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National Sedimentation Laboratory

An Environmental Assessment of Moon Lake, Mississippi and its Watershed

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by

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[1]Contribution of the National Sedimentation Laboratory Agricultural Research Service, U. S. Department of Agriculture, Oxford, MS.

[2]Summary Report

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Executive Summary

The Sedimentation Laboratory, United States Department of Agriculture, Agricultural Research Service (ARS), Oxford, Mississippi, entered into an agreement in 1982 with the Vicksburg District, U. S. Army Corps of Engineers, Department of Defense to study the hydrological, chemical and biological aspects of Moon Lake, Mississippi. Routine collection of selected water quality parameters began in June, 1982. Several quarterly and special projects were also conducted. The initial cooperative objectives of the project were met by May, 1983. Additional research by ARS which focused on offsite damages from agriculture was continued through May, 1985. This report focuses on the first year of information and additional special projects which help to portray lake water quality and contamination status.

Moon Lake was found to have moderate primary productivity which was controlled by suspended sediments, limited nutrients and, perhaps, agricultural pollutants. The two major pollutants entering Moon Lake from the Phillips Bayou drainage net were suspended sediments and metals (particularly arsenic), both of which were being deposited in the lake. These contaminants entered the lake on a somewhat seasonal basis since they were transported mainly during runoff events. Phillips Bayou inflow did not create a nutrient eutrophication problem, as has been the case with many delta watersheds. Conversely, Phillips Bayou served as a sink for nutrients and contaminants, and its high primary productivity was an asset to the lake during winter. Restoration recommendations should consider contaminant loading problems that exist in Phillips Bayou, re-routing large drainage ditches which empty into Moon Lake, revitalizing wetlands in the drainage net, and implementing additional watershed conservation measures.

Study Area

Moon Lake is a large (10.1 km^2) oxbow lake in Coahoma County, Mississippi, separated from the Mississippi River by the main river levee. Almost all of its 166 km^2 watershed drains south from Tunica County, Mississippi, through a series of relic oxbow drainages (Fig. 1). Phillips Bayou, a major inflow enters the northern end of Moon Lake and Yazoo Pass, the outflow, breaches the high natural levee on the outside perimeter of the lake about one-third distance around the typical bow pattern (Fig. 1). This outflow pattern leaves the lower two-thirds of the lake past the outflow with very little flow-through movement. For most of its length, the lake maintains the typical river bend thalweg with the shallow inside of the curve deepening to a large main channel 7 to 9 m deep. Both northern and southern extremities are quite shallow (< 1 m). An island (0.7 km^2) in the southern half of the lake (Fig. 1) alters lake morphology and fetch.

Moon Lake, a natural oxbow lake adjacent to the Mississippi River in the alluvium that forms northwestern Mississippi, was subject to periodic flooding and subsequent flushing by the Mississippi River until closure of the mainline Mississippi River levee in the 1920's. Since white settlement began in the 1830s, the percentage of Moon Lake's watershed covered by bottomland hardwoods has declined steadily in favor of intensive cultivation of cotton (Gossypium hirsutum L.) and, later, soybeans [(Glycine max L.) Merrill] and rice (Oryza sativa L.). Currently, cultivated land occupies over 70 percent of the watershed. Mechanization following World War II promoted draining and clearing of numerous wetlands in the watershed. Local residents and state game and fish personnel have noted reductions in fisheries productivity and recreational activity in the lake in the past decade (Pers. Comm. R. Garavelli, Miss. Dept. Wildlife and Fisheries, 1983).

Objectives

The major objectives of the initial Moon Lake study were to study the baseline hydrological, chemical, and biological features of the inflow stream and lake system including (1) annual cycles for the year June, 1982 through May, 1983 and (2) major environmental problems. Research included but was not limited to the following specific objectives:

(1) To determine the quality of inflowing water from Phillips Bayou and how this inflow affects Moon Lake.

(2) To determine annual cycles in hydrological, chemical, and biological parameters.

(3) To determine any gradients in the hydrological, chemical, and biological parameters of Moon Lake relative to the inflow.

(4) To determine primary productivity cycles in Phillips Bayou and Moon Lake and how suspended sediments and other water quality parameters influence productivity.

(5) To determine the state of traditional contaminants and if three non-residual pesticides currently being applied on the watershed persist long enough to accumulate in the Moon Lake ecosystem.

(6) To assess and recommend alterations to improve lake quality.

Sampling Routine

After an initial exploratory period at the beginning of the study, six sites (Fig. 1) were sampled on a biweekly basis. Site A-1 was located on Phillips Bayou 1 km north of Moon Lake. Sites A-3, A-4, A-5, and A-6 were located so as to sample different lake habitats. Site A-7 was located in the lake's outflow into Yazoo Pass. Sites A-3 and A-4 were routinely sampled for chemical and biological parameters at 2-meter intervals from surface to lake bottom. Physical data were taken at 1-m depth intervals at each site. Site A-3 was between inflow and outflow streams. In addition to routine analysis of physical, chemical, biological parameters, pesticides (DDT and Toxaphene) and three heavy metals at inflow (A-1) and A-3 and A-4, quarterly analysis of water for residual pesticides and priority pollutant metals was made from the other four water quality sites.

Sediment core samples used for sediment dating, pesticide and metal analysis were selected from several cross-sections of the lake (Fig. 14). Inflow discharge data from U. S. Army Corps of Engineers, Vicksburg District was used to compute daily sediment loads.

Temperature, conductivity, dissolved oxygen, and pH were measured by electronic water quality meters calibrated before each sampling trip. Total solids, suspended solids, dissolved solids, nutrients and coliforms were analyzed by standard methods (APHA, 1975; USEPA, 1974). Where suspect, physical or chemical values were deleted from data tables or interpolated if they formed a fraction of another parameter.
Pesticide samples, whether water or sediment, were collected in cleaned glass jars with Teflon lined screw caps. They were packed in ice upon collection. Description of contaminant procedures is described fully in Cooper, et al., 1987.

Results and Discussion

Physical Data (See Tables 1-7A)

A. The Moon Lake annual temperature cycle in 1982-1983 ranged from lows of less than 4°C in early February to highs of 31°C in July. The only true thermal stratification noted was at Station A-4 during summer temperature extremes. The absence of rigid thermal stratification illustrates the unstable thermal structure of oxbow lakes; it also implies a potentially deeper productive zone exists in these lakes.

B. Dissolved oxygen (DO) levels were acceptable by EPA (USEPA, 1973) minimum acceptable water quality standards (4.0 mg/L). Hypolimnetic oxygen depletion was evident in only one case (Site A-4; Table 4A) during the year. The abundance of DO in summer was related to frequent turnover of the lake's water column.

C. Inflowing water was slightly acidic (mean pH = 6.71) which reflected soil pH of the watershed. The pH of Moon Lake also reflected the acidic nature of its watershed, especially during periods of high runoff, as well as the oligotrophic/mesotrophic nature of primary productivity. Lake water pH shifted to basic during periods of high algal productivity as is characteristic of unbuffered fresh water (e.g., surface pH rose to 8.5 at sites A-3 during summer months).

D. Suspended solids varied seasonally with runoff. Summer values of 10 mg/L or less produced the greatest water clarity,

resulting in Secchi disc visibility readings which approached a meter in the main portion of the lake. The mean Secchi reading was 0.18 m for Phillips Bayou inflow (A-1); dilution, sedimentation and outflow withdrawal contributed to a mean Secchi reading of 0.30 m at A-4 in the center of the lake. A comparison of A-3 with A-4 (Fig. 2) indicated the suspended and deposited sediment gradient declined with increased distance from inflow. While there was no significant difference (P=0.01) in the suspended sediment concentrations at stations A-3 and A-4, station A-3 was influenced more by major storm events (Fig. 2). Suspended sediments ranged from 10 to 658 mg/L (mean = 204.38) at A-1 on Phillips Bayou. By the time inflowing water reached site A-3 in the lake, concentrations were 3 to 370 mg/L (mean = 110.74). Station A-4, south of the lake outlet, had even lower concentrations (range = 6 to 182 mg/L; mean = 82.96 mg/L). Table 10 lists the computed daily suspended sediment load entering Moon Lake. Suspended sediment load was excessive only during major runoff events.

Light penetration (Table 9) at stations A-3 and A-4 reflected the closer proximity of A-3 to Phillips Bayou inflow. While A-4 generally exhibited greater light penetration than A-3, waters at both sites took several months to clear after major storm events and reduced light penetration induced by storm events dampened primary productivity. Cooper, et al. (1984)

found that suspended sediment concentrations above 100 mg/L limited algal productivity in Lake Chicot, Arkansas.

Biological Data (See Tables 1-7B)

A. Chlorophyll a was used as in indicator of primary productivity in Moon Lake. Of primary importance was the comparison of the Phillips Bayou phytoplankton input with the resident phytoplankton of the lake. A comparison of figures 3 and 4 reveals that Phillips Bayou actually enriched lake primary productivity during fall and winter months. Taxonomic identifications of the Phillips Bayou inflow showed plankton were typically lake and wetland species and not riverine (Table 11). A survey of Phillips Bayou revealed that the watershed drainage net consisted of a series of lakes and wetland areas which flushed their plankton downstream during rainy periods. These wetlands also served to filter field runoff and contaminants. Figures 2 through 5 indicate a reduction in Chlorophyll a by high sediment concentrations in Phillips Bayou, and a similar occurrence in Moon Lake. Chlorophyll cycles in the main fetch of the lake south of the outflow (A-4) were as follows: summer peaks of plankton corresponded with plankton succession, declining suspended sediment concentrations, and nutrient availability; winter declines followed temperature lows and flushing; spring phytoplankton growth was dampened at all sites by high suspended sediment concentrations. Summer levels of chlorophyll at A-4 indicated a healthy mesotrophic level of productivity (Fig. 4). Primary productivity was limited by lack of nutrients in the fall and by suspended sediments in

the spring and early summer. This sediment-nutrient seasonal limitation is common in lakes with drainage from row crop agriculture (Cooper, et al., 1984).

B. A knowledge of plankton genera and numbers is helpful in determining annual productivity cycles. Table 11 lists genera recorded and total plankton counts. The lake experienced shifts in genera throughout the year, which is typical of lakes of the region. There was never a blue-green algal domination that would indicate eutrophication. The richness of plankton entering the lake via Phillips Bayou is noted in Table 11. During late fall and early winter Phillips Bayou input enriched the north end of the lake.

C. Coliform bacteria in Phillips Bayou (Fig. 6) were high but were characteristic of sluggish delta streams where stream borders constitute the major available cover for wildlife in any watershed. Coliform levels rapidly declined as bacteria were subjected to solar radiation (Fig. 7) after inflowing water entered Moon Lake. The only period during the study when coliform levels reached alarming proportions was immediately after a 100 year flood event (Fig. 7). However, even this major contamination was quickly reduced by aeration and solar radiation. Summer levels of contamination were acceptable for recreational purposes in the main lake. Station A-5 and A-6, while located near residential shore areas, exhibited the same trends as other stations. Fecal coliform (FC): fecal streptococci (FS) ratios were generally

less than 1.0 (Fig 8), indicating warm-blooded animal contamination. The limited exceptions in which the FC:FS ratio exceeded 4.0 indicated almost no domestic sewage input into Phillips Bayou.

Chemical Data (See Tables 1-7C)

A. Phosphorus values from Phillips Bayou (Fig. 9) reflected low levels of phosphate application in farm fertilization programs in the north delta region of Mississippi and efficient uptake by wetlands. Levels of total phosphorus were low, even during high runoff periods. Mean total phosphorus for all sites on Moon Lake for the entire study period was 0.171 mg/L. For the same period, Lake Chicot, Arkansas which receives its inflow through a series of canals, had a mean total phosphorus concentration of 0.252 mg/L. Orthophosphorus (available to plankton) levels in inflowing water and lake water were so low as to limit phytoplankton production in late summer (Table 1C, 3C). Some phosphorus loading was evident in 1983 after numerous runoff events, but no excessive levels were measured. Nitrogen nutrient levels were similar in magnitude and fluctuation to phosphorus (Fig. 10-12). In the two subsequent year sampling periods, 1983 to 1985, increases were observed in all forms of phophorus and nitrogen, but their magnitude did not significantly alter lake primary productivity. Levels were never excessive. Nutrient concentrations in Moon Lake were reduced by nutrient trapping and uptake in the wetlands that form much of the Phillips Bayou drainage net.

Pesticides and Metals (See Tables 1-7D, 12, 13)

A. DDT and its major metabolites and toxaphene residues in water were analyzed on a routine basis. Small amounts of DDT were continually present in inflow and lake water (Fig. 16). Levels were greatest, as expected, during periods of high runoff. At no time were levels high enough to pose environmental problems (Tables 1-7, Section D). Toxaphene was not detectable in lake water.

B. A scan of lake water on a seasonal basis (6/82, 12/82, 3/83, 5/83) of 11 residual insecticides, 2 herbicides, and 12 metals (see below) at inflow (A-1), 2 lake stations (A-3, A-4) and outflow (A-7) revealed only traces of insecticides (Table 12). No herbicide residues were detected.

C. Copper, mercury and zinc were measured routinely from June through August, 1982. After results of the first seasonal metal scan revealed no detectable copper and high concentrations of arsenic, it was decided to discontinue copper and begin arsenic analysis. Results from the analysis (Tables 1-7, Section D) revealed zinc, mercury, and arsenic contamination throughout all components of the Moon Lake system. Concentrations of these metals in water were great enough to accumulate in sediments (see below) and pose a threat to the environmental quality of Moon Lake.

D. Sediment cores were taken at 16 selected sites in Moon Lake (Fig. 14) for pesticide and metal analysis. Cores were

divided into 10 cm increments so that a historical record of residual pesticides and metals might be determined. Insecticides that prominently appeared in all sediment cores included DDE, DDD, DDT (Table 13, Fig. 16). Lindane occurred in low concentrations in the two deeper sites. Both dieldrin and toxaphene appeared at core site #1 where Phillips Bayou empties into the lake. Insecticides and metals generally followed a pattern in which peak concentrations of each category occurred in the same strata. For example, at core site #1 all pesticides had peak values in the 0-4 inch sediment increment and all tested metals had peak values at the 4-8 inch depth. Peaks for DDT and metabolites generally corresponded to sediment strata that were laid down in the period from 1965-1975. Metals that appeared prominently in sediments included chromium, zinc, copper, nickel, arsenic, selenium, and mercury. At all four sites all but mercury appeared to the greatest depth sampled. Mercury concentrations were more sporadic. Arsenic concentrations in sediments were alarmingly high and indicated the accumulative results of continuous arsenic inflow. While arsenic and other metals are usually higher in alluvial deposits than in other soil formations, the abnormally high concentrations found in Moon Lake and its watershed stem directly from historical and continuing use of arsenic in intensive row crop agriculture. High concentrations were recorded for metals at core site #15 near the southern extremity of the lake, which indicated probable contamination from sources other than Phillips Bayou.

E. Watershed Contamination

Accumulated sediments from lakes and wetlands in the Moon Lake drainage net (Table 13; Fig. 1) were sampled for contaminants which were pollutants in Moon Lake. Table 13 shows that

arsenic consistently had the highest concentrations in sediments, followed by metabolites of DDT. Watershed soils were sampled by grid, i.e. soil in the NW quarter of each square mile was sampled (Table 14). Cultivated soils contained measurable concentrations of all pesticides and metals measured. Wetlands, usually bottomland hardwoods, had little or no detectable residual pesticides.

F. Water, sediments and fish were analyzed for three non-residual pesticides (methyl parathion, permethrin, and fenvalerate) from January through December, 1983. Experimental emphasis was placed on determining whether any of these compounds persisted long enough to accumulate in water, sediment or fish. Small amounts of these current-use pesticides were measured in inflowing water in January and February 1983. All traces vanished in Phillips Bayou or Moon Lake water by March. Trends indicated that small concentrations of these pesticides were flushed into the aquatic ecosystem with post-spray season rains, and occasional contamination was measured in fish. However, pesticide degradation rates were such that all traces disappeared in both water and fish within six months of application.

Sediment Deposition Rates

Analysis of sediment cores for deposition rates (Table 14 and 15) indicated several patterns: (1) deposition rates decreased as distance from Phillips Bayou increased, (2) deposition rates in shallow littoral areas were less than in deeper thalweg regions, and (3) deposition rates have generally decreased in the last 15 years. Rates currently range from 0.7 cm/hr to 3.4 cm/yr (Fig. 14). Changes in cropping systems

during the 1960's, from cotton to soybeans and rice which require less cultivation, resulted in significantly (P=0.01) less sediment accumulation during the period 1965-1982 (Fig. 14) when 86 percent of the lake averaged less than 2 cm/yr sediment accumulation. Previously, in the period 1954 to 1965 (Fig. 13), 70 percent of the lake bottom experienced accumulation rates greater than 2 cm/yr, and accumulation rates exceeded 4 cm/yr in areas of delta formation (Cooper, IN PRESS).

Predicted Changes in Moon Lake

Deposition patterns and rates over the past three decades allow general prediction of future trends in Moon Lake. Since the two shallow ends (< 1 m) of the oxbow (Fig. 14) have the greatest rates of deposition, they will visibly change most rapidly. Wind action and poor light penetration (Cooper et al., 1984) will restrict secondary succession to hardy emergent species for several years, but as sediments continue to accumulate, encroaching woody shrubs and trees will continue to extend into the lake. Fluctuations in water level will also favor woody species. Eutrophication, which is currently not a problem, would increase growth conditions for emergent and floating herbaceous species.

If current deposition rates continue, the shallow ends of the oxbow and adjoining littoral zones are the only parts of Moon Lake that will noticeably fill during the next 50 years (Fig. 15). Deposition may reduce open water habitat by 0.4 to 0.8 km^2 or 3 to 7 percent during this period. Current accumulation rates are substantially less than those found in many relic oxbows of the Yazoo River where rates may exceed 7 cm/yr (Ritchie et al, 1979). If rates continue to decline, sediment-related water quality of the lake will improve and few noticeable changes should occur in the next 50 years. Conversely, if land use practices revert to more intensive cultivation and increase

them unavailable to aquatic life.

inflowing sediments, plant succession in shallow open water areas will accelerate and water quality and aquatic productivity may decline.

