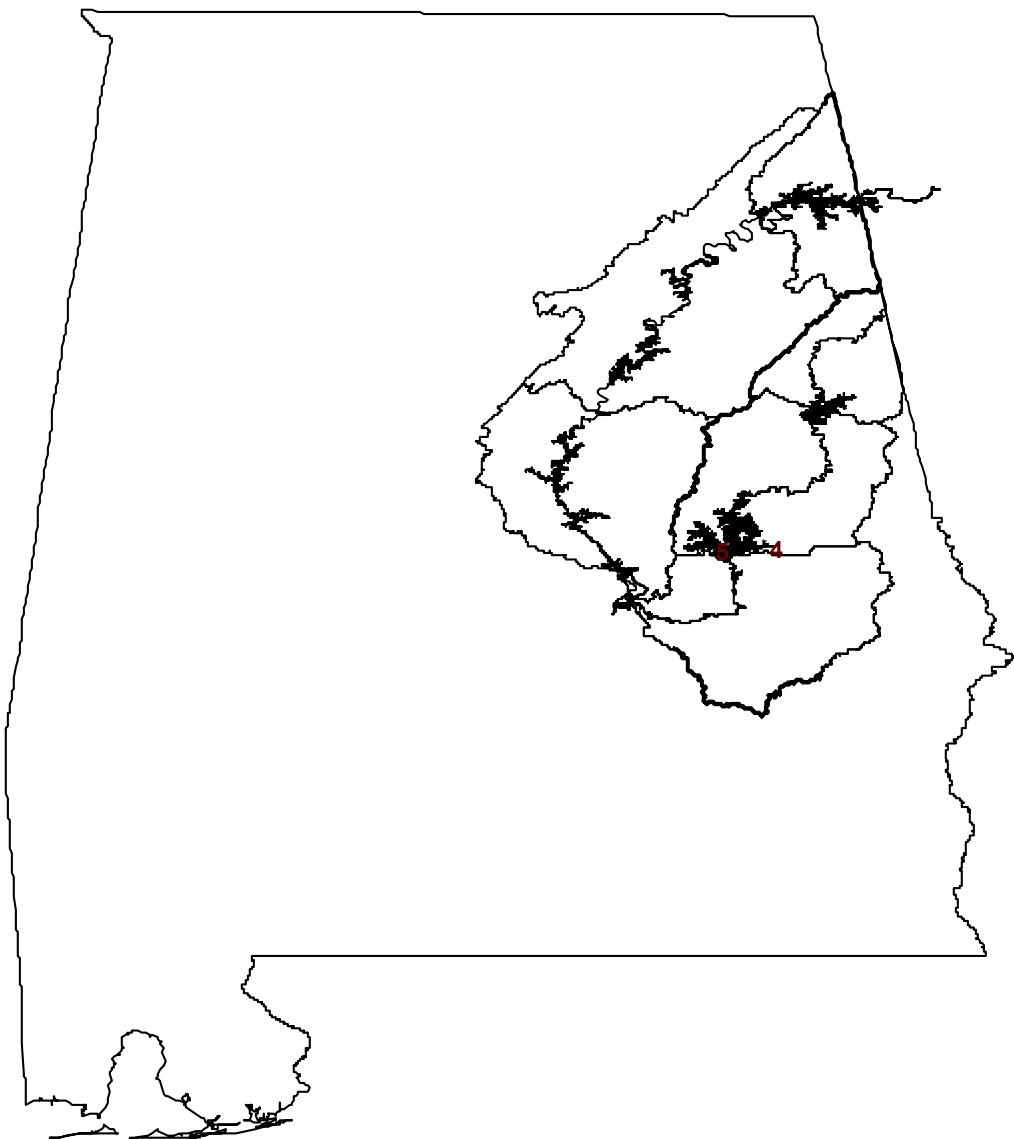


Intensive Water Quality Survey of Coosa and Tallapoosa River Reservoirs

1997



Environmental Indicators Section
Field Operations Division
Alabama Department of Environmental Management

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March 24, 1999

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Preface

This project was funded or partially funded by the Alabama Department of Environmental Management utilizing a Clean Water Act Section 106 provided by the U.S. Environmental Protection Agency - Region 4.

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INTRODUCTION

ADEM Reservoir Water Quality Monitoring Program

Section 314(a)(1) of the Water Quality Act of 1987 requires states to conduct assessments of the water quality of publicly-owned lakes and report the findings as part of their biennial 305(b) Water Quality Report To Congress. Prior to 1997, funding for the assessments was provided by Lake Water Quality Assessment (LWQA) grants administered through the Clean Lakes Program of the United States Environmental Protection Agency (EPA). Submittal to the EPA of approved lakes assessment information from states ensured continued eligibility for financial assistance under the Clean Lakes Program. With the discontinuance of Clean Lakes Program funding, water quality assessments are currently conducted using funding from a variety of sources, including Clean Water Act Section 319 funds.

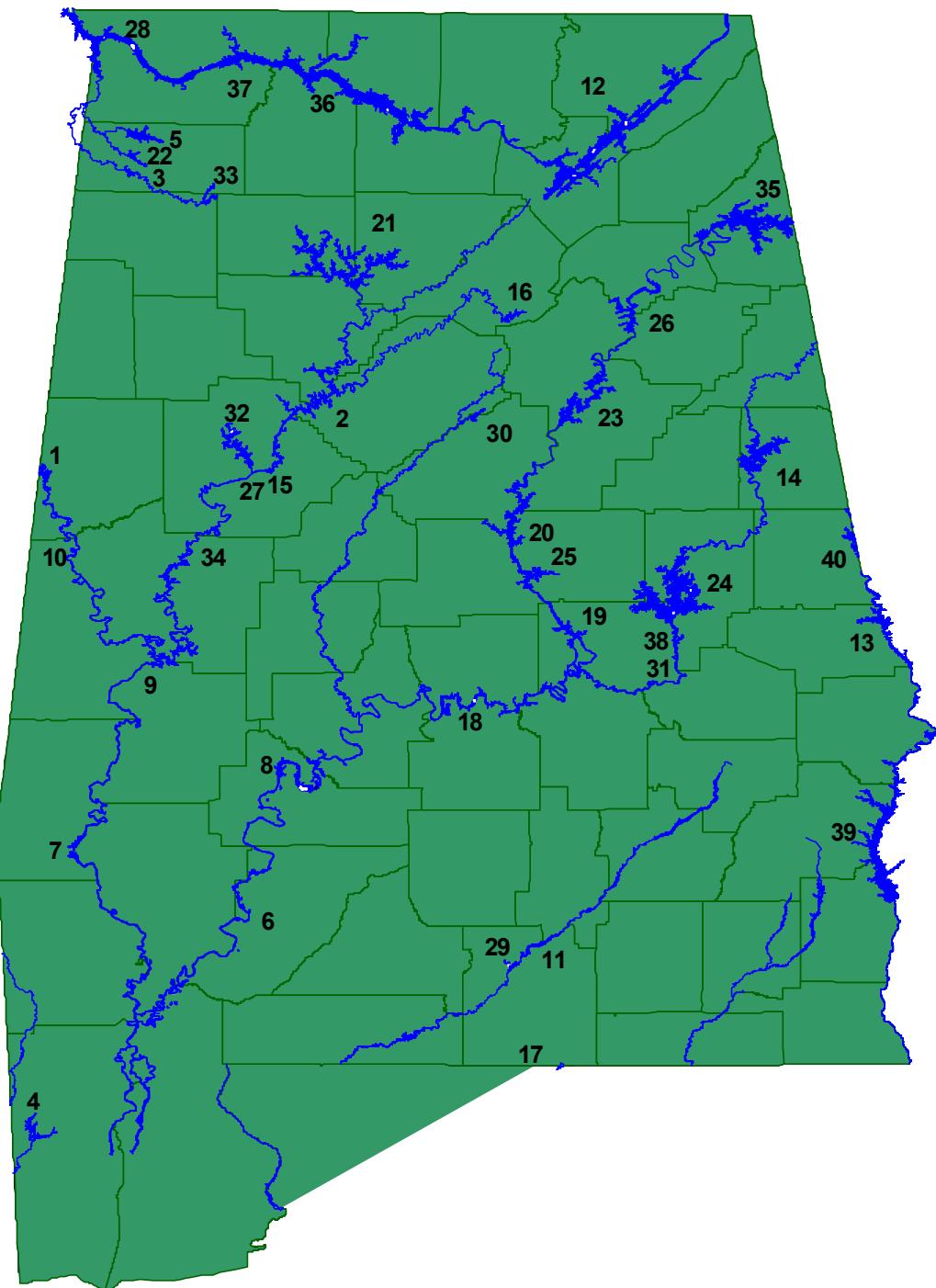
The Alabama Department of Environmental Management (ADEM) has defined publicly-owned lakes/reservoirs as those that are of a multiple-use nature, publicly-accessible, and exhibit physical/chemical characteristics typical of impounded waters. Lakes designated strictly for water supply, privately owned lakes, or lakes managed by the Alabama Department of Conservation and Natural Resources (ADCNR) strictly for fish production are not included in this definition. Lakes meeting the above definition are listed in Figure 1.

In 1985, the need for information on the trophic state of Alabama's publicly-owned lakes led to an initial survey conducted by ADEM with the assistance of the Environmental Protection Agency (EPA), Region IV. The survey established limited baseline information on the lakes and was used to rank them according to trophic condition.

In 1989, LWQA funds enabled the ADEM to conduct required water quality assessments of thirty-four publicly-owned lakes in the state and submit the collected information as part of the 1990 305(b) Water Quality Report to Congress (ADEM 1989). Trophic state index (TSI) values calculated from data gathered for the water quality

Figure 1.

Alabama Publicly Accessible Reservoirs



- 1) Aliceville
- 2) Bankhead
- 3) Bear Creek
- 4) Big Creek
- 5) Cedar Creek
- 6) Claiborne
- 7) Coffeeville
- 8) Dannelly
- 9) Demopolis
- 10) Gainesville
- 11) Gantt
- 12) Guntersville
- 13) Harding
- 14) Harris
- 15) Holt
- 16) Inland
- 17) Jackson
- 18) Jones Bluff
- 19) Jordan
- 20) Lay
- 21) Lewis Smith
- 22) Little Bear Creek
- 23) Logan-Martin
- 24) Martin
- 25) Mitchell
- 26) Neely Henry
- 27) Oliver
- 28) Pickwick
- 29) Point A
- 30) Purdy
- 31) Thurlow
- 32) Tuscaloosa
- 33) Upper Bear Creek
- 34) Warrior
- 35) Weiss
- 36) Wheeler
- 37) Wilson
- 38) Yates
- 39) W. F. George
- 40) West Point

assessments indicated potentially significant increases when compared to TSI values from the study conducted in 1985.

In 1990, the Reservoir Water Quality Monitoring (RWQM) Program was initiated by the Special Studies Section of the Field Operations Division of ADEM. Objectives of the program are as follows:

- a) to develop an adequate water quality database for all publicly-owned lakes in the state;
- b) to establish trends in lake trophic status that can only be established through long-term monitoring efforts; and,
- c) to satisfy the requirement of Section 314(a)(1) of the Water Quality Act of 1987 that states conduct assessments of the water quality of publicly-owned lakes and report the findings as part of their biennial Water Quality Report to Congress.

Acquiring this information enables the ADEM to determine lake water quality and identify those in which water quality may be deteriorating. Should a deterioration in lake water quality be indicated by collected data, more intensive study of the lake can be instituted to establish causes and extent of the deterioration.

Thirty-one publicly-owned lakes in the state were monitored at least once during the three-year period 1990-1992. In 1991, additional funding received through the Clean Lakes Program enabled the expansion of the RWQM Program to include all of the 31 publicly-owned lakes in the state, with the exception of those in the Tennessee River system. Expansion of the program allowed more extensive monitoring of certain lakes for which water quality concerns were greatest and the inclusion of Alabama/Georgia border lakes that were not included in earlier water quality assessments.

Beginning in 1994, the frequency of reservoir monitoring in the RWQM Program was increased to a minimum of once every two years so that the water quality database

and trends in trophic status could be developed more rapidly. Lakes indicated to be use-threatened or impaired from previously collected data continued to be monitored annually. Realignment of the reservoir sampling schedule was also begun in 1994 so that reservoir sampling by basin could be instituted by 1996.

Water diversion activities have been proposed in both the Coosa and Tallapoosa watersheds in Georgia (Nolton Johnson, Georgia Environmental Protection Division). Construction of water supply reservoirs has commenced (personal communication, Dr. David Bayne) and water diversion may begin before scheduled watershed monitoring of the Coosa and Tallapoosa River basins in the year 2000. Water diversion will reduce flows within both basins and could, depending upon the allocation plan selected, result in negative impacts to downstream water quality. Therefore, intensive monitoring of reservoirs of the Coosa and Tallapoosa River basins was proposed for 1996 to gather pre-diversion water quality data that could be used for comparisons with post-diversion data. Spring season sampling of various reservoirs previously conducted in the RWQM Program was discontinued to allow allocation of resources toward this effort. However, intensive monitoring of Coosa and Tallapoosa reservoirs was not conducted during 1996 because of conflicting water quality study requirements. In 1997, intensive monitoring of reservoirs of the Coosa and Tallapoosa basins was conducted. Spring season sampling of various reservoirs previously conducted in the RWQM Program was again discontinued to allow allocation of resources toward this effort.

