77.
OXIDATION REDUCTION POTENTIAL (MV)	440	410	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	6.6	7.8	--	8.8
PH (STD UNITS)	7.60	8.00	--	7.90
LABORATORY DATA				
COLOR (PT-CO UNITS)	60.	55.	55.	48.
TURBIDITY, HACH TURBIDIMETER (FTU)	16.00	13.00	14.00	15.00
TOTAL FILTERABLE RESIDUE (MG/L)	63.	60.	65.	57.
TOTAL NONFILTERABLE RESIDUE (MG/L)	17.	13.	13.	< 10.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	22.	21.	21.	19.
CHLORIDE (MG CL/L)	4.	4.	4.	4.
SULFATE, DISSOLVED (MG SO_4/L)	5.	6.	5.	5.
SULFIDE, TOTAL (MG S/L)	< 0.1	< 0.1	< 0.1	< 0.1
CALCIUM, TOTAL (MG CA/L)	4.4	7.3	6.6	5.2
HARDNESS, TOTAL (MG CaCO_3/L)	22.9	29.2	19.0	26.0
IRON, DISSOLVED (UG FE/L)	170	140	180	80
IRON, TOTAL (UG FE/L)	700	1200	1210	770
MAGNESIUM, TOTAL (MG MG/L)	2.9	2.7	2.7	3.2
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	120	70	90	80
POTASSIUM, TOTAL (MG K/L)	1.4	1.4	1.4	1.6
SODIUM, TOTAL (MG NA/L)	5.20	4.27	3.97	4.33
ZINC, TOTAL (UG ZN/L)	10	20	< 10	< 10
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 8.	4.	5.	< 7.
CARBON, TOTAL ORGANIC (MG C/L)	6.	5.	6.	6.
CARBON DIOXIDE (MG CO_2/L)	1.0	0.4	3.0	0.4
NITROGEN, TOTAL AMMONIA (MG N/L)	0.07	< 0.01	0.02	0.03
NITROGEN, NITRATE+NITRITE (MG N/L)	0.18	0.10	0.14	0.03
NITROGEN, TOTAL INORGANIC (MG N/L)	0.25	< 0.11	0.16	0.06
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.5	0.5	0.5	0.5
NITROGEN, TOTAL ORGANIC (MG N/L)	0.4	> 0.5	0.5	0.5
NITROGEN, TOTAL (MG N/L)	0.7	0.6	0.6	0.5
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	< 0.01	0.03	< 0.01	< 0.01
PHOSPHORUS, TOTAL (MG P/L)	0.04	0.09	0.08	0.06

TABLE D-4d

PARAMETER NAME (UNITS)	STATION 11 8/16/78	STATION 11 9/16/79	STATION 12 8/16/79	STATION 13 3/13/73
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (XFROM P-RK LK UPST)	20.	40.	20.	30.
SAMPLE DEPTH (METERS)	1.0	5.0	0.6	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	30.0	28.0	--	30.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	143.	130.	--	133.
OXIDATION REDUCTION POTENTIAL (MV)	330	360	--	330
DISSOLVED OXYGEN, ELECTRODE (MG/L)	8.8	6.8	--	10.4
PH (STD UNITS)	9.10	7.80	--	9.00
LABORATORY DATA				
COLOR (PT-CO UNITS)	30.	55.	17.	21.
TURBIDITY, NACH TURBIDIMETER (FTU)	8.50	17.00	0.75	6.30
TOTAL FILTERABLE RESIDUE (MG/L)	62.	60.	50.	78.
TOTAL NONFILTERABLE RESIDUE (MG/L)	< 10.	< 10.	< 10.	< 10.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO3/L)	29.	20.	32.	45.
CHLORIDE (MG CL/L)	4.	4.	3.	4.
SULFATE, DISSOLVED (MG SO4/L)	5.	5.	< 1.	2.
SULFIDE, TOTAL (MG S/L)	< 0.1	< 0.1	< 0.1	< 0.1
CALCIUM, TOTAL (MG CA/L)	5.2	5.0	9.6	10.9
HARDNESS, TOTAL (MG CaCO3/L)	22.9	23.4	24.6	41.4
IRON, DISSOLVED (UG FE/L)	70	120	< 50	< 50
IRON, TOTAL (UG FE/L)	420	1220	90	220
MAGNESIUM, TOTAL (MG MG/L)	2.4	2.7	0.7	3.5
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	< 50	180	< 50	< 50
POTASSIUM, TOTAL (MG K/L)	1.3	1.6	< 0.1	0.9
SODIUM, TOTAL (MG NA/L)	4.00	4.47	1.15	3.13
ZINC, TOTAL (UG ZN/L)	10	10	< 10	10
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	6.	6.	< 2.	< 8.
CARBON, TOTAL ORGANIC (MG C/L)	7.	7.	7.	7.
CARBON DIOXIDE (MG CO2/L)	< 0.1	0.6	0.3	< 0.1
NITROGEN, TOTAL AMMONIA (MG N/L)	< 0.01	< 0.01	0.01	< 0.01
NITROGEN, NITRATE+NITRITE (MG N/L)	0.00	0.12	< 0.01	0.14
NITROGEN, TOTAL INORGANIC (MG N/L)	1.10	< 0.13	< 0.02	0.14
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.5	0.3	0.4	0.6
NITROGEN, TOTAL ORGANIC (MG N/L)	> 0.5	> 0.3	0.4	> 0.6
NITROGEN, TOTAL (MG N/L)	0.6	0.4	< 0.4	0.7
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	< 0.01	0.01	< 0.01	0.02
PHOSPHORUS, TOTAL (MG P/L)	0.08	0.06	0.03	0.05

TABLE D-4e

PARAMETER NAME (UNITS)	STATION 13 9/14/72	STATION 14 8/15/72	STATION 15 8/14/79	STATION 15 9/14/79
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (XFFCM P-3K LK UPST)	37.	50.	15.	50.
SAMPLE DEPTH (METERS)	4.3	1.3	1.3	7.3
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	29.3	27.5	30.0	28.3
SPEC CONDUCTANCE: FLD (UMH/CM 25C)	133.	127.	133.	133.
OXIDATION REDUCTION POTENTIAL (MV)	340	—	320	380
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.6	5.5	10.8	6.4
PH (STD UNITS)	8.23	7.03	9.00	7.43
LABORATORY DATA				
COLOR (PT-CO UNITS)	21.	90.	36.	36.
TURBIDITY, NACH TURBIDIMETER (FTU)	3.50	17.00	16.00	11.00
TOTAL FILTERABLE RESIDUE (MG/L)	76.	94.	71.	74.
TOTAL NONFILTERABLE RESIDUE (MG/L)	< 10.	< 10.	< 10.	14.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	46.	48.	40.	42.
CHLORIDE (MG CL/L)	4.	4.	4.	4.
SULFATE, DISSOLVED (MG SO_4/L)	1.	3.	< 1.	2.
SULFIDE, TOTAL (MG S/L)	< 0.1	< 0.1	< 0.1	< 0.1
CALCIUM, TOTAL (MG CA/L)	11.6	13.7	10.4	10.4
HARDNESS, TOTAL (MG CaCO_3/L)	43.5	35.4	57.8	56.1
IRON, DISSOLVED (UG FE/L)	< 50	200	90	120
IRON, TOTAL (UG FE/L)	400	730	450	1050
MAGNESIUM, TOTAL (MG MG/L)	3.6	1.2	7.5	7.3
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	< 50	< 50	60	90
POTASSIUM, TOTAL (MG K/L)	0.9	0.6	1.1	1.1
SODIUM, TOTAL (MG NA/L)	3.07	1.45	3.27	3.27
ZINC, TOTAL (UG ZN/L)	30	< 10	10	< 10
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	4.	< 5.	6.	7.
CARBON, TOTAL ORGANIC (MG C/L)	6.	3.	7.	7.
CARBON DIOXIDE (MG CO_2/L)	0.5	5.1	< 3.1	3.1
NITROGEN, TOTAL AMMONIA (MG N/L)	0.23	0.03	< 0.01	0.04
NITROGEN, NITRATE+NITRITE (MG N/L)	0.23	0.07	0.37	0.42
NITROGEN, TOTAL INORGANIC (MG N/L)	0.26	0.10	< 0.38	0.46
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.5	0.5	0.7	0.4
NITROGEN, TOTAL ORGANIC (MG N/L)	0.5	0.5	> 0.7	0.4
NITROGEN, TOTAL (MG N/L)	0.7	0.6	1.1	0.9
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	< 0.01	< 0.01	0.02	0.03
PHOSPHORUS, TOTAL (MG P/L)	0.04	0.04	0.07	0.07

TABLE D-4f

PARAMETER NAME (UNITS)	STATION 16 5/14/73	STATION 17 6/14/73	STATION 18 9/16/73	STATION 19 9/16/73
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (XFROM P-BK LK UPST)	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	28.0	28.0	29.0	29.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	90.	90.	105.	115.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	6.8	6.4	8.0	7.5
PH (STD UNITS)	7.40	6.90	7.50	7.10
LABORATORY DATA				
COLOR (PT-CO UNITS)	60.	60.	32.	30.
TURBIDITY, NACH TURBIDIMETER (FTU)	12.30	11.00	10.00	8.60
TOTAL FILTERABLE RESIDUE (MG/L)	63.	68.	65.	57.
TOTAL NONFILTERABLE RESIDUE (MG/L)	< 10.	27.	< 10.	10.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	25.	25.	33.	38.
CHLORIDE (MG CL/L)	4.	4.	4.	4.
SULFATE, DISSOLVED (MG SO_4/L)	3.	2.	5.	4.
SULFIDE, TOTAL (MG S/L)	< 0.1	< 0.1	< 0.1	< 0.1
CALCIUM, TOTAL (MG CA/L)	6.4	6.2	13.0	15.3
HARDNESS, TOTAL (MG CaCO_3/L)	22.4	22.1	42.8	49.8
IRON, DISSOLVED (UG FE/L)	< 50	420	70	< 50
IRON, TOTAL (UG FE/L)	1250	2040	760	650
MAGNESIUM, TOTAL (MG MG/L)	1.6	1.6	2.5	2.8
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	90	260	90	100
POTASSIUM, TOTAL (MG K/L)	1.1	1.2	1.1	1.1
SODIUM, TOTAL (MG NA/L)	3.30	3.30	3.87	3.50
ZINC, TOTAL (UG ZN/L)	20	30	10	20
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	8.	8.	6.	5.
CARBON, TOTAL ORGANIC (MG C/L)	8.	8.	6.	5.
CARBON DIOXIDE (MG CO_2/L)	1.9	5.8	1.9	5.6
NITROGEN, TOTAL AMMONIA (MG N/L)	0.03	0.02	0.05	0.09
NITROGEN, NITRATE+NITRITE (MG N/L)	0.29	0.28	0.04	0.17
NITROGEN, TOTAL INORGANIC (MG N/L)	0.32	0.30	0.09	0.25
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.5	0.5	0.6	0.6
NITROGEN, TOTAL ORGANIC (MG N/L)	0.5	0.5	0.6	0.5
NITROGEN, TOTAL (MG N/L)	0.8	0.8	0.6	0.9
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.03	0.03	< 0.01	< 0.01
PHOSPHORUS, TOTAL (MG P/L)	0.05	0.09	0.04	0.04

TABLE D-5a

ST. LAKE MINERAL WATER QUALITY MONITORING STUDY --
 COPIES OF LABORATORY (CONTRACT DATA)-714-C-01011 PHASE 1, CYCLE 1
 WATER QUALITY SAMPLING RESULTS

Grab Samples

PARAMETER NAME (UNITS)	STATION 01 0/27/78	STATION 02 0/27/78	STATION 03 0/27/78	STATION 04 0/27/78
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC. (REF. LK. 1-3R LK. UNITS)	50.	50.	30.	30.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG. C)	27.5	27.5	27.0	24.0
SPIC CONDUCTANCE, FLD (UMH/CM, 25C)	80.	80.	80.	85.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	8.3	8.1	8.1	7.4
PH (STD. UNITS)	7.20	7.50	7.50	7.50
LABORATORY DATA				
COLOR (PT-CO UNITS)	9.	0.	3.	23.
TURBIDITY, HACH TURBIDIMETER (FTU)	4.10	5.10	6.40	9.40
TOTAL NONFILTERABLE RESIDUE (MG/L)	< 10.	< 10.	20.	19.
TOTAL FILTERABLE RESIDUE (MG/L)	49.	49.	46.	57.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CA/CL)	19.	19.	20.	25.
SULFATE, DISSOLVED (MG SO4/L)	7.	7.	6.	9.
IRON, DISSOLVED (UG FE/L)	< 50	< 50	< 50	< 50
IRON, TOTAL (UG FE/L)	190	230	440	470
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	90	120	190	190
ZINC, TOTAL (UG ZN/L)	30	10	50	10
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	4.	7.	5.	7.
CARBON, TOTAL ORGANIC (MG C/L)	6.	10.	12.	17.
CARBON DIOXIDE (MG CO2/L)	2.2	1.1	1.2	1.4
NITROGEN, TOTAL AMMONIA (MG N/L)	< 0.01	< 0.01	< 0.01	0.02
NITROGEN, NITRATE+NITRITE (MG N/L)	0.02	0.07	0.07	0.07
NITROGEN, TOTAL INORGANIC (MG N/L)	< 0.01	< 0.01	< 0.01	0.09
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.2	0.3	0.5	0.7
NITROGEN, TOTAL ORGANIC (MG N/L)	> 0.2	> 0.2	> 0.2	0.7
NITROGEN, TOTAL (MG N/L)	0.5	0.5	0.5	0.9
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	< 0.01	< 0.01	< 0.01	< 0.01
PHOSPHORUS, TOTAL (MG P/L)	0.03	0.03	0.06	0.04

TABLE D-5b

PARAMETER NAME (UNITS)	STATION 05 9/27/72	STATION 06 9/27/72	STATION 07 9/27/72	STATION 07 9/27/72
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOG (EXPOSED BANK LK UPST)	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	7.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	25.0	27.7	27.7	27.0
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	90.	100.	90.	95.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	300	340
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.6	7.2	7.2	7.4
PH (STD UNITS)	7.50	7.50	7.20	7.20
LABORATORY DATA				
COLOR (PT-CO UNITS)	12.	24.	21.	24.
TURBIDITY, HACH TURBIDIMETER (FTU)	7.90	7.30	5.50	7.00
TOTAL NONFILTERABLE RESIDUE (MG/L)	15.	12.	11.	16.
TOTAL FILTERABLE RESIDUE (MG/L)	50.	58.	55.	55.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CAECO3/L)	22.	24.	25.	23.
SULFATE, DISSOLVED (MG SO4/L)	8.	8.	9.	8.
IRON, DISSOLVED (UG FE/L)	< 50	< 50	< 50	< 50
IRON, TOTAL (UG FE/L)	410	400	290	370
MANGANESE, DISSOLVED (UG MN/L)	40	< 50	80	40
MANGANESE, TOTAL (UG MN/L)	130	160	140	150
ZINC, TOTAL (UG ZN/L)	30	20	10	20
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	7.	8.	8.	0.
CARBON, TOTAL ORGANIC (MG C/L)	13.	18.	16.	18.
CARBON DIOXIDE (MG CO2/L)	1.3	1.5	2.0	2.7
NITROGEN, TOTAL AMMONIA (MG N/L)	0.01	0.05	0.02	0.02
NITROGEN, NITRATE+NITRITE (MG N/L)	0.07	0.10	0.10	0.12
NITROGEN, TOTAL INORGANIC (MG N/L)	0.04	0.10	0.10	0.14
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.4	0.4	0.4	0.6
NITROGEN, TOTAL ORGANIC (MG N/L)	0.3	0.3	0.3	0.6
NITROGEN, TOTAL (MG N/L)	0.4	0.4	0.3	0.7
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	<0.01	<0.01	<0.01	<0.01
PHOSPHORUS, TOTAL (MG P/L)	0.05	0.04	0.04	0.06

TABLE D-5c

PARAMETER NAME (UNITS)	STATION 04 9/20/77	STATION 09 9/26/78	STATION 06 7/28/78	STATION 10 6/24/73
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOG (XFROM FARK LK UPST)	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	5.0	3.6
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	25.7	24.5	23.7	24.5
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	100.	95.	85.	80.
OXIDATION REDUCTION POTENTIAL (MV)	460	410	410	420
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.2	7.3	7.4	7.7
PH (STD UNITS)	7.20	7.50	7.30	7.70
LABORATORY DATA				
COLOR (PT-CO UNITS)	25.	33.	32.	34.
TURBIDITY, HACH TURBIDIMETER (FTU)	8.20	9.50	9.00	9.60
TOTAL NONFILTERABLE RESIDUE (MG/L)	< 10.	13.	13.	13.
TOTAL FILTERABLE RESIDUE (MG/L)	63.	59.	63.	55.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	22.	22.	25.	24.
SULFATE, DISSOLVED (MG SO_4/L)	7.	7.	7.	7.
IRON, DISSOLVED (UG Fe/L)	< 50	170	< 50	< 50
IRON, TOTAL (UG Fe/L)	< 50	380	370	250
MANGANESE, DISSOLVED (UG Mn/L)	< 50	100	< 50	< 50
MANGANESE, TOTAL (UG Mn/L)	< 50	170	160	130
ZINC, TOTAL (UG Zn/L)	< 10	< 10	< 10	< 10
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	5.	5.	5.	5.
CARBON, TOTAL ORGANIC (MG C/L)	5.	6.	5.	6.
CARBON DIOXIDE (MG CO_2/L)	3.3	1.2	2.3	0.9
NITROGEN, TOTAL AMMONIA (MG N/L)	<0.01	<0.01	<0.01	<0.01
NITROGEN, NITRATE/NITRITE (MG N/L)	0.12	0.03	0.09	0.04
NITROGEN, TOTAL INORGANIC (MG N/L)	<0.13	<0.04	<0.10	<0.05
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.5	0.5	0.5	1.0
NITROGEN, TOTAL ORGANIC (MG N/L)	> 0.5	> 0.5	> 0.5	> 1.0
NITROGEN, TOTAL (MG N/L)	0.5	0.5	0.5	1.0
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	--	0.03	0.02	0.02
PHOSPHORUS, TOTAL (MG P/L)	0.03	0.04	0.04	0.03

TABLE D-5d

PARAMETER NAME (UNITS)	STATION 11 9/25/78	STATION 11 9/25/78	STATION 12 9/25/78	STATION 13 9/25/78
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOG (FROM A-BK LK UPST)	60.	60.	50.	30.
SAMPLE DEPTH (METERS)	1.0	4.0	0.3	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	24.5	24.5	30.0	24.0
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	135	135	95	145
OXIDATION REDUCTION POTENTIAL (MV)	-10	-42	—	-37
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.6	7.3	9.4	9.4
PH (STD UNITS)	8.10	7.60	8.40	9.00
LABORATORY DATA				
COLOR (PT-CO UNITS)	23.	23.	12.	20.
TURBIDITY, HACH TURBIDIMETER (FTU)	8.00	8.50	3.20	4.50
TOTAL NONFILTERABLE RESIDUE (MG/L)	< 10.	11.	< 10.	227.
TOTAL FILTERABLE RESIDUE (MG/L)	90.	81.	53.	106.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO ₃ /L)	49.	47.	34.	62.
SULFATE, DISSOLVED (MG SO ₄ /L)	4.	4.	1.	3.
IRON, DISSOLVED (UG FE/L)	< 50	< 50	< 50	< 50
IRON, TOTAL (UG FE/L)	240	290	120	100
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	120	150	110	80
ZINC, TOTAL (UG ZN/L)	30	10	20	< 10
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	5.	4.	7.	< 2.
CARBON, TOTAL ORGANIC (MG C/L)	5.	7.	7.	2.
CARBON DIOXIDE (MG CO ₂ /L)	0.7	2.1	0.2	0.1
NITROGEN, TOTAL AMMONIA (MG N/L)	< 0.01	< 0.01	< 0.01	< 0.01
NITROGEN, NITRATE+NITRITE (MG N/L)	0.03	0.04	< 0.01	0.14
NITROGEN, TOTAL INORGANIC (MG N/L)	< 0.04	< 0.05	< 0.02	< 0.15
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.4	0.4	0.4	0.5
NITROGEN, TOTAL ORGANIC (MG N/L)	> 0.4	> 0.4	> 0.4	> 0.5
NITROGEN, TOTAL (MG N/L)	0.4	0.4	< 0.4	0.6
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.01	0.01	0.03	< 0.01
PHOSPHORUS, TOTAL (MG P/L)	0.04	0.04	0.02	0.05

TABLE D-5e

PARAMETER NAME (UNITS)	STATION 13 9/22/79	STATION 14 5/27/78	STATION 15 9/25/78	STATION 13 9/25/79
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (FROM A-HK LK POST)	30.	50.	50.	50.
SAMPLE DEPTH (METERS)	5.0	1.5	1.0	7.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (°C)	24.5	25.5	29.0	24.0
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	170.	210.	162.	170.
OXIDATION REDUCTION POTENTIAL (MV)	37	--	310	320
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.4	7.5	8.2	7.4
PH (STD UNITS)	8.20	7.50	9.40	9.00
LABORATORY DATA				
COLOR (PT-CO UNITS)	20.	10.	20.	20.
TURBIDITY, NACH TURBIDIMETER (FTU)	5.50	5.30	3.60	4.40
TOTAL NONFILTERABLE RESIDUE (MG/L)	203.	< 10.	300.	> 10.
TOTAL FILTERABLE RESIDUE (MG/L)	103.	118.	100.	100.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CA/CO ₃ /L)	62.	93.	61.	60.
SULFATE, DISSOLVED (MG SO ₄ /L)	3.	< 1.	2.	3.
IRON, DISSOLVED (UG FE/L)	< 50	< 50	< 50	< 50
IRON, TOTAL (UG FE/L)	200	150	190	210
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	110	50	80	120
ZINC, TOTAL (UG ZN/L)	20	20	< 10	10
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 2.	2.	2.	< 2.
CARBON, TOTAL ORGANIC (MG C/L)	2.	16.	3.	1.
CARBON DIOXIDE (MG CO ₂ /L)	0.7	5.4	0.4	1.1
NITROGEN, TOTAL AMMONIA (MG N/L)	< 0.01	< 0.01	< 0.01	0.03
NITROGEN, NITRATE+NITRITE (MG N/L)	0.15	0.35	0.30	0.10
NITROGEN, TOTAL INORGANIC (MG N/L)	< 0.15	< 0.36	< 0.31	0.22
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.4	0.3	0.5	0.4
NITROGEN, TOTAL ORGANIC (MG N/L)	> 0.4	> 0.3	> 0.5	0.4
NITROGEN, TOTAL (MG N/L)	0.4	0.4	0.4	0.6
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	< 0.01	< 0.01	0.01	0.02
PHOSPHORUS, TOTAL (MG P/L)	0.05	0.01	0.06	0.05

TABLE D-5f

PARAMETER NAME (UNITS)	STATION 1A 9/25/78	STATION 17 9/25/78	STATION 18 9/26/78	STATION 19 9/26/79
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (NFROM F-BK LK UPST)	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	28.0	27.0	29.5	23.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	143.	143.	135.	133.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.1	7.1	7.0	6.0
PH (STD UNITS)	8.20	7.50	7.50	7.30
LABORATORY DATA				
COLOR (PT-CO UNITS)	16.	13.	34.	18.
TURBIDITY, NACH TURBIDIMETER (FTU)	3.60	1.60	7.80	6.10
TOTAL NONFILTERABLE RESIDUE (MG/L)	< 10.	< 10.	< 10.	< 10.
TOTAL FILTERABLE RESIDUE (MG/L)	88.	91.	85.	80.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO3/L)	52.	52.	44.	43.
SULFATE, DISSOLVED (MG SO4/L)	4.	3.	4.	4.
IRON, DISSOLVED (UG FE/L)	< 50	< 50	50	< 50
IRON, TOTAL (UG FE/L)	220	150	220	250
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	60	< 50	120	130
ZINC, TOTAL (UG ZN/L)	< 10	< 10	10	10
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 3.	< 2.	4.	4.
CARBON, TOTAL ORGANIC (MG C/L)	1.	1.	7.	6.
CARBON DIOXIDE (MG CO2/L)	0.6	3.0	2.5	3.9
NITROGEN, TOTAL AMMONIA (MG N/L)	0.04	0.03	0.03	0.06
NITROGEN, NITRATE+NITRITE (MG N/L)	0.49	0.55	0.05	0.09
NITROGEN, TOTAL INORGANIC (MG N/L)	0.53	0.61	0.09	0.14
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.4	0.4	0.4	0.5
NITROGEN, TOTAL ORGANIC (MG N/L)	0.4	0.4	0.4	0.4
NITROGEN, TOTAL (MG N/L)	0.9	1.0	0.5	0.6
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.08	0.37	0.02	0.03
PHOSPHORUS, TOTAL (MG P/L)	0.10	0.39	0.24	0.04

TABLE D-6a

** LAMP SEMI-ANNUAL WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DACW31-77-C-0101) PHASE I, CYCLE 6

WATER QUALITY SAMPLING RESULTS

Grab Samples

PARAMETER NAME (UNITS)	STATION 01 11/29/78	STATION 02 11/29/78	STATION 03 11/29/78	STATION 04 11/29/78
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (XFROM R-BK LK UPST)	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	18.0	18.0	18.0	18.0
SPEC CONDUCTANCE, FLD (UMH/CM 25C)	181.	181.	180.	181.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	9.1	9.5	9.4	9.3
PH (STD UNITS)	7.00	7.10	7.20	7.20
LABORATORY DATA				
CLLOR (PT-CO UNITS)	24.	30.	35.	29.
TURBIDITY, MACH TURBIDIMETER (FTU)	8.20	9.10	9.80	9.40
TOTAL NONFILTERABLE RESIDUE (MG/L)	35.	--	< 10.	16.
TOTAL FILTERABLE RESIDUE (MG/L)	35.	126.	59.	62.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	16.	16.	16.	16.
CHLORIDE (MG CL/L)	3.	5.	5.	5.
SULFATE, DISSOLVED (MG SO_4/L)	7.	7.	7.	7.
CALCIUM, TOTAL (MG CA/L)	3.0	3.8	4.3	3.9
HARDNESS, TOTAL (MG CaCO_3/L)	12.2	13.7	15.4	14.6
IRON, DISSOLVED (UG FE/L)	< 50	60	60	90
IRON, TOTAL (UG FE/L)	780	810	950	900
MAGNESIUM, TOTAL (MG MG/L)	1.1	1.1	1.2	1.2
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	50	60	70	70
POTASSIUM, TOTAL (MG K/L)	2.4	2.3	2.2	2.2
SODIUM, TOTAL (MG NA/L)	6.08	5.72	5.55	5.55
ZINC, TOTAL (UG ZN/L)	< 10	< 10	< 10	< 10
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 5.	3.	< 6.	< 5.
CARBON, TOTAL ORGANIC (MG C/L)	2.	4.	5.	3.
CARBON DIOXIDE (MG CO_2/L)	3.4	2.5	2.1	2.1
NITROGEN, TOTAL AMMONIA (MG N/L)	0.04	0.03	0.01	< 0.01
NITROGEN, NITRATE+NITRITE (MG N/L)	0.31	0.30	0.31	0.32
NITROGEN, TOTAL INORGANIC (MG N/L)	0.35	0.33	0.33	0.32
NITROGEN, TOTAL KJFDAML (MG N/L)	0.4	0.4	0.3	0.3
NITROGEN, TOTAL ORGANIC (MG N/L)	0.4	0.4	0.3	0.3
NITROGEN, TOTAL (MG N/L)	0.7	0.7	0.5	0.5
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.01	0.01	< 0.01	< 0.01
PHOSPHORUS, TOTAL (MG P/L)	0.04	0.04	0.04	0.04

TABLE D-6b

PARAMETER NAME (UNITS)	STATION 32 11/29/79	STATION 36 11/29/78	STATION 37 11/30/78	STATION 37 11/30/79
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (FROM R-9K LK UPST)	50.	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	5.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	14.3	19.3	12.3	15.0
SPIC CONDUCTANCE, FLO (UMH/CM 25C)	105.	101.	112.	112.
OXIDATION REDUCTION POTENTIAL (MV)	--	--	370	360
DISSOLVED OXYGEN, ELECTRODE (MG/L)	8.5	8.2	8.4	8.2
PH (STD UNITS)	7.20	7.20	7.13	7.10
LABORATORY DATA				
COLOR (PT-CO UNITS)	63.	55.	65.	73.
TURBIDITY, NACH TURBIDIMETER (FTU)	8.30	9.43	9.73	30.00
TOTAL NONFILTERABLE RESIDUE (MG/L)	12.	< 10.	> 10.	97.
TOTAL FILTERABLE RESIDUE (MG/L)	79.	73.	88.	96.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	25.	26.	29.	31.
CHLORIDE (MG CL/L)	3.	5.	5.	5.
SULFATE, DISSOLVED (MG SO_4/L)	12.	11.	13.	12.
CALCIUM, TOTAL (MG CA/L)	4.8	4.0	5.2	5.4
HARDNESS, TOTAL (MG CaCO_3/L)	17.2	17.3	20.2	16.3
IRON, DISSOLVED (UG FE/L)	80	80	70	80
IRON, TOTAL (UG FE/L)	930	750	873	4100
MAGNESIUM, TOTAL (MG MG/L)	1.3	1.8	1.3	1.4
MANGANESE, DISSOLVED (UG MN/L)	50	70	113	130
MANGANESE, TOTAL (UG MN/L)	90	103	150	590
POTASSIUM, TOTAL (MG K/L)	2.4	2.4	2.3	2.8
SODIUM, TOTAL (MG NA/L)	10.93	10.03	12.40	12.70
ZINC, TOTAL (UG ZN/L)	< 10	< 10	10	10
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 11.	7.	< 11.	8.
CARBON, TOTAL ORGANIC (MG C/L)	7.	7.	8.	9.
CARBON DIOXIDE (MG CO_2/L)	3.4	3.4	4.5	5.0
NITROGEN, TOTAL AMMONIA (MG N/L)	0.02	< 0.01	0.02	0.03
NITROGEN, NITRATE+NITRITE (MG N/L)	0.32	0.23	0.27	0.26
NITROGEN, TOTAL INORGANIC (MG N/L)	0.34	0.30	0.30	0.30
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.4	0.4	0.4	0.8
NITROGEN, TOTAL ORGANIC (MG N/L)	0.4	0.4	0.4	0.8
NITROGEN, TOTAL (MG N/L)	0.7	0.7	0.7	1.1
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	< 0.01	< 0.01	0.01	0.05
PHOSPHORUS, TOTAL (MG P/L)	0.03	0.04	0.05	0.05

TABLE D-6c

PARAMETER NAME (UNITS)	STATION 09 11/30/74	STATION 09 11/29/75	STATION 09 11/29/73	STATION 10 11/25/73
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (XFFCM F-BK LK UPST)	--	50.	30.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	3.0	3.5
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	19.0	18.5	18.0	14.5
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	117.	124.	112.	97.
OXIDATION REDUCTION POTENTIAL (MV)	370	390	370	400
DISSOLVED OXYGEN, ELECTRODE (MG/L)	8.1	6.2	7.2	4.4
PH (STD UNITS)	7.30	7.10	7.00	7.40
LABORATORY DATA				
COLOR (PT-CO UNITS)	70.	47.	47.	24.
TURBIDITY, MACH TURBIDIMETER (FTU)	7.50	8.00	7.60	14.00
TOTAL NONFILTERABLE RESIDUE (MG/L)	< 10.	15.	12.	18.
TOTAL FILTERABLE RESIDUE (MG/L)	87.	77.	75.	76.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	33.	31.	30.	25.
CHLORIDE (MG CL/L)	5.	4.	4.	6.
SULFATE, DISSOLVED (MG SO_4/L)	15.	11.	11.	8.
CALCIUM, TOTAL (MG CA/L)	5.1	5.9	5.9	5.0
HARDNESS, TOTAL (MG CaCO_3/L)	18.0	19.6	22.5	17.6
IRON, DISSOLVED (UG FE/L)	90	110	80	60
IRON, TOTAL (UG FE/L)	750	640	230	1130
MAGNESIUM, TOTAL (MG MG/L)	1.3	1.2	1.3	1.3
MANGANESE, DISSOLVED (UG MN/L)	110	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	150	90	130	100
POTASSIUM, TOTAL (MG K/L)	2.2	2.5	2.5	2.4
SODIUM, TOTAL (MG NA/L)	13.40	8.59	9.44	8.05
ZINC, TOTAL (UG ZN/L)	< 10	< 10	< 10	< 10
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 10.	6.	6.	< 6.
CARBON, TOTAL ORGANIC (MG C/L)	5.	7.	6.	5.
CARBON DIOXIDE (MG CO_2/L)	3.4	5.1	6.3	2.1
NITROGEN, TOTAL AMMONIA (MG N/L)	0.03	0.07	0.05	0.03
NITROGEN, NITRATE+NITRITE (MG N/L)	0.24	0.25	0.27	0.25
NITROGEN, TOTAL INORGANIC (MG N/L)	0.31	0.32	0.31	0.29
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.6	0.4	0.4	0.5
NITROGEN, TOTAL ORGANIC (MG N/L)	0.4	0.3	0.4	0.4
NITROGEN, TOTAL (MG N/L)	0.7	0.5	0.7	0.7
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	< 0.01	< 0.01	< 0.01	0.02
PHOSPHORUS, TOTAL (MG P/L)	0.04	0.04	0.05	0.07

TABLE D-6d

PARAMETER NAME (UNITS)	STATION 11 11/28/78	STATION 11 11/29/78	STATION 13 11/29/78	STATION 13 11/29/78
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (XFROM P-BK LK UPST)	85.	85.	90.	90.
SAMPLE DEPTH (METERS)	1.0	4.0	1.0	7.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	18.5	18.5	18.5	18.5
SPEC CONDUCTANCE, FLD (UMHU/CM 25C)	117.	113.	140.	148.
OXIDATION REDUCTION POTENTIAL (MV)	420	410	420	420
DISSOLVED OXYGEN, ELECTRODE (MG/L)	8.4	7.9	8.0	9.0
PH (STD UNITS)	7.70	7.70	7.90	7.80
LABORATORY DATA				
COLOR (PT-CO UNITS)	18.	18.	15.	14.
TURBIDITY, HACH TURBIDIMETER (FTU)	10.00	11.00	6.00	5.50
TOTAL NONFILTERABLE RESIDUE (MG/L)	< 10.	12.	< 10.	< 10.
TOTAL FILTERABLE RESIDUE (MG/L)	72.	73.	90.	105.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	37.	35.	59.	59.
CHLORIDE (MG CL/L)	6.	5.	6.	5.
SULFATE, DISSOLVED (MG SO_4/L)	8.	8.	4.	2.
CALCIUM, TOTAL (MG CA/L)	8.3	8.2	15.1	15.8
HARDNESS, TOTAL (MG CaCO_3/L)	25.7	25.5	42.5	44.3
IRON, DISSOLVED (UG FE/L)	< 50	60	< 50	< 50
IRON, TOTAL (UG FE/L)	770	850	450	430
MAGNESIUM, TOTAL (MG MG/L)	1.2	1.3	1.2	1.2
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	60	70	60	80
POTASSIUM, TOTAL (MG K/L)	2.1	2.1	1.0	0.9
SODIUM, TOTAL (MG NA/L)	7.98	7.95	4.01	4.15
ZINC, TOTAL (UG ZN/L)	< 10	< 10	< 10	20
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 7.	< 6.	< 2.	< 15.
CARBON, TOTAL ORGANIC (MG C/L)	6.	6.	3.	4.
CARBON DIOXIDE (MG CO_2/L)	1.6	1.4	1.5	1.9
NITROGEN, TOTAL AMMONIA (MG N/L)	0.02	0.02	0.03	0.04
NITROGEN, NITRATE+NITRITE (MG N/L)	0.28	0.25	0.62	0.57
NITROGEN, TOTAL INORGANIC (MG N/L)	0.30	0.28	0.65	0.60
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.5	0.4	0.3	0.4
NITROGEN, TOTAL ORGANIC (MG N/L)	0.4	0.3	0.3	0.3
NITROGEN, TOTAL (MG N/L)	0.7	0.5	1.0	0.9
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	< 0.01	< 0.01	0.04	0.03
PHOSPHORUS, TOTAL (MG P/L)	0.05	0.05	0.06	0.07

Note: Station 12 not sampled due to low water.

TABLE D-6e

PARAMETER NAME (UNITS)	STATION 14 11/30/79	STATION 15 11/24/78	STATION 15 11/29/79	STATION 16 11/29/79
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (XFROM R-BK LK UPST)	--	50.	50.	50.
SAMPLE DEPTH (METERS)	1.0	1.0	5.0	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	19.0	18.5	18.5	19.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	140.	145.	143.	141.
OXIDATION REDUCTION POTENTIAL (MV)	--	440	450	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	8.6	8.5	9.2	8.1
PH (STD UNITS)	7.30	7.00	7.80	7.30
LABORATORY DATA				
COLOR (PT-CO UNITS)	30.	20.	20.	20.
TURBIDITY, NACH TURBIDIMETER (FTU)	11.00	8.00	10.00	4.50
TOTAL NONFILTERABLE RESIDUE (MG/L)	24.	< 10.	< 10.	< 10.
TOTAL FILTERABLE RESIDUE (MG/L)	84.	87.	82.	86.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO3/L)	64.	53.	53.	53.
CHLORIDE (MG CL/L)	3.	5.	6.	4.
SULFATE, DISSOLVED (MG SO4/L)	6.	3.	3.	2.
CALCIUM, TOTAL (MG CA/L)	15.9	17.8	14.4	13.6
HARDNESS, TOTAL (MG CaCO3/L)	42.3	49.2	40.5	37.5
IRON, DISSOLVED (UG FE/L)	< 50	< 50	< 50	120
IRON, TOTAL (UG FE/L)	1370	680	940	470
MAGNESIUM, TOTAL (MG MG/L)	0.7	1.2	1.1	0.8
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	130	60	90	< 50
POTASSIUM, TOTAL (MG K/L)	0.7	0.9	1.0	0.9
SODIUM, TOTAL (MG NA/L)	1.14	4.20	4.22	3.94
ZINC, TOTAL (UG ZN/L)	< 10	< 10	20	< 10
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	6.	4.	< 6.	< 6.
CARBON, TOTAL ORGANIC (MG C/L)	6.	5.	4.	3.
CARBON DIOXIDE (MG CO2/L)	6.6	1.6	1.7	5.6
NITROGEN, TOTAL AMMONIA (MG N/L)	0.12	0.05	0.04	0.05
NITROGEN, NITRATE+NITRITE (MG N/L)	0.10	0.55	0.53	0.88
NITROGEN, TOTAL INORGANIC (MG N/L)	0.22	0.57	0.57	0.93
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.8	0.3	0.3	0.4
NITROGEN, TOTAL ORGANIC (MG N/L)	0.7	0.3	0.3	0.3
NITROGEN, TOTAL (MG N/L)	0.9	0.7	0.8	1.0
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.02	0.02	0.05	0.05
PHOSPHORUS, TOTAL (MG P/L)	0.07	0.09	0.09	0.08

TABLE D-6f

PARAMETER NAME (UNITS)	STATION 17 11/23/78	STATION 19 11/30/78
PHYSICAL DATA		
MISCELLANEOUS DATA		
X-SECTION LOC (XFROM L-BK LK UPST)	50.	5.
SAMPLE DEPTH (METERS)	1.0	1.0
FIELD MEASUREMENTS		
WATER TEMPERATURE (DEG C)	18.0	19.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	145.	122.
OXIDATION REDUCTION POTENTIAL (MV)	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.4	9.0
PH (STD UNITS)	7.20	7.60
LABORATORY DATA		
COLOR (PT-CO UNITS)	20.	21.
TURBIDITY, HACH TURBIDIMETER (FTU)	4.20	8.00
TOTAL NONFILTERABLE RESIDUE (MG/L)	< 10.	< 10.
TOTAL FILTERABLE RESIDUE (MG/L)	91.	99.
CHEMICAL DATA		
MINERALS AND METALS		
ALKALINITY, TOTAL (MG CaCO_3/L)	55.	47.
CHLORIDE (MG Cl/L)	5.	5.
SULFATE, DISSOLVED (MG SO_4/L)	2.	< 1.
CALCIUM, TOTAL (MG Ca/L)	16.3	14.2
HARDNESS, TOTAL (MG CaCO_3/L)	44.6	40.3
IRON, DISSOLVED (UG Fe/L)	250	< 50
IRON, TOTAL (UG Fe/L)	490	490
MAGNESIUM, TOTAL (MG Mg/L)	0.2	1.3
MANGANESE, DISSOLVED (UG Mn/L)	< 50	< 50
MANGANESE, TOTAL (UG Mn/L)	< 50	60
POTASSIUM, TOTAL (MG K/L)	1.0	1.5
SODIUM, TOTAL (MG Na/L)	4.40	6.25
ZINC, TOTAL (UG Zn/L)	< 10	< 10
NUTRIENTS		
CARBON, DISSOLVED ORGANIC (MG C/L)	4.	5.
CARBON, TOTAL ORGANIC (MG C/L)	4.	6.
CARBON DIOXIDE (MG CO_2/L)	7.2	2.4
NITROGEN, TOTAL AMMONIA (MG N/L)	0.03	0.09
NITROGEN, NITRATE+NITRITE (MG N/L)	0.51	0.25
NITROGEN, TOTAL INORGANIC (MG N/L)	0.51	0.34
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.2	0.5
NITROGEN, TOTAL ORGANIC (MG N/L)	0.2	0.4
NITROGEN, TOTAL (MG N/L)	0.5	0.7
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.05	0.01
PHOSPHORUS, TOTAL (MG P/L)	0.08	0.03

Note: Station 19 not sampled due to equipment malfunction.

TABLE D-7

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I, CYCLE 1

WATER QUALITY SAMPLING RESULTS
 Special Station - Grab Sample

PARAMETER NAME (UNITS)	STATION A0 4/17/78	STATION B0 4/17/78
PHYSICAL DATA		
MISCELLANEOUS DATA		
X-SECTION LOC (%FROM R-EK LK UPST)	--	50.
SAMPLE DEPTH (METERS)	1.0	1.0
FIELD MEASUREMENTS		
WATER TEMPERATURE (DEG C)	19.0	19.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	65.	75.
OXIDATION REDUCTION POTENTIAL (MV)	530	380
DISSOLVED OXYGEN, ELECTRODE (MG/L)	9.2	9.3
PH (STD UNITS)	7.40	7.60
LABORATORY DATA		
TURBIDITY, HACH TURBIDIMETER (FTU)	22.00	29.00

TABLE D-8

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DACW01-79-C-0101) PHASE I, CYCLE 2

WATER QUALITY SAMPLING RESULTS
 Special Station - Grab Sample

PARAMETER NAME (UNITS)	STATION A0 6/ 7/78	STATION B0 3/ 7/78	STATION A1 6/ 5/78	STATION B2 6/ 6/78
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (XFROM P-BK LK UPST)	90.	20.	0.	0.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	24.1	24.0	--	--
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	60.	78.	--	--
OXIDATION REDUCTION POTENTIAL (MV)	620	160	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.7	7.1	--	--
PH (STD UNITS)	7.00	7.00	--	--
LABORATORY DATA				
TURBIDITY, HACH TURBIDIMETER (FTU)	40.00	100.00	--	--
BIOLOGICAL DATA				
** BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	--	--	1.26	<0.00
FECAL STREPTOCOCCI (LOG10(/100ML))	--	--	1.08	1.15
FC/FS RATIO	--	--	1.50	<0.07

** Note: Sampled at 0.3 meters

PARAMETER NAME (UNITS)	STATION FE 6/ 6/78
PHYSICAL DATA	
MISCELLANEOUS DATA	
X-SECTION LOC (XFROM P-BK LK UPST)	15.
SAMPLE DEPTH (METERS)	1.0
FIELD MEASUREMENTS	
WATER TEMPERATURE (DEG C)	27.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	95.
OXIDATION REDUCTION POTENTIAL (MV)	440
DISSOLVED OXYGEN, ELECTRODE (MG/L)	8.1
PH (STD UNITS)	7.00
LABORATORY DATA	
TURBIDITY, HACH TURBIDIMETER (FTU)	20.00
BIOLOGICAL DATA	
** BACTERIOLOGICAL DATA	
FECAL COLIFORM (LOG10(/100ML))	--
FECAL STREPTOCOCCI (LOG10(/100ML))	--
FC/FS RATIO	--

** Note: Sampled at 0.3 meters

TABLE D-9

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
CORPS OF ENGINEERS (CONTRACT DAC601-78-C-0101) PHASE I, CYCLE 3

WATER QUALITY SAMPLING RESULTS
Special Station - Grab Sample

PARAMETER NAME (UNITS)	STATION A0 7/19/78	STATION B0 7/19/78	STATION B1 7/18/78	STATION B2 7/17/78
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (XFROM R-DK LK UPST)	90.	20.	0.	0.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	29.0	29.0	--	--
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	68.	108.	--	--
OXIDATION REDUCTION POTENTIAL (MV)	510	60	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.9	7.6	--	--
PH (STD UNITS)	7.00	7.20	--	--
LABORATORY DATA				
TURBIDITY, NACH TURBIDIMETER (FTU)	10.00	23.00	--	--
BIOLOGICAL DATA				
** BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	--	--	1.00	<0.00
FECAL STREPTOCOCCI (LOG10(/100ML))	--	--	1.18	<0.00
FC/FS RATIO	--	--	0.67	< --

** Note: Sampled at 0.3 meters

PARAMETER NAME (UNITS)	STATION FE 7/18/78
PHYSICAL DATA	
MISCELLANEOUS DATA	
X-SECTION LOC (XFROM R-DK LK UPST)	15.
SAMPLE DEPTH (METERS)	1.0
FIELD MEASUREMENTS	
WATER TEMPERATURE (DEG C)	31.5
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	94.
OXIDATION REDUCTION POTENTIAL (MV)	370
DISSOLVED OXYGEN, ELECTRODE (MG/L)	9.9
PH (STD UNITS)	8.40
LABORATORY DATA	
TURBIDITY, NACH TURBIDIMETER (FTU)	5.70
BIOLOGICAL DATA	
** BACTERIOLOGICAL DATA	
FECAL COLIFORM (LOG10(/100ML))	--
FECAL STREPTOCOCCI (LOG10(/100ML))	--
FC/FS RATIO	--

** Note: Sampled at 0.3 meters

TABLE D-10

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 COPPS OF ENGINEERS (CONTRACT DACD01-78-C-0101) PHASE I, CYCLE 4

WATER QUALITY SAMPLING RESULTS
 Special Station - Grab Sample

PARAMETER NAME (UNITS)	STATION A0 8/17/78	STATION B0 8/17/78	STATION B1 8/14/78	STATION B2 8/14/78
PHYSICAL DATA				
MISCELLANEOUS DATA				
X-SECTION LOC (XFROM R-DK LK UPST)	90.	20.	0.	0.
SAMPLE DEPTH (METERS)	1.0	1.0	1.0	1.0
FIELD MEASUREMENTS				
WATER TEMPERATURE (DEG C)	28.0	28.5	--	--
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	75.	80.	--	--
OXIDATION REDUCTION POTENTIAL (MV)	370	330	--	--
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.4	7.2	--	--
PH (STD UNITS)	7.10	6.50	--	--
LABORATORY DATA				
TURBIDITY, MACH TURBIDIMETER (FTU)	7.00	7.20	--	--
BIOLOGICAL DATA				
** BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	--	--	0.00	1.28
FECAL STREPTOCOCCI (LOG10(/100ML))	--	--	<1.00	<0.00
FC/FS RATIO	--	--	>1.00	>5.00

** Note: Sampled at 0.3 meters

PARAMETER NAME (UNITS)	STATION FE 8/18/78
PHYSICAL DATA	
MISCELLANEOUS DATA	
X-SECTION LOC (XFROM R-DK LK UPST)	--
SAMPLE DEPTH (METERS)	1.0
FIELD MEASUREMENTS	
WATER TEMPERATURE (DEG C)	30.0
SPEC CONDUCTANCE, FLD (UMHO/CM 25C)	90.
OXIDATION REDUCTION POTENTIAL (MV)	390
DISSOLVED OXYGEN, ELECTRODE (MG/L)	7.4
PH (STD UNITS)	7.40
LABORATORY DATA	
TURBIDITY, MACH TURBIDIMETER (FTU)	14.00
BIOLOGICAL DATA	
** BACTERIOLOGICAL DATA	
FECAL COLIFORM (LOG10(/100ML))	--
FECAL STREPTOCOCCI (LOG10(/100ML))	--
FC/FS RATIO	--

** Note: Sampled at 0.3 meters

TABLE D-11

Water Quality Sampling Results
Phase I, Cycle 5

Parameter Name (Units)	Station A0 9/27/78	Station B0 9/27/78	Station B1 9/25/78	Station B2 9/25/78	Station Fe 9/26/78
Physical Data					
Miscellaneous Data					
X-Section Loc (%From R-BK LK Upst)	90	20	--	--	15
Sample Depth (Meters)	1.0	1.0	1.0	1.0	1.0
Field Measurements					
Water Temperature (Deg C)	27.5	28	--	--	28.0
Spec Conductance Fld (umho/cm 25C)	80	80	--	--	95
Oxidation Reduction Potential (mV)	450	80	--	--	420
Dissolved Oxygen, Elec- trode (mg/l)	8.2	7.9	--	--	7.5
PH (Std units)	7.3	7.5	--	--	7.5
Laboratory Data					
Turbidity, Hach Turbi- dimer (FTU)	2.96	4.56	--	--	9.56
Biological Data					
** Bacteriological Data					
Fecal Coliform (Log 10 (/100ml))			0.0		0.0
Fecal Streptococci (Log 10(/100ml))			1.57		0.0
FC/FS ratio			1.00		1.00

** Note: Sampled at 0.3 meters

TABLE D-12

Water Quality Sampling Results
Phase I, Cycle 6

Parameter Name (Units)	Station A0 11/29/78	Station B0 11/29/78	Station Fe
Physical Data			
Miscellaneous Data			
X-Section Loc (%From R-BK LK Upst)	90	5	40
Sample Depth (Meters)	1.0	1.0	1.0
Field Measurements			
Water Temperature (Deg C)	18.0	18.0	18.5
Spec Conductance, Fld (umho/cm 25C)	180	103	129
Oxidation Reduction Potential (mV)	370	290	370
Dissolved Oxygen, Elec- trode (mg/l)	9.4	9.1	6.6
PH (Std units)	7.00	6.60	7.00
Laboratory Data			
Turbidity, Hach Turbi- dimer (FTU)	7.56	9.06	6.76

TABLE D-13a

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DACW01-74-C-0101) PHASE I, CYCLE 1
 WATER QUALITY SAMPLING RESULTS

PARAMETER NAME (UNITS)	STATION 01 4/17/73	STATION 02 4/18/73	STATION 03 4/19/73	STATION 04 4/19/73
BIOLOGICAL DATA				
ALGAL GROWTH POTENTIAL				
ALGAL GROWTH POTENTIAL (MG/L)	--	--	--	--
BIOASS MEASUREMENTS				
ATP (NG/L)	90.	80.	70.	120.
BIOASS. PLANKTON (MG/CU M)	7.	9.	< 1.	7.
CHLOROPHYLL-A (UG/L)	8.3	6.4	6.5	5.7
CHLOROPHYLL-B (UG/L)	2.0	1.4	1.3	1.6
CHLOROPHYLL-C (UG/L)	< 0.1	< 0.1	< 0.1	0.2
PARAMETER NAME (UNITS)	STATION 05 4/17/73	STATION 06 4/19/73	STATION 07 4/19/73	STATION 08 4/19/73
BIOLOGICAL DATA				
ALGAL GROWTH POTENTIAL				
ALGAL GROWTH POTENTIAL (MG/L)	--	9.53	8.83	--
BIOASS MEASUREMENTS				
ATP (NG/L)	120.	100.	80.	80.
BIOASS. PLANKTON (MG/CU M)	7.	5.	3.	2.
CHLOROPHYLL-A (UG/L)	4.9	4.2	4.3	3.6
CHLOROPHYLL-B (UG/L)	1.4	1.0	0.5	0.3
CHLOROPHYLL-C (UG/L)	0.2	< 0.1	< 0.1	< 0.1
PARAMETER NAME (UNITS)	STATION 09 4/19/73	STATION 10 4/20/73	STATION 11 4/20/73	STATION 12 4/20/73
BIOLOGICAL DATA				
ALGAL GROWTH POTENTIAL				
ALGAL GROWTH POTENTIAL (MG/L)	7.81	8.41	9.75	1.45
BIOASS MEASUREMENTS				
ATP (NG/L)	150.	80.	90.	30.
BIOASS. PLANKTON (MG/CU M)	1.	< 1.	< 1.	2.
CHLOROPHYLL-A (UG/L)	4.5	4.5	5.5	3.5
CHLOROPHYLL-B (UG/L)	1.5	< 0.1	0.3	< 0.1
CHLOROPHYLL-C (UG/L)	< 0.1	< 0.1	< 0.1	< 0.1

TABLE D-13b

PARAMETER NAME (UNITS)	STATION 13 4/20/78	STATION 14 4/20/78	STATION 15 4/21/78	STATION 16 4/21/78
BIOLOGICAL DATA				
ALGAL GROWTH POTENTIAL				
ALGAL GROWTH POTENTIAL (MG/L)	11.40	3.52	14.90	13.40
BIOMASS MEASUREMENTS				
ATP (NG/L)	80.	60.	60.	< 30.
BIOMASS, PLANKTON (MG/CU M)	4.	2.	< 1.	5.
CHLOROPHYLL-A (UG/L)	6.7	2.0	3.0	3.0
CHLOROPHYLL-B (UG/L)	1.4	< 0.1	0.2	0.3
CHLOROPHYLL-C (UG/L)	< 0.1	< 0.1	< 0.1	< 0.1

PARAMETER NAME (UNITS)	STATION 17 4/21/78	STATION 18 4/19/78	STATION 19 4/19/78
BIOLOGICAL DATA			
ALGAL GROWTH POTENTIAL			
ALGAL GROWTH POTENTIAL (MG/L)	--	10.30	--
BIOMASS MEASUREMENTS			
ATP (NG/L)	40.	< 70.	170.
BIOMASS, PLANKTON (MG/CU M)	3.	6.	< 1.
CHLOROPHYLL-A (UG/L)	3.0	0.8	0.6
CHLOROPHYLL-B (UG/L)	0.3	0.7	0.1
CHLOROPHYLL-C (UG/L)	< 0.1	< 0.1	< 0.1

Notes: Bacteriological data from grab samples taken at 0.3 meters.

All other data from depth integrated samples composited from individual grab samples taken at 1 meter intervals above the depth of 1% light transmittance (or 8 equally spaced intervals where this zone is >7 meters).

Algal Growth Potential results represent the mean of the 12-day mean algal concentrations in the unspiked water.

TABLE D-14a

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I, CYCLE 2
 WATER QUALITY SAMPLING RESULTS

PARAMETER NAME (UNITS)	STATION 01 6/ 7/78	STATION 02 6/ 7/78	STATION 03 6/ 7/78	STATION 04 6/ 7/78
BIOLOGICAL DATA				
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	--	--	--	--
FECAL STREPTOCOCCI (LOG10(/100ML))	2.20	2.96	3.11	--
FC/FS RATIO	--	--	--	--
BIOMASS MEASUREMENTS				
ATP (NG/L)	110.	<100.	<100.	90.
BIOMASS, PLANKTON (MG/CU M)	2.	5.	4.	8.
CHLOROPHYLL-A (UG/L)	3.5	2.9	3.7	4.1
CHLOROPHYLL-B (UG/L)	0.8	0.1	0.9	0.9
CHLOROPHYLL-C (UG/L)	< 0.1	< 0.1	0.3	< 0.1
PARAMETER NAME (UNITS)	STATION 05 6/ 7/78	STATION 06 6/ 7/78	STATION 07 6/ 6/78	STATION 08 6/ 6/78
BIOLOGICAL DATA				
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	--	--	2.90	<0.00
FECAL STREPTOCOCCI (LOG10(/100ML))	3.57	3.79	2.43	2.32
FC/FS RATIO	--	--	2.96	<0.01
BIOMASS MEASUREMENTS				
ATP (NG/L)	<100.	<100.	100.	120.
BIOMASS, PLANKTON (MG/CU M)	6.	21.	2.	4.
CHLOROPHYLL-A (UG/L)	3.1	4.3	2.5	3.1
CHLOROPHYLL-B (UG/L)	1.0	1.4	0.2	0.3
CHLOROPHYLL-C (UG/L)	< 0.1	< 0.1	< 0.1	0.2
PARAMETER NAME (UNITS)	STATION 09 6/ 6/78	STATION 10 6/ 6/78	STATION 11 5/ 6/78	STATION 12 6/ 7/78
BIOLOGICAL DATA				
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	<0.00	0.90	<0.00	--
FECAL STREPTOCOCCI (LOG10(/100ML))	0.93	<0.00	0.00	0.30
FC/FS RATIO	<0.11	>0.00	<1.00	--
BIOMASS MEASUREMENTS				
ATP (NG/L)	500.	500.	400.	30.
BIOMASS, PLANKTON (MG/CU M)	3.	2.	3.	< 1.
CHLOROPHYLL-A (UG/L)	14.4	21.7	9.0	0.5
CHLOROPHYLL-B (UG/L)	1.2	0.7	2.9	0.3
CHLOROPHYLL-C (UG/L)	3.4	0.2	0.6	< 0.1

TABLE D-14b

PARAMETER NAME (UNITS)	STATION 13 6/ 5/78	STATION 14 6/ 5/78	STATION 15 6/ 5/78	STATION 16 6/ 5/78
BIOLOGICAL DATA				
BACTERIOLOGICAL DATA				
FECAL COLFORM (LOG10(/100ML))	<0.00	1.15	1.15	2.36
FECAL STREPTOCOCCI (LOG10(/100ML))	0.95	1.08	1.15	1.92
FC/FS RATIO	<0.14	1.25	0.93	2.77
BIOMASS MEASUREMENTS				
ATP (NG/L)	560.	70.	130.	30.
BIOMASS, PLANKTON (MG/CU M)	< 1.	< 1.	< 1.	< 1.
CHLOROPHYLL-A (UG/L)	11.0	6.3	11.2	1.6
CHLOROPHYLL-B (UG/L)	1.2	1.3	1.1	0.5
CHLOROPHYLL-C (UG/L)	< 0.1	0.2	< 0.1	< 0.1
PARAMETER NAME (UNITS)	STATION 17 6/ 5/78	STATION 18 6/ 6/78	STATION 19 6/ 6/78	
BIOLOGICAL DATA				
BACTERIOLOGICAL DATA				
FECAL COLFORM (LOG10(/100ML))	3.40	<0.00	0.00	
FECAL STREPTOCOCCI (LOG10(/100ML))	2.86	2.85	3.18	
FC/FS RATIO	3.42	<0.01	<0.01	
BIOMASS MEASUREMENTS				
ATP (NG/L)	30.	90.	220.	
BIOMASS, PLANKTON (MG/CU M)	< 1.	5.	3.	
CHLOROPHYLL-A (UG/L)	1.3	5.6	4.7	
CHLOROPHYLL-B (UG/L)	0.3	0.5	0.1	
CHLOROPHYLL-C (UG/L)	0.1	0.1	< 0.1	

Notes: Bacteriological data from grab samples taken at 0.3 meters.
 All other data from depth integrated samples composited from individual grab samples taken at 1 meter intervals above the depth of 1% light transmittance (or 8 equally spaced intervals where this zone is >7 meters).

TABLE D-15a

STATION 01 (STATION 02) STATION 03 STATION 04
 COMPS (P) (STATION 02) (STATION 03) (STATION 04) (STATION 05)
 DATE: QUALITY SAMPLING RESULTS

PARAMETER NAME (UNITS)	STATION 01 7/17/78	STATION 02 7/17/78	STATION 03 7/17/78	STATION 04 7/17/78
BIOLOGICAL DATA				
ALGAL GROWTH POTENTIAL				
ALGAL GROWTH POTENTIAL (MG/L)	--	--	--	--
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10)/(100ML)	1.75	1.85	1.90	2.18
FECAL STREPTOCOCCI (LOG10)/(100ML)	1.55	1.35	1.75	1.80
FC/FS RATIO	1.56	3.53	1.26	1.53
BIOMASS MEASUREMENTS				
ATP (UG/L)	170.	70.	50.	100.
BIOMASS PLANKTON (MG/QU M)	2.	< 1.	3.	5.
CHLOROPHYLL-A (UG/L)	6.8	11.7	11.3	11.0
CHLOROPHYLL-B (UG/L)	0.0	1.2	1.0	1.2
CHLOROPHYLL-C (UG/L)	< 0.1	0.7	0.5	0.4
PARAMETER NAME (UNITS)	STATION 05 7/17/78	STATION 06 7/20/78	STATION 07 7/20/78	STATION 08 7/20/78
BIOLOGICAL DATA				
ALGAL GROWTH POTENTIAL				
ALGAL GROWTH POTENTIAL (MG/L)	--	5.82	6.12	--
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10)/(100ML)	2.70	2.74	1.22	--
FECAL STREPTOCOCCI (LOG10)/(100ML)	2.01	2.54	0.84	--
FC/FS RATIO	0.62	1.71	1.11	--
BIOMASS MEASUREMENTS				
ATP (UG/L)	60.	100.	< 400.	--
BIOMASS PLANKTON (MG/QU M)	3.	3.	< 1.	--
CHLOROPHYLL-A (UG/L)	10.0	7.9	0.5	--
CHLOROPHYLL-B (UG/L)	1.0	1.2	1.0	--
CHLOROPHYLL-C (UG/L)	0.5	0.1	0.3	--

TABLE D-15b

PARAMETER NAME (UNITS)	STATION 09 7/11/79	STATION 05 7/11/79	STATION 08 7/13/79	STATION 17 7/13/79
BIOLOGICAL DATA				
ALGAL GROWTH POTENTIAL				
ALGAL GROWTH POTENTIAL (MG/L)	--	4.34	--	3.47
BACTERIOLOGICAL DATA				
FECAL COLEFORM (LOG10(/100ML))	0.79	<0.00	--	<0.00
FECAL STREPTOCOCCI (LOG10(/100ML))	1.40	1.32	--	0.05
FC/FS RATIO	0.10	<0.00	--	<0.11
ATP (MG/L)	80.	50.	--	70.
BIOASSAY PLANKTON (MG/100 ML)	3.	4.	--	< 1.
CHLOROPHYLL-A (UG/L)	10.9	11.9	--	14.5
CHLOROPHYLL-B (UG/L)	1.3	1.4	--	1.7
CHLOROPHYLL-C (UG/L)	0.5	0.2	--	0.3
PARAMETER NAME (UNITS)	STATION 11 7/11/79	STATION 11 7/11/79	STATION 12 7/13/79	STATION 13 7/17/79
BIOLOGICAL DATA				
ALGAL GROWTH POTENTIAL				
ALGAL GROWTH POTENTIAL (MG/L)	5.43	--	2.30	5.22
BACTERIOLOGICAL DATA				
FECAL COLEFORM (LOG10(/100ML))	<0.00	--	<0.00	<0.00
FECAL STREPTOCOCCI (LOG10(/100ML))	1.70	--	0.40	0.00
FC/FS RATIO	<0.02	--	<0.33	<1.00
BIOMASS MEASUREMENTS				
ATP (MG/L)	40.	--	40.	30.
BIOASSAY PLANKTON (MG/100 ML)	< 1.	--	< 1.	3.
CHLOROPHYLL-A (UG/L)	10.0	--	2.2	10.2
CHLOROPHYLL-B (UG/L)	0.7	--	0.0	1.2
CHLOROPHYLL-C (UG/L)	< 0.1	--	0.4	0.1

TABLE D-15c

PARAMETER NAME (UNITS)	STATION 13 7/17/78	STATION 14 7/17/78	STATION 15 7/17/78	STATION 16 7/17/78
BIOLOGICAL DATA				
ALGAL GROWTH POTENTIAL				
ALGAL GROWTH POTENTIAL (MG/L)	--	2.43	5.15	--
BACTERIOLOGICAL DATA				
FECAL COLEFORM (LOG10(/100ML))	--	0.63	0.33	--
FECAL STREPTOCOCCI (LOG10(/100ML))	--	0.03	<0.00	--
FC/FS RATIO	--	4.03	>1.00	--
BIOMASS MEASUREMENTS				
ATP (NG/L)	--	40.	470.	--
BIOMASS, PLANKTON (MG/CU M)	--	2.	2.	--
CHLOROPHYLL-A (UG/L)	--	6.3	13.2	--
CHLOROPHYLL-B (UG/L)	--	1.4	2.7	--
CHLOROPHYLL-C (UG/L)	--	< 0.1	0.2	--
PARAMETER NAME (UNITS)	STATION 17 7/17/78	STATION 17 7/17/78	STATION 18 7/18/78	STATION 19 7/18/78
BIOLOGICAL DATA				
ALGAL GROWTH POTENTIAL				
ALGAL GROWTH POTENTIAL (MG/L)	14.70	--	5.72	--
BACTERIOLOGICAL DATA				
FECAL COLEFORM (LOG10(/100ML))	1.85	1.63	1.30	0.85
FECAL STREPTOCOCCI (LOG10(/100ML))	0.85	1.85	2.85	2.75
FC/FS RATIO	10.40	1.35	0.03	<0.01
BIOMASS MEASUREMENTS				
ATP (NG/L)	< 0.5	< 10.	80.	40.
BIOMASS, PLANKTON (MG/CU M)	< 1.	< 1.	2.	2.
CHLOROPHYLL-A (UG/L)	4.2	3.1	7.1	9.5
CHLOROPHYLL-B (UG/L)	< 0.6	< 0.5	0.4	1.2
CHLOROPHYLL-C (UG/L)	< 0.1	< 0.1	0.4	1.3

Notes: Bacteriological data from grab samples taken at 0.3 meters.

All other data from depth integrated samples composited from individual grab samples taken at 1 meter intervals above the depth of 1% light transmittance (or 8 equally spaced intervals where this zone is >7 meters.

Algal Growth Potential results represent the mean of the 12-day and 14-day mean algal concentrations in the unspiked water.

TABLE D-16a

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DACW31-70-C-0101) PHASE 1: CYCLE 4
 WATER QUALITY SAMPLING RESULTS

PARAMETER NAME (UNITS)	STATION 01 8/17/78	STATION 02 8/17/78	STATION 03 8/17/78	STATION 04 9/17/78
BIOLOGICAL DATA				
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	1.70	1.70	1.48	1.60
FECAL STREPTOCOCCI (LOG10(/100ML))	1.93	1.59	1.61	1.51
FC/FS RATIO	0.74	1.30	0.73	1.30
BIOMASS MEASUREMENTS				
ATP (NG/L)	70.	130.	110.	90.
BIOMASS, PLANKTON (MG/CU M)	9.	2.	2.	3.
CHLOROPHYLL-A (UG/L)	9.7	9.5	9.9	11.0
CHLOROPHYLL-B (UG/L)	0.7	0.7	1.6	0.7
CHLOROPHYLL-C (UG/L)	< 0.1	< 0.1	0.9	0.5
PARAMETER NAME (UNITS)	STATION 05 8/17/78	STATION 06 8/17/78	STATION 07 8/16/78	STATION 07 8/16/78
BIOLOGICAL DATA				
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	1.45	1.93	<0.00	--
FECAL STREPTOCOCCI (LOG10(/100ML))	1.60	1.57	1.11	--
FC/FS RATIO	0.70	2.30	<0.08	--
BIOMASS MEASUREMENTS				
ATP (NG/L)	80.	80.	70.	--
BIOMASS, PLANKTON (MG/CU M)	3.	2.	2.	--
CHLOROPHYLL-A (UG/L)	11.5	10.5	9.8	--
CHLOROPHYLL-B (UG/L)	1.9	1.3	2.0	--
CHLOROPHYLL-C (UG/L)	1.1	0.6	< 0.1	--
PARAMETER NAME (UNITS)	STATION 08 8/16/78	STATION 09 8/16/78	STATION 09 8/16/78	STATION 10 8/15/78
BIOLOGICAL DATA				
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	0.49	0.30	--	<0.00
FECAL STREPTOCOCCI (LOG10(/100ML))	1.36	0.85	--	0.30
FC/FS RATIO	0.13	0.29	--	<0.50
BIOMASS MEASUREMENTS				
ATP (NG/L)	90.	100.	--	120.
BIOMASS, PLANKTON (MG/CU M)	3.	3.	--	3.
CHLOROPHYLL-A (UG/L)	9.3	12.2	--	19.0
CHLOROPHYLL-B (UG/L)	0.4	1.5	--	0.9
CHLOROPHYLL-C (UG/L)	< 0.1	0.4	--	0.1

TABLE D-16b

PARAMETER NAME (UNITS)	STATION 11 8/16/78	STATION 11 8/16/78	STATION 12 8/15/78	STATION 13 8/14/78
BIOLOGICAL DATA				
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	0.00	---	<0.00	<0.00
FECAL STREPTOCOCCI (LOG10(/100ML))	<0.00	---	<0.00	1.34
FC/FS RATIO	>1.00	---	---	<0.05
BIDMASS MEASUREMENTS				
ATP (NG/L)	70.	---	30.	116.
BIDMASS, PLANKTON (MG/CU M)	2.	---	< 1.	3.
CHLOROPHYLL-A (UG/L)	14.7	---	1.8	22.9
CHLOROPHYLL-B (UG/L)	1.8	---	0.5	2.5
CHLOROPHYLL-C (UG/L)	0.7	---	0.1	1.5
PARAMETER NAME (UNITS)	STATION 13 8/14/78	STATION 14 8/15/78	STATION 15 8/14/78	STATION 15 8/14/78
BIOLOGICAL DATA				
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	---	1.65	1.32	---
FECAL STREPTOCOCCI (LOG10(/100ML))	---	1.15	1.08	---
FC/FS RATIO	---	3.20	1.60	---
BIDMASS MEASUREMENTS				
ATP (NG/L)	---	90.	330.	---
BIDMASS, PLANKTON (MG/CU M)	---	< 1.	3.	---
CHLOROPHYLL-A (UG/L)	---	4.6	28.3	---
CHLOROPHYLL-B (UG/L)	---	1.5	5.1	---
CHLOROPHYLL-C (UG/L)	---	0.2	2.2	---
PARAMETER NAME (UNITS)	STATION 10 8/14/78	STATION 17 8/14/78	STATION 1P 8/16/78	STATION 15 8/16/78
BIOLOGICAL DATA				
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	2.32	2.81	0.90	1.04
FECAL STREPTOCOCCI (LOG10(/100ML))	1.34	1.38	2.84	2.79
FC/FS RATIO	19.30	27.00	0.01	0.02
BIDMASS MEASUREMENTS				
ATP (NG/L)	60.	< 60.	80.	70.
BIDMASS, PLANKTON (MG/CU M)	1.	6.	< 1.	2.
CHLOROPHYLL-A (UG/L)	2.4	2.5	13.1	12.6
CHLOROPHYLL-B (UG/L)	0.3	0.2	4.9	4.9
CHLOROPHYLL-C (UG/L)	< 0.1	0.1	0.5	0.6

Notes: Bacteriological data from grab samples taken at 0.3 meters.

All other data from depth integrated samples composited from individual grab samples taken at 1 meter intervals above the depth of 1% light transmittance (or 8 equally spaced intervals where this zone is >7 meters.

TABLE D-17a

ST. LAKE MINIDOTA WATER QUALITY MONITORING STUDY -
 STATION 01 (CONTRACT DAP-01-71-C-0101) PHASE 1, CYCLE 1
 WATER QUALITY SAMPLING RESULTS

PARAMETER NAME (UNITS)	STATION 01 9/27/78	STATION 02 9/27/78	STATION 03 9/27/78	STATION 04 9/27/78
BIOLOGICAL DATA				
ALGAL GROWTH POTENTIAL				
ALGAL GROWTH POTENTIAL (MG/L)	--	--	--	--
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	1.40	1.34	1.63	2.20
FECAL STREPTOCOCCI (LOG10(/100ML))	1.53	1.30	1.40	1.40
FC/FS RATIO	0.72	1.10	1.72	2.32
BIOMASS MEASUREMENTS				
ATP (MG/L)	300.	100.	110.	90.
BIOMASS, PLANKTON (MG/100 ML)	< 1.	< 1.	4.	4.
CHLOROPHYLL-A (UG/L)	12.0	12.0	11.0	11.0
CHLOROPHYLL-B (UG/L)	0.3	1.2	1.3	0.6
CHLOROPHYLL-C (UG/L)	< 0.1	0.7	0.5	0.1
PARAMETER NAME (UNITS)	STATION 05 9/27/78	STATION 06 9/27/78	STATION 07 9/27/78	STATION 07 9/27/78
BIOLOGICAL DATA				
ALGAL GROWTH POTENTIAL				
ALGAL GROWTH POTENTIAL (MG/L)	--	7.65	9.27	--
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	2.06	2.07	1.41	--
FECAL STREPTOCOCCI (LOG10(/100ML))	1.45	1.40	1.14	--
FC/FS RATIO	4.07	1.60	1.73	--
BIOMASS MEASUREMENTS				
ATP (MG/L)	100.	150.	90.	--
BIOMASS, PLANKTON (MG/100 ML)	--	5.	4.	--
CHLOROPHYLL-A (UG/L)	7.4	9.1	9.2	--
CHLOROPHYLL-B (UG/L)	0.4	2.1	0.5	--
CHLOROPHYLL-C (UG/L)	< 0.1	0.9	< 0.1	--

TABLE D-17b

PARAMETER NAME (UNITS)	STATION 08 9/26/78	STATION 09 9/26/78	STATION 06 9/26/78	STATION 10 9/26/78
BIOLOGICAL DATA				
ALGAL GROWTH POTENTIAL				
ALGAL GROWTH POTENTIAL (MG/L)	--	4.39	--	3.12
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	0.40	< 0.00	--	< 0.00
FECAL STREPTOCOCCI (LOG10(/100ML))	1.34	2.15	--	2.70
FC/FS RATIO	0.18	< 1.00	--	< 1.00
BIOMASS MEASUREMENTS				
ATP (NG/L)	150.	170.	--	140.
BIOMASS, PLANKTON (MG/CU M)	< 1.	1.	--	1.
CHLOROPHYLL-A (UG/L)	14.0	16.0	--	19.0
CHLOROPHYLL-B (UG/L)	1.3	0.2	--	1.0
CHLOROPHYLL-C (UG/L)	0.2	< 0.1	--	0.2
PARAMETER NAME (UNITS)	STATION 11 9/26/78	STATION 11 9/26/78	STATION 12 9/26/78	STATION 13 9/26/78
BIOLOGICAL DATA				
ALGAL GROWTH POTENTIAL				
ALGAL GROWTH POTENTIAL (MG/L)	2.21	--	1.44	4.72
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	0.00	--	0.00	< 0.00
FECAL STREPTOCOCCI (LOG10(/100ML))	1.39	--	3.48	0.70
FC/FS RATIO	0.01	--	0.03	< 1.00
BIOMASS MEASUREMENTS				
ATP (NG/L)	150.	--	230.	170.
BIOMASS, PLANKTON (MG/CU M)	2.	--	4.	< 1.
CHLOROPHYLL-A (UG/L)	22.0	--	2.4	29.0
CHLOROPHYLL-B (UG/L)	1.4	--	0.5	2.3
CHLOROPHYLL-C (UG/L)	< 0.1	--	0.3	0.8

TABLE D-17C

PARAMETER NAME (UNITS)	STATION 13 9/25/78	STATION 14 9/25/78	STATION 15 9/25/78	STATION 16 9/25/78
BIOLOGICAL DATA				
ALGAL GROWTH POTENTIAL				
ALGAL GROWTH POTENTIAL (MG/L)	--	2.11	3.90	--
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	--	0.33	<0.00	--
FECAL STREPTOCOCCI (LOG10(/100 ML))	--	<0.00	1.70	--
FC/FS RATIO	--	>1.00	<1.00	--
BIOMASS MEASUREMENTS				
ATP (NG/L)	--	100.	240.	--
BIOMASS, PLANKTON (MG/CU M)	--	4.	< 1.	--
CHLOROPHYLL-A (UG/L)	--	8.5	21.0	--
CHLOROPHYLL-B (UG/L)	--	0.5	2.3	--
CHLOROPHYLL-C (UG/L)	--	< 0.1	0.5	--
PARAMETER NAME (UNITS)	STATION 15 9/25/78	STATION 17 9/25/78	STATION 18 9/25/78	STATION 19 9/25/78
BIOLOGICAL DATA				
ALGAL GROWTH POTENTIAL				
ALGAL GROWTH POTENTIAL (MG/L)	23.90	--	3.20	--
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	--	0.90	<1.00	0.30
FECAL STREPTOCOCCI (LOG10(/100ML))	0.80	1.00	2.70	3.20
FC/FS RATIO	--	0.10	<1.00	<0.01
BIOMASS MEASUREMENTS				
ATP (NG/L)	30.	70.	140.	40.
BIOMASS, PLANKTON (MG/CU M)	< 1.	< 1.	3.	< 1.
CHLOROPHYLL-A (UG/L)	4.7	6.3	12.0	3.5
CHLOROPHYLL-B (UG/L)	0.4	0.7	1.0	1.1
CHLOROPHYLL-C (UG/L)	< 0.1	< 0.1	0.1	< 0.1

Notes: Bacteriological data from grab samples taken at 0.3 meters.