Mississippi River Water Quality

Proposals for water quality improvements in Moon Lake have included one for pumping large quantities of water from the Mississippi River to the exclusion of Phillips Bayou water. Limited sampling (May-June,

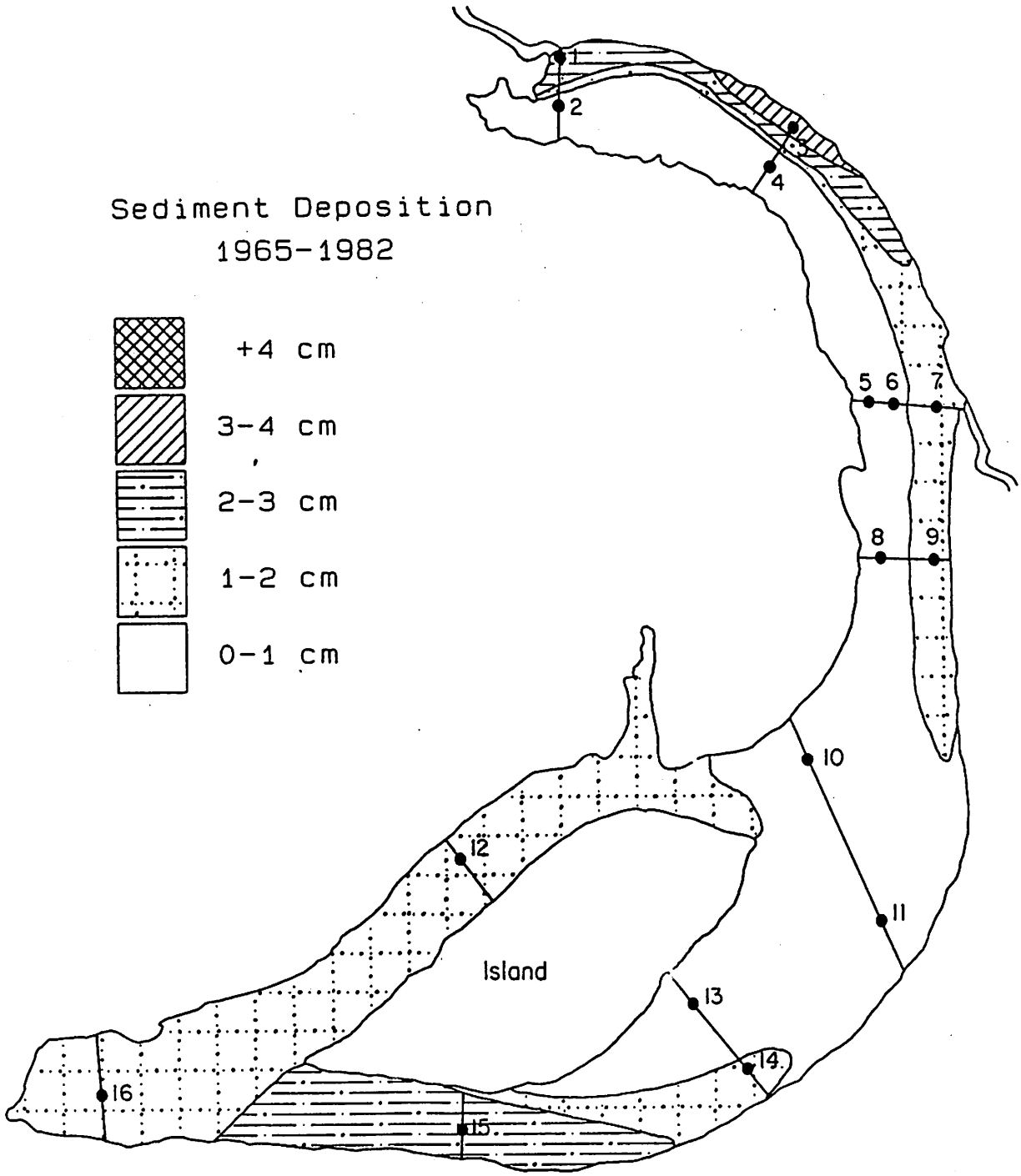

Figure 14. Sedimentation accumulation patterns (cm/yr) in Moon Lake, Mississippi from 1965-1982 (with core sampling sites).

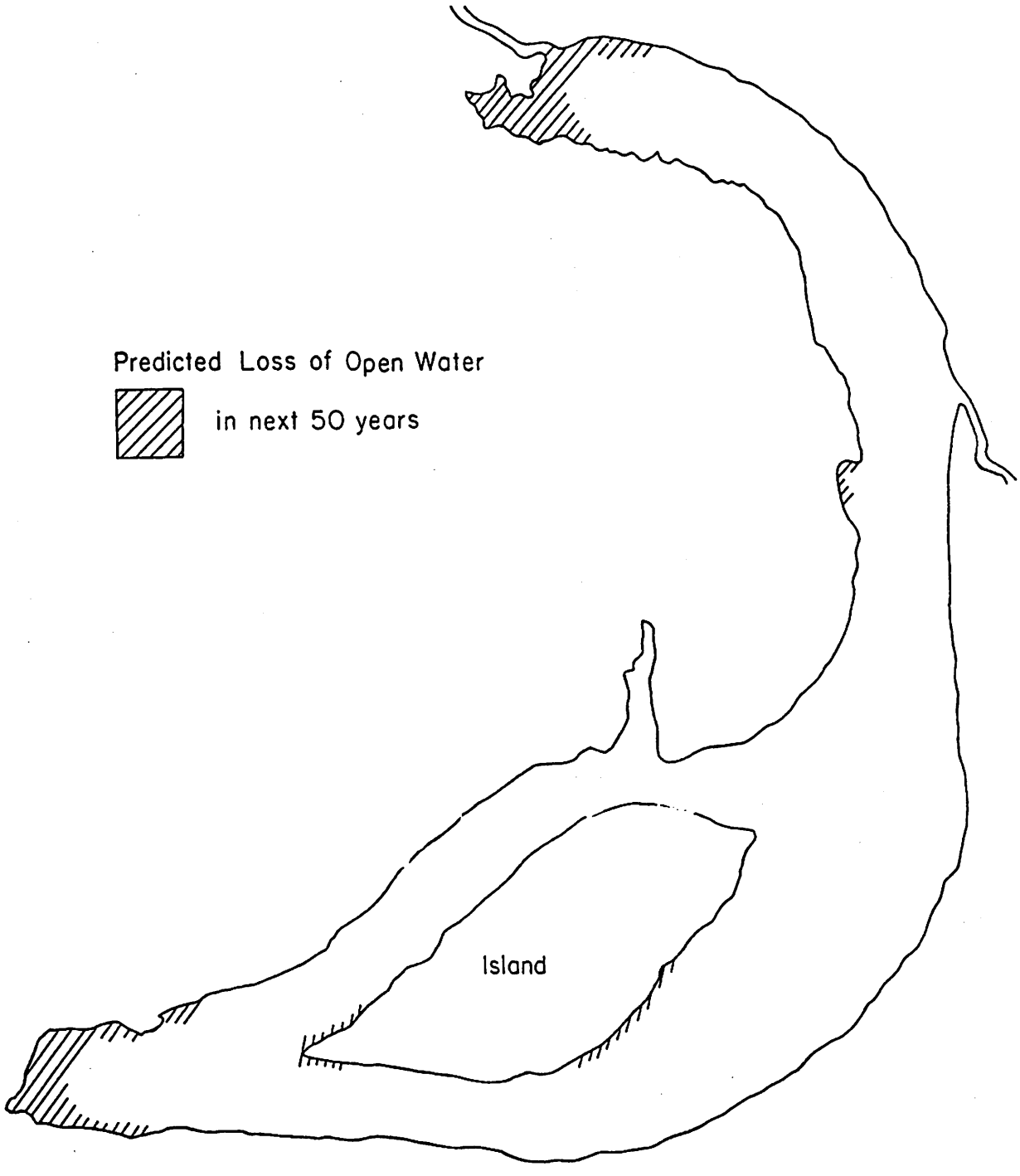

Figure 15. Predicted loss of open water habitat in Moon Lake, Mississippi during the next 50 years.

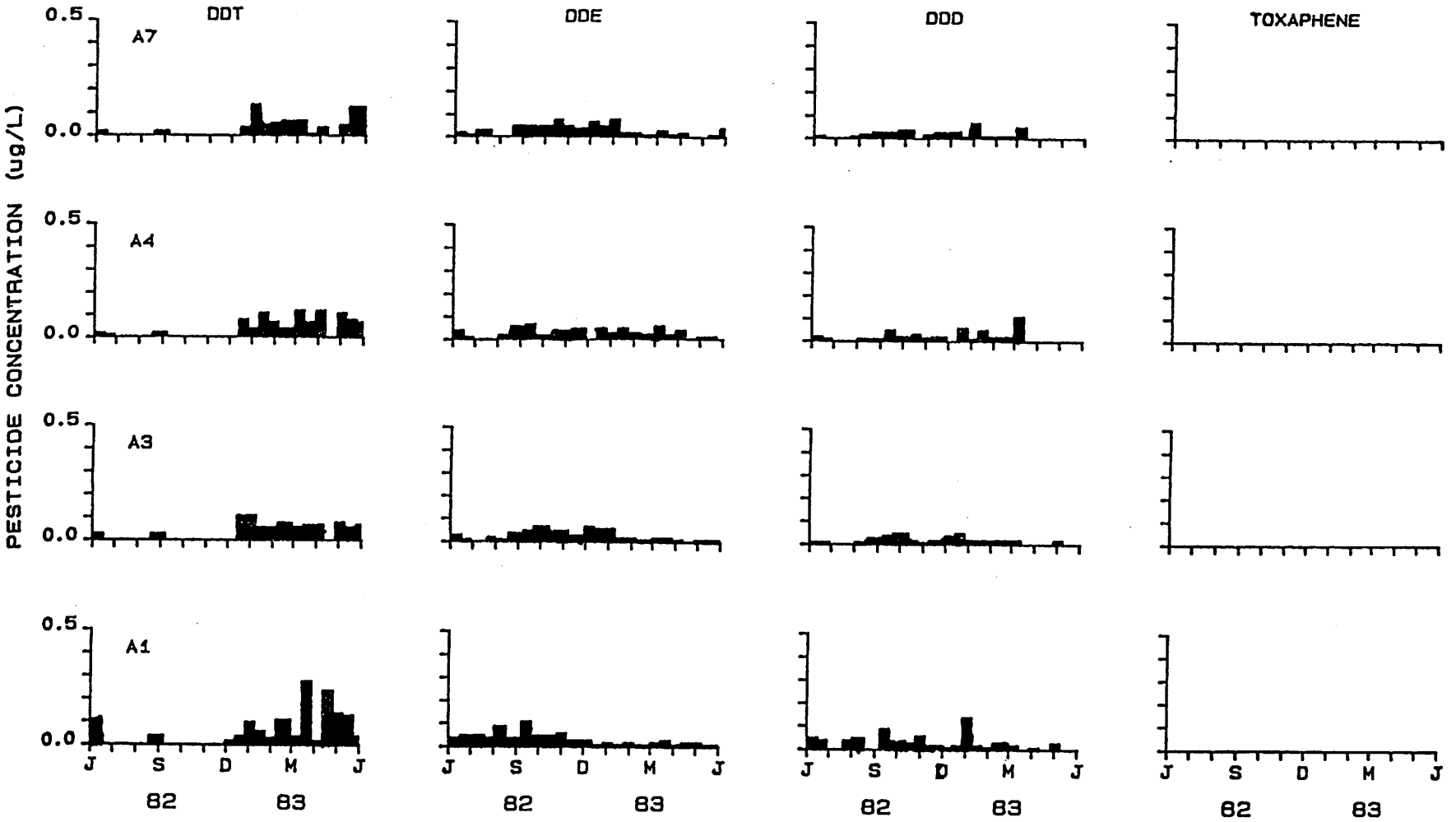

Figure 16. Residual pesticide patterns in surface waters of Moon Lake, Mississippi during 1982-1983 (based on bi-weekly samples).

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TABLE 1A. Physical Data Sampling Station A-1

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
06-02-82	0	1.14	23.5	75	2.9	6.7	552	73	0.06
06-17-82	0	0.64	22.9	104	5.0	7.0	233	81	0.23
06-30-82	0	0.89	27.4	114	4.8	6.6	239	105	0.17
07-21-82	0	0.45	28.2	145	3.9	6.9	179	113	0.27
08-02-82	0	0.46	27.3	172	3.6	6.9	197	146	0.29
08-19-82	0	1.53	25.6	77	2.2	6.3	163	58	0.24
09-08-82	0	0.84	25.0	136	4.1	6.9	209	110	0.25
09-22-82	0	0.54	17.8	112	4.2	6.7	174	104	0.27
10-14-82	0	0.71	15.7	140	5.6	7.0	194	139	0.31
10-26-82	0	0.51	10.9	130	6.4	6.7	165	141	0.35
11-09-82	0	0.53	10.2	162	1.7	6.6	170	160	0.51
11-30-82	0	0.82	10.8	117	7.0	6.8	238	114	0.22
12-14-82	0	2.65	6.2	47	7.8	6.4	306	59	0.13
12-28-82	0	2.82	12.3	45	7.0	6.6	349	37	0.10
01-11-83	0	2.83	7.1	40	6.6	6.3	293	59	0.10
01-25-83	0	2.13	4.3	61	10.0	7.2	162	58	0.19
02-08-83	0	1.87	4.2	58	8.3	6.9	196	60	0.10

TABLE 1A. (Continued) Physical Data Sampling Station A-1

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
03-01-83	0	1.31	7.8	76	8.4	6.7	276	73	0.10
03-15-83	0	1.93	11.2	53	6.0	7.3	476	43	0.06
03-29-83	0	1.42	10.1	72	9.3	6.7	222	64	0.13
04-12-83	0	1.81	15.1	56	5.4	6.5	711	53	0.05
04-27-83	0	1.76	16.0	67	6.3	6.4	394	76	0.09
05-10-83	0	1.36	18.8	107	5.1	6.8	511	87	0.06
05-25-83	0	2.49	19.7	81	2.6	6.2	377	68	0.09

TABLE 2A. Physical Data Sampling Station A-2.

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
06-02-82	0	1.0	25.1	87	3.9	6.8	619	76	0.05
06-17-82	0	0.92	26.4	132	6.9	7.2	202	90	0.20
06-30-82	0	0.75	27.0	117	5.2	6.7	290	96	0.18

TABLE 3A. Physical Data Sampling Station A-3

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
06-02-82	0	6.46	27.2	147	7.3	7.7	224	109	0.17
	1		25.4	141	6.7	7.6			
	2		24.9	140	6.6	7.6	196	102	
	3		24.7	142	6.7	7.6			
	4		24.4	143	6.6	7.6	224	98	
	5		24.3	137	6.1	7.4			
	6		23.6	114	4.8	7.3			
06-17-82	0	4.51	27.8	154	8.2	7.8	177	97	0.23
	1		25.6	147	6.7	7.5			
	2		25.2	146	6.7	7.5	182	109	
	3		24.9	146	6.5	7.4			
	4		24.3	146	6.0	7.3	208	208	
06-30-82	0	4.42	28.6	148	9.6	7.8	148	114	0.30
	1		28.1	148	9.1	7.6			
	2		27.1	145	7.8	7.4	146	119	
	3		26.8	144	7.4	7.2			
	4		26.4	141	6.1	6.9	184	116	
07-21-82	0	4.07	31.4	168	8.6	8.5	119	109	0.94
	1		31.3	169	8.6	8.6			
	2		30.9	168	8.3	8.5	118	105	
	3		30.6	168	7.8	8.4			
	4		29.3	172	5.7	7.7	172	108	
08-02-82	0	4.10	29.7	167	8.1	8.2	124	116	0.76
	1		29.8	168	8.0	6.2			
	2		29.5	168	7.1	8.0	132	120	
	3		29.3	172	6.7	7.8			
	4		28.9	177	5.5	7.5	276	123	

TABLE 3A. (Continued) Physical Data Sampling Station A-3

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
08-19-82	0	5.04	28.2	130	5.0	6.9	135	79	0.24
	1		27.4	130	4.4	6.8			
	2		26.2	128	4.0	6.8	134	83	
	3		26.0	127	3.9	6.8			
	4		25.8	122	3.4	6.7	142	82	
	5		25.7	120	3.0	6.5			
09-08-82	0	4.83	26.3	144	6.3	7.2	126	101	0.44
	1		26.2	143	5.0	7.1			
	2		25.5	142	4.2	7.1	131	100	
	3		25.4	142	4.5	7.1			
	4		25.3	142	4.4	7.1	138	110	
09-22-82	0	4.52	22.0	128	6.0	7.2	147	103	0.30
	1		21.9	128	5.7	7.2			
	2		21.7	129	5.3	7.2	157	104	
	3		21.6	128	5.3	7.2			
	4		20.6	127	5.0	7.1	177	102	
10-14-82	0	4.36	19.4	129	6.7	7.3	134	110	0.33
	1		19.3	129	6.4	7.3			
	2		19.2	129	6.3	7.2	150	107	
	3		18.9	132	6.9	7.2			
	4		18.6	134	5.6	7.1	208	126	
10-26-82	0	4.18	14.0	136	8.5	7.2	155	116	0.32
	1		13.9	136	8.3	7.2			
	2		13.5	135	8.2	7.2	147	140	
	3		13.4	134	8.2	7.2			
	4		13.4	134	8.2	7.2	147	116	

TABLE 3A. (Continued) Physical Data Sampling Station A-3

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
11-09-82	0	3.97	13.6	140	9.9	7.5	138	123	0.39
	1		13.5	140	9.8	7.5			
	2		13.4	140	9.9	7.4	134	149	
	3		13.2	139	10.0	7.3			
11-30-82	0	4.11	10.6	126	9.5	7.3	173	111	0.22
	1		10.5	126	9.4	7.2			
	2		10.5	126	9.4	7.2	170	114	
	3		10.4	126	9.4	7.3			
	4		10.4	127	9.5	7.3	168	111	
12-14-82	0	6.58	7.0	84	10.2	6.7	226	88	0.13
	1		6.8	83	10.1	6.7			
	2		6.8	76	9.8	6.6	251	99	
	3		6.7	63	9.7	6.5			
	4		6.7	58	9.5	6.3	310	80	
	5		6.7	53	9.4	6.3			
	6		6.8	55	9.4	6.3	351	81	
12-28-82	0	7.14	11.8	49	8.5	6.7	419	49	0.11
	1		11.9	49	8.1	6.3			
	2		11.9	49	8.1	6.3	417	44	
	3		11.9	49	8.1	6.3			
	4		11.9	48	8.1	6.3	419	45	
	5		11.9	48	8.1	6.3			
	6		11.9	50	8.1	6.3	421	49	
	7		11.7	55	8.3	6.4			

TABLE 3A. (Continued) Physical Data Sampling Station A-3

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
01-11-83	0	6.96	7.3	56	8.9	6.6	260	64	0.12
	1		7.2	56	8.5	6.7			
	2		7.1	56	8.5	6.7	260	64	
	3		7.1	56	8.5	6.7			
	4		7.1	55		6.6	260	63	
	5		7.0	55		6.5			
	6		7.0	55		6.5	267	63	
01-25-83	0	6.29	3.7	71	12.4	7.1	202	62	0.15
	1		3.5	71	9.1	7.1			
	2		3.4	71	9.7	7.1	202	66	
	3		3.4	72	9.7	7.1			
	4		3.3	73	10.0	7.1	284	66	
	5		3.3	73	9.7	7.1			
	6		3.3	73	9.8	7.1	109	69	
02-08-83	0	5.86	3.6	68	9.9	6.9	201	64	0.15
	1		3.6	68	10.1	7.0			
	2		3.6	68	10.0	7.0	199	67	
	3		3.6	68	9.8	7.0			
	4		3.6	68	9.8	7.0	201	68	
	5		3.6	68	9.8	7.0			
03-01-83	0	5.31	8.7	89	10.6	6.9	192	92	0.16
	1		7.8	85	10.6	6.9			
	2		7.5	84	10.7	6.9	190	74	
	3		7.3	83	11.0	6.9			
	4		7.3	82	11.0	6.9	191	82	
	5		7.2	82	11.2	6.9			