MATERIALS AND METHODS

Sampling Locations. Reservoirs sampled during 1997 appear in Table 1. Locations of sampling sites appear in Table 2. All reservoirs were sampled in the dam forebay. Multiple sites were sampled on larger reservoirs. Water quality measurements and water sample collections were conducted from boats positioned at the deepest point of the channel at each sampling site.

Sample Collection. Intensive monitoring of reservoirs consisted of monthly sampling of all stations from April through October in the Coosa basin and from April through September in the Tallapoosa basin. Reservoirs within each basin were sampled within a one-week period to reduce weather-related variability in water quality conditions.

Monitoring and analyses were conducted in accordance with appropriate standard operating procedures. Water quality variables measured during 1997 appear in Table 3.

At each sampling site temperature, dissolved oxygen, specific conductance, and pH were measured *in situ* at multiple depths in the water column with Hydrolab Surveyor III instruments.

A standard, 20 cm diameter Secchi disk with attenuating black and white quadrants was used to measure visibility. Photic zone depth determinations were made by measuring the vertical illumination of the water column using an underwater photometer. The depth at which one percent of the surface illumination was measured by the photometer was considered the photic zone depth. A composite water sample of twenty liters was collected from the photic zone. The sample was collected by raising and lowering a plastic submersible pump and hose apparatus repeatedly through the photic zone while collecting the sample in a plastic container. Withdrawal of individual samples from the composite water sample occurred in the order presented in the following paragraphs.

Chlorophyll *a* samples were collected by filtering a minimum of 500 ml of the composite photic zone sample through glass fiber filters immediately after collection of

Table 1. Reservoirs sampled during the Intensive Water Quality Survey of Coosa and Tallapoosa River Reservoirs, 1997.

River Basin	Reservoir	Surface Area (acres)	Drainage Area (sq. miles)
Coosa			
	Weiss	30,200	5,270
	Neely-Henry	11,235	6,600
	Logan-Martin	15,260	7,700
	Lay	12,000	9,087
	Mitchell	5,850	9,827
	Jordan	6,800	10,165
Tallapoosa			
	Harris	10,660	1,453
	Martin	39,000	3,000
	Yates	1,980	3,250
	Thurlow	585	3,300

Table 2. Monitoring sites for the Intensive Water Quality Survey of Coosa and Tallapoosa River Reservoirs, 1997.

Basin	Reservoir	Site	Latitude/ Longitude			County	Section, Township, Range	Station Description
Coosa								
Weiss	Sta. 1	34 10 24	Cherokee	SW 1/4, Sec 12, T10S, R8E	Deepest point, main river channel, power dam forebay.			
		85 45 17						
		34 12 54	Cherokee	NW 1/4, Sec 32, T9S, R10E	Deepest point, main river channel, immediately upstream of causeway at Cedar Bluff.			
		85 36 38						
		34 12 38	Cherokee	SE 1/4, Sec 35, T9S, R10E	Deepest point, main river channel, at power line crossing upstream of Spring Creek.			
	Sta. 3	85 32 52						
		34 10 45	Cherokee	SW 1/4, Sec 09, T10S, R11E	Deepest point, main river channel, immediately upstream of Mud Creek / Coosa River confluence.			
	Sta. 4	85 29 04						
		33 47 05	Calhoun	SW 1/4, Sec 30, T14S, R6E	Deepest point, main river channel, dam forebay.			
		86 03 14						
		33 59 28	Etowah	NW 1/4, Sec 15, T12S, R6E	Deepest point, main river channel, immediately upstream of I-759 highway bridge.			
		85 59 57						
Neely-Henry	Sta. 1	33 56 36	Etowah	SE 1/4, Sec 32, T12S, R6E	Deepest point, main river channel, immediately upstream of Alabama Highway 77 bridge.			
		86 01 30						
		33 56 17	Etowah	Sec 6, T13S, R6E	Deepest point of main channel, immediately upstream of Whorton's Bend.			
		85 57 09						
	Sta. 2	33 25 39	Talladega	NW 1/4, Sec 33, T18S, R3E	Deepest point, main river channel, dam forebay .			
		86 20 00						
		33 35 39	Talladega	SW 1/4, Sec 34, T16S, R4E	Deepest point, main river channel. Downstream of I-20 bridge, immediately upstream of Riverside Marina.			
		86 12 50						
Logan-Martin	Sta. 3	33 30 00	Talladega	NW 1/4, Sec 4, T18S, R4E	Deepest point, main river channel. Approximately 1.5 miles downstream of Alabama Highway 34 bridge.			
		86 13 51						
		32 58 05	Coosa	NW 1/4, Sec 19, T23N, R15E	Deepest point, main river channel, dam forebay .			
		86 31 01						
	Sta. 2	33 13 13	Talladega	NW 1/4, Sec 08, T21S, R2E	Deepest point, main river channel, upstream of Bullock's Islands.			
		86 27 55						
	Sta. 3	33 06 35	Shelby	NE 1/4, Sec 24, T21S, R2E	Mid-channel, immediately downstream of Peckerwood Creek / Coosa River confluence.			
		86 29 25						

Table 2. Monitoring sites for the Intensive Water Quality Survey of Coosa and Tallapoosa River Reservoirs, 1997.

Basin	Reservoir	Site	Latitude/ Longitude			County	Section, Township, Range	Station Description
Tallapoosa	Mitchell	Sta. 1	32	48	23	Coosa	NE 1/4, Sec 14, T21N, R16E	Deepest point, main river channel, dam forebay .
			86	26	42			
		Sta. 2	32	53	55	Coosa	NE 1/4, Sec 08, T22N, R16E	Deepest point, main river channel, downstream of Foshee Islands.
			86	29	17			
	Jordan	Sta. 1	32	37	20	Elmore	SW 1/4, Sec 15, T19N, R18E	Deepest point, main river channel, dam forebay .
			86	15	41			
		Sta. 2	32	40	33	Elmore	SE 1/4, Sec 35, T20N, R17E	Deepest point, main river channel, upstream of Weoka Creek / Coosa River confluence.
			86	19	47			
	Harris	Sta. 1	33	15	37	Randolph	NW 1/4, Sec 28, T20S, R10E	Deepest point, main river channel, dam forebay .
			85	37	02			
		Sta. 2	33	18	44	Randolph	NW 1/4, Sec 2, T20S, R10E	Deepest point, main river channel, immediately upstream of Tallapoosa River / Little Tallapoosa River confluence .
			85	34	27			
		Sta. 3	33	24	27	Randolph	SW 1/4, Sec 34, T18S, R10E	Deepest point, Tallapoosa main river channel, immediately downstream of Randolph County Hwy 82 bridge.
			85	35	33			
	Martin	Sta. 4	33	20	54	Randolph	NE 1/4, Sec 25, T19S, R10E	Deepest point, Little Tallapoosa main river channel, immediately downstream of Randolph County Hwy 29.
			85	35	12			
		Sta. 1	32	40	53	Elmore	SE 1/4, Sec 25, T20N, R21E	Deepest point, main river channel, dam forebay .
			85	54	42			
		Sta. 2	32	44	00	Tallapoosa	NW 1/4, Sec 8, T20N, R22E	Deepest point, main river channel, at confluence of Blue Creek and Tallapoosa River.
			85	53	02			
	Yates	Sta. 3	32	44	34	Elmore	SW 1/4, Sec 4, T20N, R21E	Deepest point, main creek channel, immediately upstream of Alabama Highway 63 (Kowaliga) bridge.
			85	57	47			
		Sta. 4	32	51	45	Tallapoosa	SW 1/4, Sec 30, T22N, R22E	Deepest point, main river channel, upstream of Wind Creek State Park.
			85	54	10			
		Sta. 1	32	34	30	Elmore	SE 1/4, Sec 18, T18N, R22E	Deepest point, main river channel, dam forebay .
			85	53	22			
	Thurlow	Sta. 2	32	36	43	Tallapoosa	SW 1/4, Sec 20, T19N, R22E	Deepest point, main creek channel, Sougahatchee Creek embayment. Approximately 1.6 miles upstream from the Tallapoosa River confluence
			85	52	37			
	Thurlow	Sta. 1	32	32	10	Elmore	SE 1/4, Sec 18, T18N, R22E	Deepest point, main river channel, dam forebay .
			85	53	20			

Table 3. Water quality variables measured during the Intensive Water Quality Survey of Coosa and Tallapoosa River Reservoirs, 1997.

Variable	Method	Reference	Detection Limit
Physical			
Vertical illumination	Photometer, Secchi disk	Lind, 1979	---
Temperature	Thermistor	APHA et al. 1992	---
Turbidity	Nephelometer	APHA et al. 1992	---
Total dissolved solids	Filtration, drying	EPA-600/4-79-020	1 mg/l
Total suspended solids	Filtration, drying	EPA-600/4-79-020	1 mg/l
Specific conductance	Wheatstone bridge	APHA et al. 1992	---
Hardness	Titrametric, EDTA	EPA-600/4-79-020	1 mg/l
Alkalinity	Potentiometric titration	EPA-600/4-79-020	1 mg/l
Chemical			
Dissolved oxygen	Membrane electrode	APHA et al. 1992	---
pH	Glass electrode	APHA et al. 1992	---
Ammonia	Automated phenate	EPA-600/4-79-020	0.015 mg/l
Nitrate + Nitrite	Cadmium reduction	EPA-600/4-79-020	0.003 mg/l
Total Kjeldahl Nitrogen	Automated colorimetric	EPA-600/4-79-020	0.15 mg/l
Soluble reactive phosphorus	Automated single reagent	EPA-600/4-79-020	0.004 mg/l
Total phosphorus	Persulfate digestion	EPA-600/4-79-020	0.004 mg/l
Total organic carbon	Persulfate-ultraviolet	EPA-600/4-79-020	0.50 mg/l
Biological			
Chlorophyll a	Spectrophotometric	APHA et al. 1992	0.1 mg/l
Fecal coliform	Membrane filter	APHA et al. 1992	---

the composite sample. Immediately after filtering, each filter was folded once and placed in a 50 mm petri dish. Each petri dish was wrapped in aluminum foil, sealed in a ziploc bag, and placed on ice for shipment to the Field Operations Division to be frozen until analyzed. Corrected chlorophyll *a* concentrations were used in calculating Carlson's trophic state index (TSI) for lakes. A more detailed discussion of Carlson's TSI appears later in this section.

Soluble reactive phosphorus (formerly termed orthophosphate) samples were collected by vacuum-filtering 200 ml of the composite sample through 0.45 micron Millipore membrane filters and collecting the filtrate in acid-washed 250 ml Nalgene containers.

Finally, two half-gallon portions of the composite sample were collected in plastic containers and properly preserved for laboratory analysis of water quality variables. Subsurface grab samples were collected in properly prepared containers at each sampling site for fecal coliform analysis.

During August, samples for Algal Growth Potential Tests (AGPT) were collected from the composite photic zone sample by filling a properly prepared plastic container and preserving on ice. A more detailed discussion of AGPT appears later in this section.

All samples were preserved, stored, and transported according to procedures in the ADEM Field Operations Division Standard Operating Procedures and Quality Control Assurance Manual Volume I Physical/Chemical (1992).

Quality Control / Quality Assurance. For quality control/quality assurance purposes, field duplicates of each sample type were collected at ten percent of the sampling sites. Field duplicates were true duplicates of the complete collection process. Blanks were collected at the same frequency as duplicates by processing distilled water through the collection and filtration equipment in the same manner as regular samples. Measurements of water temperature, dissolved oxygen, specific conductance, and pH were replicated at sampling sites where duplicate samples were collected.

Trophic State Index. Corrected chlorophyll *a* concentrations were used in calculating Carlson's trophic state index (TSI) for lakes (Carlson 1977). Carlson's TSI provides limnologists and the public with a single number that serves as an indicator of a lake's trophic status. Corrected chlorophyll *a* is the parameter used in the RWQM

Program to calculate TSI because it is considered to give the best estimate of the biotic response of lakes to nutrient enrichment when algae is the dominant plant community.

The trophic state classification scale used is as follows:

Oligotrophic: TSI < 40

Mesotrophic: TSI 40 - 49

Eutrophic: TSI 50 - 69

Hypereutrophic: TSI \geq 70

Algal Growth Potential Tests. The Algal Growth Potential Test (AGPT) determines the total quantity of algal biomass supportable by the test waters and provides a reliable estimate of the bioavailable and limiting nutrients (Raschke and Schultz 1987). In control samples, maximum algal standing crop (MSC) dry weights below 5.0 mg/l are thought to assure protection from nuisance algal blooms and fish-kills in southeastern lakes, with the exception of lakes in Florida (Raschke and Schultz 1987). In most freshwater lakes, phosphorus is the essential plant nutrient that limits growth and productivity of plankton algae (Wetzel 1983). Nitrogen usually becomes the limiting nutrient when bioavailable phosphorus increases relative to nitrogen, as in the case of waters receiving quantities of treated municipal waste (Raschke and Schultz 1987). The AGPT is helpful in identifying these common growth limiting nutrients.