All other data from depth integrated samples composited from individual grab samples taken at 1 meter intervals above the depth of 1% light transmittance (or 8 equally spaced intervals where this zone is >7 meters).

Algal Growth Potential results represent the mean of the 12-day and 14-day mean algal concentrations in the unspiked water.

TABLE D-18a

LAKE SCHINOLE WATER QUALITY MANAGEMENT STUDY
 GROUP OF ENGINEERS (CONTRACT DAC-31-77-C-0101) PHASE 1, CYCLE 1
 WATER QUALITY SAMPLING RESULTS

PARAMETER NAME (UNITS)	STATION 01 11/24/78	STATION 02 11/29/78	STATION 03 11/29/78	STATION 04 11/29/78
BIOLOGICAL DATA				
BIOMASS MEASUREMENTS				
ATP (NG/L)	80.	80.	50.	60.
BIOMASS, PLANKTON (MG/CU M)	3.	2.	3.	3.
CHLOROPHYLL-A (UG/L)	6.0	5.5	5.5	6.5
CHLOROPHYLL-B (UG/L)	1.3	0.5	2.7	1.7
CHLOROPHYLL-C (UG/L)	0.2	< 0.1	1.1	0.3
PARAMETER NAME (UNITS)	STATION 05 11/29/78	STATION 06 11/29/78	STATION 07 11/30/78	STATION 07 11/30/78
BIOLOGICAL DATA				
BIOMASS MEASUREMENTS				
ATP (NG/L)	70.	90.	90.	--
BIOMASS, PLANKTON (MG/CU M)	4.	3.	4.	--
CHLOROPHYLL-A (UG/L)	6.2	7.4	7.4	--
CHLOROPHYLL-B (UG/L)	1.5	1.1	1.6	--
CHLOROPHYLL-C (UG/L)	0.9	0.9	0.3	--
PARAMETER NAME (UNITS)	STATION 08 11/30/78	STATION 09 11/29/78	STATION 09 11/29/78	STATION 10 11/29/78
BIOLOGICAL DATA				
BIOMASS MEASUREMENTS				
ATP (NG/L)	100.	130.	--	110.
BIOMASS, PLANKTON (MG/CU M)	4.	2.	--	3.
CHLOROPHYLL-A (UG/L)	7.1	10.5	--	11.5
CHLOROPHYLL-B (UG/L)	0.5	3.1	--	1.4
CHLOROPHYLL-C (UG/L)	< 0.1	1.3	--	0.0

TABLE D-18b

PARAMETER NAME (UNITS)	STATION 14 11/23/78	STATION 15 11/29/78	STATION 15 11/29/78	STATION 16 11/29/78
BIOLOGICAL DATA				
BIOMASS MEASUREMENTS				
ATP (NG/L)	130.	100.	--	40.
BIOMASS, PLANKTON (MG/CU M)	9.	1.	--	1.
CHLOROPHYLL-A (UG/L)	9.1	13.5	--	1.2
CHLOROPHYLL-B (UG/L)	2.5	2.2	--	0.5
CHLOROPHYLL-C (UG/L)	1.6	1.3	--	< 0.1
PARAMETER NAME (UNITS)	STATION 11 11/28/78	STATION 11 11/28/78	STATION 13 11/29/78	STATION 13 11/29/78
BIOLOGICAL DATA				
BIOMASS MEASUREMENTS				
ATP (NG/L)	130.	--	140.	--
BIOMASS, PLANKTON (MG/CU M)	3.	--	2.	--
CHLOROPHYLL-A (UG/L)	13.8	--	12.5	--
CHLOROPHYLL-B (UG/L)	2.5	--	3.5	--
CHLOROPHYLL-C (UG/L)	0.6	--	0.0	--
PARAMETER NAME (UNITS)	STATION 17 11/23/78	STATION 18 11/30/78		
BIOLOGICAL DATA				
BIOMASS MEASUREMENTS				
ATP (NG/L)	40.	120.		
BIOMASS, PLANKTON (MG/CU M)	< 1.	2.		
CHLOROPHYLL-A (UG/L)	1.1	8.4		
CHLOROPHYLL-B (UG/L)	0.5	1.7		
CHLOROPHYLL-C (UG/L)	< 0.1	0.8		

Notes: Bacteriological data from grab samples taken at 0.3 meters.

All other data from depth integrated samples composited from individual grab samples taken at 1 meter intervals above the depth of 1% light transmittance (or 8 equally spaced intervals where this zone is >7 meters).

APPENDIX E
LABORATORY QUALITY CONTROL DATA

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TABLE E-1a

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I, CYCLE 1
 DATA FROM DUPLICATE ANALYSES

PARAMETER NAME (UNITS)	STATION 1-A 4/17/78	STATION 1-B 4/17/78	STATION 2-A 4/18/78	STATION 2-B 4/18/78
PHYSICAL DATA				
LABORATORY DATA				
COLOR (PT-CO UNITS)	55.	50.	50.	50.
TURBIDITY, HACH TURBIDIMETER (FTU)	25.00	26.00	23.00	24.00
TOTAL FILTERABLE RESIDUE (MG/L)	--	--	--	--
TOTAL NONFILTERABLE RESIDUE (MG/L)	10.	24.	--	--
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	14.	14.	16.	16.
SULFATE, DISSOLVED (MG SO_4/L)	--	--	4.	4.
IRON, DISSOLVED (UG Fe/L)	280	210	150	150
IRON, TOTAL (UG Fe/L)	1750	1670	1620	1520
MANGANESE, DISSOLVED (UG Mn/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG Mn/L)	80	80	70	70
ZINC, TOTAL (UG Zn/L)	30	30	30	40
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 9.	< 8.	< 9.	< 7.
CARBON, TOTAL ORGANIC (MG C/L)	6.	6.	6.	6.
NITROGEN, TOTAL AMMONIA (MG N/L)	0.09	0.09	0.11	0.11
NITROGEN, NITRATE+NITRITE (MG N/L)	0.23	0.22	0.27	0.27
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	< 0.01	< 0.01	0.01	0.01
PHOSPHORUS, TOTAL (MG P/L)	--	--	--	--
BIOLOGICAL DATA				
BIOMASS MEASUREMENTS				
BIOMASS, PLANKTON (GM/100 ML)	2.	11.	--	--
CHLOROPHYLL-A (UG/L)	8.4	8.1	7.6	5.2
CHLOROPHYLL-B (UG/L)	2.6	1.3	1.0	1.7
CHLOROPHYLL-C (UG/L)	< 0.1	< 0.1	< 0.1	< 0.1

TABLE E-1b

PARAMETER NAME (UNITS)	STATION 8-A 4/19/78	STATION 8-B 4/19/78	STATION 11-A 4/20/78	STATION 11-B 4/20/78
PHYSICAL DATA				
LABORATORY DATA				
COLOR (PT-CO UNITS)	50.	55.	50.	50.
TURBIDITY, NACH TURBIDIMETER (FTU)	29.00	29.00	26.00	26.00
TOTAL FILTERABLE RESIDUE (MG/L)	58.	54.	64.	73.
TOTAL NONFILTERABLE RESIDUE (MG/L)	--	--	--	--
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO ₃ /L)	17.	19.	23.	23.
SULFATE, DISSOLVED (MG SO ₄ /L)	--	--	4.	5.
IRON, DISSOLVED (UG FE/L)	190	190	170	210
IRON, TOTAL (UG FE/L)	2160	2100	1770	1780
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	90	90	80	80
ZINC, TOTAL (UG ZN/L)	30	30	30	30
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 7.	7.	7.	7.
CARBON, TOTAL ORGANIC (MG C/L)	6.	7.	7.	7.
NITROGEN, TOTAL AMMONIA (MG N/L)	0.10	0.10	0.06	0.07
NITROGEN, NITRATE+NITRITE (MG N/L)	0.27	0.27	0.27	0.27
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.01	0.01	<0.01	<0.01
PHOSPHORUS, TOTAL (MG P/L)	--	--	0.08	0.08
BIOLOGICAL DATA				
BIOMASS MEASUREMENTS				
BIOMASS, PLANKTON (GM/CM ³)	--	--	4.	3.
CHLOROPHYLL-A (UG/L)	3.8	3.4	5.8	5.4
CHLOROPHYLL-B (UG/L)	0.2	0.3	0.3	0.2
CHLOROPHYLL-C (UG/L)	< 0.1	< 0.1	< 0.1	< 0.1

TABLE E-1c

PARAMETER NAME (UNITS)	STATION 15-A 4/21/78	STATION 15-B 4/21/78
PHYSICAL DATA		
LABORATORY DATA		
COLOR (PT-CO UNITS)	60.	60.
TURBIDITY, NACH TURBIDIMETER (FTU)	13.00	13.00
TOTAL FILTERABLE RESIDUE (MG/L)	--	--
TOTAL NONFILTERABLE RESIDUE (MG/L)	3.	9.
CHEMICAL DATA		
MINERALS AND METALS		
ALKALINITY, TOTAL (MG CaCO_3/L)	32.	32.
SULFATE, DISSOLVED (MG SO_4/L)	--	--
IRON, DISSOLVED (UG Fe/L)	380	370
IRON, TOTAL (UG Fe/L)	1370	1410
MANGANESE, DISSOLVED (UG Mn/L)	< 50	< 50
MANGANESE, TOTAL (UG Mn/L)	70	70
ZINC, TOTAL (UG Zn/L)	20	10
NUTRIENTS		
CARBON, DISSOLVED ORGANIC (MG C/L)	< 8.	< 8.
CARBON, TOTAL ORGANIC (MG C/L)	6.	6.
NITROGEN, TOTAL AMMONIA (MG N/L)	0.12	0.09
NITROGEN, NITRATE+NITRITE (MG N/L)	0.32	0.32
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.03	0.03
PHOSPHORUS, TOTAL (MG P/L)	0.08	0.08
BIOLOGICAL DATA		
BIOMASS MEASUREMENTS		
BIOMASS, PLANKTON (GM/CU M)	--	--
CHLOROPHYLL-A (UG/L)	3.3	3.0
CHLOROPHYLL-B (UG/L)	< 0.1	0.3
CHLOROPHYLL-C (UG/L)	< 0.1	< 0.1

TABLE E-2a

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I, CYCLE 2
 DATA FROM DUPLICATE ANALYSES

PARAMETER NAME (UNITS)	STATION 6-A 6/ 7/78	STATION 6-B 6/ 7/78	STATION 11-A 6/ 6/78	STATION 11-B 6/ 6/78
PHYSICAL DATA				
LABORATORY DATA				
COLOR (PT-CO UNITS)	120.	120.	35.	35.
TURBIDITY, NACH TURBIDIMETER (FTU)	160.00	150.00	6.60	7.00
TOTAL FILTERABLE RESIDUE (MG/L)	101.	106.	81.	94.
TOTAL NONFILTERABLE RESIDUE (MG/L)	109.	129.	5.	4.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	17.	16.	51.	50.
SULFATE, DISSOLVED (MG SO_4/L)	4.	4.	2.	2.
SULFIDE, TOTAL (MG S/L)	0.7	0.3	0.1	0.2
IRON, DISSOLVED (UG Fe/L)	150	150	190	190
IRON, TOTAL (UG Fe/L)	5010	5020	610	630
MANGANESE, DISSOLVED (UG Mn/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG Mn/L)	150	150	< 50	< 50
ZINC, TOTAL (UG Zn/L)	50	40	50	50
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	9.	12.	7.	7.
CARBON, TOTAL ORGANIC (MG C/L)	11.	12.	7.	8.
NITROGEN, TOTAL AMMONIA (MG N/L)	0.10	0.09	0.05	0.06
NITROGEN, NITRATE+NITRITE (MG N/L)	0.40	0.36	0.36	0.36
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	3.06	0.06	< 0.01	< 0.01
PHOSPHORUS, TOTAL (MG P/L)	0.35	0.34	0.08	0.10
BIOLOGICAL DATA				
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	< 0.00	< 0.00	--	< 0.00
FECAL STREPTOCOCCI (LOG10(/100ML))	0.57	0.59	--	--
BIOMASS MEASUREMENTS				
BIOMASS, PLANKTON (GM/CU M)	15.	27.	9.	7.
CHLOROPHYLL-A (UG/L)	4.0	3.9	9.6	8.4
CHLOROPHYLL-B (UG/L)	1.5	1.3	3.7	2.1
CHLOROPHYLL-C (UG/L)	< 0.1	< 0.1	0.5	0.7

TABLE E-2b

PARAMETER NAME (UNITS)	STATION 17-A 6/ 5/78	STATION 17-B 6/ 5/78
PHYSICAL DATA		
LABORATORY DATA		
COLOR (PT-CO UNITS)	35.	50.
TURBIDITY, NACH TURBIDIMETER (FTU)	8.70	8.90
TOTAL FILTERABLE RESIDUE (MG/L)	93.	93.
TOTAL NONFILTERABLE RESIDUE (MG/L)	15.	19.
CHEMICAL DATA		
MINERALS AND METALS		
ALKALINITY, TOTAL (MG CaCO_3/L)	49.	50.
SULFATE, DISSOLVED (MG SO_4/L)	2.	2.
SULFIDE, TOTAL (MG S/L)	0.1	< 0.1
IRON, DISSOLVED (UG FE/L)	410	420
IRON, TOTAL (UG FE/L)	1110	1070
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	< 50	< 50
ZINC, TOTAL (UG ZN/L)	40	40
NUTRIENTS		
CARBON, DISSOLVED ORGANIC (MG C/L)	< 7.	6.
CARBON, TOTAL ORGANIC (MG C/L)	6.	6.
NITROGEN, TOTAL AMMONIA (MG N/L)	0.08	0.10
NITROGEN, NITRATE+NITRITE (MG N/L)	0.58	0.58
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.02	0.02
PHOSPHORUS, TOTAL (MG P/L)	0.13	0.11
BIOLOGICAL DATA		
BACTERIOLOGICAL DATA		
FECAL COLIFORM (LOG ₁₀ (/100ML))	0.54	0.53
FECAL STREPTOCOCCI (LOG ₁₀ (/100ML))	0.30	0.45
BIOMASS MEASUREMENTS		
BIOMASS, PLANKTON (GM/CU M)	< 1.	--
CHLOROPHYLL-A (UG/L)	1.3	1.3
CHLOROPHYLL-B (UG/L)	0.3	0.3
CHLOROPHYLL-C (UG/L)	< 0.1	0.1

TABLE E-3a

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE 1, CYCLE 3
 DATA FROM DUPLICATE ANALYSES

PARAMETER NAME (UNITS)	STATION 6-A 7/20/78	STATION 6-B 7/20/78	STATION 12-A 7/19/78	STATION 12-B 7/19/78
PHYSICAL DATA				
LABORATORY DATA				
COLOR (PT-CO UNITS)	55.	53.	14.	14.
TURBIDITY, NACH TURBIDIMETER (FTU)	19.20	16.03	0.52	0.45
TOTAL FILTERABLE RESIDUE (MG/L)	67.	62.	47.	55.
TOTAL NON-FILTERABLE RESIDUE (MG/L)	10.	< 10.	16.	10.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	21.	21.	32.	37.
SULFATE, DISSOLVED (MG SO_4/L)	8.	6.	< 1.	< 1.
SULFIDE, TOTAL (MG S/L)	< 0.1	< 0.1	< 0.1	< 0.1
IRON, DISSOLVED (UG FE/L)	70	83	< 50	< 50
IRON, TOTAL (UG FE/L)	510	790	80	110
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	70	70	< 50	< 50
ZINC, TOTAL (UG ZN/L)	30	33	20	10
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 7.	5.	6.	7.
CARBON, TOTAL ORGANIC (MG C/L)	5.	6.	7.	8.
NITROGEN, TOTAL AMMONIA (MG N/L)	0.06	0.05	0.03	0.04
NITROGEN, NITRATE+NITRITE (MG N/L)	< 0.01	< 0.01	0.10	0.11
NITROGEN, NITRATE, DISSOLVED (MG P/L)	< 0.01	< 0.01	< 0.01	< 0.01
PHOSPHORUS, TOTAL (MG P/L)	0.05	0.07	0.09	0.02
BIOLOGICAL DATA				
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10/100ML)	0.44	0.44	< 0.00	< 0.00
FECAL STREPTOCOCCI (LOG10/100ML)	0.41	0.40	-0.16	--
BIOMASS MEASUREMENTS				
CHLOROPHYLL-A (UG/L)	7.9	7.7	2.0	2.3
CHLOROPHYLL-B (UG/L)	1.3	1.1	0.6	0.6
CHLOROPHYLL-C (UG/L)	< 0.1	0.1	0.3	0.5

TABLE E-3b

PARAMETER NAME (UNITS)	STATION 17-A 7/17/78	STATION 17-B 7/17/78	STATION 17-A 7/18/78	STATION 17-B 7/18/78
PHYSICAL DATA				
LABORATORY DATA				
COLOR (PT-CO UNITS)	24.	24.	42.	34.
TURBIDITY, NATCH TURBIDIMETER (FTU)	5.00	4.00	4.00	5.40
TOTAL FILTRABLE RESIDUE (MG/L)	42.	43.	47.	73.
TOTAL NONFILTRABLE RESIDUE (MG/L)	< 10.	< 10.	11.	14.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	57.	56.	42.	74.
SULFATE, DISSOLVED (MG SO_4/L)	2.	2.	7.	7.
SULFIDE, TOTAL (MG S/L)	< 0.1	< 0.1	< 0.1	< 0.1
IRON, DISSOLVED (UG FE/L)	70	60	< 50	< 50
IRON, TOTAL (UG FE/L)	390	620	940	740
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	< 50	< 50	170	170
ZINC, TOTAL (UG ZN/L)	20	30	20	30
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	4.	4.	4.	5.
CARBON, TOTAL ORGANIC (MG C/L)	5.	5.	5.	5.
NITROGEN, TOTAL AMMONIA (MG N/L)	0.05	0.05	0.11	0.09
NITROGEN, NITRATE+NITRITE (MG N/L)	0.52	0.52	0.14	0.14
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.03	0.03	< 0.01	0.01
PHOSPHORUS, TOTAL (MG P/L)	0.05	0.07	0.26	0.17
BIOLOGICAL DATA				
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	0.34	0.23	0.03	-0.32
FECAL STREPTOCOCCI (LOG10(/100ML))	0.20	0.19	0.47	0.47
BIOMASS MEASUREMENTS				
CHLOROPHYLL-A (UG/L)	3.2	3.0	1.2	4.0
CHLOROPHYLL-B (UG/L)	3.6	2.3	0.8	1.5
CHLOROPHYLL-C (UG/L)	< 0.1	< 0.1	0.0	1.7

TABLE E-4a

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I, CYCLE 4
 DATA FROM DUPLICATE ANALYSES

PARAMETER NAME (UNITS)	STATION 1-A 8/17/78	STATION 1-B 8/17/78	STATION 12-A 8/15/78	STATION 12-B 8/15/78
PHYSICAL DATA				
LABORATORY DATA				
COLOR (PT-CO UNITS)	47.	47.	18.	17.
TURBIDITY, NACH TURBIDIMETER (FTU)	5.10	8.00	0.65	0.85
TOTAL FILTERABLE RESIDUE (MG/L)	66.	52.	61.	55.
TOTAL NONFILTERABLE RESIDUE (MG/L)	17.	11.	3.	4.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	19.	18.	32.	33.
CHLORIDE (MG CL/L)	4.	4.	3.	3.
SULFATE, DISSOLVED (MG SO_4/L)	5.	5.	< 1.	< 1.
SULFIDE, TOTAL (MG S/L)	< 0.1	< 0.1	< 0.1	< 0.1
CALCIUM, TOTAL (MG CA/L)	0.1	0.1	2.5	2.5
IRON, DISSOLVED (UG FE/L)	90	90	< 50	< 50
IRON, TOTAL (UG FE/L)	890	670	80	110
MAGNESIUM, TOTAL (MG MG/L)	2.8	2.8	0.2	0.2
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	140	130	< 50	50
POTASSIUM, TOTAL (MG K/L)	1.6	1.6	< 0.1	< 0.1
SODIUM, TOTAL (MG NA/L)	4.33	4.40	1.17	1.13
ZINC, TOTAL (UG ZN/L)	30	20	10	< 10
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 8.	< 8.	< 2.	< 2.
CARBON, TOTAL ORGANIC (MG C/L)	6.	5.	7.	7.
NITROGEN, TOTAL AMMONIA (MG N/L)	0.09	0.10	0.03	< 0.01
NITROGEN, NITRATE+NITRITE (MG N/L)	0.11	0.11	< 0.01	< 0.01
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.5	0.5	0.4	0.4
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	< 0.01	< 0.01	< 0.01	< 0.01
PHOSPHORUS, TOTAL (MG P/L)	0.05	0.05	0.04	< 0.01
BIOLOGICAL DATA				
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG10(/100ML))	0.25	0.20	< 0.00	< 0.00
FECAL STREPTOCOCCI (LOG10(/100ML))	0.28	0.24	< 0.00	< 0.00
BIOMASS MEASUREMENTS				
CHLOROPHYLL-A (UG/L)	9.6	9.7	1.8	1.8
CHLOROPHYLL-B (UG/L)	0.7	0.6	0.4	0.6
CHLOROPHYLL-C (UG/L)	< 0.1	< 0.1	< 0.1	0.1

TABLE E-4b

PARAMETER NAME (UNITS)	STATION 17-A 8/14/78	STATION 17-B 8/14/78	STATION 19-A 8/16/78	STATION 19-B 8/16/78
PHYSICAL DATA				
LABORATORY DATA				
COLOR (PT-CO UNITS)	60.	60.	30.	29.
TURBIDITY, HACH TURBIDIMETER (FTU)	14.00	8.20	4.20	11.00
TOTAL FILTERABLE RESIDUE (MG/L)	64.	71.	51.	62.
TOTAL NONFILTERABLE RESIDUE (MG/L)	29.	25.	10.	11.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	25.	25.	36.	39.
CHLORIDE (MG CL/L)	4.	4.	4.	4.
SULFATE, DISSOLVED (MG SO_4/L)	2.	1.	4.	3.
SILFIDE, TOTAL (MG S/L)	< 0.1	< 0.1	< 0.1	< 0.1
CALCIUM, TOTAL (MG CA/L)	31.3	31.0	28.2	31.3
IRON, DISSOLVED (UG FE/L)	440	400	< 50	< 50
IRON, TOTAL (UG FE/L)	1910	2180	580	730
MAGNESIUM, TOTAL (MG MG/L)	1.9	1.3	2.8	2.9
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	270	240	80	130
POTASSIUM, TOTAL (MG K/L)	1.1	1.2	1.1	1.1
SODIUM, TOTAL (MG NA/L)	3.27	3.33	3.60	3.57
ZINC, TOTAL (UG ZN/L)	30	30	20	30
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 9.	8.	< 6.	4.
CARBON, TOTAL ORGANIC (MG C/L)	8.	8.	6.	5.
NITROGEN, TOTAL AMMONIA (MG N/L)	0.03	< 0.01	0.08	0.08
NITROGEN, NITRATE+NITRITE (MG N/L)	0.28	0.28	0.17	0.17
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.5	0.5	0.5	0.6
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.03	0.03	< 0.01	< 0.01
PHOSPHORUS, TOTAL (MG P/L)	0.08	0.10	0.04	0.04
BIOLOGICAL DATA				
BACTERIOLOGICAL DATA				
FECAL COLIFORM (LOG ₁₀ (/100ML))	0.45	0.45	0.11	0.08
FECAL STREPTOCOCCI (LOG ₁₀ (/100ML))	0.14	0.13	0.45	0.44
BIOMASS MEASUREMENTS				
CHLOROPHYLL-A (UG/L)	2.5	2.5	13.1	12.0
CHLOROPHYLL-B (UG/L)	0.2	0.2	4.9	4.8
CHLOROPHYLL-C (UG/L)	0.1	< 0.1	0.5	0.7

TABLE E-5a

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 COMPS OF ENGINEERS (CONTRACT DACW01-77-C-0101) PHASE 1, CYCLE 5
 DATA FROM DUPLICATE ANALYSES

PARAMETER NAME (UNITS)	STATION 14-A 9/27/78	STATION 14-B 9/27/78	STATION 17-A 9/25/78	STATION 17-B 9/25/78
PHYSICAL DATA				
LABORATORY DATA				
COLOR (PT-CO UNITS)	9.	11.	14.	13.
TURBIDITY, NACH TURBIDIMETER (FTU)	5.60	5.30	1.50	1.60
TOTAL FILTERABLE RESIDUE (MG/L)	123.	113.	94.	89.
TOTAL NONFILTERABLE RESIDUE (MG/L)	7.	8.	2.	< 2.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	95.	91.	51.	53.
SULFATE, TOTAL (MG SO_4/L)	< 1.	< 1.	3.	3.
IRON, DISSOLVED (UG Fe/L)	< 50	< 50	< 50	< 50
IRON, TOTAL (UG Fe/L)	140	160	150	140
MANGANESE, DISSOLVED (UG Mn/L)	< 50	< 50	< 50	< 50
MANGANESE, TOTAL (UG Mn/L)	< 50	60	< 50	< 50
ZINC, TOTAL (UG Zn/L)	20	20	10	20
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 10.	10.	< 2.	< 2.
CARBON, TOTAL ORGANIC (MG C/L)	16.	16.	2.	1.
NITROGEN, TOTAL AMMONIA (MG N/L)	< 0.01	< 0.01	0.03	0.04
NITROGEN, NITRATE+NITRITE (MG N/L)	0.35	0.30	0.53	0.53
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.2	0.3	0.3	0.5
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	< 0.01	< 0.01	0.07	0.07
PHOSPHORUS, TOTAL (MG P/L)	0.01	< 0.01	0.09	0.09
BIOLOGICAL DATA				
BACTERIOLOGICAL DATA				
FECAL COLOFORM (LOG10/100ML)	0.00	0.30	0.95	0.85
FECAL STREPTOCOCCI (LOG10/100ML)	< 0.00	< 0.00	1.71	2.04
BIOMASS MEASUREMENTS				
CHLOROPHYLL-A (UG/L)	3.4	9.6	6.5	6.0
CHLOROPHYLL-B (UG/L)	0.4	0.7	1.1	0.6
CHLOROPHYLL-C (UG/L)	0.1	< 0.1	0.1	< 0.1

TABLE E-5b

PARAMETER NAME (UNITS)	STATION 19-A 9/26/78	STATION 19-B 9/26/78
PHYSICAL DATA		
LABORATORY DATA		
COLOR (PT-CO UNITS)	20.	18.
TURBIDITY, NACH TURBIDIMETER (FTU)	6.10	6.20
TOTAL FILTERABLE RESIDUE (MG/L)	77.	83.
TOTAL NONFILTERABLE RESIDUE (MG/L)	5.	11.
CHEMICAL DATA		
MINERALS AND METALS		
ALKALINITY, TOTAL (MG CaCO_3/L)	42.	44.
SULFATE, TOTAL (MG SO_4/L)	5.	4.
IRON, DISSOLVED (UG Fe/L)	< 50	< 50
IRON, TOTAL (UG Fe/L)	250	240
MANGANESE, DISSOLVED (UG Mn/L)	< 50	< 50
MANGANESE, TOTAL (UG Mn/L)	120	140
ZINC, TOTAL (UG Zn/L)	10	10
NUTRIENTS		
CARBON, DISSOLVED ORGANIC (MG C/L)	5.	4.
CARBON, TOTAL ORGANIC (MG C/L)	7.	6.
NITROGEN, TOTAL AMMONIA (MG N/L)	0.04	0.09
NITROGEN, NITRATE+NITRITE (MG N/L)	0.09	0.08
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.5	0.6
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.03	0.02
PHOSPHORUS, TOTAL (MG P/L)	0.04	0.04
BIOLOGICAL DATA		
BACTERIOLOGICAL DATA		
FECAL COLEFORM (LOG10(/100ML))	0.30	0.30
FECAL STREPTOCOCCI (LOG10(/100ML))	3.26	3.23
BIOMASS MEASUREMENTS		
CHLOROPHYLL-A (UG/L)	5.4	8.5
CHLOROPHYLL-B (UG/L)	0.9	1.3
CHLOROPHYLL-C (UG/L)	0.1	0.1

TABLE E-6a

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I, CYCLE 6
 DATA FROM DUPLICATE ANALYSES

PARAMETER NAME (UNITS)	STATION 75-A 11/30/78	STATION 75-B 11/30/78	STATION 95-A 11/29/78	STATION 95-B 11/29/78
PHYSICAL DATA				
LABORATORY DATA				
COLOR (PT-CO UNITS)	65.	60.	50.	45.
TURBIDITY, NACH TURBIDIMETER (FTU)	10.00	9.50	10.00	6.10
TOTAL FILTERABLE RESIDUE (MG/L)	90.	86.	75.	79.
TOTAL NONFILTERABLE RESIDUE (MG/L)	9.	< 0.	21.	10.
CHEMICAL DATA				
MINERALS AND METALS				
ALKALINITY, TOTAL (MG CaCO_3/L)	26.	32.	32.	31.
CHLORIDE (MG CL/L)	4.	6.	4.	4.
SULFATE, DISSOLVED (MG SO_4/L)	13.	13.	11.	11.
CALCIUM, TOTAL (MG CA/L)	6.0	5.7	5.9	5.9
IRON, DISSOLVED (UG FE/L)	70	80	130	90
IRON, TOTAL (UG FE/L)	970	770	650	630
MAGNESIUM, TOTAL (MG MG/L)	1.3	1.3	1.2	1.2
MANGANESE, DISSOLVED (UG MN/L)	110	110	50	< 50
MANGANESE, TOTAL (UG MN/L)	150	150	90	90
POTASSIUM, TOTAL (MG K/L)	2.7	2.8	2.5	2.5
SODIUM, TOTAL (MG NA/L)	12.40	12.50	10.40	6.80
ZINC, TOTAL (UG ZN/L)	10	< 10	< 10	< 10
NUTRIENTS				
CARBON, DISSOLVED ORGANIC (MG C/L)	< 12.	< 11.	6.	6.
CARBON, TOTAL ORGANIC (MG C/L)	9.	8.	7.	7.
NITROGEN, TOTAL AMMONIA (MG N/L)	0.02	0.02	0.07	0.07
NITROGEN, NITRATE+NITRITE (MG N/L)	0.26	0.28	0.25	0.27
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.6	0.6	0.3	0.4
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	< 0.01	0.04	< 0.01	< 0.01
PHOSPHORUS, TOTAL (MG P/L)	0.04	0.05	0.03	0.05
BIOLOGICAL DATA				
BIOMASS MEASUREMENTS				
CHLOROPHYLL-A (UG/L)	7.6	7.2	10.5	10.6
CHLOROPHYLL-B (UG/L)	2.1	1.1	3.8	2.4
CHLOROPHYLL-C (UG/L)	0.3	0.3	1.6	0.9

TABLE E-6b

PARAMETER NAME (UNITS)	STATION 17-A 11/28/78	STATION 17-B 11/28/78
PHYSICAL DATA		
LABORATORY DATA		
COLOR (PT-CO UNITS)	18.	21.
TURBIDITY, NACH TURBIDIMETER (FTU)	3.50	4.90
TOTAL FILTERABLE RESIDUE (MG/L)	91.	90.
TOTAL NONFILTERABLE RESIDUE (MG/L)	< 2.	< 0.
CHEMICAL DATA		
MINERALS AND METALS		
ALKALINITY, TOTAL (MG CaCO_3/L)	57.	52.
CHLORIDE (MG CL/L)	6.	6.
SULFATE, DISSOLVED (MG SO_4/L)	2.	2.
CALCIUM, TOTAL (MG CA/L)	17.0	15.7
IRON, DISSOLVED (UG FE/L)	260	250
IRON, TOTAL (UG FE/L)	440	540
MAGNESIUM, TOTAL (MG MG/L)	0.9	0.9
MANGANESE, DISSOLVED (UG MN/L)	< 50	< 50
MANGANESE, TOTAL (UG MN/L)	< 50	< 50
POTASSIUM, TOTAL (MG K/L)	1.0	1.0
SODIUM, TOTAL (MG NA/L)	4.33	4.47
ZINC, TOTAL (UG ZN/L)	< 10	< 10
NUTRIENTS		
CARBON, DISSOLVED ORGANIC (MG C/L)	4.	3.
CARBON, TOTAL ORGANIC (MG C/L)	4.	5.
NITROGEN, TOTAL AMMONIA (MG N/L)	0.04	0.02
NITROGEN, NITRATE+NITRITE (MG N/L)	0.60	0.56
NITROGEN, TOTAL KJELDAHL (MG N/L)	0.2	0.2
ORTHOPHOSPHATE, DISSOLVED (MG P/L)	0.05	0.06
PHOSPHORUS, TOTAL (MG P/L)	0.08	0.09
BIOLOGICAL DATA		
BIOMASS MEASUREMENTS		
CHLOROPHYLL-A (UG/L)	0.9	1.3
CHLOROPHYLL-B (UG/L)	0.3	0.6
CHLOROPHYLL-C (UG/L)	< 0.1	< 0.1

TABLE E-7
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101)
Phase I, Cycle 1
SPIKED SAMPLE RECOVERIES

Parameter	Station Number	Spike Value	Analytical Results		
			Sample	Spiked Sample	% Recovery
Zinc, Total (mg Zn/l)	08	0.06	0.03	0.09	96.5
	11	0.06	0.03	0.09	104
	15	0.04	0.01	0.05	102
Iron, Dissolved (mg Fe/l)	02	0.30	0.15	0.49	109
	08	0.35	0.19	0.56	104
	15	0.80	0.38	1.26	107
Iron, Total (mg Fe/l)	02	3.00	1.57	4.66	102
	11	3.00	1.77	4.65	97.2
	15	3.00	1.39	4.37	99.7
Manganese, Dissolved (mg Mn/l)	01	0.02	0.01	0.04	109
	08	0.04	0.02	0.06	100
	11	0.02	0.01	0.04	111
Manganese Total (mg Mn/l)	01	0.16	0.08	0.24	97.8
	02	0.16	0.07	0.22	98.5
	08	0.16	0.09	0.25	100

TABLE E-8
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101)
Phase I, Cycle 2
SPIKED SAMPLE RECOVERIES

Parameter	Station Number	Spike Value	Analytical Results		
			Sample	Spiked Sample	% Recovery
Zinc, (mg Zn/l)	13	0.05	0.02	0.06	88.2
	16	0.05	0.05	0.07	68.8*
Iron, Dissolved (mg Fe/l)	13	0.80	0.09	0.89	100
	16	0.80	0.26	1.05	98.9
Iron, Total (mg Fe/l)	13	2.50	0.35	2.43	85.1
	16	2.50	0.96	3.34	96.4
Manganese, Dissolved (mg Mn/l)	13	0.03	0.01	0.04	104
	16	0.03	0.02	0.05	111
Manganese, Total (mg Mn/l)	13	0.20	0.03	0.21	92.9
	16	0.10	0.04	0.14	104

*This sample was spiked in the laboratory resulting in:

16 0.02 0.05 0.07 100

The percent recoveries were calculated using the concentrations to three significant figures.

TABLE E-9
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101)
Phase I, Cycle 3
SPIKED SAMPLE RECOVERIES

Parameter	Station Number	Spike Value	Analytical Results		
			Sample	Spiked Sample	% Recovery
Zinc, Total (mg Zn/l)	15	0.05	0.02	0.07	109.1
	09	0.05	0.02	0.07	95.8
Iron, Dissolved (mg Fe/l)	15	0.40	<0.01	0.42	102.5
	09	0.40	0.10	0.52	104.0
Iron, Total (mg Fe/l)	15	2.50	0.08	2.45	95.1
	09	2.50	0.35	2.49	87.3
Manganese, Dissolved (mg Mn/l)	15	0.03	<0.01	0.04	115.2
	09	0.06	0.02	0.07	97.3
Manganese, Total (mg Mn/l)	15	0.10	0.05	0.17	112.5
	09	0.20	0.12	0.31	97.2

The percent recoveries were calculated using the concentrations to three significant figures.

TABLE E-10
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101)
Phase I, Cycle 4
SPIKED SAMPLE RECOVERIES

Parameter	Station Number	Spike Value	Analytical Results		
			Sample	Spiked Sample	% Recovery
Zinc, Total (mg Zn/l)	14	0.05	<0.01	0.06	107
	16	0.10	0.02	0.12	103
Iron, Dissolved (mg Fe/l)	14	0.08	0.20	0.26	90.2
	16	0.20	0.03	0.25	112
Iron, Total (mg Fe/l)	14	0.50	0.73	1.25	102
	16	0.40	1.25	1.48	89.3
Manganese, Dissolved (mg Mn/l)	14	0.03	0.01	0.05	109
	16	0.03	<0.01	0.04	104
Manganese, Total (mg Mn/l)	14	0.10	0.04	0.14	93.5
	16	0.10	0.09	0.19	102
Potassium, Total (mg K/l)	14	1.5	0.6	2.1	100
	16	1.5	1.1	2.7	103
Sodium Total (mg Na/l)	14	4.00	1.43	5.30	97.0
	16	4.00	3.27	7.07	95.0

The percent recoveries were calculated using the concentrations to three significant figures.

TABLE E-11
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101)
Phase I, Cycle 5
SPIKED SAMPLE RECOVERIES

Parameter	Station Number	Spike Value	Analytical Results		
			Sample	Spiked Sample	% Recovery
Zinc, Total (mg Zn/l)	07	0.10	0.01	0.11	103.7
	12	0.10	0.02	0.12	100.9
Iron, Dissolved (mg Fe/l)	07	0.20	0.04	0.24	100.4
	12	0.04	<0.01	0.04	97.7
Iron, Total (mg Fe/l)	07	1.0	0.29	1.18	91.5
	12	1.0	0.12	1.13	100.4
Manganese Dissolved (mg Mn/l)	07	0.03	0.08	0.11	100.0
	12	0.03	<0.01	0.04	100.0
Manganese, Total (mg Mn/l)	07	0.2	0.14	0.36	103.8
	12	0.1	0.11	0.23	106.5

The percent recoveries were calculated using the concentrations to three significant figures.

TABLE E-12
LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY
CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101)
Phase I, Cycle 6
SPIKED SAMPLE RECOVERIES

Parameter	Station Number	Spike Value	Analytical Results		
			Sample	Spiked Sample	% Recovery
Zinc, Total (mg Zn/l)	03	0.05	<0.01	0.05	100
	09S-A	0.05	<0.01	0.05	100
Iron, Dissolved (mg Fe/l)	03	0.04	0.06	0.14	138
	09S	0.16	0.11	0.22	83.5
Iron, Total (mg Fe/l)	03	0.50	0.95	1.50	104
	09S-A	0.50	0.65	1.35	117
Manganese Dissolved (mg Mn/l)	03	0.06	<0.05	0.06	102
	09S	0.06	<0.05	0.11	99.1
Manganese, Total (mg Mn/l)	03	0.10	0.07	0.18	107
	09S-A	0.20	0.09	0.30	103

The percent recoveries were calculated using the concentrations to three significant digits.

APPENDIX F
IN SITU VERTICAL PROFILES AND ISOPLETHS

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WATER AND AIR RESEARCH INC GAINESVILLE FL

WATER QUALITY MANAGEMENT STUDIES LAKE SEMINOLE, APRIL-NOVEMBER --ETC(U)

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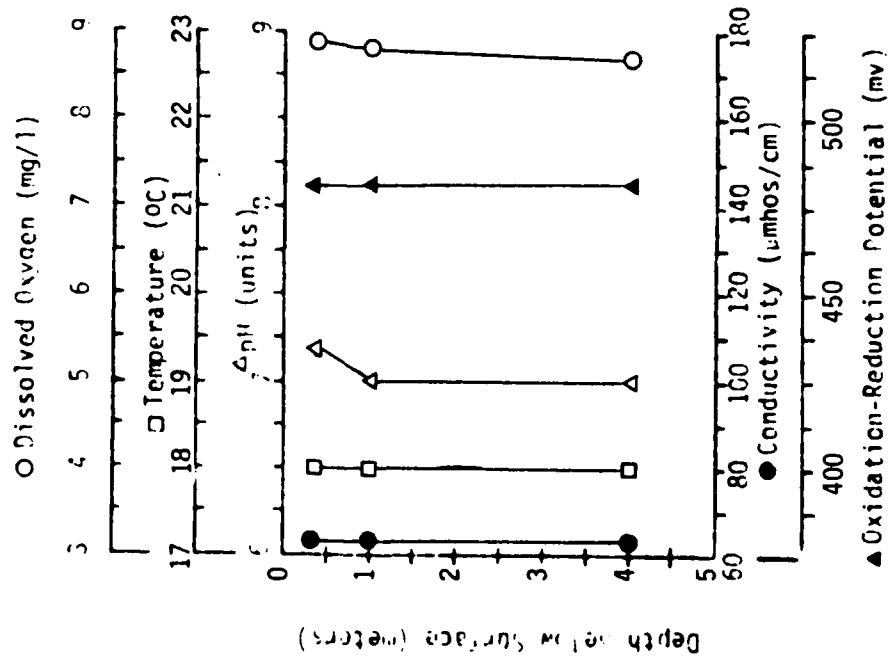
DOCS

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FIGURE F-1a. DISSOLVED OXYGEN, TEMPERATURE, pH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 1, APRIL 17-21, 1978.

Station 7



Station 8

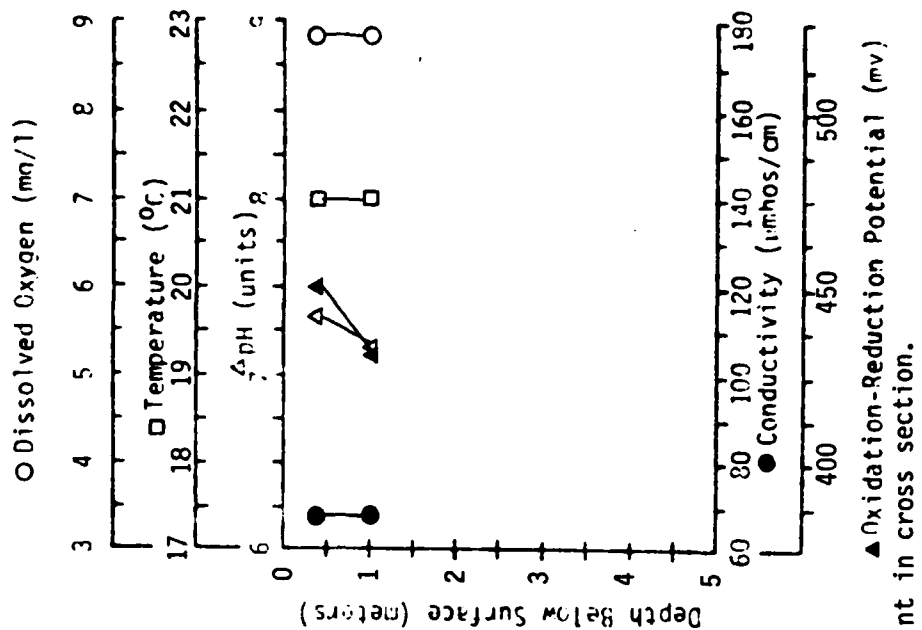
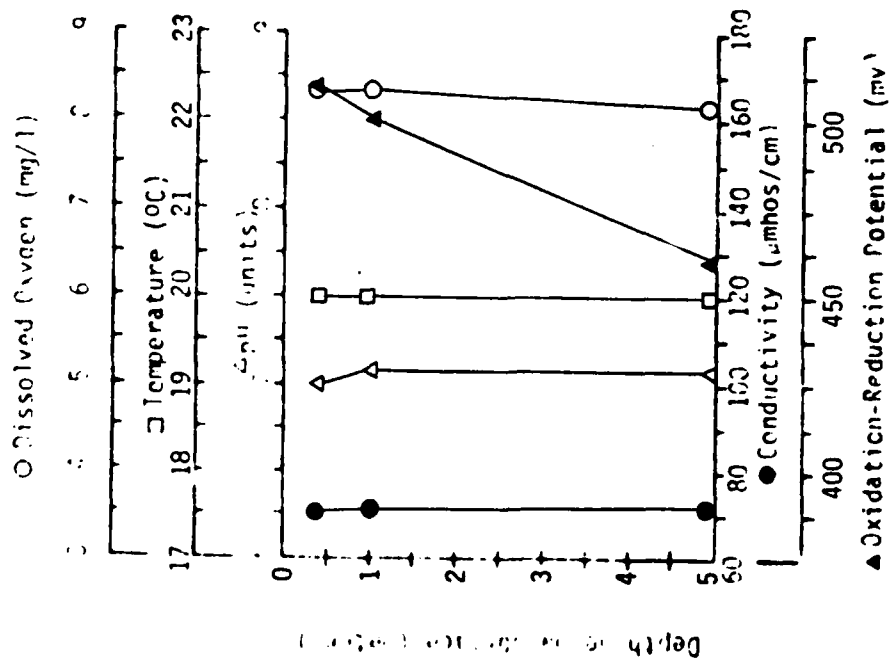


FIGURE F-1b. DISSOLVED OXYGEN, TEMPERATURE, pH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 1, APRIL 17-21, 1978.

Station 9



Unless otherwise noted, profiles taken at midpoint in cross section.

Station 10

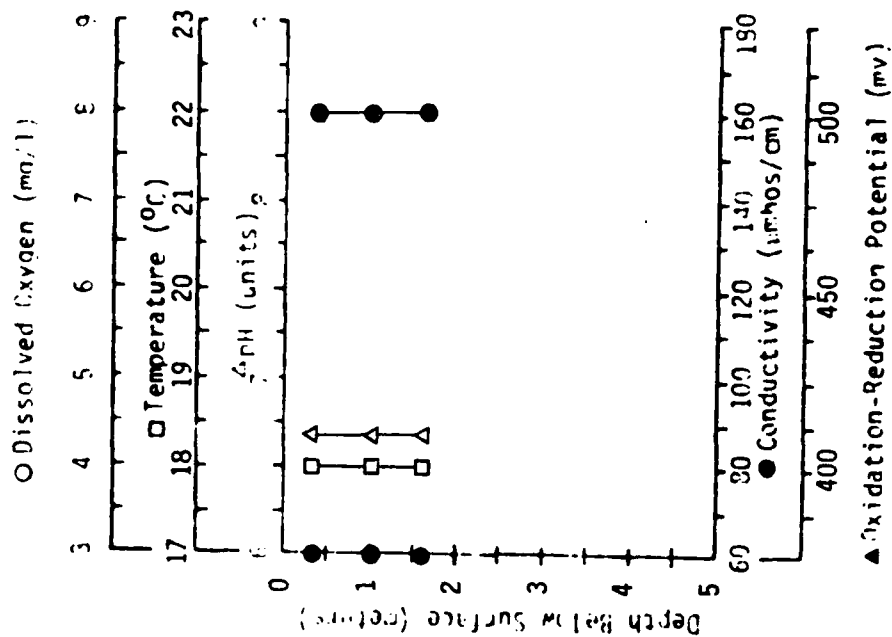
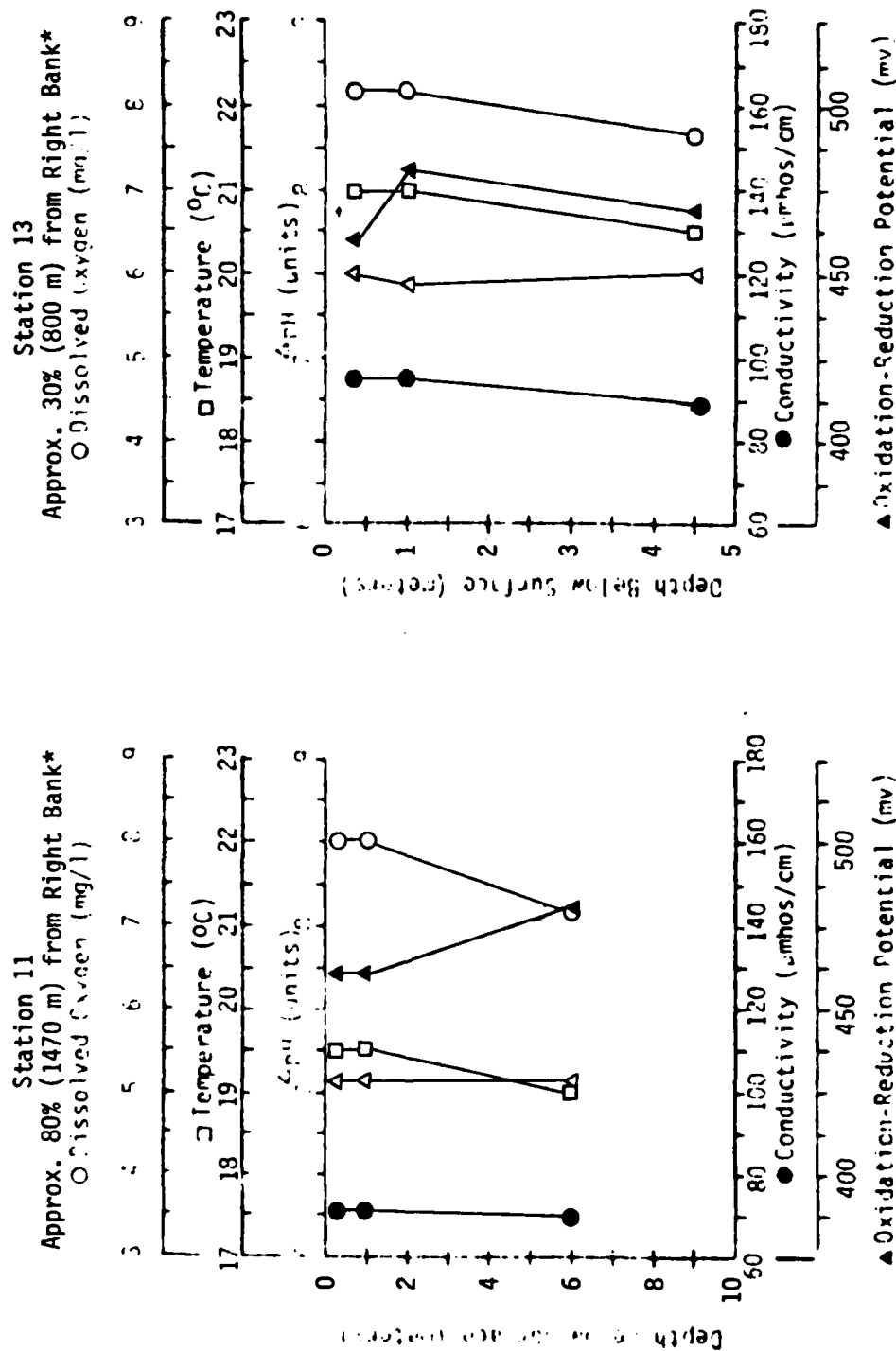


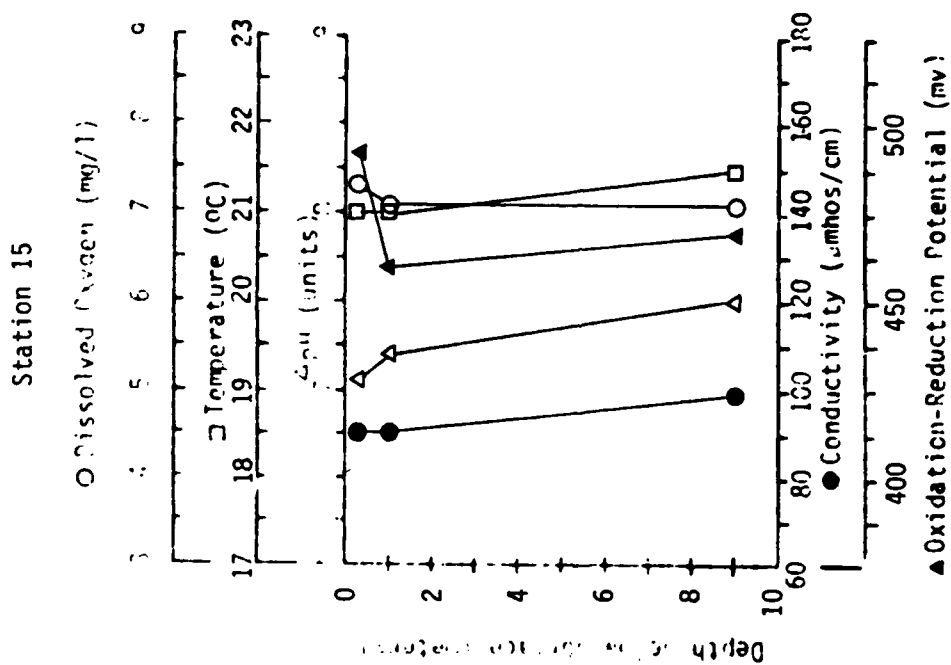
FIGURE F-1c. DISSOLVED OXYGEN, TEMPERATURE, PH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 1, APRIL 17-21, 1978.



*Distance from Right Bank Facing Upstream

Unless otherwise noted, profiles taken at midpoint in cross section.

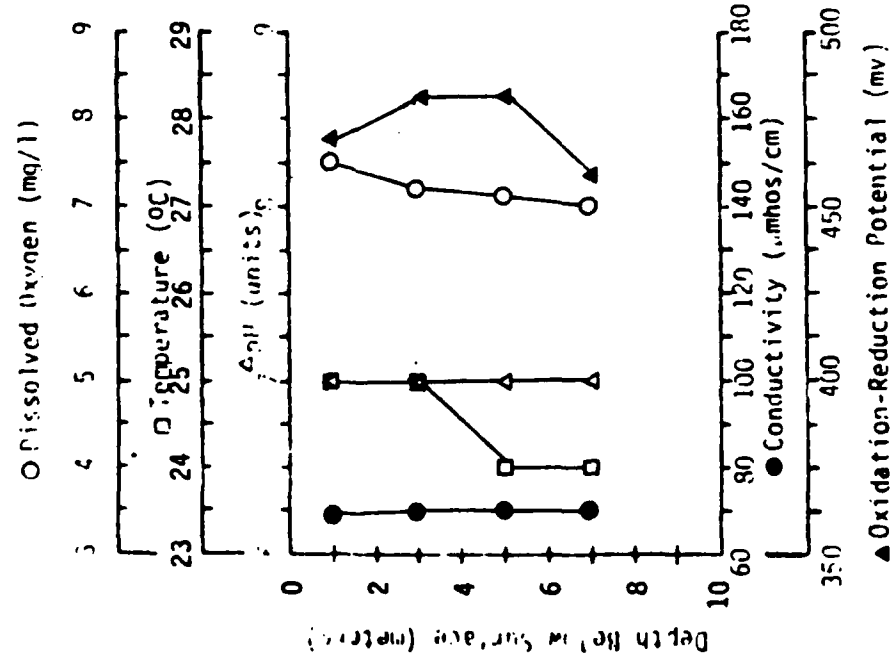
FIGURE F-1d. DISSOLVED OXYGEN, TEMPERATURE, pH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 1, APRIL 17-21, 1978.



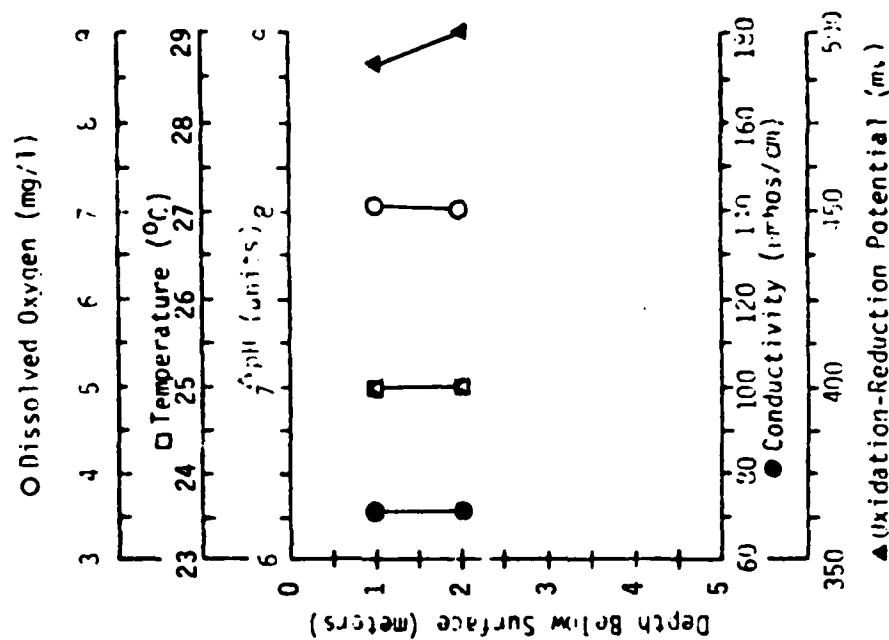
Unless otherwise noted, profiles taken at midpoint in cross section.

FIGURE F-2a. DISSOLVED OXYGEN, TEMPERATURE, pH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 2, JUNE 5-7, 1978.

Station 7



Station 8



▲ Oxidation-Reduction Potential (mv)
 Unless otherwise noted, profiles taken at midpoint in cross section.

FIGURE F-2b. DISSOLVED OXYGEN, TEMPERATURE, pH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 2, JUNE 5-7, 1978.

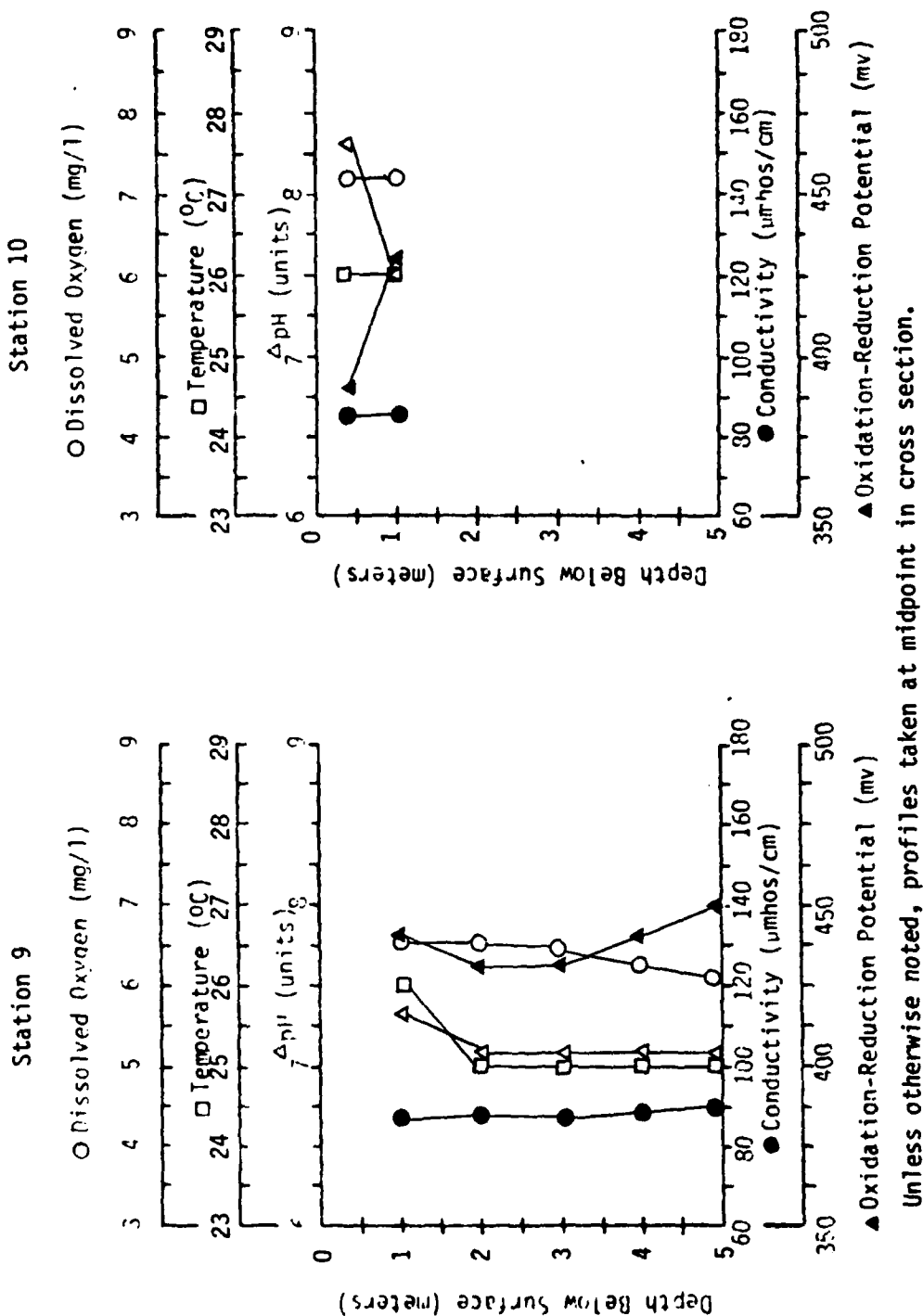


FIGURE F-2c. DISSOLVED OXYGEN, TEMPERATURE, pH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 2, JUNE 5-7, 1978.

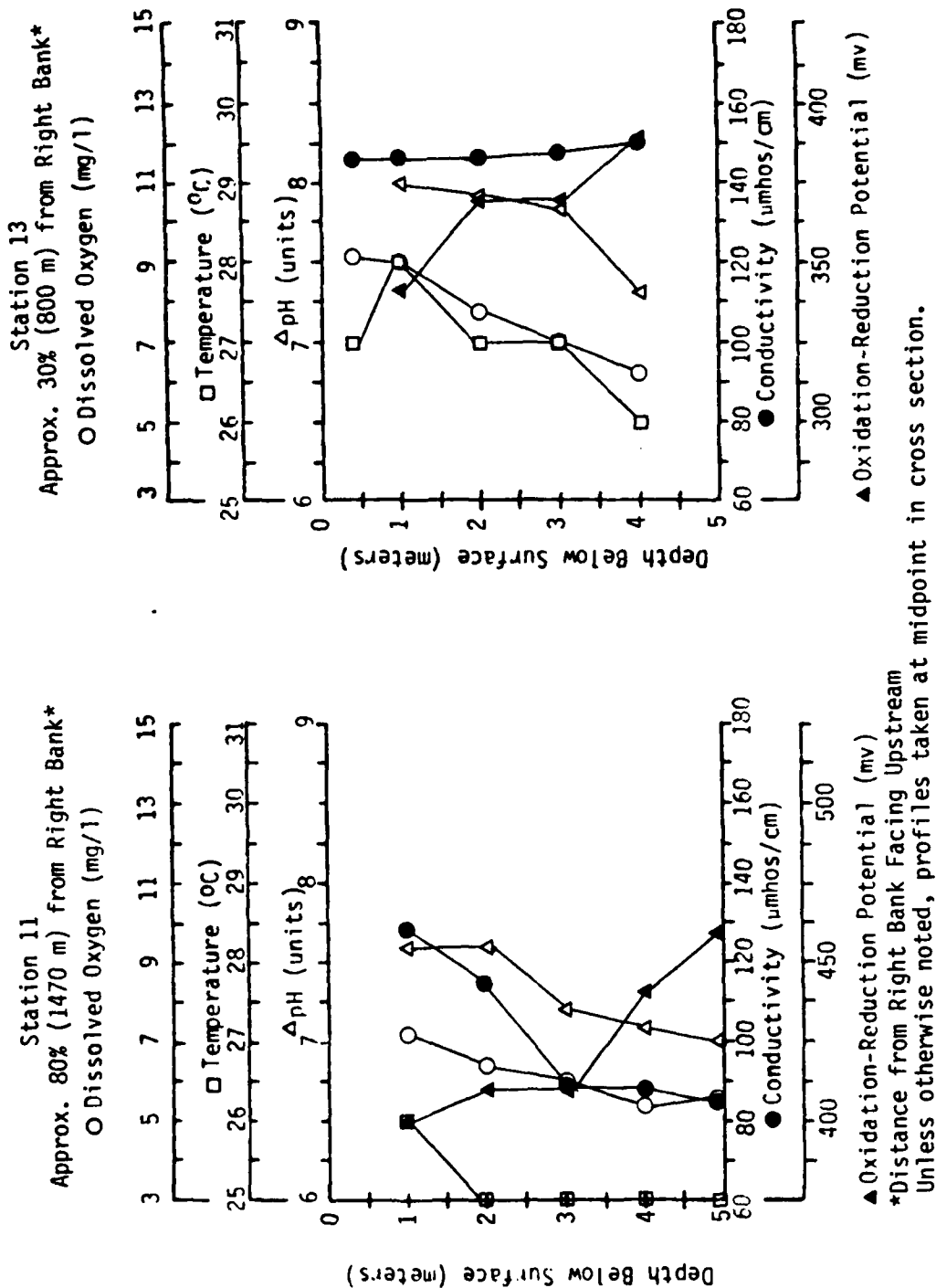
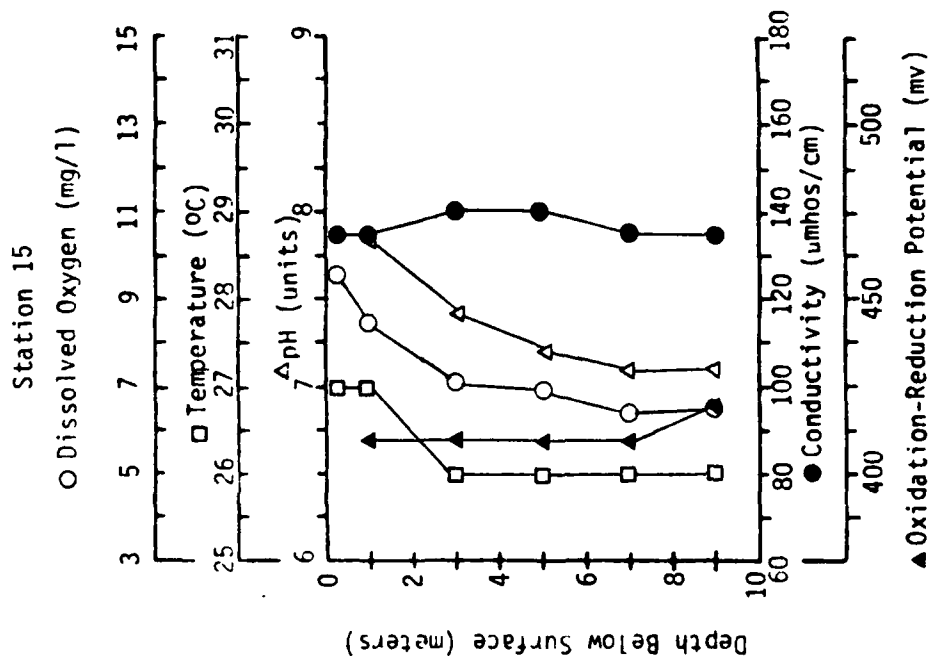


FIGURE F-2d. DISSOLVED OXYGEN, TEMPERATURE, pH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 2, JUNE 5-7, 1978.



Unless otherwise noted, profiles taken at midpoint in cross section.

FIGURE F-3a. DISSOLVED OXYGEN, TEMPERATURE, pH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 3, JULY 17-20, 1978.

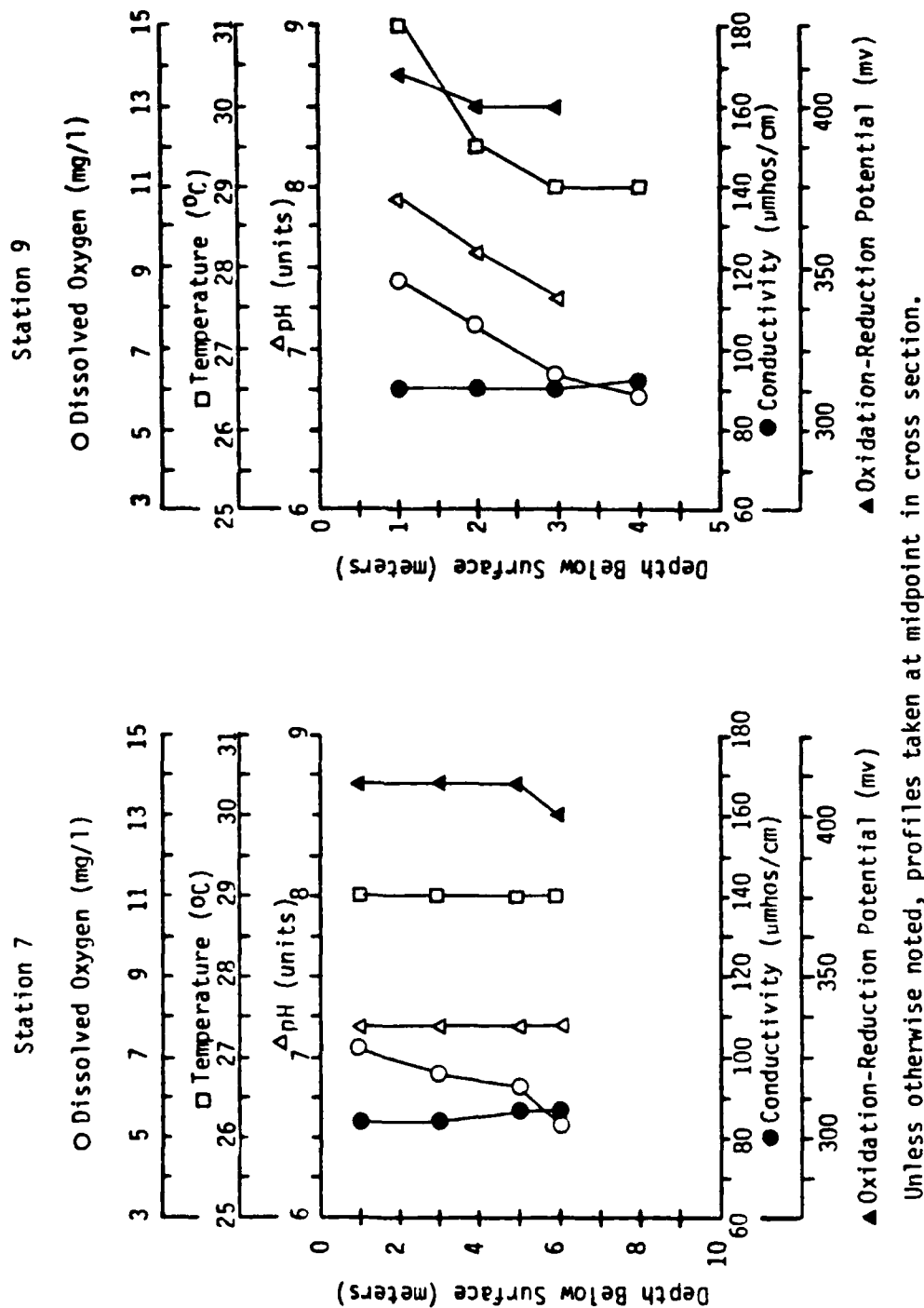
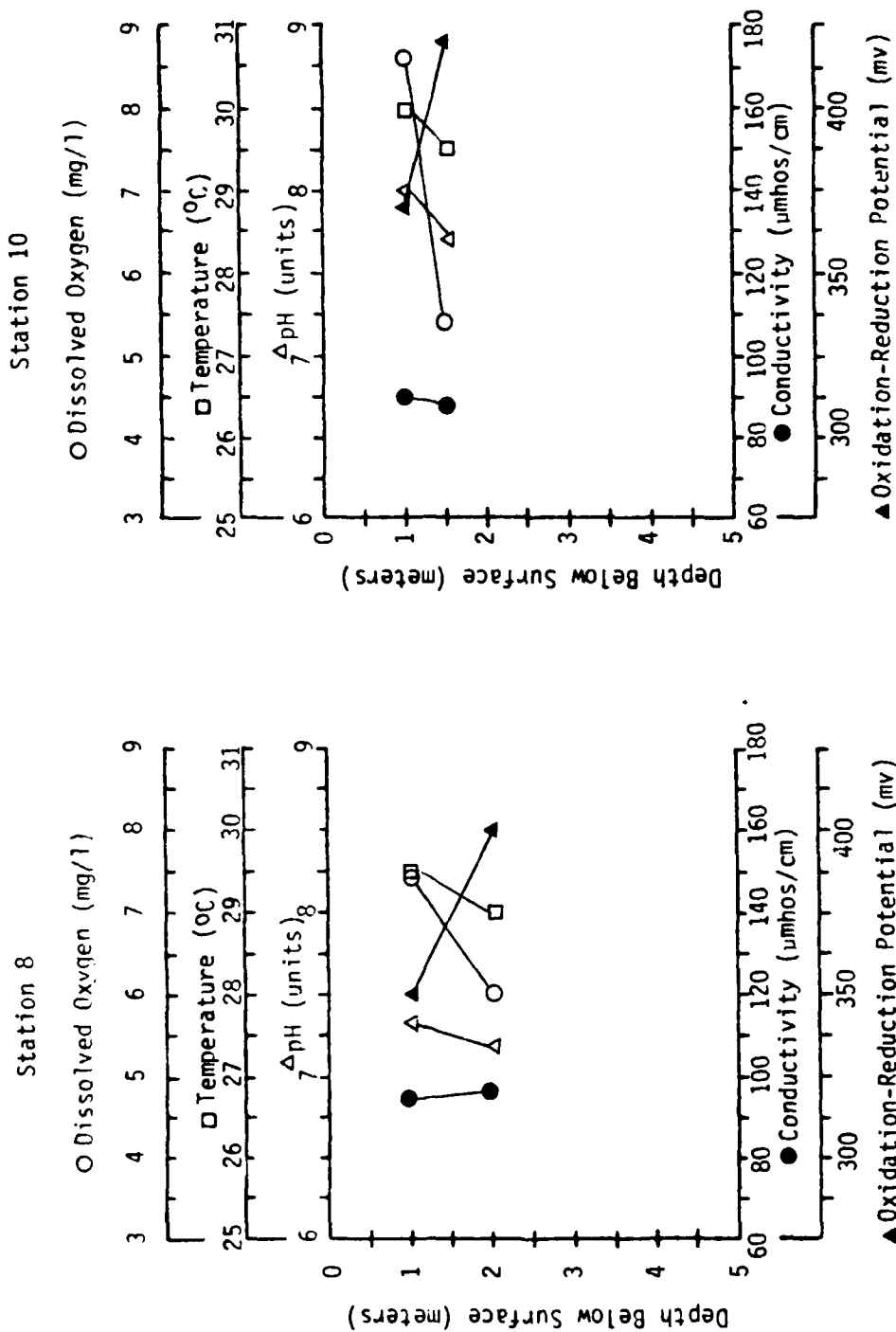


FIGURE F-3b. DISSOLVED OXYGEN, TEMPERATURE, pH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 3, JULY 17-20, 1978.



Unless otherwise noted, profiles taken at midpoint in cross section.

FIGURE F-3c. DISSOLVED OXYGEN, TEMPERATURE, pH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 3, JULY 17-20, 1978.