TABLE 3A. (Continued) Physical Data Sampling Station A-3

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
03-15-83	0	5.92	11.5	83	9.7	7.0	227	64	0.13
	1		11.4	83	9.6	7.0			
	2		11.3	83	9.5	7.0	257	59	
	3		11.1	82	9.5	6.9			
	4		10.4	81	9.4	6.9	232	68	
	5		10.0	79	9.3	6.9			
03-29-83	0	5.50	10.2	82	9.6	6.9	222	74	0.15
	1		10.1	82	9.5	6.9			
	2		9.2	81	9.4	6.9	223	71	
	3		9.1	81	9.2	6.8			
	4		8.9	82	9.0	6.8	214	72	
	5		8.8	83	8.7	6.7			
04-12-83	NO SAMPLES TAKEN								
04-27-83	0	5.63	16.4	77	8.2	6.7	306	78	0.12
	1		16.3	77	8.0	6.7			
	2		16.2	77	8.2	6.7	304	78	
	3		16.2	77	8.0	6.7			
	4		14.6	76	8.2	6.7	293	74	
	5		14.4	75	8.3	6.8			
05-10-83	0	5.40	19.4	93	7.4	7.0	238	77	0.14
	1		19.2	93	7.3	7.1			
	2		19.0	93	7.3	7.1	236	75	
	3		18.5	92	7.4	7.1			
	4		17.9	90	7.4	7.1	233	72	
	5		17.2	104	5.8	6.9			

TABLE 3A. (Continued) Physical Data Sampling Station A-3

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
05-25-83	0	5.99	21.5	88	5.8	6.5	328	74	0.12
	1		21.3	88	5.7	6.4			
	2		20.2	88	5.8	6.4	329	80	
	3		19.3	88	5.6	6.5			
	4		19.1	89	5.7	6.5	326	73	
	5		19.0	70	5.6	6.5			

TABLE 4A. Physical Data Sampling Station A-4

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
06-02-82	0	7.45	27.2	154	8.6	7.9	196	106	0.23
	1		25.8	150	7.6	7.8			
	2		25.3	148	7.6	7.8	192	104	
	3		24.9	147	7.2	7.7			
	4		24.7	147	7.2	7.7	192	106	
	5		24.7	148	7.3	7.8			
	6		24.6	148	7.1	7.7	173	108	
	7		23.6	146	3.4	7.2			
06-17-82	0	8.29	27.9	155	7.0	7.6	188	100	0.24
	1		24.9	148	6.5	7.5			
	2		24.6	146	6.4	7.4	199	101	
	3		24.5	146	6.4	7.4			
	4		24.5	146	6.4	7.4	191	100	
	5		24.4	146	6.4	7.4			
	6		24.3	146	6.4	7.4	196	97	
	7		24.3	146	6.4	7.4			
	8		24.0	147	5.1	7.3			
06-30-82	0	8.23	28.0	148	8.7	7.6	145	111	0.39
	1		27.4	146	5.6	7.6			
	2		26.7	144	7.7	7.2	148	123	
	3		26.0	143	9.0	7.2			
	4		25.9	143	10.0	7.1	151	112	
	5		25.4	142	11.8	7.0			
	6		25.2	141	10.4	6.9			
	7		24.2	141	6.4	6.7			
	8		23.6	142	5.6	6.5			

TABLE 4A. (Continued) Physical Data Sampling Station A-4

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
07-21-82	0	8.08	31.6	170	8.4	8.5	117	103	0.98
	1		31.0	168	8.4	8.5			
	2		30.3	166	8.2	8.5	117	104	
	3		30.0	165	7.7	8.4			
	4		29.7	165	6.5	8.0			
	5		28.1	164	0.7	7.2			
	6		27.0	165	0.3	6.7			
	7		24.0	178	0.3	6.4			
	8		23.9	183	0.3	6.4			
08-02-82	0	7.84	29.4	168	7.2	8.0	122	116	0.83
	1		29.2	168	6.6	7.8			
	2		28.7	167	6.0	7.6	150	125	
	3		28.6	166	5.8	7.6			
	4		28.5	167	5.6	7.6	131	124	
	5		28.4	168	4.3	7.3			
	6		27.3	173	0.7	7.0	186	132	
	7		25.4	184	0.3	6.7			
	7.5		24.0	201	0.3	6.5			
08-19-82	0	8.97	27.6	156	7.0	7.1	130	99	0.32
	1		26.8	152	7.1	7.1			
	2		26.5	151	7.1	7.1	135	104	
	3		26.5	152	7.3	7.1			
	4		26.4	153	7.4	7.2	138	94	
	5		26.2	140	6.1	6.9			
	6		25.8	126	5.4	6.8	144	85	
	7		25.6	118	4.1	6.5			
	8		25.4	118	3.7	6.4			

TABLE 4A. (Continued) Physical Data Sampling Station A-4

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
09-08-82	0	8.71	26.5	144	6.8	7.4	130	99	0.49
	1		25.9	143	6.4	7.3			
	2		25.4	142	5.9	7.3	129	97	
	3		25.3	142	5.6	7.3			
	4		25.2	141	5.5	7.3	130	104	
	5		25.2	141	5.5	7.3			
	6		25.2	141	5.5	7.3	129	106	
	7		25.1	141	5.5	7.2			
	8		25.1	141	5.1	7.2			
09-22-82	0	8.34	22.5	130	6.3	7.2	141	105	0.34
	1		22.5	130	6.3	7.3			
	2		22.6	129	6.3	7.3	141	105	
	3		22.6	130	6.2	7.3			
	4		22.6	130	6.1	7.3	141	104	
	5		22.6	130	6.1	7.3			
	6		22.6	130	6.1	7.3	142	106	
	7		22.6	130	6.1	7.3			
	8		22.5	130	6.1	7.3			
10-14-82	0	8.04	19.3	128	7.0	7.4	141	108	0.35
	1		19.7	129	6.9	7.4			
	2		19.6	128	6.7	7.4	135	105	
	3		19.6	128	6.7	7.4			
	4		19.6	128	6.7	7.4	130	113	
	5		19.6	128	6.7	7.4			
	6		19.5	128	6.7	7.4	136	108	
	7		19.5	127	6.8	7.5			
	8		19.4	127	6.7	7.0			

TABLE 4A. (Continued) Physical Data Sampling Station A-4

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
10-26-82	0	7.87	13.7	133	10.9	7.4	153	132	0.35
	1		13.6	133	8.8	7.4			
	2		13.6	133	8.8	7.4	150	118	
	3		13.5	132	8.8	7.4			
	4		13.5	132	8.8	7.4	152	124	
	5		13.5	132	8.8	7.4			
	6		13.5	133	8.8	7.3	155	127	
	7		13.5	133	8.8	7.3			
11-09-82	0	7.79	13.9	139	9.7	7.3	141	135	0.40
	1		13.7	138	9.4	7.4			
	2		13.2	137	9.3	7.4	136	117	
	3		13.1	137	9.3	7.4			
	4		12.7	136	9.1	7.3	137	115	
	5		12.6	136	9.1	7.3			
	6		12.4	135	9.1	7.3	139	120	
	7		12.3	134	9.1	7.3			
11-30-82	0	8.00	10.1	126	10.0	7.4	135	112	0.39
	1		10.1	126	9.9	7.4			
	2		10.0	126	9.8	7.4	100	111	
	3		10.0	126	9.8	7.4			
	4		9.9	126	9.7	7.4	103	111	
	5		9.9	126	9.7	7.4			
	6		9.8	126	9.6	7.3	135	103	
	7		9.8	126	9.5	7.3			
	8		9.8	126	9.5	6.6	157	107	

TABLE 4A. (Continued) Physical Data Sampling Station A-4

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
12-14-82	0	10.18	7.4	104	10.6	6.9	163	97	0.20
	1		7.4	104	10.4	7.0			
	2		7.4	104	10.4	7.0	163	109	
	3		7.4	104	10.3	7.0			
	4		7.4	104	10.3	6.9	162	123	
	5		7.4	104	10.3	6.9			
	6		7.4	103	10.3	6.9	166	94	
	7		7.4	102	10.2	6.9			
	8		7.3	102	10.3	6.9	165	98	
	9		7.4	103	10.3	6.8			
12-28-82	0	7.14	11.8	49	8.5	6.7	200	69	0.11
	1		11.9	49	8.1	6.3			
	2		11.9	49	8.1	6.3	193	75	
	3		11.9	49	8.1	6.3			
	4		11.9	49	8.1	6.3	190	73	
	5		11.9	48	8.1	6.3			
	6		11.9	50	8.1	6.3	193	71	
	7		11.7	55	8.3	6.4			
	8						198	73	
01-11-83	0	10.57	7.6	74	10.2	7.2	206	107	0.15
	1		7.6	74	9.8	7.1			
	2		7.5	74	9.8	7.1	213	82	
	3		7.5	74	9.8	7.1			
	4		7.4	74	9.7	7.1	207	87	
	5		7.4	74	9.7	7.1			
	6		7.4	74	9.7	7.1	212	82	
	7		7.4	74	9.7	7.1			
	8		7.4	75	9.7	7.1	212	84	
	9		7.4	75	9.7	7.1			
	10		7.4	69	8.7	6.7			

TABLE 4A. (Continued) Physical Data Sampling Station A-4

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
01-25-83	0	9.93	4.4	82	8.8	7.4	208	70	1.35
	1		4.1	82	9.6	7.4			
	2		3.8	81	9.7	7.4	205	79	
	3		3.7	81	10.1	7.4			
	4		3.7	81	10.2	7.4	207	76	
	5		3.7	81	11.0	7.4			
	6		3.6	81	11.5	7.4	209	72	
	7		3.6	81	12.3	7.4			
	8		3.6	81	13.1	7.4	207	71	
	9		3.6	81	13.4	7.4			
	10		3.6	81	14.2	6.4			
02-08-83	0	9.62	3.8	71	10.5	7.2	198	66	0.16
	1		3.7	72	10.4	7.2			
	2		3.7	72	10.3	7.2	195	67	
	3		3.7	72	10.3	7.2			
	4		3.7	72	10.3	7.2	197	65	
	5		3.7	72	10.3	7.2			
	6		3.7	72	10.3	7.2	199	68	
	7		3.7	72	10.3	7.2			
	8		3.7	72	10.2	7.2	197	70	
	9		3.7	72	10.2	7.2			
03-01-83	0	9.00	8.5	88	10.8	7.1	192	77	0.17
	1		7.6	85	11.0	7.0			
	2		7.5	84	11.1	7.0	195	83	
	3		7.4	84	11.2	7.0			
	4		7.3	83	11.3	7.0	196	80	
	5		7.3	83	11.4	7.0			
	6		7.2	82	11.3	7.0	190	78	
	7		7.2	83	11.0	6.9			
	8		7.2	83	10.8	7.0	195	80	

TABLE 4A. (Continued) Physical Data Sampling Station A-4

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
03-15-83	0	9.63	11.3	85	10.0	7.2	212	66	0.15
	1		10.2	82	9.8	7.1			
	2		10.0	81	9.7	7.0	223	66	
	3		9.7	81	9.7	7.0			
	4		9.7	79	9.5	6.9	235	60	
	5		9.6	78	9.5	6.9			
	6		9.5	78	9.3	6.8	251	56	
	7		9.4	77	9.2	6.8			
	8		9.2	74	8.4	6.7	274	55	
	9		8.9	72	7.7	6.7			
03-29-83	0	9.04	10.0	80	9.9	7.0	224	70	0.16
	1		9.5	80	9.8	7.0			
	2		9.1	80	9.8	7.0	225	75	
	3		9.1	80	9.8	7.0			
	4		9.0	80	9.8	7.0	226	72	
	5		9.0	80	9.7	7.0			
	6		9.0	80	9.7	7.0	227	71	
	7		9.0	80	9.6	7.0			
	8		9.0	80	9.6	7.0	225	71	
	9		9.0	80	9.7	7.0			
04-12-83	NO SAMPLE TAKEN								

TABLE 4A. (Continued) Physical Data Sampling Station A-4

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
04-27-83	0	9.45	14.7	75	8.8	7.0	259	81	0.12
	1		14.5	76	8.5	6.9			
	2		14.4	76	8.9	6.9	256	75	
	3		14.2	76	9.0	6.9			
	4		14.2	76	8.9	6.9	255	77	
	5		14.2	76	8.8	6.9			
	6		14.1	76	8.8	6.8	255	81	
	7		13.9	75	8.7	6.8			
	8		13.9	75	8.7	6.8	270	84	
	9		13.4	73	8.8	6.6			
05-10-83	0	9.39	18.4	88	8.1	7.2	229	75	0.15
	1		17.6	88	7.9	7.1			
	2		17.4	87	7.8	7.1	232	78	
	3		17.3	87	8.1	7.1			
	4		17.2	88	8.2	7.1	230	71	
	5		17.2	88	8.1	7.1			
	6		17.2	88	8.1	7.1	229	71	
	7		17.1	88	8.1	7.0			
	8		17.0	87	8.2	7.1	232	73	
	9		16.8	87	8.2	7.0			
05-25-83	0	9.93	20.6	94	6.9	6.7	264	82	0.15
	1		20.6	95	6.8	6.8			
	2		20.5	95	7.0	6.8	260	74	
	3		20.5	95	6.8	6.8			
	4		20.4	95	6.9	6.8	264	72	
	5		19.8	95	6.5	6.7			
	6		19.0	93	6.0	6.6	279	73	
	7		18.9	92	6.0	6.6			
	8		18.7	88	4.5	6.3	311	79	
	9		18.3	80	2.7	6.1			

TABLE 5A. Physical Data Sampling Station A-5

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
06-02-82	0	4.14	25.0	149	7.6	7.8	178	112	0.25
	1		25.0	149	7.4	7.8			
	2		24.4	148	7.1	7.8			
	3		24.3	148	7.2	7.7			
	4		24.1	148	6.8	7.7			
06-17-82	0	4.34	25.3	149	7.0	7.5	202	103	0.25
	1		24.7	144	6.4	7.5			
	2		24.5	145	6.4	7.5			
	3		24.4	145	6.5	7.5			
	4		24.3	145	6.4	7.4			
06-30-82	0	4.01	28.1	150	7.3	7.3	150	118	0.38
07-21-82	0	3.77	30.8	165	8.3	8.4	116	107	0.97
08-02-82	0	3.72	29.5	168	6.4	8.0	123	117	0.81
08-19-82	0	4.80	28.0	166	7.7	7.5	124	98	0.44
	1		27.8	166	7.7	7.6			
	2		27.4	166	7.6	7.4			
	3		27.3	166	7.3	7.3			
	4		27.3	167	5.1	7.3			
09-08-82	0	4.53	26.8	142	9.2	8.2	124	101	0.52
	1		26.5	141	9.0	8.2			
	2		26.3	142	8.6	8.2	121	99	
	3		26.2	142	8.2	8.0			
	4		25.6	146	1.8	7.0	137	106	

TABLE 5A. (Continued) Physical Data Sampling Station A-5

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
09-22-82	0	4.17	22.1	128	7.1	7.4	146	101	0.32
	1		22.0	128	6.8	7.4			
	2		22.0	128	6.7	7.4			
	3		21.9	128	6.7	7.4			
	4		21.7	128	6.7	7.4			
10-14-82	0	3.68	19.5	125	7.2	7.4	146	108	0.30
	1		19.2	125	6.8	7.4			
	2		19.0	125	6.6	7.4			
	3		18.9	126	6.5	7.4			
10-26-82	0	3.76	13.7	131	9.1	7.3	159	117	0.29
	1		13.6	130	8.9	7.4			
	2		13.2	130	8.8	7.4	161	117	
	3		13.8	130	8.8	7.3			
11-09-82	0	3.46	13.5	139	9.5	7.4	145	130	0.41
	1		12.9	137	9.6	7.4			
	2		12.5	135	9.5	7.4	146	134	
	3		12.4	135	9.1	7.2			
11-30-82	0	3.56	10.3	124	10.0	7.4	140	115	0.36
	1		10.0	125	10.0	7.4			
	2		9.9	124	9.9	7.4	136	112	
	3		9.7	124	9.8	7.4			

TABLE 5A. (Continued) Physical Data Sampling Station A-5

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
12-14-82	0	5.52	7.8	108	10.8	7.2	151	101	0.21
	1		7.6	108	10.5	7.2			
	2		7.5	108	10.5	7.1	160	108	
	3		7.5	109	10.5	7.1			
	4		7.5	109	10.5	7.1	157	185	
	5		7.5	109	10.5	7.1			
12-28-82	0	6.25	11.5	93	9.8	7.3	161	83	0.23
	1		11.4	93	9.8	7.3			
	2		11.3	93	9.5	7.2	164	78	
	3		11.3	93	9.5	7.2			
	4		11.2	93	9.6	7.2	157	75	
	5		11.2	93	9.6	7.2			
	6		11.2	93	9.6	7.2			
01-11-83	0		8.0	78	10.1	7.2	193	107	0.17
	1		7.7	78	9.8	7.2			
	2		7.6	78	9.7	7.2	195	97	
	3		7.5	78	9.8	7.2			
	4		7.5	78	9.7	7.2	192	86	
	5		7.5	78	9.7	7.2			
	6		7.5	79	9.7	6.7			
01-25-83	0	5.46	4.3	81	14.0	7.6	207	72	0.15
	1		3.7	80	9.3	7.5			
	2		3.6	79	8.6	7.3	206	73	
	3		3.5	81	9.6	7.3			
	4		3.4	81	10.3	7.2	207	71	
	5		3.4	81	10.4	7.2			

TABLE 5A. (Continued) Physical Data Sampling Station A-5

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
02-08-83	0	5.15	3.5	71	10.8	7.4	190	72	0.15
	1		3.6	72	10.6	7.3			
	2		3.5	72	10.6	7.3	191	71	
	3		3.5	72	10.6	7.3			
	4		3.5	72	10.6	7.3	191	65	
	5		3.5	72	10.6	7.3			
03-01-83	0	4.50	8.7	85	12.6	6.9	190	77	0.16
	1		7.9	84	12.0	6.9			
	2		7.7	83	12.8	6.9	193	78	
	3		7.2	83	12.4	7.0			
	4		7.2	83	11.7	6.9	191	83	
03-15-83	0	5.00	12.2	86	10.1	7.2	205	67	0.16
	1		11.1	85	10.1	7.1			
	2		10.7	85	10.3	7.1	207	70	
	3		10.2	83	10.4	7.0			
	4		9.8	81	10.2	6.9	226	69	
	5		9.3	82	10.0	6.9			
03-29-83	0	4.86	10.0	81	10.0	7.0	223	75	0.19
	1		9.7	81	9.9	7.0			
	2		9.4	80	9.8	7.0	223	75	
	3		9.3	80	9.9	7.0			
	4		9.2	80	9.9	7.0	228	74	
04-12-83	0	5.0	14.1	75	9.4	7.1	210	72	0.13
	1		13.4	75	9.3	7.0			
	2		13.2	75	9.5	7.0	214	70	
	3		13.0	75	9.4	7.0			
	4		12.6	75	9.4	6.9	219	72	
	5		11.6	75	8.9	6.8			