RESULTS AND DISCUSSION

Data Selection. Material in this section is divided by basin and reservoir. Water quality data presented for further discussion consist of the following:

- a) total nitrogen (TN) and total phosphorus (TP), used as indicators of nutrient content in the waterbody;
- b) algal growth potential tests (AGPT), used as a determinant of the total quantity of algal biomass supportable by test waters and of the limiting nutrient;
- c) corrected chlorophyll a (chl. a), used as an indicator of algal biomass;
- d) Carlson Trophic State Index (TSI), calculated from corrected chlorophyll a concentrations as a means of trophic state classification of the reservoir ; and,
- e) dissolved oxygen (DO) concentrations, used as a more direct indicator of water quality because severe depletion can damage aquatic vertebrate and macroinvertebrate communities and interfere with water supply and recreational uses;

These data were selected because of their relationship to the process of eutrophication and their interest to the regulatory and scientific communities that stems from this relationship. The process of eutrophication and the effects on water quality will be discussed more fully in following paragraphs. Topics not selected for further discussion in this report were done so in the interests of time, space, or data availability. However, all data collected during the intensive survey appear in the Appendix.

Graphs. Bar graphs consist of means of the variables for all months depicted in the line graphs. Bar graphs with multiple reservoirs and reservoir stations are illustrated from upstream to downstream as the graph is read from left to right. Line graphs for each reservoir depict the monthly changes in the variables. Unless otherwise specified, reservoir location is referred to in the legends of graphs as **upper**, for the upper portion of each reservoir; **mid**, for the middle portion of the reservoir; and **lower**, for the dam forebay of each reservoir.

Line graphs of DO concentrations consist of measurements conducted at a depth of five feet because ADEM Water Quality Criteria pertaining to reservoir waters require a DO concentration of 5.0 mg/l at this depth (ADEM 1997). Under extreme natural conditions such as drought the DO concentration may be as low as 4.0 mg/l.

Eutrophication. For those unfamiliar with the process of eutrophication, it may be useful to discuss the relationship of the topics to the process and how the process affects the water quality of lakes and reservoirs. Eutrophication is the process by which water bodies become more productive through increased input of nutrients, primarily nitrogen and phosphorus (Welch 1992). Normally, increased plant (algae and/or macrophyte) productivity and biomass are considered part of the eutrophication process though nutrients can increase without an increase in plant growth if available light in the water column is limited by high concentrations of suspended solids.

The classical trophic succession sequence that occurs in natural lakes is as follows:

Oligotrophy: nutrient-poor, biologically unproductive;

Mesotrophy: intermediate nutrient availability and productivity;

Eutrophy: nutrient-rich, highly productive;

Hypereutrophic: the extreme end of the eutrophic stage.

Depending on the nature of the watershed however, eutrophication of natural lakes may take thousands of years or they may never become eutrophic.

All waterbodies monitored during the intensive survey are reservoirs rather than natural lakes. Trophic succession in reservoirs does not occur in the classical form as in natural lakes. After filling of the reservoir basin, trophic upsurge occurs, resulting in high productivity of algae and fish. The trophic upsurge is fueled by nutrient inputs from the watershed, leaching of nutrients from the flooded soils of the basin, and decomposition of terrestrial vegetation and litter. Eventually a trophic depression takes place with a decline in the productivity of algae and fish as these initially available nutrient sources decline. In time, a less productive but more stable trophic state is established. The trophic state that the reservoir eventually settles into (oligotrophic, mesotrophic, or eutrophic) is determined by the combination of the natural fertility of the

watershed and the effects of the point and nonpoint sources of pollution within the watershed.

The concern about eutrophication from a water quality standpoint is more likely due to cultural eutrophication. Cultural eutrophication can be defined as eutrophication brought about by the increase of nutrient, soil, and /or organic matter loads to a lake or reservoir as a result of anthropogenic activities (EPA 1990). Activities that contribute to cultural eutrophication include wastewater treatment discharges, agricultural and silvicultural activities, residential and urban development, and road building. Increased eutrophication in a waterbody occurring over a period of 10 to 50 years usually indicates cultural eutrophication (Welch 1992).

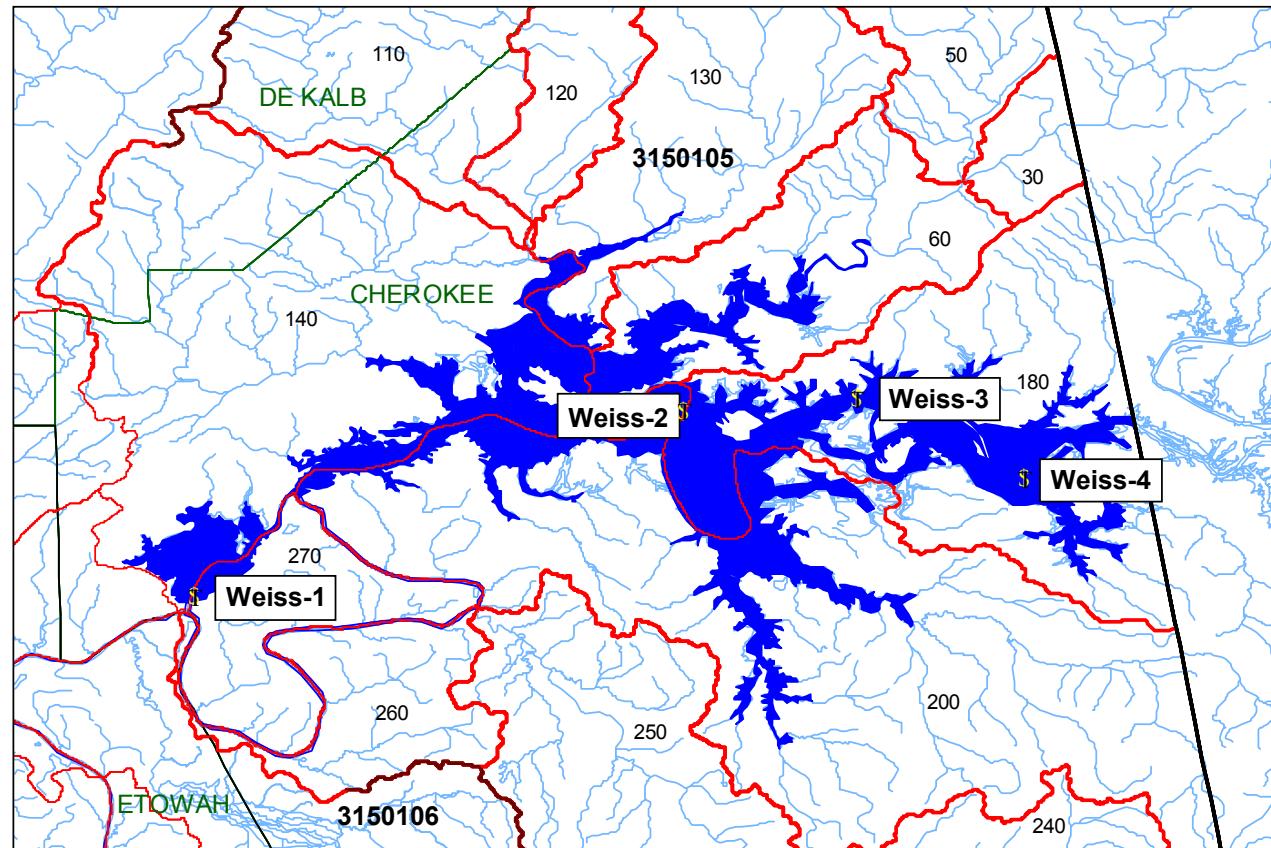
The effects of cultural eutrophication to a reservoir that is highly productive, or eutrophic, can lead to hypereutrophic conditions. Hypereutrophic conditions are characterized by the following:

- a) dense algal populations;
- b) low dissolved oxygen concentrations;
- c) increased likelihood of fish kills; and,
- d) interference with public water supply and recreational uses.

Regardless of whether a reservoir is oligotrophic, mesotrophic, or eutrophic, however, cultural eutrophication negatively affects biological communities of these waterbodies through sedimentation and changes in water quality variables such as dissolved oxygen, pH, water temperature, and light availability.

I. COOSA RIVER RESERVOIRS

Figure I.1
Weiss Reservoir



1 0 1 2 Miles

- Yellow T: Ambient Reservoir Water Quality Station
- Green Box: Counties
- Red Box: USDA-NRCS Subwatersheds
- Blue Box: Weiss Reservoir
- Blue Line: USEPA Reach File 3
- Red Box: USGS Cataloging Units
- Black Box: Coosa River Basin

Weiss Reservoir

Nitrogen. Mean TN concentrations in Weiss were, overall, the highest of all Coosa reservoirs (Fig. I.7). Mean concentrations in upper Weiss reservoir were above those of the mid and lower reservoir and second highest of all Coosa reservoir locations.

Generally, monthly TN concentrations increased at all Weiss locations from April through August and decreased afterward (Fig I.10). Highest monthly TN concentrations occurred in August.

Highest lake mean TN values occurred in August with lowest values in September (Fig. I.10). Lake mean TN concentrations (mean of all stations) generally increased from April through August while discharge decreased from May through September. Lake mean TN concentrations increased as did discharge during the reservoir drawdown period in October.

Phosphorus. Mean TP concentrations in upper Weiss Reservoir were highest of all Coosa reservoir locations (Fig. I.8). Values for mid Weiss were, along with upper Mitchell reservoir, the second highest of all Coosa reservoir locations. Mean TP values decreased from upstream to downstream locations in Weiss.

Monthly TP values at each station were lowest in June then increased overall from June through September with the upper station increasing through October (Fig. I.10).

Highest lake mean TP values (mean of all stations) occurred in May and September with lowest values occurring in June (Fig. I.10). Lake mean TP values followed the same pattern as lake mean discharge from April through June. From June through September, lake mean TP values increased overall while discharge decreased. TP values decreased once again with increasing discharge during the reservoir drawdown period in October.

Algal Growth Potential Tests. Nitrogen was indicated as the limiting nutrient at all locations of Weiss Reservoir during August 1997 (Table I.1). Mean MSC values for the upper, mid, and lower reservoir (25.54, 5.68, and 6.82 mg/l respectively) were well

above the maximum 5.0 mg/l level suggested to assure protection from nuisance algal blooms and fish-kills in southeastern lakes.

Chlorophyll a. Mean chlorophyll *a* concentrations in mid and lower Weiss Reservoir were second only to those of mid and lower Neely Henry and upper Logan Martin (Fig. I.9). Within the reservoir, the mean value for the upper station was well below those of downstream stations and was second lowest to Jordan Reservoir forebay.

Monthly chlorophyll *a* concentrations for the lower and mid reservoir stations increased from May to July then decreased through October (Fig. I.11). Values for the upper reservoir were variable month to month with concentrations dropping sharply in June.

The highest lake mean chlorophyll *a* concentrations (mean of all stations) occurred from July through September when lake mean discharge was lowest. The lake mean chlorophyll *a* concentration was highest in July and decreased afterward while discharge decreased from May through September (Fig. I.11). The mean chlorophyll *a* value continued to decline in October as discharge increased during the reservoir drawdown period.

Trophic state. Monthly TSI values for the mid and lower reservoir were well within the eutrophic range from April through June with values in July reaching hypereutrophic levels in the lower reservoir and highly eutrophic levels in the mid reservoir (Fig. I.11). TSI values declined from August through October but remained within the upper half of the eutrophic range. Values for the upper reservoir were near or within the lower half of the eutrophic range in all months with the exception of June when the TSI dropped into the oligotrophic range.

Dissolved oxygen/Temperature. Dissolved oxygen concentrations at all locations decreased from April through June then generally increased thereafter (Fig. I.11). DO concentrations were similar at all locations except during July and August.

Concentrations were above the ADEM Water Criteria (1997) of 5.0 mg/l at all times.

Depth profiles of temperature and DO from the Weiss dam forebay indicated isothermal and isochemical conditions from April through June (Fig. I.12). Weak chemical stratification began to develop in July and persisted into September. Isochemical conditions were reestablished in October. Highest temperatures in the water

column occurred in July. Lowest overall DO concentrations in the water column occurred in August.

Discussion. Data collected during 1997 indicate that Weiss Reservoir locations are considerably higher in nutrients and algal biomass than most other Coosa River reservoir locations. TSI values derived from chlorophyll *a* concentrations indicated that Weiss reached hypereutrophic levels in the lower reservoir in July and were highly eutrophic at mid-reservoir.