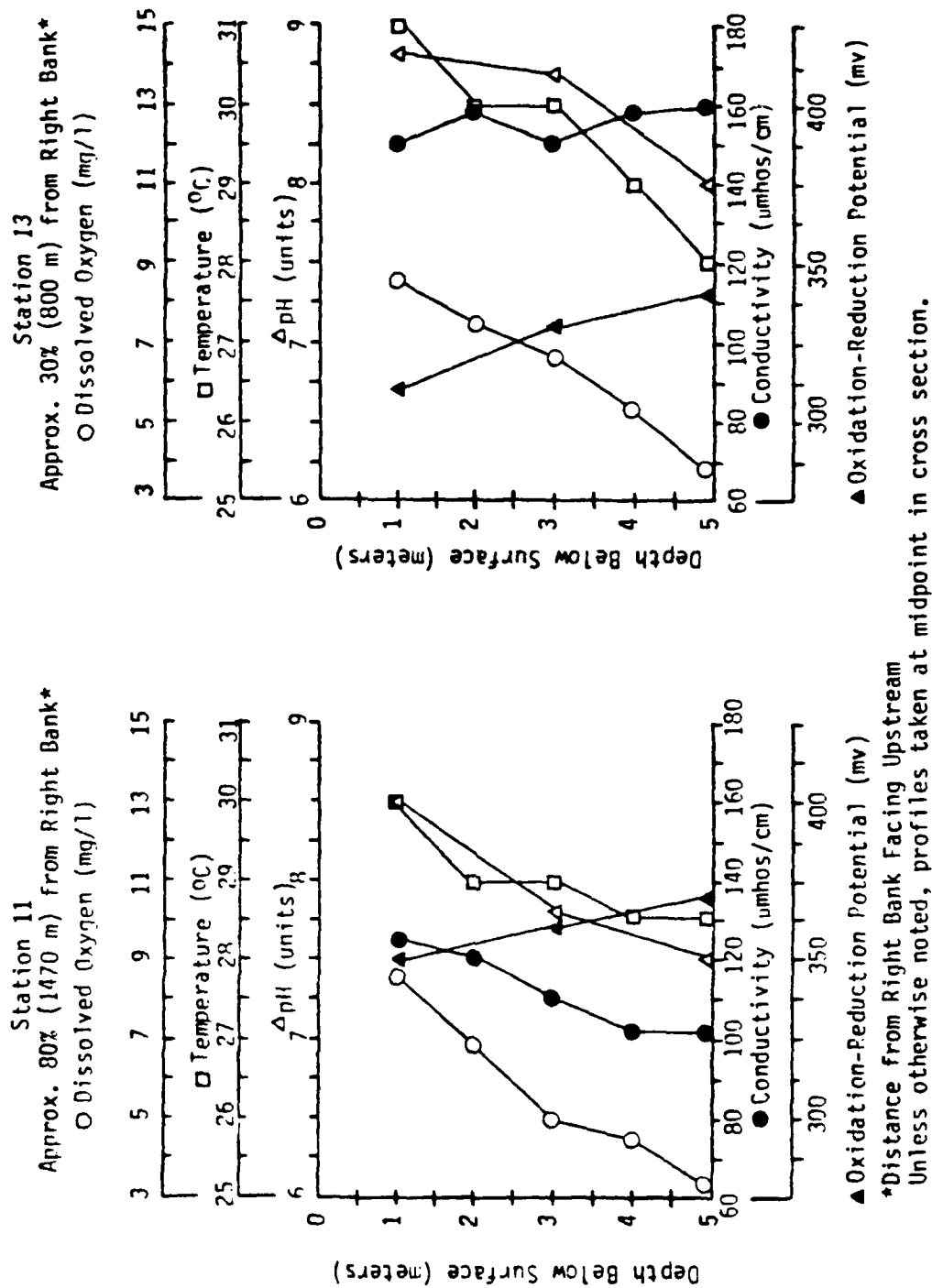
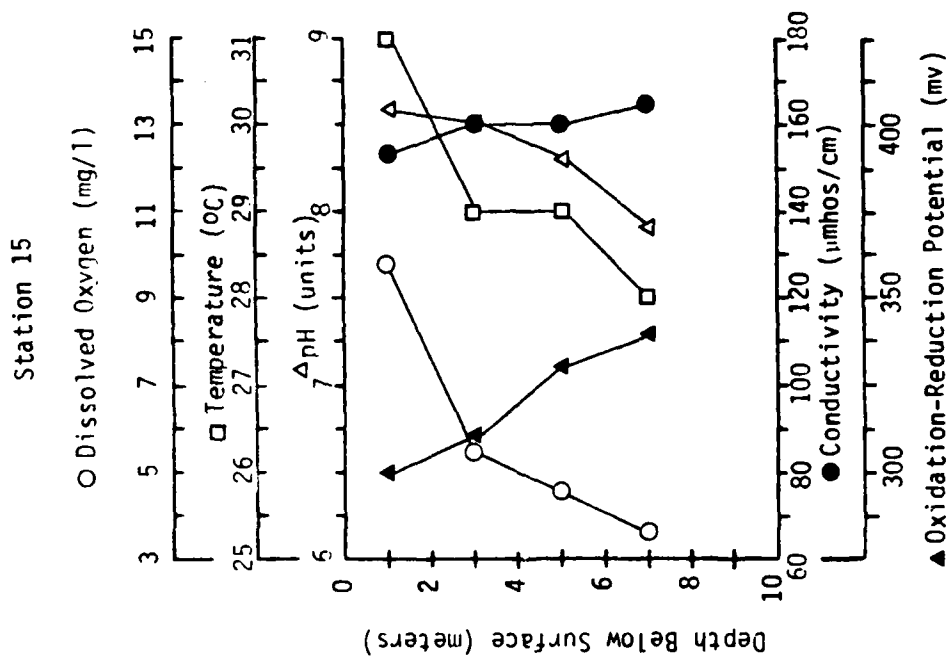
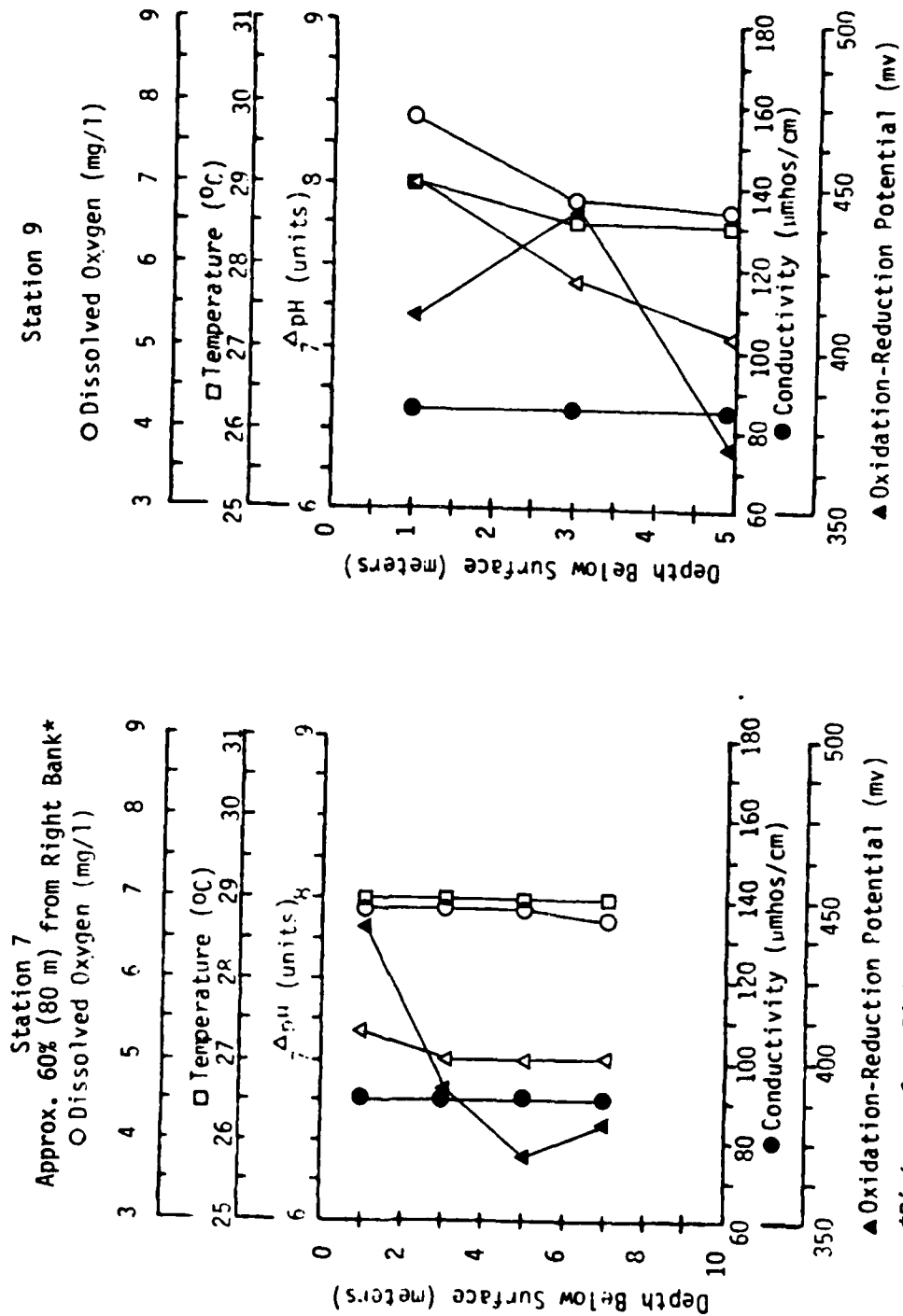


FIGURE F-3d. DISSOLVED OXYGEN, TEMPERATURE, PH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 3, JULY 17-20, 1978.



Unless otherwise noted, profiles taken at midpoint in cross section.

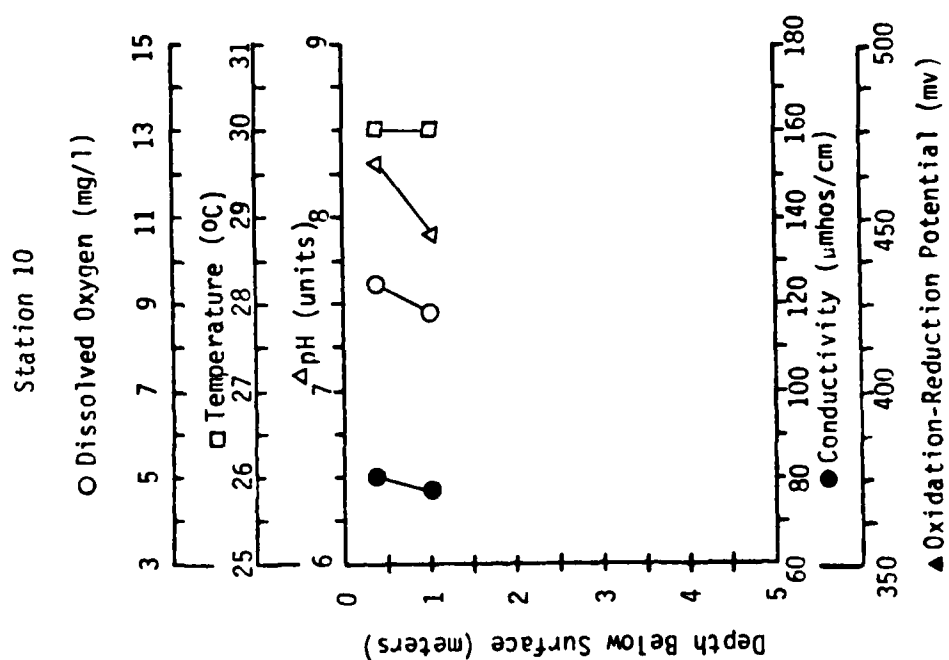
FIGURE F-4a. DISSOLVED OXYGEN, TEMPERATURE, pH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 4, AUGUST 14-17, 1978.



*Distance from Right Bank Facing Upstream

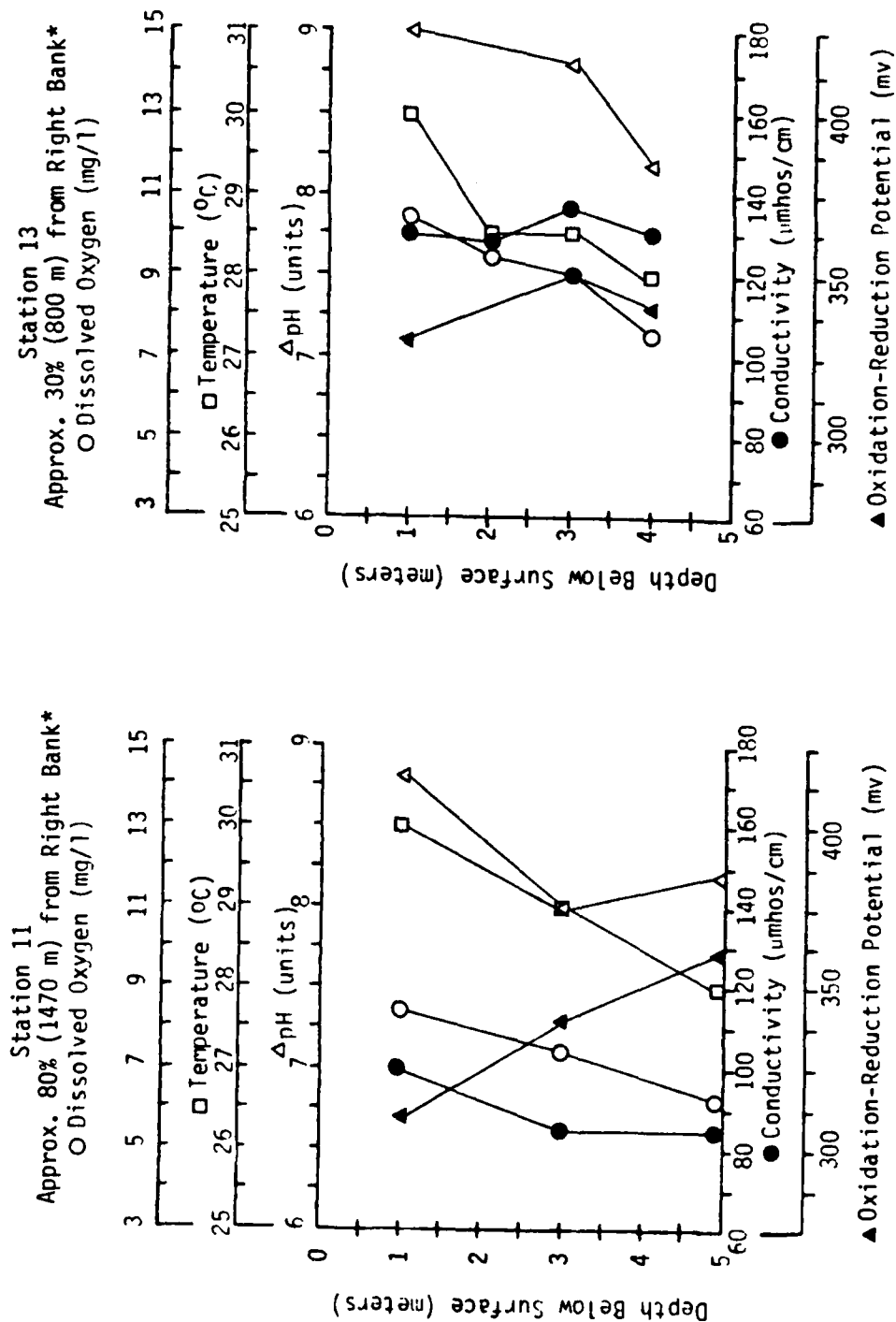
Unless otherwise noted, profiles taken at midpoint in cross section.

FIGURE F-4b. DISSOLVED OXYGEN, TEMPERATURE, PH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 4, AUGUST 14-17, 1978.



Unless otherwise noted, profiles taken at midpoint in cross section.

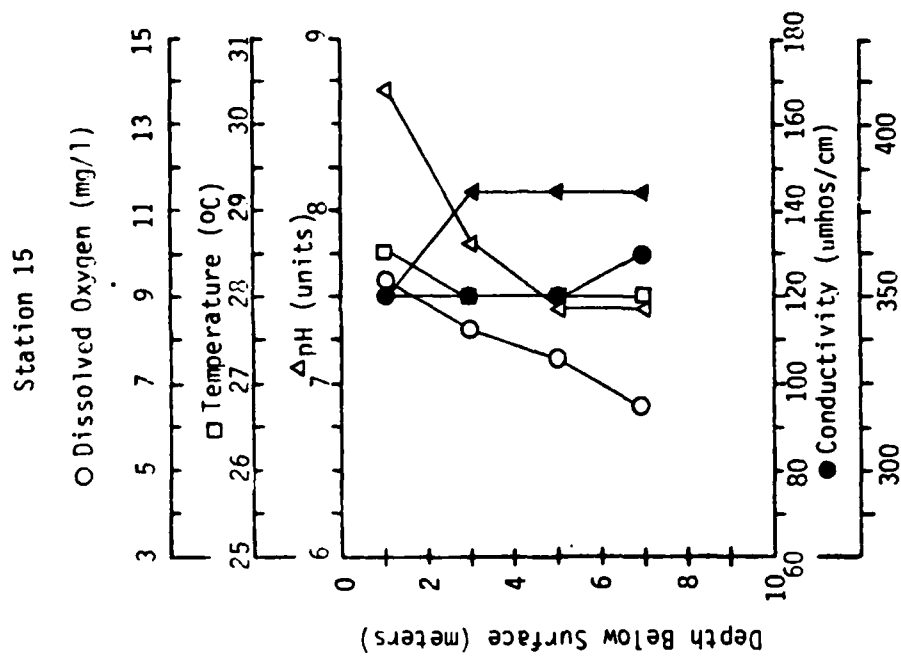
FIGURE F-4c. DISSOLVED OXYGEN, TEMPERATURE, PH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 4, AUGUST 14-17, 1978.



*Distance from Right Bank Facing Upstream

Unless otherwise noted, profiles taken at midpoint in cross section.

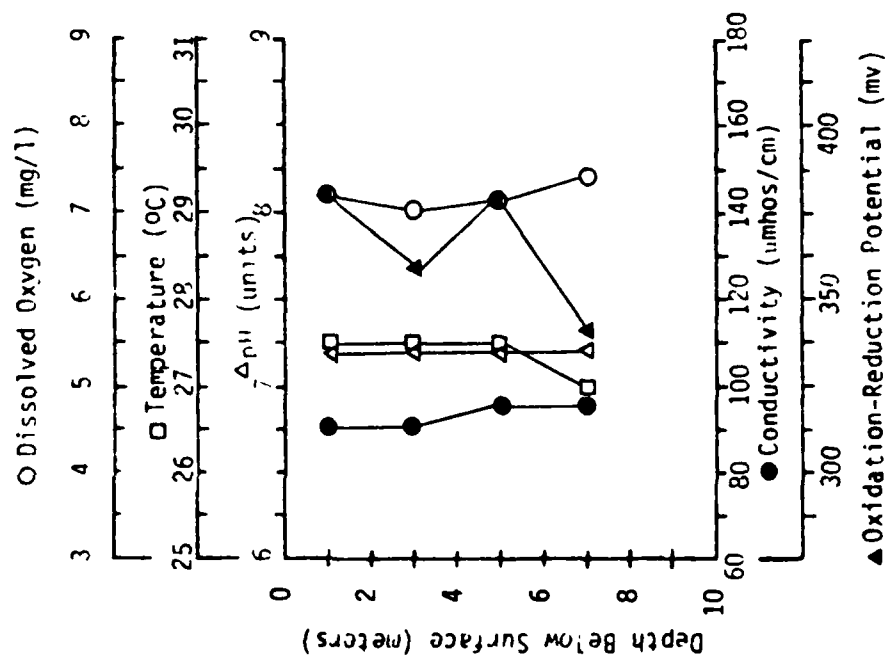
FIGURE F-4d. DISSOLVED OXYGEN, TEMPERATURE, pH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 4, AUGUST 14-17, 1978.



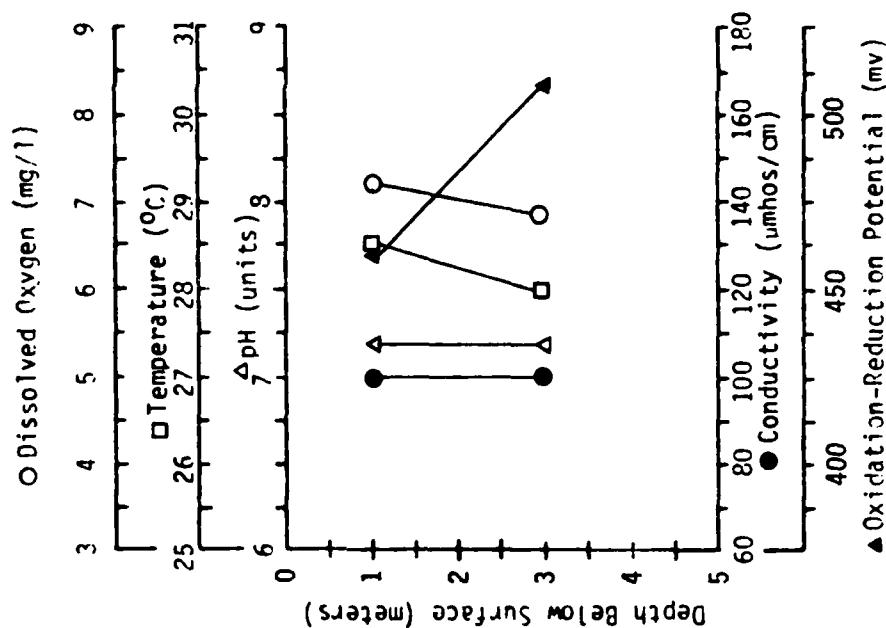
▲ Oxidation-Reduction Potential (mv)
 Unless otherwise noted, profiles taken at midpoint in cross section.

FIGURE F-5a. DISSOLVED OXYGEN, TEMPERATURE, pH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 5, SEPTEMBER 25-27, 1978.

Station 7



Station 8



Unless otherwise noted, profiles taken at midpoint in cross section.

FIGURE F-5b. DISSOLVED OXYGEN, TEMPERATURE, pH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 5, SEPTEMBER 25-27, 1978.

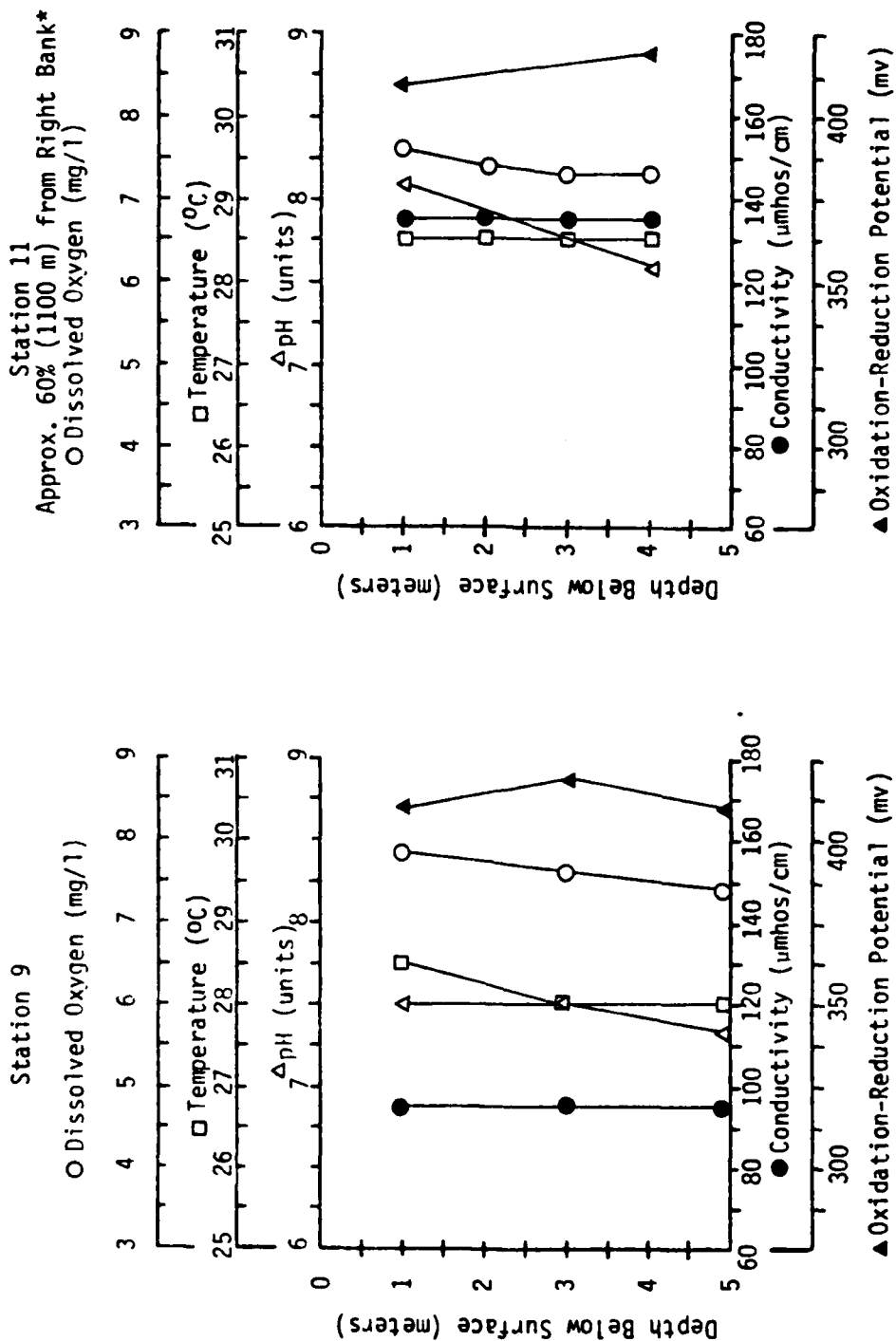
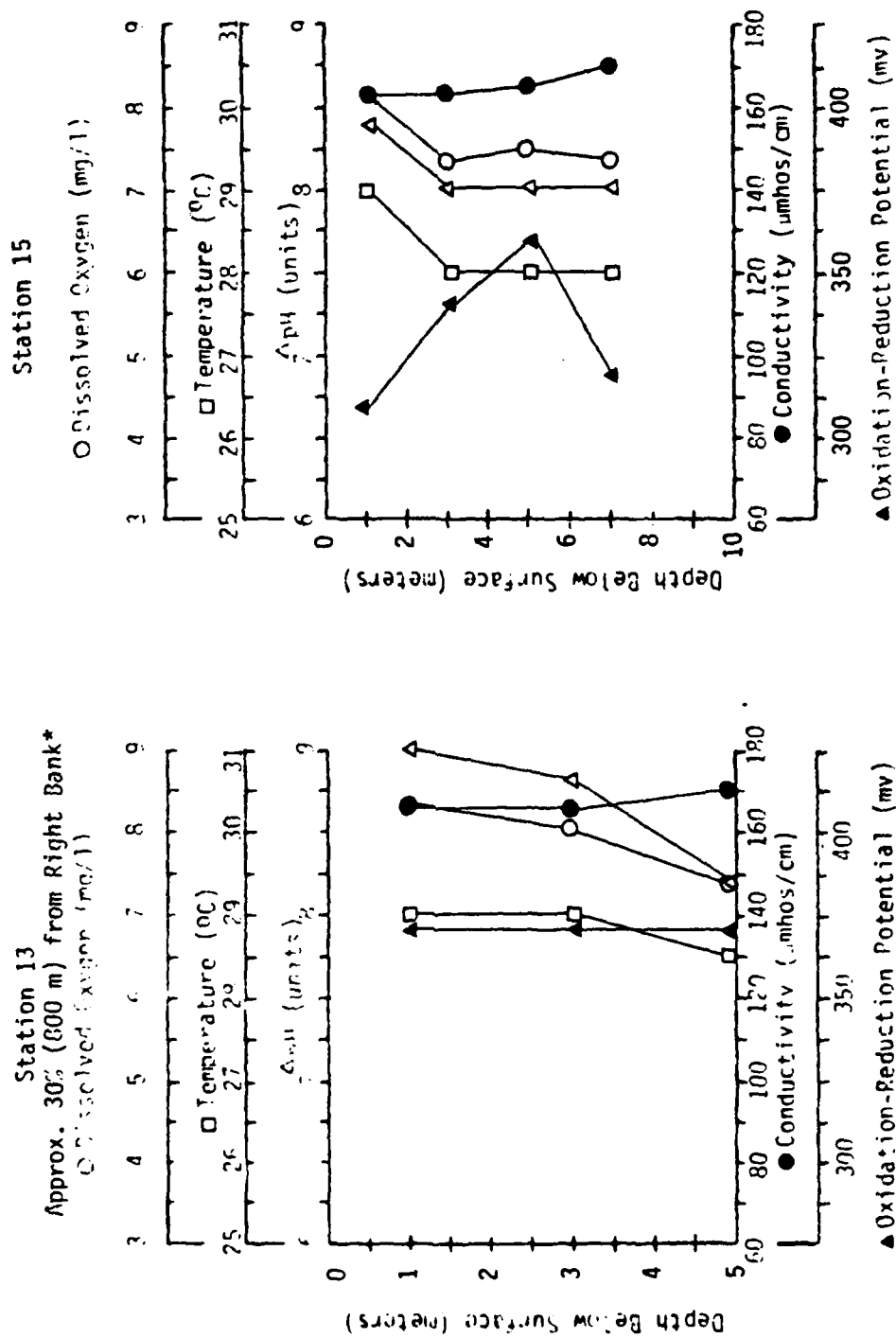


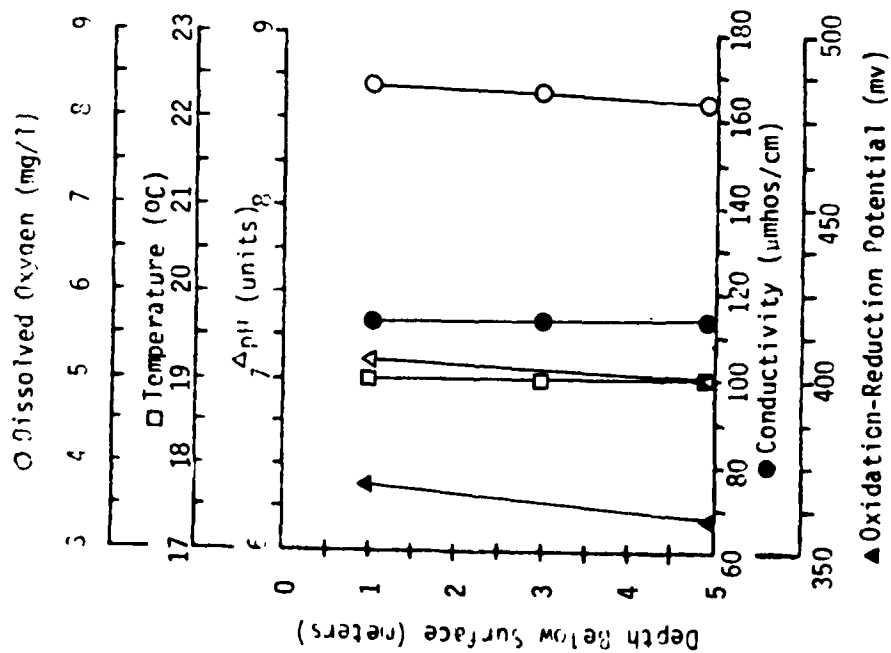
FIGURE F-5C DISSOLVED OXYGEN, TEMPERATURE, pH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 5, SEPTEMBER 25-27, 1978.



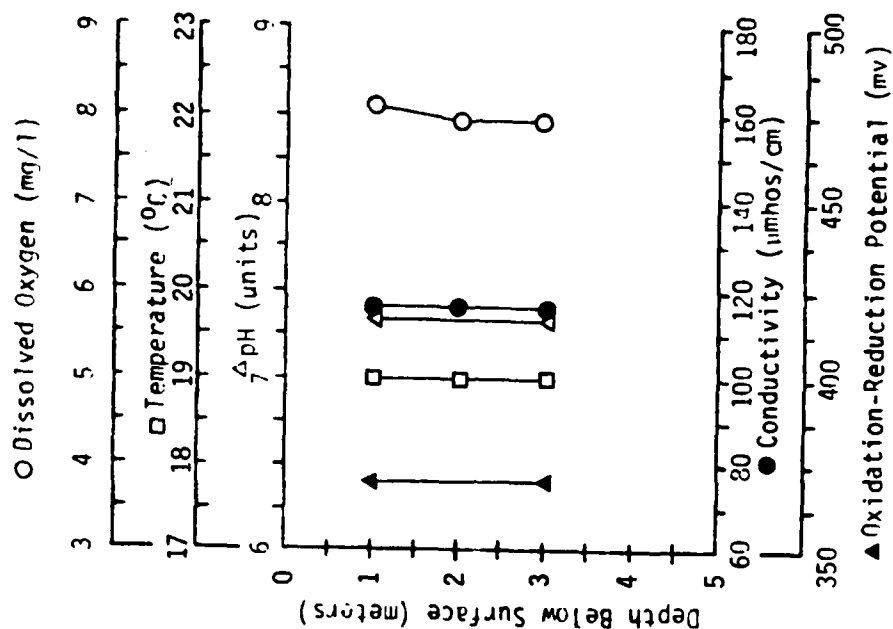
▲ Oxidation-Reduction Potential (mv)
*Distance from Right Bank Facing Downstream
Unless otherwise noted, profiles taken at midpoint in cross section.

FIGURE F-6a. DISSOLVED OXYGEN, TEMPERATURE, pH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 6, NOVEMBER 28-30, 1978.

Station 7

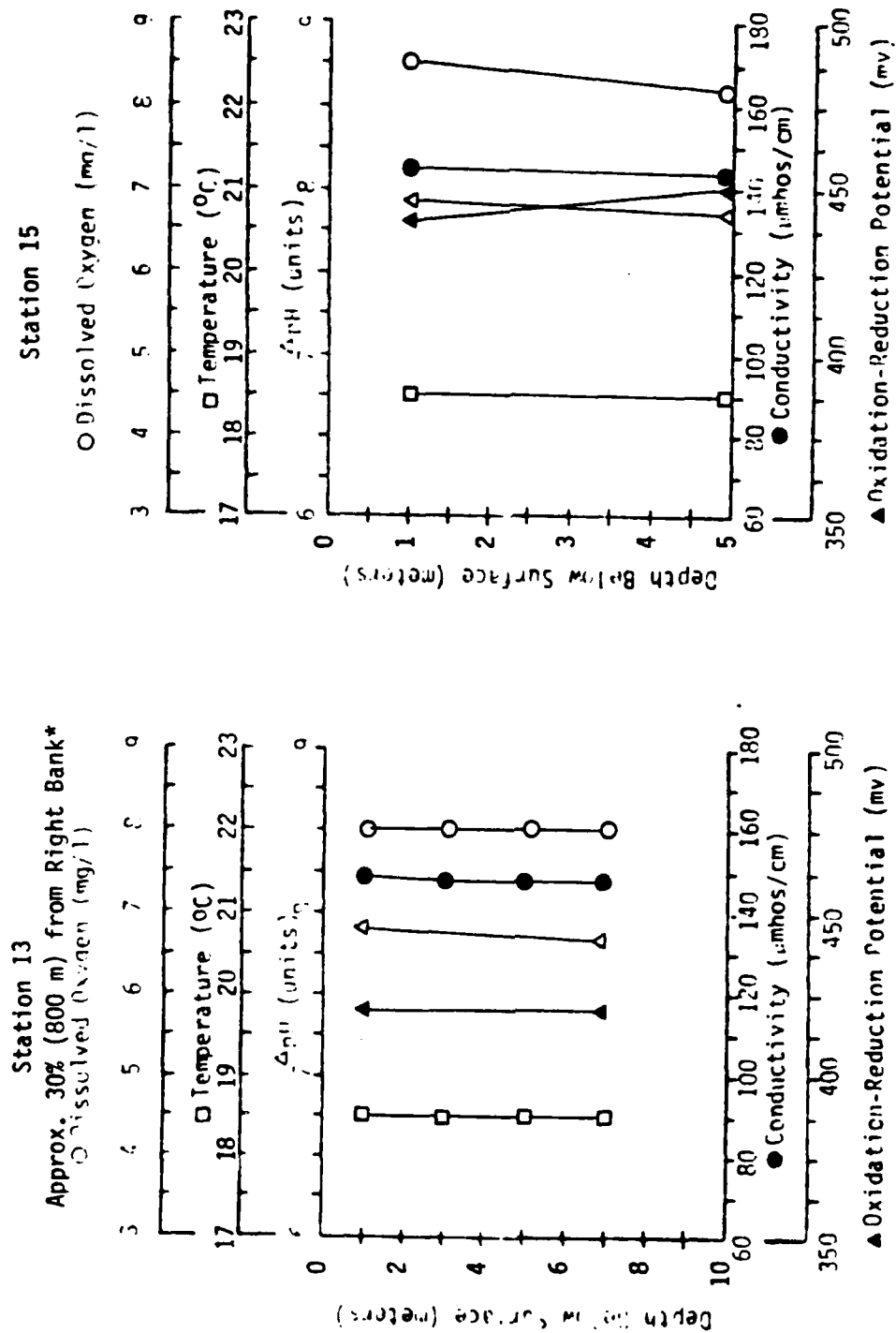


Station 8



Unless otherwise noted, profiles taken at midpoint in cross section.

FIGURE F-6c DISSOLVED OXYGEN, TEMPERATURE, pH, CONDUCTIVITY, AND OXIDATION-REDUCTION POTENTIAL VERTICAL PROFILES, TAKEN IN SITU CYCLE 6, NOVEMBER 28-30, 1978.

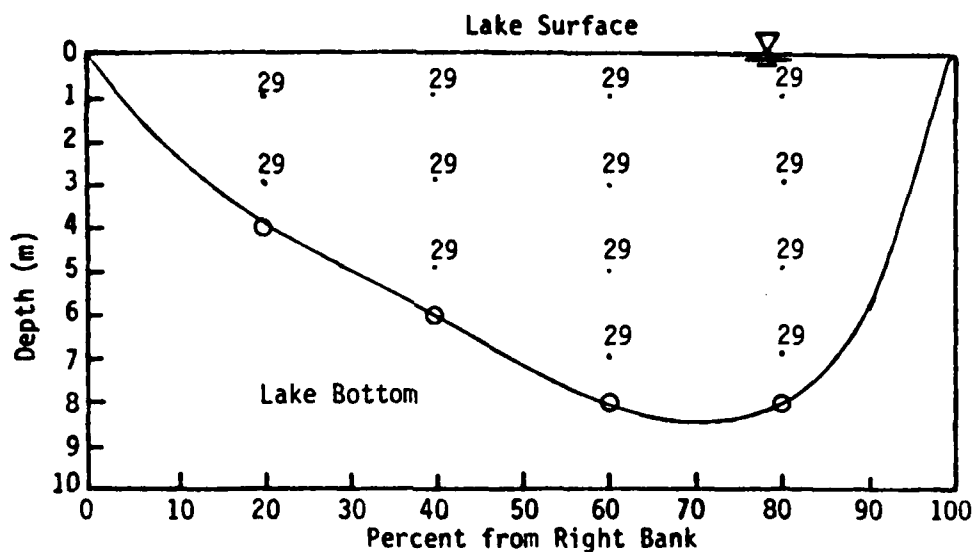


*Distance from Right Bank Facing Upstream

Unless otherwise noted, profiles taken at midpoint in cross section.

FIGURE F-7. TEMPERATURE, DISSOLVED OXYGEN, pH, SPECIFIC CONDUCTANCE, AND OXIDATION-REDUCTION POTENTIAL ISOPLETHS TAKEN IN SITU, CYCLE 4, AUGUST 14-17, 1978 AT STATION 7.

a) Isotherms ($^{\circ}\text{C}$)



b) Dissolved Oxygen (mg/l)

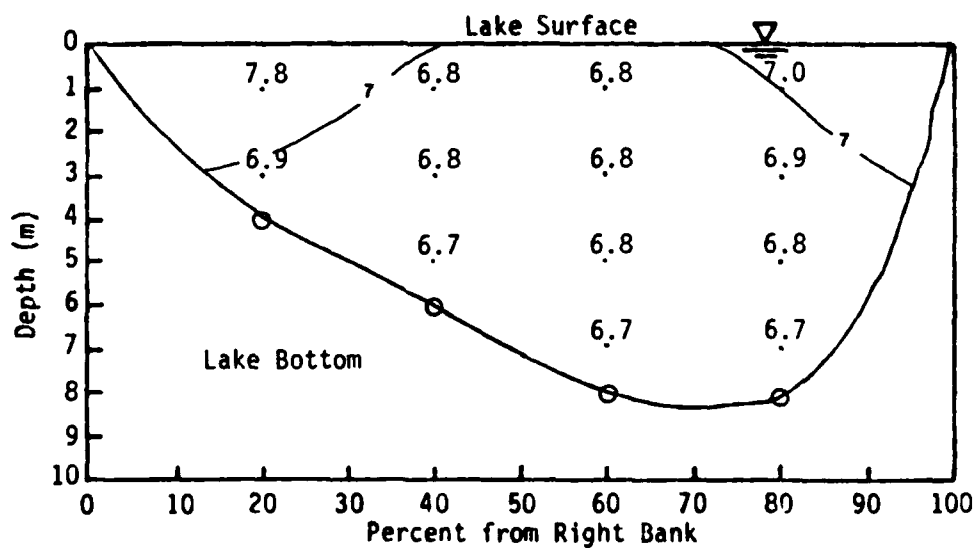
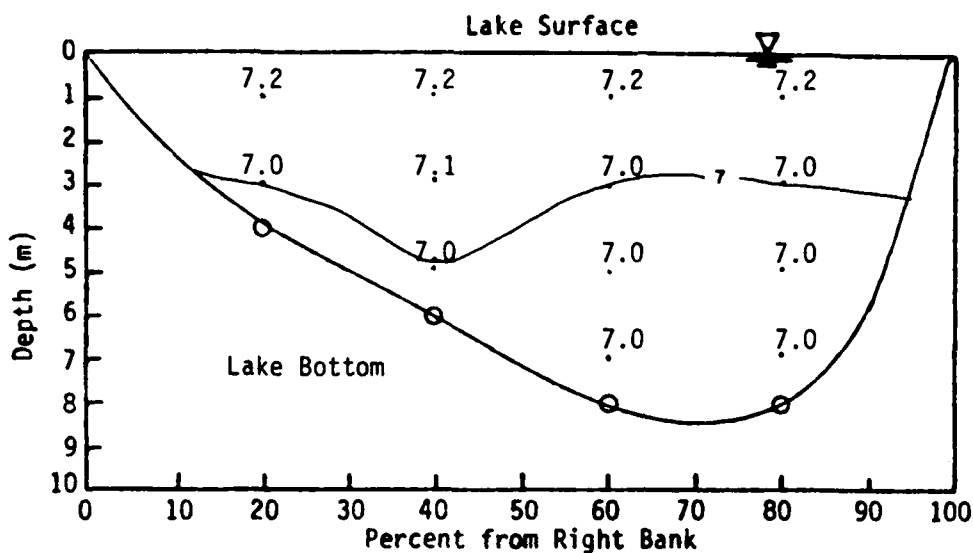


FIGURE F-7. TEMPERATURE, DISSOLVED OXYGEN, pH, SPECIFIC CONDUCTANCE, AND OXIDATION-REDUCTION POTENTIAL ISOPLETHS TAKEN IN SITU, CYCLE 4, AUGUST 14-17, 1978 AT STATION 7.

c) pH



d) Specific Conductance ($\mu\text{mhos/cm}$ @25°C)

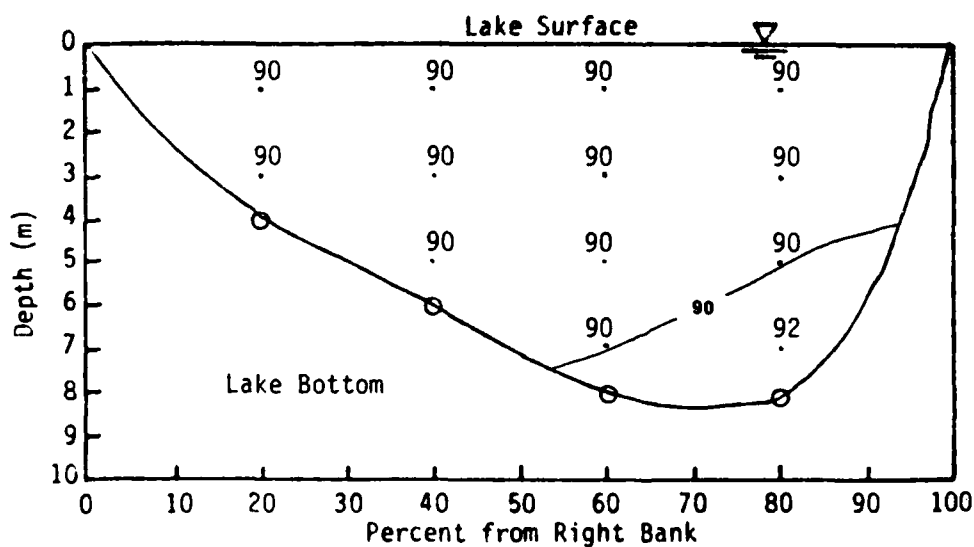


FIGURE F-7 . TEMPERATURE, DISSOLVED OXYGEN, pH, SPECIFIC CONDUCTANCE, AND OXIDATION-REDUCTION POTENTIAL ISOPLETHS TAKEN IN SITU, CYCLE 4, AUGUST 14-17, 1978 AT STATION 7.

e) Oxidation Reduction Potential (mv)

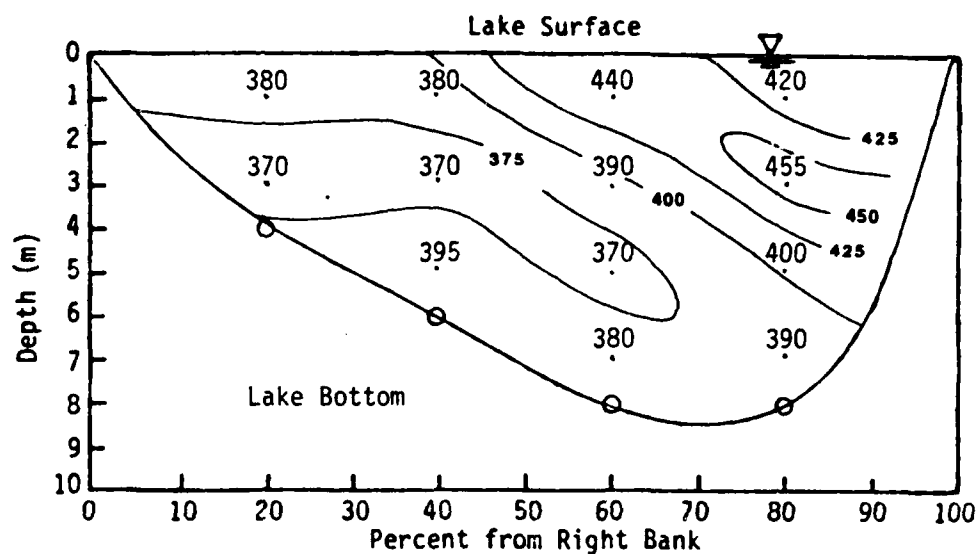
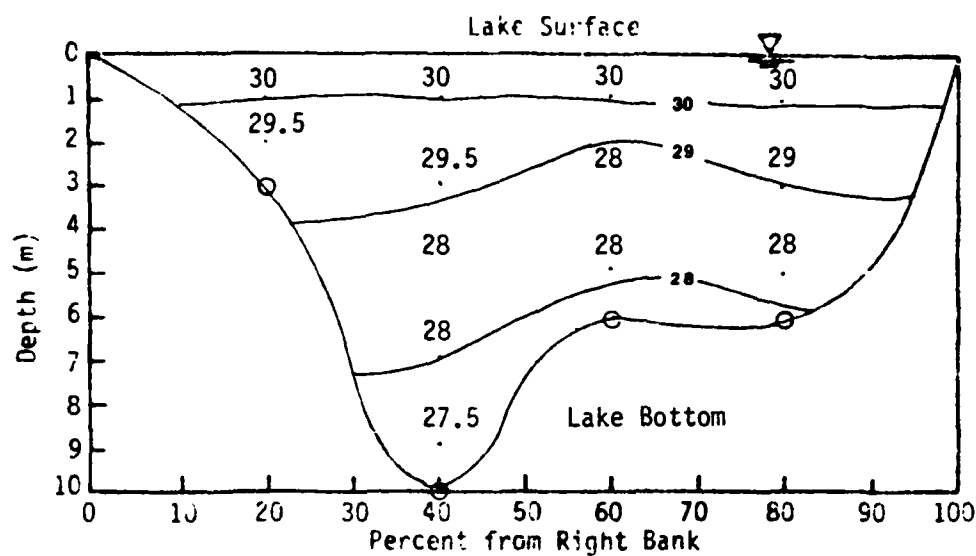


FIGURE F-8. TEMPERATURE, DISSOLVED OXYGEN, pH, SPECIFIC CONDUCTANCE, AND OXIDATION-REDUCTION POTENTIAL ISOPLETHS TAKEN IN SITU, CYCLE 4, AUGUST 14-17, 1978 AT STATION 11.

a) Isotherms ($^{\circ}\text{C}$)



b) Dissolved Oxygen (mg/l)

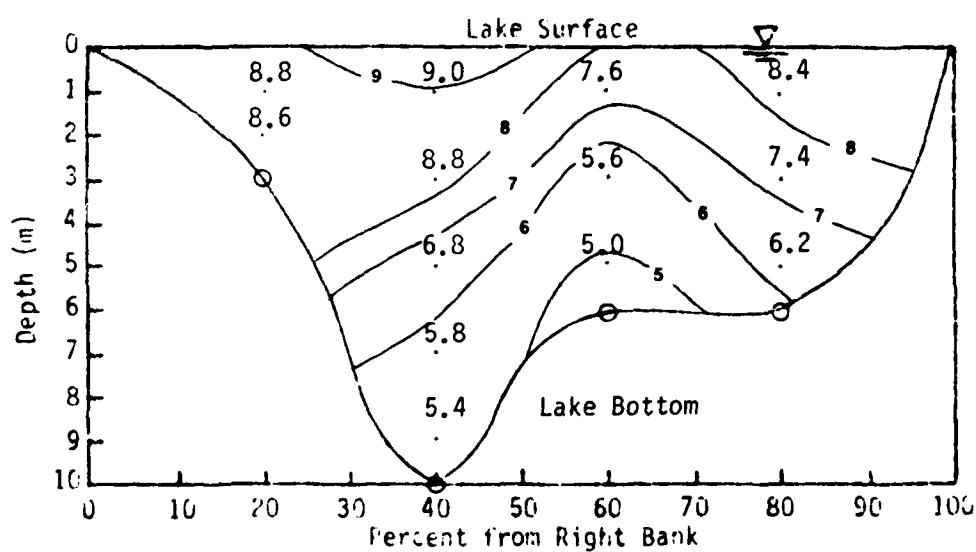
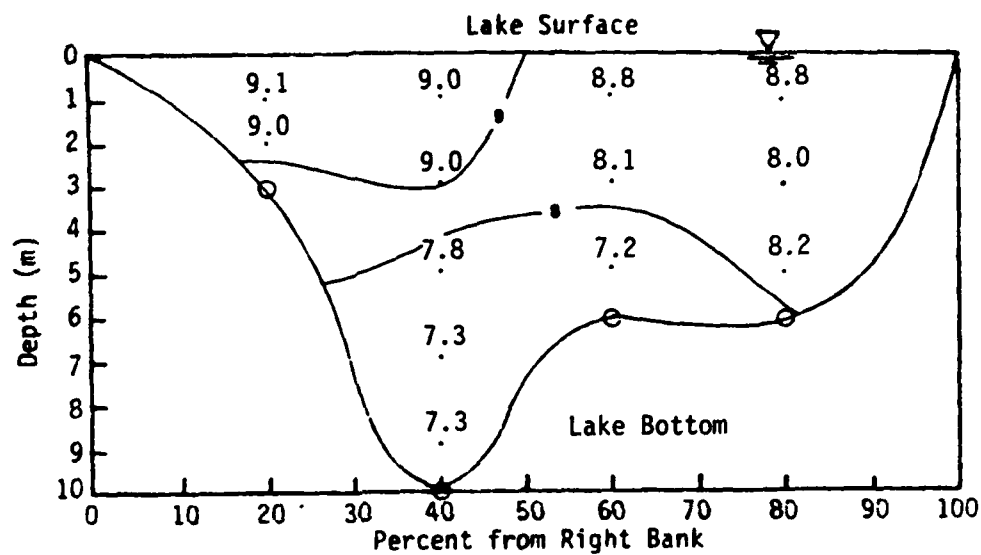


FIGURE F-8. TEMPERATURE, DISSOLVED OXYGEN, pH, SPECIFIC CONDUCTANCE, AND OXIDATION-REDUCTION POTENTIAL ISOPLETHS TAKEN IN SITU, CYCLE 4, AUGUST 14-17, 1978 AT STATION 11.

c) pH



d) Specific Conductance ($\mu\text{mho}/\text{cm}$ @25°C)

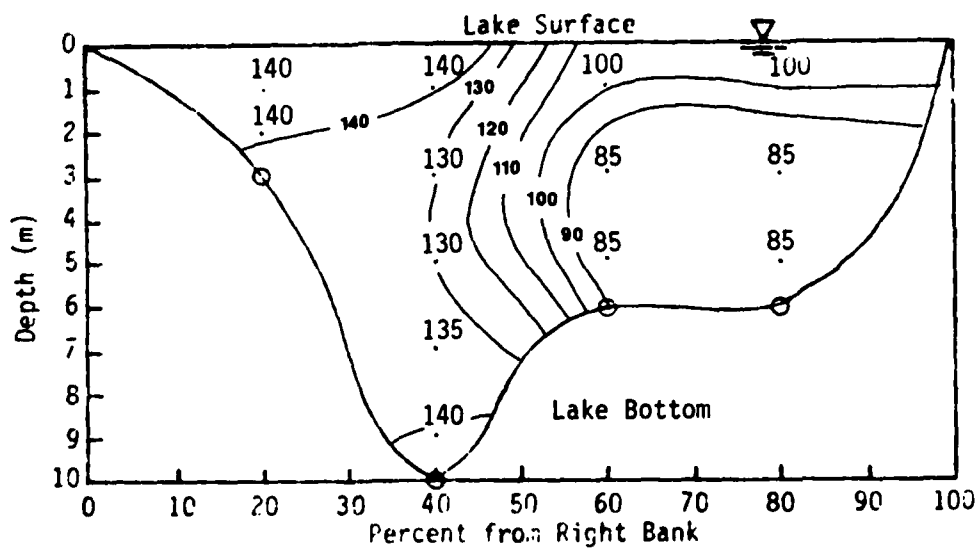


FIGURE F-8. TEMPERATURE, DISSOLVED OXYGEN, pH, SPECIFIC CONDUCTANCE, AND OXIDATION-REDUCTION POTENTIAL ISOPLETHS TAKEN IN SITU, CYCLE 4, AUGUST 14-17, 1978 AT STATION 11.

e) Oxidation Reduction Potential (mv)

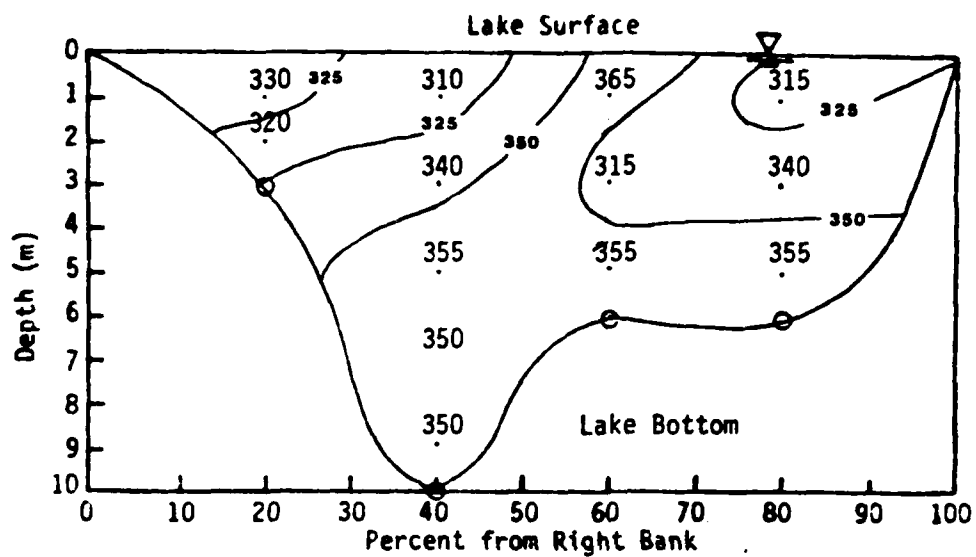
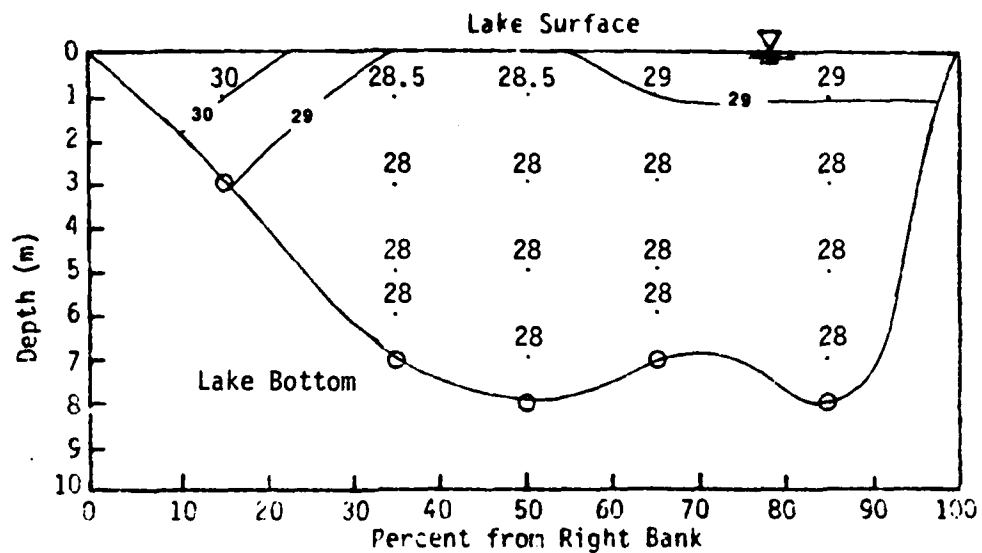


FIGURE F-9. TEMPERATURE, DISSOLVED OXYGEN, pH, SPECIFIC CONDUCTANCE, AND OXIDATION-REDUCTION POTENTIAL ISOPLETHS TAKEN IN SITU, CYCLE 4, AUGUST 14-17, 1978 AT STATION 15.

a) Isotherms (°C)



b) Dissolved Oxygen (mg/l)

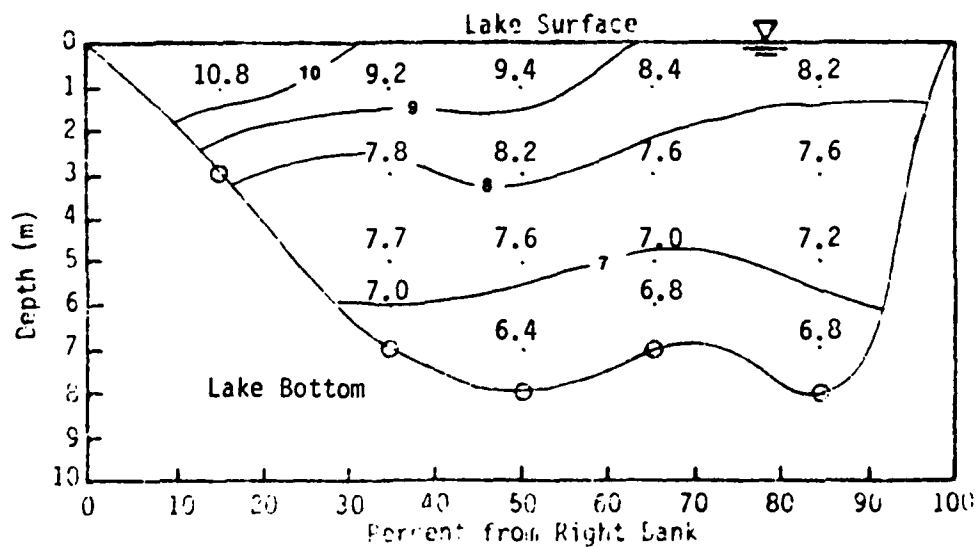
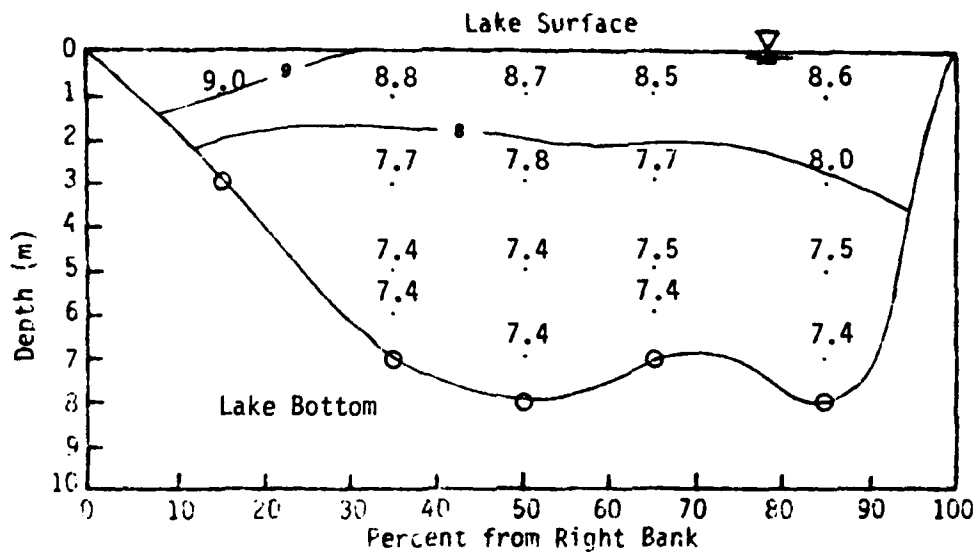


FIGURE F-9. TEMPERATURE, DISSOLVED OXYGEN, pH, SPECIFIC CONDUCTANCE, AND OXIDATION-REDUCTION POTENTIAL ISOPLETHS TAKEN IN SITU, CYCLE 4, AUGUST 14-17, 1978 AT STATION 15

c) pH



d) Specific Conductance ($\mu\text{mho/cm}$ @25°C)

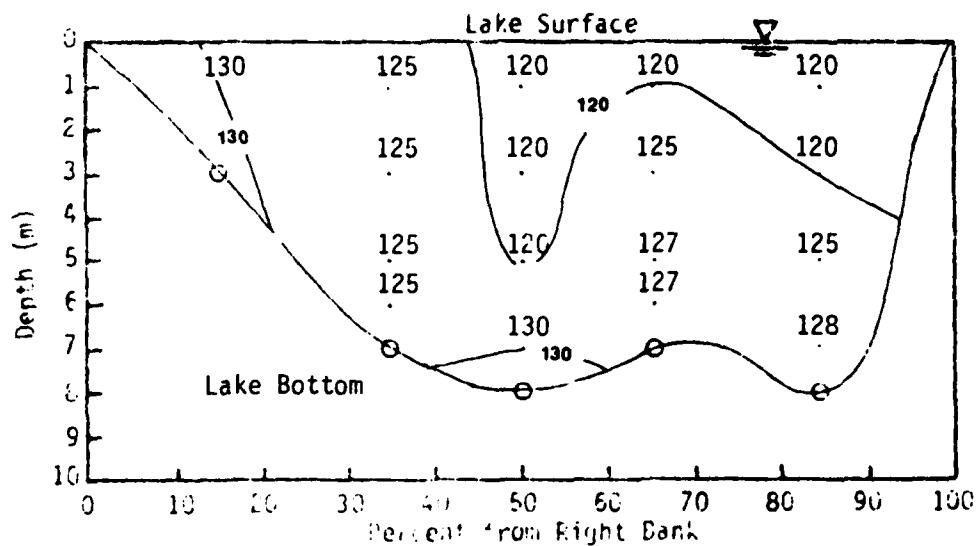
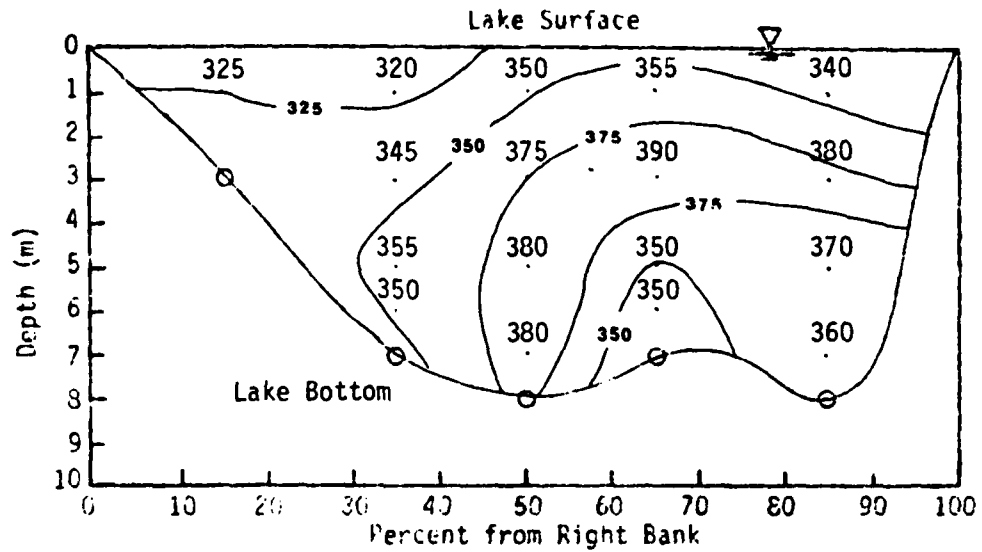


FIGURE F-9. TEMPERATURE, DISSOLVED OXYGEN, pH, SPECIFIC CONDUCTANCE, AND OXIDATION-REDUCTION POTENTIAL ISOPLETHS TAKEN IN SITU, CYCLE 4, AUGUST 14-17, 1978 AT STATION 15.

e) Oxidation Reduction Potential (mv)



APPENDIX G
ALGAL GROWTH POTENTIAL TEST RESULTS

LIST OF TABLES

<u>TABLE</u>	<u>DESCRIPTION</u>	<u>PAGE NO.</u>
G-1	Algal Growth Potential Test Results, Cycle 1, April 17-21, 1978	G-1
G-2	Algal Growth Potential Test Results, Cycle 3, July 17-20, 1978	G-12
G-3	Algal Growth Potential Test Results Cycle 5, September 25-27, 1978	G-23

TABLE G-1

ALGAL GROWTH POTENTIAL

Cycle 1 Station 6 Date Collected 4/18/78 Date Processed 4/21/78

Treatment	Growth Response, mg/1 Ash-free Dry Wt.						Overall		
	12 Day Count			14 Day Count					
	Replicate			$\bar{x} \pm 2\sigma$	Replicate			$\bar{x} \pm 2\sigma$	
	1	2	3		1	2			3
LW	9.85	9.21	9.38	9.48 $\pm$ 0.66	9.56	9.43	9.76	9.58 $\pm$ 0.33	9.53 $\pm$ 0.48
LW+P	15.71	16.23	16.51	16.51 $\pm$ 0.81	15.32	16.37	15.87	15.85 $\pm$ 1.05	16.00 $\pm$ 0.90
LW+N	9.63	9.56	9.21	9.47 $\pm$ 0.45	9.53	9.28	9.85	9.55 $\pm$ 0.57	9.51 $\pm$ 0.47
LW+P+N	29.46	28.71	30.58	29.58 $\pm$ 1.88	33.91	32.56	31.58	32.68 $\pm$ 2.34	31.13 $\pm$ 3.89
LW+E	9.67	9.73	9.52	9.64 $\pm$ 0.22	9.83	9.91	9.25	9.66 $\pm$ 0.72	9.65 $\pm$.048
LW+P+E	16.21	17.03	16.32	16.52 $\pm$ 0.89	15.42	16.91	15.42	15.94 $\pm$ 1.72	16.22 $\pm$ 1.39
LW+N+E	9.52	9.91	9.65	9.69 $\pm$ 0.40	9.32	9.48	9.51	9.44 $\pm$ 0.20	9.57 $\pm$ 0.40
LW+P+N+E	30.32	31.56	30.21	30.70 $\pm$ 1.50	31.56	33.21	32.51	32.42 $\pm$ 1.66	31.56 $\pm$ 2.36

Background Water Quality

Parameter and Units	Before Processing	After Processing
pH	7.2	7.2
Specific Conductance ($\mu\text{mho cm}^{-1}$)	78	63
Total Kjeldahl Nitrogen (mg N l^{-1})	0.53	0.47
$\text{NH}_3\text{-N}$ (mg N l^{-1})	0.09	0.10
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.283	0.322
Dissolved Ortho-phosphate (mg P l^{-1})	0.016	0.023
Total Phosphorus (mg P l^{-1})	0.045	0.040

LW = Lake Water

P = 0.05 mg/l P spike

N = 1.00 mg/l N spike

E = 1.00 mg/l EDTA spike

TABLE G-1 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 1 Station 7 Date Collected 4/19/78 Date Processed 4/21/78

Treatment	Growth Response, mg/l Ash-Free Dry Wt.					
	12 Day Count			14 Day Count		
	Replicate			Replicate		
	1	2	3	1	2	3
	$\bar{x} \pm 2\sigma$			$\bar{x} \pm 2\sigma$		
LW	8.65	8.91	9.32	8.96 $\pm$ 0.68	8.95	8.92
LW+P	13.65	13.78	13.42	13.62 $\pm$ 0.36	13.31	13.61
LW+N	8.92	8.31	8.49	8.57 $\pm$ 0.63	9.51	9.23
LW+P+N	30.01	30.21	31.05	30.42 $\pm$ 1.10	30.32	29.25
LW+E	8.72	8.35	8.46	8.51 $\pm$ 0.38	8.72	8.39
LW+P+E	14.20	13.56	13.43	13.73 $\pm$ 0.82	13.79	14.51
LW+N+E	9.06	9.05	9.31	9.14 $\pm$ 0.29	8.72	9.21
LW+P+N+E	30.61	30.42	31.00	30.68 $\pm$ 0.59	31.06	29.71
					30.56	30.44 $\pm$ 1.36
						30.56 $\pm$ 0.97

Background Water Quality

Parameter and Units	Before Processing	After Processing
pH	7.1	7.1
Specific Conductance ($\mu\text{mho cm}^{-1}$)	53	46
Total Kjeldahl Nitrogen (mg N l^{-1})	0.60	0.50
$\text{NH}_3\text{-N}$ (mg N l^{-1})	0.15	0.08
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.265	0.275
Dissolved Ortho-phosphate (mg P l^{-1})	0.015	0.021
Total Phosphorus (mg P l^{-1})	0.045	0.027

LW = Lake Water

P = 0.05 mg/l P spike

N = 1.00 mg/l N spike

E = 1.00 mg/l EDTA spike

TABLE G-1 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 1 Station 9 Date Collected 4/19/78 Date Processed 4/21/78

Growth Response, mg/l Ash-Free Dry Wt.										
Treatment	12 Day Count						14 Day Count			Overall
	Replicate			$\bar{x} \pm 2\sigma$	Replicate			$\bar{x} \pm 2\sigma$		
	1	2	3		1	2	3			
LW	7.75	7.62	7.21	7.53 $\pm$ 0.56	8.06	8.21	8.02	8.10 $\pm$ 0.20	7.81 $\pm$ 0.73	
LW+P	15.83	15.21	16.00	15.68 $\pm$ 0.83	16.52	16.18	16.43	16.38 $\pm$ 0.35	16.03 $\pm$ 0.58	
LW+N	7.98	7.81	7.99	7.93 $\pm$ 0.20	7.21	7.83	7.84	7.63 $\pm$ 0.72	7.78 $\pm$ 0.58	
LW+P+N	28.42	29.46	28.13	28.67 $\pm$ 1.40	29.74	30.05	31.06	30.28 $\pm$ 1.38	29.48 $\pm$ 2.16	
LW+E	7.65	8.05	8.10	7.93 $\pm$ 0.49	7.55	7.62	7.83	7.67 $\pm$ 0.29	7.80 $\pm$ 0.47	
LW+P+E	15.95	16.28	15.55	15.93 $\pm$ 0.73	15.45	16.32	15.41	15.73 $\pm$ 1.03	15.83 $\pm$ 0.83	
LW+N+E	7.59	7.83	7.46	7.63 $\pm$ 0.38	7.95	7.86	7.42	7.74 $\pm$ 0.56	7.69 $\pm$ 0.45	
LW+P+N+E	29.95	29.47	30.03	29.82 $\pm$ 0.61	30.16	30.89	29.32	30.12 $\pm$ 1.57	30.00 $\pm$ 1.12	

Background Water Quality

Parameter and Units	Before Processing		After Processing	
	Before Processing	After Processing	Before Processing	After Processing
pH		7.1		7.1
Specific Conductance ($\mu\text{mho cm}^{-1}$)		78		64
Total Kjeldahl Nitrogen (mg N l^{-1})		0.57		0.39
$\text{NH}_3\text{-N}$ (mg N l^{-1})		0.11		0.11
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})		0.296		0.306
Dissolved Ortho-phosphate (mg P l^{-1})		0.011		0.018
Total Phosphorus (mg P l^{-1})		0.059		0.057

LW = Lake Water
P = 0.05 mg/l P spike
N = 1.00 mg/l N spike
E = 1.00 mg/l EDTA spike

ALGAL GROWTH POTENTIAL

Cycle 1 Station 10 Date Collected 4/20/78 Date Processed 4/21/78

Treatment	12 Day Count				14 Day Count				Overall
	Replicate			$\bar{x} \pm 2\sigma$	Replicate			$\bar{x} \pm 2\sigma$	
	1	2	3		1	2	3		
LW	7.91	8.13	8.31	8.12 $\pm$ 0.40	8.12	8.75	8.93	8.70 $\pm$ 0.52	8.41 $\pm$ 0.76
LW+P	13.62	13.21	14.01	13.61 $\pm$ 0.80	13.21	14.10	13.05	13.45 $\pm$ 1.13	13.53 $\pm$ 0.89
LW+N	7.87	7.95	7.68	7.83 $\pm$ 0.28	8.62	8.65	8.34	8.55 $\pm$ 0.28	8.19 $\pm$ 0.83
LW+P+N	30.01	29.03	29.65	29.56 $\pm$ 0.99	29.15	28.98	30.12	29.42 $\pm$ 1.23	29.49 $\pm$ 1.01
LW+E	7.86	8.03	8.15	8.01 $\pm$ 0.29	8.65	8.92	8.43	8.67 $\pm$ 0.49	8.34 $\pm$ 0.80
LW+P+E	14.23	13.96	14.15	14.11 $\pm$ 0.28	14.05	13.19	14.54	13.93 $\pm$ 1.37	14.02 $\pm$ 0.91
LW+N+E	7.99	8.65	8.54	8.39 $\pm$ 0.71	8.53	7.96	8.42	8.30 $\pm$ 0.60	8.35 $\pm$ 0.60
LW+P+N+E	31.30	30.57	31.20	31.02 $\pm$ 0.79	30.15	29.83	30.15	30.04 $\pm$ 0.37	30.53 $\pm$ 1.20

G-4 7.86

Background Water Quality

Parameter and Units	Before Processing	After Processing
pH	6.7	6.7
Specific Conductance ($\mu\text{mho cm}^{-1}$)	66	56
Total Kjeldahl Nitrogen (mg N l^{-1})	0.74	0.41
$\text{NH}_3\text{-N}$ (mg N l^{-1})	0.11	0.08
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.242	0.274
Dissolved Ortho-phosphate (mg P l^{-1})	0.009	0.020
Total Phosphorus (mg P l^{-1})	0.080	0.055

TABLE G-1 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 1 Station 11 Date Collected 4/20/78 Date Processed 4/21/78

Treatment	Growth Response, mg/l Ash-Free Dry Wt.										Overall
	12 Day Count					14 Day Count					
	Replicate			$\bar{x} \pm 2\sigma$	Replicate			$\bar{x} \pm 2\sigma$			
	1	2	3		1	2	3				
LW	9.95	10.10	9.85	9.97 ± 0.25	9.21	9.91	9.45	9.52 ± 0.71	9.75 ± 0.68		
LW+P	15.91	16.94	15.92	16.26 ± 0.59	15.21	16.32	16.15	15.89 ± 1.20	16.01 ± 1.14		
LW+N	9.82	10.15	10.26	10.08 ± 0.46	10.13	9.25	9.43	9.60 ± 0.93	9.84 ± 0.84		
LW+P+N	32.35	30.91	31.26	31.51 ± 1.50	31.42	29.15	28.61	29.73 ± 2.98	30.62 ± 2.87		
LW+E	9.56	10.21	10.53	10.10 ± 0.99	10.13	9.95	10.81	10.30 ± 0.91	10.20 ± 0.88		
LW+P+E	16.21	16.03	16.32	16.19 ± 0.29	16.91	15.21	15.95	16.02 ± 1.70	16.11 ± 1.11		
LW+N+E	9.27	8.26	9.97	9.17 ± 1.72	9.95	10.15	10.32	10.14 ± 0.37	9.65 ± 1.54		
LW+P+N+E	33.21	32.15	36.17	33.84 ± 4.17	30.21	30.32	31.95	30.83 ± 1.95	32.33 ± 4.40		

Background Water Quality

Parameter and Units	Before Processing		After Processing	
pH	7.1		7.1	
Specific Conductance ($\mu\text{mho cm}^{-1}$)	79		63	
Total Kjeldahl Nitrogen (mg N l^{-1})	0.76		0.64	
$\text{NH}_3\text{-N}$ (mg N l^{-1})	0.07		0.12	
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.274		0.306	
Dissolved Ortho-phosphate (mg P l^{-1})	0.009		0.023	
Total Phosphorus (mg P l^{-1})	0.087		0.058	

LW = Lake Water

P = 0.05 mg/l P spike

N = 1.00 mg/l N spike

E = 1.00 mg/l EDTA spike

TABLE G-1 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 1 Station 12 Date Collected 4/20/78 Date Processed 4/21/78