TABLE 5A. (Continued) Physical Data Sampling Station A-5

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
04-27-83	0	5.1	15.4	77	9.5	7.0	245	85	0.13
	1		14.9	77	8.9	7.0			
	2		14.7	77	8.8	6.9	244	84	
	3		14.4	77	8.8	6.9			
	4		14.0	77	8.5	6.8	241	78	
	5		13.4	76	8.4	6.8			
05-10-83	0	4.87	18.9	91	7.9	7.2	230	73	0.13
	1		18.3	90	8.0	7.2			
	2		17.4	89	8.1	7.1	239	77	
	3		17.3	88	8.2	7.2			
	4		17.1	88	8.2	7.1	231	73	
05-25-83	0	5.49	21.7	96	6.7	6.8	257	55	0.15
	1		21.4	97	6.8	6.8			
	2		20.8	96	6.7	6.9	263	73	
	3		20.2	95	6.6	6.8			
	4		19.2	95	6.6	6.8	257	76	
	5		19.1	95	6.3	6.7			

TABLE 6A. Physical Data Sampling Station A-6

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
06-02-82	0	4.76	25.5	150	8.6	8.1	183	109	0.24
	1		24.6	147	7.5	7.8			
	2		24.5	147	7.6	7.9			
	3		24.5	147	7.6	7.9			
	4		24.4	147	7.4	7.8			
06-17-82	0	5.00	25.6	146	6.6	7.4	199	106	0.24
	1		24.4	143	6.3	7.4			
	2		24.1	142	6.2	7.4			
	3		24.1	142	6.0	7.3			
	4		24.0	142	5.9	7.3			
06-30-82	0	4.70	27.4	145	7.8	7.4	149	120	0.40
07-21-82	0	4.44	30.2	164	7.4	8.2	116	113	0.85
08-02-82	0	4.52	28.8	166	4.6	7.3	135	124	0.52
08-19-82	0	5.25	27.7	160	6.3	7.3	130	97	0.42
09-08-82	0	5.20	26.4	144	7.7	7.7	125	113	0.52
09-22-82	0	4.92	21.7	127	7.3	7.3	144	102	0.36
10-14-82	0	4.59	19.2	126	7.4	7.4	150	102	0.30
	1		19.2	127	7.1	7.4			
	2		19.9	126	7.0	7.4			
	3		19.1	126	7.1	7.4			
	4		19.1	126	7.1	7.4			

TABLE 6A. (Continued) Physical Data Sampling Station A-6

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
10-26-82	0	4.39	13.5	132	9.1	7.3	152	130	0.29
	1		13.4	132	9.0	7.4			
	2		13.4	132	8.9	7.4			
	3		13.4	132	8.9	7.4			
	4		13.3	132	8.9	7.3			
11-09-82	0	4.26	12.7	134	9.6	7.3	144	122	0.34
	1		12.2	132	9.3	7.4			
	2		11.7	131	9.1	7.4			
	3		11.6	131	9.1	7.3			
	4		11.5	130	9.0	7.3			
11-30-82	0	4.37	10.0	125	9.9	7.4	131	108	0.38
	1		9.8	125	9.8	7.4			
	2		9.7	125	9.8	7.4			
	3		9.6	125	9.8	7.4			
	4		9.6	125	9.8	7.4			
12-14-82	0	6.51	7.3	108	11.6	7.2	156	115	0.20
12-28-82	0	7.18	10.9	87	9.9	7.0	187	66	0.21
01-11-83	0	7.00	7.6	75	10.3	7.3	206	78	0.17
01-25-83	0	6.12	3.8	81	11.2	7.3	207	71	0.13
02-08-83	0	6.16	3.8	72	11.0	7.2	189	72	0.16
03-01-83	0	5.67	8.1	85	11.0	6.9	186	80	0.16

TABLE 6A. (Continued) Physical Data Sampling Station A-6

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
03-15-83	0	5.08	11.1	86	11.0	7.2	202	70	0.16
03-29-83	0	5.58	9.9	81	9.7	7.1	227	88	0.17
04-12-83	NO SAMPLES TAKEN								
04-27-83	0	5.79	15.1	76	9.2	7.0	249	78	0.13
05-10-83	0	5.71	19.2	90	8.2	7.3	223	70	0.14
05-25-83	0	7.52	21.0	95	7.2	6.9	251	78	0.13

TABLE 7A. Physical Data Sampling Station A-7

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
06-02-82	0	.77	26.3	150	7.6	7.8	201	103	0.19
06-17-82	0	1.54	25.8	147	7.0	7.5	174	99	0.24
06-30-82	0	1.26	28.4	147	10.8	8.0	145	108	0.33
07-21-82	0	1.07	30.7	166	8.0	8.4	118	108	0.81
08-02-82	0	1.18	29.2	165	7.7	8.0	121	121	0.80
08-19-82	0	1.65	25.2	89	2.7	6.3	135	67	0.25
09-08-82	0	1.72	25.9	144	7.9	7.2	128	104	0.45
09-22-82	0	1.45	21.9	128	6.6	7.1	141	105	0.31
10-14-82	0	1.19	9.9	129	6.9	7.3	138	106	0.33
10-26-82	0	0.85	14.4	136	8.7	7.4	151	115	0.32
11-09-82	0	0.72	13.2	137	9.7	7.4	141	122	0.38
11-30-82	0	1.00	10.5	127	10.0	7.3	128	115	0.39
12-14-82	0	3.33	7.2	97	10.5	6.8	181	115	0.19
12-28-82	0	4.12	11.1	88	9.9	7.0	199	69	0.18
01-11-83	0	3.58	7.5	69	9.6	7.1	227	74	0.12
01-25-83	0	3.12	4.0	78	11.9	7.3	204	67	0.13

TABLE 7A. (Continued) Physical Data Sampling Station A-7

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
02-08-83	0	2.73	3.9	71	10.1	7.0	194	65	0.14
03-01-83	0	2.00	7.7	85	11.4	6.8	192	82	0.15
03-15-83	0	2.88	10.3	81	9.5	7.0	225	60	0.10
03-29-83	0	2.34	9.9	81	9.4	7.0	225	73	0.15
04-12-83	NO SAMPLES TAKEN								
04-27-83	0	5.79	15.1	76	9.2	7.0	264	84	0.13
05-10-83	0	2.30	17.6	87	8.1	7.2	225	79	0.15
05-25-83	0	3.05	20.6	96	6.8	6.2	263	93	0.10

TABLE 8A. Physical Data Sampling Station A-8

Date	Sample Depth m	Water Depth m	Temp. °C	Cond. µmhos/cm	D.O. mg/L	pH	Total Solids mg/L	Dissol. Solids mg/L	Secchi Depth m
06-02-82	0	1.61	25.3	149	6.2	7.6	263	110	0.14
06-17-82	0	1.47	26.4	148	5.9	7.4	208	104	0.19
06-30-82	0	1.45	27.4	142	6.4	7.2	156	111	0.33

Table 1B. Biological Data Sampling Station A-1.

Date	Sample Depth m	Chlorophyll a mg/m^3	Bacteria Total Coliform #/100 mL	Bacteria Fecal Coliform #/100 mL	Fecal Streptococci #/100 mL
06-02-82	0	3.5	230	50	65
06-17-82	0	44.5	<10	<10	94
06-30-82	0	47.6	118	51	TNTC
07-21-82	0	38.2	35	227	364
08-02-82	0	61.3	30	297	251
08-19-82	0	18.2	<10	90	371
09-08-82	0	18.3	<10	17	237
09-22-82	0	26.2	25	<10	141
10-14-82	0	20.1	<10	35	TNTC
10-26-82	0	20.2	10	27	152
11-09-82	0	16.2	47	<10	87
11-30-82	0	14.8	<10	79	288
12-14-82	0	3.6	<10	65	TNTC
12-28-82	0	7.2	<10	140	750
01-11-83	0	3.6	<10	<10	552
01-25-83	0	24.6	11	<10	441
02-08-83	0	12.0	<10	<10	1385
03-01-83	0	26.8	<10	<10	612
03-15-83	0	9.1	<10	<10	303
03-29-83	0	49.9	<10	<10	93
04-12-83	0	7.8	<10	<10	333
04-27-83	0	19.1	<10	<10	170

TNTC - Too Numerous to Count

Table 1B. (Continued) Biological Data Sampling Station A-1.

Date	Sample Depth m	Chlorophyll *a* mg/m^3	Bacteria Total Coliform #/100 mL	Bacteria Fecal Coliform #/100 mL	Fecal Streptococci #/100 mL
05-10-83	0	7.3	<10	<10	99
05-25-83	0	10.8	<10	<10	377

Table 2B. Biological Data Sampling Station A-2.

Date	Sample Depth m	Chlorophyll *a* mg/m^3	Bacteria Total Coliform #/100 mL	Bacteria Fecal Coliform #/100 mL	Fecal Streptococci #/100 mL
06-02-82	0	2.5	<10	43	90
06-17-82	0	56.6	<10	85	142
06-30-82	0	50.2	40	<10	<10

Table 3B. Biological Data Sampling Station A-3.

Date	Sample Depth m	Chlorophyll *a* mg/m^3	Bacteria Total Coliform #/100 mL	Bacteria Fecal Coliform #/100 mL	Fecal Streptococci #/100 mL
06-02-82	0	6.0	<10	<10	<10
	2	6.5			
	4	5.8			
06-17-82	0	12.1	<10	17	<10
	2	12.8			
	4	12.5			
06-30-82	0	17.5	<10	14	17
	2	20.0			
	4	17.5			
07-21-82	0	8.2	11	<10	10
	2	7.6			
	4	13.3			
08-02-82	0	12.4	<10	<10	<10
	2	10.3			
	4	14.4			
08-19-82	0	5.4	<10	<10	71
	2	5.2			
	4	9.1			
09-08-82	0	8.5	11	<10	10
	2	7.5			
	4	14.4			
09-22-82	0	8.4	<10	<10	15
	2	8.8			
	4	11.0			
10-14-82	0	4.6	10	<10	76
	2	5.3			
	4	7.6			
10-26-B2	0	5.6	11	25	10
	2	4.9			
	4	7.7			
11-09-82	0	8.9	<10	<10	21
	2	7.6			

Table 3B. (Continued) Biological Data Sampling Station A-3.

Date	Sample Depth m	Chlorophyll *a* mg/m^3	Total Coliform #/100 mL	Bacteria Fecal Coliform #/100 mL	Fecal Streptococci #/100 mL
11-30-82	0	7.2	13	51	222
	2	6.8			
	4	6.1			
12-14-82	0	3.0	<10	91	TNTC
	2	2.8			
	4	2.3			
	6	2.4			
12-28-82	0	5.4	<10	253	1775
	2	4.1			
	4	5.2			
	6	4.3			
01-11-83	0	4.4	<10	<10	87
	2	3.9			
	4	4.3			
	6	3.8			
01-25-83	0	5.5	<10	<10	252
	2	5.7			
	4	3.9			
	6	3.8			
02-08-83	0	4.9	<10	<10	1138
	2	5.8			
	4	5.8			
03-01-83	0	4.9	<10	<10	131
	2	4.4			
	4	4.1			
03-15-83	0	7.4	<10	<10	300
	2	7.1			
	4	6.8			
03-29-83	0	7.9	<10	<10	117
	2	9.6			
	4	9.4			
04-12-83	NO SAMPLE TAKEN				

TNTC - Too numerous to count

Table 3B. (Continued) Biological Data Sampling Station A-3.

Date	Sample Depth m	Chlorophyll *a* mg/m^3	Bacteria Total Coliform #/100 mL	Bacteria Fecal Coliform #/100 mL	Fecal Streptococci #/100 mL
04-27-83	0	13.0	<10	<10	159
	2	11.1			
	4	6.0			
05-10-83	0	8.8	<10	<10	38
	2	6.9			
	4	3.5			
05-25-83	0	6.2	<10	<10	239
	2	6.5			
	4	5.9			

Table 4B. Biological Data Sampling Station A-4.

Date	Sample Depth m	Chlorophyll *a* mg/m^3	Total Coliform #/100 mL	Bacteria Fecal Coliform #/100 mL	Fecal Streptococci #/100 mL
06-02-82	0	9.0	<10	33	<10
	2	6.2			
	4	6.1			
	6	7.0			
06-17-82	0	8.0	<10	<10	<10
	2	8.2			
	4	7.3			
	6	7.6			
06-30-82	0	17.9	54	<10	63
	2	20.6			
	4	14.5			
07-21-82	0	5.5	405	<10	<10
	2	7.8			
	4				
08-02-82	0	12.4	<10	<10	25
	2	9.3			
	4	10.3			
	6	7.0			
08-19-82	0	8.1	<10	6	11
	2	8.8			
	4	7.6			
	6	6.9			
09-08-82	0	20.4	<10	<10	27
	2	15.6			
	4	9.2			
	6	26.4			
09-22-82	0	10.7	<10	<10	<10
	2	10.7			
	4	10.9			
	6	8.5			
10-14-82	0	5.9	<10	<10	21
	2	7.5			
	4	5.2			
	6	5.0			

Table 4B. (Continued) Biological Data Sampling Station A-4.

Date	Sample Depth m	Chlorophyll a mg/m^3	Bacteria Total Coliform #/100 mL	Bacteria Fecal Coliform #/100 mL	Fecal Streptococci #/100 mL
10-26-82	0	6.7	<10	<10	<10
	2	5.8			
	4	7.1			
	6	5.6			
11-09-82	0	7.0	31	<10	38
	2	9.9			
	4	7.1			
	6	6.2			
11-30-82	0	6.6	<10	<10	94
	2	6.4			
	4	5.3			
	6	6.1			
	8	7.5			
12-14-82	0	2.3	<10	<10	TNTC
	2	2.3			
	4	1.3			
	6	2.6			
	8	2.8			
12-28-82	0	3.0	<10	406	1770
	2	2.3			
	4	3.1			
	6	3.1			
	8	2.8			
01-11-83	0	2.0	<10	<10	85
	2	1.8			
	4	2.3			
	6	1.9			
	8	2.3			
01-25-83	0	2.7	<10	<10	55
	2	2.5			
	4	2.4			
	6	2.9			
	8	2.3			
02-08-83	0	3.3	36	<10	246
	2	3.0			
	4	3.6			
	6	3.0			
	8	2.6			

TNTC - Too numerous to count.

Table 5B (Continued) Biological Data Sampling Station A-5.

Date	Sample Depth m	Chlorophyll *a* mg/m^3	Bacteria Total Coliform #/100 mL	Bacteria Fecal Coliform #/100 mL	Fecal Streptococci #/100 mL
03-01-83	0	4.9	<10	<10	24
	2	4.4			
	4	4.1			
03-15-83	0	4.3	<10	<10	227
	2	5.2			
	4	4.2			
03-29-83	0	4.2	<10	<10	28
	2	2.9			
	4	3.4			
04-12-83	0	3.2	<10	<10	94
	2	3.5			
	4	3.2			
04-27-83	0	5.5	<10	<10	42
	2	5.2			
	4	4.1			
05-10-83	0	6.1	<10	<10	38
	2	3.2			
	4	5.1			
05-25-83	0	3.7	<10	<10	174
	2	3.5			
	4	2.3			

Table 6B. Biological Data Sampling Station A-6.

Date	Sample Depth m	Chlorophyll *a* mg/m^3	Bacteria Total Coliform #/100 mL	Bacteria Fecal Coliform #/100 mL	Fecal Streptococci #/100 mL
06-02-82	0	8.0	<10	<10	<10
06-17-82	0	7.9	<10	12	18
06-30-82	0	17.4	61	<10	15
07-21-82	0	5.6	<10	<10	<10
08-02-82	0	13.6	14	<10	20
08-19-82	0	12.9	<10	18	16
09-08-82	0	21.5	<10	<10	<10
09-22-82	0	17.3	<10	<10	<10
10-14-82	0	6.8	<10	<10	24
10-26-82	0	7.2	<10	<10	<10
11-09-82	0	6.5	16	<10	21
11-30-82	0	6.7	27	18	103
12-14-82	0	2.8	<10	70	TNTC
12-28-82	0	2.8	<10	300	1290
01-11-83	0	1.9	<10	<10	406
01-25-83	0	2.7	<10	<10	144
02-08-83	0	2.7	<10	<10	93
03-01-83	0	4.4	<10	<10	59
03-15-83	0	4.4	<10	<10	190
03-29-83	0	2.9	<10	<10	58
04-12-83	NO SAMPLE TAKEN				
04-27-83	0	4.8	<10	<10	42

TNTC - Too Numerous to Count

Table 6B. (Continued) Biological Data Sampling Station A-6.

Date	Sample Depth m	Chlorophyll *a* mg/m^3	Bacteria Total Coliform #/100 mL	Bacteria Fecal Coliform #/100 mL	Fecal Streptococci #/100 mL
05-10-83	0	7.2	<10	<10	15
05-25-83	0	3.8	<10	<10	134

Table 7B. Biological Data Sampling Station A-7.