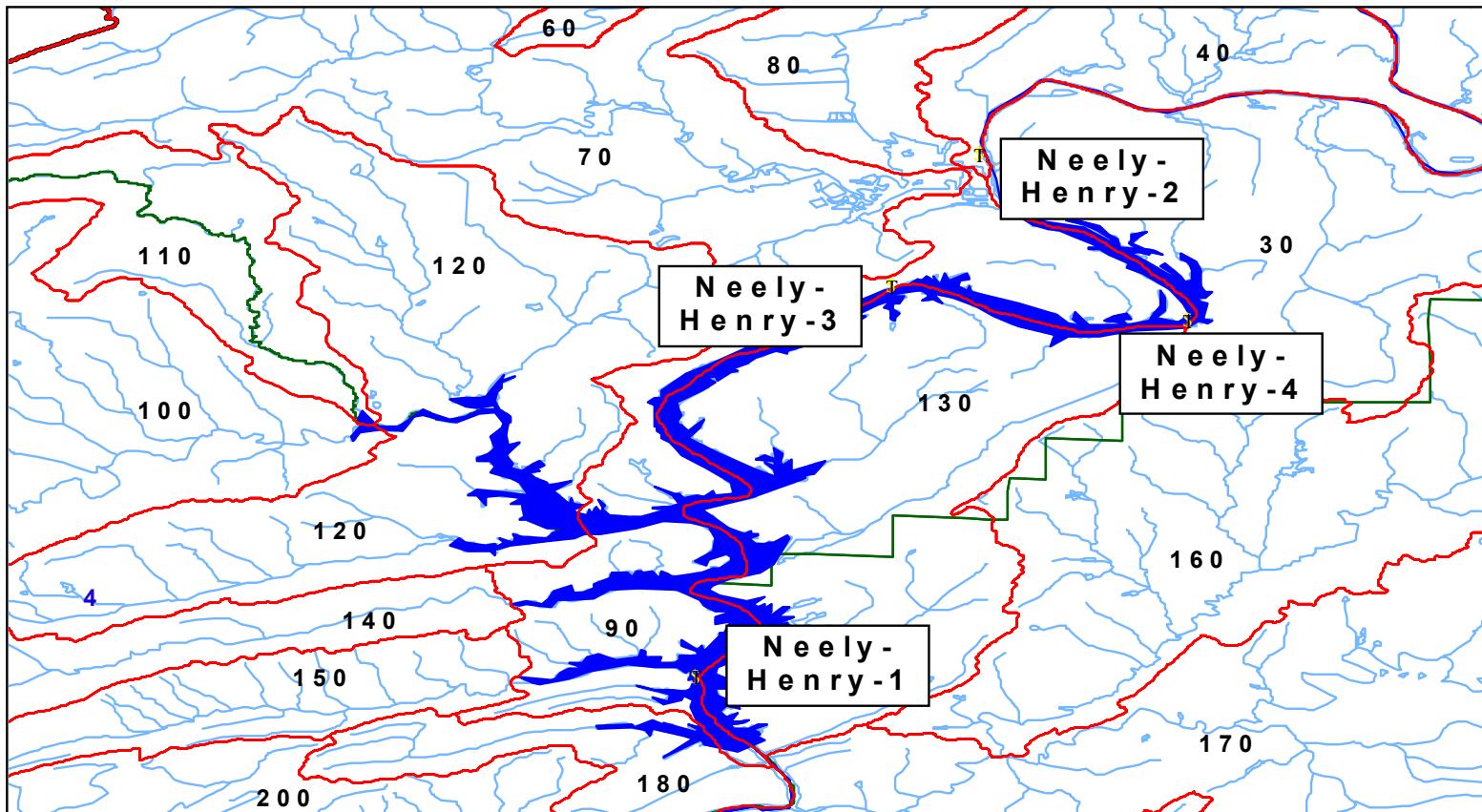
Mean TN values were second only to those of lower Neely Henry Reservoir and mid Lay Reservoir. Mean TP values for Weiss were highest of all Coosa reservoirs, overall. The increase in mean TN and TP concentrations as lake discharge decreased indicates that point sources may be a considerable contributor to these values.

Algal growth potential tests confirmed the TP concentrations by indicating nitrogen to be the limiting nutrient at all locations. Mean MSC values for all locations were well above the 5.0 mg/l level suggested to assure protection from nuisance algal blooms and fish-kills in southeastern lakes.

Mean chlorophyll *a* concentrations for mid and lower Weiss were second only to those of Neely Henry Reservoir and upper Logan Martin Reservoir. Lake mean concentrations increased to highest levels as discharge decreased and reservoir retention time increased.

Dissolved oxygen concentrations remained above the criterion limit of 5.0 mg/l at all locations of Weiss during the months sampled. Weak chemical stratification developed in the dam forebay during July, August, and September though anoxic conditions never developed.

Figure I.2
Neely Henry Reservoir



2 0 2 Miles

T Ambient Reservoir Water Quality Station
Counties
USDA-NRCS Subwatersheds
Neely-Henry Reservoir
USEPA Reach File 3
Tallapoosa River Basin

Neely Henry Reservoir

Nitrogen. Mean TN concentrations for lower Neely Henry were second only to those of upper Weiss Reservoir and mid Lay Reservoir (Fig. I.7). Within the reservoir, mean TN concentrations for the upper and mid locations were below those of the lower reservoir.

Monthly TN values were variable with highest values at each reservoir location occurring in August (Fig. I.13).

Highest lake mean TN values (mean of all stations) occurred in August while lowest values occurred in April (Fig. I.13). Lake mean TN values followed much the same pattern as lake discharge for all months except August, when TN values were much higher as discharge declined.

Phosphorus. Mean TP concentrations of upper and mid Neely Henry were above those of lower Neely Henry Reservoir and similar to those of lower Weiss Reservoir (Fig. I.8).

Monthly TP concentrations varied similarly at all locations with highest concentrations occurring during May and September and lowest concentrations occurring in June (Fig. I.13).

Highest lake mean TP values (mean of all stations) occurred in April, May, and September with lowest TP values occurring in June (Fig. I.13). Lake mean TP values followed a pattern similar to lake discharge April-June. Lake mean TP values increased afterward through September as lake discharge declined. TP values decreased once again in October as discharge increased during the reservoir drawdown period.

Algal Growth Potential Tests. Nitrogen was indicated as the limiting nutrient at all locations of Neely Henry Reservoir during August 1997 (Table I.1). Mean MSC values for the upper reservoir (7.23 mg/l) were well above the maximum 5.0 mg/l level suggested to assure protection from nuisance algal blooms and fish-kills in southeastern lakes while those of the mid and lower reservoir (3.40 and 3.40) were below the 5.0 mg/l level.

Chlorophyll a. Mean chlorophyll *a* concentrations for mid and lower Neely Henry were the highest of all Coosa reservoir locations (Figs. I.9). Mean values for the

upper reservoir were below only those of locations in Weiss, Neely Henry, and Logan Martin Reservoirs.

Monthly chlorophyll *a* concentrations generally decreased at all locations from April through June (Fig. I.14). In the lower and mid reservoir locations, concentrations increased from their lowest point in June to the highest point in August and decreased afterward. Highest concentrations in the upper reservoir were reached in September then declined in October. With the exception of August, chlorophyll *a* concentrations were similar at all locations in the months studied.

Lake mean chlorophyll *a* concentrations (mean of all stations) decreased as lake discharge increased from April through June (Fig. I.14). From July through September the opposite was true with lake mean chlorophyll *a* concentrations increasing as lake discharge decreased and reservoir retention time increased. In October, mean concentrations decreased once again as lake discharge increased during the reservoir drawdown period.

Trophic state. TSI values for all locations of Neely Henry were within the upper half of the eutrophic range during April then declined into the lower half of the eutrophic range in May and June (Fig. I.14). In the lower and mid reservoir locations, TSI values increased from June through August, when hypereutrophic conditions were indicated. TSI values for the lower and mid reservoir declined in September and October but remained highly eutrophic. In the upper reservoir, TSI values increased from June to September, when highly eutrophic conditions occurred. TSI values in the upper reservoir decreased in October but remained well within the eutrophic range.

Dissolved oxygen/Temperature. DO concentrations at all locations decreased April-July when values for the upper reservoir (4.82 mg/l) were below the criterion limit of 5.0 mg/l (Fig. I.14). Concentrations increased at all locations in August and remained well above the criterion limit in September and October. DO concentrations at all locations were similar from April through July then varied until October.

Depth profiles of temperature and DO in the dam forebay of Neely Henry Reservoir indicated that thermal and chemical stratification existed during April (Fig. I.15). Essentially isothermal and isochemical conditions occurred from May through July as water temperatures increased and DO concentrations decreased. During August

and September, Neely Henry forebay was chemically and thermally stratified. Isothermal and isochemical conditions returned in October. Highest water column temperatures and lowest water column DO concentrations occurred in July.

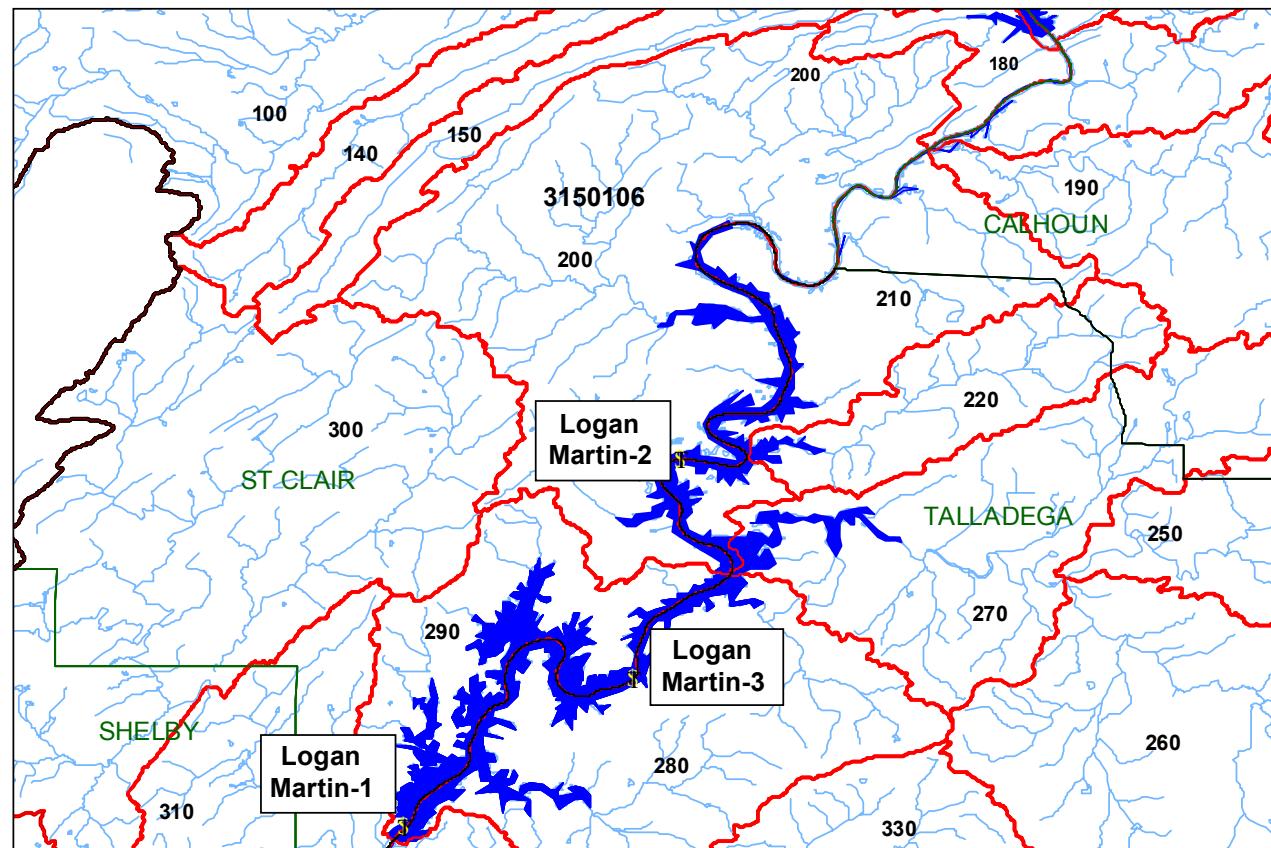
Discussion. Of primary concern for Neely Henry Reservoir are the high chlorophyll *a* concentrations during August and September. The highest chlorophyll *a* concentrations recorded at any Coosa reservoir location during the study occurred in lower and mid Neely Henry Reservoir (60.3 and 56.5 ug/l respectively) during August. TSI values derived from these concentrations (71 and 70, respectively) indicated hypereutrophic conditions.

TN concentrations in the lower reservoir and TP concentrations in the mid and upper reservoir locations were higher than those of many other Coosa reservoir locations. The increase in mean TP values as lake discharge decreased indicates that point sources may be a considerable contributor to these concentrations.

Algal growth potential tests confirmed the TP concentrations by indicating nitrogen to be the limiting nutrient at all locations in August. Mean MSC values for the upper reservoir location were well above the 5.0 mg/l level suggested to assure protection from nuisance algal blooms and fish-kills in southeastern lakes.

DO concentrations in the upper reservoir were below the criterion limit of 5.0 mg/l during July. Concentrations at all other locations were above the criterion limit on all dates sampled. The water column of Neely Henry was thermally and chemically stratified during April, August, and September. Anoxic conditions did not develop, however.

Figure I.3
Logan Martin Reservoir



1 0 1 2 Miles

- Yellow square: Ambient Reservoir Water Quality Station
- Green square: Counties
- Red line: USDA-NRCS Subwatersheds
- Blue polygon: Logan Martin Reservoir
- Blue line: USEPA Reach File 3
- Red line: USGS Cataloging Units
- Black line: Coosa River Basin

Logan Martin Reservoir

Nitrogen. Mean TN concentrations for Logan Martin were lower overall than upstream reservoirs Neely Henry and Weiss (Fig. I.7). Within the reservoir, mean TN values increased from upstream to downstream.

Monthly TN values followed similar patterns at all locations in the months sampled with highest concentrations in the lower and upper reservoir in October and the mid-reservoir in August (Fig. I.16). Lowest values at all locations occurred in April. TN concentrations at all locations were similar April-July then varied at one or more locations August-October.

Highest lake mean TN concentrations (mean of all stations) occurred in August and October with lowest values occurring in April (Fig. I.16). Mean TN values followed much the same pattern as lake discharge for all months except August, when TN was much higher as discharge declined.