Growth Response, mg/l Ash-Free Dry Wt.										
Treatment	12 Day Count						14 Day Count			Overall
	Replicate			$\bar{x} \pm 2\sigma$	Replicate			$\bar{x} \pm 2\sigma$		
	1	2	3		1	2	3			
LW	1.75	1.32	1.40	1.49 $\pm$ 0.46	1.95	1.03	1.27	1.42 $\pm$ 0.95	1.45 $\pm$ 0.67	
LW+P	2.58	2.13	2.96	2.56 $\pm$ 0.83	2.65	2.02	1.83	2.17 $\pm$ 0.86	2.36 $\pm$ 0.87	
LW+N	1.63	1.24	1.05	1.31 $\pm$ 0.59	1.02	1.15	1.32	1.16 $\pm$ 0.30	1.24 $\pm$ 0.45	
LW+P+N	22.51	21.05	21.32	21.63 $\pm$ 1.55	21.43	22.40	21.50	21.78 $\pm$ 1.08	21.70 $\pm$ 1.21	
LW+E	1.83	1.21	0.99	1.34 $\pm$ 0.87	1.56	1.08	2.93	1.86 $\pm$ 1.92	1.60 $\pm$ 1.45	
LW+P+E	2.68	1.76	3.07	2.50 $\pm$ 1.34	3.15	2.59	2.96	2.90 $\pm$ 0.57	2.70 $\pm$ 1.02	
LW+N+E	2.60	1.32	1.57	1.83 $\pm$ 1.36	1.59	2.03	1.32	1.65 $\pm$ 0.72	1.74 $\pm$ 0.99	
LW+P+N+E	21.22	20.15	19.03	20.13 $\pm$ 2.19	19.15	19.99	21.32	20.15 $\pm$ 2.19	20.14 $\pm$ 1.96	

Background Water Quality

Parameter and Units	Before Processing		After Processing	
pH	7.7		7.7	
Specific Conductance ($\mu\text{mho cm}^{-1}$)	105		94	
Total Kjeldahl Nitrogen (mg N l^{-1})	0.70		0.56	
$\text{NH}_3\text{-N}$ (mg N l^{-1})	0.03		0.05	
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.007		0.015	
Dissolved Ortho-phosphate (mg P l^{-1})	0.003		0.004	
Total Phosphorus (mg P l^{-1})	0.026		0.012	

LW = Lake Water

P = 0.05 mg/l P spike

N = 1.00 mg/l N spike

E = 1.00 mg/l EDTA spike

TABLE G-1 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 1 Station 13 Date Collected 4/20/78 Date Processed 4/21/78

Treatment	Growth Response, mg/l Ash-Free Dry Wt.					
	12 Day Count			14 Day Count		
	Replicate			Replicate		
	1	2	3	1	2	3
LW	10.59	11.51	11.21	12.05	11.65	11.21
LW+P	16.05	15.13	15.55	15.58 ± 0.92	15.52	15.62
LW+N	10.59	11.52	12.15	11.42 ± 1.57	10.32	11.15
LW+P+N	33.55	34.21	32.15	33.30 ± 2.10	30.59	32.16
LW+E	10.15	10.32	11.02	10.50 ± 0.92	10.53	10.21
LW+P+E	16.32	17.35	16.31	16.66 ± 1.20	16.89	15.92
LW+N+E	10.11	9.75	9.98	9.95 ± 0.36	11.15	9.93
LW+P+N+E	32.48	34.01	31.52	32.67 ± 2.51	31.42	34.76
					30.92	32.37 ± 4.17
						32.52 ± 3.10
						Overall
						$\bar{x} \pm 2\sigma$
						11.37 ± 0.99
						15.65 ± 0.69
						11.18 ± 1.32
						32.68 ± 2.62
						10.59 ± 0.96
						16.62 ± 1.05
						10.16 ± 1.00
						32.52 ± 3.10

Background Water Quality

Parameter and Units	Before Processing	After Processing
pH	7.5	7.5
Specific Conductance ($\mu\text{mho cm}^{-1}$)	103	73
Total Kjeldahl Nitrogen (mg N l^{-1})	0.76	0.71
$\text{NH}_3\text{-N}$ (mg N l^{-1})	0.06	0.08
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.285	0.326
Dissolved Ortho-phosphate (mg P l^{-1})	0.021	0.027
Total Phosphorus (mg P l^{-1})	0.082	0.068

LW = Lake Water
P = 0.05 mg/l P spike
N = 1.00 mg/l N spike
E = 1.00 mg/l EDTA spike

TABLE G-1 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 1 Station 14 Date Collected 4/20/78 Date Processed 4/21/78

Treatment	Growth Response, mg/l Ash-Free Dry Wt.				Overall			
	12 Day Count		14 Day Count		12 Day Count		14 Day Count	
	Replicate		Replicate		$\bar{x} \pm 2\sigma$		$\bar{x} \pm 2\sigma$	
	1	2	3	1	2	3	1	2
LW	4.31	2.98	3.15	3.48 $\pm$ 1.45	3.24	3.81	4.22	3.76 $\pm$ 0.98
LW+P	11.21	10.93	11.96	11.37 $\pm$ 1.07	11.42	11.06	12.83	11.77 $\pm$ 1.87
LW+N	4.22	3.15	4.28	3.88 $\pm$ 1.27	4.39	4.65	4.62	4.55 $\pm$ 0.28
LW+P+N	26.90	26.85	27.18	26.98 $\pm$ 0.36	25.43	27.92	26.33	26.56 $\pm$ 2.52
LW+E	4.21	4.10	3.29	3.87 $\pm$ 1.0	4.15	4.72	3.90	4.26 $\pm$ 0.84
LW+P+E	11.55	12.68	13.21	12.48 $\pm$ 1.70	12.20	11.15	10.82	11.39 $\pm$ 1.44
LW+N+E	4.82	4.31	4.11	4.41 $\pm$ 0.73	4.91	4.62	3.92	4.48 $\pm$ 1.02
LW+P+N+E	28.20	27.31	26.95	27.49 $\pm$ 1.29	26.48	28.35	26.92	27.25 $\pm$ 1.96

Background Water Quality

Parameter and Units	Before Processing		After Processing	
	Before	Processing	After	Processing
pH		7.7		7.7
Specific Conductance ($\mu\text{mho cm}^{-1}$)		155		140
Total Kjeldahl Nitrogen (mg N l^{-1})		0.63		0.63
$\text{NH}_3\text{-N}$ (mg N l^{-1})		0.05		0.08
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})		0.206		0.218
Dissolved Ortho-phosphate (mg P l^{-1})		0.005		0.010
Total Phosphorus (mg P l^{-1})		0.045		0.034

LW = Lake Water
P = 0.05 mg/l P spike
N = 1.00 mg/l N spike
E = 1.00 mg/l EDTA spike

TABLE G-1 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 1 Station 15 Date Collected 4/21/78 Date Processed 4/24/78

Treatment	Growth Response, mg/l Ash-Free Dry Wt.				Overall			
	12 Day Count		14 Day Count					
	Replicate		Replicate		$\bar{x} \pm 2\sigma$		$\bar{x} \pm 2\sigma$	
	1	2	3	1	2	3	$\bar{x} \pm 2\sigma$	$\bar{x} \pm 2\sigma$
LW	15.48	13.21	16.92	15.20 $\pm$ 3.74	15.32	14.81	13.92	14.68 $\pm$ 1.42
LW+P	21.30	21.00	18.52	20.27 $\pm$ 3.05	19.29	17.68	19.20	18.72 $\pm$ 1.81
LW+N	14.83	15.21	13.29	14.44 $\pm$ 2.03	15.51	16.03	14.09	15.21 $\pm$ 2.01
LW+P+N	36.95	32.15	36.15	35.08 $\pm$ 5.14	30.42	31.81	29.92	30.72 $\pm$ 1.96
LW+E	15.41	13.92	16.83	15.39 $\pm$ 2.91	15.32	15.10	14.99	15.14 $\pm$ 0.67
LW+P+E	21.99	23.68	21.42	22.36 $\pm$ 2.35	19.62	19.23	19.28	19.38 $\pm$ 0.42
LW+N+E	14.83	15.42	16.91	15.72 $\pm$ 2.14	15.81	13.92	16.10	15.28 $\pm$ 2.37
LW+P+N+E	37.48	36.18	37.21	36.96 $\pm$ 1.37	36.48	38.20	37.15	37.28 $\pm$ 1.73
								37.12 $\pm$ 1.44

Background Water Quality

Parameter and Units	Before Processing		After Processing	
pH		7.2		7.2
Specific Conductance ($\mu\text{mho cm}^{-1}$)		97		83
Total Kjeldahl Nitrogen (mg N l^{-1})		0.55		0.55
$\text{NH}_3\text{-N}$ (mg N l^{-1})		0.08		0.15
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})		0.320		0.374
Dissolved Ortho-phosphate (mg P l^{-1})		0.029		0.036
Total Phosphorus (mg P l^{-1})		0.099		0.083

LW = Lake Water
P = 0.05 mg/l P spike
N = 1.00 mg/l N spike
E = 1.00 mg/l EDTA spike

TABLE G-1 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 1 Station 16 Date Collected 4/21/78 Date Processed 4/24/78

Treatment	Growth Response, mg/1 Ash-Free Dry Wt.									Overall
	12 Day Count						14 Day Count			
	Replicate			$\bar{x} \pm 2\sigma$	Replicate			$\bar{x} \pm 2\sigma$		
	1	2	3		1	2	3			
LW	13.75	12.61	13.76	13.37 $\pm$ 1.32	12.48	13.61	14.20	13.43 $\pm$ 1.75	13.40 $\pm$ 1.39	
LW+P	21.48	26.31	24.21	24.00 $\pm$ 4.84	22.38	24.59	23.62	23.53 $\pm$ 2.22	23.77 $\pm$ 3.41	
LW+N	13.05	15.10	13.22	13.79 $\pm$ 1.14	14.15	13.68	14.02	13.95 $\pm$ 0.49	13.87 $\pm$ 1.48	
LW+P+N	34.28	31.21	33.42	32.97 $\pm$ 1.58	33.56	34.32	35.16	34.35 $\pm$ 1.60	33.66 $\pm$ 2.70	
LW+E	13.15	23.21	14.28	16.88 $\pm$ 11.02	15.15	14.02	13.69	14.29 $\pm$ 1.53	15.58 $\pm$ 7.59	
LW+P+E	22.51	13.75	21.46	19.24 $\pm$ 9.57	21.86	24.23	23.36	23.15 $\pm$ 2.40	21.20 $\pm$ 7.57	
LW+N+E	14.21	35.33	13.16	20.90 $\pm$ 25.02	14.18	13.21	13.38	13.59 $\pm$ 1.04	17.25 $\pm$ 17.74	
LW+P+N+E	36.42		38.21	37.32 $\pm$ 2.53	35.41	36.28	34.19	35.29 $\pm$ 2.10	36.06 $\pm$ 3.00	

Background Water Quality

Parameter and Units	Before Processing		After Processing	
pH		7.2		7.2
Specific Conductance ($\mu\text{mho cm}^{-1}$)		105		85
Total Kjeldahl Nitrogen (mg N l^{-1})		0.01		0.57
$\text{NH}_3\text{-N}$ (mg N l^{-1})		0.07		0.18
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})		0.356		0.432
Dissolved Ortho-phosphate (mg P l^{-1})		0.023		0.032
Total Phosphorus (mg P l^{-1})		0.100		0.082

LW = Lake Water
P = 0.05 mg/1 P spike
N = 1.00 mg/1 N spike
E = 1.00 mg/1 EDTA spike

TABLE G-1 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 1 Station 18 Date Collected 4/19/78 Date Processed 4/21/78

Treatment	Growth Response, mg/l Ash-Free Dry Wt.									
	12 Day Count						14 Day Count			Overall
	Replicate			$\bar{x} \pm 2\sigma$	Replicate			$\bar{x} \pm 2\sigma$		
	1	2	3		1	2	3			
LW	9.32	10.85	10.32	10.16 $\pm$ 1.55	10.15	10.92	10.32	10.46 $\pm$ 0.81	10.31 $\pm$ 1.16	
LW+P	16.83	15.96	16.32	16.37 $\pm$ 0.87	15.81	19.85	16.32	17.33 $\pm$ 4.40	16.84 $\pm$ 3.02	
LW+N	9.99	10.32	10.56	10.29 $\pm$ 0.57	11.56	12.32	10.15	11.34 $\pm$ 2.20	10.82 $\pm$ 1.84	
LW+P+N	32.45	32.61	33.15	32.74 $\pm$ 0.73	33.68	38.21	33.22	35.04 $\pm$ 5.52	33.89 $\pm$ 1.84	
LW+E	10.93	10.11	10.03	10.36 $\pm$ 1.00	12.60	13.72	9.86	12.06 $\pm$ 3.97	11.21 $\pm$ 3.19	
LW+P+E	16.86	15.85	16.92	16.54 $\pm$ 1.20	16.99	18.92	17.63	17.85 $\pm$ 1.97	17.20 $\pm$ 2.04	
LW+N+E	10.75	10.89	10.11	10.58 $\pm$ 0.83	10.99	8.95	12.32	10.75 $\pm$ 1.70	10.67 $\pm$ 2.22	
LW+P+N+E	33.86	38.21	31.40	34.49 $\pm$ 6.90	35.68	33.92	33.43	34.34 $\pm$ 2.37	34.42 $\pm$ 4.61	

Background Water Quality

Parameter and Units	Before Processing	After Processing
pH	7.4	7.4
Specific Conductance ($\mu\text{mho cm}^{-1}$)	86	76
Total Kjeldahl Nitrogen (mg N l^{-1})	0.66	0.94
$\text{NH}_3\text{-N}$ (mg N l^{-1})	0.08	0.09
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.332	0.356
Dissolved Ortho-phosphate (mg P l^{-1})	0.018	0.025
Total Phosphorus (mg P l^{-1})	0.066	0.034

LW = Lake Water
P = 0.05 mg/l P spike
N = 1.00 mg/l N spike
E = 1.00 mg/l EDTA spike

TABLE G-2

ALGAL GROWTH POTENTIAL

Cycle 3 Station 6 Date Collected 7/20/78 Date Processed 7/21/78

Treatment	Growth Response, mg/l Ash-Free Dry Wt.						Overall		
	12 Day Count			14 Day Count					
	Replicate			Replicate					
	1	2	3	1	2	3			
LW	6.21	5.70	6.29	6.07 ± 0.64	5.92	5.84	5.35	5.70 ± 0.62	5.89 ± 0.69
LW+P	5.89	5.88	6.06	5.94 ± 0.20	6.52	6.01	5.83	6.12 ± 0.72	6.03 ± 0.51
LW+N	7.34	8.52	7.59	7.82 ± 1.24	7.22	7.41	7.91	7.51 ± 0.71	7.67 ± 0.97
LW+P+N	29.0	29.1	27.8	28.6 ± 1.45	30.5	33.7	32.4	32.2 ± 3.22	30.4 ± 4.50
LW+E	6.01	5.63	5.71	5.78 ± 0.40	5.78	6.11	5.68	5.86 ± 0.45	5.82 ± 0.39
LW+P+E	5.96	6.24	5.84	6.03 ± 0.47	5.80	6.15	5.85	5.93 ± 0.38	5.98 ± 0.39
LW+N+E	7.92	8.26	7.40	7.86 ± 0.87	8.28	8.38	8.15	8.27 ± 0.23	8.07 ± 0.72
LW+P+N+E	28.4	28.0	27.2	27.9 ± 1.22	28.7	28.3	30.5	29.2 ± 2.34	28.5 ± 2.20

Background Water Quality

LW = Lake Water	Parameter and Units	Before Processing	After Processing
P = 0.05 mg/l P spike	pH	7.3	7.3
N = 1.00 mg/l N spike	Specific Conductance ($\mu\text{mho cm}^{-1}$)	76	80
E = 1.00 mg/l EDTA spike	Total Kjeldahl Nitrogen (mg N l^{-1})	0.49	0.43
	$\text{NH}_3\text{-N}$ (mg N l^{-1})	0.05	0.07
	$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.11	0.10
	Dissolved Ortho-phosphate (mg P l^{-1})	<0.01	0.02
	Total Phosphorus (mg P l^{-1})	0.10	0.06

LW = Lake Water

P = 0.05 mg/l P spike

N = 1.00 mg/l N spike

E = 1.00 mg/l EDTA spike

TABLE G-2 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 3 Station 7 Date Collected 7/20/78 Date Processed 7/21/78

Treatment	Growth Response, mg/1 Ash-Free Dry Wt.							Overall	
	14 Day Count						$\bar{x} \pm 2\sigma$		
	12 Day Count			Replicate					
	1	2	3	1	2	3			
LW	6.50	6.29	5.91	6.23 $\pm$ 0.60	5.74	6.73	5.95	6.14 $\pm$ 1.04	6.19 $\pm$ 0.77
LW+P	6.01	6.09	5.98	6.03 $\pm$ 0.11	6.28	6.46	6.29	6.34 $\pm$ 0.20	6.19 $\pm$ 0.38
LW+H	12.0	9.48	10.4	10.6 $\pm$ 2.55	11.1	9.92	10.1	10.4 $\pm$ 1.27	10.5 $\pm$ 1.82
LW+P+H	32.3	33.3	36.0	33.9 $\pm$ 3.83	30.5	30.8	30.8	30.7 $\pm$ 0.35	32.3 $\pm$ 4.24
LW+E	6.24	6.31	6.37	6.34 $\pm$ 0.06	6.29	6.14	6.29	6.24 $\pm$ 0.17	6.29 $\pm$ 0.16
LW+P+E	6.29	6.36	6.61	6.42 $\pm$ 0.34	6.66	6.44	6.18	6.43 $\pm$ 0.48	6.42 $\pm$ 0.37
LW+N+E	11.4	11.4	10.1	11.0 $\pm$ 1.50	11.2	11.1	10.1	10.8 $\pm$ 1.22	10.9 $\pm$ 1.24
LW+P+N+E	31.3	29.1	31.4	30.6 $\pm$ 2.60	31.7	32.9	32.7	32.4 $\pm$ 1.29	31.5 $\pm$ 2.72

Background Water Quality

Parameter and Units	Before Processing	After Processing
pH	7.2	7.1
Specific Conductance ($\mu\text{mho cm}^{-1}$)	80	85
Total Kjeldahl Nitrogen (mg N l^{-1})	0.48	0.83
$\text{NH}_3\text{-N}$ (mg N l^{-1})	0.06	0.06
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.16	0.11
Dissolved Ortho-phosphate (mg P l^{-1})	0.01	0.02
Total Phosphorus (mg P l^{-1})	0.11	0.12

LW = Lake Water
 P = 0.05 mg/l P spike
 N = 1.00 mg/l N spike
 E = 1.00 mg/l EDTA spike

ALGAL GROWTH POTENTIAL

Date Collected 7/18/78 Date Processed 7/21/78

Background Water Quality

Parameter and Units	Before Processing	After Processing
pH	7.7	7.6
Specific Conductance ($\mu\text{mho cm}^{-1}$)	92	95
Total Kjeldahl Nitrogen (mg N l^{-1})	0.48	0.33
$\text{NH}_3\text{-N}$ (mg N l^{-1})	0.05	0.07
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.03	0.05
Dissolved Ortho-phosphate (mg P l^{-1})	<0.01	0.01
Total Phosphorus (mg P l^{-1})	0.14	0.11

LW = Lake Water

$P = 0.05 \text{ mg/l P spike}$

N = 1.00 mg/l N spike

$t = 1.00$ mg/l EDTA spike

TABLE G-2 (cont)

ALGAL GROWTH POTENTIAL

Cycle 3 Station 10 Date Collected 7/18/78 Date Processed 7/20/78

Growth Response, mg/1 Ash-Free Dry Wt.										
Treatment	12 Day Count						14 Day Count			Overall
	Replicate			$\bar{x} \pm 2\sigma$	Replicate			$\bar{x} \pm 2\sigma$		
	1	2	3		1	2	3			
LW	3.42	3.51	3.43	3.45 $\pm$ 0.10	3.42	3.45	3.58	3.48 $\pm$ 0.17	3.47 $\pm$ 0.13	
LW+P	3.95	4.10	3.84	3.96 $\pm$ 0.26	3.90	3.86	3.89	3.88 $\pm$ 0.04	3.92 $\pm$ 0.19	
LW+N	14.6	14.6	14.5	14.57 $\pm$ 0.12	13.4	14.1	14.2	13.9 $\pm$ 0.87	14.23 $\pm$ 0.92	
LW+P+N	35.8	37.4	36.8	36.7 $\pm$ 1.62	35.3	35.7	36.2	35.7 $\pm$ 0.91	36.2 $\pm$ 1.55	
LW+E	3.28	3.40	3.39	3.36 $\pm$ 0.13	3.35	3.69	3.54	3.53 $\pm$ 0.17	3.44 $\pm$ 0.30	
LW+P+E	3.89	3.84	3.92	3.88 $\pm$ 0.08	4.06	3.83	4.04	3.98 $\pm$ 0.25	3.93 $\pm$ 0.20	
LW+N+E	14.7	15.3	14.6	14.9 $\pm$ 0.76	14.6	14.0	15.1	14.6 $\pm$ 1.10	14.7 $\pm$ 0.91	
LW+P+N+E	37.0	36.7	36.1	36.6 $\pm$ 0.92	37.5	38.4	38.5	38.1 $\pm$ 1.10	37.4 $\pm$ 1.91	

Background Water Quality

Parameter and Units	Before Processing		After Processing	
	Before	Processing	After	Processing
pH		7.8		7.9
Specific Conductance ($\mu\text{mho cm}^{-1}$)		93		100
Total Kjeldahl Nitrogen (mg N l^{-1})		0.58		0.49
$\text{NH}_3\text{-N}$ (mg N l^{-1})		0.03		0.06
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})		0.01		0.04
Dissolved Ortho-phosphate (mg P l^{-1})		<0.01		0.03
Total Phosphorus (mg P l^{-1})		0.11		0.12

LW = Lake Water
P = 0.05 mg/1 P spike
N = 1.00 mg/1 N spike
E = 1.00 mg/1 EDTA spike

TABLE G-2 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 3 Station 11 Date Collected 7/18/78 Date Processed 7/20/78

Treatment	Growth Response, mg/l Ash-Free Dry Wt.										Overall
	12 Day Count					14 Day Count					
	Replicate			$\bar{x} \pm 2\sigma$	Replicate			$\bar{x} \pm 2\sigma$			
	1	2	3		1	2	3				
LW	5.54	5.70	5.72	5.65 ± 0.20	5.62	5.60	5.61	5.61 ± 0.02	5.63 ± 0.13		
LW+P	5.76	5.66	5.92	5.78 ± 0.26	5.79	5.81	5.98	5.86 ± 0.21	5.82 ± 0.23		
LW+N	7.59	7.45	7.45	7.50 ± 0.16	7.39	7.12	7.06	7.19 ± 0.35	7.34 ± 0.42		
LW+P+N	29.2	28.7	28.8	28.9 ± 0.53	30.4	27.8	27.5	28.6 ± 3.19	28.7 ± 2.08		
LW+E	5.66	5.56	5.82	5.68 ± 0.26	5.52	5.53	5.69	5.58 ± 0.19	5.63 ± 0.23		
LW+P+E	5.81	5.93	5.99	5.91 ± 0.18	5.71	5.78	5.73	5.74 ± 0.07	5.83 ± 0.22		
LW+N+E	7.26	7.27	7.36	7.30 ± 0.11	7.25	7.18	7.08	7.17 ± 0.17	7.23 ± 0.19		
LW+P+N+E	29.4	29.3	29.3	29.3 ± 0.12	29.3	28.1	27.3	28.2 ± 1.01	28.8 ± 1.75		

Background Water Quality

Parameter and Units	Before Processing	After Processing
pH	7.9	7.9
Specific Conductance ($\mu\text{mho cm}^{-1}$)	125	120
Total Kjeldahl Nitrogen (mg N l^{-1})	0.45	0.35
$\text{NH}_3\text{-N}$ (mg N l^{-1})	0.07	0.06
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.09	0.09
Dissolved Ortho-phosphate (mg P l^{-1})	<0.01	0.02
Total Phosphorus (mg P l^{-1})	0.06	0.12

LW = Lake Water

P = 0.05 mg/l P spike

N = 1.00 mg/l N spike

E = 1.00 mg/l EDTA spike

TABLE G-2

ALGAL GROWTH POTENTIAL

Cycle 3 Station 12 Date Collected 7/19/78 Date Processed 7/20/78

Growth Response, mg/l Ash-Free Dry Wt.										
Treatment	12 Day Count						14 Day Count			Overall
	Replicate			$\bar{x} \pm 2\sigma$	Replicate			$\bar{x} \pm 2\sigma$		
	1	2	3		1	2	3			
LW	2.41	2.39	2.40	2.40 $\pm$ 0.02	2.34	2.25	2.37	2.32 $\pm$ 0.12	2.36 $\pm$ 0.12	
LW+P	3.66	3.83	3.69	3.73 $\pm$ 0.18	3.95	3.94	3.94	3.94 $\pm$ 0.01	3.84 $\pm$ 0.13	
LW+N	2.12	2.15	2.07	2.11 $\pm$ 0.08	1.96	1.94	1.97	1.96 $\pm$ 0.03	2.04 $\pm$ 0.18	
LW+P+N	23.3	24.0	23.2	23.5 $\pm$ 0.87	24.8	26.2	—	25.5 $\pm$ 1.98	24.3 $\pm$ 2.48	
LW+E	2.27	—	—	2.27 $\pm$ 0.00	2.21	—	—	2.21 $\pm$ 0.00	2.24 $\pm$ 0.08	
LW+P+E	3.74	3.73	—	3.74 $\pm$ 0.01	3.66	3.97	3.84	3.82 $\pm$ 0.31	3.79 $\pm$ 0.24	
LW+N+E	2.04	2.16	—	2.10 $\pm$ 0.17	2.03	2.11	—	2.07 $\pm$ 0.11	2.09 $\pm$ 0.12	
LW+P+N+E	23.1	23.7	23.2	23.3 $\pm$ 0.64	25.7	26.3	25.5	25.8 $\pm$ 0.83	24.6 $\pm$ 2.82	

Background Water Quality

Parameter and Units	Before Processing	After Processing
pH	7.8	7.9
Specific Conductance ($\mu\text{mho cm}^{-1}$)	90	95
Total Kjeldahl Nitrogen (mg N l^{-1})	0.36	0.41
$\text{NH}_3\text{-N}$ (mg N l^{-1})	0.05	0.07
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	<0.01	0.03
Dissolved Ortho-phosphate (mg P l^{-1})	<0.01	<0.01
Total Phosphorus (mg P l^{-1})	0.03	0.03

LW = Lake Water

P = 0.05 mg/l P spike

N = 1.00 mg/l N spike

E = 1.00 mg/l EDTA spike

TABLE G-2 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 3 Station 13 Date Collected 7/17/78 Date Processed 7/18/78

Growth Response, mg/l Ash-Free Dry Wt.										
Treatment	12 Day Count						14 Day Count			Overall
	Replicate			$\bar{x} \pm 2\sigma$	Replicate			$\bar{x} \pm 2\sigma$		
	1	2	3		1	2	3			
LW	5.06	5.15	4.93	5.04 $\pm$ 0.22	5.31	5.41	5.46	5.39 $\pm$ 0.15	5.22 $\pm$ 0.42	
LW+P	9.17	9.30	9.36	9.28 $\pm$ 0.19	9.69	9.56	9.91	9.72 $\pm$ 0.35	9.50 $\pm$ 0.55	
LW+N	4.88	5.16	5.26	5.10 $\pm$ 0.39	5.23	5.33	5.45	5.34 $\pm$ 0.22	5.22 $\pm$ 0.39	
LW+P+N	26.6	27.6	27.1	27.1 $\pm$ 1.00	27.5	27.2	27.1	27.3 $\pm$ 0.41	27.2 $\pm$ 0.71	
LW+E	5.30	5.27	—	5.29 $\pm$ 0.04	5.64	5.59	—	5.72 $\pm$ 0.08	5.45 $\pm$ 0.38	
LW+P+E	9.77	9.48	—	9.63 $\pm$ 0.41	10.2	10.5	—	10.4 $\pm$ 0.42	9.99 $\pm$ 0.90	
LW+N+E	5.10	5.12	—	5.11 $\pm$ 0.03	5.10	5.48	—	5.29 $\pm$ 0.54	5.20 $\pm$ 0.37	
LW+P+N+E	26.0	27.0	—	26.5 $\pm$ 1.41	28.9	29.9	—	24.4 $\pm$ 1.41	28.0 $\pm$ 3.54	

Background Water Quality

Parameter and Units	Before Processing		After Processing	
	Before Processing	After Processing	Before Processing	After Processing
pH	8.3	8.3	155	160
Specific Conductance ($\mu\text{mho cm}^{-1}$)	155	160	0.47	0.43
Total Kjeldahl Nitrogen (mg N l^{-1})	0.47	0.43	0.08	0.09
$\text{NH}_3\text{-N}$ (mg N l^{-1})	0.08	0.09	0.14	0.16
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.14	0.16	0.01	0.01
Dissolved Ortho-phosphate (mg P l^{-1})	0.01	0.01	0.06	<0.01
Total Phosphorus (mg P l^{-1})	0.06	<0.01		

LW = Lake Water

P = 0.05 mg/l P spike

N = 1.00 mg/l N spike

E = 1.00 mg/l EDTA spike

TABLE G-2 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 3 Station 14 Date Collected 7/19/78 Date Processed 7/20/78

Treatment	Growth Response, mg/l Ash-Free Dry Wt.					
	12 Day Count			14 Day Count		
	Replicate			Replicate		
	1	2	3	1	2	3
LW	2.37	2.41	2.41	2.38	2.36	2.51
LW+P	18.3	18.1	17.7	17.6	17.8	18.8
LW+N	2.52	2.47	2.47	2.56	2.62	2.36
LW+P+N	23.8	23.5	22.4	26.0	26.3	27.0
LW+E	2.35	2.45	2.37	2.43	2.63	2.57
LW+P+E	18.0	18.2	18.5	19.8	19.7	19.1
LW+N+E	2.40	2.48	2.49	2.30	2.38	2.28
LW+P+N+E	23.6	23.3	23.8	25.2	24.1	23.6
	$\bar{x} \pm 2\sigma$			$\bar{x} \pm 2\sigma$		
	2.39 $\pm$ 0.08			2.42 $\pm$ 0.16		
	18.0 $\pm$ 0.61			18.1 $\pm$ 1.29		
	2.49 $\pm$ 0.06			2.51 $\pm$ 0.27		
	23.2 $\pm$ 1.47			26.4 $\pm$ 1.03		
	2.39 $\pm$ 0.11			2.54 $\pm$ 0.21		
	18.2 $\pm$ 0.50			19.5 $\pm$ 0.76		
	2.46 $\pm$ 0.10			2.32 $\pm$ 0.11		
	23.6 $\pm$ 0.50			24.3 $\pm$ 1.64		
	$\bar{x} \pm 2\sigma$			$\bar{x} \pm 2\sigma$		
	2.40 $\pm$ 0.12			2.40 $\pm$ 0.12		
	18.1 $\pm$ 0.90			18.1 $\pm$ 0.90		
	2.50 $\pm$ 0.18			2.50 $\pm$ 0.18		
	24.8 $\pm$ 3.68			24.8 $\pm$ 3.68		
	2.47 $\pm$ 0.22			2.47 $\pm$ 0.22		
	18.9 $\pm$ 1.54			18.9 $\pm$ 1.54		
	2.39 $\pm$ 0.18			2.39 $\pm$ 0.18		
	23.9 $\pm$ 1.35			23.9 $\pm$ 1.35		

Background Water Quality

Parameter and Units	Before Processing	After Processing
pH	7.9	7.9
Specific Conductance ($\mu\text{mho cm}^{-1}$)	200	215
Total Kjeldahl Nitrogen (mg N l^{-1})	0.25	0.27
$\text{NH}_3\text{-N}$ (mg N l^{-1})	0.04	0.07
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.50	0.42
Dissolved Ortho-phosphate (mg P l^{-1})	<0.01	<0.01
Total Phosphorus (mg P l^{-1})	0.10	0.08

LW = Lake Water

P = 0.05 mg/l P spike

N = 1.00 mg/l N spike

E = 1.00 mg/l EDTA spike

TABLE G-2 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 3 Station 15 Date Collected 7/17/78 Date Processed 7/18/78

Growth Response, mg/1 Ash-Free Dry Wt.									
Treatment	12 Day Count			$\bar{x} \pm 2\sigma$	14 Day Count			$\bar{x} \pm 2\sigma$	Overall
	Replicate				Replicate				
	1	2	3		1	2	3		
LW	5.29	5.12	5.20	5.20 $\pm$ 0.17	5.09	5.04	5.20	5.11 $\pm$ 0.16	5.16 $\pm$ 0.18
LW+P	15.7	16.0	15.7	15.8 $\pm$ 0.35	16.2	15.6	16.6	16.1 $\pm$ 1.01	16.0 $\pm$ 0.77
LW+N	5.37	5.53	5.58	5.49 $\pm$ 0.22	5.25	5.55	5.30	5.37 $\pm$ 0.32	5.43 $\pm$ 0.28
LW+P+N	28.3	28.3	26.1	27.6 $\pm$ 2.54	29.6	29.0	30.8	29.8 $\pm$ 1.83	28.7 $\pm$ 3.15
LW+E	5.33	5.35	—	5.34 $\pm$ 0.03	5.25	5.38	—	5.32 $\pm$ 0.18	5.33 $\pm$ 0.11
LW+P+E	15.7	15.9	—	15.8 $\pm$ 0.28	16.1	16.0	—	16.1 $\pm$ 0.14	15.9 $\pm$ 0.34
LW+N+E	5.65	5.68	—	5.67 $\pm$ 0.04	5.35	5.35	—	5.35 $\pm$ 0.00	5.51 $\pm$ 0.36
LW+P+N+E	28.8	29.2	—	29.0 $\pm$ 0.57	29.4	30.0	—	29.7 $\pm$ 0.85	29.4 $\pm$ 1.00

Background Water Quality

LW = Lake Water
 P = 0.05 mg/l P spike
 N = 1.00 mg/l N spike
 E = 1.00 mg/l EDTA spike

Parameter and Units	Before Processing	After Processing
pH	8.6	8.6
Specific Conductance ($\mu\text{mho cm}^{-1}$)	160	175
Total Kjeldahl Nitrogen (mg N l^{-1})	0.57	0.41
$\text{NH}_3\text{-N}$ (mg N l^{-1})	0.08	0.10
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.28	0.30
Dissolved Ortho-phosphate (mg P l^{-1})	<0.01	0.01
Total Phosphorus (mg P l^{-1})	0.12	

TABLE G-2 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 3 Station 16 Date Collected 7/17/78 Date Processed 7/18/78

Treatment	Growth Response, mg/l Ash-Free Dry Wt.			
	12 Day Count			Overall
	Replicate			
	1	2	3	$\bar{x} \pm 2\sigma$
LW	15.3	13.7	14.1	14.4 $\pm$ 1.67
LW+P	29.1	30.4	28.3	29.3 $\pm$ 2.12
LW+N	15.2	15.3	15.4	15.3 $\pm$ 0.20
LW+P+N	35.9	37.6	36.9	36.8 $\pm$ 1.71
LW+E	14.8	14.5	15.5	14.9 $\pm$ 1.03
LW+P+E	28.8	29.9	28.7	29.1 $\pm$ 1.33
LW+N+E	13.9	14.9	14.8	14.5 $\pm$ 1.10
LW+P+N+E	37.1	37.8	36.6	37.2 $\pm$ 1.21
				$\bar{x} \pm 2\sigma$
				14.7 $\pm$ 1.40
				30.5 $\pm$ 3.03
				15.2 $\pm$ 0.69
				36.9 $\pm$ 4.28
				14.8 $\pm$ 1.57
				30.5 $\pm$ 4.16
				14.8 $\pm$ 1.30
				36.9 $\pm$ 2.72

Background Water Quality

Parameter and Units	Before Processing	After Processing
	7.6	7.6
pH		
Specific Conductance ($\mu\text{mho cm}^{-1}$)	145	150
Total Kjeldahl Nitrogen (mg N l^{-1})	0.39	0.35
$\text{NH}_3\text{-N}$ (mg N l^{-1})	0.05	0.06
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.57	0.65
Dissolved Ortho-phosphate (mg P l^{-1})	0.03	0.05
Total Phosphorus (mg P l^{-1})	0.08	0.02

LW = Lake Water

P = 0.05 mg/l P spike

N = 1.00 mg/l N spike

E = 1.00 mg/l EDTA spike

TABLE G-2 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 3 Station 18 Date Collected 7/18/78 Date Processed 7/20/78

Treatment	Growth Response, mg/l Ash-Free Dry Wt.					
	12 Day Count			14 Day Count		
	Replicate			Replicate		
	1	2	3	1	2	3
LW	5.56	5.81	5.73	5.70 ± 0.26	5.74	5.50
LW+P	18.2	18.2	17.9	18.1 ± 0.35	19.3	18.5
LW+N	5.73	5.67	5.79	5.73 ± 0.12	5.85	5.77
LW+P+N	26.7	26.6	27.8	27.0 ± 1.33	28.6	28.2
LW+E	5.73	5.67	5.64	5.68 ± 0.09	5.65	5.54
LW+P+E	18.1	18.3	17.7	18.0 ± 0.61	18.1	18.6
LW+N+E	5.79	5.35	5.77	5.64 ± 0.50	5.70	5.81
LW+P+N+E	29.0	28.3	28.2	28.5 ± 0.86	26.9	26.7
					27.4 ± 2.20	28.7
						27.7 ± 1.68
						5.59 ± 0.11
						18.4 ± 0.50
						5.83 ± 0.28
						5.73 ± 0.42
						28.0 ± 1.90

Background Water Quality

Parameter and Units	Before Processing		After Processing	
	Before Processing	After Processing	Before Processing	After Processing
pH		7.5		7.5
Specific Conductance ($\mu\text{mho cm}^{-1}$)		120		135
Total Kjeldahl Nitrogen (mg N l^{-1})		0.47		0.35
$\text{NH}_3\text{-N}$ (mg N l^{-1})		0.08		0.07
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})		0.12		0.41
Dissolved Ortho-phosphate (mg P l^{-1})		<0.01		0.01
Total Phosphorus (mg P l^{-1})		0.14		0.11

LW = Lake Water

P = 0.05 mg/l P spike

N = 1.00 mg/l N spike

E = 1.00 mg/l EDTA spike

ALGAL GROWTH POTENTIAL

Cycle 5 Station 6 Date Collected 9/27/78 Date Processed 9/28/78

Treatment	Growth Response, mg/l Ash-Free Dry Wt.							Overall	
	12 Day Count			14 Day Count					
	Replicate			$\bar{x} \pm 2\sigma$	Replicate				$\bar{x} \pm 2\sigma$
	1	2	3		1	2	3		
LW	8.28	8.53	7.57	8.13 $\pm$ 1.00	7.65	6.68	7.22	7.18 $\pm$ 0.97	7.66 $\pm$ 1.36
LW+P	9.86	9.63	9.98	9.82 $\pm$ 0.36	8.54	11.3	11.8	10.5 $\pm$ 3.51	10.2 $\pm$ 2.37
LW+N	8.65	8.32	8.90	8.62 $\pm$ 0.58	9.83	9.03	8.09	8.98 $\pm$ 1.74	8.80 $\pm$ 1.23
LW+P+N	29.7	31.1	29.9	30.2 $\pm$ 1.51	32.8	31.0	30.8	31.5 $\pm$ 2.20	30.9 $\pm$ 2.21
LW+E	7.54	8.43	8.39	8.12 $\pm$ 1.01	8.72	9.51	9.31	9.18 $\pm$ 0.82	8.65 $\pm$ 1.42
LW+P+E	11.1	8.99	7.21	9.10 $\pm$ 3.89	10.6	8.51	9.72	9.61 $\pm$ 2.10	9.36 $\pm$ 2.85
LW+N+E	7.22	8.43	7.83	7.83 $\pm$ 1.21	8.67	8.32	8.77	8.59 $\pm$ 0.47	8.21 $\pm$ 1.17
LW+P+N+E	38.3	38.6	43.7	40.2 $\pm$ 6.07	35.9	34.8	34.0	34.9 $\pm$ 1.91	37.6 $\pm$ 7.06

Background Water Quality

Parameter and Units	Before Processing	After Processing
pH	7.50	7.50
Specific Conductance ($\mu\text{mho cm}^{-1}$)	100	108
Total Kjeldahl Nitrogen (mg N l^{-1})	0.5	0.4
$\text{NH}_3\text{-N}$ (mg N l^{-1})	0.05	0.10
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.13	0.16
Dissolved Ortho-phosphate (mg P l^{-1})	<0.01	0.02
Total Phosphorus (mg P l^{-1})	0.05	0.03

LW = Lake Water
P = 0.05 mg/l P spike
N = 1.00 mg/l N spike
E = 1.00 mg/l EDTA spike

TABLE G-3

ALGAL GROWTH POTENTIAL

Cycle 5 Station 7 Date Collected 9/27/78 Date Processed 9/28/78

Treatment	Growth Response, mg/l Ash-Free Dry Wt.										Overall
	12 Day Count						14 Day Count				
	Replicate			$\bar{x} \pm 2\sigma$	Replicate			$\bar{x} \pm 2\sigma$			
	1	2	3		1	2	3				
LW	7.98	7.93	8.55	8.15 ± 0.69	8.05	8.08	9.19	8.44 ± 1.30	8.27 ± 1.04		
LW+P	7.50	7.45	8.23	7.73 ± 0.87	8.80	8.87	10.2	9.29 ± 1.58	8.51 ± 2.06		
LW+N	14.0	15.9	17.0	15.6 ± 3.04	16.4	15.4	14.6	15.5 ± 2.00	15.6 ± 2.24		
LW+P+N	44.5	43.2	42.3	43.5 ± 1.78	40.4	39.9	40.0	40.1 ± 0.53	41.8 ± 3.90		
LW+E	7.04	8.61	8.05	7.90 ± 1.59	7.93	8.44	7.83	8.07 ± 0.65	7.98 ± 1.10		
LW+P+E	8.21	7.80	8.13	8.05 ± 0.43	9.15	10.0	8.34	9.33 ± 1.20	8.69 ± 1.62		
LW+N+E	14.4	15.0	14.4	14.6 ± 0.69	15.0	16.1	15.2	15.4 ± 1.17	15.0 ± 1.25		
LW+P+N+E	30.5	32.7	30.9	31.4 ± 2.34	42.1	38.6	39.2	40.0 ± 3.74	35.7 ± 9.83		

Background Water Quality

Parameter and Units	Before Processing		After Processing	
pH			7.20	7.20
Specific Conductance ($\mu\text{mho cm}^{-1}$)			95	100
Total Kjeldahl Nitrogen (mg N l^{-1})			0.5	0.4
$\text{NH}_3\text{-N}$ (mg N l^{-1})			<0.01	0.06
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})			0.12	0.15
Dissolved Ortho-phosphate (mg P l^{-1})			<0.01	0.01
Total Phosphorus (mg P l^{-1})			0.04	0.03

LW = Lake Water

P = 0.05 mg/l P spike

N = 1.00 mg/l N spike

E = 1.00 mg/l EDTA spike

TABLE G-3 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 5 Station 9 Date Collected 9/26/78 Date Processed 9/28/78

Growth Response, mg/1 Ash-Free Dry Wt.									
Treatment	12 Day Count			$\bar{x} \pm 2\sigma$	14 Day Count			$\bar{x} \pm 2\sigma$	Overall
	Replicate				Replicate				
	1	2	3		1	2	3		
LW	4.77	4.41	4.11	4.43 $\pm$ 0.66	4.34	4.42	4.30	4.35 $\pm$ 0.12	4.39 $\pm$ 0.44
LW+P	3.93	4.15	4.33	4.14 $\pm$ 0.40	4.11	4.72	4.21	4.35 $\pm$ 0.65	4.24 $\pm$ 0.54
LW+N	25.1	24.8	22.4	24.1 $\pm$ 2.96	26.3	23.0	24.0	24.4 $\pm$ 3.38	24.3 $\pm$ 2.87
LW+P+N	48.9	47.6	49.9	48.8 $\pm$ 2.31	50.3	48.6	50.8	49.9 $\pm$ 2.31	49.4 $\pm$ 2.39
LW+E	4.39	4.42	4.05	4.29 $\pm$ 0.41	4.60	4.77	5.15	4.84 $\pm$ 0.56	4.56 $\pm$ 0.75
LW+P+E	4.33	4.77	3.96	4.35 $\pm$ 0.81	4.34	4.38	4.39	4.37 $\pm$ 0.05	4.36 $\pm$ 0.51
LW+N+E	22.8	21.9	24.3	23.0 $\pm$ 2.42	24.0	24.3	24.6	24.3 $\pm$ 0.08	23.5 $\pm$ 2.27
LW+P+N+E	46.6	45.9	52.8	48.4 $\pm$ 7.60	55.8	50.5	52.0	52.8 $\pm$ 5.46	50.6 $\pm$ 7.59

Background Water Quality

Parameter and Units	Before Processing		After Processing	
	Before Processing	After Processing	Before Processing	After Processing
pH		7.30		7.40
Specific Conductance ($\mu\text{mho cm}^{-1}$)		95		100
Total Kjeldahl Nitrogen (mg N l^{-1})		0.6		0.4
$\text{NH}_3\text{-N}$ (mg N l^{-1})		<0.01		0.04
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})		0.08		0.08
Dissolved Ortho-phosphate (mg P l^{-1})		<0.01		0.01
Total Phosphorus (mg P l^{-1})		0.04		0.05

LW = Lake Water

P = 0.05 mg/l P spike

N = 1.00 mg/l N spike

E = 1.00 mg/l EDTA spike

ALGAL GROWTH POTENTIAL

Cycle	Station	Date Collected	Date Processed
5	10	9/26/78	9/28/78

Treatment	Growth Response, mg/l Ash-Free Dry Wt.						Overall		
	12 Day Count			14 Day Count					
	Replicate			Replicate					
	1	2	3	$\bar{x} \pm 2\sigma$	1	2		3	$\bar{x} \pm 2\sigma$
LW	2.70	3.36	3.56	3.21 ± 0.90	3.32	2.81	2.95	3.03 ± 0.53	3.12 ± 0.69
LW+P	3.54	3.28	3.05	3.29 ± 0.49	3.13	3.07	3.30	3.17 ± 0.24	3.23 ± 0.37
LW+N	4.89	5.13	4.67	4.90 ± 0.46	4.69	4.74	4.73	4.72 ± 0.05	4.81 ± 0.35
LW+P+N	28.9	27.0	29.2	28.4 ± 2.39	32.2	31.0	32.5	31.9 ± 1.59	30.1 ± 4.27
LW+E	3.27	3.20	2.99	3.15 ± 0.29	2.45	2.70	2.43	2.53 ± 0.30	2.84 ± 0.74
LW+P+E	2.43	2.94	2.81	2.73 ± 0.53	2.76	2.76	2.67	2.73 ± 0.10	2.73 ± 0.34
LW+N+E	4.11	4.78	4.55	4.48 ± 0.68	4.90	4.66	4.70	4.75 ± 0.26	4.62 ± 0.55
LW+P+N+E	35.0	36.3	38.2	36.5 ± 3.22	34.2	28.5	32.7	31.8 ± 5.91	34.2 ± 6.68

LW = Lake Water
P = 0.05 mg/l P spike
N = 1.00 mg/l N spike
E = 1.00 mg/l EDTA spike

Background Water Quality		
Parameter and Units	Before Processing	After Processing
pH	7.70	7.85
Specific Conductance ($\mu\text{mho cm}^{-1}$)	90	92
Total Kjeldahl Nitrogen (mg N l^{-1})	0.7	0.4
$\text{NH}_3\text{-N}$ (mg N l^{-1})	<0.01	0.04
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.04	0.04
Dissolved Ortho-phosphate (mg P l^{-1})	<0.01	0.01
Total Phosphorus (mg P l^{-1})	0.02	0.03

Cycle 5 Station 11 Date Collected 9/26/78 Date Processed 9/28/78

Background Water Quality

Parameter and Units	Before Processing	After Processing
pH	8.10	8.10
Specific Conductance ($\mu\text{mho cm}^{-1}$)	135	130
Total Kjeldahl Nitrogen (mg N l^{-1})	0.7	0.4
$\text{NH}_3\text{-N}$ (mg N l^{-1})	<0.01	0.03
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.04	0.04
Dissolved Ortho-phosphate (mg P l^{-1})	0.01	0.02
Total Phosphorus (mg P l^{-1})	0.05	0.02

LW = Lake Water
P = 0.05 mg/l P spike
N = 1.00 mg/l N spike
E = 1.00 mg/l EDTA spike

TABLE G-3 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 5 Station 12 Date Collected 9/26/78 Date Processed 9/28/78

Treatment	Growth Response, mg/l Ash-Free Dry Wt.					
	12 Day Count			14 Day Count		
	Replicate			Replicate		
	1	2	3	1	2	3
	$\bar{x} \pm 2\sigma$			$\bar{x} \pm 2\sigma$		
LW	1.36	1.36	1.36	1.51	1.59	1.45
LW+P	1.33	1.36	1.31	1.32	1.42	1.26
LW+N	2.24	2.12	2.11	2.40	2.57	2.83
LW+P+N	24.3	25.4	26.7	25.2	23.4	24.1
LW+E	1.25	1.25	1.33	1.49	1.39	1.34
LW+P+E	1.27	2.25	1.24	1.46	1.42	1.29
LW+N+E	2.51	2.67	2.67	2.70	2.96	2.94
LW+P+N+E	25.4	26.0	22.6	27.6	29.4	27.4
	$\bar{x} \pm 2\sigma$			$\bar{x} \pm 2\sigma$		
	1.44 $\pm$ 0.19			1.44 $\pm$ 0.19		
	1.33 $\pm$ 0.11			1.33 $\pm$ 0.11		
	2.38 $\pm$ 0.57			2.38 $\pm$ 0.57		
	24.9 $\pm$ 2.33			24.9 $\pm$ 2.33		
	1.34 $\pm$ 0.18			1.34 $\pm$ 0.18		
	1.49 $\pm$ 0.77			1.49 $\pm$ 0.77		
	2.74 $\pm$ 0.35			2.74 $\pm$ 0.35		
	26.4 $\pm$ 4.65			26.4 $\pm$ 4.65		

Background Water Quality

LW = Lake Water
 P = 0.05 mg/l P spike
 N = 1.00 mg/l N spike
 E = 1.00 mg/l EDTA spike

Parameter and Units	Background Water Quality	
	Before Processing	After Processing
pH	8.40	8.30
Specific Conductance ($\mu\text{mho cm}^{-1}$)	95	90
Total Kjeldahl Nitrogen (mg N l^{-1})	0.6	0.4
$\text{NH}_3\text{-N}$ (mg N l^{-1})	<0.02	0.02
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	<0.01	<0.01
Dissolved Ortho-phosphate (mg P l^{-1})	<0.01	<0.01
Total Phosphorus (mg P l^{-1})	0.01	0.01

TABLE G-3 (cont.)
ALGAL GROWTH POTENTIAL

Cycle 5 Station 13 Date Collected 9/25/78 Date Processed 9/28/78

Treatment	Growth Response, mg/l Ash-Free Dry Wt.				Overall			
	12 Day Count				14 Day Count			
	Replicate			$\bar{x} \pm 2\sigma$	Replicate			$\bar{x} \pm 2\sigma$
	1	2	3		1	2	3	
LW	5.20	4.60	4.63	4.81 ± 0.68	4.73	4.54	4.90	4.72 ± 0.36
LW+P	6.92	7.61	8.09	7.54 ± 1.18	9.01	9.08	7.63	8.57 ± 1.64
LW+N	4.71	4.55	4.73	4.66 ± 0.20	4.32	4.47	4.82	4.54 ± 0.51
LW+P+N	27.4	27.7	27.6	27.6 ± 0.31	30.6	29.6	30.5	30.2 ± 1.10
LW+E	4.58	4.90	4.74	4.74 ± 0.32	4.55	4.55	4.73	4.61 ± 0.21
LW+P+E	7.44	8.07	7.79	7.77 ± 0.63	9.21	8.13	8.93	8.76 ± 1.12
LW+N+E	4.67	4.57	4.43	4.56 ± 0.24	4.22	4.54	4.43	4.40 ± 0.33
LW+P+N+E	31.6	31.1	30.6	31.1 ± 1.00	37.6	31.9	31.5	31.7 ± 6.82
								32.4 ± 5.19

Background Water Quality

Parameter and Units	Before Processing		After Processing	
	Before Processing	After Processing	Before Processing	After Processing
pH		9.10	9.00	9.10
Specific Conductance ($\mu\text{mho cm}^{-1}$)		178	165	178
Total Kjeldahl Nitrogen (mg N l^{-1})		0.4	0.5	0.4
$\text{NH}_3\text{-N}$ (mg N l^{-1})		0.02	0.04	0.02
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})		0.16	0.15	0.16
Dissolved Ortho-phosphate (mg P l^{-1})		0.01	<0.01	0.01
Total Phosphorus (mg P l^{-1})		0.04	0.04	0.04

LW = Lake Water
P = 0.05 mg/l P spike
N = 1.00 mg/l N spike
E = 1.00 mg/l EDTA spike

TABLE G-3 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 5 Station 14 Date Collected 9/27/78 Date Processed 9/28/78

Growth Response, mg/l Ash-Free Dry Wt.										
Treatment	12 Day Count						14 Day Count			Overall
	Replicate			$\bar{x} \pm 2\sigma$	Replicate			$\bar{x} \pm 2\sigma$		
	1	2	3		1	2	3			
LW	2.26	2.16	2.22	2.21 $\pm$ 0.10	2.25	1.67	2.09	2.00 $\pm$ 0.60	2.11 $\pm$ 0.45	
LW+P	16.6	17.1	18.0	17.2 $\pm$ 1.42	16.0	16.7	17.0	16.6 $\pm$ 1.03	16.9 $\pm$ 1.33	
LW+N	2.43	2.28	2.27	2.33 $\pm$ 0.18	2.49	2.52	2.76	2.59 $\pm$ 0.30	2.45 $\pm$ 0.38	
LW+P+N	23.7	25.0	24.3	24.3 $\pm$ 1.30	27.0	25.9	25.5	26.1 $\pm$ 1.55	25.2 $\pm$ 2.35	
LW+E	2.29	2.34	2.27	2.30 $\pm$ 0.07	2.40	2.31	2.11	2.27 $\pm$ 0.30	2.29 $\pm$ 0.20	
LW+P+E	16.4	16.9	15.9	16.4 $\pm$ 1.00	16.2	16.0	17.5	16.6 $\pm$ 1.63	16.5 $\pm$ 1.22	
LW+N+E	2.02	1.94	2.09	2.02 $\pm$ 0.15	1.29	1.34	1.32	1.32 $\pm$ 0.05	1.66 $\pm$ 0.77	
LW+P+N+E	24.9	24.6	24.4	24.6 $\pm$ 0.50	28.3	28.6	29.9	28.9 $\pm$ 1.70	26.8 $\pm$ 4.84	

Background Water Quality

Parameter and Units	Before Processing	After Processing
pH	7.50	7.50
Specific Conductance ($\mu\text{mho cm}^{-1}$)	210	200
Total Kjeldahl Nitrogen (mg N l^{-1})	0.3	0.2
$\text{NH}_3\text{-N}$ (mg N l^{-1})	0.01	<0.01
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.37	0.38
Dissolved Ortho-phosphate (mg P l^{-1})	<0.01	<0.01
Total Phosphorus (mg P l^{-1})	0.01	0.01

LW = Lake Water

P = 0.05 mg/l P spike

N = 1.00 mg/l N spike

E = 1.00 mg/l EDTA spike

TABLE G-3 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 5 Station 15 Date Collected 9/25/78 Date Processed 9/28/78

Growth Response, mg/l Ash-Free Dry Wt.										
Treatment	12 Day Count						14 Day Count			Overall
	Replicate			$\bar{x} \pm 2\sigma$	Replicate			$\bar{x} \pm 2\sigma$		
	1	2	3		1	2	3			
LW	9.48	9.15	8.63	9.09 $\pm$ 0.86	9.36	8.34	8.70	8.80 $\pm$ 1.03	8.94 $\pm$ 0.91	
LW+P	13.9	14.8	15.1	14.6 $\pm$ 1.25	15.1	17.8	16.4	16.4 $\pm$ 2.70	15.5 $\pm$ 2.75	
LW+N	10.4	10.7	9.80	10.3 $\pm$ 0.92	10.2	9.63	8.99	9.63 $\pm$ 1.21	9.96 $\pm$ 1.21	
LW+P+N	33.7	34.2	31.0	33.0 $\pm$ 3.44	28.9	28.7	30.4	29.3 $\pm$ 1.86	31.2 $\pm$ 4.69	
LW+E	7.22	6.93	7.89	7.35 $\pm$ 0.98	9.08	8.29	8.66	8.68 $\pm$ 0.79	8.01 $\pm$ 1.66	
LW+P+E	16.0	15.9	16.6	16.2 $\pm$ 0.76	16.4	16.4	15.5	16.1 $\pm$ 1.04	16.1 $\pm$ 0.82	
LW+N+E	8.34	9.44	8.78	8.85 $\pm$ 1.11	8.85	8.14	8.39	8.46 $\pm$ 0.72	8.66 $\pm$ 0.94	
LW+P+N+E	31.5	32.6	32.1	32.1 $\pm$ 1.10	29.8	31.4	27.7	29.6 $\pm$ 3.71	30.9 $\pm$ 3.62	

Background Water Quality

Parameter and Units	Before Processing		After Processing	
pH	8.40		8.30	
Specific Conductance ($\mu\text{mho cm}^{-1}$)	162		170	
Total Kjeldahl Nitrogen (mg N l^{-1})	0.5		0.3	
$\text{NH}_3\text{-N}$ (mg N l^{-1})	<0.02		0.12	
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.12		0.25	
Dissolved Ortho-phosphate (mg P l^{-1})	0.01		0.02	
Total Phosphorus (mg P l^{-1})	0.05		0.04	

LW = Lake Water

P = 0.05 mg/l P spike

N = 1.00 mg/l N spike

E = 1.00 mg/l EDTA spike

TABLE G-3 (cont.)

ALGAL GROWTH POTENTIAL

Cycle 5 Station 16 Date Collected 9/25/78 Date Processed 9/28/78

Treatment	Growth Response, mg/l Ash-Free Dry Wt.				Overall			
	12 Day Count		14 Day Count		12 Day Count		14 Day Count	
	Replicate		Replicate		Replicate		Replicate	
	1	2	3	$\bar{x} \pm 2\sigma$	1	2	3	$\bar{x} \pm 2\sigma$
LW	24.8	21.7	23.0	23.2 $\pm$ 3.11	28.2	22.3	23.2	24.6 $\pm$ 6.36
LW+P	21.9	23.9	23.4	23.1 $\pm$ 2.09	22.7	21.5	22.8	22.3 $\pm$ 1.45
LW+N	30.2	29.6	32.0	30.6 $\pm$ 2.50	32.0	29.1	31.8	31.0 $\pm$ 3.24
LW+P+N	53.4	59.9	48.2	53.8 $\pm$ 11.7	57.7	56.8	58.9	57.8 $\pm$ 2.11
LW+E	26.8	24.9	25.8	25.8 $\pm$ 1.90	22.4	23.0	23.9	23.1 $\pm$ 1.51
LW+P+E	27.7	23.4	22.9	24.7 $\pm$ 5.28	24.8	26.0	27.0	25.9 $\pm$ 2.20
LW+N+E	34.0	32.7	37.8	34.8 $\pm$ 5.30	31.1	33.7	35.0	33.3 $\pm$ 3.97
LW+P+N+E	62.5	60.9	59.0	60.8 $\pm$ 3.50	52.6	59.4	56.6	56.2 $\pm$ 6.84

Background Water Quality

Parameter and Units	Before Processing	After Processing
pH	8.20	8.00
Specific Conductance ($\mu\text{mho cm}^{-1}$)	145	150
Total Kjeldahl Nitrogen (mg N l^{-1})	0.5	0.5
$\text{NH}_3\text{-N}$ (mg N l^{-1})	0.05	0.05
$\text{NO}_2^- + \text{NO}_3^- - \text{N}$ (mg N l^{-1})	0.53	0.52
Dissolved Ortho-phosphate (mg P l^{-1})	0.04	0.07
Total Phosphorus (mg P l^{-1})	0.09	0.15

LW = Lake Water

P = 0.05 mg/l P spike

N = 1.00 mg/l N spike

E = 1.00 mg/l EDTA spike

Cycle 5 Station 18 Date Collected 9/26/78 Date Processed 9/26/78

Background Water Quality

LW = Lake Water
P = 0.05 mg/l P spike
N = 1.00 mg/l N spike
E = 1.00 mg/l EDTA spike

APPENDIX H
PHYTOPLANKTON DATA

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TABLE H-1a

●●LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY - PHYTOPLANKTON (CELLS/ML) ●●
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I, CYCLE 1
 (April 17-21, 1978)

TAXONOMIC CLASSIFICATION	1	2	3	4	5	6	7	8	9	10
CYANOPHYCEAE										
ANABAENA SP DELICATISSIMA	-	-	73	-	-	-	-	-	-	-
APIANOCAPSA NIDULANS	-	-	-	-	-	-	-	-	-	-
CHROOCOCCLUS DISPERFUS	-	-	-	-	-	-	-	-	-	-
CHROOCOCCLUS DISPERFUS V MINOR	-	-	-	-	-	-	-	-	-	-
CHROOCOCCLUS MINIMUS	-	-	-	-	-	-	-	-	-	-
CHROOCOCCLUS MINUTUS	-	-	-	-	-	29	-	-	-	8
CHROOCOCCLUS SP	-	-	-	-	-	-	31	-	-	-
GLECCAPSA SP	-	-	-	-	-	-	-	-	-	-
HERISPHERIA TENUISSIMA	-	-	-	-	108	-	-	276	67	-
MICROCYSTIS INCEPES	-	-	-	-	-	59	-	-	-	-
OSCILLATORIA SP	-	-	-	-	-	-	-	-	-	-
SPIRULINA SP	-	-	-	-	-	-	-	-	-	-
CHLOROPHYCEAE										
ANKISTRODESMUS CONVOLUTUS	-	-	-	-	-	-	-	-	-	-
ANKISTRODESMUS FALCATUS	-	-	-	-	7	6	-	-	4	-
ANKISTRODESMUS KANDISELENE	-	-	9	-	-	-	8	-	-	-
ANKISTRODESMUS SPIRALIS	25	5	4	-	7	3	-	4	8	-
CHLAMYDOMONAS SP	-	-	-	-	-	6	-	-	-	-
CHLORELLA SP	-	10	-	5	-	-	-	7	-	-
CHLOROCOCCLUS MUMICOLA	-	-	-	-	-	-	-	-	-	-
CLOSTERIUM SP	-	-	-	-	-	-	-	-	-	-
COELASTRUM CAMBRIUM	-	-	-	-	-	-	-	-	-	-
COELASTRUM MICROPODUM	-	-	-	-	-	-	-	-	-	-
COELASTRUM MURUS	-	-	540	-	-	-	-	4	33	-

TABLE H-1a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)									
	1	2	3	4	5	6	7	8	9	10
COELASTRUM PROHUSCIDIFUM	57	-	-	-	-	-	-	-	-	-
COSCIANUS SP.	-	-	-	-	-	-	-	-	-	-
CRUCIGENIA APICULATA	-	-	-	-	-	-	-	-	-	-
CRUCIGENIA FENESTRATA	-	-	-	-	-	-	-	-	-	-
CRUCIGENIA QUADRATA	-	-	17	-	-	-	-	-	-	-
CRUCIGENIA TETRAEDRIA	-	-	-	-	-	-	-	-	-	-
DICTYOSOMATRIUM PULCHELLUM	-	-	-	-	-	-	-	-	33	-
GULLINIA PALLIATA	-	-	4	-	-	-	-	-	-	-
KIRCHNERIELLA LUNARIS	-	-	-	-	-	-	-	-	-	-
KIRCHNERIELLA OBESA	-	-	-	-	-	-	-	-	-	-
KIRCHNERIELLA SOLITARIA	-	-	4	5	-	-	-	-	8	-
ONCOSTIS SP.	6	5	-	-	-	-	-	-	-	-
PEDASTRUM DUPLEX	57	-	-	10	-	-	-	-	-	-
PEDASTRUM CUTOSUM	-	-	-	-	-	-	-	-	-	-
PEDASTRUM SIMPLEX	-	-	-	-	-	-	-	-	-	-
PEDASTRUM TETRAS V. TETRAEDRON	-	-	-	-	-	26	-	-	-	-
SCENEDESMUS ARUNDANS	25	-	17	-	15	-	-	21	17	15
SCENEDESMUS ACUMINATUS	-	-	-	-	-	-	-	-	-	-
SCENEDESMUS ARMATUS	76	77	17	31	15	39	35	36	67	108
SCENEDESMUS ARMATUS V. BICAUDATA	-	-	17	20	15	23	-	-	-	-
SCENEDESMUS BIJUCA	-	-	-	-	-	-	-	-	-	-
SCENEDESMUS DENTICULATUS	-	-	-	-	-	-	-	-	-	-
SCENEDESMUS QUADRICAUDA	164	126	77	82	63	33	38	68	25	8
SCHROEDERIA SETIGERA	-	-	-	-	-	6	-	-	4	46
SELANASTRUM MINUTUM	-	-	-	-	-	-	-	-	-	-
SELANASTRUM SP.	-	-	-	5	4	-	4	4	-	-
TETRAEDRON CAUDATUM	-	-	-	-	-	-	-	-	-	-
TETRAEDRON MINIMUM	-	-	-	-	-	-	-	-	4	-
TETRAEDRON REGULARE	-	-	-	-	-	-	-	-	-	-
TETRASTINIUM ELEGANS	-	-	-	-	-	-	-	-	-	-
TETRASTINIUM STAHOGENIFORME	-	-	-	-	-	13	-	-	-	-
CRYPTOPHYCEAE	-	-	-	-	-	-	-	-	-	-
CRYPTOMONAS SP.	-	-	-	-	-	-	-	-	-	-

[illegible]

TABLE H-1a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)									
	1	2	3	4	5	6	7	8	9	10
CYCLITELLA CATENATA	19	12	17	10	4	3	8	11	12	15
CYCLITELLA GLOMERATA	-	16	13	31	4	29	-	-	50	38
CYCLITELLA MENEGHINIANA	-	-	-	-	-	-	-	-	4	-
CYCLITELLA STELLIGERA	68	19	9	15	-	20	31	21	33	38
CYCLITELLA DELICATULA	6	-	-	-	-	-	-	-	-	-
CYCLITELLA LEPTOCERUS	-	-	-	-	-	-	-	-	-	-
CYMBELLA MICROCEPHALA	-	-	-	-	-	-	-	-	-	-
CYMBELLA MINUTA	-	-	-	-	5	-	-	-	-	-
CYMBELLA PUSILLA	-	-	-	-	-	-	-	-	-	-
CYMBELLA TUMIDA	-	-	-	-	5	-	-	-	-	-
CYMBELLA SP.	-	-	-	-	-	-	-	-	-	-
FUNDITIA CURVATA	-	-	-	-	-	-	-	4	-	-
FUNDITIA TENELLA	-	-	-	-	-	-	-	-	-	-
FUNDITIA SP.	-	-	-	-	-	3	-	-	-	-
FRAGILARIA BREVISTRATA	-	-	-	-	-	-	-	-	-	-
FRAGILARIA CAPUCINA	-	-	-	-	-	-	-	-	-	-
FRAGILARIA CAPUCINA V MESOLEPTA	6	-	-	10	-	-	-	-	-	-
FRAGILARIA CINSTRUENS	-	-	-	-	-	-	-	-	-	-
FRAGILARIA COTONENSIS	-	-	-	-	7	3	-	7	-	-
FRAGILARIA LEPTOSTAURON	-	-	-	-	-	-	-	-	-	-
FRAGILARIA PINNATA	-	-	-	-	-	-	-	-	-	-
FRUSTULIA HUMBLICIDES	-	-	-	-	-	-	-	-	-	-
GOMPHONEMA PARVULUM	-	-	-	-	-	-	-	-	-	-
GOMPHONEMA SP.	-	-	-	-	5	-	-	-	-	-
GYROSTOMA ACUMINATUM	-	-	-	-	-	-	-	-	-	-
GYROSTOMA SP.	50	44	26	31	26	10	65	64	50	42
MELOSIRA AMBIGUA	-	-	-	-	-	-	-	-	-	-
MELOSIRA ELSTANS	2250	1656	1500	1733	1377	1062	1788	1175	1682	1481
MELOSIRA GRAPULATA	57	34	13	56	37	16	8	18	8	27
MELOSIRA GRAPULATA V. ANGUSTISSIMA	13	-	5	31	-	13	23	25	8	8
MELOSIRA VARIANS	-	-	-	-	-	6	-	-	-	-
NAVICULA CRYPTOCERHALP	-	-	-	-	-	10	4	11	12	11
NAVICULA ERIGUA V CAPITATA	-	-	-	-	-	-	-	-	-	-
NAVICULA FRACATA	-	-	-	-	4	-	-	-	-	-
NAVICULA GASTRUM	-	5	-	-	-	-	-	-	-	-
NAVICULA GREGARIA	-	-	-	-	-	-	-	-	-	-
NAVICULA LATENS	-	-	-	-	-	-	-	-	-	-
NAVICULA LATROPUNCTATA	-	-	-	-	-	-	-	-	-	-
NAVICULA PUPULA	-	-	-	-	7	3	4	4	-	-
NAVICULA SALINARIUM V INTERMEDIA	6	5	4	5	-	3	-	-	-	-
NAVICULA SP.	-	14	4	-	-	0	-	-	-	-
NITZSCHIA ACICULARIS	25	-	-	-	7	-	8	4	-	-

TABLE H-1a (cont.)

TAXONOMIC CLASSIFICATION	1	2	3	4	5	6	7	8	9	10
NITZSCHIA AMPHIDIA	6	-	-	-	-	-	-	-	-	-
NITZSCHIA COMMUNIS	-	-	-	-	-	3	-	-	-	-
NITZSCHIA GRACILIS	-	-	-	-	-	-	-	-	-	-
NITZSCHIA KUTZINGIANA	6	15	-	-	4	6	8	-	-	-
NITZSCHIA KUTZINGIANA V. SCALPELLIFORMIS	19	15	-	5	4	-	-	-	-	-
NITZSCHIA PALEA	-	-	9	5	4	6	15	11	8	-
NITZSCHIA PALEACEA	-	-	-	-	-	-	-	-	-	-
NITZSCHIA SP.	-	-	-	-	-	-	-	-	-	-
UPPERMORA MARTYI	-	-	-	-	-	-	-	-	-	-
PIANULARIA SP.	-	-	-	-	-	3	4	-	-	-
STEPHANODISCUS SP.	6	-	-	5	-	-	-	-	-	-
SURIELLA ATOMUS	-	-	-	-	-	-	-	-	-	-
SURIELLA SP.	-	-	-	-	-	-	-	-	-	-
SYNDRA CAPITATA	-	-	-	-	-	-	-	-	-	-
SYNDRA DELICATISSIMA	6	5	-	-	-	-	-	-	-	-
SYNDRA RUMPLENS	-	-	-	-	-	-	-	-	-	-
SYNDRA RUMPLENS V. FAMILIARIS	-	-	-	-	-	-	-	-	-	-
SYNDRA ULNA	-	-	-	-	-	3	8	-	-	-
TABELLARIA FLOCCULOSA V. FLOCCULOSA	-	-	-	-	-	-	-	-	-	-
EUGLENDPHYCEAE	-	-	-	-	-	-	-	-	-	-
EUGLENA SP.	-	10	-	10	4	-	-	-	-	-
PHACUS SP.	6	-	-	-	-	-	-	-	-	-
THACHELOCHNAS SP.	-	-	-	-	-	-	-	-	-	-
CILICPHORA	-	-	-	-	-	-	-	-	-	-
STROBILIDIUM GYRANS	-	-	-	-	-	-	-	-	-	-
UNID CILICPHORA	-	-	-	-	-	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS	3230	2450	2531	2293	1884	1738	1807	1974	2331	1995
NUMBER OF TAXA	26	22	25	27	25	32	25	27	33	18

TABLE II-1b

●●LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY - PHYTOPLANKTON (CELLS/ML) ●●
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I, CYCLE 1

(April 17-21, 1978)

TAXONOMIC CLASSIFICATION	11	12	13	14	15	16	17	18	19	(CELLS/ML)
CYANOPHYCEAE										
ANAFENA SP	-	74	-	-	-	17	-	-	-	-
APHANOLAPSA DELICATISSIMA	-	176	-	-	-	-	-	-	-	-
APHANIZOEE NIDULANS	-	-	-	-	-	-	-	-	-	-
CHROCOCCUS DISPERFUS	-	37	33	-	4	6	15	-	-	-
CHROCOCCUS DISPERFUS V MINOR	-	-	-	-	-	-	-	-	-	-
CHROCOCCUS MINUTUS	-	-	-	-	17	-	-	-	-	-
CHROCOCCUS MINUTUS	-	-	41	-	-	-	-	39	60	-
CHROCOCCUS SP	-	18	-	-	-	-	-	-	-	-
GLORIOCAPSA SP	-	-	-	-	-	11	-	-	-	-
MERISOPEDIA TENUISSIMA	-	5	-	48	35	-	-	-	-	-
MICROCYSTIS IMBERTA	-	-	296	97	17	-	-	-	-	-
OSCILLATORIA SP	-	-	-	6	3	-	-	-	-	-
SPIRULINA SP	-	-	-	-	-	-	3	-	-	-
CHLOROPHYCEAE										
ANKISTRODESCHUS CONVOLUTUS	5	-	45	12	2	4	4	10	6	-
ANKISTRODESCHUS FALCATUS	-	-	21	-	5	-	6	-	-	-
ANKISTRODESCHUS NANNOSSELENE	-	-	-	-	-	-	-	-	-	-
ANKISTRODESCHUS SPIRALIS	-	-	-	-	-	-	-	-	-	-
CHARACTON ARUTICUM	-	23	25	-	5	3	2	5	-	-
CHLADONOMAS SP	-	-	-	-	-	-	-	-	-	-
CHLORELLA SP	-	-	-	-	-	3	-	-	-	-
CHLORELLA SP	-	-	-	3	-	6	-	-	6	-
CLOSTETUM SP	-	-	-	-	-	-	-	-	-	-
CYLASTRUM CAMBRICUM	9	37	-	-	12	22	22	5	-	-
CYLASTRUM MICROPORUM	-	47	-	-	-	-	-	-	-	-
CYLASTRUM PIRUS	-	-	-	-	-	-	-	-	-	-

TABLE H-1b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)									
	11	12	13	14	15	16	17	18	19	
CULASTRUM PHOROCIDEUM	5	102	6	5	1	1	1	5	72	
CUSMARIUM SP	2									
CRUCIGENIA APICULATA										
CRUCIGENIA FEMSTRATA										
CRUCIGENIA QUADRATA		55		3	4	6	4			
CRUCIGENIA TETRAPELIDIA		509	33						24	
DICTYOSPHAERIUM PULCHELLUM						148	29		222	
GELFARINIA RADIATA						1			12	
KINCHMARELLA LUNARIS			12							
KINCHMARELLA OHL SA					2	1				
KINCHMARELLA SOLITARIA			16	36				5	6	
ORCYSTIS SP										
PERIASTRUM DUPLEX		37				3				
PERIASTRUM ORTUSUM					17					
PERIASTRUM SIMPLEX			91							
PEDIASTRUM TETRAS V TETRAODON		18								
SCENEDESMUS ABUADANS	5	18	49	24	10			10	30	
SCENEDESMUS ACUMINATUS		9								
SCENEDESMUS ARMATUS	56	79	86	24	14	6	4	98	60	
SCENEDESMUS ARMATUS V BICAUDATA	19	120	25			6	6		36	
SCENEDESMUS UJUGA										
SCENEDESMUS DENTICULATUS	5	195	16	12	4	25	2	98	72	
SCENEDESMUS GUACHICAUDA	28	157	58	39	15				132	
SCHROEDERIA SETIGERA	5									
SELANASTRUM MINUTUM		284	8					5		
STAUASTRUM SP		5								
TETRALECON CAUDATUM										
TETRALECON MINUTUM										
TETRALECON MINUTUM		14			9				6	
TETRALECON REGULARE			25		4					
TETRALECON ELEGANS										
TETRALECON STAUROGENIFORME			49		4	8		5		
CRYPTOPHYCEAE										
CRYPTOPHYCES SP		5								

TABLE H-1b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)													
	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DINOPHYCEAE														
CEPATIUM HIRUNDINELLA	-	5	-	-	2	1	-	-	-	-	-	-	-	-
PERICINUM SP	-	-	-	-	-	-	-	-	-	-	-	-	-	-
XANTHOPHYCEAE														
OPHIOTYTIUM CAPITATUM V LONGISPINUM	-	5	-	-	-	-	-	-	-	-	-	-	-	-
CHRYCOPHYCEAE														
DINOBRYON DIVERGENS	-	30%	12	9	2	13	7	5	-	-	-	-	-	-
DACILLARIOPHYTA (DIATOMS)														
ACHNANTHES CLEVEI	-	1	45	15	14	1	3	1	1	1	1	1	1	1
ACHNANTHES LANCEOLATA	-	1	1	1	1	1	1	1	1	1	1	1	1	1
ACHNANTHES LANCEOLATA V OUBIA	-	1	1	1	1	1	1	1	1	1	1	1	1	1
ACHNANTHES SP	-	1	1	1	1	1	1	1	1	1	1	1	1	1
AMPHILEURA PELLUCIDA	-	1	1	1	1	1	1	1	1	1	1	1	1	1
AMPHORA PERRUSSELLA	-	1	1	1	1	1	1	1	1	1	1	1	1	1
ANOMOEONEIS FRILIS	-	1	1	1	1	1	1	1	1	1	1	1	1	1
ASTERIONELLA FORMOSA	-	1	1	1	1	1	1	1	1	1	1	1	1	1
COCCONEIS DISCULUS	-	1	1	1	1	1	1	1	1	1	1	1	1	1
COCCONEIS PEDICULUS	-	1	1	1	1	1	1	1	1	1	1	1	1	1
COCCONEIS PLACENTIA	-	1	1	1	1	1	1	1	1	1	1	1	1	1
COCCONEIS PLACENTIA V EUGLYPTA	-	1	1	1	1	1	1	1	1	1	1	1	1	1

TABLE H-1b (cont.)