Date	Sample Depth m	Chlorophyll a mg/m^3	Bacteria Total Coliform #/100 mL	Bacteria Fecal Coliform #/100 mL	Fecal Streptococci #/100 mL
06-02-82	0	6.3	25	25	125
06-17-82	0	8.8	<10	18	<10
06-30-82	0	44.6	33	68	TNTC
07-21-82	0	6.6	13	<10	<10
08-02-82	0	12.0	<10	<10	<10
08-19-82	0	6.0	<10	114	TNTC
09-08-82	0	40.9	<10	<10	<10
09-22-82	0	11.3	<10	<10	19
10-14-82	0	6.0	<10	<10	37
10-26-82	0	6.3	<10	<10	<10
11-09-82	0	7.2	36	<10	78
11-30-82	0	6.4	49	<10	112
12-14-82	0	3.3	<10	36	TNTC
12-28-82	0	3.2	<10	387	1575
01-11-83	0	2.8	<10	<10	1240
01-25-83	0	2.9	15	<10	47
02-08-83	0	3.0	12	<10	242
03-01-83	0	4.9	<10	<10	109
03-15-83	0	4.3	<10	<10	271
03-29-83	0	4.8	<10	<10	13
04-12-83	NO SAMPLE TAKEN				
04-27-83	0	3.8	<10	<10	99

TNTC - Too Numerous To Count

Table 1C. Chemical Data Sampling Station A-1

Date	Sample Depth m	P Ortho Sol. mg/L	P Ortho Sed. mg/L	P Total mg/L	NO_3-N mg/L	NO_2-N mg/L	NH_4-N mg/L	ALKALINITY CO_3 mg/L	ALKALINITY HCO_3 mg/L
06-02-82	0	0.041	0.162	0.312	0.13	0.010	0.70	--	40
06-17-82	0	0.020	0.081	0.156	0.56	0.040	0.98	--	40
06-30-82	0	0.014	0.054	0.104	0.08	0.050	1.17	0	58
07-21-82	0	0.019	0.077	0.148	0.40	0.050	1.60	0	75
08-02-82	0	0.012	0.048	0.092	0.43	0.001	1.46	0	92
08-19-82	0	0.018	0.073	0.140	0.37	ND	1.52	0	33
09-08-82	0	0.012	0.048	0.092	0.05	ND	2.80	0	68
09-22-82	0	0.021	0.083	0.160	0.51	ND	3.20	0	68
10-14-82	0	0.025	0.100	0.192	0.40	ND	1.65	0	88
10-26-82	0	0.022	0.087	0.168	0.44	ND	0.95	0	75
11-09-82	0	0.017	0.067	0.128	0.27	ND	0.30	0	105
11-30-82	0	0.021	0.085	0.164	0.40	<0.001	0.80	0	66
12-14-82	0	0.016	0.062	0.120	0.23	ND	ND	0	22
12-28-82	0	0.009	0.035	0.068	0.18	ND	ND	0	24
01-11-83	0	0.031	0.123	0.236	0.33	ND	ND	0	24

ND - Non Detectable

Table 1C. (Continued) Chemical Data Sampling Station A-1

Date	Sample Depth m	P Ortho Sol. mg/L	P Ortho Sed. mg/L	P Total mg/L	NO_3-N mg/L	NO_2-N mg/L	NH_4-N mg/L	ALKALINITY CO_3 mg/L	ALKALINITY HCO_3 mg/L
01-25-83	0	0.022	0.089	0.172	0.31	ND	ND	0	32
02-08-83	0	0.029	0.114	0.220	0.31	ND	0.20	0	32
03-01-83	0	0.023	0.094	0.180	0.32	ND	0.50	0	40
03-15-83	0	0.041	0.162	0.312	0.40	ND	0.25	0	28
03-29-83	0	0.020	0.081	0.156	0.21	ND	0.05	0	39
04-12-83	0	0.004	0.015	0.028	0.48	ND	ND	0	28
04-27-83	0	0.006	0.025	0.048	0.35	ND	ND	0	34
05-10-83	0	0.013	0.052	0.100	0.44	ND	0.001	0	61
05-25-83	0	0.009	0.037	0.072	0.23	ND	ND	0	44

ND - Non Detectable

Table 2C. Chemical Data Sampling Station A-2

Date	Sample Depth m	P Ortho Sol. mg/L	P Ortho Sed. mg/L	P Total mg/L	NO_3-N mg/L	NO_2-N mg/L	NH_4-N mg/L	ALKALINITY CO_3	ALKALINITY HCO_3 mg/L
06-02-82	0	0.048	0.119	0.208	0.18	0.010	0.70	-	56
06-17-82	0	0.007	0.019	0.032	0.43	0.030	0.72	-	70
06-30-82	0	0.019	0.049	0.084	0.08	0.080	1.39	2	61

ND - Non Detectable

Table 3C. Chemical Data Sampling Station A-3

Date	Sample Depth m	P Ortho Sol. mg/L	P Ortho Sed. mg/L	P Total mg/L	NO_3-N mg/L	NO_2-N mg/L	NH_4-N mg/L	ALKALINITY CO_3 mg/L	ALKALINITY HCO_3 mg/L
06-02-82	0	0.040	0.109	0.192	0.22	ND	0.45	-	82
	2	0.032	0.087	0.152	0.22	ND	0.45	-	73
	4	0.042	0.114	0.200	0.25	ND	0.45	-	72
06-17-82	0	0.039	0.107	0.188	0.47	0.010	0.58	-	80
06-30-82	0	0.014	0.039	0.068	0.08	0.050	0.66	2	75
	2	0.025	0.068	0.120	ND	0.010	0.61	0	76
	4	0.017	0.046	0.080	ND	0.140	1.04	0	74
07-21-82	0	0.010	0.027	0.048	0.40	ND	0.22	8	72
	2	0.012	0.032	0.056	0.40	ND	0.25	12	69
08-02-82	0				0.33	ND	0.48	10	71
	2	0.004	0.011	0.020	0.40	ND	0.40	6	74
	4	0.019	0.052	0.092	0.35	ND	0.98	0	90
08-19-82	0	0.031	0.084	0.148	0.33	ND	1.51	0	54
	2	0.027	0.073	0.128	0.20	ND	1.52	0	60
	4	0.031	0.084	0.148	0.22	ND	1.60	0	58
09-08-82	0	0.021	0.057	0.100	ND	ND	0.80	0	67
	2	0.018	0.048	0.084	ND	ND	0.83	0	70
	4	0.032	0.087	0.152	0.05	ND	1.30	0	67
09-22-82	0	0.029	0.080	0.140	0.40	ND	1.03	0	69
	2	0.045	0.123	0.216	0.50	ND	0.96	0	71
	4	0.036	0.098	0.172	0.64	ND	1.03	0	69
10-14-82	0	0.039	0.105	0.184	0.40	ND	0.91	0	76
	2	0.040	0.109	0.192	0.42	ND	0.95	0	74
	4	0.040	0.109	0.192	0.38	ND	1.51	0	76

ND - Non Detectable

Table 10. (Continued).

Date	Stage	Water CFS	Sediment p.p.m.	Sediment Load tons/day	Water Inflow ac ft/day
01-07-83	171.27	1065	385.7	1107.31	2112.4
01-08-83	171.45	1150	403.4	1250.56	2281.0
01-09-83	171.50	1150	403.4	1250.56	2281.0
01-10-83	171.33	1065	385.7	1107.31	2112.4
01-11-83	171.17	1050	382.5	1082.66	2082.7
01-12-83	170.97	975	366.3	962.75	1933.9
01-13-83	170.83	950	360.8	923.98	1884.3
01-14-83	170.65	925	355.2	885.70	1834.7
01-15-83	170.43	840	335.7	760.16	1666.1
01-16-83	170.29	815	329.8	724.57	1616.6
01-17-83	170.13	750	314.2	635.24	1487.6
01-18-83	169.93	700	301.8	569.49	1388.5
01-19-83	169.76	675	295.4	537.51	1338.8
01-20-83	169.60	650	288.9	506.21	1289.3
01-21-83	169.50	612	278.9	460.12	1213.9
01-22-83	169.37	575	268.9	416.80	1140.5
01-23-83	169.23	540	259.3	377.45	1071.1
01-24-83	169.10	525	255.0	360.88	1041.3
01-25-83	168.95	490	244.9	323.49	971.9
01-26-83	168.83	475	240.5	307.95	942.2
01-27-83	168.74	450	233.0	282.64	892.6
01-28-83	168.64	450	233.0	282.64	892.6
01-29-83	168.53	400	217.6	234.63	793.4
01-30-83	168.40	390	214.4	225.40	773.6
01-31-83	168.31	375	209.5	211.78	743.8
02-01-83	168.47	400	217.6	234.63	793.4
02-02-83	168.40	390	214.4	225.40	773.6
02-03-83	168.31	375	209.5	211.78	743.8
02-04-83	168.23	350	201.2	189.83	694.2
02-05-83	168.16	350	201.2	189.83	694.2
02-06-83	168.18	350	201.2	189.83	694.2
02-07-83	168.11	325	192.7	168.82	644.6
02-08-83	168.05	313	188.5	159.05	620.8
02-09-83	167.96	312	188.1	158.20	618.9
02-10-83	168.03	313	188.5	159.05	620.8
02-11-83	167.97	312	188.1	158.20	618.9
02-12-83	167.87	300	183.9	148.72	595.1
02-13-83	167.78	300	183.9	148.72	595.1
02-14-83	167.66	275	174.7	129.51	545.5
02-15-83	167.53	250	165.3	111.40	495.9
02-16-83	167.39	240	161.4	104.42	476.0
02-17-83	167.27	225	155.4	94.26	446.3
02-18-83	167.13	200	145.1	78.23	396.7
02-19-83	167.01	185	138.6	69.12	366.9
02-20-83	166.89	175	134.1	63.26	347.1

Table 10. (Continued).

Date	Stage	Water CFS	Sediment p.p.m.	Sediment Load tons/day	Water Inflow ac ft/day
11-23-82	164.17	26	44.0	3.08	51.6
11-24-82	164.14	25	43.0	2.90	49.6
11-25-82	164.09	25	43.0	2.90	49.6
11-26-82	164.15	26	44.0	3.08	51.6
11-27-82	164.17	26	44.0	3.08	51.6
11-28-82	165.63	75	81.7	16.52	148.8
11-29-82	165.00	50	64.4	8.68	99.2
11-30-82	164.59	32	49.7	4.29	63.5
12-01-82	164.49	30	47.8	3.87	59.5
12-02-82	164.46	30	47.8	3.87	59.5
12-03-82	164.53	30	47.8	3.87	59.5
12-04-82	168.33	375	209.5	211.78	743.8
12-05-82	168.80	475	240.5	307.95	942.2
12-06-82	169.10	500	247.9	334.13	991.8
12-07-82	169.17	540	259.3	337.46	1071.1
12-08-82	169.17	540	259.3	337.46	1071.1
12-09-82	169.15	540	259.3	337.46	1071.1
12-10-82	169.15	540	259.3	337.46	1071.1
12-11-82	169.41	500	247.9	334.13	991.8
12-12-82	169.47	612	278.9	460.12	1213.9
12-13-82	169.53	612	278.9	460.12	1213.9
12-14-82	169.53	612	278.9	460.12	1213.9
12-15-82	169.93	725	308.0	601.95	1438.0
12-16-82	170.27	750	314.2	635.24	1487.6
12-17-82	170.39	840	335.7	760.16	1666.1
12-18-82	170.43	840	335.7	760.16	1666.1
12-19-82	170.43	840	335.7	760.16	1666.1
12-20-82	170.37	840	335.7	760.16	1666.1
12-21-82	170.31	815	329.8	724.57	1616.6
12-22-82	170.23	765	317.8	655.37	1517.4
12-23-82	170.15	765	317.8	655.37	1517.4
12-24-82	170.08	725	308.0	601.95	1438.0
12-25-82	169.98	725	308.0	601.95	1438.0
12-26-82	170.43	840	335.7	760.16	1666.1
12-27-82	170.30	815	329.8	724.57	1616.6
12-28-82	170.95	975	366.3	962.75	1933.9
12-29-82	170.77	950	360.8	923.98	1884.3
12-30-82	170.71	925	355.2	885.70	1834.7
12-31-82	170.70	925	355.2	885.70	1834.7
01-01-83	170.73	925	355.2	885.70	1834.7
01-02-83	170.77	950	360.8	923.98	1884.3
01-03-83	170.84	950	360.8	923.98	1884.3
01-04-83	170.94	975	366.3	962.75	1933.9
01-05-83	171.04	1000	371.7	1001.99	1983.5
01-06-83	171.14	1025	377.1	1041.96	2033.1

Table 10. (Continued).

Date	Stage	Water CFS	Sediment p.p.m.	Sediment Load tons/day	Water Inflow ac ft/day
10-09-82	163.88	25	43.0	2.90	49.6
10-10-82	164.07	25	43.0	2.90	49.6
10-11-82	164.18	26	44.0	3.08	51.6
10-12-82	164.22	26	44.0	3.08	51.6
10-13-82	164.31	26	44.0	3.08	51.6
10-14-82	164.27	26	44.0	3.08	51.6
10-15-82	164.17	26	44.0	3.08	51.6
10-16-82	164.06	25	43.0	2.90	49.6
10-17-82	163.89	25	43.0	2.90	49.6
10-18-82	163.77	25	43.0	2.90	49.6
10-19-82	163.67	24	41.9	2.71	47.6
10-20-82	163.63	23	40.9	2.54	45.6
10-21-82	163.53	22	39.9	2.37	43.6
10-22-82	163.61	23	40.9	2.54	45.6
10-23-82	163.62	23	40.9	2.54	45.6
10-24-82	163.70	24	41.9	2.71	47.6
10-25-82	163.75	24	41.9	2.71	47.6
10-26-82	163.75	25	43.0	2.90	49.6
10-27-82	163.70	24	41.9	2.71	47.6
10-28-82	163.67	24	41.9	2.71	47.6
10-29-82	163.64	23	40.9	2.54	45.6
10-30-82	163.67	24	41.9	2.71	47.6
10-31-82	163.69	24	41.9	2.71	47.6
11-01-82	163.68	24	41.9	2.71	47.6
11-02-82	163.69	24	41.9	2.71	47.6
11-03-82	163.72	24	41.9	2.71	47.6
11-04-82	163.73	24	41.9	2.71	47.6
11-05-82	163.71	24	41.9	2.71	47.6
11-06-82	163.70	24	41.9	2.71	47.6
11-07-82	163.70	24	41.9	2.71	47.6
11-08-82	163.70	24	41.9	2.71	47.6
11-09-82	163.71	24	41.9	2.71	47.6
11-10-82	163.71	24	41.9	2.71	47.6
11-11-82	163.71	24	41.9	2.71	47.6
11-12-82	163.73	24	41.9	2.71	47.6
11-13-82	163.73	24	41.9	2.71	47.6
11-14-82	163.74	24	41.9	2.71	47.6
11-15-82	163.74	24	41.9	2.71	47.6
11-16-82	163.75	25	43.0	2.90	49.6
11-17-82	163.75	25	43.0	2.90	49.6
11-18-82	163.77	25	43.0	2.90	49.6
11-19-82	163.77	25	43.0	2.90	49.6
11-20-82	163.79	25	43.0	2.90	49.6
11-21-82	164.12	25	43.0	2.90	49.6
11-22-82	163.95	25	43.0	2.90	49.6

Table 10. (Continued).

Date	Stage	Water CFS	Sediment p.p.m.	Sediment Load tons/day	Water Inflow ac ft/day
8-25-82	166.33	125	110.2	37.13	247.9
8-26-82	166.20	110	102.3	30.33	218.2
8-27-82	166.07	100	96.7	26.07	198.4
8-28-82	165.97	100	96.7	26.07	198.4
8-29-82	165.87	100	96.7	26.07	198.4
8-30-82	165.77	85	87.9	20.14	168.6
8-31-82	165.66	77	83.0	17.23	152.7
9-01-82	165.54	75	81.7	16.52	148.8
9-02-82	165.40	75	81.7	16.52	148.8
9-03-82	165.29	65	75.1	13.16	128.9
9-04-82	165.17	60	71.7	11.60	119.0
9-05-82	165.06	50	64.4	8.68	99.2
9-06-82	164.94	50	64.4	8.68	99.2
9-07-82	164.81	45	60.6	7.35	89.3
9-08-82	164.69	37	54.1	5.40	73.4
9-09-82	164.59	32	49.7	4.29	63.5
9-10-82	164.48	30	47.8	3.87	59.5
9-11-82	164.38	26	44.0	3.08	51.6
9-12-82	164.44	26	44.0	3.08	51.6
9-13-82	164.67	37	54.0	5.39	73.4
9-14-82	164.57	32	49.7	4.29	63.5
9-15-82	164.43	26	44.0	3.08	51.6
9-16-82	164.33	26	44.0	3.08	51.6
9-17-82	164.18	26	44.0	3.08	51.6
9-18-82	164.08	25	43.0	2.90	49.6
9-19-82	163.97	25	43.0	2.90	49.6
9-20-82	163.87	25	43.0	2.90	49.6
9-21-82	163.77	24	41.9	2.71	47.6
9-22-82	163.67	24	41.9	2.71	47.6
9-23-82	163.48	22	39.9	2.37	43.6
9-24-82	163.47	22	39.9	2.37	43.6
9-25-82	163.39	20	37.7	2.03	39.7
9-26-82	163.30	14	30.6	1.15	27.8
9-27-82	163.27	14	30.6	1.15	27.8
9-28-82	163.27	14	30.6	1.15	27.8
9-29-82	163.29	14	30.6	1.15	27.8
9-30-82	163.27	14	30.6	1.15	27.8
10-01-82	163.29	14	30.6	1.15	27.8
10-02-82	163.27	14	30.6	1.15	27.8
10-03-82	163.27	14	30.6	1.15	27.8
10-04-82	163.30	14	30.6	1.15	27.8
10-05-82	163.30	14	30.6	1.15	27.8
10-06-82	163.35	20	37.7	2.03	39.7
10-07-82	163.47	22	39.9	2.37	43.6
10-08-82	163.54	22	39.9	1.37	43.6

Table 10. (Continued).

Date	Stage	Water CFS	Sediment p.p.m.	Sediment Load tons/day	Water Inflow ac ft/day
7-11-82	162.55	4	14.7	.16	7.9
7-12-82	162.53	4	14.7	.16	7.9
7-13-82	162.47	3	12.4	.10	6.0
7-14-82	162.43	3	12.4	.10	6.0
7-15-82	162.37	3	12.4	.10	6.0
7-16-82	162.34	3	12.4	.10	6.0
7-17-82	162.27	3	12.4	.10	6.0
7-18-82	162.24	3	12.4	.10	6.0
7-19-82	162.17	2	9.8	.05	4.0
7-20-82	162.14	2	9.8	.05	4.0
7-21-82	162.07	1	6.5	.02	2.0
7-22-82	162.04	1	6.5	.02	2.0
7-23-82					
7-24-82					
7-25-82					
7-26-82					
7-27-82					
7-28-82	163.47	20	37.7	2.03	39.7
7-29-82	163.53	21	38.8	2.20	41.7
7-30-82	163.49	20	37.7	2.03	39.7
7-31-82	163.44	20	37.7	2.03	39.7
8-01-82	163.48	20	37.7	2.03	39.7
8-02-82	163.50	20	37.7	2.03	39.7
8-03-82	163.47	20	37.7	2.03	39.7
8-04-82	163.49	20	37.7	2.03	39.7
8-05-82	163.48	20	37.7	2.03	39.7
8-06-82	163.48	20	37.7	2.03	39.7
8-07-82	163.47	20	37.7	2.03	39.7
8-08-82	163.45	20	37.7	2.03	39.7
8-09-82	163.45	20	37.7	2.03	39.7
8-10-82	163.43	19	36.6	1.87	37.7
8-11-82	163.47	20	37.7	2.03	39.7
8-12-82	163.50	20	37.7	2.03	39.7
8-13-82	163.53	21	38.8	2.20	41.7
8-14-82	167.12	175	134.0	63.21	347.1
8-15-82	166.19	100	96.7	26.07	198.4
8-16-82	166.57	125	110.2	37.13	247.9
8-17-82	166.75	160	127.3	54.91	317.4
8-18-82	166.79	175	134.1	63.26	347.1
8-19-82	166.80	175	134.1	63.26	347.1
8-20-82	166.84	175	134.1	63.26	347.1
8-21-82	166.77	160	127.3	54.91	317.4
8-22-82	166.67	160	127.3	54.91	317.4
8-23-82	166.57	150	122.6	49.57	297.5
8-24-82	166.46	135	115.3	41.96	267.8

Table 10. Phillips Bayou Water and Sediment Inflow.