Phosphorus. Mean TP concentrations for Logan Martin Reservoir were, along with those of Jordan Reservoir, the lowest of all Coosa reservoir locations (Fig. I.8). Within the reservoir, mean TP values for the upper and mid locations were similar with both higher than that of the lower reservoir.

Monthly TP concentrations were highest at all reservoir locations in May (Fig. I.16). Lowest TP concentrations occurred in the upper reservoir during June and September, the mid reservoir during June, and the lower reservoir during October. TP concentrations varied similarly at all locations from April through August then varied at one or more locations in September and October.

Lake mean TP values (mean of all stations) were highest in April and May and lowest in June (Fig. I.16). Lake mean TP values and lake discharge generally followed a similar pattern until October when TP declined as lake discharge increased during reservoir drawdown.

Algal Growth Potential Tests. Nitrogen was indicated as the limiting nutrient at the upper reservoir location with nitrogen and phosphorus co-limiting at the mid and lower reservoir locations (Table I.1) in August. Mean MSC values for the upper, mid, and lower reservoir locations (2.71, 2.42, and 2.26, respectively) were below the

maximum 5.0 mg/l level suggested to assure protection from nuisance algal blooms and fish-kills in southeastern lakes.

Chlorophyll a. The mean chlorophyll *a* concentration for upper Logan Martin was second only to those of Neely Henry Reservoir among Coosa reservoir locations (Fig. I.9). Mean values declined at the mid and lower reservoir locations though values for the mid reservoir remained among the highest of Coosa reservoir locations.

Monthly chlorophyll *a* concentrations at all reservoir locations were highest in August (Fig. I.17). Lowest concentrations in the upper and mid reservoir occurred in June and in the lower reservoir in October. Concentrations were similar at all locations in May and June when lake discharge was highest but differed at one or more locations in other months.

As lake discharge increased April-June, lake mean chlorophyll *a* concentrations (mean of all stations) decreased (Fig. I.17). As lake discharge declined July-September, mean chlorophyll *a* concentrations were higher, then declined once again with increasing lake discharge in October during reservoir drawdown . Highest lake mean chlorophyll *a* values occurred in August during the low discharge period with lowest values occurring during high discharge periods in May and June.

Trophic state. TSI values for all locations were near or within the upper half of the eutrophic range in all months (Fig. I.17). In the upper and mid reservoir, highest TSI values occurred in August when values were highly eutrophic. Lowest TSI values at these locations occurred in June, with values at the midpoint of the eutrophic range. In the lower reservoir, TSI values were similar in all months with the highest value occurring in August and the lowest value occurring in October.

Dissolved oxygen/Temperature. DO concentrations in the upper reservoir declined from April through June then remained similar until October when DO increased (Fig. I.17). At mid reservoir, DO decreased from April through June then changed little through October. In the lower reservoir, DO concentrations were more variable with values decreasing from April through June, increasing in July and August, then decreasing again to the lowest levels in September and October. DO concentrations at the lower reservoir during September and October (5.51 and 5.56 respectively) were near the criterion limit of 5.0 mg/l.

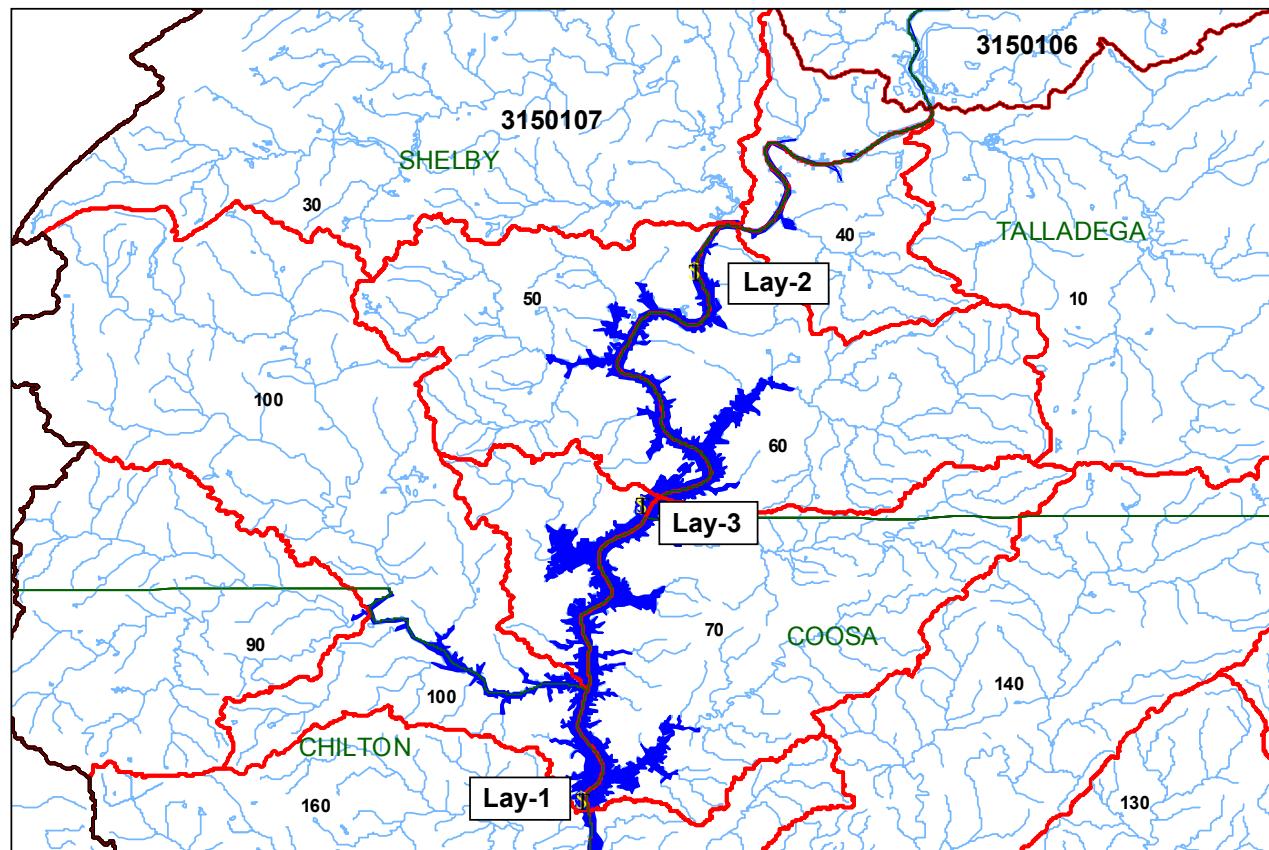
Depth profiles of DO and temperature in the dam forebay of Logan Martin indicated that weak chemical stratification occurred in April and May and isochemical conditions in June, with the water column remaining essentially isothermal in these months (Fig. I.18). Weak thermal and stronger chemical stratification developed in July with the water column becoming essentially anoxic below seven meters depth. In August, weak thermal and strong chemical stratification was evident though anoxic conditions did not develop. Chemical and thermal stratification weakened in September with the water column essentially isothermal and isochemical in October. Highest water column temperatures and lowest water column DO concentrations occurred in July.

Discussion. Nutrient concentrations of Logan Martin Reservoir were lower overall than those of upstream reservoirs Weiss and Neely Henry. Mean TN values of Logan Martin were lower overall while mean TP values were among the lowest of Coosa reservoir locations. Though nitrogen was either the limiting or co-limiting nutrient at all locations in August, mean MSC values from the AGPT were well below the maximum of 5.0 mg/l suggested to assure protection from nuisance algal blooms and fish-kills.

The mean chlorophyll *a* concentrations of upper and mid Logan Martin are a concern though they are likely influenced directly (algal transport) or indirectly (nutrients) by the downstream flow of water from Neely Henry Reservoir. In the upper and mid reservoir in August, TSI values were highly eutrophic with those of the upper reservoir approaching hypereutrophic levels (TSI = 68).

Though DO concentrations in the lower reservoir remained above the criterion limit in the months sampled, values in September and October were near the limit of 5.0 mg/l and the majority of the water column (below 7m) during the month of July was essentially anoxic.

Figure I.4
Lay Reservoir



- Ambient Reservoir Water Quality Station
- Counties
- USDA-NRCS Subwatersheds
- Lay Reservoir
- △ USEPA Reach File 3
- USGS Cataloging Units
- Coosa River Basin

1 0 1 2 Miles

Lay Reservoir

Nitrogen. The mean TN concentration of mid Lay Reservoir was highest of all Coosa reservoir locations (Fig. I.7). Mean concentrations of the upper and lower reservoir were similar to those of upstream Logan Martin Reservoir and above those of downstream Mitchell and Jordan Reservoirs.

Monthly TN concentrations at mid reservoir increased from April through July then decreased afterward (Fig. I.19). In the upper and lower reservoir, TN concentrations varied monthly with highest values occurring in June and August and lowest values occurring in September. Mean values for the upper and lower reservoir were similar in all months except for June.

Lake mean TN values (mean of all stations) increased from April through June as lake discharge increased then were variable July-September as lake discharge decreased (Fig. I.19). Mean TN increased once again in October as lake discharge increased during reservoir drawdown. Highest mean TN values occurred in August with lowest values occurring in September.

Phosphorus. Mean TP concentrations of Lay Reservoir were higher than those of upstream Logan Martin Reservoir (Fig. I.8) and less than those of downstream Mitchell Reservoir. Within the reservoir, the highest mean TP concentration occurred at the upper reservoir.

Monthly TP values decreased from April to June, then increased through August when highest concentrations at all locations occurred (Fig. I.19). TP concentrations declined again in September followed by an increase in October. Concentrations at all locations were similar in the months sampled.

Lake mean TP (mean of all stations) decreased as lake discharge increased from April through June (Fig. I.19). Mean TP increased as lake discharge decreased in July and August. TP concentration declined in September as lake discharge declined further, then increased along with discharge in October during reservoir drawdown. Lowest lake mean TP concentrations occurred in June while highest lake mean TP concentrations occurred in August.

Algal Growth Potential Tests. Nitrogen and phosphorus were co-limiting nutrients at the upper reservoir location in August (Table I.1). Nitrogen was the limiting nutrient at the mid and lower reservoir locations. Mean MSC values in the upper reservoir (10.48 mg/l) and the lower reservoir (6.80 mg/l) were well above the maximum 5.0 mg/l level suggested to assure protection from nuisance algal blooms and fish-kills in southeastern lakes. The mean MSC value at mid reservoir (2.21 mg/l) was well below the 5.0 mg/l maximum level.

Chlorophyll a. Overall, mean chlorophyll *a* concentrations in Lay Reservoir were lower than those of upstream Logan Martin Reservoir but higher than those of downstream reservoirs (Fig. I.9). Within Lay, lowest mean values occurred in the upper locations with highest values occurring at mid reservoir.

Monthly chlorophyll *a* concentrations were similar at the mid and lower reservoir locations for all months except August (Fig. I.20). In the upper reservoir, concentrations were generally less than other reservoir locations and varied April-July. Concentrations in the upper reservoir were higher August-October.

Lake mean chlorophyll *a* concentrations (mean of all stations) decreased April through July as lake discharge reached its highest point then declined sharply (Fig. I.20). Lake mean concentrations were higher August through October as lake discharge reached its lowest level then increased in October during reservoir drawdown.

Trophic state. TSI values in the upper reservoir were generally within the lower half of the eutrophic range April through July, then increased to mid-eutrophic levels August-September (Fig. I.20). Values at mid reservoir were within the upper levels of the eutrophic range in all months except July. In the lower reservoir, TSI values varied between the upper and lower levels of the eutrophic range.

Dissolved oxygen/Temperature. DO concentrations decreased at all locations April-July then were generally higher through October (Fig. I.20). Concentrations at the upper reservoir in June and July (5.75 and 5.50 mg/l respectively) were just above the criterion limit of 5.0 mg/l. DO concentrations at mid reservoir were well above the criterion limit in all months except July when the value (5.11 mg/l) was just above the criterion limit. In the lower reservoir, DO concentrations in July and August (4.47 and 4.46, respectively) were below the criterion limit.