TAXONOMIC CLASSIFICATION	11	12	13	14	15	16	17	18	19	20
CYCLotella CATENATA	23	28	679	3	1	14	1	15	842	
CYCLotella GLOMERATA	89	5						679		
CYCLotella MELCHIONIANA	19	231	4	6	6		4	10	24	
CYCLotella STELLIGERA				12						
CYMBELLA MERICATA										
CYMBELLA LEPTOCERUS										
CYMBELLA MICROCEPHALA			12	166		3				
CYMBELLA MINUTA			4	18						
CYMBELLA PUSILLA				19						
CYMBELLA TUMIDA				15	1	1				
CYMBELLA SP.										
EUNOTIA CURVATA										
EUNOTIA TENELLA							2	5		
EUNOTIA SP.		6								
FRAGILARIA INEVISTRIATA				6						
FRAGILARIA CAPUCINA				24						
FRAGILARIA CAPUCINA V. MESOLEPTA										
FRAGILARIA CONSPICUENS				9				15	60	
FRAGILARIA CRUTONENSIS			4							
FRAGILARIA LEPTICSTAURON		18	95	184	12	7	3	34	42	
FRAGILARIA PINNATA				329						
FRUSTULIA RHOMBOIDES										
GOMPHONEMA PARVULUM				6			7			
GOMPHONEMA SP.										
GYROSEGMA ACUMINATUM										
GYROSEGMA SP.										
MELOSIRA AMBIGUA	37	23	95	6				34	54	
MELOSIRA DISTANS	1877	14						958	1130	
MELOSIRA GRANULATA	56	5					2	29		
MELOSIRA GRANULATA V. ANGUSTISSIMA	9					10	16	34	30	
MELOSIRA VARIANS	19	9	33	13	1			10		
NAVICULA CRYPTOCEPHALA	5	18	33	18	3	4	3	19		
NAVICULA EXIGUA V. CAPITATA										
NAVICULA FRACTA		5								
NAVICULA GASTRUM			4							
NAVICULA GREGARIA										
NAVICULA LATENS										
NAVICULA LATROPUNCTATA										
NAVICULA PUPULA	14	5	16	9	1		3		6	
NAVICULA SALINARIUM V. INTERMEDIA										
NAVICULA SP.	5	37	45	27	6	1	6	15	6	
NITZSCHIA ACICULARIS	9	14		2	1				3	

TABLE H-1b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)									
	11	12	13	14	15	16	17	18	19	
NITZSCHIA AMPHILETA	-	-	-	3	-	-	-	-	-	-
NITZSCHIA COMMUNIS	-	-	-	-	-	-	-	-	-	-
NITZSCHIA GRACILIS	-	-	-	-	-	-	-	-	-	-
NITZSCHIA KUTZINGIANA	-	-	-	-	-	-	-	-	-	-
NITZSCHIA OBUSA V SCALPELLIFORMIS	-	-	-	-	-	-	-	-	-	-
NITZSCHIA PALEA	5	5	-	-	1	-	-	-	-	-
NITZSCHIA PALEACEA	-	-	-	3	-	-	-	-	-	-
NITZSCHIA SP	-	-	-	-	-	3	-	-	-	-
OPEPHORA MARTYI	-	-	-	-	-	-	-	-	-	-
PINNULARIA SP	-	-	-	-	-	-	-	5	-	-
STEPHANODISCUS SP	-	14	-	-	-	-	-	-	-	6
SUTRELLA ATOMLE	5	-	-	-	-	-	-	-	-	-
SUTRELLA SP	-	-	-	-	-	-	-	-	-	-
SYNEORA CAPITATA	5	28	-	-	-	-	-	-	-	6
SYNEORA DELICATISSIMA	-	-	-	-	-	-	-	-	-	-
SYNEORA RUPPENS	-	-	-	-	-	-	P	-	-	-
SYNEORA RUPPENS V FAMILIARIS	-	-	-	-	-	-	-	-	-	-
SYNEORA ULNA	-	-	4	-	-	1	-	-	-	-
TABELLARIA FLOCCULOSA V FLOCCULOSA	5	-	-	-	-	-	-	-	-	-
EUGLENDOPHYCEAE										
EUGLENA SP	-	-	8	1	-	-	-	-	-	-
PHACUS SP	-	14	8	3	6	1	-	-	-	-
TRACHELONONAS SP	-	-	8	-	-	-	-	-	-	-
CILIOPHORA										
STROBILIDIUM GYRANS	5	-	-	6	-	-	-	-	-	-
UNID CILIOPHORA	5	-	25	-	-	4	5	5	6	-
TOTAL NUMBER OF ORGANISMS	2544	2824	2152	1247	249	379	175	2241	3084	60000
NUMBER OF TAXA	29	50	44	43	35	39	34	31	33	60000

TABLE H-2a

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY - PHYTOPLANKTON (CELLS/ML) **
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE 1, CYCLE 2

(June 5-7, 1978)

TAXONOMIC CLASSIFICATION	1	2	3	4	5	6	7	8	9	10
NUMBER OF ORGANISMS AT STATION: (CELLS/ML)										
CYANOPHYCEAE										
ANABAENA SP	-	64	-	-	-	-	-	-	745	-
ANABAZA SP	-	-	-	-	-	-	-	-	798	839
APHANOCAPSA FLACIDATA	-	-	-	-	-	-	-	-	-	-
APHANOCAPSA PULCHRA	-	-	-	-	-	-	-	-	-	-
APHANOTHECE MIDULATUS	-	-	-	-	-	-	23	-	-	-
CHROCOCCUS DISPERGUS	-	64	-	-	-	-	-	-	32	268
CHROCOCCUS LIMNETICUS	-	-	-	-	-	-	-	-	-	-
CHROCOCCUS MINIMUS	70	51	62	41	-	-	-	-	174	754
CHROCOCCUS PALLIDUS	-	-	-	-	-	-	-	-	-	-
MERISMOPECE GLAUCA	-	-	-	-	-	-	-	-	-	-
MERISMOPECE TENUISIMA	70	-	-	82	-	-	-	-	3598	4792
MICROCYSTIS INCERTA	-	-	-	-	-	-	-	-	-	2627
OSCILLATORIA SP	70	191	-	128	19	-	-	-	-	-
SPIRULINA SP	-	-	-	-	-	-	-	-	16	24
CHLOROPHYCEAE										
ACTINASTRUM MANTZSCHII	-	-	-	-	-	-	-	-	-	-
ACTINOSTRUM PALCARI	-	6	5	-	-	-	23	-	32	100
ANKISTRODESMIUS NANTIOSELENE	9	-	-	-	-	-	-	-	47	292
ANKISTRODESMIUS SPITALIS	-	6	-	-	-	-	-	-	-	-
CARTERIA SP	-	-	-	-	-	-	-	-	-	-
CHARACTUM AMBIGUUM	-	-	-	-	-	-	-	-	-	-
CHLAMYDOMONAS SP	-	-	-	-	-	-	-	-	-	-
CHLORELLA SP	-	-	-	-	-	-	-	-	-	36
CHODATILLA CHODATI	-	-	-	-	-	-	-	-	-	12
CHODATELLA SUBSALSA	-	-	-	-	-	-	-	-	-	-
CLESTERIUM SP	-	-	-	-	-	-	-	-	16	-
CHELASTRUM CAMBRICUM	-	-	-	-	-	-	-	-	-	-
CHELASTRUM MICROPORUM	-	57	41	-	-	25	87	8	250	97
CHELASTRUM MINUS	-	-	-	-	-	-	-	-	-	-

TABLE H-2a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)									
	1	2	3	4	5	6	7	8	9	10
CLULASTRUM PHORUSCIDEUM	-	-	-	-	-	-	-	-	32	-
COLASTRUM SIPHAEICUM	-	-	-	-	-	-	-	-	-	-
CUSMARUM SP	-	-	-	-	-	-	-	-	16	-
CRUCIGENIA APICULATA	-	-	-	-	-	-	-	-	-	-
CRUCIGENIA QUADRATA	-	-	-	-	-	-	-	-	-	36
CRUCIGENIA TETRAFFIDA	-	-	-	-	-	-	-	-	-	-
DICTYOSPHAERIUM PULCHELLUM	-	-	-	-	-	-	-	-	626	645
ELAKATOMBIIX GELATINOSA	-	-	-	-	-	-	3	-	-	-
ELASTRUM SP	-	-	-	-	-	-	-	-	-	-
GUENENINIA PAUCISPINA	-	-	-	-	-	-	-	-	-	-
GOLENKINIA RADIATA	-	-	36	26	-	-	3	4	317	401
KIRCHMERIELLA LUNARIS	-	6	-	-	-	-	-	-	111	170
KIRCHMERIELLA DEESA	-	-	-	-	-	-	-	-	-	-
KIRCHMERIELLA SOLITARIA	-	-	-	-	-	-	-	-	-	-
KIRCHMERIELLA SP	-	-	-	5	3	-	23	-	-	-
OUCEYSTIS SP	-	-	-	-	-	-	-	-	-	-
PANDORINA MCRUM	-	-	-	-	-	-	-	-	390	109
PANDURINA SP	-	-	-	-	-	-	-	-	571	924
PEDIASTRUM BIRACIATUM	148	-	-	-	-	-	-	-	63	97
PEDIASTRUM BORYANUM	-	-	-	-	-	-	-	-	-	-
PEDIASTRUM DUPREI	-	-	-	-	-	-	-	-	-	-
PEDIASTRUM ONTULUM	70	-	-	-	-	-	-	-	127	-
PEDIASTRUM SIMPLEX	-	-	-	-	-	-	-	-	-	-
PEDIASTRUM TETRAS V TETRADON	-	-	-	-	-	-	-	-	-	49
PEDIASTRUM SP	-	-	-	-	-	-	-	-	-	-
PTEROMNAS SP	52	-	-	-	-	-	-	-	16	122
SCENEDESMS ANUDANS	-	-	-	-	-	-	-	-	32	49
SCENEDESMS ACUMINATUS	-	-	-	-	-	-	-	-	-	-
SCENEDESMS ARMATUS	70	64	-	72	-	-	23	-	206	243
SCENEDESMS ARMATUS V BICAUDATA	35	38	-	10	-	-	23	16	95	97
SCENEDESMS RIJUCA	-	-	-	-	-	-	-	-	32	24
SCENEDESMS DENTICULATUS	-	25	-	41	-	-	-	-	-	-
SCENEDESMS QUADRICAUDA	270	89	-	-	-	-	6	-	246	511
SCHOLDERIA SETIGERA	-	-	-	-	-	-	-	-	-	-
SELANASTRUM MINUTUM	-	6	-	-	-	-	-	-	-	-
SELANASTRUM SP	-	-	-	-	-	-	-	-	8	-
TETRAECRON CAUDATUM	-	-	-	-	-	-	3	-	8	12
TETRAECRON MINIMUM	-	-	10	-	-	3	-	-	-	-
TETRAECRON ELEGANS	-	-	-	-	-	-	-	-	16	36
TETRAECRON STAUROGENIFORME	-	25	-	-	-	-	-	-	47	146
CRYPTOPHYCEAE	-	-	-	-	-	-	-	-	-	-

TABLE H-2a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATIONS: (CELLS/ML)									
	1	2	3	4	5	6	7	8	9	10
UNITO CRYPTOMONACACEAE	-	-	-	-	-	-	-	-	-	-
DINOPHYCEAE										
GYMNOIDINIUM SP	9	-	-	-	-	-	-	-	-	36
PRIDIINIUM SP										
XANTHOPHYCEAE										
BRACHIOCHLORIS SP	-	-	-	-	-	-	-	-	-	85
CENTETRACIUS NITANOPHORUS	-	13	-	-	-	-	-	-	-	-
OPHIOCYTUM CAPITATUM	-	-	-	-	-	-	-	-	-	-
OPHIOCYTUM CAPITATUM V LONGISPINUM	-	-	-	-	-	-	-	-	-	-
CHRYSPHRYCEAE										
DINOBRYON CAMPANULOSTIPITATUM	-	-	-	-	-	-	-	-	-	-
DINOBRYON DIVERGENS	-	-	-	-	-	-	-	-	-	-
BACILLARIOPHYTA (Diatoms)										
ACHNANTHES CLEVELI	9	-	5	-	-	-	-	-	-	-
ACHNANTHES LANCEOLATA V DUBIA	-	-	-	-	-	-	-	-	-	24
AMPHIDOMA OVALIS	-	-	-	-	-	-	-	-	-	-
AMPHIDOMA PERPUSILLA	-	13	10	10	-	-	12	-	55	12
ASTHIONELLA FORMOSA	-	-	-	-	-	-	-	-	-	-
COCCELLIS PLACENTULA	-	-	-	-	-	-	-	-	-	-

TABLE H-2a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)									
	1	2	3	4	5	6	7	8	9	10
COCCIDIS PLACENTULA V EUGLYPTA	-	-	-	-	-	-	-	-	-	-
CYCLOTELLA CATINATA	70	150	62	26	16	25	41	20	16	12
CYCLOTELLA GONERATA	-	-	-	-	-	-	-	-	-	-
CYCLOTELLA STELLIGERA	26	34	67	31	5	13	20	24	55	73
CYMBELLA LEPTOCEROS	-	-	-	-	-	-	-	-	-	-
CYMBELLA MICROCEPHALA	-	-	-	-	-	-	-	-	-	-
CYMBELLA MINUTA	-	-	-	-	-	-	-	-	-	-
CYMBELLA TUMIDA	-	-	-	-	-	-	-	-	-	-
DIAUNTES SP.	-	-	-	-	-	-	-	-	-	-
FUNGITIA TENELLA	-	-	-	-	-	-	-	4	-	-
FUNGITIA SP.	-	6	-	-	-	-	-	-	-	-
FRAGILARIA CONSTRUENS	-	-	-	-	-	-	-	-	-	-
FRAGILARIA GROENENSIENS	-	-	-	-	-	-	-	-	-	-
FRAGILARIA LEPIDOCYCLURON	-	332	135	-	-	-	-	-	-	-
FRAGILARIA PINNATA	-	-	-	-	-	-	-	-	-	-
FRUSTULIA RHOMBONIDES	-	-	-	-	-	-	-	-	-	-
FRUSTULIA VULGARIS	5	-	5	-	-	-	-	-	-	-
GOMPHONEMA PARVULUM	-	13	-	5	3	6	-	-	-	-
MELOSIRA AMBIGUA	17	64	47	1070	15	9	1107	8	127	73
MELOSIRA DISTRANS	3164	2271	1731	61	1146	1418	29	1714	2940	3912
MELOSIRA GRANULATA	61	63	31	-	11	6	-	20	16	49
MELOSIRA GRACILATA V ANGUSTISSIMA	35	-	-	-	-	-	-	-	-	-
MELOSIRA VARIANS	9	13	5	20	27	3	14	28	-	-
NAVICULA CRYPTOCOPHALA	-	-	-	15	-	-	6	12	6	-
NAVICULA EXIGUA V CAPITATA	5	-	-	-	3	-	3	4	-	-
NAVICULA GREGARIA	-	-	-	-	3	-	-	-	-	-
NAVICULA PUPULA	5	-	-	-	-	-	3	-	-	-
NAVICULA SALINARIUM V INTERMEDIA	-	-	-	-	-	-	-	-	-	-
NAVICULA SP.	-	-	-	-	-	-	-	-	-	-
MEIODIUM AFFINE V LONGICEPS	-	-	-	-	-	-	-	-	-	-
NETZSCHIA ACICULARIS	-	-	-	-	-	-	-	-	-	-
NETZSCHIA HOLSATICA	-	-	-	-	-	-	3	-	-	-
NETZSCHIA IGNORATA	-	-	5	-	-	-	-	-	-	-
NETZSCHIA KUTZINGIANA	9	13	5	5	-	-	-	-	-	-
NETZSCHIA PALEA	-	6	-	-	-	-	-	-	-	-
NETZSCHIA PALEACEA	-	-	-	-	-	-	-	-	-	-
NETZSCHIA SINUATA V TABELLARIA	-	-	-	-	-	-	-	-	-	-
NETZSCHIA THURNALIS	-	4	5	-	-	-	3	-	-	-
NETZSCHIA SP.	-	-	-	-	-	-	-	-	-	-
PINNULARIA APALUJENSIS V ROSTRATA	-	-	-	-	-	-	-	-	-	-
PINNULARIA SUBCAPITATA	17	6	5	-	3	3	-	-	-	-
PINNULARIA SP.	-	-	-	-	-	-	-	-	-	-
SYNEURA CAPITATA	-	-	-	-	-	-	-	-	-	-
SYNEURA DELICATISSIMA	-	-	-	-	-	-	-	-	-	-
SYNEURA RUMPHENS	-	-	-	-	-	-	-	-	24	-

TABLE H-2a (cont.)

TAXONOMIC CLASSIFICATION	1	2	3	4	5	6	7	8	9	10
SYNECRA ULNA TERRESTRIAL MUSICA	-	-	5	-	-	-	-	-	-	-
EUGLENDOPHYCEAE										
EUGLENA SP TRACHELOMONAS SP	-	-	5	5	-	-	3	-	8	24 61
CILIOPHORA										
UNID CILIOPHORA	-	-	-	-	-	-	3	-	40	49
ROTIFERA										
UNID ROTIFER	-	-	-	-	-	-	-	-	-	-
PROTOZOANS										
VORTICELLA SP	-	-	-	-	-	-	-	-	-	12
TOTAL NUMBER OF ORGANISMS	4326	3746	2362	2587	1259	1514	1478	1878	11944	17947
NUMBER OF TAXA	24	32	23	22	13	11	24	15	40	41

TABLE H-2b

● LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY - PHYTOPLANKTON (CELLS/ML) ●
 CORPS OF ENGINEERS (CONTRACT EACW01-78-C-0101) PHASE 1, CYCLE 2
 (June 5-7, 1978)

TAXONOMIC CLASSIFICATION	11	12	13	14	15	16	17	18	19	
NUMBER OF ORGANISMS AT STATION: (CELLS/ML)										
CYANOPHYCEAE										
ANABENA SP	-	3776	-	-	-	-	-	-	-	.....
APHANOCAPSA DELICATISSIMA	79	-	-	-	111	-	-	131	-	.....
APHANOCAPSA ELACHISTA	-	-	-	-	-	-	-	-	-	.....
APHANOCAPSA PULCHRA	-	40	-	-	98	-	5	29	-	.....
APHANOTHECE NIDULANS	39	2373	310	-	117	-	7	106	53	.....
CHROOCOCCUS DISPERBUS	-	443	38	60	-	-	-	-	-	.....
CHROOCOCCUS LINNETICUS	-	-	-	-	-	10	-	-	-	.....
CHROOCOCCUS MINIMUS	-	58	22	40	10	7	3	-	-	.....
CHROOCOCCUS PALLIDUS	-	61	19	20	62	-	-	-	-	.....
MERISOMEDIA GLAUCA	-	3744	-	-	-	-	-	221	232	.....
MERISOMEDIA TENUISSIMA	710	769	264	413	656	-	14	893	-	.....
MICROCYSTIS INCHIA	1880	2442	206	-	255	71	-	-	-	.....
OSCILLATORIA SP	-	-	-	105	12	7	14	-	-	.....
SPIRULINA SP	-	-	-	-	-	-	-	-	-	.....
CHLOROPHYCEAE										
ACTINASTRUM MANTZSCHII	-	-	88	-	173	14	-	-	-	.....
ANKISTRODESMIUS FALCATUS	30	7	88	17	13	P	P	19	-	.....
ANKISTRODESMIUS NANNICENTENE	45	14	19	25	13	4	-	24	11	.....
ANKISTRODESMIUS SPIRALIS	-	-	-	30	10	-	P	-	-	.....
CANTHIA SP	-	-	7	-	2	4	P	-	-	.....
CHAMACIUM ARBICUM	-	7	-	-	-	-	P	-	-	.....
CHLAMYDOMONAS SP	-	-	5	5	2	3	-	-	-	.....
CHLORALLA SP	-	-	-	-	-	-	-	-	-	.....
CLODARELLA CHODATI	-	-	-	-	-	-	-	-	-	.....
CHODARELLA SUBSALSA	-	-	-	-	-	-	-	-	-	.....
CLOSTERIUM SP	-	-	-	5	-	2	P	5	3	.....
CODONASTRUM CAMERICUM	-	112	-	-	-	-	-	-	-	.....
CODONASTRUM MICROPORUM	178	18	66	50	2	15	P	98	132	.....
CODONASTRUM MINUS	632	-	-	-	-	-	-	-	42	.....

TABLE H-2b (cont.)

TAXONOMIC CLASSIFICATION	11	12	13	14	15	16	17	18	19
	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)								
COELASTRUM PHODOSCIDEUM	-	-	-	-	-	-	3	-	42
COELASTRUM SPHAERICUM	-	-	3	5	27	-	-	-	-
COSMARUM SP	158	65	-	-	3	-	3	-	5
CRUCIGENIA APICULATA	-	-	-	-	-	-	-	-	-
CRUCIGENIA QUADRATA	99	14	66	10	-	-	-	-	-
CRUCIGENIA TETRAPERDIA	128	108	52	10	-	-	-	-	106
DICTYOSPHAERIUM PACHYELLUM	424	43	-	-	85	-	4	-	-
ELAKATAPLEX GCLATINOSA	-	7	-	-	-	-	-	-	-
FUASTRUM SP	-	-	-	-	-	-	-	-	-
GULEAKINIA PAUCISPINA	10	29	5	2	-	1	-	-	-
GULEAKINIA RACIATA	-	4	22	-	27	-	1	24	-
KIRCHNERIELLA LUNARIS	49	40	47	52	73	10	1	34	5
KIRCHNERIELLA OBESA	158	-	14	10	2	-	-	5	11
KIRCHNERIELLA SOLITARIA	-	-	-	30	2	-	-	-	-
KIRCHNERIELLA SP	217	-	14	-	20	-	-	5	5
OOCYSTIS SP	-	4	-	-	-	-	-	-	-
PANDORINA MGRUM	-	-	41	82	-	-	-	-	-
PANDORINA SP	-	-	66	-	22	7	2	-	-
PEDIASTRUM BIRACIATUM	-	-	-	-	-	-	-	-	-
PEDIASTRUM BRYANUM	-	-	-	30	-	-	-	-	-
PEDIASTRUM DUBILEX	-	-	-	-	15	-	-	-	-
PEDIASTRUM OUTUSUM	158	-	-	-	-	-	-	-	42
PEDIASTRUM SIMPLEX	-	-	27	-	-	-	-	-	-
PEDIASTRUM TETNAS V TETRAODON	-	-	-	-	-	-	-	19	-
PEDIASTRUM SP	39	-	-	-	-	-	-	-	-
PTEROMNAS SP	20	-	-	-	2	-	2	63	5
SCENEDESIMUS ABUNDANS	118	14	-	20	-	-	3	21	21
SCENEDESIMUS ALUMINATUS	-	-	-	-	-	-	-	-	-
SCENEDESIMUS ARMATUS	335	29	33	30	53	2	7	281	106
SCENEDESIMUS ARMATUS V BICAUDATA	138	36	14	10	7	5	8	58	47
SCENEDESIMUS BILUCA	-	87	58	50	-	-	-	-	11
SCENEDESIMUS DENTICULATUS	-	-	55	2	-	-	-	5	84
SCENEDESIMUS QUADRICAUDA	197	123	5	37	28	17	5	218	111
SCHROEDERIA SETICERIA	-	-	-	-	-	-	-	-	-
SELANASTRUM MINUTUM	-	-	11	-	3	-	-	-	-
SELANASTRUM SP	-	47	-	2	2	-	-	14	5
TETRAODON CAUDATUM	-	-	-	-	-	-	-	-	-
TETRAODON MINIMUM	10	22	8	5	28	-	-	5	-
TETRAODON FLEGANS	-	-	-	-	2	-	-	-	-
TETRAODON STAUROGENIFORME	-	14	-	-	7	-	-	77	-
CRYPTOPHYCEAE	-	-	-	-	-	-	-	-	-

TABLE H-2b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)									
	11	12	13	14	15	16	17	18	19	
UNID. CRYPTOMONADACEAE	-	-	311	92	32	-	-	-	-	
DINOPHYCEAE										
GYMNOIDINIUM SP.	-	4	-	5	-	-	-	5	5	
PERIDINIUM SP.	20	29	3	-	-	-	-	-	-	
XANTHOPHYCEAE										
ARACHNOCLOCHORIS SP.	39	7	-	12	18	-	-	14	16	
CENTAIPTACTUS HELANOPHORUS	-	-	-	-	-	-	-	-	-	
OPHIOCYTUM CAPITATUM	-	-	-	-	-	-	-	-	-	
OPHIOCYTUM CAPITATUM V LONGISPINUM	10	4	-	-	2	2	-	-	-	
CHRYSDOPHYCEAE										
DINOBYRON CAMPANULOSTIPITATUM	-	54	-	12	-	-	-	-	-	
DINOBYRON DIVERGENS	-	18	-	-	-	-	-	-	-	
BACILLARIOPHYTA (DIATOMS)										
ACHMANTHES CLEVELI	-	11	-	15	-	2	2	10	5	
ACHMANTHES LANCEOLATA V DUBIA	20	-	3	2	8	2	2	10	5	
AMPHICRA OVALIS	-	-	-	-	-	-	-	-	-	
AMPHORA PERPUSSELLA	-	-	-	-	-	-	-	-	-	
ASTENIONELLA FURCOSA	-	-	-	-	-	-	-	-	-	
COCCONELLIS PLACENTULA	-	-	-	-	-	-	-	-	-	

[illegible]

TABLE H-2b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)									
	11	12	13	14	15	16	17	18	19	
SYNECHRA ULNA	-	-	-	-	2	2	2	-	-	-
TEPHROSINE MUSICA	-	-	-	-	-	-	-	-	-	-
EUGLEMPHYCEAE										
EUGLENA SP	-	4	3	2	3	P	-	5	5	
TRACHELOMONAS SP	-	7	-	12	8	P	2	-	-	
CILIOPHORA										
UNID CILIOPHORA	10	18	14	2	3	-	P	14	16	
ROTIFERA										
UNID ROTIFER	-	-	5	-	-	-	-	5	-	
PROTOZOANS										
VORTICELLA SP	-	-	8	-	-	-	-	-	-	
TOTAL NUMBER OF ORGANISMS	9195	15377	2306	1724	2232	244	164	3854	3178	
NUMBER OF TAXA	41	55	53	59	61	41	49	39	38	

TABLE H-3a

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY - PHYTOPLANKTON (CELLS/ML) **
 COMPS OF ENGINEERS (CONTRACT DACW01-7A-C-0101) PHASE I, CYCLE 3
 (July 17-20, 1978)

TAXONOMIC CLASSIFICATION	1	2	3	4	5	6	7	8	9	10
CYANOPHYCEAE										
ANABAENA SP	-	-	-	-	-	-	-	-	-	-
ANABAEINOPSIS SP	1151	1740	831	588	436	283	35	413	475	294
APHANIZOEMON FLOS-AQUAE	-	-	-	-	-	-	-	-	-	-
APHANOCARPA DELICATISSIMA	167	274J	-	2615	1015	215	631	184	3140	2136
APHANOCARPA ELUCIDATA	167	-	-	-	-	-	655	397	677	-
APHANOCARPA PULCHRA	-	-	-	-	-	-	-	-	-	-
APHANOTHECE MIDULANS	-	-	-	-	-	-	-	-	-	-
CHROCOCCUS DISPERSUS	920	171	486	349	111	132	270	254	214	327
CHROCOCCUS LIMNETICUS	-	-	-	-	-	-	-	-	1022	-
CHROCOCCUS MINIMUS	-	-	-	-	-	-	-	-	-	-
CHROCOCCUS PALLIDUS	335	256	-	523	79	98	172	252	-	1209
LYNGBYA CONTORTA	-	-	-	-	-	-	105	150	83	287
LYNGBYA SP	-	-	-	-	-	147	-	-	-	-
MERTISMORPHIA PUNCTATA	-	640	448	174	460	10	637	185	1307	1068
MERTISMORPHIA TENUSSIMA	-	-	-	-	-	-	-	-	-	-
MICROCYSTIS INCEPITA	1004	1139	486	1440	2211	850	2632	3435	1425	1504
OSCILLATORIA LIMNETICA	397	352	-	261	325	245	471	142	113	835
OSCILLATORIA SP	-	-	-	-	-	-	-	-	-	-
SPHULINA LAXA	314	537	233	294	222	89	172	86	100	207
CHLOROPHYCEAE										
ANKISTROPSIDUS FALCATUS	52	43	19	-	-	5	113	18	24	22
ANKISTROPSIDUS HANNOSFLENE	52	21	-	-	-	10	0	-	5	5
ANKISTROPSIDUS SPHALIS	1008	1074	700	521	523	229	610	274	1044	810
CARTERIA SP	-	-	-	-	-	-	-	-	-	-
CHLAPHODONAS SP	-	-	-	-	-	-	17	-	59	22
CHLOROCYTHUS SP	-	-	-	-	-	-	-	-	-	-
CHLORELLA CHLORELLA	10	-	10	-	-	-	-	-	24	-
CHLORELLA SUJALSA	-	-	-	-	-	-	-	-	-	-
CHLORELLA WHITLANDIENSIS	-	-	-	-	-	-	-	-	-	-

TABLE H-3a (cont.)

TAXONOMIC CLASSIFICATION	1	2	3	4	5	6	7	8	9	10
CLOSTELIUM SP.	10	-	-	-	-	5	2	-	12	-
CLOSTELIUM MICROSPORIUM	94	-	-	87	127	-	-	-	-	-
CLOSTELIUM MIOUS	-	-	-	-	-	-	-	-	-	-
CLOSTELIUM MIOUS	-	-	-	-	-	-	-	-	-	-
CLOSTELIUM MIOUS	147	-	149	11	-	-	-	6	-	-
CLOSTELIUM MIOUS	-	-	-	-	-	-	-	-	-	-
CLOSTELIUM MIOUS	-	-	-	-	-	-	-	-	-	-
CLOSTELIUM MIOUS	63	72	56	93	32	24	11	24	12	44
CLOSTELIUM MIOUS	251	43	-	76	127	12	73	24	47	251
CLOSTELIUM MIOUS	-	-	-	-	-	-	-	-	-	-
CLOSTELIUM MIOUS	1253	-	37	33	63	-	35	24	-	-
CLOSTELIUM MIOUS	-	-	-	-	158	-	2	-	-	-
CLOSTELIUM MIOUS	-	-	19	-	16	-	17	-	-	-
CLOSTELIUM MIOUS	-	21	28	44	24	10	9	12	59	11
CLOSTELIUM MIOUS	10	11	-	-	-	-	-	-	-	-
CLOSTELIUM MIOUS	-	-	-	-	-	-	-	-	-	-
CLOSTELIUM MIOUS	63	64	177	76	119	73	157	121	238	185
CLOSTELIUM MIOUS	31	43	-	76	-	-	174	-	-	-
CLOSTELIUM MIOUS	-	11	-	-	8	-	-	21	-	11
CLOSTELIUM MIOUS	84	-	-	174	-	50	-	13	167	44
CLOSTELIUM MIOUS	-	-	-	-	-	-	-	-	-	-
CLOSTELIUM MIOUS	-	43	140	131	32	-	15	49	-	152
CLOSTELIUM MIOUS	-	-	-	-	-	-	130	-	-	-
CLOSTELIUM MIOUS	-	-	9	-	63	107	-	-	-	174
CLOSTELIUM MIOUS	42	-	-	-	-	-	75	-	-	-
CLOSTELIUM MIOUS	-	-	-	-	-	-	-	-	-	-
CLOSTELIUM MIOUS	21	75	-	-	47	-	-	-	233	11
CLOSTELIUM MIOUS	-	-	-	44	32	10	34	24	-	107
CLOSTELIUM MIOUS	251	85	205	251	111	117	175	293	180	327
CLOSTELIUM MIOUS	104	171	93	152	93	74	322	72	554	251
CLOSTELIUM MIOUS	31	-	37	-	127	-	17	143	93	77
CLOSTELIUM MIOUS	-	-	-	-	-	-	-	-	-	-
CLOSTELIUM MIOUS	125	43	112	44	32	30	53	48	117	47
CLOSTELIUM MIOUS	115	203	177	131	105	123	132	148	217	244
CLOSTELIUM MIOUS	-	85	54	109	79	123	130	112	71	44

TABLE H-3a (cont.)

[illegible]

TABLE H-3a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)									
	1	2	3	4	5	6	7	8	9	10
CHRYSOPHYCEAE										
CHRYSOCCUS SP	21	-	-	-	-	-	17	-	-	-
DIATHEON SP	-	-	-	-	-	-	-	-	-	-
HACILLARIOPHYTA (DIATOMS)										
AGNANTHUS LANCEOLATA V DUTTA	-	-	-	-	-	-	-	-	-	11
AMORPHA OVALIS P JAWORS	-	-	0	11	8	3	2	4	38	17
ASTERIONELLA FORMOSA	-	-	0	-	-	-	-	-	-	-
COSCIINODISCUS SP	-	-	-	-	-	-	-	-	-	-
CYCLotella CATENATA	-	-	-	44	16	-	-	-	-	-
CYCLotella CLAMPATA	-	-	-	-	-	-	-	-	-	-
CYCLotella MEMPHISIANA	-	-	-	-	-	-	-	-	-	-
CYCLotella STILLENBERGA	94	64	19	55	63	44	77	73	95	54
CYPRIDELLA MICROCEPHALA	-	-	-	-	-	-	-	-	-	-
CYPRIDELLA MINUTA	-	-	-	-	-	-	-	-	-	-
CYPRIDELLA SP	-	-	-	-	-	-	-	-	-	-
EUNOTIA SP	-	-	-	-	-	-	-	-	-	-
FRAGILARIA CONSTRUENS	492	630	903	906	531	445	220	102	71	74
FRAGILARIA CHOTOMFISTIS	-	-	-	-	-	-	-	-	-	-
FRAGILARIA LEPTOSTAURON	-	-	-	-	-	-	-	-	-	-
FRAGILARIA PINNATA	-	-	-	-	-	-	-	-	-	-
CEPHALOCYPRIDELLA	31	-	-	-	8	17	-	-	-	-
MELOSIRA AFFLUA	-	-	56	-	63	15	-	48	110	76
MELOSIRA DISTANS	199	242	224	447	277	240	344	253	224	593
MELOSIRA GRANULATA	73	107	24	120	40	112	79	174	174	142
MELOSIRA GRANULATA V ANGUSTISSIMA	21	-	-	-	-	-	-	-	-	-
MELOSIRA VARIANS	-	11	-	-	-	-	-	-	-	-
NAVICULA CRYPTICEPHALA	-	-	-	-	-	-	-	-	-	-
NAVICULA EXIGUA V CAPITATA	-	-	-	11	11	-	-	-	12	-
NAVICULA GASTRUM	-	-	-	-	-	-	-	-	-	-
NAVICULA PUPULA	-	-	-	-	-	-	-	-	-	-
NAVICULA PUPULA V RECTANGULARIS	-	-	-	-	-	-	-	-	-	-

TABLE H-3a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION:									
	1	2	3	4	5	6	7	8	9	10
NITZSCHIA ACICULARIS	136	64	103	74	103	193	70	10	50	71
NITZSCHIA DELICATISSIMA	21	-	-	33	16	-	-	-	-	73
NITZSCHIA DYZINGIANA	10	-	-	-	-	-	-	-	-	-
NITZSCHIA PALEA	21	11	19	-	-	-	-	-	-	-
NITZSCHIA SP	21	21	-	11	-	15	37	18	-	11
SURIPELLA SP	-	-	-	-	-	-	-	-	-	-
SYNECHA DELICATISSIMA	52	53	47	54	103	43	24	78	50	142
SYNECHA RUBENS	-	-	-	-	-	-	-	-	-	-
SYNECHA ULNA	21	11	9	11	16	-	70	-	12	31
EUGLENOPHYCEAE										
EUGLENA SP	-	-	-	-	-	-	-	-	-	-
FRACILLUM	42	43	19	11	9	34	26	30	36	54
FRACILLUM SP	-	-	-	-	-	-	-	-	-	-
CILIOPHORA										
UNID CILIOPHORA	-	-	-	11	-	24	24	-	12	33
ROTIFERA										
UNID ROTIFER	-	-	-	-	-	-	-	4	23	-
TOTAL NUMBER OF ORGANISMS	10539	10067	7056	10319	8916	4305	9760	4492	12942	12356
NUMBER OF TAXA	48	51	39	47	44	41	52	47	40	43

•••••LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY - PHYTOPLANKTON
(CELLS/ML) •••••
(CINCS OF ENGINEERS, CONTRACT DACW01-78A-C-0101) PHASE I, CYCLE 1
(July 17-20, 1978)

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TABLE H-3b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)									
	11	12	13	14	15	16	17	18	19	20
CLOSTRIDIUM SP.	44	2	50	10	9	2	1	1	1	1
COELASTRUM MICROPORUM	44	7	245	10	9	2	1	1	1	1
COELASTRUM SP.	11	1	1	1	1	1	1	1	1	1
COELASTRUM F2 MICROCIDIUM	11	1	1	1	1	1	1	1	1	1
COELASTRUM SPHAGNUM	11	1	1	1	1	1	1	1	1	1
COELASTRUM TETRASTOMUM	11	1	1	1	1	1	1	1	1	1
COSMIDIUM SP.	174	15	205	91	51	22	21	19	21	21
CRUCIGENIA ADICULATA	174	36	214	44	11	1	1	1	1	1
CRUCIGENIA COCAVATA	174	36	214	44	11	1	1	1	1	1
CRUCIGENIA TETRAPELIA	174	36	214	44	11	1	1	1	1	1
DICTYOSPHAERIUM PULCHELLUM	174	36	214	44	11	1	1	1	1	1
DICTYOSPHAERIUM SP.	174	36	214	44	11	1	1	1	1	1
ELASTOTOMIX GELATINOSA	174	36	214	44	11	1	1	1	1	1
ELASTOTOMIX SP.	174	36	214	44	11	1	1	1	1	1
GILLERINIA RADIATA	174	36	214	44	11	1	1	1	1	1
GONION PECTINALE	174	36	214	44	11	1	1	1	1	1
KINCHERELLA LUNARIS	174	36	214	44	11	1	1	1	1	1
KINCHERELLA SP.	174	36	214	44	11	1	1	1	1	1
ONCOSTIS SP.	174	36	214	44	11	1	1	1	1	1
PANICHERIA MCHUM	174	36	214	44	11	1	1	1	1	1
PANICHERIA SP.	174	36	214	44	11	1	1	1	1	1
PEDIATRUM PIRADIATUM	174	36	214	44	11	1	1	1	1	1
PEDIATRUM DUPLEX	174	36	214	44	11	1	1	1	1	1
PEDIATRUM DUPLEX V. CLATHRATUM	174	36	214	44	11	1	1	1	1	1
PEDIATRUM ORTUSUM	174	36	214	44	11	1	1	1	1	1
PEDIATRUM SIMPLEX	174	36	214	44	11	1	1	1	1	1
PEDIATRUM TETRA V. T. TRACON	174	36	214	44	11	1	1	1	1	1
PERCENUS SP.	174	36	214	44	11	1	1	1	1	1
SCENEDUS ARUNDANS	174	36	214	44	11	1	1	1	1	1
SCENEDUS ACUTIPATUS	174	36	214	44	11	1	1	1	1	1
SCENEDUS AMATUS	174	36	214	44	11	1	1	1	1	1
SCENEDUS ADNATUS V. BICAUDATA	174	36	214	44	11	1	1	1	1	1
SCENEDUS HIJUGA	174	36	214	44	11	1	1	1	1	1
SCENEDUS PLATYLLATUS	174	36	214	44	11	1	1	1	1	1
SCENEDUS QUADRICAUDA	174	36	214	44	11	1	1	1	1	1
SCENEDUS SP.	174	36	214	44	11	1	1	1	1	1

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WATER AND AIR RESEARCH INC GAINESVILLE FL

WATER QUALITY MANAGEMENT STUDIES LAKE SEMINOLE, APRIL-NOVEMBER --ETC(U)

SEP 81

DACW01-78-C-0101

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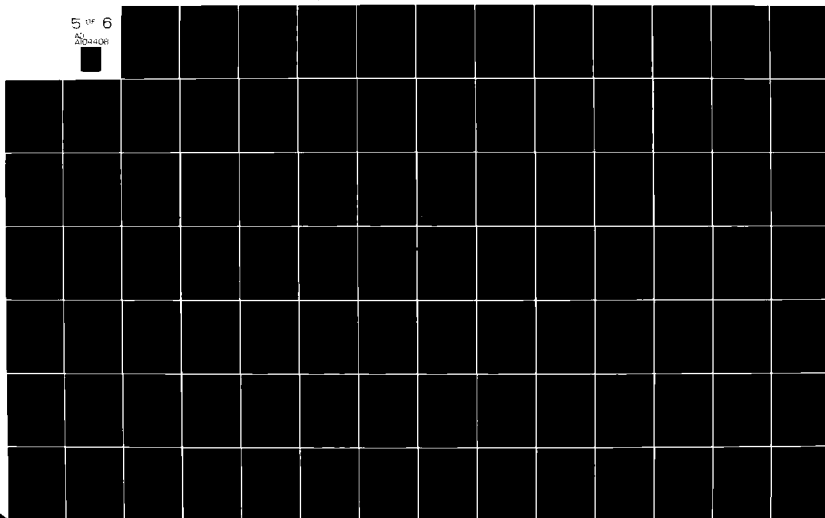


TABLE H-3b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATIONS											(CELLS/ML)
	11	12	13	14	15	16	17	18	19	20		
SYLANASTRUM MINUTUM	11	17	15	1	17	1	1	1	1	1		
STANASTRUM SP	11	17	7	8	17	1	1	1	1	1		
TELEASTRUM CAUDATUM	11	17	7	8	17	1	1	1	1	1		
TELEASTRUM MINUTUM	11	17	23	16	17	2	1	24	1	4		
TELEASTRUM MISTICUM	11	17	11	1	17	4	1	1	1	1		
TELEASTRUM BRUGLAE	11	17	11	1	17	4	1	1	1	1		
TELEASTRUM TIGIDUM	11	17	22	1	17	1	1	1	1	1		
TELEASTRUM ELEGANS	11	17	1	1	1	1	1	1	1	1		
TELEASTRUM PTEROPANTHUM	11	17	1	1	1	1	1	1	1	1		
TELEASTRUM STAUROGLINIFORME	11	17	177	5	140	1	1	1	1	1		
CRYPTOPHYCEAE												
CRYPTOMONAS PROSA	11	12	1	1	1	1	1	1	1	1		
CRYPTOMONAS SP	11	12	1	1	1	1	1	1	1	1		
UNID CRYPTOMONADACEAE	44	1	1	6	6	4	1	1	1	1		
DINOPHYCEAE												
GLENNONIA QUADRIDENS	11	5	1	1	1	1	1	1	1	1		
GLENNONIA SP	11	12	29	10	4	2	1	1	1	1		
PERIDINIA SP	11	12	29	10	4	2	1	1	1	1		
XANTHOPHYCEAE												
ARACHNOCHLORIS SP	65	1	7	5	1	4	1	25	1	1		
CINOCYSTUM CAPITATUM	11	1	1	1	1	1	1	1	1	1		

TABLE H-3b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)											
	11	12	13	14	15	16	17	18	19	20	21	22
CHRYSOPHYCEAE												
CHRYSOCCOCUS SP.	-	2	-	5	-	-	-	-	-	-	-	-
DINERPHYON SPATULARIA	-	-	-	-	-	-	-	-	-	-	-	-
BACILLARIOPHYTA (DIATOMS)												
ACHNANTHES LANCEOLATA V DUPIA	-	5	37	-	-	4	1	-	-	-	-	-
AMPHICA OVALIS	-	-	-	-	-	-	-	-	-	-	-	-
ASTERIONELLA FIRMOSA	-	-	-	-	-	-	-	-	-	-	-	-
COSCHINODISCUS SP.	-	-	7	-	-	2	-	-	-	-	-	-
CYCLOTELLA CATENATA	-	7	88	-	135	24	-	17	-	-	-	-
CYCLOTELLA QUINQUEPORA	-	-	-	-	-	-	-	-	-	-	-	-
CYCLOTELLA WEINIGERIANA	-	17	354	74	337	15	4	141	75	-	-	-
CYCLOTELLA STALLIGRA	100	73	-	11	-	-	-	-	-	-	-	-
CYPRIDELLA MICROCEPHALA	-	-	-	-	-	-	-	-	-	-	-	-
CYPRIDELLA MINUTA	-	-	-	4	-	-	-	-	-	-	-	-
CYPRIDELLA SP.	-	-	-	3	-	-	-	-	-	-	-	-
EUNECTIA SP.	-	-	-	-	-	-	-	-	-	-	-	-
FRAGILARIA CONSTRUENS	22	-	-	14	-	-	3	90	-	-	-	-
FRAGILARIA CRITHONENSIS	-	-	-	30	-	-	-	-	-	-	-	-
FRAGILARIA LEPTOSTAUFON	-	-	-	-	-	-	-	-	-	-	-	-
FRAGILARIA PIMPHATA	-	2	22	44	101	-	3	12	-	-	-	-
FRAGILARIA PUNCTULUM	-	-	110	-	-	-	-	100	-	-	-	-
MELOSIRA AMPHICA	152	-	-	-	-	-	-	-	-	-	-	-
MELOSIRA CISTANS	272	-	152	33	93	45	8	107	-	-	-	-
MELOSIRA GRAPULATA	507	-	132	-	243	-	-	204	-	-	-	-
MELOSIRA GRAPULATA V ANGUSTISSIMA	87	-	15	-	27	-	-	37	-	-	-	-
MELOSIRA VARIANS	-	-	-	5	-	-	17	-	-	-	-	-
NAVICULA CRYPTOCERPHALA	-	-	-	5	-	-	-	-	-	-	-	-
NAVICULA ERIGUA V CAPITATA	11	-	7	5	-	2	3	-	-	-	-	-
NAVICULA GASTROUM	-	-	-	-	-	-	-	-	-	-	-	-
NAVICULA RUPULA	-	-	-	5	3	-	2	-	-	-	-	-
NAVICULA RUPULA V RECTANGULARIS	-	-	-	5	3	-	2	-	-	-	-	-

TABLE H-3b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATIONS (CELLS/ML)												
	11	12	13	14	15	16	17	18	19	20	21	22	23
NITZSCHIA ACICULANIS	33	1	29	8	25	10	1	12	35				
NITZSCHIA PALLAVICA	33	1	74	3	34	10	1	12					
NITZSCHIA PUTATINGIANA	11	1	30	3	1	1	1	1					
NITZSCHIA PALLACEA	1	2	7	3	17	2	1	1					
NITZSCHIA SP.	1	1	1	1	1	10	1	12	4				
SURIPELLA SP.	152	5	37	3	1	1	3	105	44				
SYNECHA DELICATISSIMA	1	1	1	1	1	4	4	1					
SYNECHA EUREFENS	1	1	1	1	1	1	1	1					
SYNECHA ULNA	22	1	7	11	17	14	13	12	2				
EUGLENOPHYCEAE													
EUGLENA SP.	11	2	7	14	11	12	1	4	1				
PHACUS SP.	11	5	7	3	1	1	1	4	13				
THACHELONIAS SP.													
CILIOPHORA													
UNITO CILIOPHORA	1	19	15	11	17	6	1	14	22				
ROTIFERA													
UNITO ROTIFER	1	1	1	1	1	1	1	1	1				
TOTAL NUMBER OF ORGANISMS													
NUMBER OF TAXA	31240	931	15418	1569	14032	860	498	11054	7116				
	40	35	63	58	45	44	42	49	37				

TABLE H-4a

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY - PHYTOPLANKTON (CELLS/ML) ●●
CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I, CYCLE 4

(August 14-17, 1978)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)									
	1	2	3	4	5	6	7	8	9	10
CYANOPHYCEAE										
ANABAENA SP	-	-	-	488	227	376	477	-	672	-
ANABAEOPSIS CYLINDRICA	3975	5716	4730	1674	2433	2157	1446	1461	2148	3351
ANABAEOPSIS SP	-	-	-	-	-	-	-	-	-	-
APHANIZOENON FLOS-AQUAE	1726	336	2047	697	887	458	431	930	1065	2770
APHANOCAPSULA DELICATISSIMA	4498	2578	2956	209	-	-	1338	541	-	-
APHANOCAPSULA ELACINISTA	-	-	-	-	4411	1634	461	361	2428	1937
APHANOCAPSULA PULCHRA	-	-	-	139	-	-	-	-	-	-
APHANOTHECE MIDILLANS	471	299	273	-	-	-	61	-	-	1937
CHRODOCCUS DISPERSUS	575	-	273	-	500	294	185	-	953	310
CHRODOCCUS LIMNETICUS	-	37	273	-	-	-	-	-	-	-
CHRODOCCUS MINUTUS	209	1420	273	488	773	1177	1569	1767	37	4765
CHRODOCCUS MINUTUS	-	-	-	-	-	-	-	-	2690	-
LYNGBYA SP	-	317	1046	453	1956	1307	461	667	784	291
LYNGBYA SP	-	654	-	-	-	-	-	-	-	-
MERISOMEDIA PUNCTATA	-	-	-	-	-	-	-	-	-	-
MERISOMEDIA TENUISSIMA	1534	1195	1273	279	1637	1144	2184	866	1195	1950
MICROCYSTIS INCENTA	-	-	2047	3138	1546	1798	3538	1623	747	736
OSCILLATORIA LIMNETICA	1430	1864	2115	1342	2024	1340	2000	1994	878	988
OSILLATORIA SP	-	-	273	349	45	-	-	184	-	-
SPIRULINA LAVA	122	-	68	35	23	-	15	54	19	19
SPIRULINA MAJOR	-	-	-	-	-	-	-	-	-	-
CHLOROPHYCEAE										
ACTINASTRUM NANTZSCHII	-	-	-	-	-	-	-	-	-	-
ANKISTRODESMUS FALCATUS	52	-	-	35	-	-	-	-	-	136
ANKISTRODESMUS SPINALIS	482	430	477	645	546	409	261	180	205	174
CARTERIA SP	-	-	-	-	-	16	-	-	-	-
CARTERIA SP	-	-	23	-	23	41	-	-	131	58
CHLOROGONIUM ELONGATUM	-	-	-	-	-	-	15	-	-	-

TABLE H-4a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)									
	1	2	3	4	5	6	7	8	9	10
CHODATELLA CHODATI	-	-	45	17	-	-	-	-	-	-
CHODATELLA SUBSALSA	-	-	-	-	-	-	-	18	-	-
CLOSTRIDIUM SP	-	-	-	-	-	-	-	-	-	-
COPULASTRUM MICROPORUM	-	149	45	-	546	16	61	-	-	39
COPULASTRUM MINUTUM	139	-	-	-	-	-	61	-	-	-
COPULASTRUM PRONOCICIDUM	-	-	-	-	-	-	-	-	-	-
COSMARITUM TRILGULATUM	-	56	23	52	91	16	46	36	37	58
COSMARITUM SP	209	149	91	139	136	-	-	198	-	-
CRUCIGENIA APEICULATA	-	-	-	-	-	-	-	-	-	-
CRUCIGENIA QUADRATA	-	-	142	-	-	-	-	-	-	77
CRUCIGENIA TRIANGULATA	35	-	-	-	-	-	-	-	-	-
CYCLOSPHEREIUM PULCELLUM	174	187	-	157	819	196	185	667	467	39
DYSCHROMOCOCCUS VARIABILIS	-	-	-	-	-	-	-	-	-	-
EUPASTRUM SP	-	-	-	-	23	16	-	18	-	19
GULENKINIA PAUCISPINA	-	-	-	-	-	-	-	-	-	-
GULENKINIA RADIATA	-	37	91	17	91	16	46	54	37	58
GONIM PECTORALE	-	-	-	-	-	-	-	-	-	-
KIRCHNERIELLA LUNARIS	67	-	182	17	159	163	154	72	14	116
KIRCHNERIELLA ODESA	-	-	-	17	-	-	-	-	-	-
MICRACANTHUM PUSILLUM V ELEGANS	-	-	-	17	-	-	-	-	-	-
NOCTYETIS SP	35	37	-	17	45	16	31	54	-	77
PANDORINA MORUM	-	-	-	-	-	-	-	-	35	-
PANDORINA SP	-	-	-	-	-	-	-	-	209	-
PEDIASINUM BIRADIATUM	-	-	-	-	-	-	-	-	-	77
PEDIASINUM DUPLEX	-	131	-	-	-	65	-	-	-	-
PEDIASINUM DUPLEX V GLATHRATUM	139	37	-	227	182	114	123	180	-	252
PEDIASINUM DUTUSUM	-	-	-	35	91	-	-	-	-	155
POLYEDRIBIOSIS SPINULOSA	-	-	-	-	-	-	-	-	-	-
PITRICHONAS SP	-	-	-	-	-	-	-	-	-	-
SCENEDESMS ABUNDANS	105	-	91	105	23	-	61	72	19	39
SCENEDESMS ACUMINATUS	-	149	-	-	162	-	-	-	-	-
SCENEDESMS ARMATUS	70	-	227	70	162	-	123	36	224	387
SCENEDESMS ARMATUS V BICAUDATA	35	149	91	-	162	65	-	72	147	155
SCENEDESMS BILJUGA	35	37	-	70	-	33	61	36	75	-
SCENEDESMS DENTICULATUS	-	112	45	70	-	-	61	36	75	-
SCENEDESMS QUADRICAUDA	523	302	273	244	546	229	123	523	112	232
SCENEDESMS SP	-	-	-	-	-	-	-	-	-	-
SCHROEDERIA SETIGERA	-	-	136	35	23	16	-	-	75	39
SELANASTRUM MINUTUM	-	-	23	35	-	-	-	-	-	58
SPONCYLOSTOM PLANUM	-	-	-	-	-	-	-	-	-	-
STAUROSTROM SP	-	-	-	-	-	-	-	-	-	-
TETRAEDRON CAUDATUM	35	37	136	67	68	16	92	144	112	-
TETRAEDRON MINIMUM	-	-	-	-	-	-	-	-	-	-
TETRAEDRON HICULARE	17	19	23	35	45	16	15	18	37	-
TETRAEDRON TRICCCUM	-	-	-	-	-	-	-	-	19	-

TABLE H-4a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)									
	1	2	3	4	5	6	7	8	9	10
TETRASTROM ELEGANS	139	-	-	70	51	65	41	-	149	-
TETRASTROM HETEROCANTHUM	-	-	-	-	-	-	246	108	75	39
TETRASTROM STAUROGENIFORME	-	-	-	-	-	-	-	-	-	-
TREUDARIA SETIGERUM	-	-	68	17	45	33	15	-	19	-
CRYPTOPHYCEAE										
CRYPTOMONAS EROSA	-	-	-	-	-	-	15	-	-	39
CRYPTOMONAS SP.	-	-	-	-	-	-	-	-	-	-
UNIT CRYPTOMONADACEAE	-	-	-	17	-	-	-	-	-	-
DINOPHYCEAE										
GLENDONILUM SP.	-	-	-	-	-	-	-	-	19	39
CYANODITHIUM SP.	-	-	-	-	-	-	-	-	-	39
PERIDINIUM SP.	-	-	-	17	-	-	15	-	19	-
KANTHOPYCEAE										
ARACHNOCENTRIS SP.	-	-	-	-	-	-	15	-	19	19
ARACHNOCENTRIS SP. STATION	-	-	23	-	-	-	15	-	-	-
OPHIOCYTUM CAPITATUM V LONGISPINUM	-	-	-	-	-	-	-	-	-	-
CHRYSOPHYCEAE										
CHRYSOCCOCUS SP.	-	-	23	17	-	16	-	-	-	19
MONESICMA VARIANS	-	-	-	-	-	-	-	108	-	59

TABLE H-4a (cont.)

TAXONOMIC CLASSIFICATION	1	2	3	4	5	6	7	8	9	10
BACILLARIOPHYTA (DIATOMS)										
ACHNANTHES LANCEOLATA	-	-	-	-	-	-	-	-	-	19
ACHNANTHES LANCEOLATA V DUBIA	-	-	-	-	-	-	-	-	-	-
AMPHICHA OVALIS	-	-	-	-	-	-	-	-	-	-
AMPHORA OVALIS V AFFINIS	-	-	-	-	-	-	-	-	-	-
AMPHICHA PERPUSILLA	-	-	-	-	-	-	-	-	-	-
COCCONEIS PLACENTULA	-	-	-	-	-	-	-	-	-	-
COCCONEIS PLACENTULA V EUGLYPTA	-	-	23	-	-	-	-	-	-	58
COCCONEIS PLACENTULA SP	-	-	-	17	-	-	-	-	-	-
CYCLELLA CATENATA	-	-	-	-	-	-	-	-	-	-
CYCLELLA GLOMERATA	-	-	-	-	-	-	-	-	-	-
CYCLELLA STELLIGERA	105	-	114	70	91	65	46	18	112	97
CYMBELLA LEPTOCHELOS	-	-	-	-	-	-	-	-	-	-
CYMBELLA MICROCEPHALA	-	-	-	-	-	-	-	-	-	-
CYMBELLA MINIMA	-	-	-	-	-	-	-	-	-	-
CYMBELLA TUNIDA	-	-	-	-	-	-	-	-	-	-
CYMBELLA SP	-	-	-	-	-	-	-	-	-	-
FRAGILARIA CENSTRUENS	-	-	-	-	-	-	-	-	-	-
FRAGILARIA CROTONENSIS	17	37	23	17	45	33	92	-	56	39
FRAGILARIA LEPTOSTAURON	-	-	-	-	-	-	-	-	-	-
FRAGILARIA PINNATA	-	-	-	-	-	-	-	-	-	-
GOMPHONEMA PARVULUM	-	-	-	-	-	-	-	-	-	-
GYROSIGMA ACUMINATUM	-	-	-	-	-	-	-	-	-	-
MELOSIRA AMBIGUA	70	75	-	-	45	-	-	36	-	116
MELOSIRA DISTANS	331	280	523	401	591	474	385	613	560	426
MELOSIRA GRANULATA	-	-	-	-	-	-	-	-	-	-
MELOSIRA GRANULATA V ANGSTISSIMA	244	336	523	436	477	441	323	397	411	232
MELOSIRA VARIANS	-	-	23	-	-	-	-	126	-	-
NAVICULA CRYPTOCYPHALA	-	-	-	-	-	-	-	-	-	-
NAVICULA ERIGUA V CAPITATA	-	-	-	-	23	-	-	-	-	-
NAVICULA FRACATA	-	-	-	-	-	-	-	-	-	-
NAVICULA GASTRUM	-	-	-	-	-	-	-	-	-	-
NAVICULA PUPULA	17	-	-	-	-	16	-	-	-	-
NAVICULA SCUFFELOIDES	-	-	-	-	-	-	-	-	-	-
NAVICULA SP	-	-	-	-	-	-	-	-	-	-
MITZSCHIA ACICULARIS	17	56	-	52	-	82	92	72	56	19
MITZSCHIA HOLSATICA	-	-	-	-	-	-	-	-	-	-
MITZSCHIA IGNORATA	87	187	68	52	114	65	15	18	224	-
MITZSCHIA KUTZINGIANA	17	19	-	17	-	33	-	18	19	19

TABLE H-4a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)									
	1	2	3	4	5	6	7	8	9	10
NITZSCHIA ORTUSA	-	37	-	-	-	-	15	-	-	19
NITZSCHIA PALEA	17	37	-	-	68	-	15	-	19	-
NITZSCHIA PALEACEA	-	-	-	-	-	-	-	-	-	-
NITZSCHIA PARVULA	-	-	-	17	-	-	-	-	-	-
NITZSCHIA SIGMA	-	19	-	-	-	-	-	-	-	-
NITZSCHIA TRIVULIONELLA V VICTORIAE	-	-	-	-	-	-	-	-	-	-
NITZSCHIA SP	-	37	91	17	-	-	15	-	-	-
SURINELLA SP	-	-	-	-	-	-	-	-	-	-
SYNECHIA DELICATISSIMA	70	75	114	70	68	114	15	-	-	39
SYNECHIA RUMPENS	-	-	-	-	-	-	-	-	-	-
SYNECHIA ULNA	17	-	-	17	23	-	-	-	-	-
TEMP-STIMDE MUSICA	-	-	-	-	-	-	-	-	-	-
EUGLENOPHYCEAE										
EUGLENA SP	-	-	-	-	-	-	-	18	19	-
PHACUS SP	-	-	-	-	-	-	15	36	19	-
TRACHELONAS SP	-	-	-	-	-	33	-	18	37	39
CILIOPHORA										
UNITO CILIOPHORA	-	19	23	35	-	16	15	36	-	-
TOTAL NUMBER OF ORGANISMS	17681	17742	21217	12773	21964	14654	17156	14262	17653	22680
NUMBER OF TAXA	39	39	43	51	43	43	50	45	47	52

TABLE H-4b

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY - PHYTOPLANKTON (CELLS/ML)
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I. CYCLE 4
 (August 14-17, 1978)

TAXONOMIC CLASSIFICATION	11	12	13	14	15	16	17	18	19
NUMBER OF ORGANISMS AT STATION: (CELLS/ML)									
CYANOPHYCEAE									
ANABAENA SP	-	120	-	43	-	-	-	-	-
ANABAEOPSIS CYLINDRICA	318	-	-	-	35	-	-	261	-
ANABAEOPSIS SP	2592	-	-	-	-	-	-	784	-
APHANIZOMENON FLOS-AQUAE	1019	108	2615	-	-	-	-	407	-
APHANOCAPSULA DELICATISSIMA	2274	-	-	-	-	-	-	-	713
APHANOCAPSULA ELACHISTA	682	-	-	-	-	-	-	-	-
APHANOCAPSULA PULCHRA	1137	-	-	-	30	-	-	-	-
APHANOTHECE NIJULANS	227	9	139	-	24	-	-	349	24
CHROCOCCUS DISPERGUS	-	-	-	-	-	-	-	-	-
CHROCOCCUS LIMNETICUS	3729	-	139	-	123	45	-	1060	333
CHROCOCCUS MINUTUS	523	-	-	-	-	-	-	-	-
CHROCOCCUS MINUTUS	692	33	-	-	-	-	-	-	83
LYNGBYA CONTORTA	-	-	-	-	-	-	-	-	-
LYNGBYA SP	-	-	-	-	-	-	-	-	-
MERISMPECIA PUNCTATA	3184	261	16004	69	2092	96	-	2208	1902
MERISMPECIA TENUISSIMA	910	203	453	536	154	24	7	872	1426
MICROCYSTIS INCERTA	1956	-	-	-	-	-	-	1395	-
OSCILLATORIA LIMNETICA	-	-	-	26	-	65	-	-	-
OSCILLATORIA SP	136	-	-	9	-	-	-	-	-
SPIRULINA LAXA	-	-	-	-	-	-	-	-	-
SPIRULINA MAJOR	-	-	-	-	-	-	-	-	-
CHLOROPHYCEAE									
ACTINASTRUM HANTZSCHII	45	-	316	-	292	-	-	-	-
ANKISTRODESNIUS FALCATUS	546	7	35	-	61	1	2	203	83
ANKISTRODESNIUS SPIRALIS	-	-	-	-	-	-	-	-	-
CARTERIA SP	-	-	-	-	31	-	-	29	-
CHLAMYDOMONAS SP	-	9	70	-	246	-	-	-	24
CHLOROGONIUM ELONGATUM	-	-	-	-	-	-	-	-	-

TABLE H-4b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)									
	11	12	13	14	15	16	17	18	19	
CHODATIELLA CHODATI	-	5	-	4	15	-	-	-	-	-
CHODATIELLA SUBSALSA	-	-	-	-	-	-	-	-	-	-
CLOSTERIUM SP	-	-	-	-	-	-	-	-	-	-
COELASTRUM MICROPORUM	23	9	-	34	15	56	P	116	95	-
COELASTRUM MORUS	91	19	-	-	-	-	10	-	-	-
CULLASTRUM PHODOSCICIDUM	-	-	-	-	-	-	-	-	-	-
COSMARUM TELLURELLATUM	23	2	-	2	-	-	7	29	-	-
COSMARUM SP	-	22	-	2	-	6	6	-	143	-
CRUCIGENIA APICULATA	-	-	-	-	-	-	-	-	-	-
CRUCIGENIA QUADRATA	-	38	-	-	61	30	-	-	-	-
CRUCIGENIA TETRAPEDIA	-	97	279	-	-	60	-	174	-	-
DICTYOSPHAERIUM PULCHELLUM	-	-	-	-	-	-	-	-	-	-
DYSDROMOCCUS VARIABILIS	23	-	17	-	-	-	-	14	12	-
EUSTRUM SP	45	-	17	-	-	1	-	-	12	-
GOLEARINIA PAUCISPINA	-	-	-	-	-	-	-	-	-	-
GLENNINIA RADIATA	227	5	436	-	108	6	2	102	-	-
GONTUM PECTRALE	45	12	139	17	123	19	9	378	24	-
KIRCHFRIEDLA LUNARIS	-	-	-	-	61	21	9	29	12	-
KIRCHFRIEDLA OBESA	136	26	70	-	-	1	-	29	24	-
LOCYSTIS SP	-	-	139	-	31	-	-	-	-	-
PANDORINA MORUM	-	-	209	-	769	-	-	-	-	-
PANDORINA SP	-	-	-	-	-	-	-	-	-	-
PEDIASTRUM BIRADIATUM	-	-	-	-	-	-	-	-	-	-
PEDIASTRUM DUPLEX	-	-	-	-	-	-	-	-	-	-
PEDIASTRUM DUPLEX V CLATHRATUM	-	-	-	-	-	-	-	-	-	-
PEDIASTRUM URUTUSUM	-	-	-	-	-	-	-	-	-	-
POLYDORIOPSIS SPINULOSA	-	-	17	-	15	1	-	-	-	-
PTEROMONAS SP	-	9	105	-	-	3	-	145	47	-
SCENEDESMUS ABUNDANS	-	-	-	-	-	-	-	-	-	-
SCENEDESMUS ACUMINATUS	136	7	70	34	61	-	-	29	143	-
SCENEDESMUS ARMATUS	-	-	205	-	-	-	3	145	119	-
SCENEDESMUS ARMATUS V BICAUDATA	-	-	70	-	-	6	-	-	-	-
SCENEDESMUS BIJUGA	91	19	-	17	-	3	-	-	95	-
SCENEDESMUS DEICULATUS	81	5	70	26	-	9	9	320	95	-
SCENEDESMUS QUADRICAUDA	182	-	-	-	-	-	-	-	-	-
SCENEDESMUS SP	273	9	70	-	61	9	9	-	119	-
SCHNEIDERIA SETIGERA	45	2	52	-	31	-	-	-	-	-
SFLANASTHUM MINUTUM	-	-	-	-	-	-	-	-	-	-
SPONDYLOSTIUM PLANUM	-	29	-	-	46	27	8	14	24	-
STAUASTHUM SP	136	40	-	4	15	-	P	-	-	-
TETRAECRON CAUDATUM	-	-	-	-	-	-	-	-	-	-
TETRAECRON MINIMUM	-	-	-	-	-	-	-	-	-	-
TETRAECRON REGULARE	-	-	-	-	-	-	-	-	-	-
TETRAECRON TRICORN	-	-	-	4	-	3	-	-	12	-

TABLE H-4b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)									
	11	12	13	14	15	16	17	18	19	20
TETRASTRUM ELEGANS	-	-	-	-	-	-	-	-	-	-
TETRASTRUM HYTHOICANTHUM	-	-	274	-	185	-	-	58	-	47
TETRASTRUM STACHYDIOIDEUM	-	-	-	-	-	-	-	-	-	-
TREBARTIA SETIGERUM	45	-	52	-	-	-	-	-	24	-
CRYPTOPHYCEAE										
CRYPTOMONAS EROSA	23	12	35	-	261	3	-	-	-	-
CRYPTOMONAS SP.	-	2	-	-	-	1	-	-	-	-
UNID. CHRYPTOMONADACEAE	-	-	-	-	-	-	-	-	-	-
OTIOPHYCEAE										
OLENODONTIUM SP.	-	14	-	-	15	1	9	29	-	-
GYMNODONTIUM SP.	-	-	-	-	15	-	-	-	-	-
PERIDINIUM SP.	-	-	17	4	-	-	-	-	-	-
XANTHOPHYCEAE										
ARACHNOCLADUS SP.	23	-	-	4	31	-	-	14	-	-
ORHODICTIUM CAPITATUM	-	-	-	5	-	6	5	-	-	-
ORHODICTIUM CAPITATUM V LONGISPINUM	-	-	-	-	-	-	-	-	-	-
CHRYSOPHYCEAE										
CHRYSOCOCCUS SP.	-	-	-	-	-	-	-	-	-	-
MONOSIGMA VARIANS	-	-	17	-	-	-	-	-	-	-

TABLE H-4b (cont.)

TAXONOMIC CLASSIFICATION	11	12	13	14	15	16	17	18	19
	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)								
PACILLARIOPHYTA (DIATOMS)									
ACHNANTHES LANCEOLATA	-	-	17	60	-	-	3	-	-
ACHNANTHES LANCEOLATA V DUBIA	23	-	-	-	-	1	-	-	-
AMPHICRA OVALIS	-	-	-	-	-	-	-	-	-
AMPHICRA OVALIS V AFFINIS	-	-	-	4	-	-	-	-	-
AMPHICRA PLEUROPUSILLA	-	-	-	4	-	-	p	-	-
COCconeis PLACINTULA	-	-	-	-	-	-	-	-	-
COCconeis PLACINTULA V EUGLYPTA	-	-	-	-	-	1	5	-	-
COCconeiscus SP.	-	-	-	-	-	-	-	14	-
CYCLotella CATENATA	-	-	-	-	-	-	-	-	-
CYCLotella GLOMERATA	114	5	4759	4	1631	30	-	508	535
CYCLotella STELLIGERA	136	1	70	60	31	1	3	73	47
CYMBELLA LEPTOCEROS	-	-	-	17	-	-	-	-	-
CYMBELLA MICROCEPHALA	-	40	-	150	15	-	-	-	-
CYMBELLA MINUTA	-	-	-	9	-	3	-	-	-
CYMBELLA TURIDA	-	-	-	-	-	-	-	-	-
CYMBELLA SP.	-	-	-	4	-	-	-	-	-
FRAGILARIA CONSTANS	91	7	-	9	-	-	3	73	36
FRAGILARIA LEPTOSTAURON	-	2	-	99	-	-	-	-	-
FRAGILARIA PINNATA	296	-	-	111	15	1	p	73	59
GOMPHONEMA PARVULUM	-	-	-	4	-	-	-	-	-
GYPHOSIGA ACUMINATUM	-	-	-	-	-	6	-	-	-
MELOSIRA AMBIGUA	-	5	17	-	-	1	-	-	-
MELOSIRA DISTANS	361	-	-	-	-	-	-	-	-
MELOSIRA GRANULATA	136	-	-	-	-	-	-	334	321
MELOSIRA GRANULATA V ANGUSTISSIMA	23	-	-	-	-	3	-	247	238
MELOSIRA VAHIENS	-	-	-	-	-	-	2	-	-
NAVICULA CONFERVACEA	-	-	-	-	-	-	3	-	-
NAVICULA CRYPTOCERPHALA	-	5	-	17	-	3	4	-	-
NAVICULA EXIGUA V CAPITATA	-	-	-	17	-	3	p	-	-
NAVICULA FRACTA	-	-	-	-	-	1	-	-	-
NAVICULA GASTRUM	-	-	-	-	-	3	-	-	-
NAVICULA PUBULA	-	-	17	26	-	-	-	-	-
NAVICULA SCUTELLICIDES	-	-	-	4	-	-	-	-	-
NAVICULA SP.	45	-	-	9	-	-	-	-	-
NITZSCHIA ACICULARIS	-	-	-	-	-	-	p	-	-
NITZSCHIA MOLSATICA	68	-	35	9	-	4	p	131	-
NITZSCHIA LONGIRATA	-	-	-	-	-	-	-	-	-
NITZSCHIA RUTZINGIANA	21	-	52	21	-	-	-	14	24

TABLE H-4b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATIONS: (CELLS/ML)									
	11	12	13	14	15	16	17	18	19	
NITZSCHIA ORTUSA	-	-	-	-	-	1	P	-	-	-
NITZSCHIA PALLA	-	-	-	9	-	-	-	-	-	24
NITZSCHIA PALEACEA	-	-	-	-	-	-	-	-	-	-
NITZSCHIA PAPVULA	-	-	-	-	-	-	-	-	-	-
NITZSCHIA SAGM	-	-	-	-	-	1	2	-	-	12
NITZSCHIA THYBOLIONELLA V VICTORIAE	-	-	-	-	-	-	-	-	-	-
NITZSCHIA SP	-	-	35	-	-	1	3	-	-	-
SUTRELLA SP	-	-	-	-	-	-	-	-	-	-
SYNEURA DELTICATISSIMA	45	7	-	-	-	-	-	14	-	-
SYNEURA BUMBENS	-	-	-	-	-	15	3	-	-	-
SYNEURA ULM	-	-	-	-	-	-	2	-	-	-
THIPSINOL MUSICA	-	-	-	-	-	-	-	-	-	-
EUGLENDOPHYCEAE										
EUGLENA SP	-	-	-	-	-	-	-	-	-	-
PHACUS ORPICULARIS	-	-	-	-	-	-	-	-	-	-
PHACUS SP	-	-	-	-	-	-	-	-	-	-
TRACHELONAS SP	45	5	-	-	15	-	-	14	12	-
CILIOPHORA										
UNID CILIOPHORA	-	14	87	4	-	-	P	44	-	-
TOTAL NUMBER OF ORGANISMS										
NUMBER OF TAXA										
23803	1246	27471	1515	6794	698	144	10848	6979	37	6979
48	41	41	44	32	51	43	41	37	37	6979

TABLE H-5a

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY - PHYTOPLANKTON (CELLS/ML) **
 GROUPS OF SPECIES (CONTRACT DACH01-78-C-0101) PLATE 1, CYCLE 5

(September 25-27, 1978)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATIONS (CELLS/ML)									
	1	2	3	4	5	6	7	8	9	10
CYANOPHYCEAE										
ANABAENA SP	7504	11930	6615	3500	8484	1252	254	212	37	503
ANATOKOPISTIS SP	2479	4134	5261	2625	2238	618	1237	237	237	602
APHANIZOEN FLOS-AQUAE	-	-	-	-	-	-	-	-	-	-
APHANOCAPSA DILICATISSIMA	-	-	-	-	-	-	-	-	-	-
APHANOCAPSA ELACHISTIA	-	-	-	704	-	-	-	1423	639	1141
CHROCOCCUS DISPERBUS	136	-	-	-	-	79	-	240	77	7410
CHROCOCCUS LIMNETICUS	91	-	123	151	930	23	224	27	85	1094
CHROCOCCUS MINUTUS	432	273	402	1307	2324	1141	144	1371	1533	1714
LYNGBYA CRATATA	1296	2441	1651	-	-	-	-	-	2131	-
LYNGBYA SP	-	-	-	-	-	-	-	-	-	-
MERISMOPEDIA GLAUCA	2547	797	2953	966	1860	127	254	1154	933	1327
MERISMOPEDIA TENUISSIMA	-	-	-	-	-	-	-	-	-	-
MICROCYSTIS INCESTA	1300	1743	1538	1334	1453	134	317	721	968	3404
OSCILLATORIA LIMNETICA	2401	1743	5344	2776	2782	1315	1470	1354	2515	7440
SPIRULINA LAXA	23	75	-	-	54	15	-	24	-	-
CHLOROPHYCEAE										
ACANTHOSPHAERA ZACHARIASI	-	-	-	-	-	-	-	-	-	-
ACTINASTREUM HANTZSCHEI	-	100	-	40	-	10	32	63	54	-
ANKISTRONEMUS FALCATUS	-	-	-	-	-	-	-	-	-	-
ANKISTRONEMUS NANOSPLEME	837	617	1015	325	374	75	75	202	19	554
CARTERIA SP	-	-	-	25	-	16	-	14	-	-
CHLAMYDOMONAS SP	-	-	-	-	-	23	-	-	32	-
CHLAMYDOMONAS SP	-	-	92	-	-	12	-	10	-	-
CHLOROCYBUS HUMICOLA	-	-	-	-	-	-	-	-	-	-
CHLOATALLA CHLOATALLA	-	-	-	-	-	-	-	-	-	-
CHLOATALLA SUBSALSA	-	25	-	40	29	-	-	-	-	-
CHLOATALLA SUBSALSA	23	-	-	40	29	-	70	14	15	-

TABLE H-5a (cont.)