Date	Stage	Water CFS	Sediment p.p.m.	Sediment Load tons/day	Water Inflow ac ft/day
5-27-82	163.17	12	27.9	.90	23.8
5-28-82	163.22	12	27.9	.90	23.8
5-29-82	163.27	12	27.9	.90	23.8
5-30-82	163.29	12	27.9	.90	23.8
5-31-82	163.30	12	27.9	.90	23.8
6-01-82	163.27	12	27.9	.90	23.8
6-02-82	163.26	12	27.9	.90	23.8
6-03-82	163.23	12	27.9	.90	23.8
6-04-82	163.18	12	27.9	.90	23.8
6-05-82	163.17	12	27.9	.90	23.8
6-06-82	163.14	12	27.9	.90	23.8
6-07-82	163.10	11	26.6	.79	21.8
6-08-82	163.07	11	26.6	.79	21.8
6-09-82	163.02	11	26.6	.79	21.8
6-10-82	162.95	10	25.2	.68	19.8
6-11-82	162.89	8	22.1	.48	15.9
6-12-82	162.87	8	22.1	.48	15.9
6-13-82	162.86	8	22.1	.48	15.9
6-14-82	162.83	8	22.1	.48	15.9
6-15-82	162.78	5	16.8	.23	9.9
6-16-82	162.77	5	16.8	.23	9.9
6-17-82	162.82	8	22.1	.48	15.9
6-18-82	162.78	5	16.8	.23	9.9
6-19-82	162.75	5	16.8	.23	9.9
6-20-82	162.71	5	16.8	.23	9.9
6-21-82	162.69	5	16.8	.23	9.9
6-22-82	162.67	5	16.8	.23	9.9
6-23-82	162.63	5	16.8	.23	9.9
6-24-82	162.62	5	16.8	.23	9.9
6-25-82	162.61	4	14.7	.16	7.9
6-26-82	162.61	4	14.7	.16	7.9
6-27-82	162.59	4	14.7	.16	7.9
6-28-82	162.58	4	14.7	.16	7.9
6-29-82	162.57	4	14.7	.16	7.9
6-30-82	162.55	4	14.7	.16	7.9
7-01-82	162.54	4	14.7	.16	7.9
7-02-82	162.59	4	14.7	.16	7.9
7-03-82	162.65	5	16.8	.23	9.9
7-04-82	162.66	5	16.8	.23	9.9
7-05-82	162.64	5	16.8	.23	9.9
7-06-82	162.62	5	16.8	.23	9.9
7-07-82	162.61	4	14.7	.16	7.9
7-08-82	162.59	4	14.7	.16	7.9
7-09-82	162.58	4	14.7	.16	7.9
7-10-82	162.57	4	14.7	.16	7.9

Table 9. Light Penetration Data. Sampling Stations 3 and 4

	Station 3			Station 4		
Date	Incident Value	Depth(m) at 1.0 %	Depth(m) of extinction	Incident Value	Depth(m) at 1.0 %	Depth(m) of extinction
04-12-83	**			**		
04-27-83	1550	0.4	1.0	1400	0.5	1.2
05-10-83	1650	0.5	1.1	1730	0.5	1.3
05-25-83	1850	0.3	0.9	1900	0.4	1.2

* Lake Bottom
** No Reading

Table 9. Light Penetration Data. Sampling Stations 3 and 4

	Station 3			Station 4		
Date	Incident Value	Depth(m) at 1.0 %	Depth(m) of extinction	Incident Value	Depth(m) at 1.0 %	Depth(m) of extinction
06-02-82	2150	0.6	1.6	**		
06-17-82	2175	0.5	2.3	2250	0.9	2.1
06-30-82	1900	1.3	2.7	1980	1.4	2.9
07-21-82	1520	3.4	4.0*	1520	3.8	5.8
08-02-82	1600	2.7	3.9	1650	3.0	5.3*
08-19-82	1850	1.0	1.8	1820	1.2	2.4
09-08-82	1510	1.6	3.8	1660	1.9	4.1
09-22-82	1780	1.2	2.8	1740	1.4	3.3
10-14-82	1600	1.4	3.2	1600	1.5	3.4
10-26-82	1200	0.5	0.6	1360	0.5	0.6
11-09-82	1220	1.7	3.6	1350	1.5	3.7
11-30-82	**			**		
12-14-82	1020	0.5	0.8	1040	0.8	2.0
12-28-82	**			**		
01-11-83	1300	0.4	0.9	1300	0.5	0.9
01-25-83	1160	0.5	1.1	990	0.6	1.2
02-08-83	**			**		
03-01-83	1600	0.6	1.8	1700	0.6	1.8
03-15-83	1350	0.4	1.4	1250	0.5	1.4
03-29-83	1870	0.5	1.4	1970	0.5	1.5

* Lake Bottom
** No Reading

Table 7D. (Continued) Pesticide Data Sampling Station A-7

Date	P,P'DDE ppb	P,P'DDD ppb	P,P'DDT ppb	Toxaphene ppb	Zinc ppm	Copper ppm	Mercury ppb	Arsenic ppb
02-08-83	0.01	0.01	0.07	ND	ND		ND	4.1
03-01-83	0.03	0.05	0.07	ND	0.01		2.1	4.1
03-15-83	<0.01	ND	0.01	ND	ND	ND	1562.5	5.3
03-29-83	0.02	ND	0.04	ND	ND		27.7	4.4
04-12-83	NO SAMPLES TAKEN							
04-27-83	ND	ND	0.05	ND	ND		ND	3.7
05-10-83	<0.01	ND	0.13	ND	ND		ND	3.4
05-25-83	0.04	ND	0.13	38	ND	ND	ND	4.2

ND - Non Detectable

Table 7D. Pesticide Data Sampling Station A-7

Date	P,P'DDE ppb	P,P'DDD ppb	P,P'DDT ppb	Toxaphene ppb	Zinc ppm	Copper ppm	Mercury ppb	Arsenic ppb
06-02-82	0.02	<0.01	0.02	ND	ND	ND	ND	
06-17-82	0.01	ND	ND	ND	ND	ND	ND	
06-30-82	0.03	ND	ND	ND	0.02	ND	16.0	
07-21-82	ND	0.01	ND	ND	0.01	ND	38.0	
08-02-82	ND	0.02	ND	ND	ND	ND	ND	
08-19-82	0.05	0.03	0.02	ND	0.01	ND	ND	
09-08-82	0.05	0.03	ND	ND	0.40		ND	9.7
09-22-82	0.05	0.04	ND	ND	0.20		ND	6.6
10-14-82	0.08	ND	ND	ND	0.30		3.2	4.0
10-26-82	0.05	0.02	ND	ND	ND		6.3	1.7
11-09-82	0.04	0.03	ND	ND	ND		2.5	1.2
11-30-82	0.07	0.03	ND	ND	ND	ND	4.3	4.4
12-14-82	0.05	0.01	0.04	ND	8.0		ND	3.3
12-28-82	0.08	0.07	0.14	ND	6.3		1.05	3.9
01-11-83	0.02	0.01	0.05	ND	9.3		ND	3.7
01-25-83	0.02	0.01	0.06	ND	7.8		ND	4.1

ND - Non Detectable

Table 6D. Pesticide Data Sampling Station A-6

Date	P,P'DDE ppb	P,P'DDD ppb	P,P'DDT ppb	Toxaphene ppb	Zinc ppm	Copper ppm	Mercury ppb	Arsenic ppb
06-02-82	0.02	<0.01	0.02	ND	ND	ND	ND	
06-17-82	0.01	<0.01	<0.01	ND	ND	ND	ND	

ND - Non Detectable

Table 4D. (Continued) Pesticide Data Sampling Station A-4

Date	P,P'DDE ppb	P,P'DDD ppb	P,P'DDT ppb	Toxaphene ppb	Zinc ppm	Copper ppm	Mercury ppb	Arsenic ppb
02-08-83	0.02	0.02	0.04	ND	0.1		0.8	3.7
03-01-83	0.06	0.11	0.12	ND	0.05		0.4	3.9
03-15-83	0.02	ND	0.07	ND	ND	ND	ND	4.7
03-29-83	0.04	ND	0.12	ND	ND		ND	4.4
04-14-83	NO SAMPLE TAKEN							
04-27-83	0.01	ND	0.11	ND	ND		ND	2.7
05-10-83	<0.01	ND	0.08	ND	ND		ND	3.4
05-25-83	0.93	ND	0.07	ND	ND	ND	ND	4.2

ND - Non Detectable

Table 4D. Pesticide Data Sampling Station A-4

Date	P,P'DDE ppb	P,P'DDD ppb	P,P'DDT ppb	Toxaphene ppb	Zinc ppm	Copper ppm	Mercury ppb	Arsenic ppb
06-02-82	0.04	0.02	0.02	ND	ND	ND	ND	
06-17-82	0.01	0.01	<0.01	ND	ND	ND	ND	
06-30-82	ND	ND	ND	ND	0.02	ND	7.5	
07-21-82	ND	ND	ND	ND	0.02	ND	5.0	
08-02-82	0.02	<0.01	ND	ND	0.01	ND	16.8	
08-19-82	0.06	0.01	0.02	ND	ND	ND	6.7	
09-08-82	0.07	0.05	ND	ND	0.20		15.8	10.1
09-22-82	0.02	0.02	ND	ND	0.90		6.4	6.6
10-14-82	0.04	0.03	ND	ND	0.10		19.0	4.2
10-26-82	0.04	0.01	ND	ND	ND		2.8	5.0
11-09-82	0.05	0.02	ND	ND	ND		4.4	1.1
11-30-82	ND	ND	ND	ND	ND	ND	2.9	1.2
12-14-82	0.05	0.06	0.08	ND	8.7		ND	2.7
12-28-82	0.03	<0.01	0.04	ND	6.3		ND	3.1
01-11-83	0.05	0.05	0.11	ND	7.8		ND	3.5
01-25-83	0.03	0.02	0.07	ND	5.5		2.1	3.5

ND - Non Detectable

Table 3D. (Continued) Pesticide Data Sampling Station A-3

Date	P,P'DDE ppb	P,P'DDD ppb	P,P'DDT ppb	Toxaphene ppb	Zinc ppm	Copper ppm	Mercury ppb	Arsenic ppb
02-08-83	0.01	0.02	0.08	ND	0.01		0.8	3.9
03-01-83	0.02	0.02	0.06	ND	ND		2.5	3.9
03-15-83	0.02	ND	0.07	ND	ND	ND	ND	4.7
03-29-83	0.01	ND	0.07	ND	ND		3.6	4.7
04-12-83	NO SAMPLE TAKEN							
04-27-83	0.01	0.02	0.08	ND	ND		3.3	2.5
05-10-83	0.01	ND	0.06	ND	ND		0.5	3.7
05-25-83	0.01	ND	0.07	ND	ND	ND	ND	4.9

ND - Non Detectable

Table 3D. Pesticide Data Sampling Station A-3

Date	P,P'DDE ppb	P,P'DDD ppb	P,P'DDT ppb	Toxaphene ppb	Zinc ppm	Copper ppm	Mercury ppb	Arsenic ppb
06-02-82	0.03	<0.01	0.03	ND	ND	ND	5.0	
06-17-82	<0.01	<0.01	ND	ND	ND	ND	ND	
06-30-82	ND	ND	ND	ND	0.02	ND	ND	
07-21-82	0.02	ND	ND	ND	0.01	ND	1.0	
08-02-82	0.01	<0.01	ND	ND	ND	0.01	ND	
08-19-82	0.04	0.03	0.03	ND	ND	ND	7.5	
09-08-82	0.05	0.04	ND	ND	0.10		ND	10.2
09-22-82	0.07	0.05	ND	ND	0.20		ND	6.9
10-14-82	0.05	0.02	ND	ND	1.00		ND	4.0
10-26-82	0.05	0.01	ND	ND	ND		1.5	1.8
11-09-82	0.03	0.02	ND	ND	ND		2.9	3.0
11-30-82	0.07	0.04	ND	ND	0.1	ND	2.8	1.4
12-14-82	0.06	0.05	0.11	ND	8.8		3.15	3.7
12-28-82	0.06	0.02	0.11	ND	15.3		ND	7.0
01-11-83	0.02	0.02	0.06	ND	8.8		ND	4.5
01-25-83	0.02	0.02	0.06	ND	7.8		7.35	3.9

ND - Non Detectable

Table 4C. (Continued) Chemical Data Sampling Station A-4

Date	Sample Depth m	P Ortho Sol. mg/L	P Ortho Sed. mg/L	P Total mg/L	NO_3-N mg/L	NO_2-N mg/L	NH_4-N mg/L	ALKALINITY CO_3 mg/L	ALKALINITY HCO_3 mg/L
12-14-82	0	0.030	0.070	0.120	0.49	<0.001	0.08	0	54
	2	0.032	0.074	0.128	0.49	<0.001	0.08	0	55
	4	0.038	0.088	0.152	0.54	<0.001	0.08	0	56
	6	0.041	0.095	0.164	0.45	<0.001	0.03	0	57
	8	0.040	0.093	0.160	0.54	ND	ND	0	57
12-28-82	0	0.026	0.060	0.104	0.36	ND	0.25	0	49
	2	0.033	0.077	0.132	0.47	<0.001	0.95	0	48
	4	0.028	0.065	0.112	0.42	<0.001	0.30	0	50
	6	0.031	0.072	0.124	0.39	ND	0.40	0	51
	8	0.049	0.114	0.196	0.33	<0.001	0.65	0	48
01-11-83	0	0.058	0.135	0.232	0.49	ND	ND	0	42
	2	0.061	0.142	0.244	0.47	ND	ND	0	45
	4	0.055	0.128	0.220	0.40	ND	ND	0	44
	6	0.061	0.142	0.244	0.44	ND	ND	0	45
	8	0.061	0.142	0.244	0.49	<0.001	ND	0	45
01-25-83	0	0.056	0.130	0.224	0.38	ND	ND	0	44
	2	0.068	0.158	0.272	0.49	<0.001	ND	0	44
	4	0.064	0.148	0.256	0.49	ND	ND	0	45
	6	0.068	0.158	0.272	0.45	ND	ND	0	47
	8	0.066	0.153	0.264	0.49	ND	ND	0	45

ND - Non Detectable

Table 4C. (Continued) Chemical Data Sampling Station A-4

Date	Sample Depth m	P Ortho Sol. mg/L	P Ortho Sed. mg/L	P Total mg/L	NO_3-N mg/L	NO_2-N mg/L	NH_4-N mg/L	ALKALINITY CO_3 mg/L	ALKALINITY HCO_3 mg/L
09-22-82	0	0.040	0.093	0.160	0.42	ND	0.80	0	69
	2	0.046	0.107	0.184	0.44	ND	0.76	0	67
	4	0.043	0.100	0.172	0.44	ND	0.72	0	68
	6	0.046	0.107	0.184	0.42	ND	0.72	0	69
10-14-82	0	0.044	0.102	0.176	0.40	ND	0.83	0	70
	2	0.046	0.107	0.184	0.50	ND	0.76	0	70
	4	0.049	0.114	0.196	0.45	<0.001	0.83	0	72
	6	0.038	0.088	0.152	0.40	<0.001	0.80	0	74
10-26-82	0	0.038	0.088	0.152	0.55	ND	0.91	0	73
	2	0.041	0.095	0.164	0.48	ND	0.91	0	74
	4	0.044	0.102	0.176	0.55	ND	0.91	0	74
	6	0.044	0.102	0.176	0.48	ND	0.95	0	76
11-09-82	0	0.035	0.081	0.140	0.51	ND	0.54	0	78
	2	0.035	0.081	0.140	0.47	ND	0.57	0	79
	4	0.031	0.072	0.124	0.47	ND	0.54	0	79
	6	0.039	0.090	0.156	0.40	<0.001	0.50	0	79
11-30-82	0	0.041	0.095	0.164	0.73	ND	0.25	0	84
	2	0.043	0.100	0.172	0.71	ND	0.22	0	81
	4	0.044	0.102	0.176	0.54	<0.001	0.22	0	81
	6	0.022	0.051	0.088	0.53	<0.001	0.33	0	83
	8	0.038	0.088	0.152	0.63	<0.001	0.50	0	82

ND - Non Detectable

Table 4C. Chemical Data Sampling Station A-4

Date	Sample Depth m	P Ortho Sol. mg/L	P Ortho Sed. mg/L	P Total mg/L	NO_3-N mg/L	NO_2-N mg/L	NH_4-N mg/L	ALKALINITY CO_3	ALKALINITY HCO_3 mg/L
06-02-82	0	0.054	0.125	0.216	0.36	ND	0.45	-	77
	2	0.052	0.121	0.208	0.27	ND	0.48	-	74
	4	0.050	0.116	0.200	0.33	ND	0.98	-	73
	6	0.059	0.137	0.236	0.22	ND	0.72	-	71
06-17-82	0	0.057	0.132	0.228	0.57	0.060	0.61	-	76
06-30-82	0	0.024	0.056	0.096	ND	0.040	0.58	2	70
	2	0.020	0.046	0.080	ND	0.040	0.58	0	71
	4	0.020	0.046	0.080	ND	0.040	0.56	0	71
07-21-82	0	0.008	0.019	0.032	0.40	0.010	0.22	10	69
	2	0.014	0.032	0.056	0.38	0.010	0.19	10	69
08-02-82	0	0.003	0.007	0.012	0.43	ND	0.35	6	81
	2	0.002	0.005	0.008	0.35	ND	0.35	2	78
	4	0.013	0.030	0.052	0.40	0.001	0.48	0	85
	6	0.042	0.097	0.168	0.42	ND	2.07	0	90
08-19-82	0	0.027	0.063	0.108	0.26	ND	0.79	0	75
	2	0.028	0.065	0.112	0.26	ND	0.87	0	71
	4	0.029	0.066	0.114	0.19	ND	0.92	0	75
	6	0.028	0.065	0.112	0.24	ND	0.92	0	75
09-08-82	0	0.024	0.056	0.096	ND	ND	0.57	0	68
	2	0.033	0.077	0.132	ND	ND	0.65	0	69
	4	0.037	0.086	0.148	0.05	ND	0.68	0	69
	6	0.032	0.074	0.128	0.13	ND	0.65	0	66

ND - Non Detectable

Table 3C. (Continued) Chemical Data Sampling Station A-3

Date	Sample Depth m	P Ortho Sol. mg/L	P Ortho Sed. mg/L	P Total mg/L	NO_3-N mg/L	NO_2-N mg/L	NH_4-N mg/L	ALKALINITY CO_3 mg/L	ALKALINITY HCO_3 mg/L
02-08-83	0	0.035	0.096	0.168	0.53	ND	0.05	0	43
	2	0.035	0.096	0.168	0.53	ND	0.21	0	40
	4	0.036	0.098	0.172	0.53	ND	0.21	0	41
03-01-83	0	0.034	0.091	0.160	0.51	ND	0.18	0	45
	2	0.039	0.107	0.188	0.44	ND	0.20	0	45
	4	0.041	0.112	0.196	0.52	ND	0.25	0	45
03-15-83	0	0.048	0.130	0.228	0.38	ND	ND	0	42
	2	0.054	0.146	0.256	0.49	ND	ND	0	39
	4	0.055	0.150	0.264	0.49	<0.001	ND	0	43
03-29-83	0	0.033	0.089	0.156	0.56	ND	ND	0	41
	2	0.046	0.125	0.220	0.56	<0.001	ND	0	41
	4	0.046	0.125	0.220	0.62	<0.001	ND	0	44
04-12-83	NO SAMPLE TAKEN								
04-27-83	0				0.58	<0.001	ND	0	40
	2				0.43	ND	ND	0	40
	4				0.40	ND	ND	0	40
05-10-83	0	0.006	0.016	0.028	0.57	ND	ND	0	54
	2	0.006	0.016	0.028	0.50	ND	ND	0	53
	4	0.006	0.016	0.028	0.58	ND	ND	0	47
05-25-83	0	0.006	0.016	0.028	0.33	ND	ND	0	46
	2	0.013	0.036	0.064	0.30	ND	ND	0	46
	4	0.011	0.030	0.052	0.33	ND	ND	0	44

ND - Non Detectable

Table 3C. (Continued) Chemical Data Sampling Station A-3

Date	Sample Depth m	P Ortho Sol. mg/L	P Ortho Sed. mg/L	P Total mg/L	NO_3-N mg/L	NO_2-N mg/L	NH_4-N mg/L	ALKALINITY CO_3 mg/L	ALKALINITY HCO_3 mg/L
10-26-82	0	0.031	0.084	0.148	0.61	ND	0.91	0	75
	2	0.035	0.096	0.168	0.58	ND	0.95	0	75
	4	0.033	0.089	0.156	0.55	ND	1.07	0	73
11-09-82	0	0.022	0.059	0.104	0.47	ND	0.54	0	80
	2	0.023	0.062	0.108	0.42	ND	0.54	0	78
11-30-82	0	0.026	0.071	0.124	0.76	ND	0.30	0	79
	2	0.034	0.093	0.164	0.76	ND	0.30	0	79
	4	0.026	0.071	0.124	0.56	ND	0.05	0	81
12-14-82	0	0.030	0.082	0.144	0.36	ND	0.19	0	43
	2	0.036	0.098	0.172	0.31	ND	0.21	0	40
	4	0.042	0.114	0.200	0.31	ND	0.21	0	31
	6	0.053	0.144	0.252	0.31	ND	0.21	0	25
12-28-82	0	0.016	0.043	0.076	0.07	ND	0.25	0	29
	2	0.014	0.039	0.068	0.20	ND	0.25	0	26
	4	0.014	0.039	0.068	0.10	ND	0.25	0	28
	6	0.014	0.039	0.068	0.16	ND	0.25	0	28
01-11-83	0	0.049	0.132	0.232	0.35	ND	ND	0	34
	2	0.052	0.141	0.248	0.44	ND	ND	0	32
	4	0.053	0.144	0.252	0.45	ND	ND	0	32
	6	0.049	0.132	0.232	0.47	ND	ND	0	36
01-25-83	0	0.047	0.128	0.224	0.40	<0.001	ND	0	39
	2	0.051	0.139	0.244	0.42	<0.001	ND	0	39
	4	0.055	0.150	0.264	0.44	<0.001	ND	0	40
	6	0.057	0.155	0.272	0.37	ND	ND	0	42

ND - Non Detectable

Table 10. (Continued).