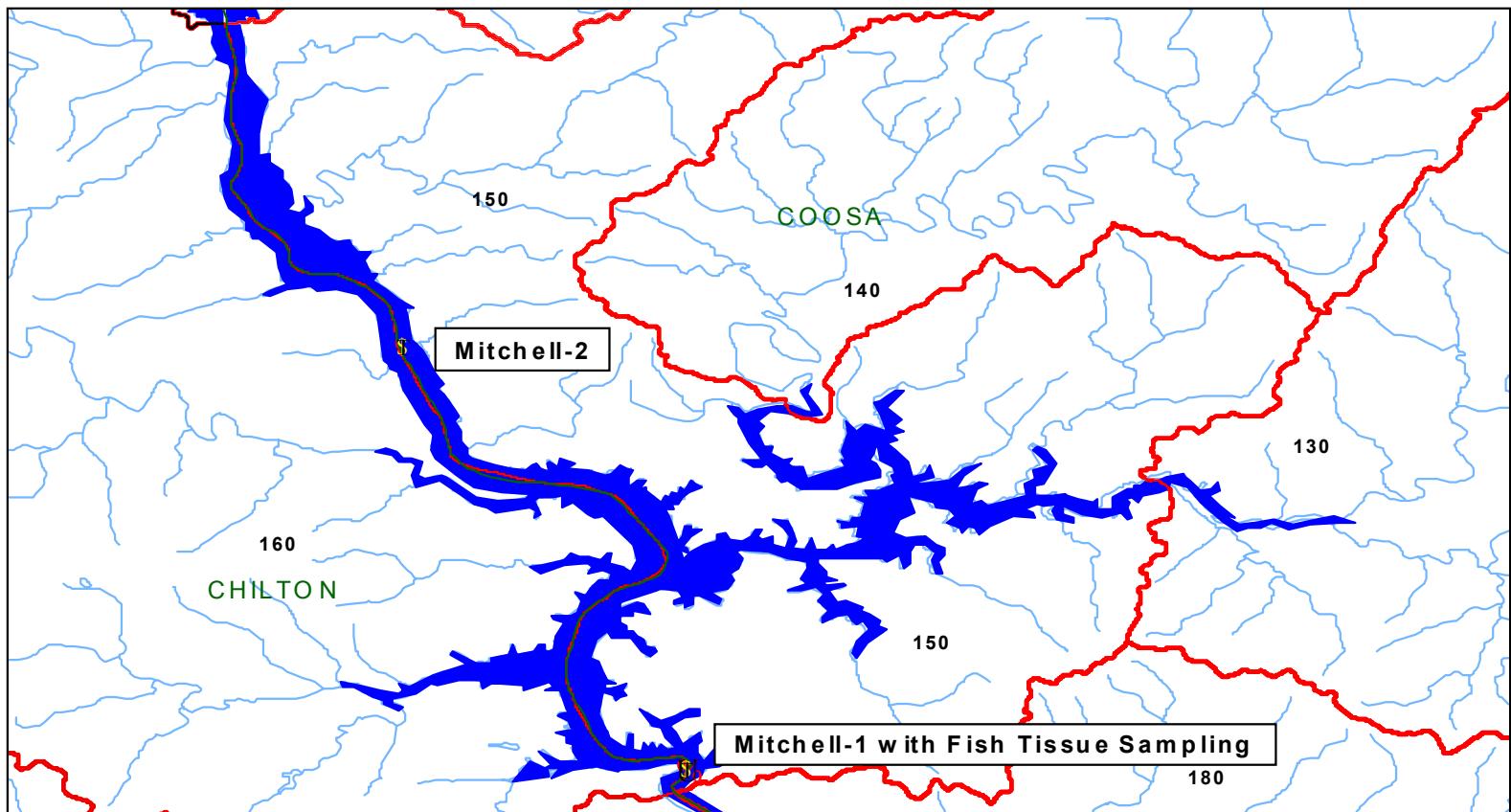
Depth profiles of DO and temperature in the dam forebay of Lay Reservoir indicated weak thermal and chemical stratification during April and May (Fig. I.21). From June-October, the water column was essentially isothermal. Essentially isochemical conditions occurred in June, August, and October with some chemical stratification occurring in July and September. Highest water column temperatures occurred in July and August with lowest DO concentrations occurring July-September. With the exception of a small portion of the water column in July, anoxic conditions did not occur in the dam forebay when sampled.

Discussion. Nutrient concentrations of Lay Reservoir are indicated as a concern. Mean TN concentrations at mid reservoir were highest of Coosa reservoir locations. Mean TP concentrations of Lay were higher than those of upstream Logan Martin Reservoir. Mean MSC values from the AGPT for the upper and lower reservoir were well above the 5.0 mg/l level suggested to assure protection from nuisance algal blooms and fish kills.

Mean chlorophyll *a* concentrations were lower than those of upstream Logan Martin Reservoir. TSI values derived from these concentrations were generally lower than those of upstream reservoirs and within the eutrophic range. TSI values did not approach hypereutrophic levels in the months sampled.

In the lower reservoir, DO concentrations were below the criterion limit in July and August. DO concentrations in the upper reservoir were near the criterion limit in June and July with concentrations at mid-reservoir near the limit in July. With the exception of a small portion near the bottom of the water column in July, anoxic conditions did not occur in the dam forebay when sampled.

Figure I.5
Mitchell Reservoir



1 0 1 2 Miles

- U Fish Tissue Sampling Station
- T Ambient Reservoir Water Quality Station
- C Counties
- R USDA-NRCS Subwatersheds
- M Mitchell Reservoir
- W USEPA Reach File 3
- B Coosa River Basin

Mitchell Reservoir

Nitrogen. Mean TN concentrations for Mitchell Reservoir were second lowest of Coosa reservoirs (Fig. I.7). Within the reservoir, the mean concentration for the upper location was slightly higher than that of the lower reservoir.

Monthly TN concentrations were similar at both locations in all months sampled (Fig. I.22). TN concentrations varied month to month with highest values occurring in August and lowest values occurring in September.

Lake mean TN concentrations (mean of all stations) followed a similar pattern as lake discharge April-July (Fig. I.22). Mean TN increased sharply in August as discharge continued to decline then decreased in September as lake discharge reached its lowest level. In October, mean TN increased as did discharge.

Phosphorus. Mean TP concentrations in Mitchell were second highest to Weiss Reservoir of all Coosa reservoir locations (Fig. I.8). Within the reservoir, mean TP concentrations in the upper location were higher than those of the lower reservoir.

Monthly TP concentrations at both reservoir locations decreased April-June then increased to their highest point in August (Fig. I.22). Concentrations decreased in September and increased in October.

Lake mean TP concentrations (mean of all stations) decreased as lake discharge increased from April through June (Fig. I.22). Lake discharge declined sharply July-August as mean TP concentrations increased. Lake mean TP concentrations and lake discharge decreased in September and increased in October.

Algal Growth Potential Tests. Nitrogen was indicated as the limiting nutrient in the upper reservoir with nitrogen and phosphorus co-limiting in the lower reservoir during August (Table I.1). The mean MSC value for the upper reservoir (6.05 mg/l) and the lower reservoir (7.17 mg/l) were well above the maximum 5.0 mg/l level suggested to assure protection from nuisance algal blooms and fish-kills in southeastern lakes.

Chlorophyll a. Mean chlorophyll *a* concentrations for Mitchell were second lowest to Jordan Reservoir of all Coosa reservoir locations (Fig. I.9). Within the reservoir, mean concentrations in the upper location were substantially higher than those of the lower reservoir.

Monthly chlorophyll *a* concentrations at both reservoir locations were highest in October (Fig. I. 23). Concentrations in the upper reservoir were lowest in May with those of the lower reservoir lowest in August. Concentrations at both reservoir locations varied monthly with both locations following the same pattern from June through October.

Lake mean chlorophyll *a* concentrations (mean of all stations) increased along with lake discharge April-June (Fig. I.23). Concentrations decreased along with lake discharge July-August. Mean concentrations increased in September and October with lake discharge decreasing in September and increasing in October. Highest mean chlorophyll *a* concentrations occurred in October with lowest mean concentrations occurring in August.

Trophic state. TSI values for both locations in Mitchell Reservoir were generally within the lower half of the eutrophic range April-October (Fig. I.23). Values for the upper reservoir increased into the upper half of the eutrophic range in June, September, and October while TSI values for the lower reservoir were in the upper half of the eutrophic range during the months of May and October only.

Dissolved oxygen/Temperature. DO concentrations in the upper reservoir decreased April-July with values from July (5.44 mg/l) just above the criterion limit of 5.0 mg/l (Fig. I.23). Concentrations in the upper reservoir were higher August-October. In the lower reservoir, DO concentrations increased from April through May then decreased through August. Concentrations from July-September (5.11, 4.62, and 5.51 mg/l, respectively) were near or below the criterion limit. DO concentrations in the lower reservoir during October increased from previous months.

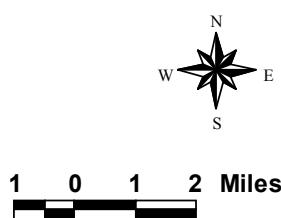
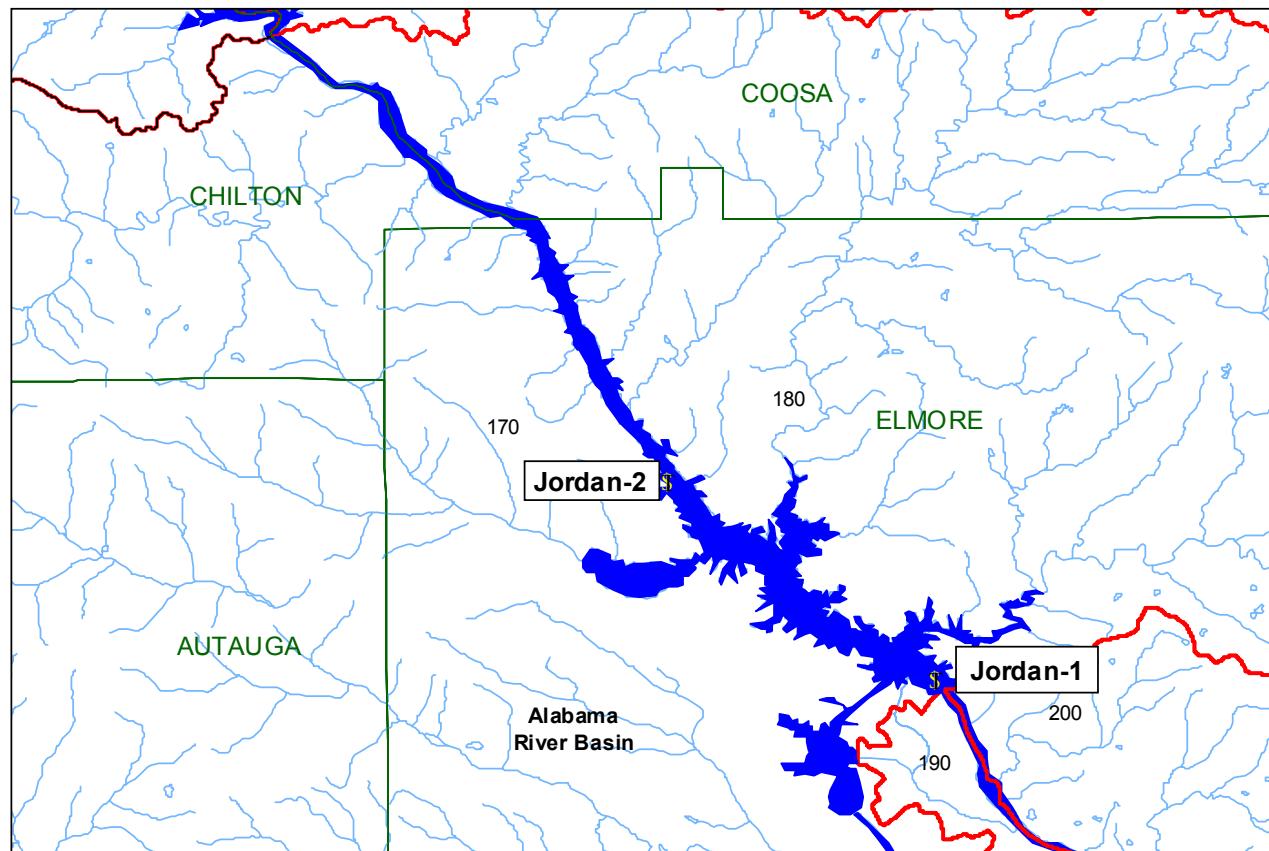
Depth profiles of dissolved oxygen and temperature from the dam forebay of Mitchell Reservoir indicated essentially isothermal and isochemical conditions during April (Fig. I.24). Weak thermal and chemical stratification began to develop in the water column in May with chemical stratification becoming more developed in July. Weak chemical stratification persisted through October. Essentially isothermal conditions returned in August and continued through the end of sampling in October. Anoxic conditions developed at the bottom of the water column in July. Highest water column temperatures and lowest water column dissolved oxygen concentrations occurred in July.

Discussion. Though TN concentrations in Mitchell Reservoir were lower than those of upstream reservoirs, phosphorus concentrations were higher. Higher phosphorus concentrations were further verified by the AGPT, which indicated nitrogen as the limiting or co-limiting nutrient and MSC values greater than the maximum 5.0 mg/l level suggested to assure protection from nuisance algal blooms and fish-kills in southeastern lakes.

Chlorophyll *a* concentrations in Mitchell Reservoir were lower than those of all upstream Coosa reservoirs. TSI values derived from these concentrations indicated that Mitchell Reservoir was often within the lower half of the eutrophic range with values entering the upper half of the range in June and October.

DO concentrations in Mitchell were near or below criterion limits from July-September. Anoxic conditions developed at the bottom of the water column in July.

Figure I.6
Jordan Reservoir



- Ambient Reservoir Water Quality Station
- Counties
- USDA-NRCS Subwatersheds
- Jordan Reservoir
- △ USEPA Reach File 3
- Coosa River Basin

Jordan Reservoir

Nitrogen. Mean TN concentrations in Jordan Reservoir were lowest of all Coosa reservoir locations. (Fig. I.7). Within the reservoir, mean concentrations in the upper location were above those of the lower reservoir.

Monthly TN concentrations at both reservoir locations were variable during the months sampled (Fig. I.25). Highest concentrations at both locations occurred in August. Lowest concentrations in the upper reservoir occurred in September-October and in the lower reservoir in May and September.

Lake mean TN concentrations (mean of all stations) were variable April-June as lake discharge increased (Fig. I.25). Lake discharge decreased sharply July-September with highest mean TN concentrations occurring in August and declining in September. Lake discharge increased during reservoir drawdown in October as did mean TN.