[illegible]

TABLE H-5a (cont.)

[illegible]

TABLE H-5a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
NAVICULARIOPHYTES (DIATOMS)														
ACHANTHES SP.	364	174	215	141	320	32	23	12	1	70				
ACHANTHES CANCEROLATA V. DUPUIS	-	24	-	-	-	-	-	-	-	12				
ACHANTHES PLACENTULA V. ELLIOTT	-	-	-	-	-	-	-	-	-	-				
COSCIPODUS SP.	45	-	-	40	29	-	-	-	-	-				
CYCLotella GLOMERATA	-	124	31	-	174	127	13	37	12	233				
CYCLotella STILICERA	-	-	-	-	-	-	-	-	-	-				
CYMBELLA DELICATULA	-	-	-	-	-	-	-	-	-	-				
CYMBELLA MICROCEPHALA	-	-	-	-	-	-	-	-	-	-				
CYMBELLA TUNICA	-	-	-	-	-	-	-	-	-	-				
CYMBELLA SP.	-	-	-	-	-	-	-	-	-	-				
FRAGILARIA CONTROPENSIS	-	25	154	121	261	95	47	72	12	-				
FRAGILARIA LEPTOSTAURON	-	-	-	-	-	-	-	-	-	-				
FRAGILARIA FIRMATA	-	-	-	-	-	-	-	-	-	-				
GOMPHIDEMA PAVULUM	-	-	-	-	-	-	-	-	-	-				
GYROCISMA ACUMINATUM	-	60	-	-	-	-	-	-	-	-				
GYROCISMA AMPLIGIA	-	274	492	242	445	324	349	125	157	337				
GYROCISMA DISTANS	227	-	-	-	-	-	-	-	304	-				
HELOSIRA GRANULATA	142	249	123	242	320	254	295	214	387	419				
NAVICULA CRYPTICEPHALA	-	-	-	242	29	-	-	-	-	-				
NAVICULA EXTIMA V. CAPITATA	-	-	-	20	-	-	-	-	-	-				
NAVICULA GASTRUM	-	-	-	-	-	-	-	-	-	-				
NAVICULA LENTIS	-	-	-	-	-	-	-	-	-	-				
NAVICULA PUPULA	-	-	-	-	-	-	-	-	-	-				
NAVICULA PUPULA V. RECTANGULARIS	-	-	31	-	-	-	-	-	-	-				
NAVICULA SCUTELLOIDES	-	-	-	-	-	-	-	-	-	-				
NAVICULA SP.	-	-	-	-	-	-	-	-	-	-				
NITZSCHIA ACICULARIS	23	-	-	-	-	-	-	-	-	-				
NITZSCHIA PULSATICA	142	143	61	20	20	47	13	72	-	135				
NITZSCHIA ROTZINGIANA	23	-	-	40	24	15	10	14	-	108				
NITZSCHIA PALLIDA	-	-	-	-	-	-	-	-	-	-				
NITZSCHIA PALEACEA	-	-	-	-	54	14	-	-	-	35				
NITZSCHIA SUTILIS	-	-	-	-	-	-	-	-	-	-				
NITZSCHIA SP.	-	25	-	-	-	30	16	18	-	-				
PINNULARIA SUDETICA	23	-	-	-	-	-	-	-	-	-				
RHIZOLEPHEA SP.	-	-	-	-	-	-	-	-	-	-				
SYMPEDA DELICATISSIMA	136	70	-	20	-	-	-	64	-	38				
SYMPEDA ULNA	-	-	-	-	-	-	-	-	-	-				

TABLE H-5a (cont.)

TAXONOMIC CLASSIFICATION	1	2	3	4	5	6	7	8	9	10
EUGLENOPHYCEAE										
EUGLENA SP	21	-	-	-	-	16	-	-	-	78
PHACUS SP	23	25	-	-	29	-	-	-	-	35
TRACHELOMONAS SP									30	-
CILIOPHORA										
UNIT CILIOPHORA										
	-	-	-	-	-	-	32	34	19	35
TOTAL NUMBER OF ORGANISMS										
	21806	24631	28087	15203	24163	8623	10116	13414	13726	37797
NUMBER OF TAXA										
	40	34	30	43	35	45	40	45	51	40

TABLE H-5b

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY - PHYTOPLANKTON (CELLS/ML) **
 CORP. OF ENGINEERS (CONTRACT DAW-01-74-C-0101) DATE: 1. CYCLE 5
 (September 25-27, 1978)

TAXONOMIC CLASSIFICATION	11	12	13	14	15	16	17	18	19	
CYANOPHYCEAE										
ANABAENA SP.	-	206	-	-	-	-	-	-	-	-
ANABAENOPSIS SP.	969	-	-	-	-	-	-	-	-	94
AFRANTZOWIA FLOS-AQUAE	1700	-	-	-	-	-	-	-	-	-
AFRANTZOWIA DELICATISSIMA	1568	-	-	-	-	-	-	-	-	-
AFRANTZOWIA ELASTICA	52	49	116	-	-	-	-	-	-	-
CHROCOCCUS DISPARIS	105	14	145	-	27	341	3	-	-	-
CHROCOCCUS LIMNETICUS	2249	41	145	-	234	-	15	-	-	-
CHROCOCCUS MINIMUS	4550	-	-	-	-	-	-	-	-	-
LYNGBYA CONTORTA	-	34	-	-	-	-	-	-	-	481
LYNGBYA SP.	-	134	-	-	-	-	-	-	-	314
MYCROSPORA GLAUCOA	2249	1101	9294	-	4404	-	-	-	-	147
MYCROSPORA TENUISSIMA	5779	-	1453	-	-	-	-	-	-	1004
MICROCYSTIS INCERTA	3216	317	3454	104	2271	112	113	1417	337	701
OSCILLATORIA LIMNETICA	-	-	-	-	-	-	-	-	-	10
SPIRULINA LARA	-	-	-	-	-	-	-	-	-	-
CHLOROPHYCEAE										
ACANTHOSPHERA ZACHARTASI	-	-	2760	-	-	-	-	-	-	-
ACTINASTRUM HANTZSCHII	209	107	-	-	244	-	-	17	-	-
AKISTODOSMUS FALCATUS	-	-	-	-	-	-	-	202	-	10
AKISTODOSMUS NANNOSTYLENE	78	-	476	18	206	-	-	47	52	-
AKISTODOSMUS SPIRALIS	-	-	29	-	-	10	-	144	63	-
CARTERIA SP.	-	-	-	-	-	-	-	-	-	-
CHLAMYDOMONAS SP.	52	7	436	50	96	31	12	67	10	-
CHLORELLA SP.	-	-	1046	27	-	-	-	-	-	-
CHLORELLA MUMICOLA	-	-	-	-	-	-	-	-	-	-
CHLORELLA CUPIDATI	-	-	-	-	-	-	-	-	-	-
CHLORELLA SUBSALSA	-	-	58	-	14	-	-	-	-	-
CECTANTHUS SP.	52	-	-	-	-	-	-	-	-	71

(CELLS/ML)

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TABLE H-5b (cont.)

TAXONOMIC CLASSIFICATION	11	12	13	14	15	16	17	18	19
<i>TETRASTICUM METEORICANTHUM</i>	-	-	29	-	-	-	-	-	-
<i>TETRASTICUM STAUROGONIFORME</i>	24	-	116	-	14	-	-	17	-
<i>TRICHOPTERIS SETIGERUM</i>	340	-	340	-	234	-	0	219	63
UNICOLORPHACEAE									
CRYPTOPHYCEAE									
<i>CRYPTOMONAS ERUSA</i>	105	3	58	0	83	25	-	-	-
UNICRYPTOMONADACEAE	52	27	58	22	-	-	-	-	-
ULVOPHYCEAE									
<i>GLAUCOCYSTIS SP.</i>	-	3	87	9	-	-	3	17	10
<i>PERIDINIA SP.</i>	-	3	-	-	-	-	-	-	-
XANTHOPHYCEAE									
<i>ARACHNOCLOPSIS SP.</i>	-	-	-	-	-	37	2	-	13
<i>EPHOCYSTIS CAPITATUM</i>	-	-	-	-	-	-	-	-	-
CHRYSOPHYCEAE									
<i>CHRYSCOCCLUS SP.</i>	-	-	-	9	-	-	-	-	-
<i>DINCHYCHON CAMBIALULOSTIPITATUM</i>	-	-	-	50	-	-	-	-	-
<i>DINCHYCHON DIVERGENS</i>	-	-	-	104	-	-	-	-	-
<i>DINORBYCHON SP.</i>	-	7	-	-	-	-	-	-	-
<i>LAGUNITON SCHIFFELII</i>	26	-	-	-	-	-	-	-	-

(CELLS/ML)

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TABLE H-5b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)											
	11	12	13	14	15	16	17	18	19	20	21	22
EUGLENNOPHYCEAE												
EUGLENA SP.	-	3	29	9	-	5	-	17	-	-	-	-
PHYLLOGLAUCIS SP.	-	-	-	-	-	-	3	34	-	-	21	-
TRACHELOMONAS SP.	-	-	-	9	-	-	-	-	-	-	-	-
CILIOPHYTES												
UNIC CILIOPHYTES	78	17	-	9	27	-	-	17	10	-	-	-
TOTAL NUMBER OF ORGANISMS												
	24630	2582	2330	1101	960	1371	688	9031	5621	-	-	-
	46	47	34	46	29	29	34	46	44	-	-	-

BOALAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY - PHYTOPLANKTON (CELLS/ML) 60
COOPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I, CYCLE 6

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[illegible]

TABLE H-6a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATIONS: (CELLS/ML)									
	1	2	3	4	5	6	7	8	9	10
CRUCIGENIA QUADRATA	-	-	322	-	-	-	-	-	-	100
CRUCIGENIA TETRABEATA	-	222	54	-	178	198	252	208	70	100
DICTYOSPHAERIUM PULCHELLUM	-	-	-	-	-	-	-	-	-	50
ELAKATOMBIA DELATINOSA	-	16	13	-	-	60	18	-	35	25
EUBASTIUM SP.	56	32	13	20	11	-	-	-	-	-
GREENFELTIA RADIATA	-	-	-	-	-	-	-	-	-	-
GONIUM RECTANGLE	141	47	201	20	89	149	108	79	70	274
KIRCHNERITELLA LUMARIS	28	10	-	10	-	15	-	18	-	25
KIRCHNERITELLA THUSA	-	-	-	-	67	-	-	-	-	-
LOCYSTIS SP.	18	-	13	10	-	-	-	-	-	-
PANDORINA MORUM	-	-	-	-	-	-	-	-	-	-
PANDORINA SP.	-	63	-	40	89	117	-	-	70	-
PEDIASTRUM IRRADIATUM	-	-	-	-	-	210	-	-	-	-
PEDIASTRUM HOLYANUM	-	-	-	-	-	-	-	-	-	-
PEDIASTRUM DUPLEX V. CLATHRATUM	-	-	-	-	-	-	-	-	-	-
PEDIASTRUM DUTUSUM	226	127	54	151	89	117	341	32	70	224
PEDIASTRUM TETRA V. TETRAEDRON	-	-	-	-	-	-	18	-	-	-
POLYDICTIPSIS SPINULOSA	-	-	-	-	-	-	-	-	-	-
SCENEDESMUS ARUNDANS	28	222	27	60	67	30	214	95	70	75
SCENEDESMUS ACUMINATUS	113	63	107	80	44	104	72	364	200	25
SCENEDESMUS ARMATUS	54	-	54	40	-	384	-	12	-	-
SCENEDESMUS ARMATUS	-	-	-	342	389	448	508	507	975	946
SCENEDESMUS ARMATUS V. BICAUDATA	523	349	483	-	111	111	100	63	70	140
SCENEDESMUS RIJUGA	113	127	80	101	44	110	140	-	-	-
SCENEDESMUS DENTICULATUS	-	-	-	-	-	-	-	-	-	-
SCENEDESMUS QUADRICAUDA	834	713	630	553	879	613	920	571	732	921
SCENEDESMUS QUADRICAUDA	113	269	134	170	22	30	214	154	130	404
SCHEUCHERIA SETIGERA	-	-	-	-	-	-	18	15	17	25
SFLAKASTRUM MINUTUM	-	-	-	-	-	-	14	-	-	50
SPECIATIZONOPSIS FAULTANS	-	-	-	-	-	-	-	-	-	-
SPECIATIZONOPSIS PLANUM	28	-	13	20	22	-	125	-	-	-
TETRAEDRON CAUATUM	-	-	-	-	-	-	-	-	-	-
TETRAEDRON MINUTUM	14	16	27	10	22	105	30	47	17	25
TETRAEDRON MUTICUM	-	-	54	10	-	-	-	-	-	50
TETRAEDRON OREGANAE	-	-	27	-	-	15	18	-	-	-
TETRAEDRON THICITUM	-	-	-	-	-	60	-	-	-	25
TETRASTRUM M. TELEOCANTHUM	56	159	54	40	-	-	-	-	-	-
TETRASTRUM STAUROCENTRIFORME	-	-	54	-	-	-	72	-	200	-
TOURNAELLA SETIGERA	14	32	-	-	-	-	18	-	36	-

TABLE H-6a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATIONS: (CELLS/ML)									
	1	2	3	4	5	6	7	8	9	10
CRYPTOPHYCEAE										
CRYPTOMONAS ERUSA	-	-	-	-	-	-	-	-	-	-
DINOPHYCEAE										
GLENODINIUM SP	14	32	54	30	33	45	34	-	-	25
PERIDINIUM SP	-	-	-	-	22	-	-	-	-	-
ZANTHODIACEAE										
ARACHNOCELOPSIS SP	-	-	-	-	-	-	-	-	-	-
CINCYTHACEAE										
CHRYSOCCOCUS SP	-	-	13	-	-	-	14	16	17	25
LACYNION SCHEFFELII	-	-	-	-	-	-	-	-	52	-
BACILLARIOPHYTES (DIATOMS)										
ACHNANTHES SP	-	-	-	-	-	-	-	-	-	25
ACHNANTHES LACINIOSA V DUBIA	-	-	13	-	11	33	-	32	-	25
ASTILICELLA FREEMANII	-	-	-	-	-	-	-	14	-	-

TABLE H-6a (cont.)

[illegible]

TABLE H-6a (cont.)

TAXONOMIC CLASSIFICATION	1	2	3	4	5	6	7	8	9	10
SURIPALLA SP	-	32	-	10	-	-	12	-	-	25
SYNECHA DELICATISSIMA	-	16	-	10	-	-	-	-	-	-
SYNECHA DELICATISSIMA V. ANGUSTISSIMA	-	-	-	-	-	-	-	-	-	-
SYNECHA GIGLARI	-	15	-	-	-	-	-	-	-	-
SYNECHA KUMBEHIS	-	-	-	-	-	-	-	-	-	-
SYNECHA ULHA	-	-	-	-	-	-	-	-	-	-
TABELLARIA FLOCCULOSA V. FLOCCULOSA	-	-	-	-	-	-	12	-	-	-
EUGLENOPHYCEAE										
EUGLENA SP	14	-	-	20	-	-	-	-	-	-
EUGLENA SP	-	32	13	-	-	15	-	-	-	-
FRACUS SP	-	-	13	-	-	-	-	-	-	-
TRACHELODONTAS SP	14	-	-	30	11	-	-	16	17	-
CILIOPHORA										
UNITO CILIOPHORA	-	47	27	10	-	-	16	16	-	25
ROTIFERA										
KEBATELLA COCHLEARIS	-	-	-	-	-	-	12	-	-	-
UNITO ROTIFER	-	-	-	-	-	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS	12574	9055	7023	5836	4913	8364	7535	5893	9007	11431
NUMBER OF TAXA	40	45	42	46	39	42	51	34	37	44

TABLE H-6b

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY - PHYTOPLANKTON (CELLS/ML)

CONOPS OF ENGINEERS (CONTRACT DACW41-78-C-0101) PHASE 1, CYCLE A

(November 28-30, 1978)

TAXONOMIC CLASSIFICATION	11	13	14	15	16	17	18	
NUMBER OF ORGANISMS AT STATION:								
CYANOPHYCEAE								
APHANOCARPA DELICATISSIMA	-	-	-	-	-	-	-	-
APHANOCARPA CLATHRATA	-	-	-	-	-	-	-	-
APHANOCARPA NITIDULANS	-	-	-	-	-	-	-	-
CYANODOTUS DISPERBUS	139	-	35	-	-	-	37	-
CYANODOTUS SP	-	-	1046	-	-	-	-	-
GYMNOSTRAIA WICHURAE	-	-	-	-	-	-	-	-
LYAGRYA CONTORTA	-	-	-	-	-	-	-	-
MYRISOMEDIA TENJISSIMA	-	-	-	545	67	-	209	-
MYRISOMEDIA TRICERTA	-	-	-	-	-	-	1691	-
OSCILLATORIA LIMNETICA	-	-	-	-	-	-	-	-
OSCILLATORIA SP	-	-	70	-	-	-	-	-
CHLOROPHYCEAE								
ACTINASTRUM MANTZSCHII	70	-	-	-	-	-	-	-
ANKISTEDOSMUS FALCATUS	36	24	-	-	2	-	56	-
ANKISTEDOSMUS NANOSILENE	-	-	-	-	-	-	75	-
ANKISTEDOSMUS SPICALIS	209	24	9	-	3	1	131	-
CAPTARIA SP	35	24	-	-	6	1	10	-
CHLADOCOMNAS SP	-	95	-	44	-	-	-	-
CHLORILLA SP	-	-	-	-	-	-	-	-
CHODATELLA CHODATI	70	47	-	-	-	1	19	-
CHODATELLA SUUSALSA	-	-	-	-	-	-	-	-
COELASTRUM MICROSPORUM	-	-	-	-	-	-	-	-
COELASTRUM MINUS	-	24	-	-	-	-	-	-
COELASTRUM PROHNSCIDEUM	-	-	-	-	-	-	-	-
COELASTRUM SPHERICUM	279	-	-	-	-	-	-	-
COSCIUM SP	35	-	-	-	-	-	-	-
CHUCIGENIA SPICULATA	137	-	9	-	-	-	-	-

TABLE H-6b (cont.)

[illegible]

TABLE H-6b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (CELLS/ML)									
	11	13	14	15	16	17	18	19	20	21
CRYPTOPHYCEAE										
CRYPTOMONAS ERGSA	-	-	-	87	5	4	56			
DINOPHYCEAE										
GAENONDIUM SP	35	24	-	-	-	-	-			
PTRIDINIUM SP	-	-	-	-	-	-	-			
XANTHOPHYCEAE										
APACHNOCHLORIS SP	35	47	9	-	-	-	-			
CHEYSDOPHYCEAE										
CHRYSDOCOCUS SP	-	-	-	-	3	-	-			
LARVINIUM SCHAEFFELII	-	-	-	-	2	-	-			
BACILLARIOPHYTA (DIATOMS)										
ACINANTHES BP	-	-	35	-	2	5	12			
ACINANTHES LANCULATA V DORTA	-	47	35	-	2	5	12			
ASTERIONELLA FORMOSA	-	-	-	-	-	-	-			

TABLE H-6b (cont.)

TAXONOMIC CLASSIFICATION	11	13	14	15	16	17	18	(CELLS/ML)
CYCLOPS FLAVIPALPA V EULYPTA	-	-	-	-	-	-	-	-
COSCIINIDISCUS SP.	35	-	35	-	-	7	-	-
CYCLOTHELLA CAT-NATA	-	-	-	-	-	-	-	-
CYCLOTHELLA GLOBEPATA	4707	5278	131	1460	6	1	2559	-
CYCLOTHELLA STYLLIGERA	279	110	9	131	37	-	75	-
CYMELLA ASCEA	-	-	9	-	-	-	-	-
CYMELLA LESTOCEROS	-	-	193	-	-	-	19	-
CYMELLA TICHOCEPHALA	-	-	200	-	-	-	-	-
CYMELLA MINOTA	-	-	-	-	-	-	-	-
CYMELLA TUMIDA	-	-	9	-	2	-	-	-
CYMELLA VENTRICOSA	-	-	-	-	-	-	-	-
EUDOTIA CURVATA	-	-	-	-	-	-	-	-
EUDOTIA SP.	-	-	-	-	-	-	-	-
FRAGILARIA CONSTRUENS	-	-	61	-	-	-	-	-
FRAGILARIA CRISTIFORMIS	-	-	44	-	-	3	-	-
FRAGILARIA LEPTOSTAURON	35	-	662	-	-	-	-	-
GOMPHONEMA GRACILE	-	-	44	-	-	1	-	-
GOMPHONEMA PALMULUM	-	-	-	-	-	-	-	-
MELICSEA AMPLUA	209	-	375	120	-	3	-	-
MELICSEA DIJANS	393	230	52	-	25	3	204	-
MELICSEA PEARLATA	-	-	-	-	-	-	-	-
MELICSEA GRANULATA V ANGUSTISSIMA	-	-	-	-	-	-	-	-
MELICSEA VARIAS	-	-	-	-	-	-	-	-
NAVICULA CCM-HACEA	-	-	-	-	-	1	-	-
NAVICULA CRYPTOCOPHALA	-	-	-	11	3	10	-	-
NAVICULA ELGINIENSIS	-	-	-	-	8	-	-	-
NAVICULA EXIMIA V CAPITATA	-	-	-	-	20	17	-	-
NAVICULA GASTRUM	-	24	-	-	-	-	-	-
NAVICULA GRIMALTA	-	-	-	-	-	-	-	-
NAVICULA LATENS	-	-	-	-	-	-	-	-
NAVICULA DUPULA	-	-	9	11	10	17	-	-
NAVICULA DUPULA V RECTANGULARIS	-	-	26	-	17	35	-	-
NAVICULA SALINAPLUM V INTRAMEDIA	-	-	-	-	-	-	-	-
NAVICULA SCUTELLOIDES	-	-	-	-	2	-	-	-
NAVICULA SP.	35	-	52	-	10	12	-	-
NITZSCHIA ACICULARIS	-	-	17	-	3	1	-	-
NITZSCHIA POLSATICA	209	-	-	-	-	3	-	-
NITZSCHIA KUTZINGIANA	35	-	-	-	3	-	-	-
NITZSCHIA DUTUNA V SCALPELLIFORMIS	-	-	-	-	-	-	-	-
NITZSCHIA PALLA	-	-	-	-	-	-	-	-
NITZSCHIA PAL-ACEA	70	-	9	-	3	1	-	-
NITZSCHIA SP.	-	-	-	-	-	-	-	-
STANULARIA SP.	-	-	-	-	-	-	-	-
SUBSETELLA ATTHUIS	-	-	-	-	-	1	-	-
SUBSETELLA LINEARIS	-	-	-	11	-	-	-	-

TABLE H-6b (cont.)

TAXONOMIC CLASSIFICATION	11	13	14	15	16	17	18	(CELLS/ML)
<i>SYNEDRA</i> SP.	-	-	-	-	-	-	-	-
<i>SYNEDRA DELICATISSIMA</i>	-	-	17	-	5	-	-	-
<i>SYNEDRA DELICATISSIMA</i> V. <i>ANGUSTISSIMA</i>	-	-	-	-	-	-	-	-
<i>SYNEDRA GYALAHU</i>	-	-	-	-	-	9	-	-
<i>SYNEDRA GYALAHU</i> V. <i>ANGUSTISSIMA</i>	-	-	-	-	-	-	-	-
<i>SYNEDRA ULNA</i>	-	-	-	-	2	9	-	-
<i>TABELLARIA FLOCCULOSA</i> V. <i>FLOCCULOSA</i>	-	-	-	-	-	-	-	-
EUGLENOPHYCEAE								
<i>EUGLENA</i> SP.	35	-	17	-	2	1	-	-
<i>LEPTOCYCLIS TERTIA</i>	-	-	-	-	-	-	-	-
<i>PHACUS</i> SP.	-	-	-	-	-	-	-	-
<i>TRACHELEMONAS</i> SP.	-	-	-	-	-	-	-	-
CILIOPHORA								
UNIT CILIOPHORA	35	-	17	-	-	-	-	-
POTIFERA								
<i>HEPATELLA CECUMLEARIS</i>	-	-	-	-	-	-	-	-
<i>UNIT POTIFEL</i>	-	-	-	11	-	-	-	-
TOTAL NUMBER OF ORGANISMS	11229	6870	3524	2552	361	163	6403	-
NUMBER OF TAXA	40	20	30	13	35	32	27	-

APPENDIX I
ZOOPLANKTON

LIST OF TABLES

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TABLE I-1a

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY - ZOOPLANKTON (ORGANISMS/100 L)
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-8101) PHASE I, CYCLE I
 (April 17-21, 1978)

TAXONOMIC CLASSIFICATION	1	2	3	4	5	6	7	8	9	10
NUMBER OF ORGANISMS AT STATION: (ORGANISMS/100 L)										
COPEPODA										
CALANOIDA										
DIATOMUS MISSISSIPPIENSIS	107	271	214	207	193	308	73	21	206	176
CYCLOPOIDA										
CYCLOPS BICUSPIDATUS TIMMANSI	238	193	92	107	245	482	447	92	197	105
CYCLOPS SP.	83	174	107	14	175	54	119	35	-	115
MESOCYCLOPS EDAX	-	-	-	-	-	-	-	-	-	-
TENDRACYCLOPS PRASINUS	-	-	-	-	-	-	-	-	-	-
NAUPLII	1155	1760	1421	635	1244	562	839	116	886	1135
CLADOCERA										
ALONA SP.	-	19	-	-	-	-	-	-	-	-
ALONELLA SP.	1052	3097	2761	1783	2960	2263	976	532	2532	859
BOSMINA LONGIROSTRIS	-	-	-	-	-	-	-	-	-	-
BOSMINOPSIS DEITERSTI	-	-	-	-	-	-	-	-	-	-
CEPHRODAPHNIA SP.	-	-	-	-	-	-	-	-	-	-
CHYDOPUS SP.	-	-	-	-	-	-	-	-	-	-
DAPHNIA PARVULA	428	329	290	128	-	696	347	56	329	100
DAPHNIA SP.	12	77	92	-	88	27	27	-	33	69
DIAPHANOSOMA BRACHYURUM	49	-	-	-	-	-	-	-	-	-
EUBOSMINA SP.	-	-	-	-	-	-	-	-	-	-
HOLAPEDIUM AMAZONICUM	71	193	15	24	-	-	-	44	-	-
TMOICPHALUS SP.	-	19	-	-	-	-	-	-	-	-

TABLE I-1a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/100 L)									
	1	2	3	4	5	6	7	8	9	10
OSTRACODA										
CYPRIS SP	-	-	-	-	-	-	-	-	-	-
ROTIFERA										
AMELIORISIA SP	-	-	-	-	-	-	-	-	-	-
ART. UNIDENT. SP	-	19	-	-	-	-	-	-	-	-
ASPL. UNCINA POLYDONTA	-	-	-	-	-	-	-	12	-	-
BOACHINUS SP	-	19	-	-	-	-	-	-	-	6
CEPHALADILLA SP	-	54	-	-	-	-	-	-	-	-
CINCHILUS UNICORNIS	-	-	-	-	-	-	-	-	-	-
GASTERUS SP	12	-	-	-	-	-	-	-	33	6
GELICOTYUS SP	24	19	31	21	17	27	-	2	16	15
HERAFELLA COCHLEARIS	-	-	-	-	-	-	-	-	-	-
MONOSTYLA SP	-	-	-	-	-	-	-	-	-	-
NOTMALCA SP	59	77	-	36	123	27	-	-	131	100
PARACHLADILLA SP	-	-	-	-	-	-	-	-	-	-
PLATYAS SP	-	77	-	-	-	-	-	-	-	6
POLYARTHA SP	-	39	122	7	52	-	9	-	-	15
TRICHOCERCA SP	-	-	-	-	-	-	-	-	-	-
UNIDENTIFIED ROTIFERA	-	-	-	-	-	-	-	-	-	-

TABLE I-1a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/100 L)									
	1	2	3	4	5	6	7	8	9	10
PROTOZOA										
RHIZOPODA										
VOLVAX SP	95	290	306	235	193	241	-	7	230	61
VORTICELLA SP	-	-	-	-	-	-	73	-	-	-
MISCELLANEA										
HYDRA	-	-	-	-	-	-	9	-	-	-
TOTAL NUMBER OF ORGANISMS										
	4284	6750	5471	3208	5290	4687	2919	918	4803	2677
NUMBER OF TAXA										
	13	16	11	12	10	10	10	10	10	15

TABLE I-1b

OLAKF SEMINOLE WATER QUALITY MANAGEMENT STUDY - ZOOPLANKTON (ORGANISMS/100 L)00
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE 1, CYCLE 1

(April 17-21, 1978)

TAXONOMIC CLASSIFICATION	11	12	13	14	15	16	17	18	19	(ORGANISMS/100 L)
Copepoda										
Calanoida										
<i>Diaptomus mississippiensis</i>	544	-	5	7	2	3	-	321	241	
Cyclopoida										
<i>Cyclops bicuspidatus thomasi</i>	131	82	37	7	18	14	-	238	167	
<i>Cyclops sp.</i>	37	-	5	14	-	3	-	-	74	
<i>Mesocyclops edax</i>	-	181	18	-	2	-	4	-	-	
<i>Tropocyclops prasinus</i>	-	-	-	-	-	-	-	-	-	
Nauplii	1033	789	384	174	175	89	8	1775	1167	
Cladocera										
<i>Alona sp.</i>	19	-	-	-	-	3	-	-	-	
<i>Alonella sp.</i>	5031	510	181	44	11	14	4	3615	2743	
<i>Moselya longirostris</i>	-	-	-	-	-	-	-	-	-	
<i>Rosinopsis deitersi</i>	-	16	-	-	25	-	-	-	37	
<i>Ceriodaphnia sp.</i>	-	16	5	-	-	-	-	-	-	
<i>Chydorus sp.</i>	-	-	-	-	-	-	-	-	-	
<i>Daphnia parvula</i>	150	-	14	-	-	3	-	556	296	
<i>Daphnia sp.</i>	56	16	23	7	-	-	-	84	56	
<i>Diaphanosoma brachyurum</i>	-	-	-	-	-	-	-	-	-	
<i>Eubosmina sp.</i>	94	-	-	-	-	-	-	278	111	
<i>Molobosoma amazonicum</i>	19	-	14	-	-	-	-	-	-	
<i>Strocephalus sp.</i>	-	-	-	-	-	-	-	-	-	

TABLE I-1b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/100 L)									
	11	12	13	14	15	16	17	18	19	
OSTRACODA										
CYPRIS SP	-	-	-	14	-	-	-	-	-	-
ROTIFERA										
ANEURIPSIS SP	-	-	-	-	4	-	-	-	-	-
ASCOROPHNA SP	-	-	-	-	4	17	-	-	-	-
ASPLANCHNA PRIONONTA	131	16	65	14	-	-	-	577	1975	-
BRACHIONUS SP	19	-	-	-	-	-	-	43	37	-
CEPHALADELLA SP	19	-	5	-	2	-	-	-	16	-
CONOCHILUS UNICORNIS	-	-	-	-	-	-	-	-	-	-
GASTRORUS SP	-	33	5	-	-	3	-	-	-	-
KELTICOTTIA SP	-	42	14	-	27	-	8	43	37	-
KERATELLA COCHLEARIS	-	-	-	-	-	-	-	-	-	-
MONOSTYLA SP	-	-	-	7	-	7	-	-	-	-
NOTOCECUM SP	-	-	-	-	2	-	-	-	-	-
PARACOLUMELLA SP	19	16	23	-	-	-	-	107	204	-
PLATYAS SP	19	-	-	-	-	-	-	43	-	-
POLYARTHRA SP	10	-	32	-	4	-	-	-	74	-
TRICHCERCA SP	-	16	-	-	2	3	39	21	18	-
UNIDENTIFIED ROTIFERA	-	-	-	7	-	3	-	-	-	-

TABLE I-1b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATIONS: (ORGANISMS/100 L)									
	11	12	13	14	15	16	17	18	19	20
PROTOZOA										
ENTODINIA	-	16	-	-	2	3	-	-	-	93
VOLENTA	-	-	-	7	-	-	-	-	216	-
VORTICELLA SP	-	-	-	-	-	-	-	-	-	-
MISCELLANEA										
HYDRA	-	-	-	-	-	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS	7360	2151	430	302	284	165	67	7892	6946	980000
NUMBER OF TAXA	16	13	16	11	15	13	6	14	17	980000

TABLE I-2a

LAKE SPINOLE WATER QUALITY MANAGEMENT STUDY - ZOOPLANKTON (ORGANISMS/100 L)
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I, CYCLE 2
 (June 5-7, 1978)

TAXONOMIC CLASSIFICATION	1	2	3	4	5	6	7	8	9	10
COPEPODA										
CALANOIDA										
DIATOMUS MISSISSIPPIENSIS	67	77	320	11	79	56	35	26	80	167
CYCLOPOIDA										
CYCLOPOID COPEPODITES										
CYCLOPS SP	18	5	18	3	28	4		15	71	584
PUCYLOPS AGILIS					3	12		42		
PFSCYCLOPS FOAX	75	86	151	41	45	39	27	15	125	250
TROPOCYCLOPS PRASINUS										
MARPACTICOID										
ATTHEYELLA SP										
NAUPLII	431	248	755	301	392	190	493	786	1176	3382
CLADOCERA										
BOSMINA LONGIROSTRIS	3	5			14	16	14	19	207	782
BOSMINOPSIS REITERI	5			101		4		8		42
CEPHODAPHNIA SP						6				42
DAPHNIA PAPYLA	38	28	178	11	34	19	6	26	52	188
DIAPHANOSOMA BRACHYURUM	108	44	16	16	101	14	70	84	336	1127
HYALOPHIDIUM AMAZONICUM			249			66			151	125
LEPTODORA KINOTII					3					
PLEUROTUS SP										

TABLE I-2a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/100 L)									
	1	2	3	4	5	6	7	8	9	10
OSTRACODA										
CYPRIS SP	-	-	-	-	-	2	-	-	-	-
ROTIFERA										
ASPLANICHA PRIDONITA	26	14	-	-	22	23	2	34	71	2639
BRACHIONUS ANGULATUS	3	-	-	-	8	-	2	23	80	1837
BRACHIONUS NAVARENENSIS	-	-	-	-	-	-	-	-	-	-
BRACHIONUS SP	-	2	-	-	3	8	-	-	-	-
COMBICILUS UNICORNIS	-	-	-	-	3	-	4	-	-	-
PILINA LONGISEA	-	-	-	-	14	-	-	-	-	-
GASTRUPUS SP	3	7	18	-	13	-	6	4	160	6889
HELLICOTTA SP	-	-	-	-	-	-	-	-	-	-
KEPATILLA AFRICANA	-	-	-	-	-	-	-	-	-	-
KEPATILLA COCKLEARTIS	10	7	-	-	17	6	10	38	-	-
KEPATILLA SP	-	-	-	-	-	2	-	-	-	-
LECANE SP	-	-	-	-	-	-	-	-	-	-
MONOSTYL SP	-	-	-	-	3	-	-	11	-	-
PLATYAS PATULUS	-	-	-	-	-	4	-	-	-	-
PLEUSOMA HIRSONI	-	-	-	-	-	-	-	-	-	-
POLYARTHA VULGARIS	-	2	-	-	-	-	-	8	-	83
POLYARTHA SP	-	-	-	-	-	-	-	-	-	-
TRICHOCCERCA LONGISEA	3	-	-	-	-	2	-	8	-	42
UNIDENTIFIED ROTIFERA	-	-	-	-	-	-	-	-	-	-

TABLE I-2a (cont.)

TAXONOMIC CLASSIFICATION	1	2	3	4	5	6	7	8	9	10
PROTOZOA										
PHIZOPODA	-	-	-	-	-	-	2	-	-	-
VOLVOX SP							6			
MISCELLANEA										
CHAROPUS SP	-	2	27	-	3	6	-	-	-	-
HYDRACARIA	-	-	-	-	-	-	-	-	-	-
OTHER OPTERA	-	-	-	-	-	-	-	-	-	-
UNITED GLOCHIDIA	-	-	9	-	-	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS	791	527	1743	482	640	481	782	1135	2591	18877
NUMBER OF TAXA	14	13	10	7	21	28	15	17	13	18

000140 2 1714 WATER QUALITY MANAGEMENT STUDY - ZEPHIRANKTON (ORGANISMS/100 L)
00 10 0104 03 (CONTRACT DML21-78-C-0101) PHASE 1, CYCLE 2
(June 5-7, 1978)

I-10

TABLE I-2b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/100 L)									
	11	12	13	14	15	16	17	18	19	20
<i>OSTRACODA</i>										
CYPRID sp	-	-	-	-	-	-	-	-	-	-
<i>NOTIFERA</i>										
ACOLASTHIA BRILLIANTA	92	50	307	8	323	12	-	37	20	20
BRACHIDONTES ANATOLICUS	291	-	1398	8	1831	1	-	-	20	20
BRACHIDONTES HAVANENSIS	-	-	-	-	-	-	-	-	-	-
BRACHIDONTES SP	-	-	253	-	52	-	-	9	-	-
CONCHILUS FUSCOTINIS	19	50	-	-	70	-	-	-	-	-
FILERIA LONGICOSTA	-	-	-	-	-	-	-	-	-	-
GASTROPOD sp	192	-	4977	-	958	-	-	-	-	-
HELLICUTELLA sp	-	-	-	-	-	-	-	-	-	-
NOTIFELLA AFRICANA	-	-	-	-	-	-	-	-	-	-
NOTIFELLA CUCULCARIS	-	-	-	-	-	-	-	-	-	-
NOTIFELLA sp	45	50	13	6	-	-	-	-	40	40
LECANID sp	-	-	-	-	-	-	-	-	-	-
MONOCOTYLA sp	-	-	40	70	26	4	-	-	-	-
NOTIFELLA PATRIBUS	-	8	-	-	-	-	-	-	-	-
PLATYDONTES sp	-	-	-	-	-	-	-	-	-	-
DELVANDIA VIRIDIS	-	-	-	-	-	-	-	-	-	-
POLYDONTES sp	-	-	27	37	9	-	-	37	20	20
TRICHOPTERUS LUNATA	27	-	13	4	-	-	-	9	-	-
UNIDENTIFIED NOTIFERA	-	8	-	-	-	-	-	-	-	-

TABLE I-2b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/100 L)									
	11	12	13	14	15	16	17	18	19	000000
PROTOZOA										
PHYLLOPODA	-	-	-	12	-	-	-	-	-	000000
VERV. IN. SP.	-	-	-	25	-	-	-	-	-	000000
MISCELLANEA										
CHADIDRUS SP.	-	-	-	4	-	-	-	-	-	000000
HYDROCACTIDIA	-	-	-	12	-	-	-	-	-	000000
HYPER. TETTERIA	-	-	-	-	-	-	-	-	-	000000
SPICED. G. TENDRIA	-	-	-	-	-	-	-	-	-	000000
TOTAL NUMBER OF ORGANISMS										
-	7746	2241	17078	1556	3305	110	13	5418	6589	000000
NUMBER OF TAXA										
-	16	11	17	19	13	13	3	15	18	000000

TABLE I-3a

OLAKI SIMULATED WATER QUALITY MANAGEMENT STUDY - ZOUPLAINTIN (ORGANISMS/100L) 100

GROUPS OF ENGINEERS (CONTRACT D4C001-74-C-0101) PHASE 1, CYCLE 1

(July 17-20, 1978)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/100 L)									
	1	2	3	4	5	6	7	8	9	10
CLUMINODA										
CALVINDA										
DIAPYCNUS MISSISSIPPIENSIS	-	26	-	15	5	37	10	37	10	-
CYCLIPODA										
CYCLIPUS OCCUPATUS THOMAS	274	393	323	503	72	302	336	167	313	93
CYCLIPUS SP	33	71	30	45	61	47	73	149	166	-
MONOCYCLIPUS FOR	-	-	-	-	-	-	-	-	-	-
TRICYCLIPUS PRASIUS	-	9	-	-	-	-	-	-	-	-
NALPIT	532	900	454	1109	237	400	1135	1334	1357	1481
CLAMICERA										
ALUNA SP	1007	1391	320	1100	107	400	1204	2037	733	546
ELSPINA LONGIPONTIS	-	5	4	10	32	15	1	43	147	109
ELSPINALPUS DELICAT	-	-	-	-	-	-	-	-	-	-
ELSPINALPUS SP	932	1226	574	1319	733	1204	1605	2000	101	105
ELSPINALPUS SP	8	143	24	15	22	6	12	-	-	31
ELSPINALPUS SP	-	-	-	-	-	-	-	-	-	-
DIAPYCNUS MISSISSIPPIENSIS	400	1374	465	1200	1270	400	1504	2000	720	123
ALUNA MACRODIP	67	-	-	15	-	-	-	-	-	-
ELSPINALPUS SP	-	-	-	-	-	-	-	-	-	-

TABLE I-3a (cont.)

[illegible]

TABLE I-3a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/100 L)									
	1	2	3	4	5	6	7	8	9	10
MISCELLANEA										
CHALICERUS SP	-	-	-	-	5	-	-	-	-	-
NEPATECA	-	-	-	-	-	-	-	-	-	-
UNIDENTIFIED INSECTA	-	-	-	-	-	-	-	-	-	-
UNIDENTIFIED ALGAE	4	-	6	-	11	-	71	-	-	-
TOTAL NUMBER OF ORGANISMS	4350	6166	2679	5051	2990	3647	8061	17447	9179	9469
NUMBER OF TAXA	13	15	17	12	15	14	14	14	10	20

TABLE I-3b

WALAPLE CREEK WATER QUALITY MANAGEMENT STUDY - ZOOPLANKTON (ORGANISMS/100 L)
 CLOSING OF FISHING (CONTACT BAY) - 78-0-01011 PHASE 1, CYCLE 3
 (July 17-20, 1978)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATIONS										(ORGANISMS/100 L)
	11	12	13	14	15	16	17	18	19	20	
CEPHALOPODA											
CALANOIDA											
DIATOMUS MISSISSIPPIENSIS	-	67	-	-	-	-	-	-	-	-	-
CYCLOPOIDA											
CYCLOPS BICUSCIPATUS THOMASI	-	-	-	-	-	-	-	-	-	-	-
CYCLOPS SP.	210	93	-	54	130	-	7	173	55	-	-
MEGALOCYCLUS COAR.	62	-	-	3	-	-	-	36	5	-	-
TRICYCLOPS PHASIDUS	-	-	-	-	-	-	-	-	-	-	-
NAUPLII	495	1194	29	241	260	-	5	750	203	-	-
CLANDEIRA											
ALUNA SP.	-	9	-	-	-	-	-	-	-	-	-
ECSPINA LONGICORNIS	743	67	-	12	-	-	-	1046	101	-	-
SPINOSUS (LITIDUS)	62	33	631	751	-	-	-	200	92	-	-
SPINOSUS (LITIDUS)	224	-	14	39	-	-	-	119	83	-	-
SPINOSUS (LITIDUS)	15	-	-	-	-	-	-	-	-	-	-
SPINOSUS (LITIDUS)	-	-	-	-	-	-	-	-	-	-	-
SPINOSUS (LITIDUS)	207	-	14	12	-	-	-	1026	157	-	-
SPINOSUS (LITIDUS)	15	-	-	3	-	-	-	11	51	-	-

TABLE I-3b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/100 L)									
	11	12	13	14	15	16	17	18	19	20
OSTRACODA										
UNIDENTIFIED OSTRACODA	-	-	-	9	-	1	-	-	-	-
UNIDENTIFIED OSTRACODS	-	-	-	-	-	-	-	-	-	-
NOTTELLA										
ADLACHNA PHIDIONIA	174	-	57	3	1272	-	-	77	7	000000
ADLACHNA ANJULAPIS	1548	-	5079	-	16	-	-	1561	553	000000
ADLACHNA PIDENTATA	-	-	-	-	-	-	-	-	-	000000
FRAGILINUS CALYPTILINUS	-	-	29	-	-	-	-	49	5	000000
FRAGILINUS SAVANNAHENSIS	-	-	43	-	14	-	-	240	19	000000
FRAGILINUS SP	-	-	-	6	-	-	-	-	-	000000
CUNEIFILUS UNICORNIS	6378	1008	600	-	436	-	-	1446	704	000000
FILINIA LONGISETA	-	-	-	-	-	-	-	-	-	000000
GASTROPEUS SP	511	100	603	18	1162	-	-	473	174	000000
PARINGIA SP	-	-	-	-	-	-	-	-	-	000000
ALICETES SP	-	-	-	-	-	-	-	-	-	000000
ALICETES AFRICANA	15	-	-	-	-	-	-	-	-	000000
ALICETES SP	867	-	576	9	173	-	-	108	97	000000
ALICETES SP	-	-	14	145	148	1	-	-	5	000000
ALICETES SP	-	-	-	-	-	-	-	-	-	000000
ALICETES SP	196	-	-	-	-	-	-	704	14	000000
ALICETES SP	146	33	43	-	14	-	-	53	51	000000
ALICETES SP	-	-	-	-	-	-	-	-	-	000000
ALICETES SP	1022	42	14	24	93	-	-	346	92	000000
ALICETES SP	-	-	-	-	-	-	-	-	-	000000

TABLE I-3b (cont.)

[illegible]

TABLE I-4a

SALARY SAMPLE WATER QUALITY MANAGEMENT STUDY - ZOOPLANKTON (ORGANISMS/100 L)
 CORPS OF ENGINEERS (CONTRACT DACW11-76-G-0101) PHASE I, CYCLE 4
 (August 14-17, 1978)

TAXONOMIC CLASSIFICATION	1	2	3	4	5	6	7	8	9	10
COPEPODA										
CALANOIDA										
DIATOMUS MISSISSIPPIENSIS	-	17	9	7	15	21	10	-	76	-
CYCLOPOIDA										
CYCLOPOID COPEPODITES										
CYCLOPS SP	524	128	178	146	267	42	-	-	92	-
MESOCYCLOPS EDAX	373	77	205	174	397	83	44	24	197	-
TROPICOCYCLOPS PRASINUS	-	-	18	-	-	4	-	-	-	-
NAUPLII	1546	462	658	459	703	262	160	75	443	150
CLADOCERA										
ROSMERIA LONGICORNIS	28		44	70	15	46	133	103	250	-
ROSMERIA DELTENSIS	1311	515	480	271	501	83	359	1066	1236	45
CERIODAPHNIA SP	41		18		8	4				
DAPHNIA PARVULA			9	28	115	67	275	16	137	15
DIAPHANOSOMA BRACHYURUM	359	68	10	146						
HOLopedium AMAZONICUM										
LETOIGIA ACANTHOCERCOIDES										
LETOIGIA MACROCORA	416	60	196	21	191	146	195	123	467	-
PLEURONIA SP										

TABLE I-4a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/100 L)									
	1	2	3	4	5	6	7	8	9	10
OSTRACODA										
UNIDENTIFIED OSTRACODA	-	-	-	-	-	-	-	-	-	-
ROTIFERA										
ASPLANCHNA PRINODONTA	124	60	40	63	92	25	151	47	206	706
BRACHIONUS ANGULARIS	83	77	-	-	-	-	151	47	704	631
BRACHIONUS RIDENTATA	-	-	-	-	-	-	-	4	-	-
BRACHIONUS CALYCIFLORUS	16	66	62	7	23	21	302	24	23	1761
BRACHIONUS HAVANAENSIS	-	-	-	-	-	33	27	-	917	-
BRACHIONUS SP	-	-	-	-	-	-	53	79	-	-
CONCHILUS UNICORNIS	41	-	-	7	-	-	-	-	-	398
DIAPHANUS LONGISETA	-	-	-	-	-	-	-	903	-	1487
GASTRUPUS SP	718	248	587	271	901	467	1430	-	2124	-
HERATELLA COCHLEARIS	524	434	471	195	412	162	204	107	412	886
HERATELLA SP	-	-	-	-	-	-	-	-	8	30
LFCANE SP	-	-	-	-	-	-	-	-	298	15
PLATYAS PATULUS	-	-	-	-	-	-	-	-	-	-
PLATYAS QUADRICORNIS	-	-	-	-	-	-	-	-	-	-
PLEOSOMA HUNTONI	-	24	18	-	8	-	9	131	603	7
POLYARTHA VULGARIS	28	60	80	63	69	-	-	16	122	300
POLYARTHA SP	-	-	-	-	-	-	27	-	-	-
SYNCHAETA SP	-	-	-	-	-	-	27	-	-	-
TRICHOCECA LONGISETA	662	171	222	209	221	121	98	24	1100	7
TRICHOCECA SP	-	-	-	-	-	-	-	-	-	-

TABLE I-4a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/100 L)									
	1	2	3	4	5	6	7	8	9	10
PROTOZOA										
ACTINOPODA	-	-	-	-	-	-	-	-	-	-
MISCELLANEA										
CHAROPUS SP.	-	-	9	7	8	-	-	-	-	-
CYPRIDINTEA	-	-	-	-	-	-	-	-	-	-
UNIONID GLUCHIDIA	28	-	-	14	-	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS	5819	2471	3362	2176	4026	1595	3863	2313	9449	6159
NUMBER OF TAXA	17	15	19	18	17	17	14	17	19	15

TABLE I-4b

LAKE SHIMOLE WATER QUALITY MANAGEMENT STUDY - ZOOPLANKTON (ORGANISMS/100 L)
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I, CYCLE 4
 (August 14-17, 1978)

TAXONOMIC CLASSIFICATION	11	12	13	14	15	16	17	18	19
COPEPODA									
CALANOIDA									
DIAPTOMUS MISSISSIPPINENSIS	94	31	37	-	-	2	-	44	38
CYCLOPOIDA									
CYCLOPIDO COPEPODITES	-	72	110	91	2	28	4	104	91
CYCLOPS SP	234	17	18	2	-	2	-	37	35
MYSOCYCLOPS EDAX	340	34	18	2	-	2	-	7	-
TROPOCYCLOPS PRASINUS	-	51	-	-	-	-	-	-	-
NAUPLII	1874	656	971	139	3	60	13	592	231
CLADOCERA									
BOSMINA LONGICORNIS	585	51	18	-	-	2	-	104	49
BOSMINIDS DETEPSEI	1077	-	1539	2	25	14	2	326	105
CERTODAPHNIA SP	47	-	92	-	-	-	-	7	21
DAPHNIA PAVULA	1159	100	220	5	2	9	-	363	175
DIAPHANOSOMA BRACHYURUM	-	-	-	-	-	-	-	7	-
HOLopedium AMAZONICUM	-	-	-	-	-	-	-	-	-
LEYDIGIA ACANTHOCERCOIDES	-	-	-	-	-	-	2	-	-
BYTHIA MACRODONTA	691	3	531	-	3	2	-	118	98
PLEUROCERUS SP	-	-	-	2	-	-	-	-	-

TABLE I-4b (cont.)

TAXONOMIC CLASSIFICATION	11	12	13	14	15	16	17	18	19	20
	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/100 L)									
OSTRACODA										
UNIDENTIFIED OSTRACODA	-	-	10	-	-	-	2	-	-	-
NOTIFERA										
ASPLANCHMA PRIOIDOTA	258	-	1026	-	19	5	-	200	35	000000
BRACHIONUS ANGULARIS	70	-	1049	-	260	75	-	126	-	000000
BRACHIONUS PIDENTATA	-	-	-	-	-	-	-	-	-	000000
BRACHIONUS CALYCIFLORUS	12	-	275	2	16	-	-	7	10	000000
BRACHIONUS HAVANAENSIS	199	-	-	-	120	-	-	30	59	000000
BRACHIONUS SP	35	7	-	-	-	-	-	-	-	000000
CONCHILUS UNICORNIS	2436	-	5021	-	93	99	-	828	175	000000
FILIMIA LONGISETA	831	-	8429	8	351	69	2	392	140	000000
GASTRORUS SP	1007	-	-	-	70	-	2	444	245	000000
KERATELLA CCMLEARTIS	-	-	-	-	23	5	-	15	-	000000
KERATELLA SP	-	20	403	5	-	-	-	-	-	000000
LECANE SP	-	68	-	109	1	36	-	-	-	000000
PLATYAS PATIUS	-	-	-	3	7	-	-	22	-	000000
PLATYAS QUATICORNIS	-	-	-	2	-	-	-	-	-	000000
PLEOSOMA MUNSONI	-	-	-	-	-	-	-	-	-	000000
POLYARTHA VULGARIS	-	-	403	2	32	14	7	74	14	000000
POLYARTHA SP	117	-	-	-	-	-	-	-	-	000000
SYNCHAETA SP	-	-	-	-	-	-	-	-	-	000000
TRICHCERCA LONGISETA	47	-	-	-	-	-	-	46	3	000000
TRICHCERCA SP	-	-	-	-	-	-	-	-	-	000000

TABLE I-4b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/100 L)									
	11	12	13	14	15	16	17	18	19	
PROTOZOA										
ACTINOPODA	-	20	-	-	-	-	-	-	-	-
MISCELLANEA										
CHAETOPUS SP	-	-	-	51	2	-	-	-	-	-
OTHER DIPYTERA	-	-	-	13	-	-	-	-	-	-
UNIONID GLYCERIDIA	-	-	-	-	-	-	-	96	-	-
TOTAL NUMBER OF ORGANISMS	11113	1139	20760	453	1035	444	49	3698	1531	80000
NUMBER OF TAXA	19	13	17	15	17	16	11	29	16	80000

TABLE I-5a

LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY - ZOOPLANKTON (ORGANISMS/100 L)
 CORPS OF ENGINEERS (CONTRACT DACW01-70-C-0101) PHASE 1. CYCLE 3
 (September 25-27, 1978)

TAXONOMIC CLASSIFICATION	1	2	3	4	5	6	7	8	9	10
COPEPODA										
CALANOIDA										
DIAPYCNUS MISSISSIPPIENSIS	44	-	-	25	-	10	-	-	-	31
CYCLOPOIDA										
CYCLOPS SP	15	77	146	161	24	10	-	42	19	-
ERGASILUS SP	-	-	-	-	24	-	-	-	-	-
MEGACYCLOPS PDAX	549	590	551	371	405	220	657	239	307	-
TROPOCYCLOPS PRASINUS	-	10	-	-	24	-	-	28	-	-
NAUPLII	2098	1954	2820	2175	2098	795	329	592	441	1854
CLADOCERA										
ALONA SP	-	-	-	-	-	-	-	-	-	-
BYTHOTRIS LONGICORNIS	516	184	349	432	1192	544	906	1064	1499	559
BYTHOTRIS DETYFEST	3008	1941	3241	1742	1621	356	119	-	346	435
CERIODAPHNIA SP	279	348	259	49	620	251	612	338	48	31
BYTHOTRIS SP	15	10	-	12	24	-	52	-	-	-
DAPHNIA SP	-	-	-	-	-	-	-	-	-	-
DIAPHANOSOMA BRACHYURUM	1174	484	1750	1063	763	607	1255	423	1960	497
HYALINOCYSTUS SP	-	-	-	-	-	10	-	-	-	-
BYTHOTRIS MACROSCOPUS	-	-	-	-	-	-	-	-	-	-
STIMOCEPHALUS SP	-	-	-	12	-	-	-	-	-	-

TABLE I-5a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/100 L)									
	1	2	3	4	5	6	7	8	9	10
OSTRACODA										
UNIDENTIFIED OSTRACODA	-	-	-	12	-	-	-	-	-	-
ROTIFERA										
ANEURIPSIS SP	44	39	16	-	95	-	-	14	230	186
ASPLANCHIA POLYDONTA	-	-	-	-	-	-	-	-	-	-
BRACHIONUS CALYCIPEDUS	-	-	-	-	-	-	-	-	-	-
BRACHIONUS FORBICULUS (TRIANGULARIS)	-	-	-	12	-	94	-	-	1193	2429
BRACHIONUS HAVANAENSIS	-	-	-	-	-	-	-	-	-	2429
CYDOPUS UNICORNIS	924	1044	1167	482	4244	1046	45	1747	1114	2480
EUCALANUS SP	-	-	-	-	-	-	-	-	-	-
FLICINUS LONGICISTA	-	-	-	-	-	-	-	-	-	-
GASTROPUS SP	-	58	-	37	381	-	-	1395	-	-
GASTROPUS MYTOSUS	-	-	-	-	-	-	-	-	-	-
HEPATICA SP	-	-	-	-	-	-	-	-	-	-
KERATILLA SP	-	-	-	-	-	-	-	-	-	-
LECANE SP	-	-	-	-	24	-	-	-	-	-
PLESTHA MUDONI	411	1335	1361	296	1335	1527	2390	42	989	31
POLYARTHA VULGARIS	18	58	-	-	-	-	-	1409	1460	31
TRICHOCEPUS LONGICISTA	1042	716	1557	124	48	10	134	169	307	373
TRICHOCEPUS SP	-	20	16	37	43	199	627	28	87	497
UNIDENTIFIED ROTIFERA	-	-	-	-	-	-	-	-	-	-

TABLE I-5a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/100 L)									
	1	2	3	4	5	6	7	8	9	10
MISCELLANEA										
CHIRONOMUS SP.	15	-	-	-	-	52	-	-	-	-
CHIRONOMUS LARVAE	-	-	-	-	-	-	-	-	-	-
PELEPOD LARVAE	-	-	-	-	-	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS	10389	8860	27273	7586	13399	5731	7286	7988	12883	14372
NUMBER OF TAXA	15	16	12	18	18	15	11	15	15	16

ROSLAF SEMINOLE WATER QUALITY MANAGEMENT STUDY - ZOOPLANKTON (ORGANISMS/100L) CO
CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE 1. CYCLP 5
(September 25-27, 1978)

I-28

TABLE I-5b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/100 L)									
	11	12	13	14	15	16	17	18	19	
OSTRACODA										
UNIDENTIFIED OSTRACODA	-	-	-	4	-	-	-	-	-	-
ROTIFERA										
ANEMOPSIS SP	503	20	61	-	43	1	7	319	299	-
ASCHMANNIA	-	-	8	-	-	-	-	-	-	-
BRACHIONUS CALYPTORHUS	174	40	7823	-	9770	49	101	1108	762	-
BRACHIONUS PUPILLULA (?=ANGULARIS)	707	1113	1650	160	4080	2	-	706	717	-
BRACHIONUS HAVANAENSIS	-	-	-	-	-	-	-	-	-	-
CONCHILUS UNICORNIS	-	-	-	9	-	-	-	-	-	-
FUCILANIS SP	-	-	-	-	-	-	-	-	-	-
FLILINIA LONGISETA	4569	182	8	23	-	11	-	148	443	-
GASTROPUS SP	126	-	5992	-	3912	-	-	-	-	-
GASTROPUS HYPTOPUS	10	-	825	-	733	1	3	11	-	-
KERATELLA SP	-	-	-	-	-	-	-	-	-	-
LECANE SP	232	182	-	4	12	1	4	-	-	-
PLATYIAS PATULUS	29	567	-	82	-	-	-	171	18	-
PLEUDOMA HUDSONI	-	-	-	-	-	-	-	-	-	-
POLYARTHA VILGABIS	1988	61	122	95	-	1	-	290	60	-
TRICHOCECA LONGISETA	194	20	8	-	-	19	12	114	15	-
TRICHOCECA SP	19	-	-	-	-	-	-	-	-	-
UNIDENTIFIED ROTIFERA	-	-	-	-	-	-	1	-	-	-

TABLE I-5b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/100 L)									
	11	12	13	14	15	16	17	18	19	20
MISCILLANEA										
CHAETOMIUS SP										
MEMA TODA	-	61	-	4	-	-	-	-	-	-
PELLEPOD LARVAE	-	-	-	-	-	-	-	752	-	-
TOTAL NUMBER OF ORGANISMS	9746	8296	16404	1579	15226	166	307	8278	6963	6963
NUMBER OF TAXA	19	22	16	16	12	16	10	15	14	14

TABLE I-6a

LAKE SIMS WATERS QUALITY MANAGEMENT STUDY - ZOOPLANKTON (ORGANISMS/100 L)
 CORPS OF ENGINEERS (CONTRACT DAK111-78-C-0101) PHASE 1, CYCLE 6
 (November 28-30, 1978)

TAXONOMIC CLASSIFICATION	1	2	3	4	5	6	7	8	9	10
COPEPODA										
CALANOIDA										
DIATOPUS MISSISSIPPIENSIS	-	39	-	-	-	-	4	-	6	-
CYCLOPOIDA										
CYCLOPID COPEPODITES	108	113	6	70	12	12	29	30	23	69
CYCLOPS SP	72	18	39	35	11	64	54	20	23	77
DIATOPUS MISSISSIPPIENSIS	-	-	6	-	-	11	4	-	-	-
THORACICOPUS PHASINUS	-	-	-	-	-	-	-	-	-	-
NAUPLII	398	239	110	220	140	96	113	96	161	386
CLADOCERA										
BOSMINA LONGIROSTRIS	265	377	265	176	238	289	426	188	322	789
LESPINOPSIS DEITZSI	36	73	45	35	11	63	45	110	96	45
CEPHALOPEDIA SP	-	-	-	-	-	-	-	-	-	-
CHYROCUS SP	-	13	39	-	-	-	-	-	46	8
DIAPHANODOMA JUVENIUM	-	-	-	-	11	-	-	-	6	-
MOLCEPHEUM ANAZENIUM	48	13	13	-	-	-	-	-	17	8
BOINA SP	12	-	-	-	-	-	-	-	-	-

TABLE I-6a (cont.)

[illegible]

TABLE I-6a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION:										(ORGANISMS/100 L)
	1	2	3	4	5	6	7	8	9	10	
MISCELLANEA											
FISH EGG	-	-	-	-	-	-	-	-	4	-	-
TARLELMADOC	-	-	6	-	-	-	-	-	27	-	-
TOTAL NUMBER OF ORGANISMS	4103	6460	5148	3194	6374	6175	1443	1143	1912	6401	
NUMBER OF TAXA	16	14	20	16	17	15	18	16	14	15	

LAKE SUPERIOR WATER QUALITY MANAGEMENT STUDY - ZEPHYRUS/1992

TAXONOMIC CLASSIFICATION	11	13	15	16	17	(ORGANISMS/100 L)
CLADOCERA						
CALANOIDA						
DIAPYCNUS MISSISSIPPIENSIS	12	-	-	-	-	
CYCLIPEDIA						
CYCLOPS COPPOURTES	85	90	-	-	-	
CYCLIPS SP	12	8	-	-	-	
DISSYCLIPS FEAR						
TEUCYCLOPS PAIINUS	-	-	-	-	-	
NAUPLII	206	279	58	4	4	
CLADOCERA						
ROSINA LONGICORNIS	85	-	-	-	1	
ESPINOPSIS DITERSI	24	33	35	-	-	
SPIODAPHNIA SP	24	-	-	-	-	
CYDCHLS SF	-	-	-	4	-	
CAMPANIA SP	-	16	15	-	-	
LEPPANUSPINA PARACYPHUM	-	-	-	-	-	
MULGREUTUA AMAYUNILUM	-	-	-	-	-	
MCINA SP	-	-	-	-	-	

TABLE I-6b (cont.)

[illegible]

TABLE I-6b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION						(ORGANISMS/100 L)
	11	13	15	16	17		
MISCELLANEA							
FLIP LIPS							
TARTARUM							
TOTAL NUMBER OF ORGANISMS	7602	33129	6100	26	14		
NUMBER OF TAXA	16	11	10	7	5		

APPENDIX J
MACROINVERTEBRATES

LIST OF TABLES

<u>TABLE</u>	<u>DESCRIPTION</u>	<u>PAGE NO.</u>
J-1	Benthic Macroinvertebrates - Collapsed Data Cycle 1, April 17-21, 1978	J-1
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J-4	Benthic Macroinvertebrates - Uncollapsed Data Cycle 1, April 17-21, 1978	J-13
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LAKE SENTINEL WD MANAGEMENT STUDY - BENTHIC MACROINVERTEBRATES (INDETERMINATE)
CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE 1, CYCLE 1
(April 17-21, 1978)

J-1

TABLE J-1a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (10 stations/5 m)									
	1	2	3	4	5	6	7	8	9	10
NON-CHIRONOMIDAE										
TRICORYTHODES ALRILINEATUS	-	-	-	-	-	-	-	-	-	-
CAMPIDEMA SP	-	-	-	-	-	-	-	-	-	-
CEPHALEA SP	-	-	-	-	-	-	-	-	-	-
CECATECOGNIDAE (NO LARVAL KEY)	-	-	-	-	-	-	-	-	-	-
CHIRONOMUS SP	-	-	-	-	-	-	-	-	-	-
POTAMITYA FLAVA	-	-	-	-	-	-	-	-	-	-
CORNICULA MARILENSIS	392	2700	757	1670	1109	1277	93	173	174	230
CORNICULUS SP	-	-	-	-	-	-	-	-	-	-
EUPHEA SP	-	-	-	-	-	-	-	-	-	-
GUMPHRIIDAE SP	-	-	-	-	-	-	-	-	-	-
CHIRONOMUS SP	-	-	-	-	-	-	-	-	-	-
PERAGENTIA SP	-	-	-	-	-	-	-	-	-	-
MYFUDINEA	-	-	-	-	-	-	-	-	-	-
HYALIS AZTECA	-	-	-	-	-	-	-	-	-	-
NATIDIDAE	-	-	-	-	-	-	-	-	-	-
NAREUS SP	-	-	-	-	-	-	-	-	-	-
NEWBODA	-	-	-	-	-	-	-	-	-	-
CLIGOCHEA FAMILY A	-	177	-	12	25	25	31	-	10	75
PARAGYRACHTIS SP	-	-	-	-	-	-	-	-	-	-
PERTHENTIS SP	-	-	-	-	-	-	-	-	-	-
POTAMITYA SP	-	-	-	-	-	-	-	-	-	-
TUEFICIDAE	-	-	-	-	-	-	-	-	-	-
TURBELLARIA	-	-	-	-	-	-	-	-	-	-
TURBELLARIA B	252	2435	206	623	760	887	5	31	10	236
UNIDENTIFIED TRICOPTERA	-	-	-	-	-	-	-	-	-	-
UNICIDAE	-	-	-	-	-	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS										
	700	5298	982	2480	1931	2161	346	270	1133	1703
NUMBER OF TAXA										
	5	8	3	5	4	6	10	4	12	13

TABLE J-1b

LAKE SEMINOLE WQ MANAGEMENT STUDY - BENTHIC MACROINVERTEBRATES (ORGANISMS/SQ M)
CORPS OF ENGINEERS (CONTRACT DACW01-70-C-0101) PHASE 1, CYCLE 1

(April 17-21, 1978)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/SQ M)									
	11	12	13	14	15	16	17	18	19	
CHIRONOMIDAE										
APLARESMYIA CINCTIPES	-	-	-	-	25	12	-	-	-	
APLARESMYIA HALLOCHTI	-	-	-	-	-	44	-	-	-	
APLARESMYIA PARAJANTA	-	-	-	-	-	4	-	-	-	
CHIRONOMUS SP	6	43	87	56	12	204	-	-	-	
CLACCIANTYRUS SP	260	75	56	131	149	19	-	-	-	
CUELIANTYRUS CONCINNUS	-	-	-	-	-	-	-	-	-	
COELTANYPLUS SCIPPIAHUS	-	-	-	-	-	-	-	-	-	
CUELIANTYRUS TRICOLOR	-	-	-	-	-	-	-	-	-	
CORYANOEURA SP	-	-	-	25	12	31	-	-	-	
NEAR CORYANOEURA SP	-	-	-	-	-	-	-	-	-	
CRYPTOCHIRONOMUS CF ROLL	-	-	-	-	-	25	-	-	-	
CRYPTOCHIRONOMUS FULVUS	-	37	100	-	-	4	-	-	-	
RICEOTEMIDUS LEBUS	-	43	-	-	-	125	-	-	-	
RICEOTEMIDUS ROBUSTUS	-	-	-	-	-	-	-	-	-	
EIFEUCIA SP	-	-	-	25	-	-	-	-	-	
ENDOCHIRONOMUS SP	-	-	-	-	-	81	-	-	-	
SPOTICHLADIUS SP	-	-	-	-	-	-	-	-	-	
GLYPOTEMIDUS SP	-	-	-	-	-	-	-	-	-	
PARATHEBIA SP	-	-	-	-	-	-	-	-	-	
PARATHEBIA NIGROHALTERALIS	-	-	12	-	6	12	-	-	-	
POLYPEDILUM NEAR CONVICTUM	-	-	-	-	-	25	-	-	-	
POLYPEDILUM HALTERALE	-	280	6	-	-	106	-	-	-	
POLYPEDILUM NEAR ILLINOENSE	-	114	214	-	12	44	-	-	-	
PROCLADIUS SP	25	-	-	-	-	-	-	-	-	
PSECTROCLADIUS SP A	-	-	-	-	-	-	-	-	-	
PSECTROCLADIUS SP B	-	-	-	-	-	-	-	-	-	
HYPERANTYRUS SP	-	-	-	-	-	-	-	-	-	
ROBACIA SP	-	-	-	-	-	-	-	-	-	
TANYTARSUS SP	-	735	-	-	-	-	9	-	-	
TRIPELOS JUCUNDUS	-	-	-	-	-	-	-	-	-	
TRIBELOS SP	-	-	-	-	-	-	-	-	-	
TRIBELUS (TRISSOPELUS) SP	-	-	-	-	-	-	-	-	-	

TABLE J-1b (cont.)

TAXONOMIC CLASSIFICATION	11	12	13	14	15	16	17	18	19	20
NON-CHIRONOMIDAE										
TRICORYTHOES ALBILINEATUS										
CAMPFLOMA SP	-	5	-	31	-	-	-	-	-	4
CEPACLEA SP	-	-	-	-	-	-	-	-	-	31
CHIRONOMIDAE (IN) LARVAL KEY)										
CHIRONOMUS SP	50	91	75	19	37	12	-	-	10	-
POTAMYIA FLAVA										
COLEPTULA MANILENSIS	161	1975	369	12	149	255A	149	379	262	
CYDNELLUS SP	6	-	-	-	-	6	-	-	-	
EUPEA SP	-	-	-	-	-	-	-	-	-	
CEPHALODUS SP	-	-	-	-	-	5	-	-	-	
GENEMUS SP	-	-	-	-	-	62	-	-	-	
PERAGENTA SP	162	2	25	141	311	-	-	-	-	
MIRUDINIA	-	6	12	-	-	-	-	-	-	
MYALFILA AZTECA	25	310	-	6	-	53A	334	6	67	
NATUIDAE										
MARGUS SP	10	12	6	-	6	12	-	-	-	
CLICOCMAEYA FAMILY A	-	-	-	-	-	-	-	-	-	
PARAGYRACETIS SP	-	5	-	-	-	-	-	-	-	
PERITHEMIS SP	-	5	-	-	-	-	-	-	-	
POTAMYIA SP	6	-	-	-	-	-	-	-	-	
TUEFICIDAE	6	193	467	12	169	635	-	12	193	
TUEFILLACIA	-	73	-	-	-	-	-	-	-	
TUEFILLACIA R	-	-	-	-	-	-	-	-	-	
UNIDENTIFIED TRICORYTERA	-	6	-	6	-	-	-	-	-	
UNIONIDAE	-	-	-	-	-	-	-	-	-	
TOTAL NUMBER OF ORGANISMS	952	4114	1437	504	899	4632	445	1721	516	
NUMBER OF TAXA	11	24	15	11	13	29	3	5	10	

LAKE SEMINOLE WG MANAGEMENT STUDY - BENTHIC MACROINVERTEBRATES (ORGANISMS/500 M²)
CORPS OF ENGINEERS (CONTRACT DACW61-79-1-0101) PHASE 1, CYCLE 3

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TABLE J-2a (cont.)

TAXONOMIC CLASSIFICATION	1	2	3	4	5	6	7	8	9	10
CHIRONOMIDAE										
TANYDUS STELLATUS	-	-	-	-	-	-	-	-	-	-
TANYTARSUS SP	-	-	-	-	-	-	-	-	-	-
APPOCHIRINUS SP	-	-	-	-	-	-	-	-	-	-
UNID. SCRIBED CHIRONOMIDAE A	-	-	-	-	-	-	-	-	-	-
NON-CHIRONOMIDAE										
ACARI	-	-	-	-	-	-	-	-	-	-
TRICORYTHODES ALBILINEATUS	-	-	-	-	-	-	-	-	-	-
CLADOCERIDAE (NO LARVAL KEY)	-	-	-	-	-	-	-	-	-	-
CHIRONOMUS SP	-	-	-	-	-	-	-	-	-	-
DOTANTIA FLAVA	-	-	-	-	-	-	-	-	-	-
COPICULA MANILENSIS	-	-	-	-	-	-	-	-	-	-
CYRILLUS SP	-	-	-	-	-	-	-	-	-	-
EMERIDAE (NO LARVAL KEY)	-	-	-	-	-	-	-	-	-	-
CEPHALUS SP	-	-	-	-	-	-	-	-	-	-
NEACENTIA SP	-	-	-	-	-	-	-	-	-	-
MISQUINA	-	-	-	-	-	-	-	-	-	-
HYALELLA AZTECA	-	-	-	-	-	-	-	-	-	-
LEPTOCERIDAE	-	-	-	-	-	-	-	-	-	-
NAUTICA	-	-	-	-	-	-	-	-	-	-
NAUTICA SP	-	-	-	-	-	-	-	-	-	-
NEMATODA	-	-	-	-	-	-	-	-	-	-
CLIOCHASTA FAMILY A	-	-	-	-	-	-	-	-	-	-
PHYLLOCLADUS SP	-	-	-	-	-	-	-	-	-	-
STEMENEMA SP	-	-	-	-	-	-	-	-	-	-
TURBELLARIA	-	-	-	-	-	-	-	-	-	-
TURBELLARIA R	-	-	-	-	-	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS	978	931	1809	1302	2706	936	1453	2834	4457	3770
NUMBER OF TAXA	2	5	9	5	7	6	13	13	11	11

TABLE J-2b

LAKE SENTINEL WAD MANAGEMENT STUDY - BENTHIC MACROINVERTEBRATES (ORGANISMS/SQ M)
CORPS OF ENGINEERS (CONTRACT DACW01-78-C-1101) PHASE 1, CYCLE 3

(July 17-20, 1978)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/SQ M)									
	11	12	13	14	15	16	17	18	19	
CHIRONOMIDAE										
APLABESMYIA CINCTIPES				44	6	12	-	-	-	10
APLABESMYIA HALLOCHTI				6	-	6	-	-	-	24
APLABESMYIA PARAJANITA				-	-	-	-	-	-	-
NEAR CHERNOVSKEITIA OMBICUS			19	19	-	13	607	-	-	-
CHIRONOMUS SP				-	-	-	-	-	-	-
CLAUDIANTHARUS SP				-	-	-	-	-	-	-
COLETTANYDUS CONCINNUS	92	12	56	333	44	12	-	-	-	-
COLETTANYDUS THICULOP	12	-	19	19	-	-	-	-	-	-
COLETTANYDUS SP				-	-	-	24	-	-	-
NEAR CRYNCHNEURA SP				-	-	-	-	-	-	-
NEAR CRYNCHNEURA SP B				-	-	5	9	-	-	-
"CRYPTOCHIRONOMUS" CF ROLLI				-	-	-	47	-	-	-
CRYPTOCHIRONOMUS FULVUS			6	17	12	13	197	25	-	30
CRYPTOCLADOPHELMA SP				12	-	31	-	-	-	-
CICOTENDITES MJOISTUS				-	-	-	-	-	-	-
EINFELDTA SP				6	-	-	-	-	-	-
EPOICCLADIUS SP			6	12	12	-	-	-	-	-
GLYPTOTENDITES SP				-	-	-	-	10	-	-
MICROCHIRONOMUS SP				25	-	-	-	-	-	-
PARACHIRONOMUS NITIDATUS				6	-	-	-	-	-	-
PARACLAIDOPHELMA SP				-	-	-	-	-	-	-
PARACLAIDOPHELMA SP A				12	-	-	-	-	-	-
PARALAUTOPHICHIPTERELLA NIGROHALTERPALS				31	-	6	205	-	-	-
PARATENDITES "CONNECTENS" (A)				-	-	-	-	-	-	-
PHANOPSECTRA SP				-	-	-	-	-	-	-
POLYTRIGILLUM NAG CONVICIUM				-	-	-	-	-	-	-
POLYPEDILUM HALTERALF		31	-	19	6	35	45	3000	1071	347
PROCLADIUS SP				-	-	-	-	-	-	-
PSEUDOCCLADIUS SP	6	6	50	100	37	5	-	44	-	-
PSEUDOCCHIRONOMUS SP				6	-	-	-	-	-	-
SPECTANTHARUS SP				-	-	-	-	75	-	45
STENELLA SP				-	-	6	10	-	-	-
STEMPELLIA SP				-	-	-	-	-	-	-

TABLE J-2b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION:										(TOTAL PERCENTAGE %)
	11	12	13	14	15	16	17	18	19		
CHIRONOMIDAE											
TANYBUL STELLATUS	6	-	-	-	-	-	-	-	-	-	
TANYTARUS SP	-	-	-	50	-	-	-	-	-	-	
REINCHETRYCHUS SP	-	-	-	-	-	5%	-	-	-	-	
UNDESCEIFIED CHIRONOMINI A	-	-	-	19	-	-	-	-	-	-	
NON-CHIRONOMIDAE											
ACAFI	-	-	-	-	-	-	-	-	-	-	
TRICORYTHODES ALBILINEATUS	-	-	-	-	-	-	-	-	-	-	
CERATOPHRIIDAE (NO LARVAL KEY)	-	-	-	-	-	-	-	-	-	-	
CHIRONOMUS SP	300	-	2374	31	1171	716	19	374	9	368	
POTAMPTA FLAVA	-	147	-	12	167	2307	2303	1077	6	7260	
COEGLICULA MANILENSIS	-	-	-	162	-	-	-	-	-	4833	
CYANELLUS SP	-	-	-	-	-	-	-	-	-	-	
EMETIDIDAE (NO LARVAL KEY)	-	-	6	-	-	-	-	-	-	-	
CUMPHUS SP	-	-	-	504	374	37	-	-	-	-	
MEGACENTIA SP	12	-	243	-	-	-	-	-	-	-	
MEGACENTIA	6	-	-	12	-	2611	-	-	-	-	
HYALLULA AZTECA	-	50	-	-	-	-	-	-	-	-	
LEPTOCERIDAE	-	-	-	5	6	-	-	-	-	-	
MAIDICAE	-	-	-	-	-	-	-	492	-	-	
NAEPUS SP	-	-	-	-	-	-	-	-	-	-	
NEMATODA	-	-	-	-	-	-	-	-	-	-	
CLIOCHOPATA FAMILY A	6	6	19	6	-	-	9	-	-	-	
PHYLLICENTRUS SP	-	-	-	6	-	-	-	-	-	-	
STENOCNEMA SP	-	-	-	-	-	-	-	-	-	-	
TUFIFICIDAE	335	268	1128	149	305	343	207	473	37	474	
TURPELLARIA	-	-	-	-	-	100	-	1171	43	43	
TURPELLARIA II	-	-	-	-	-	-	-	-	-	-	
TOTAL NUMBER OF ORGANISMS											
NUMBER (IF TAXA	1425	534	3026	1723	2160	6647	3477	17132	15624	60000	
	9	9	11	27	11	25	16	20	70	60000	

(September 25-27, 1978)

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TABLE J-3a (cont.)