Date	Stage	Water CFS	Sediment p.p.m.	Sediment Load tons/day	Water Inflow ac ft/day
02-21-83	166.78	160	127.3	54.90	317.4
02-22-83	166.68	150	122.6	49.57	297.5
02-23-83	166.59	135	115.3	41.96	267.8
02-24-83	166.73	160	127.3	54.90	317.4
02-25-83	166.60	150	122.6	49.57	297.5
02-26-83	166.48	126	110.7	37.60	249.9
02-27-83	166.40	126	110.7	37.60	249.9
02-28-83	166.37	125	110.2	37.13	247.9
03-01-83	166.26	110	102.3	30.33	218.2
03-02-83	166.17	105	99.5	28.16	197.4
03-03-83	166.09	100	96.7	26.06	198.4
03-04-83	167.66	250	165.3	111.40	495.9
03-05-83	167.97	312	188.1	158.20	618.9
03-06-83	168.22	350	201.2	189.83	694.2
03-07-83	168.36	375	209.5	211.78	743.8
03-08-83	168.46	390	214.4	225.40	773.6
03-09-83	168.44	390	214.4	225.40	773.6
03-10-83	168.45	390	214.4	225.40	773.6
03-11-83	168.46	390	214.4	225.40	773.6
03-12-83	168.42	390	214.4	225.40	773.6
03-13-83	168.37	375	209.5	211.78	743.8
03-14-83	168.32	375	209.5	211.78	743.8
03-15-83	168.26	350	201.2	189.83	694.2
03-16-83	168.16	325	192.7	168.82	644.6
03-17-83	168.16	325	192.7	168.82	644.6
03-18-83	167.95	312	188.1	158.20	618.9
03-19-83	167.87	300	183.8	148.64	595.1
03-20-83	167.77	275	174.7	129.51	545.5
03-21-83	167.67	250	165.3	111.40	495.9
03-22-83	167.57	250	165.3	111.40	495.9
03-23-83	167.39	225	155.4	94.26	446.3
03-24-83	167.40	240	161.4	104.42	476.0
03-25-83	167.29	201	145.5	78.84	398.7
03-26-83	167.12	200	145.1	78.23	396.7
03-27-83	166.97	176	134.6	63.86	349.1
03-28-83	166.87	175	134.2	63.31	347.1
03-29-83	166.67	150	122.6	49.57	297.5
03-30-83	166.57	135	115.3	41.96	267.8
03-31-83	166.42	126	110.7	37.60	249.9
04-01-83	166.37	125	110.2	37.13	247.9
04-02-83	166.31	125	110.2	37.13	247.9
04-03-83	166.22	110	102.3	30.33	218.2
04-04-83	166.13	105	99.5	28.16	208.3
04-05-83	166.37	135	115.3	41.96	267.8
04-06-83	166.97	176	134.6	63.86	349.1
04-07-83	167.35	225	155.4	94.26	446.3

Table 11. Plankton genera and plankton/mL in Phillips Bayou and Moon Lake.

GENERA	Date	A-3 0m	A-3 2m	A-4 0m	A-4 2m
Polyarthra	06-02-82	1		2	
Cyclotella		8		2	
Trachelomonas		17	18	18	19
Anabaena		6	10	13	12
Cryptoglena		10	20	103	9
Phacus		1	2		2
Pandorina		4	4		
Closterium		2	2		2
Difflugia		3	10	9	5
Euglena		1	2	14	
Mougeotia		3	62	10	9
Ulothrix		19	26	13	25
Strombidium			2	2	4
Sphaerocystis			2	6	2
Eudorina			2		
Ankistrodesmus				6	3
Microcystis				2	2
Lacrymaria				2	
Ceratium					1
Ulothrix	06-17-82	9	16	10	3
Anabaena		3		8	1
Ankistrodesmus		4			
Mougeotia		41	64	24	27
Cryptoglena		11	4	10	3
Trachelomonas		66	26	16	13
Pediastrum		1	2		
Polyarthra		3		1	
Difflugia		5	8	2	1
Strombidium		3	6	2	
Euglena		5	13	2	1
Cyclotella		4	1		
Pandorina		1			1
Scenedesmus		1			
Synedra		2	1		
Merismopedia		1			
Microcystis			1	2	
Crucigenia			1		
Closterium			2	2	
Hormidium			7		
Quadrigula				2	
Mougeotia	06-30-82	74	124	428	242
Ulothrix		12	6	18	19
Trachelomonas		6	36	16	25
Euglena		5	6		
Hormidium		1			
Crucigenia		14	7		1
Anabaena		17	166	2	4

Table 11. Continued.

GENERA	Date	A-3 0m	A-3 2m	A-4 0m	A-4 2m
Cryptoglena		26	5	24	37
Difflugia		1	3	2	
Phacus		7			
Strombidium		2	3		3
Microcystis		3	2	14	8
Merismopedia		5		2	
Polyarthra		2	1	6	
Pediastrum		1	1	4	2
Synedra		1		10	7
Pandorina			2	2	
Keratella			1		
Closterium			1		
Quadrigula			1	2	1
Filina				2	
Navicula					1
Synedra	07-21-82	344	96	264	158
Cyclotella		914	1292	562	732
Ulothrix		8	40	24	8
Scenedesmus		16		4	10
Anabaena		122	162	52	30
Trachelomonas		28			
Merismopedia		24	24	44	20
Ankistrodesmus		8	28		2
Sphaerocystis		8		8	
Spirulina		4			
Pediastrum		4		8	1
Filina		2	2		1
Microcystis		4	8	12	
Mougeotia		10	42	28	22
Strombidium		2	2	16	12
Phacus		2			2
Cryptoglena		2	12	36	42
Crucigenia		8	4	6	
Polyarthra		2			
Protococcus		4	2	4	
Gloeoactinium		16	24	24	8
Pinnularia			2		
Brachionus			2		
Oedogonium				6	
Closterium	07-21-83		16		6
Coelastrum			2		
Gonium					2
Lagerheimia					2
Difflugia			4		6
Anabaena	08-02-82	216	132	72	60
Cyclotella		282	304	802	596
Cryptoglena		24		24	4
Phacus		5	1		
Mougeotia		42	24	66	48

Table 11. Continued.

GENERA	Date	A-3 0m	A-3 2m	A-4 0m	A-4 2m
Strombidium		12		16	8
Merismopedia		2		16	
Trachelomonas		4	8		4
Sphaerocystis		1	1		2
Synedra		8	5	32	12
Actinastrum		4			
Scenedesmus		6		6	
Spirulina		1			
Ankistrodesmus		2		8	16
Euglena		1			
Pediastrum		2	1	2	
Closterium		1	2	16	24
Gyrosigma			1		
Glenodinium			3		
Filina			1		
Crucigenia				4	12
Difflugia				4	2
Trachelomonas					
Branchionus					2
Closteriopsis	08-02-82				4
Microcystis					10
Cyclotella	06-19-82	12			
Anabaena		10	1	31	
Trachelomonas		14	14	9	
Ankistrodesmus		8		5	
Synedra		2			
Cryptoglena		2	4		
Oscillatoria		2			
Oedogonium				5	2
Difflugia				2	
Conochilus				2	
Pediastrum				1	
Oedogonium	09-08-82	36	14	26	62
Pediastrum		2	1		1
Cyclotella		70	2	16	14
Trachelomonas		36	4	32	12
Cryptoglena		128	1	16	74
Synedra		8	4	26	4
Difflugia		8	4	4	50
Ankistrodesmus		12		16	1
Merismopedia		2		4	
Closterium		4	13	22	10
Scenedesmus		2			1
Sphaerocystis		6		2	
Euglena			2		
Phacus			3		
Tetraedron			1		1
Ceratium					2
Strombidium					1
Crucigenia				8	

Table 11. Continued.

GENERA	Date	A-3 0m	A-3 2m	A-4 0m	A-4 2m
Cryptoglena	09-22-82	16		4	
Ankistrodesmus		12	2	2	3
Microcystis		2	6	7	6
Anabaena		6	3	3	5
Pediastrum		2			
Cyclotella		2		4	3
Closterium		2	1	1	
Mougeotia		2	1	13	4
Scenedesmus		2			
Trachelomonas			5	7	
Difflugia			1	2	1
Synedra				2	
Oscillatoria				8	13
Difflugia	10-14-82	4	2		2
Mougeotia		2		9	6
Ankistrodesmus		7		8	12
Anabaena		15	12	1	4
Cryptoglena		5	2	9	10
Cyclotella		6	2	5	2
Tetraedron		1			
Oscillatoria			4	2	
Sphaerocystis			2		
Phacus			2		
Closterium			2		
Chlamydomonas				5	
Polyarthra				1	
Trachelomonas				1	6
Ceratium					2
Cosmarium					4
Glochidia					2
Anabaena	10-26-82	5		6	
Ankistrodesmus		8	2	14	36
Sphaerocystis		1			
Keratella		2			2
Cryptoglena		3	1	16	10
Cyclotella		2	1	2	8
Anabaena		1	2		10
Trachelomonas		1	2	2	2
Closterium		1			2
Phacus			1		2
Difflugia			1		
Strombidium				2	
Ceratium				2	
Oscillatoria					6
Glenodinium					2
Microcystis					28
Mougeotia				2	6
Cryptoglena	11-04-82	24	26	52	61
Ankistrodesmus		22	16	18	3
Trachelomonas		8	8	12	9

Table 11. Continued.

GENERA	Date	A-3 0m	A-3 2m	A-4 0m	A-4 2m
Closterium		4	4	4	5
Anabaena		4	8	4	3
Colurella		2			
Polyarthra		2	2		
Cyclotella			14	30	6
Crucigenia			6	2	
Difflugia			2		1
Conochilus			1		
Coelastrum			2		
Mougeotia			12	8	5
Pediastrum			2		
Nauplius			2		
Strombidium			2		
Sphaerocystis				2	
Synedra					1
Trachelomonas	11-30-82	6	4	6	4
Anabaena		6	11	14	
Closterium		1		4	2
Ankistrodesmus		2		25	24
Mougeotia		2			
Ceratium		1			
Cryptoglena		1	25	20	28
Synedra			4	2	8
Navicula			1		
Euglena			2		
Cyclotella			1	4	26
Microcystis					2
Oscillatoria					6
Strombidium					2
Coelastrum					2
Ankistrodesmus	12-14-82	2		1	4
Cryptoglena		8	10	11	12
Cyclotella		1	6		4
Anabaena		6	3	5	9
Trachelomonas		4		2	1
Mougeotia		1			1
Difflugia		2			2
Euglena			1		
Crucigenia			2		
Synedra			1		
Coelastrum			3		
Strombidium				2	
Closterium				1	1
Oscillatoria					1
Cryptoglena	12-28-82	9	20	3	10
Trachelomonas		12	6	5	
Difflugia		9	6		
Cyclotella			3		
Anabaena			1		7
Phacus				1	

Table 11. Continued.

GENERA	Date	A-3 0m	A-3 2m	A-4 0m	A-4 2m
Ankistrodesmus				1	
Cryptoglena	01-11-83	91	152	1	6
Trachelomonas		10	6	2	4
Closterium		1			
Anabaena		4	3	3	10
Difflugia			2		
Oscillatoria			1		2
Cymbella			1		
Ankistrodesmus				1	26
Phacus					4
Cryptoglena	01-25-83	221	146	31	12
Synedra		1			1
Spirulina					
Microcystis					
Navicula				2	
Difflugia			4	1	3
Crucigenia					
Cyclotella		5	7	2	1
Ankistrodesmus		2		1	2
Anabaena		5	6	4	3
Closterium					1
Oedogonium					
Scenedesmus					
Trachelomonas		7	5	1	2
Pinnularia		1			
Oscillatoria			9		
Cryptoglena	02-08-83	206	93	29	37
Cyclotella		44	17	11	10
Anabaena			5	2	3
Trachelomonas		10	6	2	4
Synedra		4	2	1	
Crucigenia			1		
Navicula					
Difflugia		10	4	2	
Ankistrodesmus		2			
Mougeotia		6	1		
Closterium			1	1	2
Pinnularia				1	
Difflugia	03-01-83	7		1	1
Cryptoglena		30	7	72	21
Phacus		1			
Oscillatoria		4	1		1
Cyclotella		2	9		2
Trachelomonas		3	8	23	14
Synedra		2	1		2
Sphaerocystis		1			
Closterium		1		1	
Anabaena		1	2	2	
Pinnularia			1		
Conochilus			1		

Table 11. Continued.

GENERA	Date	A-3 0m	A-3 2m	A-4 0m	A-4 2m
Strombidium			1		
Bosmina				1	
Polyarthra				1	
Keratella				1	1
Ankistrodesmus					1
Synedra	03-13-83			1	
Cyclotella			3		
Cryptoglena		153	149	1	2
Cyclotella		3		4	
Difflugia				2	
Strombidium					
Trachelomonas		14	11	3	6
Pinnularia					
Navicula					
Anabaena		1		2	4
Bosmina				1	
Cyclops				1	
Ankistrodesmus				1	2
Oscillatoria				1	
Nauplius					2
Cryptoglena	03-29-83	218	203	28	31
Strombidium		1			
Difflugia				1	
Trachelomonas		2		2	
Keratella					1
Gyrosigma					
Oscillatoria		1		2	
Cyclotella		22	39		5
Trachelomonas			15		4
Vorticella		1	1		
Polyarthra			3		
Synedra			3	3	2
Ankistrodesmus			1		
Crucigenia				1	
Phacus					
Closterium				1	1
Navicula				1	
Anabaena				1	1
Trachelomonas	04-27-83	64	73		8
Difflugia		14	37	4	2
Cryptoglena		214	259		12
Euglena		1		28	1
Conochilus					
Netrium					
Navicula				2	
Cyclotella		18	2	4	3
Synedra		4	20	4	1
Anabaena		6	5	4	3
Polyarthra		1			
Daphnia		1			

Table 11. Continued.

GENERA	Date	A-3 0m	A-3 2m	A-4 0m	A-4 2m
Oscillatoria		1			3
Phacus			4		1
Strombidium			1	2	
Closterium				2	1
Cryptoglena	05-10-83	56	35	6	12
Cyclotella		40	18	2	4
Trachelomonas		28	40	30	12
Difflugia		3	6		4
Navicula			1		4
Oscillatoria		1			2
Synedra		5	2		4
Polyarthra		1			
Scenedesmus		1			2
Strombidium			1	2	2
Anabaena			2		2
Protococcus					2
Staurastrum					2
Closterium				6	2
Phacus				2	
Euglena				2	
Ankistrodesmus					2
Cryptoglena	05-25-83	58	47	18	7
Trachelomonas		16	7	1	2
Phacus		6			2
Cyclotella		12	5	3	4
Synedra		2			
Strombidium					
Gyrosigma					
Difflugia		16	5	3	1
Crucigenia		2			
Oscillatoria			1	1	2
Ankistrodesmus					1
Closterium					1
Anabaena					1
Trachelomonas	06-08-83	44	24	42	10
Strombidium			2		
Difflugia				12	2
Gyrosigma					
Synedra			2		
Cryptoglena		12	6	56	19
Crucigenia					
Keratella					
Pinnularia					
Navicula					
Cyclotella		4	4		
Phacus		1	2		
Ankistrodesmus		2		2	
Euglena					
Melosira			2		
Euglena		1			

Table 11. Continued.

GENERA	Date	A-3 0m	A-3 2m	A-4 0m	A-4 2m
Anabaena				2	1
Cosmarium					1
Mougeotia					1

Table 12A. Seasonal Scan (June 1982) for residual pesticides and metals.

Station 6/17/82	A-1	A-3	A-4	A-6	A-7	Units
Heptachlor	ND	0.02	ND	ND	ND	ppb
Aldrin	ND	0.02	ND	ND	ND	ppb
Heptachlor epoxide	ND	ND	ND	ND	ND	ppb
Dieldrin	ND	0.01	ND	ND	ND	ppb
Endrin	ND	ND	ND	ND	ND	ppb
Methoxychlor	ND	ND	ND	ND	ND	ppb
Lindane	<0.01	<0.01	ND	<0.01	<0.01	ppb
p,p^1 DDE	0.05	<0.01	0.01	0.01	0.01	ppb
p,p^1 DDD	0.04	<0.01	0.01	<0.01	ND	ppb
p,p^1 DDT	ND	ND	<0.01	<0.01	ND	ppb
Toxaphene	ND	ND	ND	ND	ND	ppb
Chlordane	ND	ND	ND	ND	ND	ppb
Aroclor 1260	ND	ND	ND	ND	ND	ppb
2, 4-D	ND	ND	ND	ND	ND	ppb
2, 4, 5-T	ND	ND	ND	ND	ND	ppb
Chromium	ND	ND	ND	ND	ND	ppm
Antimony	ND	ND	ND	<0.01	<0.01	ppm
Zinc	ND	ND	ND	ND	ND	ppm
Cadmium	ND	ND	ND	ND	<0.01	ppm
Copper	ND	ND	ND	ND	ND	ppm
Nickel	<0.01	<0.01	<0.01	0.01	0.01	ppm
Beryllium	<0.01	ND	ND	ND	ND	ppm
Thallium	ND	ND	ND	ND	ND	ppm
Silver	ND	ND	ND	ND	ND	ppm
Arsenic	15	21	ND	12	17	ppb
Selenium	ND	ND	ND	ND	ND	ppb
Mercury	10	ND	ND	ND	ND	ppb

ND = NON DETECTABLE

Concentrations were reported in micrograms per kilogram on a mass basis.