Phosphorus. Mean TP concentrations in Jordan Reservoir were, along with those of Logan Martin Reservoir, the lowest of Coosa reservoir locations (Fig. I.8). Within the reservoir, the mean TP for the upper location was higher than that of the lower reservoir.

Monthly TP concentrations at both locations decreased April-June then increased July-August (Fig. I.25). In September, TP decreased then increased again in October. Highest TP concentrations at both locations occurred in August. Lowest TP concentrations in the lower reservoir occurred May-June and in the upper reservoir, June.

Lake mean TP concentrations (mean of all stations) declined April-June as lake discharge increased (Fig. I.25). Lake discharge decreased sharply July-September with highest mean TP concentrations occurring in August and declining in September. Lake discharge increased in October as did mean TP.

Algal Growth Potential Tests. Nitrogen was indicated as the limiting nutrient in the upper reservoir during August with phosphorus the limiting nutrient in the lower reservoir (Table I.1). Mean MSC values for the upper reservoir (6.80 mg/l) and the lower reservoir (6.28 mg/l) were well above the maximum 5.0 mg/l level suggested to assure protection from nuisance algal blooms and fish-kills in southeastern lakes.

Chlorophyll a. Mean chlorophyll *a* concentrations in Jordan Reservoir were, along with those of upper Weiss, the lowest of Coosa reservoir locations (Fig. I.9).

Within the reservoir, the mean value for the upper reservoir was greater than that of the lower reservoir.

Monthly chlorophyll *a* concentrations in the upper reservoir were similar April–October (Fig. I.26). Concentrations in the lower reservoir were more variable with highest concentrations occurring in May and lowest concentrations occurring July–August.

Lake mean chlorophyll *a* concentrations (mean of all stations) increased April–May as discharge increased (Fig. I.26). Mean concentrations declined in June then changed little through October. Lake discharge declined sharply July–September and increased in October.

Trophic state. TSI values for upper Jordan Reservoir were within the lower levels of the eutrophic range April–October (Fig. I.26). TSI values for the lower reservoir varied greatly April–October, ranging from the upper eutrophic range in May to the mesotrophic range in July and August.

Dissolved oxygen/Temperature. DO concentrations in the upper reservoir declined April–July and were variable August–October (Fig. I.26). Concentrations during July (5.33 mg/l) and September (5.10 mg/l) were near the criterion limit of 5.0 mg/l. In the lower reservoir, DO concentrations increased April–May then decreased through August. Concentrations in the lower reservoir in July (4.67 mg/l) and August (4.83 mg/l) were below the criterion limit of 5.0 mg/l.

Depth profiles of dissolved oxygen and temperature from the dam forebay of Jordan Reservoir indicated isothermal and isochemical conditions in April (Fig. I.27). Chemical stratification developed in May and persisted through September. Weak thermal stratification developed in May and persisted through August. Anoxic conditions developed at the bottom of the water column in July and August. Lowest water column DO concentrations occurred in July. Highest water column temperatures occurred in August.

Discussion. Overall, nutrient concentrations in Jordan Reservoir were lowest of all Coosa reservoir locations. However, nitrogen was indicated as the limiting nutrient in the upper reservoir in August and mean MSC values for both reservoir locations were

well above the maximum 5.0 mg/l level suggested to assure protection from nuisance algal blooms and fish-kills in southeastern lakes.

Chlorophyll *a* concentrations were lowest of Coosa reservoir locations overall. TSI values derived from these concentrations indicated that the trophic state of Jordan was lowest of the Coosa reservoirs with values generally within the lower eutrophic to mesotrophic range.

DO concentrations in Jordan reservoir were near or below the criterion limit July-September. Anoxic conditions developed at the bottom of the water column only during July and August.

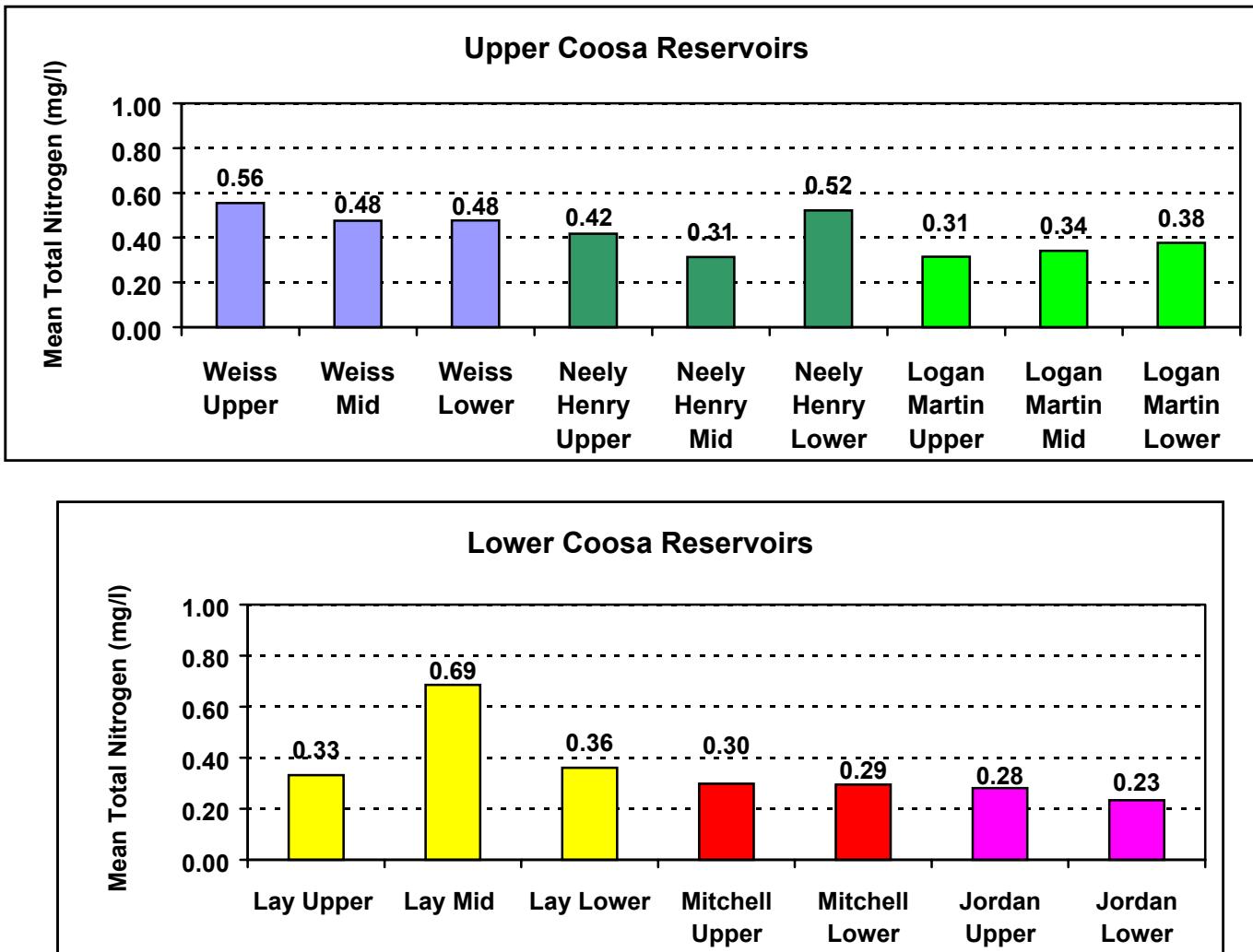


Figure I.7. Mean total nitrogen (TN) concentrations of Coosa reservoir locations, April-October 1997.

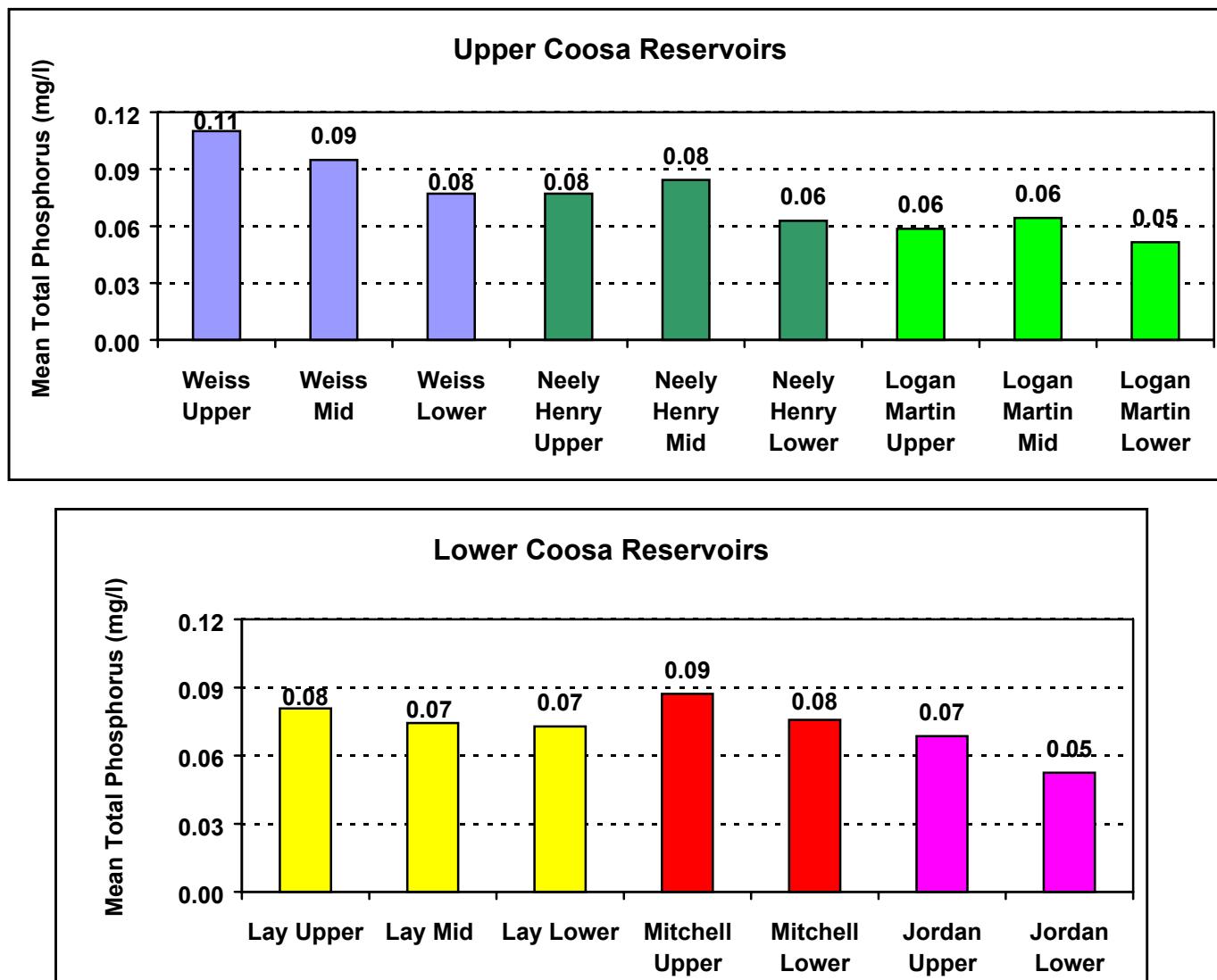


Figure I.8. Mean total phosphorus (TP) concentrations of Coosa reservoir locations, April-October 1997.