[illegible]

(September 25-27, 1978)

J-11

TABLE J-3b (cont.)

[illegible]

LAKE SEMINOLE WQ MANAGEMENT STUDY - BENTHIC MACROINVERTER RATES (ORGANISMS/SQ M)
CORPS OF ENGINEERS (CONTRACT DACW31-79-C-0101) PHASE 1, CYCLE 1

NOTE: -E East Bank
-M Mid Channel
-W West Bank
-A,B,C "Lake Type Station" Replicates

TABLE J-4a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/SQ M)									
	1-M	1-W	2-M	2-W	3-M	3-W	4-C	4-M	4-W	4-E
NON-CHIRONOMIDAE										
TRICORYTHODES ALBILINEATUS										
CAMPLOCMA SP	-	-	-	-	-	-	-	-	-	-
CERATOCMA SP	-	-	-	-	-	-	-	-	-	-
CERATOPOGONIDAE (NO LARVAL KEY)										
CHARICUS SP	-	-	-	-	-	-	-	-	-	-
POTANITA FLAVA	-	-	-	-	-	-	-	-	-	-
CORNICULA MARILENSIS	224	561	523	4056	542	972	3215	745	1009	2111
CYRILLUS SP	-	-	-	-	-	-	-	-	-	-
EUPLES SP	-	-	-	-	-	-	-	-	-	-
CEPHALOCYTES SP	-	-	-	-	-	-	-	-	-	-
CEPHALUS SP	-	-	-	-	-	-	-	-	-	-
HERACENTIA SP	-	-	-	-	-	-	-	-	-	-
MEPURTINZA	-	-	-	-	-	-	-	-	-	-
HYALELLA AZTECA	-	-	-	-	-	-	-	-	-	-
NAETICAE	-	-	-	37	-	-	-	-	467	-
NABRUS SP	-	-	-	-	-	-	-	-	-	-
DELEPHACETA FAMILY A	-	-	93	262	-	-	37	-	-	75
PARAGYRACETIS SP	-	-	-	-	-	-	-	-	-	-
PERITHEMIS SP	-	-	-	-	-	-	-	-	-	-
POTANITA SP	-	-	-	-	-	-	-	-	-	-
TUEITICIDAE	-	-	-	-	-	-	-	-	-	-
TURKELLARIA	-	-	-	-	-	-	-	-	-	-
TURKELLARIA B	-	-	3888	1393	411	-	1728	75	-	1009
UNIDENTIFIED TRICOPTERA	168	335	-	-	-	-	-	-	-	-
UNICNIDAE	-	-	-	-	-	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS										
	430	971	4691	5007	972	991	5065	870	1404	3234
NUMBER OF TAXA										
	4	4	4	4	3	2	4	3	3	4

NOTE: -E East Bank
 -M Mid Channel
 -W West Bank
 -A,B,C "Lake Type Station" Replicates

LAKE SEMINOLE WQ MANAGEMENT STUDY - BENTHIC MACROINVERTEBRATES (JPGANIS/SQ M)
CORPS OF ENGINEERS (CONTRACT DACW01-7A-C-0101) PHASE I, CYCLE I
(April 17-21, 1978)

[illegible]

NOTE: -E East Bank
-M Mid Channel
-W West Bank
-A,B,C "Lake Type S"

TABLE J-4b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/SQ M)										
	S-M	S-W	6-E	6-M	6-W	7-E	7-W	8-E	8-W	9-E	9-W
NON-CHIRONOMIDAE											
TRICORYTHOES ALBILINEATUS											
CAMPLOMA SP	-	-	-	-	-	-	-	-	-	-	-
CHIRACLA SP	-	-	-	-	-	-	-	-	-	-	-
CRATYCOGONIDAE (NO LARVAL KEY)	-	-	-	-	-	-	-	-	-	-	-
CHADORUS SP	-	-	-	-	-	-	-	-	-	-	-
POTAMYA FLAVA	-	-	-	-	-	-	-	-	-	-	-
CORRICULA MANILENSIS	467	729	486	2243	953	37	149	149	149	112	-
CYRANELLUS SP	-	-	-	-	-	-	-	-	-	-	-
EUPERA SP	-	-	-	-	-	-	-	-	-	-	-
CYPHOIDEUS SP	-	-	-	-	-	-	-	-	-	-	-
CYRILLUS SP	-	-	-	-	-	-	-	-	-	-	-
PERAENIA SP	-	-	-	-	-	-	-	-	-	-	-
MEUDINEA	-	-	-	-	-	-	-	-	-	-	-
HYALINELLA AZTECA	-	-	-	-	-	-	-	-	-	-	-
NAUCLOAE	-	-	-	-	-	243	-	-	37	54	74
NAEUS SP	-	-	-	-	-	-	-	-	-	-	-
NEPATODA	-	-	-	-	-	-	-	-	-	-	-
CLIGOCHEA FAMILY A	-	-	37	19	19	-	-	-	-	-	-
PARAGYRACIS SP	-	-	-	-	-	-	-	-	-	-	-
PERITHEUS SP	-	-	-	-	-	-	-	-	-	-	-
POTAMYA SP	-	-	-	-	-	-	-	-	-	-	-
TUEFICIDAE	-	-	19	-	-	-	-	-	-	17	-
TUEFICARUS	-	-	-	-	-	-	-	-	-	-	-
TUNELLARIA B	1252	19	2374	224	56	10	-	-	-	-	-
UNIDENTIFIED TRICOPTERA	-	-	-	-	-	-	-	-	-	-	-
UNICIDAE	-	-	-	-	-	-	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS	1775	785	2072	2486	1024	444	149	274	204	-	-
NUMBER OF TAXA	3	3	6	3	3	6	1	3	3	3	3

LAKE SEMINOLE WQ MANAGEMENT STUDY - BENZINIC MACROINVERTEBRATES (ORGANISMS/50 M)
CORPS OF ENGINEERS (CONTRACT DACW1-78-C-0101) PHASE I, CYCLF I
(April 17-21, 1978)

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TABLE J-4c (cont.)

TAXONOMIC CLASSIFICATION	R-W	9-A	9-B	9-C	10-A	10-B	10-C	11-A	11-B	11-C
NON-CHIRONOMIDAE										
TRICORYTHODES ALBILINEATUS										
CAMPLOCNA SP	-	-	-	-	-	-	-	-	-	-
CLACLEA SP	-	-	-	-	-	-	-	-	-	-
CERATOPOGONIDAE (NO LARVAL KEY)										
CHOROCUS SP	-	-	10	37	-	-	-	37	03	37
POTAMIA FLAVA	-	-	-	-	-	-	-	-	-	-
CORDICULA MANILENSIS	318	143	224	149	149	302	147	443	336	299
CYRNELLUS SP	-	-	-	-	-	-	-	-	19	-
EUPELA SP	-	-	-	-	-	-	-	-	-	-
GRYPHOLUS SP	-	-	-	-	-	-	-	-	-	-
GRYPHUS SP	-	10	-	-	-	-	-	-	-	-
MEGAGENA SP	-	318	430	654	75	205	75	140	143	187
MIRIDINFA	-	-	-	-	-	-	-	-	-	-
HYALELLA AZTECA	-	-	-	-	-	-	-	-	-	-
NATIDAE	37	131	355	299	187	37	75	17	10	19
NABRUS SP	-	-	-	-	-	-	-	-	-	-
NEMATODA	-	37	-	19	59	131	37	-	10	37
CLIGCHAEFTA FAMILY A	-	-	-	-	-	-	-	-	-	-
PARAGYRACHTIS SP	-	-	-	-	-	-	-	-	-	-
PERITHEMIS SP	-	-	-	-	-	-	-	-	-	-
POTAMIA SP	-	-	-	-	-	-	-	10	-	-
TUSIFICIDAE	75	37	-	19	108	140	200	13	-	-
TUSSELLIDAE	-	-	-	-	-	-	-	-	-	-
TUSSELLA B	-	-	-	-	-	-	-	-	-	-
UNIDENTIFIED TRICOPTERA	-	-	-	-	37	10	-	-	-	-
UNICNIDAE	-	-	-	-	-	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS	467	916	1309	1105	971	1178	410	474	1027	953
NUMBER OF TAXA	4	8	7	7	9	6	8	7	11	1

TABLE J-4d

LAKE SEMINOLE WQ MANAGEMENT STUDY - BENTHIC MACROINVERTEBRATES (ORGANISMS/SQ M)
CORPS OF ENGINEERS (CONTRACT DACW01-7A-C-0101) PHASE 1, CYCLE 1

(April 17-21, 1978)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATIONS: (ORGANISMS/SQ M)										
	12-E	12-M	12-W	13-A	13-B	13-C	14-F	14-N	14-W	15-F	
CHIRONOMIDAE											
ABLAESOMYIA CINCTIPES	-	-	-	-	-	-	-	-	-	-	12
ABLAESOMYIA MALLOCHI	-	-	-	-	-	-	-	-	-	-	-
ABLAESOMYIA PARAJANTA	-	-	-	-	-	-	-	-	-	-	-
CHIRONOMUS SP	93	19	10	93	-	168	11	10	131	19	
CLADOTANYTARUS SP	10	19	187	37	75	55	230	55	57	147	
COELOTANYTARUS CONCIINUS	-	-	-	-	-	-	-	-	-	-	
COELOTANYTARUS SCAPULARIS	19	-	-	-	-	-	17	37	-	37	
COELOTANYTARUS TRICOLOR	-	-	-	-	-	-	-	-	-	-	
CERYTICOPUS SP	-	-	-	-	-	-	-	-	-	-	
NEAR COBYNEURUS SP	-	-	-	-	-	-	-	-	-	-	
MACROTANUS SP	-	-	-	-	-	-	-	-	-	-	
CERYTICOPUS FULVUS	56	37	19	75	112	112	-	-	-	-	
DICROTENDIPES LOBUS	-	-	-	-	-	-	-	-	-	-	
DICROTENDIPES MODESTUS	131	-	19	-	-	-	36	-	17	-	
EINFELDIA SP	-	-	-	-	-	-	-	-	-	-	
EMOCHIRONOMUS SP	-	-	-	-	-	-	-	-	-	-	
EMOCHIRONOMUS SP	-	-	-	-	-	-	-	-	-	-	
GLYPHOTOENDIPES SP	-	-	-	-	-	-	-	-	-	-	
HARMISCHIA SP	-	-	-	-	19	-	-	-	-	-	
PARALAUTEROMIELLA NIGROMALTEPALS	-	-	-	-	-	-	-	-	-	-	
POLYPTILUM NEAR CONVICTUM	-	-	-	-	-	-	-	-	-	-	
POLYPTILUM HALTERALE	785	56	-	-	-	17	-	-	-	-	
POLYPTILUM NEAR ILLINCENSE	19	187	-	131	392	131	-	-	-	12	
PROCLADUS SP	-	-	-	-	-	-	-	-	-	-	
PSEUDOCALDIUS SP A	-	-	-	-	-	-	-	-	-	-	
PSEUDOCALDIUS SP B	-	-	-	-	-	-	-	-	-	-	
RHEUTANYTARUS SP	19	-	-	-	-	-	-	-	-	-	
REACKIA SP	-	-	-	-	-	-	-	-	-	-	
TANYTARUS SP	204	161	1432	-	-	-	-	-	-	-	
TRIHELLOS JUCUNDUS	-	-	-	-	-	-	-	-	-	-	
TRIHELLOS SP	-	-	-	-	-	-	-	-	-	-	
(TRISSEMPLEOTA) SP	-	-	-	-	-	-	-	-	-	-	

TABLE J-4d (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/SQ M)										
	12-E	12-W	12-W	13-A	13-B	13-C	14-F	14-W	14-W	15-F	
NON-CHIRONOMIDAE											
TRICORYTHODES ALBILINEATUS	-	-	10	-	-	-	-	-	93	-	-
CAMPLOMA SP	-	-	-	-	-	-	-	-	-	-	-
CEACILEA SP	-	-	-	-	-	-	-	-	-	-	-
CERATOCERINIDAE (NO LARVAL KEY)	-	19	-	-	37	37	-	-	10	37	-
CHIRONOMUS SP	56	24	-	93	37	33	-	-	-	-	-
POTAMYIA FLAVA	-	-	-	-	-	-	-	-	-	-	-
CORRICULA MANILENSIS	2019	112	3495	206	561	290	10	13	-	-	149
CYRNELLUS SP	-	-	-	-	-	-	-	-	-	-	-
EUPEPA SP	-	-	-	-	-	-	-	-	-	-	-
GOMPHIDES SP	-	-	-	-	-	-	-	-	-	-	-
GOMPHUS SP	-	-	-	-	-	-	-	-	-	-	-
PERACENIA SP	-	-	19	75	-	-	206	-	131	206	299
PIRUDINEA	19	-	-	19	-	10	-	-	-	-	-
MYALILLA AZTECA	112	-	131	-	-	-	10	-	-	-	-
NAUCIDAE	112	785	262	-	-	-	-	-	-	-	-
NAEELS SP	-	-	-	-	-	-	-	-	-	-	-
NAEELIDAE	56	-	-	19	-	-	-	-	-	-	-
CLIGOCHEA FAMILY A	-	-	-	-	-	-	-	-	-	-	-
PADARGYRACTIS SP	19	-	-	-	-	-	-	-	-	-	-
PERITHEMIS SP	19	-	-	-	-	-	-	-	-	-	-
POTAMYIA SP	-	-	-	-	-	-	-	-	-	-	-
TUEFICIDAE	355	37	147	112	673	617	37	-	-	-	224
TUMELLARIA	131	-	93	-	-	-	-	-	-	-	-
TUMELLARIA B	-	-	-	-	-	-	-	-	-	-	-
UNIDENTIFIED TRICOPTERA	-	-	-	-	19	-	-	-	19	-	-
UNICNIDAE	-	19	-	-	-	-	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS	4245	1682	6431	893	1494	1532	673	373	373	410	972
NUMBER OF TAXA	19	12	13	12	8	10	8	9	9	9	9

LAKE SEMINOLE W/ MANAGEMENT STUDY - URETHIC MACROPHITESTERATES (DUGALIS, 1970)
COMPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE 1, CYCLE 1
(April 17-21, 1978)

J-21

TABLE J-4e (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS BY STATION: (ORGANISMS/SQ M)									
	15-M	15-W	16-1	16-M	16-W	17-M	17-W	18-E	18-N	18-W
NON-CHIRONOMIDAE										
TRICORYTHODES ALBILINEATUS										
CAMELLA SP	-	-	-	-	-	-	-	-	-	-
CEPHEUS SP	-	-	-	-	-	-	-	-	-	-
CEPHALOGONIDAE (NO LARVAE KEY)	-	-	-	-	-	-	-	-	-	-
CHIRONOMUS SP	93	13	-	37	-	-	-	17	-	37
POTAMIA FLAVA										
CURTIOLA MANILENSIS	224	75	7234	168	262	242	19	118	2417	149
CYRILLUS SP	-	-	10	-	-	-	-	-	-	-
EUPHEA SP	-	-	-	-	-	-	-	-	-	-
CAMPIDOLUS SP	-	-	-	19	-	-	-	-	-	-
GOMPHUS SP	-	-	-	-	-	-	-	-	-	-
HEMIGENIA SP	617	19	-	-	187	-	-	-	-	-
HYALINELLA	-	-	-	-	-	-	-	-	-	-
HYALINELLA AZTECA	-	-	-	-	-	-	-	-	-	-
NAUTICA	-	-	1458	131	19	671	-	19	-	-
NABUS SP	19	19	37	19	-	-	-	-	-	-
NEMATODA	-	-	-	-	-	-	-	-	-	-
GLICOCHESTA FAMILY A	-	-	-	-	-	-	-	-	-	-
PAPARGYACTIS SP	-	-	-	-	-	-	-	-	-	-
PETITIA SP	-	-	-	-	-	-	-	-	-	-
POTAMIA SP	-	-	-	-	-	-	-	-	-	-
TUEFICIDAE	-	280	243	1084	579	-	-	17	-	-
TUEFICIDAE	-	-	-	-	-	-	-	-	-	-
TUEFICIDAE	-	-	-	-	-	-	-	-	-	-
TUEFICIDAE	-	-	-	-	-	-	-	-	-	-
UNIDENTIFIED TRICOPTERA	-	-	-	-	-	-	-	-	-	-
UNICIDAE	-	-	-	-	-	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS	1159	583	9365	3291	1253	754	19	262	2417	149
NUMBER OF TAXA	9	7	12	14	10	3	1	5	1	2

LAKE SEMINOLE #0 MANAGEMENT STUDY - BENTHIC MACROINVERTEBRATES (ORGANISMS/SQ M)
COMPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I, CYCLE 1

(April 17-21, 1978)

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A0-A104 408

WATER AND AIR RESEARCH INC GAINESVILLE FL
WATER QUALITY MANAGEMENT STUDIES LAKE SEMINOLE
SEP 81

F/G A/R
APRIL-NOVEMBER --ETC(U)

UNCLASSIFIED ACF-80-10

DACW01-7A-C-0101

NIL

6 of 6

ALL INFORMATION



END
DATE
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10-81
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TABLE J-4f (cont.)

TAXONOMIC CLASSIFICATION	19-E	19-M	19-W	NUMBER OF ORGANISMS AT STATION:	(ORGANISMS/SQ M)
NON-CHIRONOMIDAE					
TRICORYTHODES ALBILINEATUS	19	-	-		
CAMELLA SP	93	-	-		
C. RACETA SP	-	-	-		
CLIMACOPUS (N) LARVAL KEY	-	-	-		
CHIRONOMUS SP	-	-	-		
POTAMIA FLAVA	355	376	56		
CORIDICULA MANILENSIS	-	-	-		
CYRNELLUS SP	-	-	-		
EUPHERA SP	-	-	-		
GOMPHIDIOS SP	-	-	-		
GOMPHUS SP	-	-	-		
FRIGENIA SP	-	-	-		
PIRUQUINEA	-	-	-		
MYALFLLA AZTECA	-	-	-		
NAIDIDAE	187	-	-		
AREPUS SP	-	-	-		
NEMATODA	-	-	-		
CLICCHAEYA FAMILY A	-	-	-		
PARAGGACTIS SP	-	-	-		
PERITHEMIS SP	-	-	-		
POTAMIA SP	-	-	-		
TUEFICIDAE	168	-	131		
TURBELLARIA	-	-	-		
TURBELLARIA B	-	-	-		
UNIDENTIFIED TRICOPTERA	-	-	-		
UNIONIDAE	-	-	-		
TOTAL NUMBER OF ORGANISMS	915	376	262		
NUMBER OF TAXA	8	1	4		

TABLE J-5a

LAKE SEMINOLE WD MANAGEMENT STUDY - BENTHIC MACROINVERTEBRATES (ORGANISMS/SQ M)
 COMPS OF ENGINEERS (CONTRACT DACW81-79-C-0101) PHASE 1, CYCLE 3

(July 17-20, 1978)

TAXONOMIC CLASSIFICATION	1-E	1-M	1-W	2-E	2-M	2-W	3-E	3-M	3-W	4-E
CHIRONOMIDAE										
ANABESNYIA CINCTIPES										
ANABESNYIA LUGHI										
ANABESNYIA PARAJANITA										
NEAR CERNOVSKITA ORPHICUS										
CHIEKACUS ID										
CLAUDYANTAREUS SP										
CUECTANTRUS CONCINUS										
CHELOTANTRUS MICOLOR										
CERYNCEURA SP										
NEAR CORYNCEURA SP B										
NEAR CORYNCEURA SP B										
"CORYNCEURA" OF HOLLI										
COPYCCHIRACUS FULVUS										
CYTHOCLEPTICUS SP										
ETICETETIPES MODESTUS										
EIFELDIA SP										
POICCOLANUS SP										
GLYPCTIDIPES SP										
PICCECTIPACUS SP										
PARACHIRONOMUS MINUTATUS										
PARACLODIPUS SP										
PARACLODIPUS SP A										
PARACLODIPUS NIGROHALIFALIS										
PARATENDIPES "CONNETTENS" (A)										
PHAEOPSECTA SP										
POLYDORILUM NIGRO CONVICTUM										
POLYDORILUM HALIFALIS										
PROCLADUS SP										
PSECTEROLACUS SP										
PSEUDOCHEIRACUS SP										
PHOTANTYRACUS SP										
RUPACKIA SP										
STEMPELLINA SP										

NOTE: -E East Bank
 -M Mid Channel
 -W West Bank
 -A,B,C "Lake Type Station" Replicates

TABLE J-5a (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/SQ M)									
	1-E	1-M	1-W	2-E	2-M	2-W	3-E	3-M	3-W	4-E
CHIRONOMIDAE										
TANYBUS STELLATUS	-	-	-	-	-	-	-	-	-	-
TANYTARUS SP	-	-	-	-	-	-	-	-	-	-
HEACCHINORHINUS SP	-	-	-	-	-	-	-	-	-	-
UNCESCRITEL CHIRONOMINI A	-	-	-	-	-	-	-	-	-	-
NON-CHIRONOMIDAE										
AGAEI	-	-	-	-	-	-	-	-	-	-
TRICONTYMODES ALBII INEATUS	-	-	-	-	-	-	-	-	-	-
CEBATCKOGONIDAE (NO LARVAL KEY)	-	-	-	-	-	-	-	-	-	-
CHADROBUS SP	-	-	-	-	-	-	-	-	-	-
POTAMYIA FLAVA	635	243	1682	392	318	1533	37	19	2075	874
CHINUSICULA MANILENSIS	-	-	-	-	-	-	-	-	-	-
CHENILLUS SP	-	-	-	-	-	-	-	-	-	-
EMPTIGIDAE (NO LARVAL KEY)	-	-	-	-	-	-	-	-	-	-
ELMOPUS SP	-	-	-	-	-	-	-	-	-	-
HEMAGENIA SP	-	-	-	-	-	-	-	-	-	-
MYRULINEA	-	-	-	-	-	-	-	-	-	-
MYALFELLA AZTECA	-	-	-	-	-	-	-	-	-	-
LEPTOCERIDAE	-	-	-	-	-	-	-	-	-	-
ODONTOGONE	-	-	-	-	-	-	-	-	-	-
MAELPUS SP	-	-	-	-	-	-	-	-	-	-
NEWATCA	-	-	-	-	-	-	-	-	-	-
CLICOCHEAETA FAMILY A	-	-	-	-	-	-	-	-	-	-
PHYLCENTRACRUS SP	-	-	-	-	-	-	-	-	-	-
STANOWIA SP	-	-	-	-	-	-	-	-	-	-
TURBIDICHOAF	-	-	-	-	-	-	-	-	-	-
TUBELLARIA	-	-	-	-	-	-	-	-	-	-
TUBELLARIA B	149	-	224	-	411	-	-	1074	-	56
TOTAL NUMBER OF ORGANISMS										
	794	243	1906	411	922	1570	140	4113	145	972
NUMBER OF TAXA										
	2	1	2	2	4	2	4	4	3	4

LAKE SEMINOLE WOOD MANAGEMENT STUDY - RENTHIC MACROINVERTEBRATES (ORGANISMS) OF
CORPUS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE 1, CYCLE 3
(July 17-20, 1978)

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TABLE J-5b (cont.)

TAXONOMIC CLASSIFICATION	A-M	N	O-P	Q-R	S-T	U-V	W-X	Y-Z	ORGANISMS/SQ M
CHIRONOMIDAE									
TANYTUS STELLATUS	-	-	-	-	-	-	-	-	-
TANYTUS SP.	-	-	-	-	-	-	-	-	-
HEMICHIRONOMUS SP.	-	-	-	-	-	-	-	-	-
UNDESIGNED CHIRONOMINI A	-	-	-	-	-	-	-	-	-
NON-CHIRONOMIDAE									
ACAEI									
TRICONTYHOES ALBILINEATUS	-	-	-	-	-	-	-	-	-
CLERATOPHAGINIDAE (NO LARVAL KEY)	-	-	-	-	-	-	-	-	-
CHIRONOMUS SP.	-	-	-	-	-	-	-	-	-
POTAMYIA FLAVA	-	-	-	-	-	-	-	-	-
CHIRONOMUS PANILENSIS	-	-	-	-	-	-	-	-	-
CYBELLUS SP.	-	-	-	-	-	-	-	-	-
EPIDIDAE (NO LARVAL KEY)	-	-	-	-	-	-	-	-	-
GOPIUS SP.	-	-	-	-	-	-	-	-	-
HERAGENA SP.	-	-	-	-	-	-	-	-	-
PIRLOTINEA	-	-	-	-	-	-	-	-	-
HYALELLA AZTECA	-	-	-	-	-	-	-	-	-
LEPTOCERIDAE	-	-	-	-	-	-	-	-	-
HAUTERIVIA	-	-	-	-	-	-	-	-	-
HAUTERIVIA SP.	-	-	-	-	-	-	-	-	-
NEMATODA	-	-	-	-	-	-	-	-	-
CLIGOCHEA FAMILY A	-	-	-	-	-	-	-	-	-
PHYLLOCENTROPUS SP.	-	-	-	-	-	-	-	-	-
STENOMENUS SP.	-	-	-	-	-	-	-	-	-
TURBELLARIA	-	-	-	-	-	-	-	-	-
TURBELLARIA H	-	-	-	-	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS	243	2092	3270	3421	1421	200	937	107	541
NUMBER OF TAXA	3	3	6	4	2	2	4	1	3

LAKE SEMINOLE WQ MANAGEMENT STUDY - BENTHIC MACROINVERTEBRATES (DISTRIBUTION/NO.)

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TABLE J-5c (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATIONS (ORGANISMS/SQ M)									
	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20
CHIRONOMIDAE										
TANYTUS STELLATUS	-	-	-	-	-	-	-	-	-	-
TANYTARSUS SP	-	-	-	-	-	-	-	-	-	-
HEUCHROMYDUS SP	466	332	-	-	-	-	-	-	-	-
UNDESCRIBED CHIRONOMINI A	-	-	-	-	-	-	-	-	-	-
NON-CHIRONOMIDAE										
ACARI										
ACARIDOPHYTHODES ALBILINEATUS (KEY)	-	-	-	-	-	-	-	-	-	-
OPHTHOGNATHIDAE (NO LARVAL KEY)	-	-	-	-	-	-	-	-	-	-
CHACROPSUS SP	467	37	-	-	-	-	-	-	-	75
POTAMITA FLAVA	-	-	-	-	-	-	-	-	-	765
CALPICULA MANILENSIS	-	262	2841	37	17	56	149	37	692	-
CYRELLUS SP	-	-	-	-	-	-	-	-	-	-
CHIRONOMUS (NO LARVAL KEY)	19	-	10	-	-	-	-	-	-	-
HEXAGENIA SP	197	13	-	411	13	19	147	-	-	-
HYPURINIA	-	-	-	-	-	-	-	-	-	-
HYALELLA AZTECA	-	-	-	-	-	-	-	-	-	-
LEPTOCENIDAE	37	19	-	-	37	-	75	-	-	-
MAELURUS	-	-	-	-	-	-	-	-	-	-
NAREUS SP	-	-	-	-	-	-	-	-	-	-
NEMATODA	19	-	-	-	37	19	-	-	-	-
CLIGOCHEFTIA FAMILY A	-	-	-	-	-	-	-	-	-	-
PHYLOCENTROPUS SP	-	-	-	-	-	-	-	-	-	-
STENOFLEVA SP	-	-	-	3225	-	7757	768	-	-	432
TUEBICHEL	991	112	-	-	1701	-	-	-	-	-
TURFELLARIA	-	-	-	-	-	-	-	-	-	-
TURFELLARIA B	-	-	-	-	-	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS										
NUMBER OF TAXA										
1024	971	3252	4261	3097	1348	9113	4798	1428	1330	5
10	8	3	4	6	8	8	8	8	8	5

LAKE SEMINOLE WQ MANAGEMENT STUDY - BENTHIC MACROINVERTEBRATES (ORGANISMS/50 M)

CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE 1, CYCLE 3

(July 17-20, 1978)

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TABLE J-5d (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS BY STATISTIC (ORGANISMS/SQ M)									
	11-A	11-B	11-C	12-D	12-E	12-F	12-G	12-H	12-I	12-J
CHIRONOMIDAE										
TANYPUS STELLATUS	-	12	-	-	-	-	-	-	-	-
TANYTARUS SP	-	-	-	-	-	-	-	-	-	-
PHENICHERUS SP	-	-	-	-	-	-	-	-	-	-
UNDESIGNED CHIRONOMIDAE A	-	-	-	-	-	-	-	-	-	34
NON-CHIRONOMIDAE										
ACAEI										
TRICORYTHODES ALTRILINEATUS	-	-	-	-	-	-	-	-	-	-
CERATOPOGONIDAE (NO LARVAL KEY)	-	-	-	-	-	-	-	-	-	-
CHIRONOMUS SP	56	673	411	93	355	3193	3497	411	-	91
CHIRONOMUS MANILENSIS	-	-	-	-	-	-	-	-	-	-
CYRILLUS SP	-	-	-	-	-	-	-	-	-	-
EMPHIDIDAE (NO LARVAL KEY)	-	-	-	-	-	-	-	-	-	-
COMPHUS SP	37	12	-	75	75	374	334	12	-	991
PERAGENA SP	-	-	-	-	-	-	-	-	-	37
HYALINELLA AZTECA	-	-	-	-	-	-	-	-	-	-
LEPTOCERIDAE	-	-	-	-	-	-	-	-	-	-
NAUTIDAE	-	-	-	-	-	-	-	-	-	-
NARBUS SP	-	-	-	-	-	-	-	-	-	-
NEMATODA	-	19	-	19	-	94	-	-	-	-
CLITELLARIA	-	-	-	-	-	-	-	-	-	-
PHYLLICENTRUS SP	-	-	-	-	-	-	-	-	-	-
STENONEA SP	-	-	-	-	-	-	-	-	-	-
TURBELLARIA	1383	243	1178	400	200	73	1053	1150	1150	112
TURBELLARIA B	-	-	-	-	-	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS	1405	1141	1645	674	745	150	4747	5100	1710	2037
NUMBER OF TAXA	4	7	4	7	5	3	10	4	4	14

TABLE J-5e

LAKE SEMINOLE WQ MANAGEMENT STUDY - BENTHIC MACROINVERTEBRATES (ORGANISMS/SQ M)
CORPS OF ENGINEERS (CONTRACT DACW01-76-C-0001) PHASE 1, CYCLE 3
(July 17-20, 1978)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION:										(ORGANISMS/SQ M)
	14-M	14-W	15-E	15-M	15-W	16-E	16-M	16-W	17-M	17-W	
CHIRONOMIDAE											
APLARESMYIA CINCTIPES	75	-	12	-	-	-	-	-	37	-	-
APLARESMYIA MALLUCII	-	-	-	-	-	-	-	-	19	-	-
APLARESMYIA PARAJANTA	-	-	-	-	-	-	-	-	-	-	-
NEAR CLERONOMUSIIA DENTICUS	19	19	-	-	-	-	19	-	-	-	-
CHIRONOMUS SP	-	-	-	-	-	-	56	-	-	75	1140
CLADOTANYTARUS SP	-	-	-	-	-	-	-	-	-	-	-
COELOTANYTARUS CONCINUS	168	467	75	19	37	-	-	-	37	-	-
COELOTANYTARUS TRICOLOR	56	-	-	-	-	-	-	-	-	19	37
CERYNCHURA SP	-	-	-	-	-	-	19	-	-	19	-
NEAR CORYNCHURA SP	-	-	-	-	-	-	-	-	-	-	-
NEAR CORYNCHURA SP B	-	-	-	-	-	-	-	-	-	-	-
CRYPTICCHIRONOMUS* CF ROLLI	-	-	-	-	-	-	-	-	-	-	93
CRYPTICCHIRONOMUS FULVUS	37	-	-	-	37	19	37	-	-	19	334
CRYPTICCLADOCHELMA SP	-	-	-	-	-	-	-	-	63	-	-
DICLOTENDIPES MODESTUS	-	-	-	-	-	-	-	-	-	-	-
EINFELDIA SP	-	-	-	-	-	-	-	-	-	-	-
EPHICLADIUS SP	-	-	19	19	-	-	-	-	-	-	-
GLYPHICENDIPES SP	-	-	-	-	-	-	-	-	-	-	-
MICROCCHIRONOMUS SP	37	19	-	-	-	-	-	-	-	-	-
PARACHIRONOMUS HIRTALATUS	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP	19	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP A	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP B	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP C	75	-	-	-	-	-	19	-	-	-	411
PARACLAODIPELMA SP D	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP E	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP F	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP G	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP H	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP I	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP J	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP K	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP L	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP M	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP N	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP O	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP P	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP Q	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP R	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP S	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP T	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP U	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP V	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP W	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP X	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP Y	-	-	-	-	-	-	-	-	-	-	-
PARACLAODIPELMA SP Z	-	-	-	-	-	-	-	-	-	-	-
PROCLADIUS SP	75	131	19	37	56	-	-	-	19	-	-
PSEUDOCCLADIUS SP	19	-	-	-	-	-	-	-	-	-	-
PSEUDOCCHIRONOMUS SP	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP A	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP B	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP C	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP D	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP E	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP F	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP G	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP H	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP I	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP J	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP K	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP L	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP M	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP N	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP O	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP P	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP Q	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP R	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP S	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP T	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP U	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP V	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP W	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP X	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP Y	-	-	-	-	-	-	-	-	-	-	-
PHLEBOTOMUS SP Z	-	-	-	-	-	-	-	-	-	-	-
STEMPELLINA SP	-	-	-	-	-	-	19	-	-	19	19

TABLE J-5e (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/SQ M)										TOTAL NUMBER OF ORGANISMS	NUMBER OF TAXA
	10-M	10-W	15-F	15-M	15-W	16-F	16-M	17-M	17-W			
CHIRONOMIDAE												
<i>IANUS</i> <i>STELLATUS</i>												
<i>TANYTARUS</i> <i>SP</i>	140	-	-	-	-	-	-	-	-	-	-	-
<i>ANACHNEPUS</i> <i>SP</i>	-	-	-	-	-	140	-	-	-	-	-	-
UNDESIGNATED CHIRONOMINI A	-	-	-	-	-	-	-	-	-	-	-	-
NYMPH-CHIRONOMIDAE												
ACAEI												
<i>TEUCOMYTHODES</i> <i>ALBILINEATUS</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>CEPHALICINIDAE</i> (NO LARVAL KEY)	-	-	-	-	-	-	-	-	-	-	-	-
<i>CHAORORUS</i> <i>SP</i>	19	75	804	1458	1252	37	10	10	10	10	10	10
<i>POTAMIA</i> <i>FLAVA</i>	302	-	50	56	449	483	6004	2093	70	4867	149	37
<i>CEPHALICULA</i> <i>PANILENSIS</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>CYRILLUS</i> <i>SP</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>PUBERTAL</i> (NO LARVAL KEY)	-	-	-	-	-	-	-	-	-	-	-	-
<i>CEPHUS</i> <i>SP</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>HERAGENA</i> <i>SP</i>	404	10	505	299	318	-	-	112	12	-	-	-
<i>HYDRODIA</i>	-	-	-	-	-	-	10	731	-	-	-	-
<i>MYALILLA</i> <i>AZTECA</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>LEPTOCENIDAE</i>	19	-	-	-	19	-	-	-	-	-	-	-
<i>NAIDICAE</i>	-	-	-	-	-	13	-	-	-	-	-	-
<i>NAIDUS</i> <i>SP</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>SCARIDAE</i>	19	-	-	-	-	-	19	-	-	12	-	-
<i>GLICHTASTA</i> <i>FAMILY A</i>	-	-	-	-	-	-	-	-	-	14	-	-
<i>PHYLLICENTRUS</i> <i>SP</i>	19	-	-	-	-	-	-	-	-	-	-	-
<i>STENOMELA</i> <i>SP</i>	243	63	03	-	822	-	7-4	280	570	-	-	-
<i>TUBELLARIA</i>	-	-	-	-	-	-	-	200	-	-	-	-
<i>TUBELLARIA</i> <i>H</i>	-	-	-	-	-	-	634	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS	2318	823	1500	1907	2900	720	9320	11027	5420	2336	10	10
NUMBER OF TAXA	20	7	4	7	4	6	15	13	12	10	10	10

Lake Seminele wO Management Study - AftNthic MacroInvertebrates (Organisms/50 m)
Corps of Engineers (Contract DACW01-74-C-0101) Phase I: Cycle 1

(July 17-20, 1978)

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TABLE J-5f (cont.)

TAXONOMIC CLASSIFICATION	1R-E	1R-W	1R-U	10-F	10-U	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/SQ M)
CHIRONOMIDAE						
TANYBUS STELLATUS	-	-	-	-	-	
TANYBUS SP.	-	-	-	-	-	
XENICHIRONOMUS SP.	-	-	10	-	-	
UNOBSERVED CHIRONOMINI A	-	-	-	-	-	
NON-CHIRONOMIDAE						
ACAEI	10	617	336	206	18	
TRICORYTHOIDES ALBILINEATUS	-	-	-	-	525	
CECIDIPODINIDAE (NO LARVAL KEY)	-	-	-	-	-	
CHAORCUBUS SP.	-	-	19	37	-	
POTAMIA FLAVA	-	936	20243	1366	13012	
(CERTICULA MANILENSIS	1084	1450	355	4169	5337	
CYDNELLUS SP.	-	290	149	250	-	
EMERICIDAE (NO LARVAL KEY)	-	-	19	-	-	
GOMPHUS SP.	-	-	-	-	-	
MYZAGENTIA SP.	-	-	-	-	-	
HYALINELLA AZTECA	-	-	10	56	-	
LEPTOCENTRIDAE	-	-	-	-	-	
NAUCIDAE	411	916	149	149	54	
NABIDAE	-	-	-	-	-	
NEMATODA	-	-	-	-	-	
OLIGOCHEATTA FAMILY A	-	-	-	-	-	
PHYLCENTROPUS SP.	-	-	-	-	-	
STENONEMA SP.	-	-	-	56	18	
TUBIFICIDAE	904	353	262	933	34	
TUBIFICARIA	37	2187	1270	169	-	
TUBIFICARIA B	710	75	-	-	-	
TOTAL NUMBER OF ORGANISMS	3174	20374	28140	7884	25570	
NUMBER OF TAXA	9	13	15	17	11	

LAKE SCHINBEI AND MANAGEMENT STUDY - BENTHIC MACROINVERTEBRATES (DEGASIS/SO M)
COEUS OF PROJEKTS (CONTRACT DACW0-79-C-0101) PHASE 1: CYCLE 5

[illegible]

NOTE:

- E East Bank
- M Mid Channel
- W West Bank
- A,B,C "Lake Type S"

TABLE J-6a (cont.)

[illegible]

LAKE CHARLES #3) MANAGEMENT STUDY - BENTHIC MACROINVERTEBRATES (ORGANISMS/SQ M)
CLARK, J.C. ENGINEERS (CONTRACT DACWOL-78-C-0101) PHASE 1: CYCLE 2

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TABLE J-6b (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS BY STATION											(ORGANISMS/SQ M)
	5-1	5-2	5-3	5-4	5-5	5-6	5-7	5-8	5-9	5-10	5-11	
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
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INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-	-	-	-	-	-	-	-	-
PROTIST	-	-	-	-	-	-	-	-	-	-	-	-
INVERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
VERTEBRATE	-	-	-	-	-	-	-	-	-	-	-	-
ALGAL	-	-	-	-	-	-	-	-	-	-	-	-
ANIMAL	-	-	-	-	-	-	-	-	-	-	-	-
PLANT	-	-	-	-								

(September 25-27, 1978)

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TABLE J-6c (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION										(ORGANISMS/SQ M)
	0-M	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	
UNICELLULAR ALGAE	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
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DIATOMS	-	-	-	-	-	-	-	-	-	-	
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DIATOMS	-	-	-	-	-	-	-	-	-	-	
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DIATOMS	-	-	-	-	-	-	-	-	-	-	
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DIATOMS	-	-	-	-	-	-	-	-	-	-	
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DIATOMS	-	-	-	-	-	-	-	-	-	-	
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DIATOMS	-	-	-	-	-	-	-	-	-	-	
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DIATOMS	-	-	-	-	-	-	-	-	-	-	
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DIATOMS	-	-	-	-	-	-	-	-	-	-	
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DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
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DIATOMS	-	-	-	-	-	-	-	-	-	-	
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DIATOMS	-	-	-	-	-	-	-	-	-	-	
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DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-	-	-	-	-	
CHLOROPHYTES	-	-	-	-	-	-	-	-	-	-	
DIATOMS	-	-	-	-	-	-</					

LABORATORY AND MANAGEMENT STUDY - BENTHIC MACROINVERTEBRATES, (ORGANISMS/50 M)
CYCLES OF ENGINEERS (CONTACT DAWOL-7A-C-0101) PHASE 1, CYCLE 5

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TABLE J-6d (cont.)

[illegible]

EXAMPLES IN THE FIELD MANAGEMENT STUDY - BENEFIT-C MACROINVERTEBRATES (ORDIANIENSIS/SO HN)
TINCE OF ENGINEERS. (CONTACT DACWOL-78-C-0101) PHASE I, CYCLE 6
(September 25-27, 1978)

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TABLE J-6e (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION (ORGANISMS/SQ M)									
	1-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
GENUS OF THE ORDER A	-	-	-	-	-	-	-	-	-	-
ORDER A	-	-	-	-	-	-	-	-	-	-
ORDER B	-	-	-	-	-	-	-	-	-	-
ORDER C	-	-	-	-	-	-	-	-	-	-
ORDER D	-	-	-	-	-	-	-	-	-	-
ORDER E	-	-	-	-	-	-	-	-	-	-
ORDER F	-	-	-	-	-	-	-	-	-	-
ORDER G	-	-	-	-	-	-	-	-	-	-
ORDER H	-	-	-	-	-	-	-	-	-	-
ORDER I	-	-	-	-	-	-	-	-	-	-
ORDER J	-	-	-	-	-	-	-	-	-	-
ORDER K	-	-	-	-	-	-	-	-	-	-
ORDER L	-	-	-	-	-	-	-	-	-	-
ORDER M	-	-	-	-	-	-	-	-	-	-
ORDER N	-	-	-	-	-	-	-	-	-	-
ORDER O	-	-	-	-	-	-	-	-	-	-
ORDER P	-	-	-	-	-	-	-	-	-	-
ORDER Q	-	-	-	-	-	-	-	-	-	-
ORDER R	-	-	-	-	-	-	-	-	-	-
ORDER S	-	-	-	-	-	-	-	-	-	-
ORDER T	-	-	-	-	-	-	-	-	-	-
ORDER U	-	-	-	-	-	-	-	-	-	-
ORDER V	-	-	-	-	-	-	-	-	-	-
ORDER W	-	-	-	-	-	-	-	-	-	-
ORDER X	-	-	-	-	-	-	-	-	-	-
ORDER Y	-	-	-	-	-	-	-	-	-	-
ORDER Z	-	-	-	-	-	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS	1140	6720	1584	602	673	2147	2284	601	15685	46935
NUMBER OF TAXA	6	5	4	7	5	10	14	9	14	16

TABLE SEMINARS AND MANAGEMENT STUDY - SYNTHETIC MACHINE/INVERTER RATES (ORGANISMS/SO #)

(September 25-27, 1978)

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TABLE J-6f (cont.)

[illegible]

TABLE J-7

L SEMINOLE WQ MANAGEMENT STUDY - HESTER DENOV MACROCINVERTEBRATES (ORGANISMS/SQ M)

PLACED CYCLE 1 (April 17-21, 1978)
RETRIEVED CYCLE 2 (June 5-7, 1978)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/SQ M)									
	7	12	13	15	18	19	20	21	22	23
CHIRONOMIDAE										
ABLAESMYIA MALLECHI	24	-	16	32	-	-	-	-	-	-
ABLAESMYIA PAHAJANTA	87	8	-	40	-	-	-	-	-	-
CLADOTANTARUS SP	-	-	-	-	-	-	-	-	-	-
CONCHAELOPIA SP	16	-	-	-	-	-	-	-	-	-
CLAYTONELLA SP	500	-	468	103	79	151	-	-	-	-
CHIRONOMUS SP	-	-	-	-	-	-	-	-	-	-
DICROTOMIPES NEOMIDESTUS	-	-	8	32	-	-	-	-	-	-
DICROTOMIPES NEOMIDESTUS	341	254	3071	802	175	21	-	-	-	-
GLYPHODIPES SP	-	-	-	-	-	-	-	-	-	-
MICRUPSECTRA SP	8	-	-	56	-	8	-	-	-	-
PHAEODIPSECTRA SP	16	-	-	32	595	79	-	-	-	-
POLYPEDILUM NEAR CONVICTUM	-	-	8	-	-	-	-	-	-	-
POLYPEDILUM FALLAX	-	-	-	-	-	-	-	-	-	-
POLYPEDILUM MALTREALE	-	-	-	-	-	-	-	-	-	-
POLYPEDILUM NEAR TILLINENSE	-	-	-	-	-	-	-	-	-	-
PSICTROCLADIUS SP	87	8	182	95	24	198	-	-	-	-
PSYDROCHIRONOMUS SP	-	-	-	8	-	8	-	-	-	-
PHENOCHELOPS ROBACKI	-	-	-	-	-	-	-	-	-	-
PHUTANTARUS SP	16	103	24	32	24	8	-	-	-	-
TELECHIRONOMUS SP	8	-	-	246	135	-	-	-	-	-
TANTARUS SP	-	-	-	-	-	-	-	-	-	-
TENOIPERINI SP AT ROBACK 1953	6	16	8	40	-	16	-	-	-	-
THIENMANIELLA SP	-	-	71	8	-	-	-	-	-	-

TABLE J-7 (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/SQ M)									
	7	12	13	15	18	19	10	00000	00000	00000
NON-CHIRONOMIDAE										
ANCYRINX SP	63	-	16	-	-	-	-	-	-	-
ARGIA SP	373	5	24	8	214	8	8	-	-	-
TRICORYTHODES ALBILINEATUS	-	-	-	-	-	-	-	-	-	-
POTAMIA FLAVA	16	-	-	-	587	48	48	-	-	-
CLUTON SP	32	-	-	-	8	8	8	-	-	-
EMITIDAE (NI) LARVAL KEYI	-	-	-	-	-	-	-	-	-	-
MYALFLA AZTECA	24	190	270	190	-	-	-	-	-	-
NATIDIDAE	556	40	643	24	286	8	8	-	-	-
NEMATODA	-	-	-	-	-	-	-	-	-	-
NEURECLIPISIS SP	79	16	198	635	484	16	16	-	-	-
STIMULUS SP	8	-	16	198	8	8	8	-	-	-
STIMULUS SP	-	-	-	-	-	-	-	-	-	-
TURBELLARIA	-	24	-	-	-	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS	2294	667	5023	2589	2693	747	15	00000	00000	00000
NUMBER OF TAXA	20	10	15	19	15	15	15	00000	00000	00000

TABLE J-8

L SEMINOLE WQ MANAGEMENT STUDY - HESTER JENNY MACROINVERTEBRATES (ORGANISMS/SQ M)

PLACED CYCLE 3 (July 17-20, 1978)
 RETRIEVED CYCLE 4 (August 14-17, 1978)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATIONS: (ORGANISMS/SQ M)					
	1A	1A	1A	1A	1A	1A
CHIRONOMIDAE						
ARLARESMYIA MALLACHI	70					
ARLARESMYIA PARAJANTA	79					
CORYNEMURA SP	24					
CRICOTOPUS SP	8					
DICHTENIDOPSIS NEONDESTUS	222					
DICHTENIDOPSIS NEVUSUS	440					
WICEDPSICTOA SP	421					
PNTANECURA SP	32					
PHAEINUSSECTA SP	119					
POLYPETILUM NEAP CONVICTUM						
POLYPETILUM FALLAX	70					
POLYPETILUM HALTEALE	44					
POLYPETILUM HEAR ILLINOENSE	8					
PSECTROCLADUS SP						
PHEOTANTAEUS SP						
THILTMANNIELLA SP						
THINFLOS SP						

TABLE J-8 (cont.)

TAXONOMIC CLASSIFICATION	NUMBER OF ORGANISMS AT STATION: (ORGANISMS/SQ M)									
	14	14	15	16	17	18	19	20	21	22
NON-CHIRONOMIDAE										
AUGIA SP	16	8	-	-	-	-	-	-	-	-
ASELLUS SP	8	24	-	-	-	-	-	-	-	-
ASTACTOAF. IMMATURE	-	-	-	-	-	-	-	-	-	-
TRICORYTHODES ALRILINEATUS	-	111	825	-	-	-	-	-	-	-
CEPATOPUGNIDAE (NO LARVAL KEY)	24	-	12404	-	-	-	-	-	-	-
POTAMIA FLAVA	-	-	-	-	-	-	-	-	-	-
CLYEN SP	-	16	-	-	-	-	-	-	-	-
CYRILLUS SP	141	24	-	-	-	-	-	-	-	-
GRIEINUS SP	-	-	8	-	-	-	-	-	-	-
MELISOMA SP	-	-	-	-	-	-	-	-	-	-
MYALELLA AZTECA	190	1595	-	-	-	-	-	-	-	-
MAICIDAE	476	-	-	-	-	-	-	-	-	-
NABULS SP	-	69	-	-	-	-	-	-	-	-
CMROTTRICHA SP	-	71	-	-	-	-	-	-	-	-
PHASA SP	-	-	-	-	-	-	-	-	-	-
STENCENEA SP	8	159	-	-	-	-	-	-	-	-
TUPIRICIDAE	-	-	-	-	-	-	-	-	-	-
TURPELLARIA	-	3032	-	-	-	-	-	-	-	-
UNIDENTIFIED ANISOPTERA (ODONATA)	8	-	-	-	-	-	-	-	-	-
UNIDENTIFIED COLLEPTERA	8	-	-	-	-	-	-	-	-	-
TOTAL NUMBER OF ORGANISMS	2524	5192	16973	-	-	-	-	-	-	-
NUMBER OF TAXA	20	20	10	-	-	-	-	-	-	-

APPENDIX K
CORBICULA TISSUE ANALYSIS RESULTS

LIST OF TABLES

<u>TABLE</u>	<u>DESCRIPTION</u>	<u>PAGE NO.</u>
K-1	Corbicula Tissue Analysis Results, Cycle 4 August 14-17, 1978	K-1

TABLE K-1a

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DACW01-78-C-0101) PHASE I, CYCLE 4
 CORBICULA TISSUE ANALYSIS RESULTS

PARAMETER NAME (UNITS)	STATION 08 8/16/78	STATION 12 8/15/78	STATION 15 8/14/78	STATION 16 8/14/78
PHYSICAL & CHEMICAL DATA				
PHYSICAL DATA				
MOISTURE CONTENT (% TOTAL WT)	93.2	90.3	92.5	90.6
HEAVY METALS				
ARSENIC (MG AS/KG WET WT)	0.51	0.66	0.72	0.69
CADMIUM (MG CD/KG WET WT)	0.47	0.48	0.57	0.51
CHROMIUM (MG CR/KG WET WT)	0.67	0.69	4.60	1.60
LEAD (MG PB/KG WET WT)	6.50	4.50	4.70	5.50
MERCURY (MG HG/KG WET WT)	0.078	0.094	0.110	0.130
SELENIUM (MG SE/KG WET WT)	0.17	0.15	0.23	0.18
ZINC (MG ZN/KG WET WT)	14.00	17.00	14.00	10.00
CHLORINATED HYDROCARBONS				
ALDRIN (UG/KG WET WT)	--	< 0.2	--	--
DHC-ALPHA ISOMER (UG/KG WET WT)	--	< 0.2	--	--
DHC-BETA ISOMER (UG/KG WET WT)	--	< 0.2	--	--
DHC-GAMMA ISOMER (UG/KG WET WT)	--	< 0.1	--	--
CHLORDANE (UG/KG WET WT)	--	23.0	--	--
P,P' DDD (UG/KG WET WT)	--	< 0.5	--	--
P,P' DDE (UG/KG WET WT)	--	< 0.5	--	--
P,P' DDT (UG/KG WET WT)	--	< 0.5	--	--
P,P' DDT (UG/KG WET WT)	--	< 0.5	--	--
DILDRIN (UG/KG WET WT)	--	< 0.5	--	--
ENDOSULFAN SULFATE (UG/KG WET WT)	--	< 5.0	--	--
HEPTACHLOR (UG/KG WET WT)	--	< 0.2	--	--
HEPTACHLOR EPOXIDE (UG/KG WET WT)	--	< 0.2	--	--
METHOXYCHLOR (UG/KG WET WT)	--	< 5.0	--	--
MIREX (UG/KG WET WT)	--	< 5.0	--	--
PCB (UG/KG WET WT)	--	< 25.0	--	--
PENTACHLOROPHENOL (UG/KG WET WT)	--	< 5.0	--	--
TOXAPHENE (UG/KG WET WT)	--	< 5.0	--	--

TABLE K-1b

PARAMETER NAME (UNITS)	STATION 19 8/16/78
PHYSICAL & CHEMICAL DATA	
PHYSICAL DATA	
MOISTURE CONTENT (% TOTAL WT)	91.2
HEAVY METALS	
ARSENIC (MG AS/KG WET WT)	0.43
CADMIUM (MG CD/KG WET WT)	0.42
CHROMIUM (MG CR/KG WET WT)	0.46
LEAD (MG PB/KG DRY WT)	4.40
MERCURY (MG HG/KG WET WT)	0.120
SELENIUM (MG SE/KG WET WT)	0.10
ZINC (MG ZN/KG WET WT)	11.00
CHLORINATED HYDROCARBONS	
ALDRIN (UG/KG WET WT)	< 0.2
DHC-ALPHA ISOMER (UG/KG WET WT)	< 0.2
DHC-BETA ISOMER (UG/KG WET WT)	< 0.2
DHC-GAMMA ISOMER (UG/KG WET WT)	< 0.1
CHLORDANE (UG/KG WET WT)	40.0
P,P' DDD (UG/KG WET WT)	< 0.5
P,P' DDE (UG/KG WET WT)	< 0.5
P,P' DDT (UG/KG WET WT)	< 0.5
P,P' DDT (UG/KG WET WT)	< 0.5
DIELDRIN (UG/KG WET WT)	< 0.5
ENDOSULFAN SULFATE (UG/KG WET WT)	10.
HEPTACHLOR (UG/KG WET WT)	< 0.2
HEPTACHLOR EPOXIDE (UG/KG WET WT)	< 0.2
METHOXYCHLOR (UG/KG WET WT)	< 5.0
MIREX (UG/KG WET WT)	< 5.
PCB (UG/KG WET WT)	< 25.
PENTACHLOROPHENOL (UG/KG WET WT)	< 5.
TEXAPHENE (UG/KG WET WT)	< 5.

APPENDIX L
SEDIMENT SAMPLING RESULTS

LIST OF TABLES

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L-2 (a-e)	Sediment Sampling Results - Mechanical Data, Cycle 4, August 14-17, 1978	L-6

LIST OF FIGURES

<u>FIGURE</u>	<u>DESCRIPTION</u>	<u>PAGE NO.</u>
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TABLE L-1a

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CIPPS OF ENGINEERS (CONTRACT DAC01-70-C-0101) PHASE 1, CYCLE 4

SEDIMENT SAMPLING RESULTS

PARAMETER NAME (UNITS)	STATION 01 8/17/78	STATION 02 9/17/78	STATION 03 9/17/78	STATION 04 9/17/78
PHYSICAL & CHEMICAL DATA				
PHYSICAL DATA				
LOSS ON IGNITION (MG/KG DRY WT)	2500	1600	3200	2400
MOISTURE CONTENT (% TOTAL DRY WT)	18.30	19.30	18.40	16.20
MISCELLANEOUS CHEMICAL DATA				
CARBON, ORGANIC (GM C/KG DRY WT)	0.544	0.530	1.690	0.797
NITROGEN, TOTAL KJELDAHL (MG N/KG)	34.	35.	52.	117.
OIL & GREASE (MG/KG DRY WT)	< 50.	< 50.	< 50.	< 50.
PHOSPHORUS, TOTAL (MG P/KG DRY WT)	8.77	25.50	19.20	46.20
HEAVY METALS				
ARSENIC (MG AS/KG DRY WT)	0.02	0.04	0.04	0.14
CADMIUM (MG CD/KG DRY WT)	<0.50	<0.50	<0.50	<0.50
CHROMIUM (MG CR/KG DRY WT)	2.75	2.79	2.39	<1.20
COPPER (MG CU/KG DRY WT)	<0.60	<0.60	<0.60	<0.60
IRON (MG FE/KG DRY WT)	1770.	1620.	1470.	1480.
LEAD (MG PB/KG DRY WT)	<0.50	<0.50	<0.50	<0.50
MANGANESE (MG MN/KG DRY WT)	118.0	84.4	51.7	67.4
MERCURY (MG HG/ DRY WT)	0.07	0.03	0.04	0.04
NICKEL (MG NI/KG DRY WT)	0.73	0.56	<0.40	<0.40
ZINC (MG ZN/KG DRY WT)	3.42	5.08	3.55	3.88
CHLORINATED HYDROCARBONS				
ALDRIN (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
AROCLOR 1242 (UG/KG DRY WT)	< 0.5	< 0.5	< 0.5	< 0.5
AROCLOR 1254 (UG/KG DRY WT)	< 0.5	< 0.5	< 0.5	< 0.5
AROCLOR 1260 (UG/KG DRY WT)	103.0	213.0	419.0	93.0
BHC-ALPHA ISOMER (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
BHC-BETA ISOMER (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
BHC-GAMMA ISOMER (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
CHLORDANE (UG/KG DRY WT)	< 0.5	< 0.5	< 0.5	< 0.5
2,4 D (UG/KG DRY WT)	22.	< 2.	569.	< 2.
P,P' ODD (UG/KG DRY WT)	< 0.2	< 0.2	< 0.2	< 0.2
P,P' DDE (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
O,P' DDT (UG/KG DRY WT)	< 0.2	< 0.2	< 0.2	< 0.2
P,P' DDT (UG/KG DRY WT)	< 0.2	< 0.2	< 0.2	< 0.2
DIELDRIN (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
ENDOSULF (UG/KG DRY WT)	< 0.5	< 0.5	< 0.5	< 0.5
ENDRIN (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
ENDRIN ALDEHYDE (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
GLYPHOSPHATE (UG/KG DRY WT)	< 1.0	< 1.0	< 1.0	< 1.0
HEPTACHLOR (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
HEPTACHLOR EPOXIDE (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
METHOXYCHLOR (UG/KG DRY WT)	< 0.2	< 0.2	< 0.2	< 0.2
MIREX (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
PENTACHLOROPHENOL (UG/KG DRY WT)	< 0.5	< 0.5	< 0.5	< 0.5
TOXAPHENE (UG/KG DRY WT)	< 0.5	< 0.5	< 0.5	< 0.5

TABLE L-1b

PARAMETER NAME (UNITS)	STATION 5 8/17/78	STATION 06 8/17/78	STATION J7 8/16/78	STATION JR 8/16/78
PHYSICAL & CHEMICAL DATA				
PHYSICAL DATA				
LOSS ON IGNITION (MG/KG DRY WT)	1500	1503	9903	12800
MOISTURE CONTENT (% TOTAL DRY WT)	17.50	17.70	14.40	17.00
MISCELLANEOUS CHEMICAL DATA				
CARBON, ORGANIC (GM C/KG DRY WT)	0.689	0.592	1.833	2.557
NITROGEN, TOTAL KJELDAHL (MG N/KG)	60.	51.	52.	287.
OIL & GREASE (MG/KG DRY WT)	< 50.	< 50.	53.	50.
PHOSPHORUS, TOTAL (MG P/KG DRY WT)	15.70	16.90	40.50	86.50
HEAVY METALS				
ARSENIC (MG AS/KG DRY WT)	0.04	0.12	0.02	0.02
CADMIUM (MG CD/KG DRY WT)	< 0.50	< 0.50	< 0.50	< 0.50
CHROMIUM (MG CR/KG DRY WT)	< 1.20	2.42	5.02	< 1.20
COPPER (MG CU/KG DRY WT)	< 0.60	< 0.60	3.10	12.00
IRON (MG FE/KG DRY WT)	1470.	2060.	5890.	2970.
LEAD (MG PB/KG DRY WT)	< 0.50	< 0.50	< 0.50	< 0.50
MANGANESE (MG MN/KG DRY WT)	55.5	141.0	168.0	741.0
MERCURY (MG HG/KG DRY WT)	0.04	0.06	0.06	0.09
NICKEL (MG NI/KG DRY WT)	< 0.40	< 0.40	2.11	9.34
ZINC (MG ZN/KG DRY WT)	4.24	4.86	11.20	18.70
CHLORINATED HYDROCARBONS				
ALDRIN (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
APUCLOR 1242 (UG/KG DRY WT)	< 0.5	< 0.5	< 0.5	< 0.5
AKOCLOR 1254 (UG/KG DRY WT)	< 0.5	< 0.5	38.7	50.0
AKOCLOR 1260 (UG/KG DRY WT)	56.8	219.0	< 0.5	136.0
BHC-ALPHA ISOMER (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
BHC-BETA ISOMER (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
BHC-GAMMA ISOMER (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
CHLORDANE (UG/KG DRY WT)	< 0.5	< 0.5	< 0.5	< 0.5
2,4-D (UG/KG DRY WT)	< 2.	113.	< 2.	< 2.
P,P' DDD (UG/KG DRY WT)	< 0.2	< 0.2	< 0.2	< 0.2
P,P' DDE (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
O,P' DDT (UG/KG DRY WT)	< 0.2	< 0.2	< 0.2	< 0.2
P,P' DDT (UG/KG DRY WT)	< 0.2	< 0.2	< 0.2	< 0.2
DIELDRIN (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
ENDOSULF (UG/KG DRY WT)	< 0.5	< 0.5	< 0.5	< 0.5
ENDRIN (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
ENDRIN ALDEHYDE (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
GLYPHOSPHATE (UG/KG DRY WT)	< 1.0	< 1.0	< 1.0	< 1.0
HEPTACHLOR (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
HEPTACHLOR EPOXIDE (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
METHOXYCHLOR (UG/KG DRY WT)	< 0.2	< 0.2	< 0.2	< 0.2
MIREX (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1	< 0.1
PENTACHLOROPHENOL (UG/KG DRY WT)	< 0.5	< 0.5	< 0.5	< 0.5
TOXAPHENE (UG/KG DRY WT)	< 0.5	< 0.5	< 0.5	< 0.5

TABLE L-1c

PARAMETER NAME (UNITS)	STATION 9 8/16/78	STATION 10 8/15/78	STATION 11 8/16/78	STATION 12 8/15/78
PHYSICAL & CHEMICAL DATA				
PHYSICAL DATA				
LOSS ON IGNITION (MG/KG DRY WT)	51000	5300	91200	27300
MOISTURE CONTENT (% TOTAL DRY WT)	43.50	22.70	51.60	32.50
MISCELLANEOUS CHEMICAL DATA				
CARBON, ORGANIC (GM C/KG DRY WT)	15.980	1.475	34.270	34.990
NITROGEN, TOTAL KJELDAHL (MG N/KG)	942.	54.	1530.	954.
OIL & GREASE (MG/KG DRY WT)	2340.	1890.	650.	1520.
PHOSPHORUS, TOTAL (MG P/KG DRY WT)	50.60	41.20	172.00	44.70
HEAVY METALS				
ARSENIC (MG AS/KG DRY WT)	0.06	<0.01	0.04	0.03
CADMIUM (MG CD/KG DRY WT)	<0.70	<0.50	<0.80	<0.60
CHROMIUM (MG CR/KG DRY WT)	7.61	3.85	28.80	19.30
COPPER (MG CU/KG DRY WT)	4.42	1.94	7.23	3.56
IRON (MG FE/KG DRY WT)	22800.	2970.	9900.	17000.
LEAD (MG PB/KG DRY WT)	<0.50	<0.50	<0.50	<0.50
MANGANESE (MG MN/KG DRY WT)	310.0	176.0	452.0	204.0
MERCURY (MG HG/ DRY WT)	0.09	<0.03	0.12	0.12
NICKEL (MG NI/KG DRY WT)	2.48	1.26	3.10	<0.40
ZINC (MG ZN/KG DRY WT)	15.60	7.20	20.70	13.90
CHLORINATED HYDROCARBONS				
ALDRIN (UG/KG DRY WT)	< 0.2	< 0.1	< 0.2	< 0.2
AROCLOR 1242 (UG/KG DRY WT)	< 1.0	< 0.5	< 1.0	< 1.0
AROCLOR 1254 (UG/KG DRY WT)	< 1.0	77.6	< 1.0	77.9
AROCLOR 1260 (UG/KG DRY WT)	365.0	41.2	48.9	< 1.0
BHC-ALPHA ISOMER (UG/KG DRY WT)	< 0.2	< 0.1	< 0.2	< 0.2
BHC-BETA ISOMER (UG/KG DRY WT)	< 0.2	< 0.1	< 0.2	< 0.2
BHC-GAMMA ISOMER (UG/KG DRY WT)	< 0.2	< 0.1	< 0.2	< 0.2
CILORDANE (UG/KG DRY WT)	< 0.8	< 0.5	< 1.0	< 1.0
2,4-D (UG/KG DRY WT)	275.	< 2.	< 4.	< 4.
P,P' DDD (UG/KG DRY WT)	< 0.4	< 0.2	< 0.4	< 0.4
P,P' DDE (UG/KG DRY WT)	< 0.2	< 0.5	< 0.2	< 1.0
O,P' DDT (UG/KG DRY WT)	< 0.4	< 0.2	< 0.4	< 0.4
P,P' DDT (UG/KG DRY WT)	< 0.4	< 0.2	< 0.4	< 0.4
DIFLORIN (UG/KG DRY WT)	< 0.2	< 0.1	< 0.2	< 0.2
ENDOTHOL (UG/KG DRY WT)	< 0.5	< 0.5	< 0.5	< 0.5
ENDREN (UG/KG DRY WT)	< 0.2	< 0.1	< 0.2	< 0.2
ENDREN ALDEHYDE (UG/KG DRY WT)	< 0.2	< 0.1	< 0.2	< 0.2
GLYPHOSPHATE (UG/KG DRY WT)	< 1.0	< 1.0	< 1.0	< 1.0
HEPTACHLOR (UG/KG DRY WT)	< 0.2	< 0.1	< 0.2	< 0.2
HEPTACHLOR EPOXIDE (UG/KG DRY WT)	< 0.2	< 0.1	< 0.2	< 0.2
METHOXYCHLOR (UG/KG DRY WT)	< 0.4	< 0.2	< 0.4	< 0.4
MIRFX (UG/KG DRY WT)	< 0.2	< 0.1	< 0.2	< 0.2
PENTACHLOROPHENOL (UG/KG DRY WT)	< 1.0	< 0.5	< 1.0	< 1.0
TOXAPHENE (UG/KG DRY WT)	< 1.0	< 0.5	< 1.0	< 1.0

TABLE L-1d

PARAMETER NAME (UNITS)	STATION 13 8/14/78	STATION 14 8/15/78	STATION 15 8/14/78	STATION 16 8/14/78
PHYSICAL & CHEMICAL DATA				
PHYSICAL DATA				
LOSS ON IGNITION (MG/KG DRY WT)	38800	127000	91900	13000
MOISTURE CONTENT (% TOTAL DRY WT)	27.90	69.00	62.70	26.60
MISCELLANEOUS CHEMICAL DATA				
CARBON, ORGANIC (GM C/KG DRY WT)	29.850	88.880	53.860	13.460
NITROGEN, TOTAL KJELDAHL (MG N/KG)	359.	4110.	1390.	248.
OIL & GREASE (MG/KG DRY WT)	1700.	4310.	2090.	426.
PHOSPHORUS, TOTAL (MG P/KG DRY WT)	317.00	195.00	80.60	85.50
HEAVY METALS				
ARSENIC (MG AS/KG DRY WT)	0.04	0.04	0.10	0.05
CADMIUM (MG CD/KG DRY WT)	<0.60	<1.10	<1.30	<0.50
CHROMIUM (MG CR/KG DRY WT)	<1.40	65.30	6.70	<1.40
COPPER (MG CU/KG DRY WT)	7.00	40.50	3.90	7.43
IRON (MG FE/KG DRY WT)	15100.	63700.	8190.	5520.
LEAD (MG PB/KG DRY WT)	10.80	57.90	<0.50	<0.50
MANGANESE (MG MN/KG DRY WT)	170.0	2600.0	371.0	190.0
MERCURY (MG HG/ DRY WT)	0.03	0.20	0.09	0.10
NICKEL (MG NI/KG DRY WT)	4.85	40.30	5.23	4.70
ZINC (MG ZN/KG DRY WT)	20.80	123.00	19.70	26.60
CHLORINATED HYDROCARBONS				
ALDRIN (UG/KG DRY WT)	< 0.2	< 0.3	< 0.3	< 0.2
APDCLOR 1242 (UG/KG DRY WT)	< 1.0	< 1.5	< 1.5	< 1.0
ARUCLOR 1254 (UG/KG DRY WT)	< 1.0	753.0	< 1.5	135.0
ARUCLOR 1260 (UG/KG DRY WT)	5.8	< 1.5	19.0	< 1.0
BHC-ALPHA ISOMER (UG/KG DRY WT)	< 0.2	< 0.3	< 0.3	< 0.2
BHC-BETA ISOMER (UG/KG DRY WT)	< 0.2	< 0.3	< 0.3	< 0.2
BHC-GAMMA ISOMER (UG/KG DRY WT)	< 0.2	< 0.3	< 0.3	< 0.2
CHLORDANE (UG/KG DRY WT)	< 1.0	< 1.5	< 1.5	< 1.0
2,4 D (UG/KG DRY WT)	< 4.	< 6.	< 6.	< 4.
P,P' DDD (UG/KG DRY WT)	< 0.4	< 0.6	< 0.6	< 0.4
P,P' DDE (UG/KG DRY WT)	< 0.2	< 1.5	< 0.3	< 0.2
O,P' DDT (UG/KG DRY WT)	< 0.4	< 0.6	< 0.6	< 0.4
P,P' DDT (UG/KG DRY WT)	< 0.4	< 0.6	< 0.6	< 0.4
DIFLORIN (UG/KG DRY WT)	< 0.2	< 0.3	< 0.3	< 0.2
ENDOTHOL (UG/KG DRY WT)	< 0.5	< 0.5	< 0.5	< 0.5
ENDRIN (UG/KG DRY WT)	< 0.2	< 0.3	< 0.3	< 0.2
ENDRIN ALDEHYDE (UG/KG DRY WT)	< 0.2	< 0.3	< 0.3	< 0.2
GLYPHOSPHATE (UG/KG DRY WT)	< 1.0	< 1.0	< 1.0	< 1.0
HEPTACHLOR (UG/KG DRY WT)	< 0.2	< 0.3	< 0.3	< 0.2
HEPTACHLOR EPOXIDE (UG/KG DRY WT)	< 0.2	< 0.3	< 0.3	< 0.2
METHOXYCHLOR (UG/KG DRY WT)	< 0.4	< 0.6	< 0.6	< 0.4
MIREX (UG/KG DRY WT)	< 0.2	< 0.3	< 0.3	< 0.2
PENTACHLOROPHENOL (UG/KG DRY WT)	< 1.0	< 1.5	< 0.5	< 0.5
TOXAPHENE (UG/KG DRY WT)	< 1.0	< 1.5	< 1.5	< 1.0

TABLE L-1e

PARAMETER NAME (UNITS)	STATION 17 8/14/78	STATION 18 8/16/78	STATION 19 8/16/78
PHYSICAL DATA			
LOSS ON IGNITION (MG/KG DRY WT)	1700	15800	5400
MOISTURE CONTENT (% TOTAL DRY WT)	16.50	13.93	19.10
MISCELLANEOUS CHEMICAL DATA			
CARBON, ORGANIC (GM C/KG DRY WT)	0.546	--	2.283
NITROGEN, TOTAL KJELDAHL (MG N/KG)	50.	407.	346.
OIL & GREASE (MG/KG DRY WT)	377.	110.	297.
PHOSPHORUS, TOTAL (MG P/KG DRY WT)	28.60	80.10	53.00
HEAVY METALS			
ARSENIC (MG AS/KG DRY WT)	0.03	--	0.03
CADMIUM (MG CD/KG DRY WT)	<0.50	<0.50	<0.50
CHROMIUM (MG CR/KG DRY WT)	10.80	<1.20	<1.20
COPPER (MG CU/KG DRY WT)	<0.60	2.38	1.85
IRON (MG FE/KG DRY WT)	1280.	2090.	2180.
LEAD (MG PB/KG DRY WT)	<0.50	<0.50	<0.50
MANGANESE (MG MN/KG DRY WT)	72.5	172.0	261.0
MERCURY (MG HG/KG DRY WT)	0.06	--	0.06
NICKEL (MG NI/KG DRY WT)	1.14	1.86	31.50
ZINC (MG ZN/KG DRY WT)	3.59	7.03	5.69
CHLORINATED HYDROCARBONS			
ALDRIN (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1
APCCLOR 1242 (UG/KG DRY WT)	< 0.5	< 0.5	< 0.5
APCCLOR 1254 (UG/KG DRY WT)	41.4	< 0.5	< 0.5
APCCLOR 1260 (UG/KG DRY WT)	< 0.5	147.0	196.0
BHC-ALPHA ISOMER (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1
BHC-BETA ISOMER (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1
BHC-GAMMA ISOMER (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1
CHLORDANE (UG/KG DRY WT)	< 0.5	< 0.5	< 0.5
2,4 D (UG/KG DRY WT)	< 2.	< 2.	< 2.
P,P' DDD (UG/KG DRY WT)	< 0.2	< 0.2	< 0.2
P,P' DDE (UG/KG DRY WT)	< 0.5	< 0.1	< 0.1
O,P' DDT (UG/KG DRY WT)	< 0.2	< 0.2	< 0.2
P,P' DDT (UG/KG DRY WT)	< 0.2	< 0.2	< 0.2
DIELDRIN (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1
ENDOTROL (UG/KG DRY WT)	< 0.5	< 0.5	< 0.5
ENDRIN (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1
ENDRIN ALDEHYDE (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1
GLYPHOSPHATE (UG/KG DRY WT)	< 1.0	< 1.0	< 1.0
HEPTACHLOR (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1
HEPTACHLOR EPOXIDE (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1
METHOXYCHLOR (UG/KG DRY WT)	< 0.2	< 0.2	< 0.2
MIREX (UG/KG DRY WT)	< 0.1	< 0.1	< 0.1
PENTACHLOROPHENOL (UG/KG DRY WT)	2.4	< 0.5	< 0.5
TOXAPHENE (UG/KG DRY WT)	< 0.5	< 0.5	< 0.5

TABLE L-2a

** LAKE SEMINOLE WATER QUALITY MANAGEMENT STUDY **
 CORPS OF ENGINEERS (CONTRACT DAC001-78-C-0101) PHASE I, CYCLE 4
 SEDIMENT SAMPLING RESULTS