Table 12B. Seasonal Scan (November 1982) for residual pesticides and metals.

Station 11/30/82	A-1	A-3	A-4	A-7	Units
Heptachlor	ND	0.01	0.06	0.01	ppb
Aldrin	ND	ND	0.04	ND	ppb
Heptachlor epoxide	ND	ND	ND	ND	ppb
Dieldrin	0.02	0.08	0.12	0.07	ppb
Endrin	ND	ND	ND	ND	ppb
Methoxychlor	ND	ND	ND	ND	ppb
Lindane	ND	0.01	ND	0.02	ppb
p,p^1 DDE	0.03	0.07	ND	0.07	ppb
p,p^1 DDD	<0.01	0.04	ND	0.03	ppb
p,p^1 DDT	0.02	ND	ND	ND	ppb
Toxaphene	ND	ND	ND	ND	ppb
Chlordane	ND	ND	ND	ND	ppb
Aroclor 1260	ND	ND	ND	ND	ppb
2, 4-D	ND	ND	ND	ND	ppb
2, 4, 5-T	ND	ND	ND	ND	ppb
Chromium	ND	ND	ND	ND	ppm
Antimony	ND	ND	ND	ND	ppm
Zinc	0.03	0.1	ND	ND	ppm
Cadmium	ND	ND	ND	ND	ppm
Copper	0.4	ND	ND	ND	ppm
Nickel	ND	ND	ND	ND	ppm
Beryllium	ND	ND	ND	ND	ppm
Thallium	ND	0.1	0.1	0.1	ppm
Silver	ND	ND	ND	ND	ppm
Arsenic	1.4	1.4	1.2	4.4	ppb
Selenium	ND	ND	ND	ND	ppb
Mercury	3.0	2.8	2.9	4.3	ppb

ND = NON DETECTABLE

Table 12C. Seasonal Scan (March 1983) for residual pesticides and metals.

Station 03/15/83	A-1	A-3	A-4	A-7	Units
Heptachlor	ND	0.01	ND	ND	ppb
Aldrin	ND	ND	ND	ND	ppb
Heptachlor epoxide	0.03	0.02	<0.01	ND	ppb
Dieldrin	0.08	0.05	0.01	ND	ppb
Endrin	ND	ND	ND	ND	ppb
Methoxychlor	ND	ND	ND	ND	ppb
Lindane	0.02	0.02	0.01	<0.01	ppb
p,p^1 DDE	0.03	0.02	0.02	<0.01	ppb
p,p^1 DDD	ND	ND	ND	ND	ppb
p,p^1 DDT	0.28	0.07	0.07	0.01	ppb
Toxaphene	ND	ND	ND	ND	ppb
Chlordane	ND	ND	ND	ND	ppb
Aroclor 1260	ND	ND	ND	ND	ppb
2, 4-D	ND	ND	ND	ND	ppb
2, 4, 5-T	ND	0.08	0.03	0.06	ppb
Chromium	ND	ND	ND	ND	ppm
Antimony	ND	ND	ND	ND	ppm
Zinc	ND	ND	ND	ND	ppm
Cadmium	ND	ND	ND	ND	ppm
Copper	ND	ND	ND	ND	ppm
Nickel	ND	ND	ND	ND	ppm
Beryllium	ND	ND	ND	ND	ppm
Thallium	ND	ND	ND	ND	ppm
Silver	ND	ND	ND	ND	ppm
Arsenic	8.1	4.7	4.7	5.3	ppb
Selenium	ND	ND	ND	ND	ppb
Mercury	24.1	ND	ND	1562.5	ppb

ND = NON DETECTABLE

Table 12D. Seasonal Scan (May 1983) for residual pesticides and metals.

Station 05/25/83	A-1	A-3	A-4	A-7	Units
Heptachlor	ND	ND	ND	ND	ppb
Aldrin	ND	ND	ND	ND	ppb
Heptachlor epoxide	ND	ND	ND	ND	ppb
Dieldrin	ND	ND	ND	ND	ppb
Endrin	ND	ND	ND	ND	ppb
Methoxychlor	ND	ND	ND	ND	ppb
Lindane	ND	ND	ND	ND	ppb
p,p^1 DDE	0.01	0.01	0.93	0.04	ppb
p,p^1 DDD	ND	ND	ND	ND	ppb
p,p^1 DDT	0.04	0.07	0.07	0.13	ppb
Toxaphene	ND	ND	ND	0.38	ppb
Chlordane	ND	ND	ND	ND	ppb
Aroclor 1260	ND	ND	ND	ND	ppb
2, 4-D	ND	ND	ND	ND	ppb
2, 4, 5-T	0.05	ND	ND	ND	ppb
Chromium	ND	ND	ND	ND	ppm
Antimony	ND	ND	ND	ND	ppm
Zinc	ND	ND	ND	ND	ppm
Cadmium	ND	ND	ND	ND	ppm
Copper	ND	ND	ND	ND	ppm
Nickel	ND	ND	ND	ND	ppm
Beryllium	ND	ND	ND	ND	ppm
Thallium	ND	ND	ND	ND	ppm
Silver	ND	ND	ND	ND	ppm
Arsenic	7.8	4.9	4.2	4.2	ppb
Selenium	ND	ND	ND	ND	ppb
Mercury	ND	ND	ND	ND	ppb

ND = NON DETECTABLE

Table 13. Pesticide and Metal Concentration in Selected Sediment Cores (4 inch increment) from Moon Lake, MS.

Core Site Depth	#01 0-4"	#01 4-8"	#01 8-12"	Units
Heptachlor	ND	ND	ND	ppb
Aldrin	ND	ND	ND	ppb
Heptachlor epoxide	ND	ND	1.2	ppb
Dieldrin	10.2	8.5	10.9	ppb
Endrin	ND	ND	ND	ppb
Methoxychlor	ND	ND	ND	ppb
Lindane	ND	ND	ND	ppb
p,p_1 DDE	427.0	149.9	154.0	ppb
p,p_1 DDD	115.5	87.5	88.6	ppb
p,p_1 DDT	57.7	43.2	41.7	ppb
Toxaphene	131.2	108.5	124.8	ppb
Chlordane	ND	ND	ND	ppb
Aroclor 1260	ND	ND	ND	ppb
2, 4-D	ND	ND	ND	ppb
2, 4, 5-T	ND	ND	ND	ppb
Chromium	5.7	8.5	8.0	ppm
Antimony	ND	ND	ND	ppm
Zinc	31.6	46.6	46.5	ppm
Cadmium	ND	ND	ND	ppm
Copper	9.4	11.7	11.2	ppm
Nickel	9.4	11.7	11.2	ppm
Beryllium	ND	ND	ND	ppm
Thallium	ND	ND	ND	ppm
Silver	ND	ND	ND	ppm
Arsenic	5404	8352	7419	ppb
Selenium	23.3	54.8	44.9	ppb
Mercury	ND	ND	11.1	ppb

ND = NON DETECTABLE

Table 13. (Continued)

Core Site Depth	#03 0-4"	#03 4-8"	#03 8-12"	#03 12-16"	#03 16-20"	#03 20-24"	#03 24-28"	#03 28-32"	#03 32-36"	#03 36-40"	Units
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Aldrin	1.6	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Heptachlor epoxide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Dieldrin	ND	10.6	13.8	11.4	ND	ND	ND	ND	ND	ND	ppb
Endrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Methoxychlor	ND	ND	ND	ND	ND	ND	ND	ND	0.3	ND	ppb
Lindane	1.5	1.8	2.1	3.1	2.2	1.6	0.5	6.6	0.5	2.1	ppb
p,p_1' DDE	93.6	112.7	124.4	164.4	271.2	171.7	150.3	183.2	66.4	6.9	ppb
p,p_1' DDD	95.4	145.5	174.2	115.2	254.6	100.3	54.8	52.6	18.1	2.0	ppb
p,p' DDT	84.9	109.8	126.2	65.6	125.0	67.1	72.8	36.7	12.3	0.9	ppb
Toxaphene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Chlordane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Aroclor 1260	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
2, 4-D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
2, 4, 5-T	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Chromium	22.3	5.2	4.8	3.2	4.7	4.9	3.0	5.9	3.7	3.9	ppm
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppm
Zinc	81.7	28.4	30.4	24.0	32.3	31.0	25.5	26.9	27.2	25.9	ppm
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppm
Copper	19.1	6.0	5.3	4.4	6.2	5.6	4.2	4.8	5.1	3.8	ppm
Nickel	17.0	5.8	6.0	5.2	6.4	5.7	5.0	5.3	5.4	4.9	ppm
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppm
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppm
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppm
Arsenic	10518.0	2976.7	2782.5	2591.8	3215.2	2366.8	2632.4	1483.7	1211.5	2435.1	ppb
Selenium	95.5	100.2	104.8	102.2	111.7	94.7	108.1	73.5	67.4	83.2	ppb
Mercury	20.8	82.0	4.1	ND	ND	6.9	ND	24.3	12.8	13.3	ppb

ND = NON DETECTABLE

Table 13. (Continued)

Core Site Depth	#09 0-4"	#09 4-8"	#09 8-12"	#09 12-16"	#09 16-20"	#09 20-24"	#09 24-28"	#09 28-32"	#09 32-36"	#09 36-40"	Units
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Heptachlor epoxide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Dieldrin	ND	ND	ND	ND	ND	ND	ND	1.4	ND	1.2	ppb
Endrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Methoxychlor	ND	ND	ND	ND	6.4	ND	ND	ND	ND	ND	ppb
Lindane	1.4	1.7	ND	1.4	1.0	10.3	1.7	0.5	2.0	5.9	ppb
p,p_1 DDE	80.1	124.3	91.9	90.2	167.8	186.5	205.5	221.2	136.2	89.5	ppb
p,p_1 DDD	99.0	154.5	44.8	53.6	182.1	71.0	53.2	29.5	19.0	11.6	ppb
p,p_1 DDT	24.8	49.5	15.7	19.7	35.3	21.2	20.5	26.4	15.7	5.9	ppb
Toxaphene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Chlordane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Aroclor 1260	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
2, 4-D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
2, 4, 5-T	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Chromium	2.4	3.8	2.2	1.8	3.5	2.3	2.0	2.4	2.7	1.6	ppm
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppm
Zinc	17.5	23.5	15.7	16.3	25.2	16.0	16.2	21.9	17.6	18.4	ppm
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppm
Copper	3.0	4.0	2.6	2.7	4.4	2.8	2.7	4.1	2.8	3.8	ppm
Nickel	2.9	4.2	3.0	2.9	4.7	3.0	3.0	4.2	3.0	2.1	ppm
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppm
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppm
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppm
Arsenic	1954.8	1560.2	1834.0	1360.0	1679.7	1419.6	1278.7	1347.6	1072.9	1618.6	ppb
Selenium	29.1	153.3	29.9	128.5	100.6	41.8	35.4	32.1	52.0	48.6	ppb
Mercury	14.9	ND	ND	ND	10.5	16.6	ND	ND	4.2	22.0	ppb

ND = NON DETECTABLE

Table 13. (Continued)

Core Site Depth	#15 0-4"	#15 4-8"	#15 8-12"	#15 12-16"	#15 16-20"	#15 20-24"	#15 24-28"	#15 28-32"	#15 32-36"	Units
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Heptachlor epoxide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Dieldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Endrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Methoxychlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Lindane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
p,p_1 DDE	125.9	206.1	177.4	132.6	53.3	30.8	2.0	ND	ND	ppb
p,p_1 DDD	65.4	72.0	17.4	8.8	4.4	1.1	ND	ND	ND	ppb
p,p_1 DDT	22.6	25.9	10.9	5.1	2.1	ND	ND	ND	ND	ppb
Toxaphene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Chlordane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Aroclor 1260	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
2, 4-D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
2, 4, 5-T	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppb
Chromium	26.6	25.3	35.8	29.9	27.0	25.4	26.6	56.3	30.7	ppm
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppm
Zinc	136.5	129.3	157.4	126.9	119.9	118.2	110.0	111.3	118.9	ppm
Cadmium	ND	20.6	ND	ND	ND	ND	ND	ND	ND	ppm
Copper	30.3	30.4	35.8	29.6	27.0	28.1	28.6	27.1	30.7	ppm
Nickel	22.8	25.3	30.1	23.7	24.5	23.3	23.7	39.1	28.8	ppm
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppm
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppm
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ppm
Arsenic	24229	19527	15726	9670	10354	13269	12220	12160	12606	ppb
Selenium	197.2	190.3	181.7	208.9	161.8	220.5	189.1	153.9	207.1	ppb
Mercury	13.7	5.1	29.7	71.6	35.9	16.0	22.1	23.5	2.4	ppb

ND = NON DETECTABLE

Table 14. Concentrations of selected contaminants in soils representing NW quarter of each square mile of Moon Lake Watershed. Sample composites of 20 cores were taken to 20 cm depth.

SAMPLE I.D.	SITE	DDE (ppb)	DDD (ppb)	DDT (ppb)	Toxa-phene (ppb)	Arsenic (ppb)	Mercury (ppb)
01	BEANS	2.61	8.36	53.63	133.36		
02	BEANS	13.90	39.30	167.70	687.80		
3A	WETLAND	6.08	3.87	27.66	735.57		
3B	BEANS	11.10	35.80	34.60	350.50		
04	WETLAND	0.33	1.31	5.91	ND		
05	COTTON	18.00	39.60	210.50	1368.60		
06	BEANS	0.06	0.22	0.25	ND		
07	COTTON	7.50	24.90	102.20	659.19		
08	COTTON	2.82	8.14	30.85	476.56		
09	COTTON	19.80	51.90	282.50	620.70	5560.0	32.6
10	COTTON	1.20	5.04	25.11	483.68		
11	COTTON	375.60	511.30	515.90	2019.80		
12	COTTON	5.77	19.94	107.28	2175.88		
13	COTTON	132.90	377.70	1965.40	1355.60		
14	BEANS	ND	ND	ND	1009.93		
15	COTTON	297.70	370.20	1014.90	1870.80		
16	BEANS	ND	ND	ND	670.25		
17	BEANS	291.70	319.90	1631.60	1357.70		
18	BEANS	ND	ND	ND	878.71		
19	COTTON	123.90	268.80	1300.90	1176.40	5110.0	51.8
20	COTTON	ND	ND	ND	1669.17		
21	COTTON	26.00	64.60	252.50	1956.00		
22	BEANS	ND	ND	ND	776.63		
23	COTTON	7.20	14.90	51.10	603.30		
24	BEANS	7.03	4.32	27.60	665.95		
25	BEANS	1.30	1.60	6.60	87.70		
26	BEANS	0.86	1.63	6.78	286.64		
27	BEANS	0.50	1.30	7.70	38.80		
28	BEANS	0.33	3.94	26.33	560.78		
29	BEANS	2.50	4.40	19.30	211.60	3270.0	25.2
30	COTTON	3.08	10.38	77.33	826.46		
31	BEANS	9.50	18.00	22.20	1873.40		
32	BEANS	ND	2.30	14.84	ND		
33	BEANS	0.90	1.10	6.80	90.70		
34	FALLOW	ND	ND	ND	ND		
35	BEANS	3.20	3.20	15.50	174.50		
36	BEANS	ND	ND	ND	1935.00		
37	BEANS	14.40	42.60	208.90	1416.80		
38	BEANS	ND	ND	ND	7377.72		
39	BEANS	5.60	4.40	25.70	395.90	8990.0	26.4
40	COTTON	1.55	4.15	21.03	2306.04		
41	BEANS	3.30	7.90	45.60	278.80		
42	BEANS	4.45	9.63	ND	1473.47		
44	BEANS	10.90	26.20	128.40	539.90		
45	BEANS	84.18	59.03	496.59	341.69		
46	BEANS	540.90	1288.20	581.30	ND	4591.4	216.3

Table 14. (Continued)

SAMPLE I.D.	SITE	DDE (ppb)	DDD (ppb)	DDT (ppb)	Toxa-phene (ppb)	Arsenic (ppb)	Mercury (ppb)
48	BEANS	958.20	4833.38	615.35	ND	9069.0	400.3
51	BEANS	2.60	2.70	11.80	219.50		
53	BEANS	46.83	57.12	102.30	ND		
54	BEANS	2.80	4.30	30.40	7.60		
55	BEANS	437.64	157.55	664.01	604.03		
56	BEANS	ND	ND	ND	ND	3740.0	39.5
57	BEANS	ND	ND	ND	ND		
58	BEANS	ND	ND	ND	ND		
59	BEANS	ND	ND	ND	ND		
60	BEANS	ND	ND	ND	25.20		
61	BEANS	24.23	20.96	76.83	ND		
63	COTTON	ND	ND	ND	ND		
64	COTTON	ND	ND	ND	ND		
65	COTTON	ND	ND	ND	ND		
66A	WETLAND	ND	ND	ND	ND		
66B	WETLAND	ND	ND	ND	ND	5770.0	135.0
68	BEANS	ND	ND	ND	ND		

Table 15. Concentrations of selected contaminants from bottom sediments of major lakes and wetlands in Moon Lake Watershed.

SITE	DEPTH mi max	DDE (ppb)	DDD (ppb)	DDT (ppb)	Toxa-phene (ppb)	Permi-thrin (ppb)	Methyl Parath (ppb)	Pydrin (ppb)	Arsenic (ppb)	Mercury (ppb)
WILLOW SWAMP	0 10	68.05	47.32	ND	ND	ND	ND	ND	6720.0	ND
WILLOW SWAMP	10 20	24.87	30.35	ND	ND	ND	ND	ND	4920.0	ND
WILLOW SWAMP	20 30	ND	ND	ND	ND	ND	ND	ND	4780.0	ND
BEAR LAKE	0 10	97.13	101.27	30.99	ND	0.60	ND	ND	6420.0	ND
BEAR LAKE	10 20	117.18	76.27	35.21	ND	ND	ND	ND	7590.0	ND
BEAR LAKE	20 30	107.04	40.39	ND	ND	ND	ND	ND	7390.0	ND
CYPRESS LAKE	0 10	152.86	160.14	70.87	ND	3.18	8.26	ND	8130.0	ND
CYPRESS LAKE	10 20	119.80	50.38	ND	ND	ND	ND	ND	7610.0	ND
CYPRESS LAKE	20 30	94.32	25.28	ND	ND	ND	ND	ND	7490.0	ND
BEAVERDAM BAYOU	0 10	243.48	174.46	ND	ND	ND	ND	ND	10660.0	ND
BEAVERDAM BAYOU	10 20	220.91	233.60	ND	ND	ND	ND	ND	11680.0	ND
UP\BEAVERDAM LA	0 10	273.38	108.38	ND	ND	ND	ND	ND	4970.0	ND
UP\BEAVERDAM LA	10 20	411.78	156.36	ND	ND	ND	ND	ND	4080.0	ND
UP\BEAVERDAM LA	20 30	ND	ND	ND	ND	ND	ND	ND	6080.0	ND
LO\BEAVERDAM LA	0 10	234.66	45.25	ND	ND	ND	ND	ND	6030.0	ND
LO\BEAVERDAM LA	10 20	66.28	ND	ND	ND	ND	ND	ND	8440.0	ND
LO\BEAVERDAM LA	20 30	ND	ND	ND	ND	ND	ND	ND	1700.0	ND