PARAMETER NAME (UNITS)	STATION 01 8/17/78	STATION 02 9/17/78	STATION 03 9/17/78	STATION 04 8/17/78
MECHANICAL DATA				
SIEVE ANALYSIS				
SED MTL (% FINER THAN 38.1 MM)	100.0	100.0	100.0	100.0
SED MTL (% FINER THAN 25.4 MM)	100.0	100.0	95.1	100.0
SED MTL (% FINER THAN 19.1 MM)	96.0	96.4	88.7	100.0
SED MTL (% FINER THAN 9.5 MM)	88.2	92.5	85.0	99.6
SED MTL (% FINER THAN 4.75 MM)	76.20	75.30	74.10	73.30
SED MTL (% FINER THAN 0.42 MM)	22.00	30.70	27.60	67.30
SED MTL (% FINER THAN 0.075 MM)	0.83	8.05	0.30	19.60
HYDROMETER ANALYSIS				
EQUIVALENT FALL DIA (MICRONS) % FINER THAN	37. 0.61	37. 1.20	37. 0.30	78. 2.00
EQUIVALENT FALL DIA (MICRONS) % FINER THAN	23. 0.61	23. 1.20	23. 0.30	23. 1.60
EQUIVALENT FALL DIA (MICRONS) % FINER THAN	13.4 0.31	13.0 1.20	13.0 0.00	17.4 1.60
EQUIVALENT FALL DIA (MICRONS) % FINER THAN	9.5 0.31	9.5 0.90	9.5 0.00	9.5 1.60
EQUIVALENT FALL DIA (MICRONS) % FINER THAN	6.7 0.31	6.7 0.90	6.7 0.00	6.7 1.20
EQUIVALENT FALL DIA (MICRONS) % FINER THAN	3.4 0.00	3.4 0.90	3.4 0.00	3.3 1.20
EQUIVALENT FALL DIA (MICRONS) % FINER THAN	1.40 0.00	1.40 0.90	1.40 0.00	1.40 1.20

TABLE L-2b

PARAMETER NAME (UNITS)	STATION 05 8/17/78	STATION 06 8/17/78	STATION 07 8/16/78	STATION 08 8/16/78
MECHANICAL DATA				
SIEVE ANALYSIS				
SED MTL (% FINER THAN 38.1 MM)	100.0	100.0	100.0	100.0
RFD MTL (% FINER THAN 25.4 MM)	97.5	100.0	100.0	100.0
BLD MTL (% FINER THAN 19.1 MM)	95.2	100.0	100.0	100.0
NED MTL (% FINER THAN 9.5 MM)	45.4	100.0	100.0	100.0
ULD MTL (% FINER THAN 2.0 MM)	81.50	97.30	97.50	99.60
BED MTL (% FINER THAN 0.42 MM)	37.20	40.00	73.50	47.30
UDF MTL (% FINER THAN 0.074 MM)	3.00	5.70	16.20	7.00
HYDROMETER ANALYSIS				
EQUIVALENT FALL DIA (MICRONS)	37.	37.	35.	35.
% FINER THAN	1.63	1.95	7.75	6.72
EQUIVALENT FALL DIA (MICRONS)	23.	23.	22.	22.
% FINER THAN	1.63	1.56	7.00	6.30
EQUIVALENT FALL DIA (MICRONS)	13.4	13.4	13.0	13.0
% FINER THAN	1.30	1.56	5.80	5.50
EQUIVALENT FALL DIA (MICRONS)	9.5	9.5	9.0	9.1
% FINER THAN	1.30	1.56	5.40	4.75
EQUIVALENT FALL DIA (MICRONS)	6.7	6.7	6.4	6.5
% FINER THAN	1.30	1.56	4.60	4.75
EQUIVALENT FALL DIA (MICRONS)	3.4	3.4	3.2	3.3
% FINER THAN	1.30	1.17	3.90	3.16
EQUIVALENT FALL DIA (MICRONS)	1.40	1.40	1.30	1.30
% FINER THAN	1.30	1.17	3.10	1.58

TABLE L-2c

PARAMETER NAME (UNITS)	STATION 9 8/16/78	STATION 10 8/15/78	STATION 11 8/16/78	STATION 12 8/15/78
MECHANICAL DATA				
SIEVE ANALYSIS				
BDP MTL (% FINER THAN 39.1 MM)	100.0	100.0	100.0	100.0
UFD MTL (% FINER THAN 25.4 MM)	100.0	100.0	100.0	100.0
SD MTL (% FINER THAN 19.1 MM)	100.0	100.0	100.0	100.0
UFD MTL (% FINER THAN 9.5 MM)	100.0	100.0	100.0	100.0
BD MTL (% FINER THAN 2.0 MM)	100.00	100.00	100.00	98.70
UFD MTL (% FINER THAN 0.42 MM)	92.30	99.60	71.20	70.10
BD MTL (% FINER THAN 0.075 MM)	41.80	14.80	66.50	10.50
HYDROMETER ANALYSIS				
EQUIVALENT FALL DIA (MICRONS)	29.	36.	27.	35.
% FINER THAN	33.30	4.00	45.20	7.90
EQUIVALENT FALL DIA (MICRONS)	18.	23.	17.	22.
% FINER THAN	32.50	4.00	43.80	6.30
EQUIVALENT FALL DIA (MICRONS)	11.0	13.0	10.0	12.0
% FINER THAN	26.20	3.20	40.90	4.70
EQUIVALENT FALL DIA (MICRONS)	7.9	9.3	7.0	7.2
% FINER THAN	25.80	2.80	36.90	3.90
EQUIVALENT FALL DIA (MICRONS)	5.8	6.6	5.4	6.5
% FINER THAN	20.60	2.90	32.10	2.75
EQUIVALENT FALL DIA (MICRONS)	3.1	3.3	2.8	3.4
% FINER THAN	9.50	2.00	27.00	2.20
EQUIVALENT FALL DIA (MICRONS)	1.30	1.35	1.20	1.30
% FINER THAN	4.80	1.60	10.00	1.60

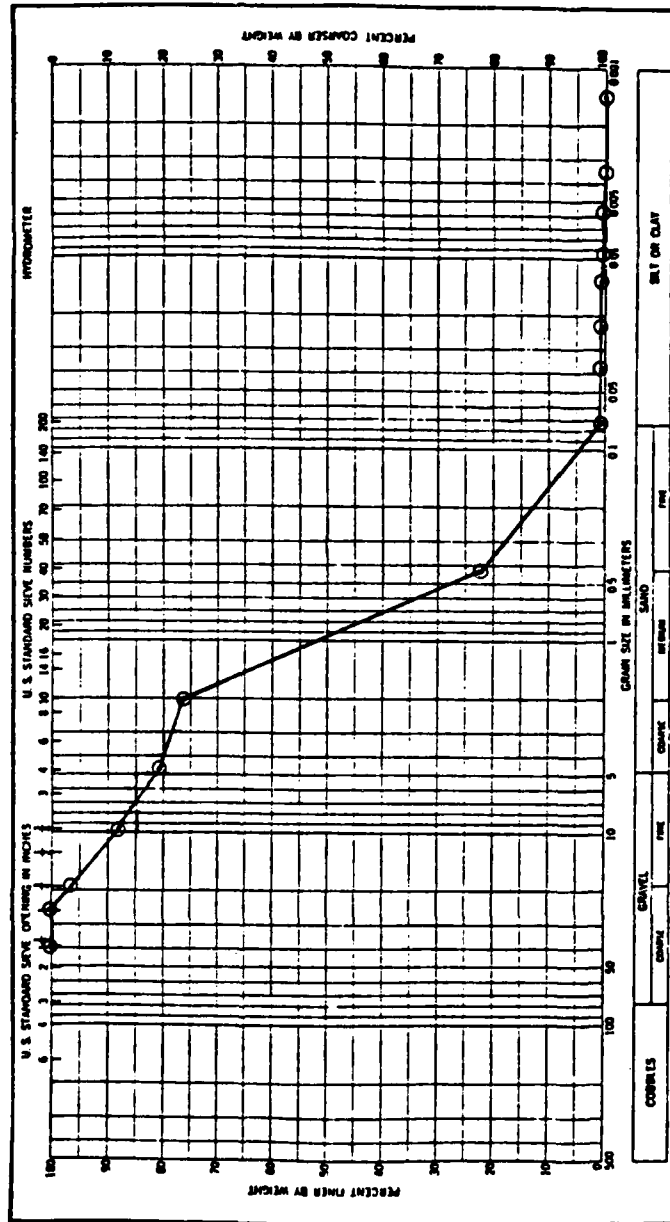
TABLE L-2d

PARAMETER NAME (UNITS)	STATION 13 8/14/78	STATION 14 8/15/78	STATION 15 8/14/78	STATION 16 8/14/78
MECHANICAL DATA				
SIEVE ANALYSIS				
DED MTL (% FINER THAN 38.1 MM)	100.0	100.0	100.0	100.0
DED MTL (% FINER THAN 25.4 MM)	100.0	100.0	100.0	100.0
DED MTL (% FINER THAN 19.1 MM)	100.0	100.0	100.0	99.9
DED MTL (% FINER THAN 9.5 MM)	99.9	100.0	100.0	91.0
DED MTL (% FINER THAN 2.0 MM)	97.10	100.00	100.00	91.30
DED MTL (% FINER THAN 0.42 MM)	70.60	43.40	81.60	22.50
DED MTL (% FINER THAN 0.075 MM)	10.40	25.00	25.00	12.10
HYDROMETER ANALYSIS				
EQUIVALENT FALL DIA (MICRONS)	34.	31.	32.	34.
% FINER THAN	17.70	23.80	20.30	10.70
EQUIVALENT FALL DIA (MICRONS)	21.	20.	20.	22.
% FINER THAN	10.50	22.20	19.90	10.20
EQUIVALENT FALL DIA (MICRONS)	12.5	12.0	12.0	13.0
% FINER THAN	10.10	19.30	17.50	9.40
EQUIVALENT FALL DIA (MICRONS)	8.9	8.6	8.5	9.0
% FINER THAN	10.10	15.90	17.10	7.25
EQUIVALENT FALL DIA (MICRONS)	6.2	6.1	6.1	6.4
% FINER THAN	9.30	14.30	14.70	6.50
EQUIVALENT FALL DIA (MICRONS)	3.2	3.1	3.1	3.2
% FINER THAN	6.20	11.90	12.70	4.35
EQUIVALENT FALL DIA (MICRONS)	1.30	1.30	1.30	1.30
% FINER THAN	3.10	7.90	7.50	2.20

TABLE L-2e

PARAMETER NAME (UNITS)	STATION 17 8/14/78	STATION 19 8/16/78	STATION 19 8/16/78
MECHANICAL DATA			
SIEVE ANALYSIS			
RED MTL (% FINER THAN 38.1 MM)	100.0	100.0	100.0
RED MTL (% FINER THAN 25.4 MM)	100.0	98.5	97.6
RED MTL (% FINER THAN 19.1 MM)	100.0	73.9	89.9
RED MTL (% FINER THAN 9.5 MM)	100.0	64.6	88.8
RED MTL (% FINER THAN 4.75 MM)	99.00	33.10	70.60
RED MTL (% FINER THAN 0.425 MM)	66.00	7.40	14.00
RED MTL (% FINER THAN 0.075 MM)	6.00	0.36	1.80
HYDROMETER ANALYSIS			
EQUIVALENT FALL DIA (MICRONS) % FINER THAN	34. 2.39	37. 0.24	37. 1.13
EQUIVALENT FALL DIA (MICRONS) % FINER THAN	23. 1.59	23. 0.24	23. 1.13
EQUIVALENT FALL DIA (MICRONS) % FINER THAN	13.4 1.59	13.0 0.24	13.4 1.13
EQUIVALENT FALL DIA (MICRONS) % FINER THAN	9.5 1.19	9.5 0.24	9.5 1.13
EQUIVALENT FALL DIA (MICRONS) % FINER THAN	6.7 1.19	6.7 0.12	6.7 0.85
EQUIVALENT FALL DIA (MICRONS) % FINER THAN	3.4 1.19	3.4 0.12	3.4 0.85
EQUIVALENT FALL DIA (MICRONS) % FINER THAN	1.40 0.80	1.40 0.00	1.40 0.57

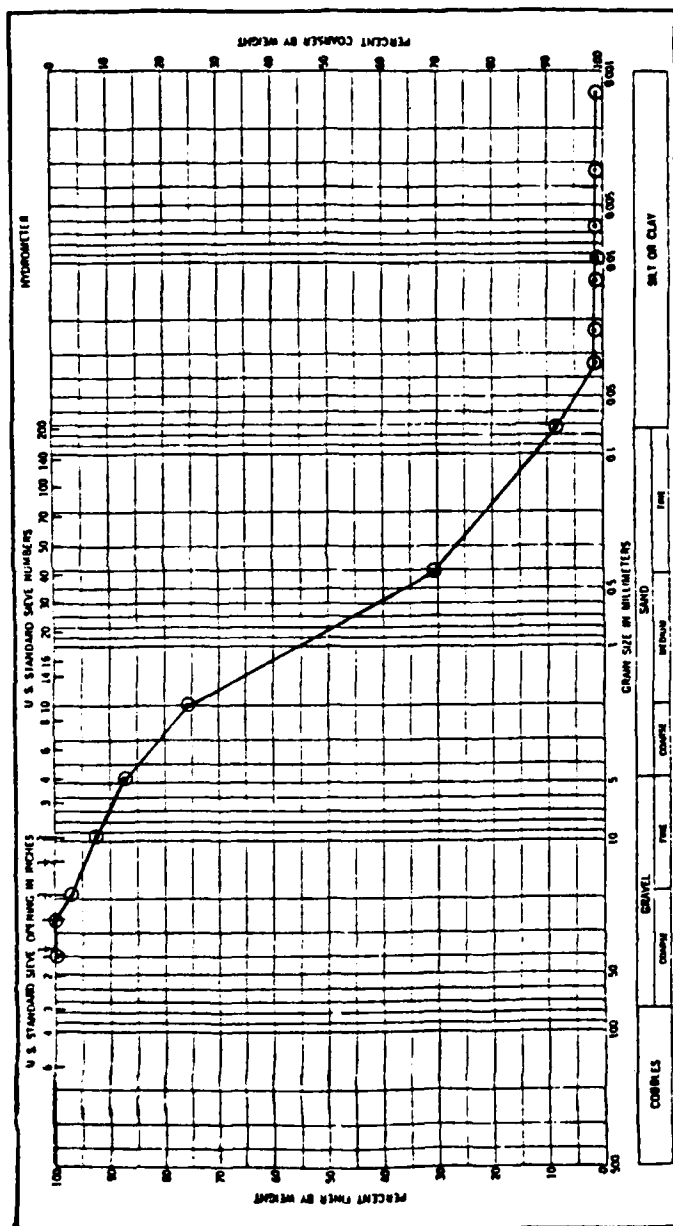
FIGURE L-1a. SEDIMENT GRADATION CURVE, STATION 1, CYCLE 4, AUGUST 14-19, 1978.



NOTE: Composited from four surface sediment samples obtained with an epoxy coated ponar dredge at:

Depth (M)	X-Section (% from R-Bank 1k. upstream)
3.	20%
6.	40%
6.	60%
5.	80%

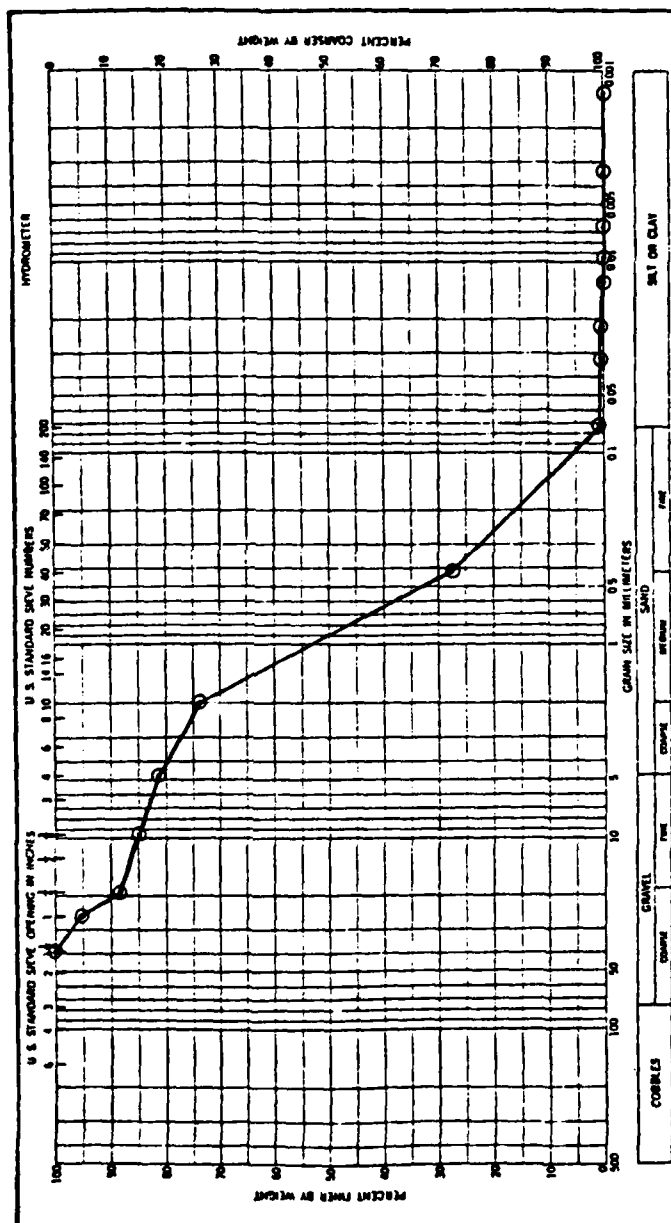
FIGURE L-1b. SEDIMENT GRADATION CURVE, STATION 2, CYCLE 4, AUGUST 14-19, 1978.



NOTE: Composited from four surface sediment samples obtained with an epoxy coated ponar dredge at:

Depth (M)	X-Section (% from R-Bank 1k. upstream)
5.	20%
6.	40%
6.	60%
5.	80%

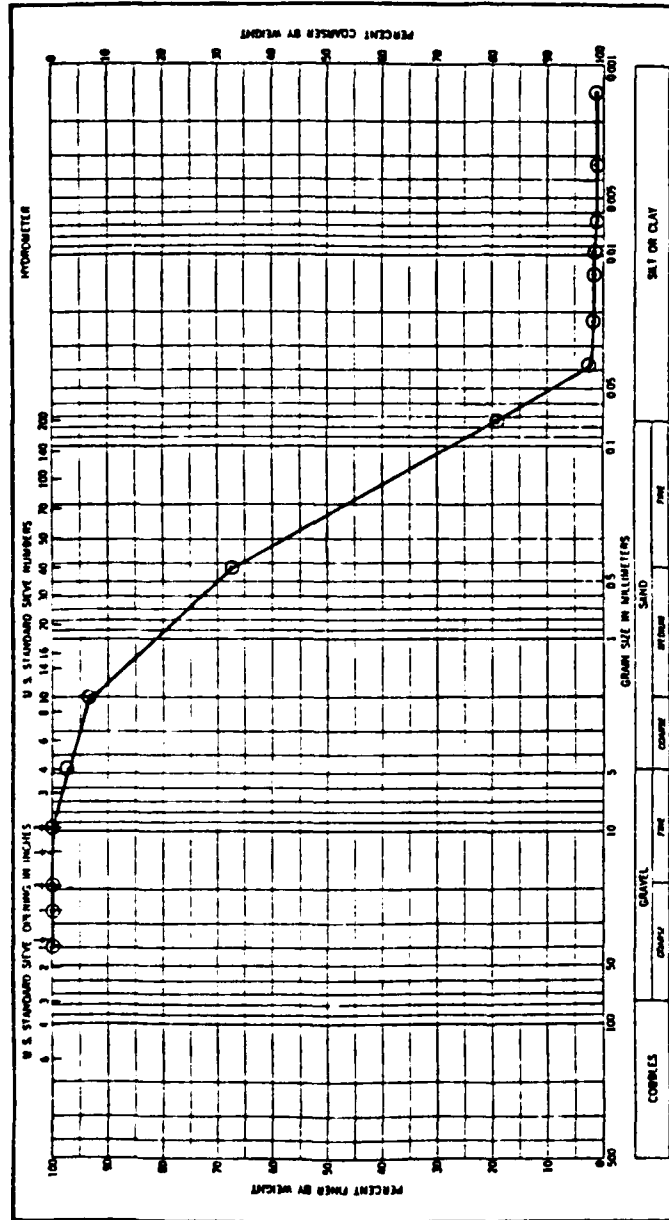
FIGURE L-1c. SEDIMENT GRADATION CURVE, STATION 3, CYCLE 4, AUGUST 14-19, 1978.



NOTE: Composited from four surface sediment samples obtained with an epoxy coated ponar dredge at:

Depth (M)	X-section (% from R-Bank 1k. upstream)
6.	20%
6.	40%
6.	60%
5.	80%

FIGURE L-1d. SEDIMENT GRADATION CURVE, STATION 4, CYCLE 4, AUGUST 14-19, 1978.



NOTE: Compositd from four surface sediment samples obtained with an epoxy coated ponar dredge at:

X-section (% from R-bank 1k. upstream)	Depth (M)
20%	5.
40%	5.
60%	5.
80%	5.

FIGURE L-1e. SEDIMENT GRADATION CURVE, STATION 5, CYCLE 4, AUGUST 14-19, 1978.

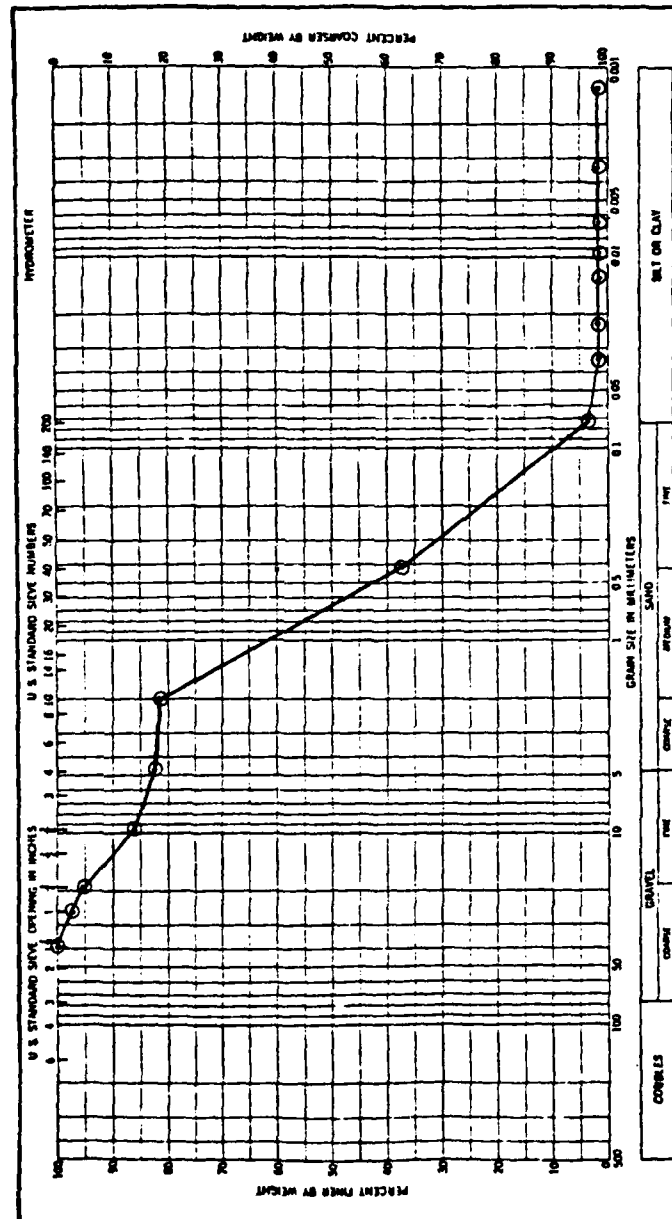
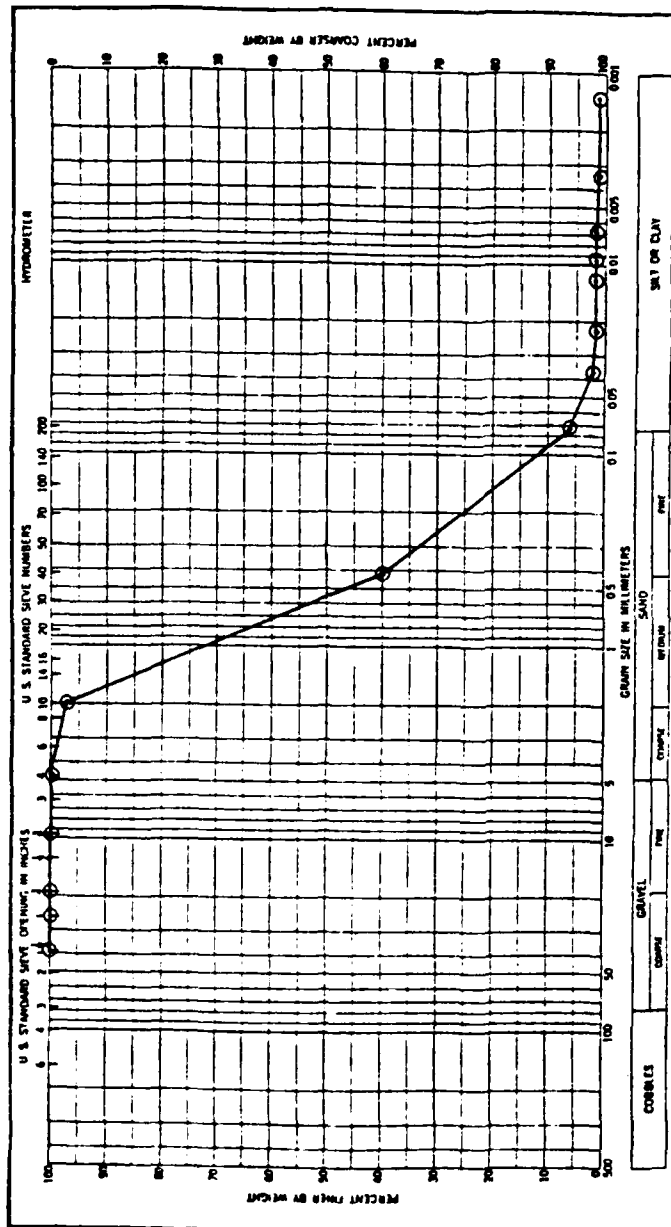


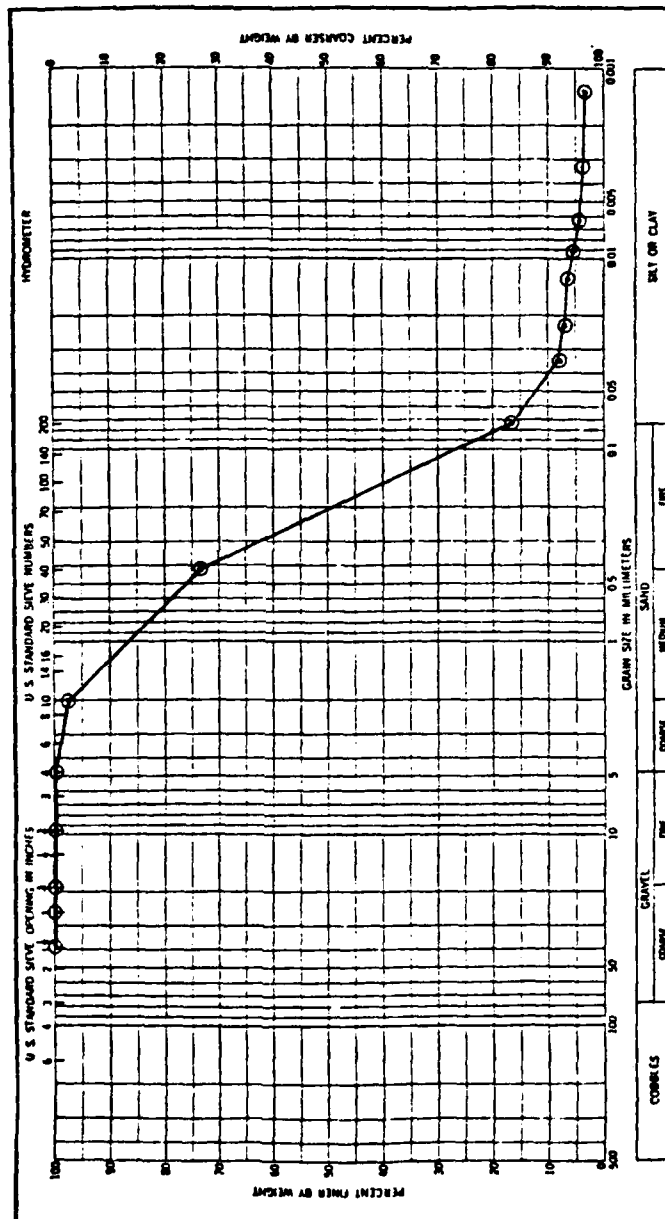
FIGURE L-1f. SEDIMENT GRADATION CURVE, STATION 6, CYCLE 4, AUGUST 14-19, 1978.



NOTE: Compositing from four surface sediment samples obtained with an epoxy coated ponar dredge at:

X-section (% from R-bank 1k. upstream)	Depth (M)
20%	6.
40%	6.
60%	6.
80%	5.

FIGURE L-1g. SEDIMENT GRADATION CURVE, STATION 7, CYCLE 4, AUGUST 14-19, 1978.



NOTE: Composites from four surface sediment samples obtained with an epoxy coated ponar dredge at:

Depth (M)	X-section (% from R-bank 1k. upstream)
4.	20%
6.	40%
8.	60%
8.	80%

FIGURE L-1h. SEDIMENT GRADATION CURVE, STATION 8, CYCLE 4, AUGUST 14-19, 1978.

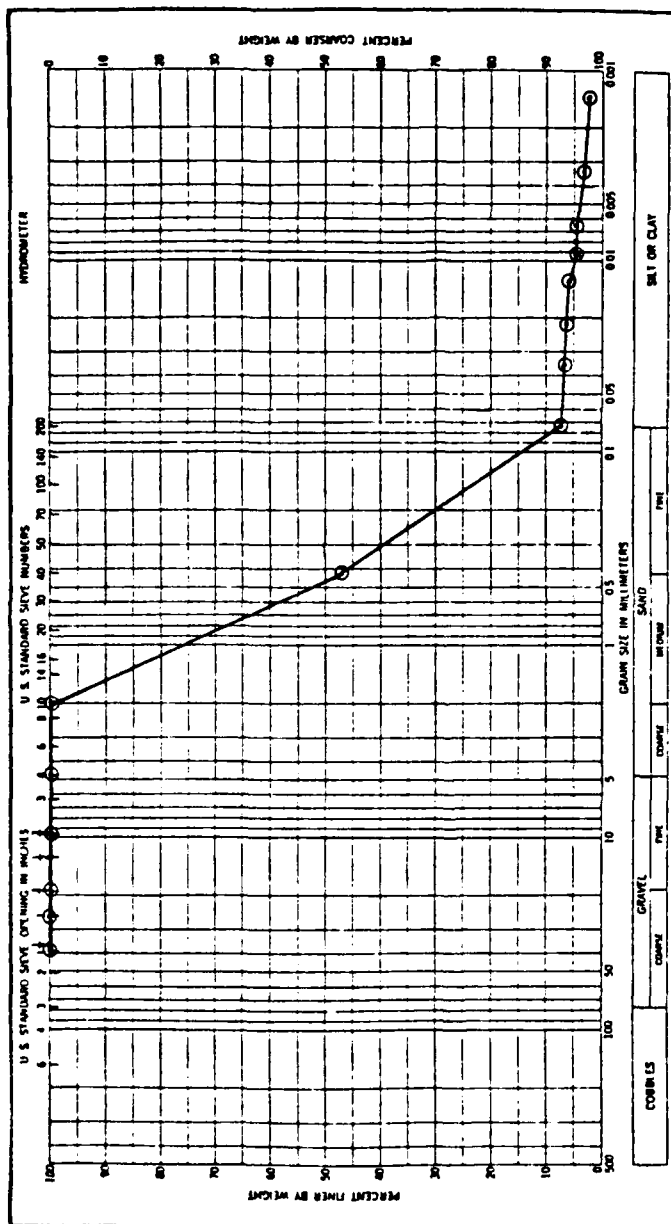
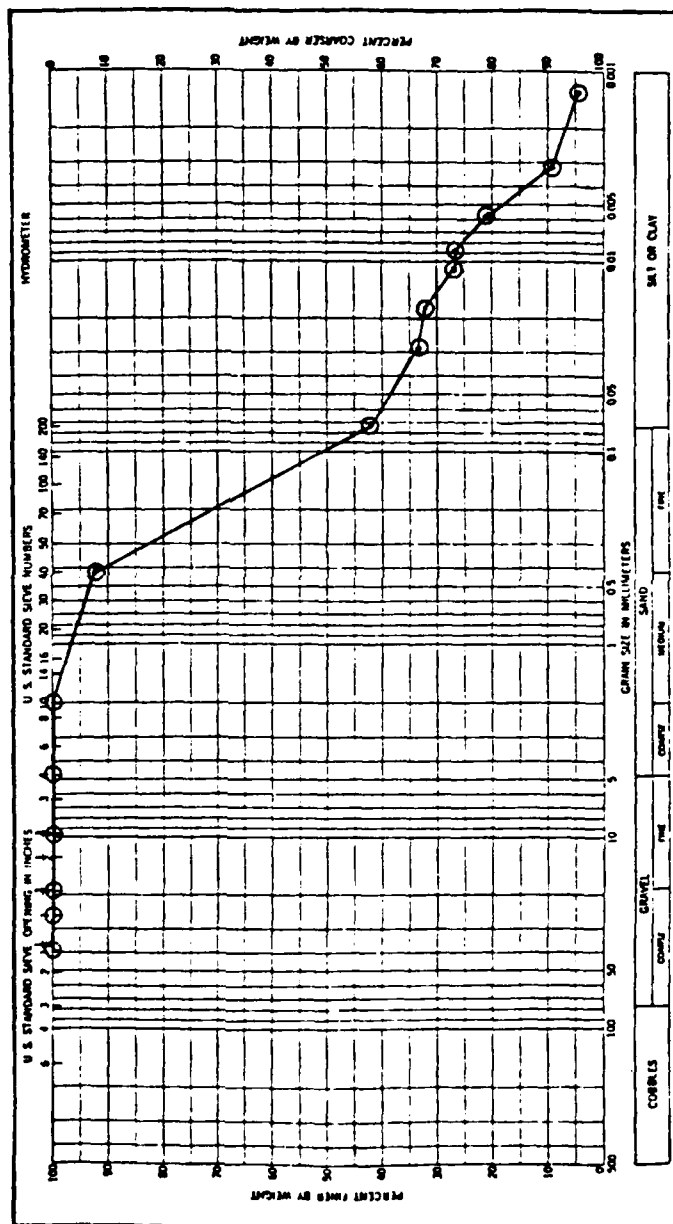
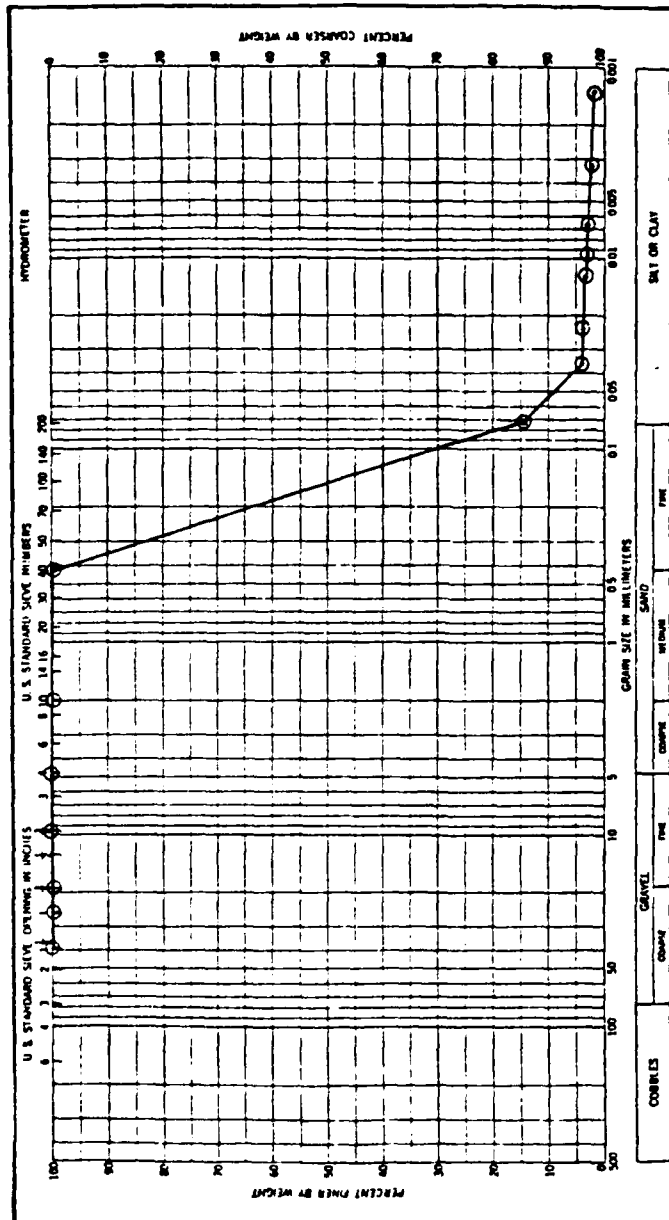


FIGURE L-11. SEDIMENT GRADATION CURVE, STATION 9, CYCLE 4, AUGUST 14-19, 1978.



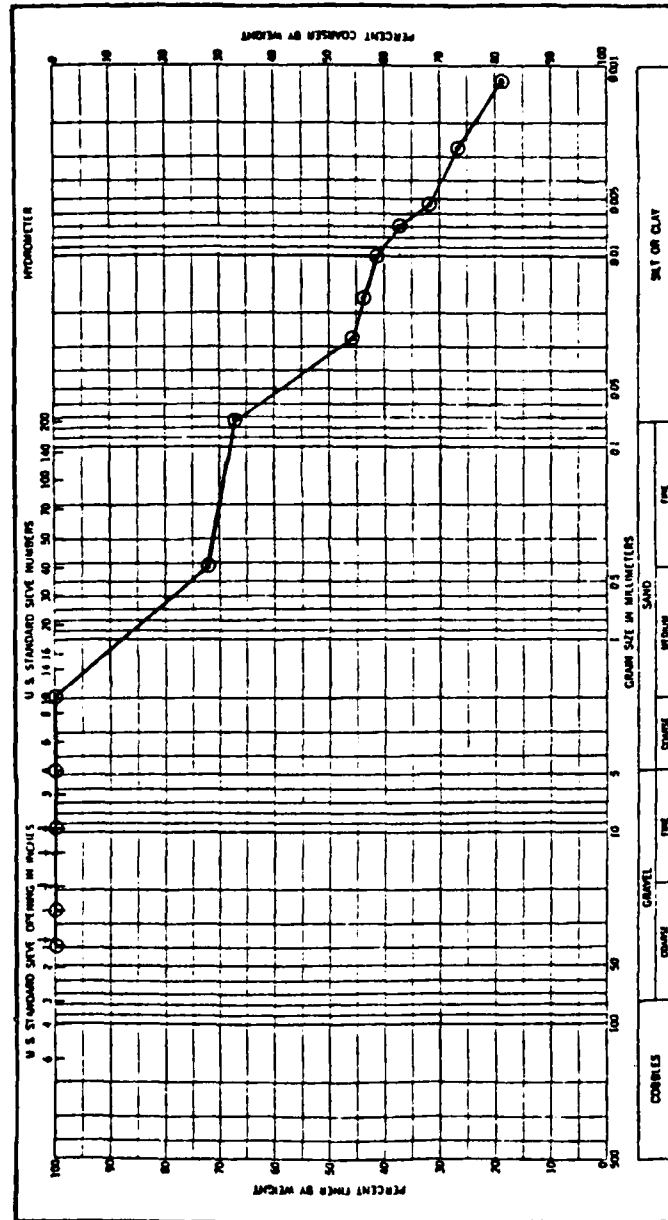
NOTE: Composited from four surface sediment samples obtained with an epoxy coated ponar dredge taken 90° apart on a 20-foot diameter circle at a depth of 6. meters.

FIGURE L-1j. SEDIMENT GRADATION CURVE, STATION 10, CYCLE 4, AUGUST 14-19, 1978.



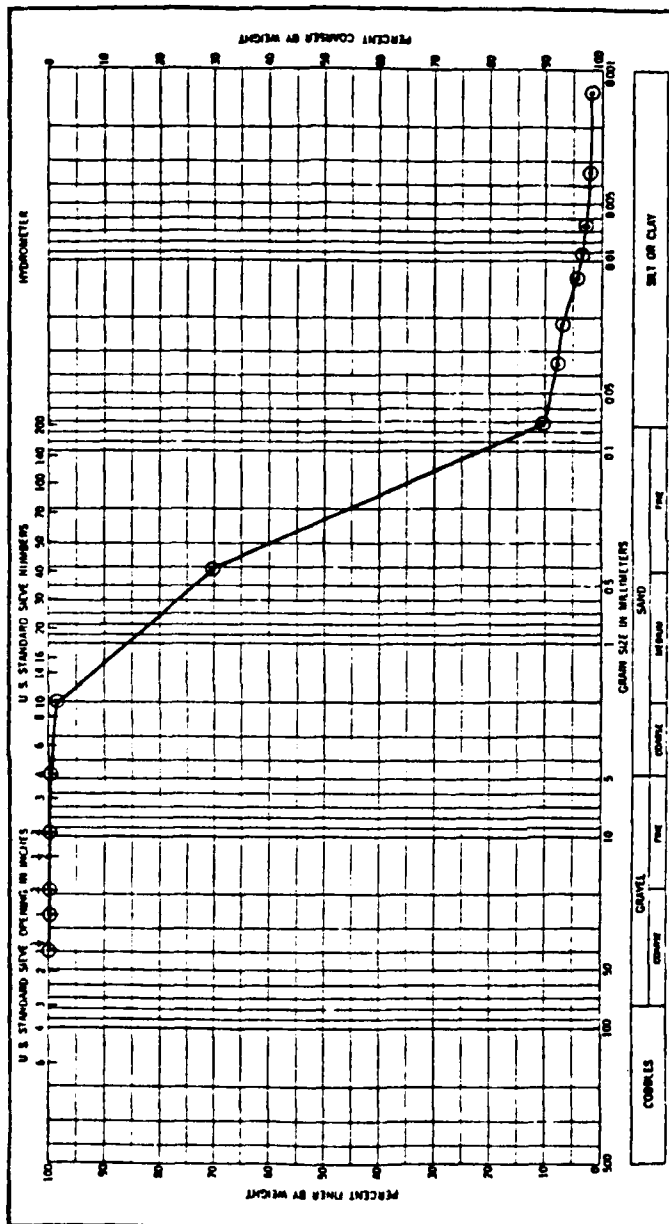
NOTE: Composited from four surface sediment samples obtained with an epoxy coated ponar dredge taken 90° apart on a 20-foot diameter circle at a depth of 1.8 meters.

FIGURE L-1k. SEDIMENT GRADATION CURVE, STATION 11, CYCLE 4, AUGUST 14-19, 1978.



NOTE: Composited from four surface sediment samples obtained with an epoxy coated ponar dredge taken 90° apart on a 20-foot diameter circle at a depth of 6. meters.

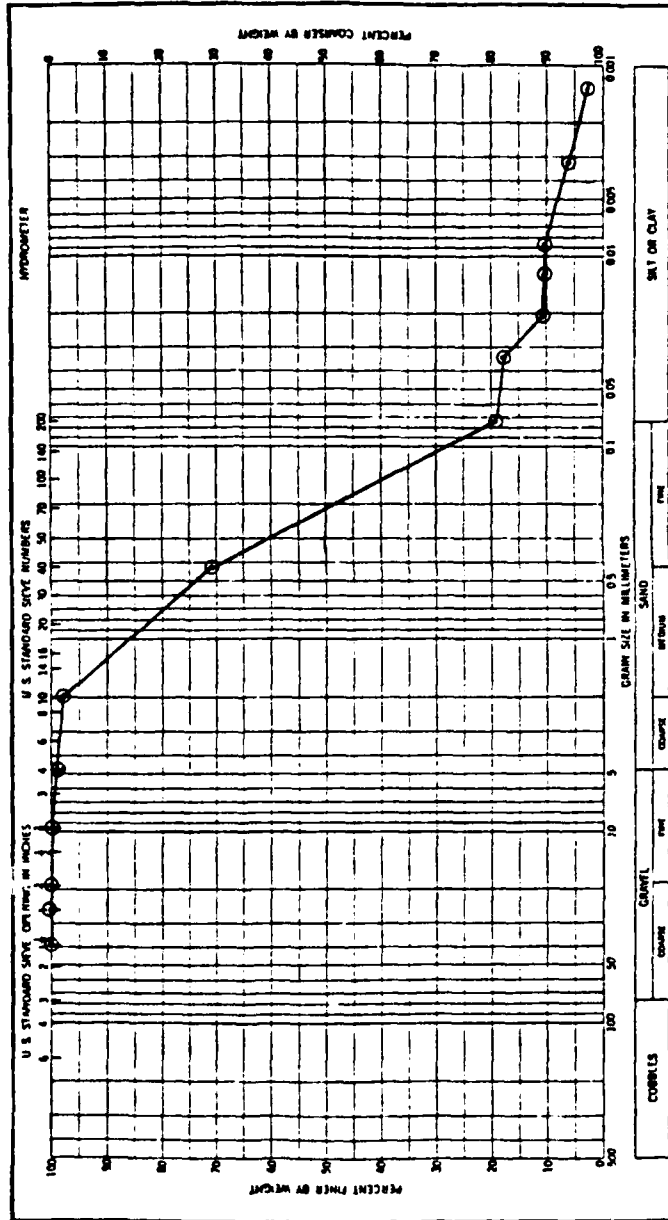
FIGURE L-11. SEDIMENT GRADATION CURVE, STATION 12, CYCLE 4, AUGUST 14-19, 1978.



NOTE: Composited from four surface sediment samples obtained with an epoxy coated ponar dredge at:

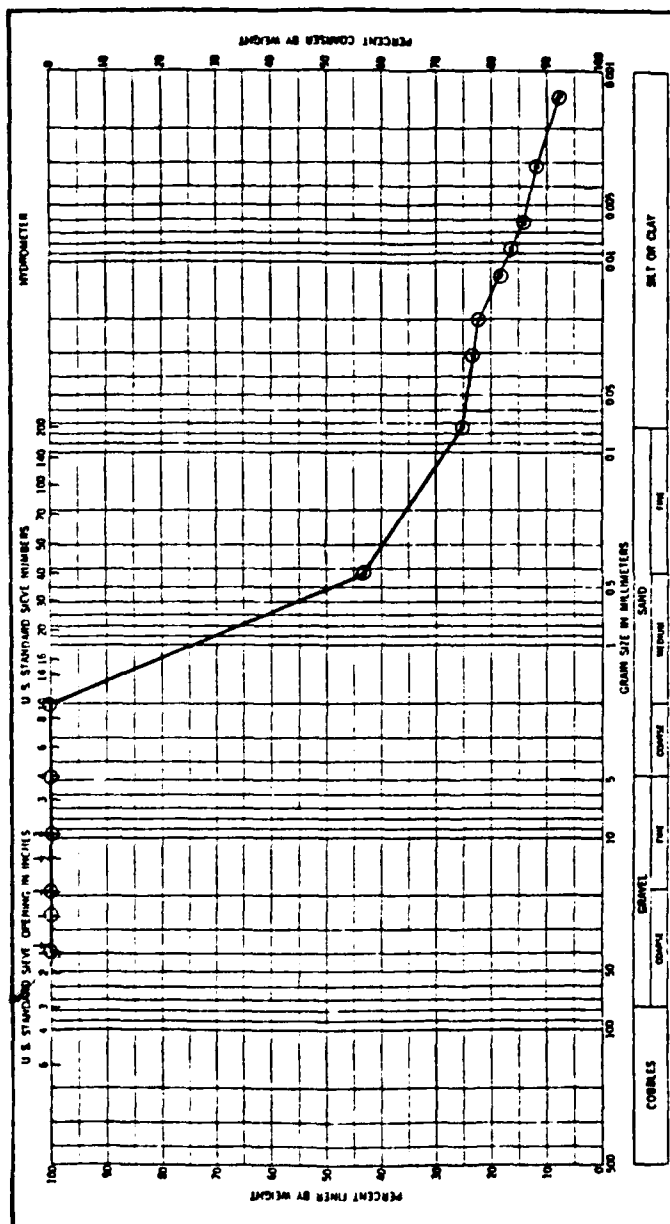
Depth (M)	3.	1.3	1.3	1.3
X-section (% from R-bank 1k. upstream)	20%	40%	60%	80%

FIGURE L-1m. SEDIMENT GRADATION CURVE, STATION 13, CYCLE 4, AUGUST 14-19, 1978.



NOTE: Composited from four surface sediment samples obtained with an epoxy coated ponar dredge taken 90° apart on a 20-foot diameter circle at a depth of 5. meters.

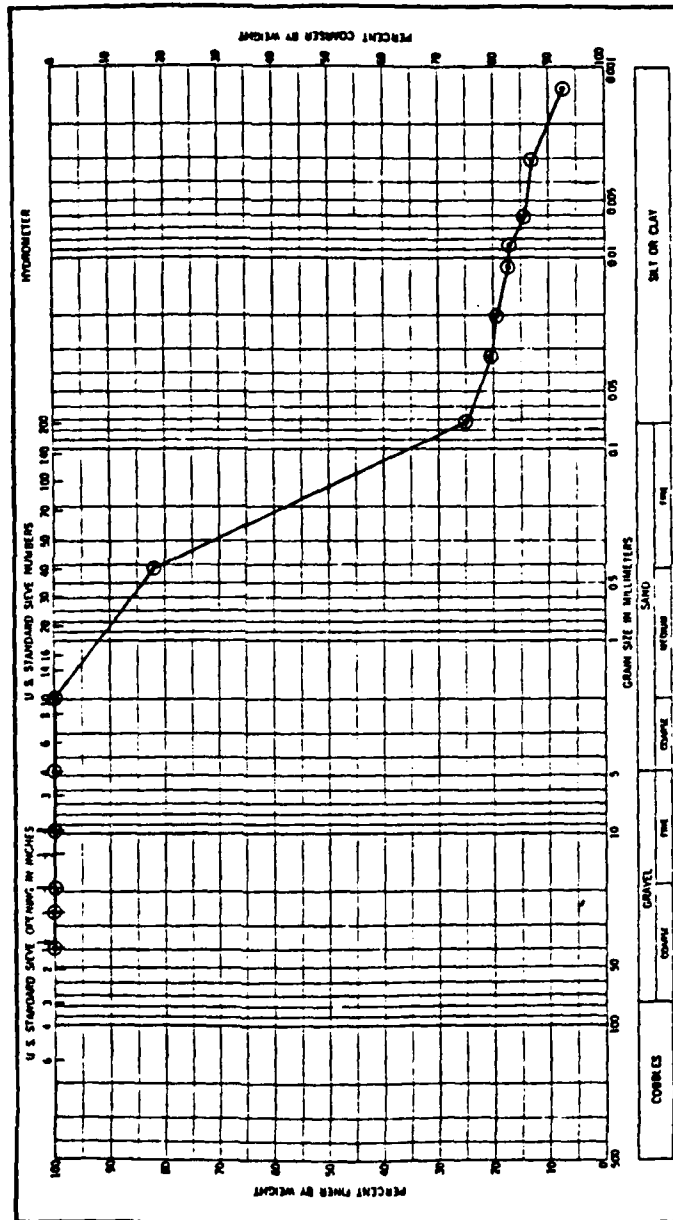
FIGURE L-1n. SEDIMENT GRADATION CURVE, STATION 14, CYCLE 4, AUGUST 14-19, 1978.



NOTE: Composited from four surface sediment samples obtained with an epoxy coated ponar dredge at:

Depth (M)	3.
X-section (% from R-bank 1k. upstream)	20%
	40%
	60%
	80%

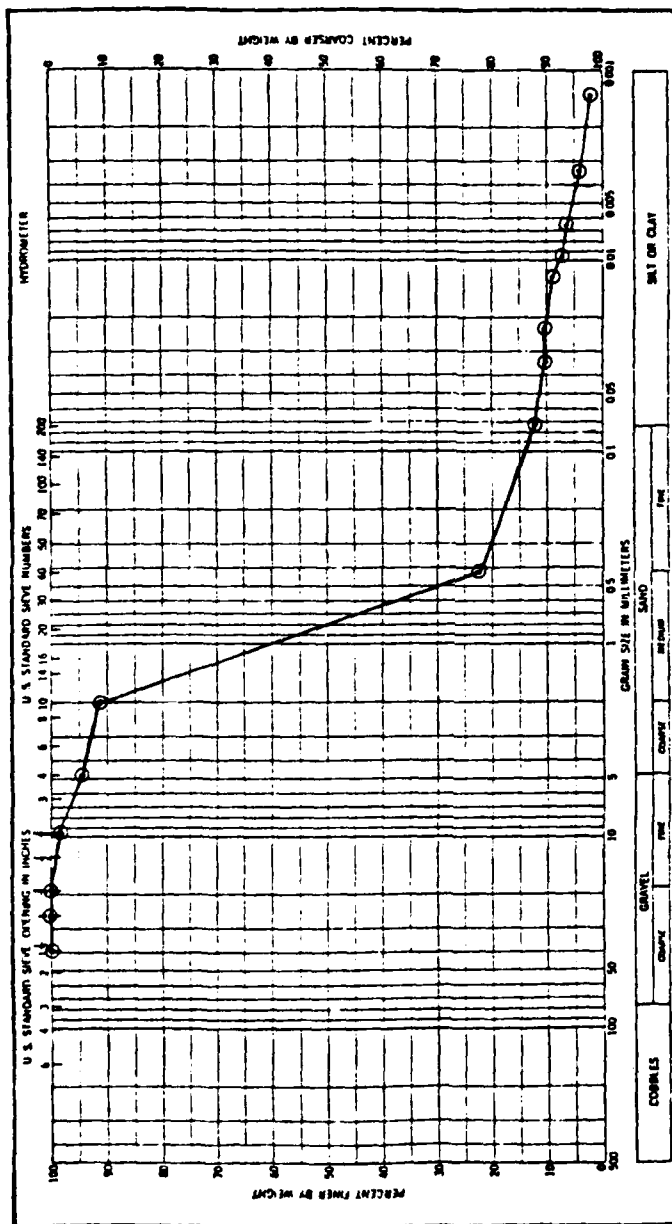
FIGURE L-10. SEDIMENT GRADATION CURVE, STATION 15, CYCLE 4, AUGUST 14-19, 1978.



NOTE: Composited from four surface sediment samples obtained with an epoxy coated ponar dredge at:

Depth (M)	X-section (% from R-bank 1k. upstream)
3.	20%
8.	40%
7.	60%
7.	80%

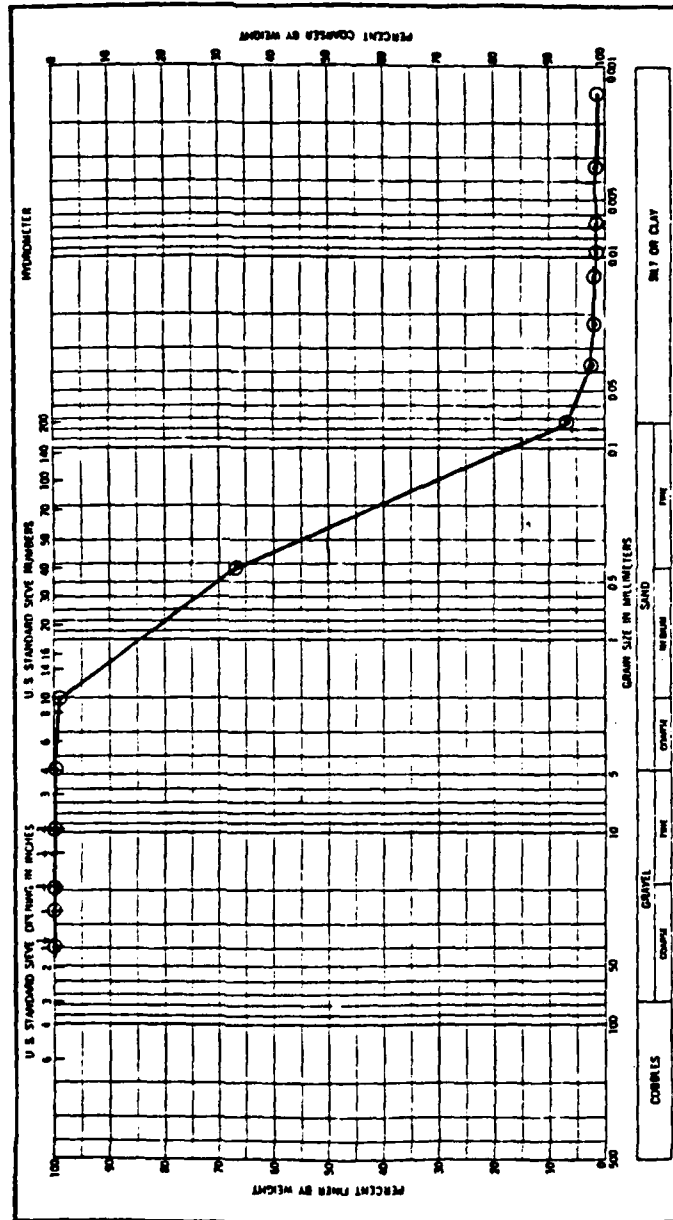
FIGURE L-1p. SEDIMENT GRADATION CURVE, STATION 16, CYCLE 4, AUGUST 14-19, 1978.



NOTE: Composites from four surface sediment samples obtained with an epoxy coated ponar dredge at:

X-section (% from R-bank 1k. upstream)	Depth (M)
20%	5.
40%	5.
60%	5.
80%	6.

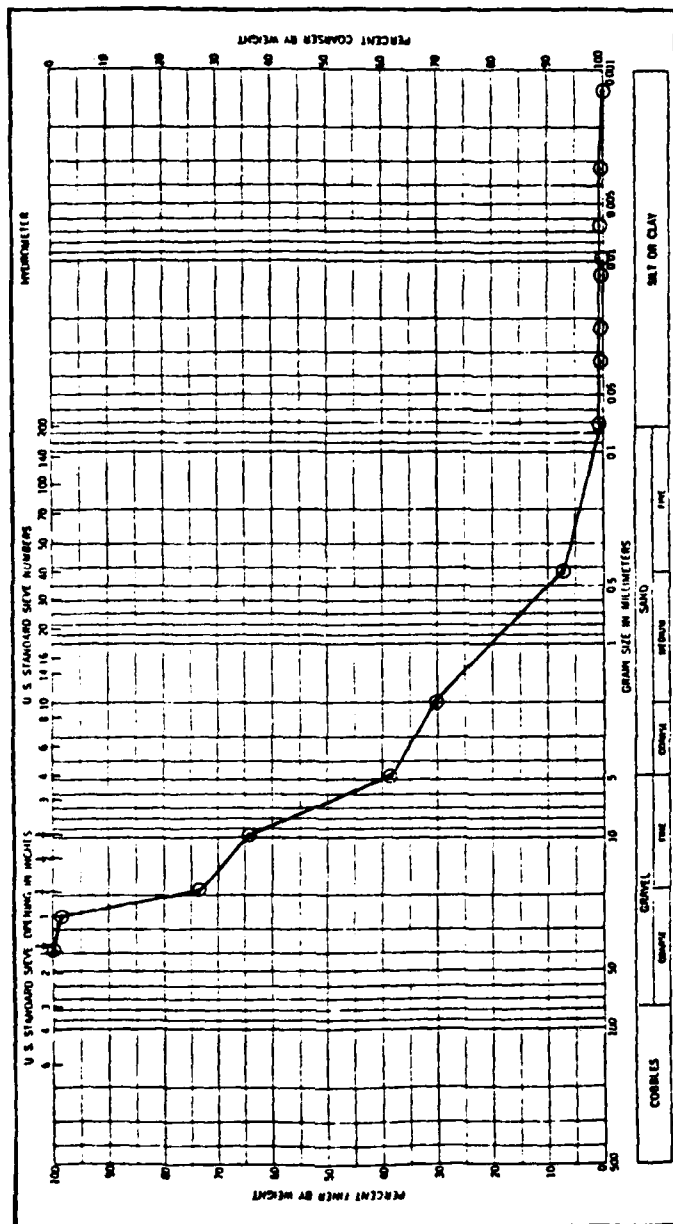
FIGURE L-1q. SEDIMENT GRADATION CURVE, STATION 17, CYCLE 4, AUGUST 14-19, 1978.



NOTE: Composited from three surface sediment samples obtained with an epoxy coated ponar dredge at:

Depth (M)	X-section (% from R-bank 1k. upstream)
4.	40%
4.	60%
3.	80%

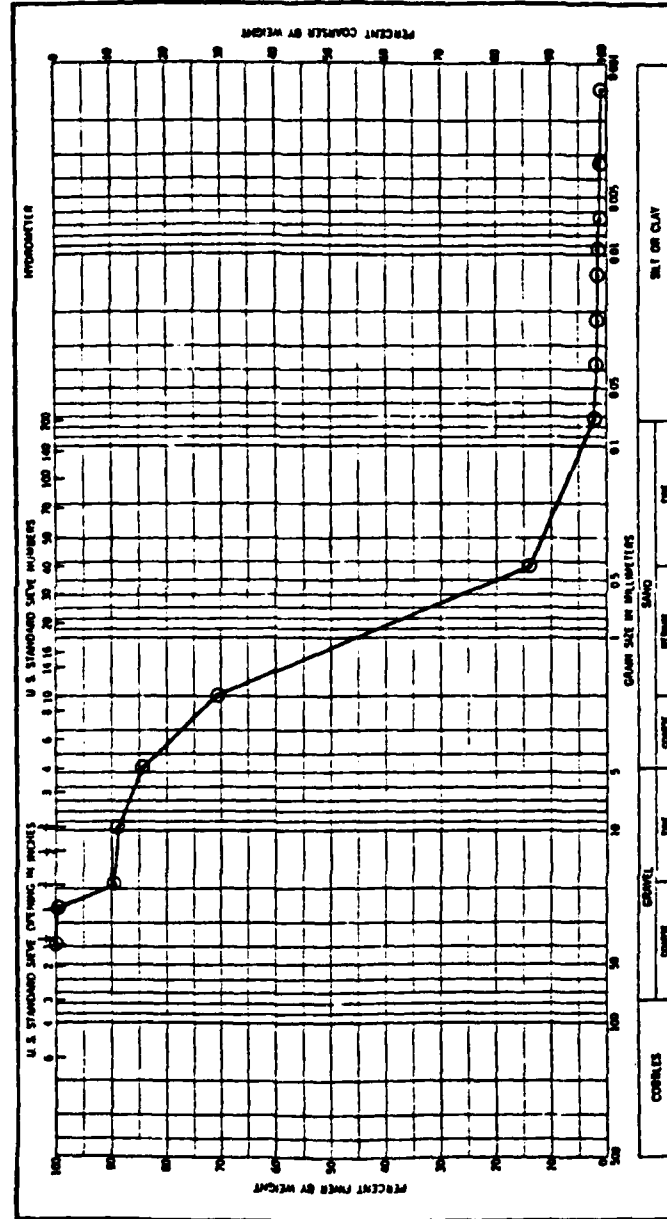
FIGURE L-1r. SEDIMENT GRADATION CURVE, STATION 18, CYCLE 4, AUGUST 14-19, 1978.



NOTE: Composites from four surface sediment samples obtained with an epoxy coated ponar dredge at:

Depth (M)	X-section (% from R-bank 1k. upstream)
5.	20%
5.	40%
5.	60%
5.	80%

FIGURE L-1s. SEDIMENT GRADATION CURVE, STATION 19, CYCLE 4, AUGUST 14-19, 1978.



APPENDIX M
AQUATIC MACROPHYTES

LIST OF TABLES

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M-1	Aquatic Macrophytes Noted to be Common To Abundant in Lake Seminole During the 1978 Field Surveys	M-1
M-2	Approximate Percent Cover of the Dominant Aquatic Macrophytes Observed in Various Areas of Lake Seminole, 1978	M-3

TABLE M-1

AQUATIC MACROPHYTES NOTED TO BE COMMON TO ABUNDANT
IN LAKE SEMINOLE DURING THE 1978 FIELD SURVEYS

<u>Algae</u>	S*	E	F
<u>Chara</u> spp.; chara	x		
<u>Lyngbya/Spirogyra</u> ; algal mat			x
<u>Nitella</u> spp.; nitella	x		
<u>Vascular</u>			
<u>Justicia americana</u> ; water willow		x	
<u>Sagittaria latifolia</u> ; common arrowhead		x	
<u>Alternanthera philoxeroides</u> ; alligator-weed		x	
<u>Colocasia esculenta</u> ; wild taro		x	
<u>Orontium aquaticum</u> ; goldenclub		x	
<u>Alnus serrulata</u> ; speckled alder		x	
<u>Betula nigra</u> ; river birch		x	
<u>Brasenia schreberi</u> ; watershield		x	
<u>Cabomba caroliniana</u> ; fanwort	x		
<u>Sphenoclea zeylandica</u> ; chicken spike		x	
<u>Ceratophyllum demersum</u> ; common coontail	x		
<u>Ceratophyllum echinatum</u> ; prickly coontail	x		
<u>Mikania scandens</u> ; climbing hempweed		x	
<u>Carex</u> spp.; sedges		x	
<u>Cyperus</u> spp.; sedges		x	
<u>Eleocharis acicularis</u> ; slender spikerush		x	
<u>Eleocharis cellulosa</u> ; spikerush		x	
<u>Eleocharis equisetodes</u> ; knotted spikerush		x	
<u>Hydrochloa carolinensis</u> ; water grass		x	
<u>Leersia hexandra</u> ; cutgrass		x	
<u>Panicum hemitomum</u> ; maidencane		x	
<u>Panicum repens</u> ; torpedograss		x	
<u>Zizaniopsis miliaceae</u> ; giant cutgrass		x	
<u>Hypericum</u> spp.; St. Johns wort		x	
<u>Myriophyllum brasiliense</u> ; parrotfeather	x		
<u>Myriophyllum spicatum</u> ; Eurasian watermilfoil	x		
<u>Egeria densa</u> ; elodea	x		
<u>Hydrilla verticillata</u> ; hydrilla	x		
<u>Vallisneria americana</u> ; eelgrass	x		
<u>Juncus effusus</u> ; soft rush		x	
<u>Juncus</u> spp.; rushes		x	
<u>Lemna perpusilla</u> ; common duckweed			x
<u>Spirodela polyrhiza</u> ; giant duckweed			x

TABLE M-1 (continued)

	S	E	F
<u>Utricularia floridana</u> ; giant bladderwort	x		
<u>Utricularia inflata</u> ; purple bladderwort	x		
<u>Utricularia purpurea</u> ; floating bladderwort	x		
<u>Mayaca fluviatilis</u> ; bog moss	x		
<u>Nymphoides aquaticum</u> ; banana lily		x	
<u>Myrica cerifera</u> ; wax myrtle		x	
<u>Najas guadalupensis</u> ; southern naiad	x		
<u>Najas minor</u> ; naiad	x		
<u>Nelumbo lutea</u> ; American lotus		x	
<u>Nuphar advena</u> ; spatterdock		x	
<u>Nymphaea odorata</u> ; fragrant waterlily		x	
<u>Nyssa aquatica</u> ; swamp tupelo		x	
<u>Nyssa ogeche</u> ; ogeche tupelo		x	
<u>Ludwigia decurrens</u> ; singed waterprimrose		x	
<u>Ludwigia leptocarpa</u> ; waterprimrose		x	
<u>Ludwigia palustris</u> ; water purslane		x	
<u>Ludwigia peruviana</u> ; waterprimrose		x	
<u>Platanus occidentalis</u> ; sycamore		x	
<u>Polygonum</u> spp.; smartweeds		x	
<u>Eichornia crassipes</u> ; water hyacinth			x
<u>Pontedaria cordata</u> ; pickerelweed		x	
<u>Pontedaria lanceolata</u> ; southern pickerelweed		x	
<u>Potamogeton diversifolius</u> ; snailseed pondweed		x	
<u>Potamogeton illinoiensis</u> ; Illinois pondweed	x		
<u>Potamogeton nodosus</u> ; American pondweed		x	
<u>Cephalanthus occidentalis</u> ; buttonbush		x	
<u>Salix caroliniana</u> ; coastal plain willow		x	
<u>Salix nigra</u> ; black willow		x	
<u>Saururus cernuus</u> ; lizard's tail		x	
<u>Bacopa caroliniana</u> ; water mint	x		
<u>Sparganium americanum</u> ; burreed		x	
<u>Taxodium ascendens</u> ; pond cypress		x	
<u>Taxodium distichum</u> ; bald cypress		x	
<u>Typha domingensis</u> ; southern cattail		x	
<u>Typha latifolia</u> ; cattail		x	
<u>Hydrocotyle ranunculoides</u> ; splitleaf pennywort			x
<u>Xyris</u> spp.; yellow-eyed grass		x	

* S = Submersed

E = Emergent

F = Floating

TABLE M-2
APPROXIMATE PERCENT COVER OF THE DOMINANT AQUATIC MACROPHYTES
OBSERVED IN THE VARIOUS AREAS OF LAKE
SEMINOLE, 1978

	<u>S</u> *	<u>E</u>	<u>F</u>
Chattahoochee River Area			
<u>Egeria densa</u> ; egeria or elodea	P		
<u>Zizaniopsis miliaceae</u> ; giant cutgrass		90	
<u>Justicia americana</u> ; water willow		P	
<u>Colocasia esculenta</u> ; wild taro		P	
<u>Sphenoclea zeylandica</u> ; chicken spike		5	
<u>Eichhornia crassipes</u> ; water hyacinth			P
Game Management Area			
<u>Myriophyllum spicatum</u> ; Eurasian watermilfoil	75		
<u>Myriophyllum brasiliensis</u> ; parrotfeather	5		
<u>Cabomba caroliniana</u> ; fanwort	5		
<u>Potamogeton illinoiense</u> ; Illinois pondweed	5		
<u>Najas minor</u> ; naiad	5		
<u>Najas quadalupensis</u> ; southern naiad	5		
<u>Hydrilla verticillata</u> ; hydrilla	P		
<u>Utricularia</u> spp.; bladderworts	P		
<u>Ceratophyllum demersum</u> ; common coontail	P		
<u>Bacopa caroliniana</u> ; water mint	P		
<u>Nymphaea odorata</u> ; fragrant water lily		5	
<u>Brasenia schreiberi</u> ; water shield		5	
<u>Polygonum</u> spp.; smartweeds		P	
<u>Pontedaria cordata</u> ; pickerelweed		P	
<u>Panicum repens</u> ; torpedograss		5	
<u>Panicum hemitomon</u> ; maidencane		5	
<u>Leersia hexandra</u> ; cutgrass		5	
<u>Eleocharis</u> spp.; spikerushes		P	
<u>Zizaniopsis miliaceae</u> ; giant cutgrass		10	
<u>Eichhornia crassipes</u> ; water hyacinth			P
<u>Hydrocotyle ranunculoides</u> ; spittleleaf pennywort			P
<u>Lemna perpusilla</u> ; common duckweed			P
Fish Pond Drain Area			
<u>Hydrilla verticillata</u> ; Hydrilla	75		
<u>Cabomba caroliniana</u> ; fanwort	P		
<u>Najas</u> spp; naiads	5		
<u>Potamogeton illinoiense</u> ; Illinois pondweed	5		
<u>Nitella</u> sp.; nitella	P		
<u>Panicum repens</u> ; torpedograss	P		

TABLE M-2 (continued)

	<u>S</u>	<u>E</u>	<u>F</u>
<u>Panicum hemitomum</u> ; maidencane	P		
<u>Leersia hexandra</u> ; cutgrass	P		
<u>Typha</u> spp.; cattails	P		
<u>Nuphar advena</u> ; spatterdock		P	
<u>Nymphaea odorata</u> ; fragrant water lily		P	
<u>Brasenia schreiberi</u> ; watershield		P	
<u>Nymphoides aquaticum</u> ; banana lily		P	
<u>Nelumbo lutea</u> ; American lotus		P	
Turkey Pond Drain			
<u>Hydrilla verticillata</u> ; hydrilla	70		
<u>Potamogeton illinoiense</u> ; Illinois pondweed	15		
<u>Myriophyllum brasiliense</u> ; Eurasian watermilfoil	5		
<u>Limnophila sessiliflora</u> ; limnophila	P		
<u>Chara</u> sp.; chara	P		
<u>Nitella</u> sp.; nitella	P		
<u>Typha</u> spp.; cattails		P	
<u>Panicum repens</u> ; torpedograss		P	
<u>Panicum hemitomum</u> ; maidencane		P	
<u>Leersia hexandra</u> ; cutgrass		P	
<u>Pontedaria cordata</u> ; pickerelweed		P	
<u>Eichhornia crassipes</u> ; water hyacinth			P
Lake Seminole Island Area			
<u>Myriophyllum spicatum</u> ; Eurasian watermilfoil	75		
<u>Hydrilla verticillata</u> ; hydrilla	5		
<u>Ceratophyllum demersum</u> ; coontail	5		
<u>Potamogeton illinoiense</u> ; Illinois pondweed	10		
<u>Chara</u> spp.; chara	P		
<u>Sagittaria caroliniana</u> ; fanwort	P		
<u>Typha</u> spp.; cattails		5	
<u>Zizaniopsis miliaceae</u> ; giant cutgrass		5	
<u>Panicum repens</u> ; torpedograss		P	
<u>Panicum hemitomum</u> ; maidencane		P	
<u>Justicia americana</u> ; water willow		P	
<u>Eleocharis</u> spp.; spikerushes		P	
<u>Pontedaria cordata</u> ; pickerelweed		P	
<u>Nyssa</u> spp.; tupelo		P	
<u>Taxodium</u> spp.; cypress		P	
<u>Cephalanthus occidentalis</u> ; buttonbush		P	
<u>Saururus cernuus</u> ; lizard's-tail		P	
<u>Nymphaea odorata</u> ; fragrant water lily		5	

TABLE M-2 (continued)

	<u>S</u>	<u>E</u>	<u>F</u>
<u>Brasenia schreiberi</u> ; water shield		P	
<u>Nymphoides aquaticum</u> ; banana lily		P	
<u>Nelumbo lutea</u> ; American lotus		5	
<u>Potamogeton nodosus</u> ; American pondweed		P	
<u>Potamogeton diversifolius</u> ; snailseed pondweed		P	
<u>Eichhornia crassipes</u> ; water hyacinth			P
<u>Lemna perpusilla</u> ; common duckweed			P
Lower Spring Creek Area			
<u>Myriophyllum spicatum</u> ; Eurasian watermilfoil	75		
<u>Potamogeton illinoiense</u> ; Illinois pondweed	20		
<u>Typha</u> spp.; cattails		P	
<u>Leersia hexandra</u> ; cutgrass		P	
<u>Nymphaea odorata</u> ; fragrant water lily		P	
<u>Eichhornia crassipes</u> ; water hyacinth			P
Spring Creek Area			
<u>Myriophyllum spicatum</u> ; Eurasian watermilfoil	90		
<u>Potamogeton illinoiense</u> ; Illinois pondweed	5		
<u>Najas</u> spp.; naiads	P		
<u>Typha</u> spp.; cattails		P	
<u>Nuphar advena</u> ; spatterdock		P	
<u>Ludwigia</u> spp.; water primroses		P	
<u>Eichhornia crassipes</u> ; water hyacinth			P
Silver Lake Area			
<u>Myriophyllum spicatum</u> ; Eurasian watermilfoil	75		
<u>Hydrilla verticillata</u> ; hydrilla	5		
<u>Najas</u> spp.; naiads	5		
<u>Potamogeton illinoiense</u> ; Illinois pondweed	5		
<u>Typha</u> spp.; cattails		P	
<u>Zizaniopsis miliaceae</u> ; giant cutgrass		P	
<u>Panicum repens</u> ; torpedograss		P	
<u>Panicum hemitomum</u> ; maidencane		P	
<u>Leersia hexandra</u> ; cutgrass		P	
<u>Eichhornia crassipes</u> ; water hyacinth			P
<u>Hydrocotyle ranunculoides</u> ; splitleaf pennywort			P
Flint River Area			
<u>Myriophyllum spicatum</u> ; Eurasian watermilfoil	P		
<u>Myriophyllum brasiliense</u> ; parrotfeather	P		
<u>Najas</u> spp.; naiads	P		

TABLE M-2 (Continued)

	<u>S</u>	<u>E</u>	<u>F</u>
<u>Lyngbya-Spyrogyra</u> algal mats	10		
<u>Zizaniopsis miliaceae</u> ; giant cutgrass		5	
<u>Typha</u> spp.; cattails		P	
<u>Alternanthera philoxeroides</u> ; alligatorweed		P	
<u>Eichhornia crassipes</u> ; water hyacinth			5
<u>Hydrocotyle ranunculoides</u> ; splitleaf pennywort			P
<u>Lemna perpusilla</u> ; common duckweed			P
<u>Spirodela polyrhiza</u> ; giant duckweed			P

*S = Submerged
 E = Emergent
 F = Floating

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