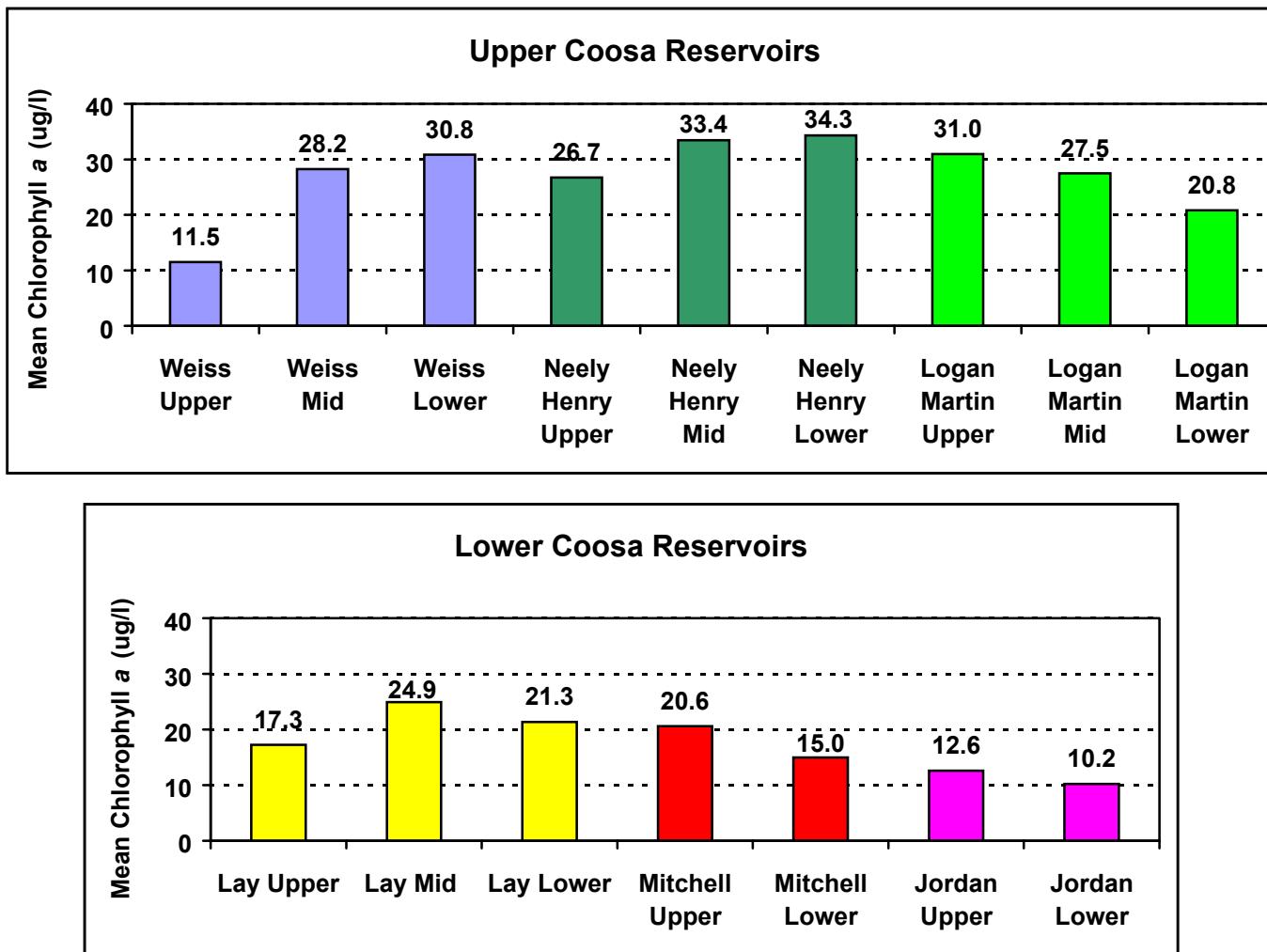


Figure I.9. Mean chlorophyll *a* concentrations of Coosa reservoir locations, April-October 1997.

Table I.1. Algal growth potential testing (AGPT) of Coosa River reservoirs, August 1997.

Reservoir	Location	Collection Date	Mean MSC (mg/l)			Limiting Nutrient
			C	C+N	C+P	
Weiss	Upper	8/13/97	25.54	40.99	25.32	Nitrogen
	Mid	8/13/97	5.68	10.50	6.14	Nitrogen
	Lower	8/13/97	6.82	13.45	7.15	Nitrogen
Neely Henry	Upper	8/12/97	7.23	16.50	7.36	Nitrogen
	Mid	8/12/97	3.40	13.37	3.13	Nitrogen
	Lower	8/12/97	3.40	10.25	2.94	Nitrogen
Logan Martin	Upper	8/12/97	2.71	6.72	3.24	Nitrogen
	Mid	8/12/97	2.42	2.65	2.53	Co-limiting
	Lower	8/12/97	2.26	2.88	2.63	Co-limiting
Lay	Upper	8/11/97	10.48	15.79	11.50	Co-limiting
	Mid	8/11/97	2.21	10.07	2.44	Nitrogen
	Lower	8/11/97	6.80	13.05	6.97	Nitrogen
Mitchell	Upper	8/11/97	6.05	11.33	6.06	Nitrogen
	Lower	8/11/97	7.17	8.99	7.71	Co-limiting
Jordan	Upper	8/11/97	6.80	10.53	7.03	Nitrogen
	Lower	8/11/97	6.28	4.42	8.98	Phosphorus

MSC = Maximum Standing Crop

C = Control; C+N = Control + Nitrogen; C+P = Control + Phosphorus

Values in **bold** print are significantly different from control.

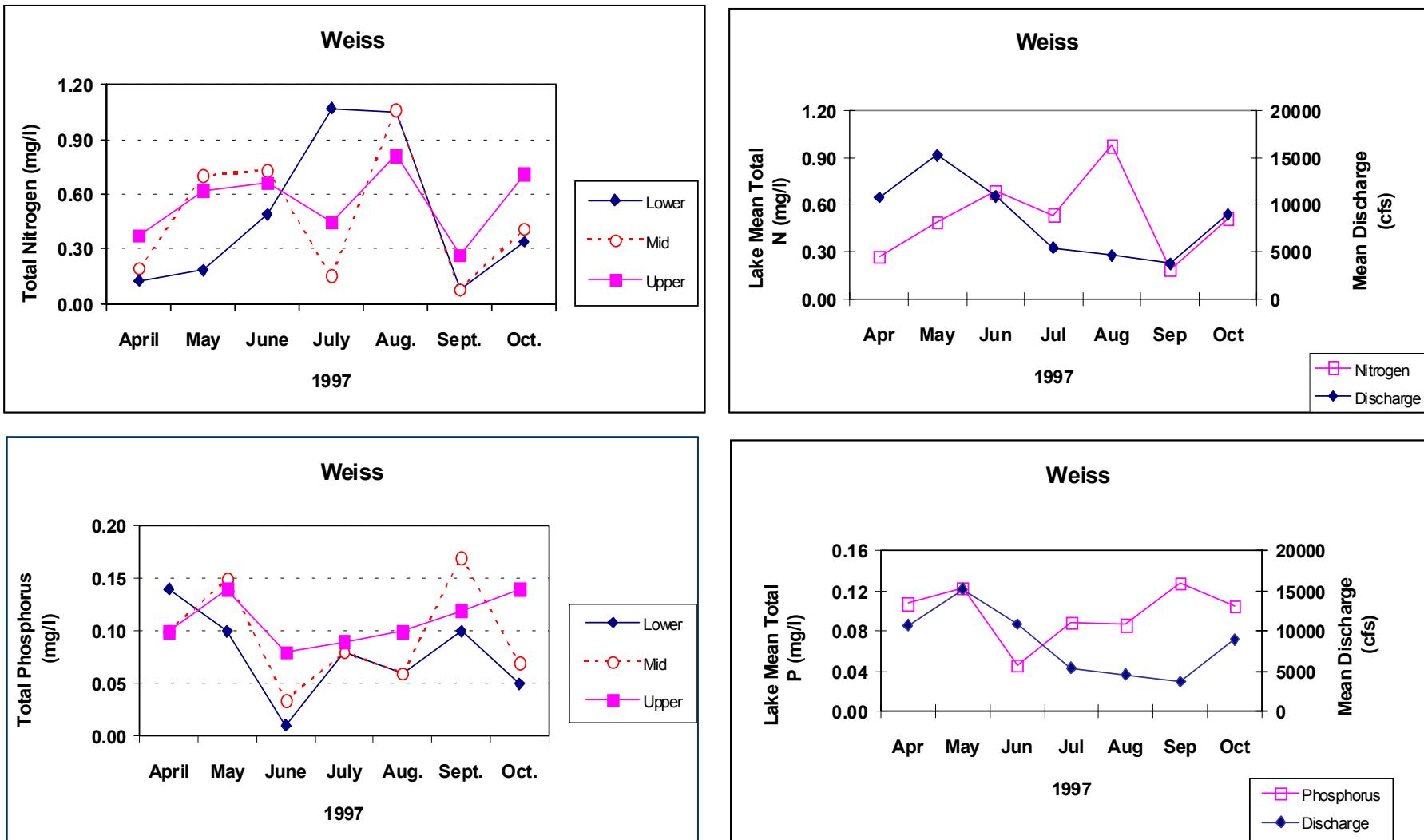


Figure I.10. Total nitrogen (TN), lake mean TN vs. discharge, total phosphorus (TP), and lake mean TP vs. discharge of Weiss Reservoir, April-October 1997.

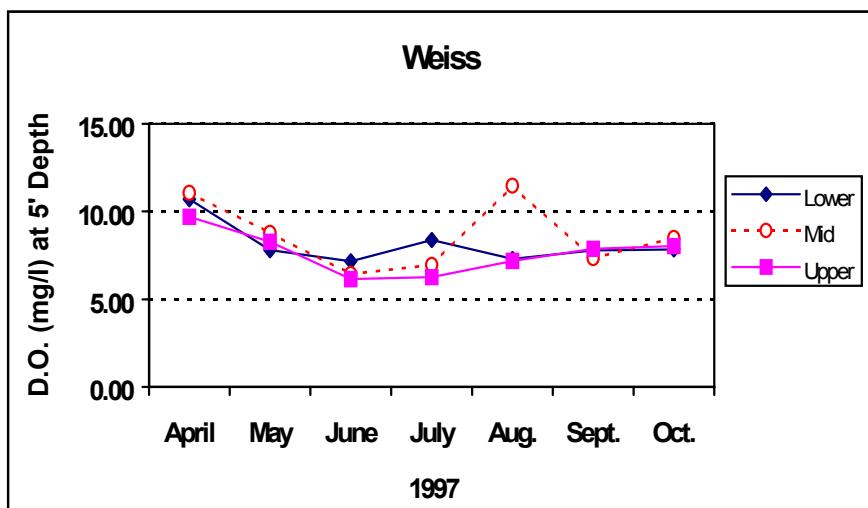
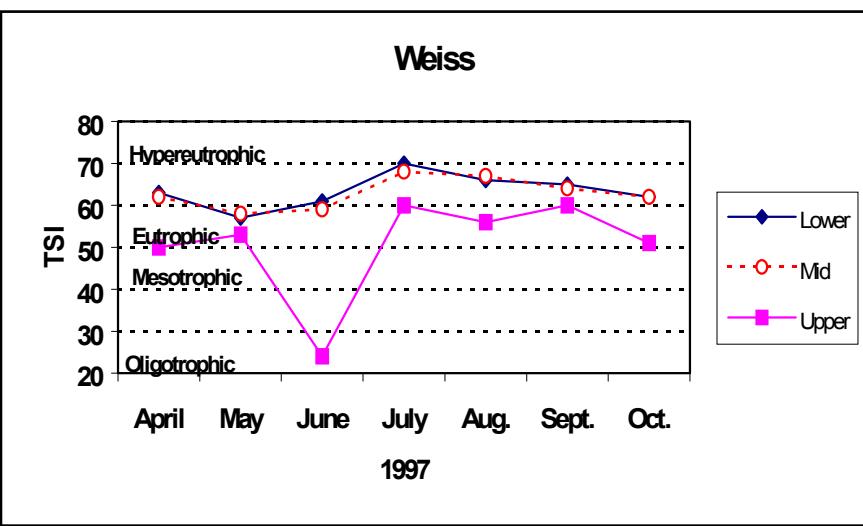
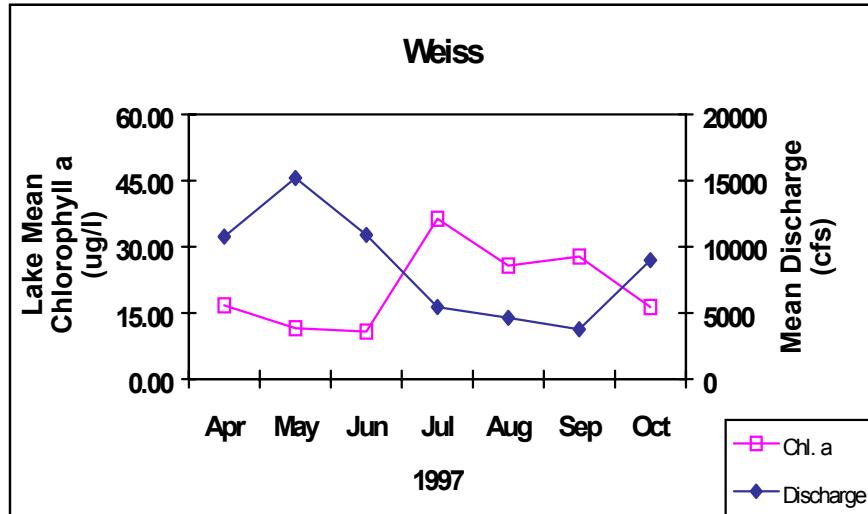
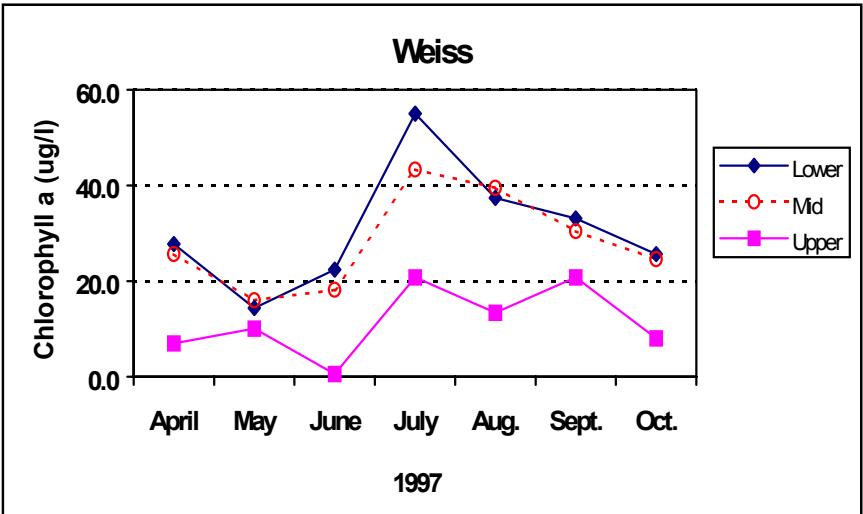
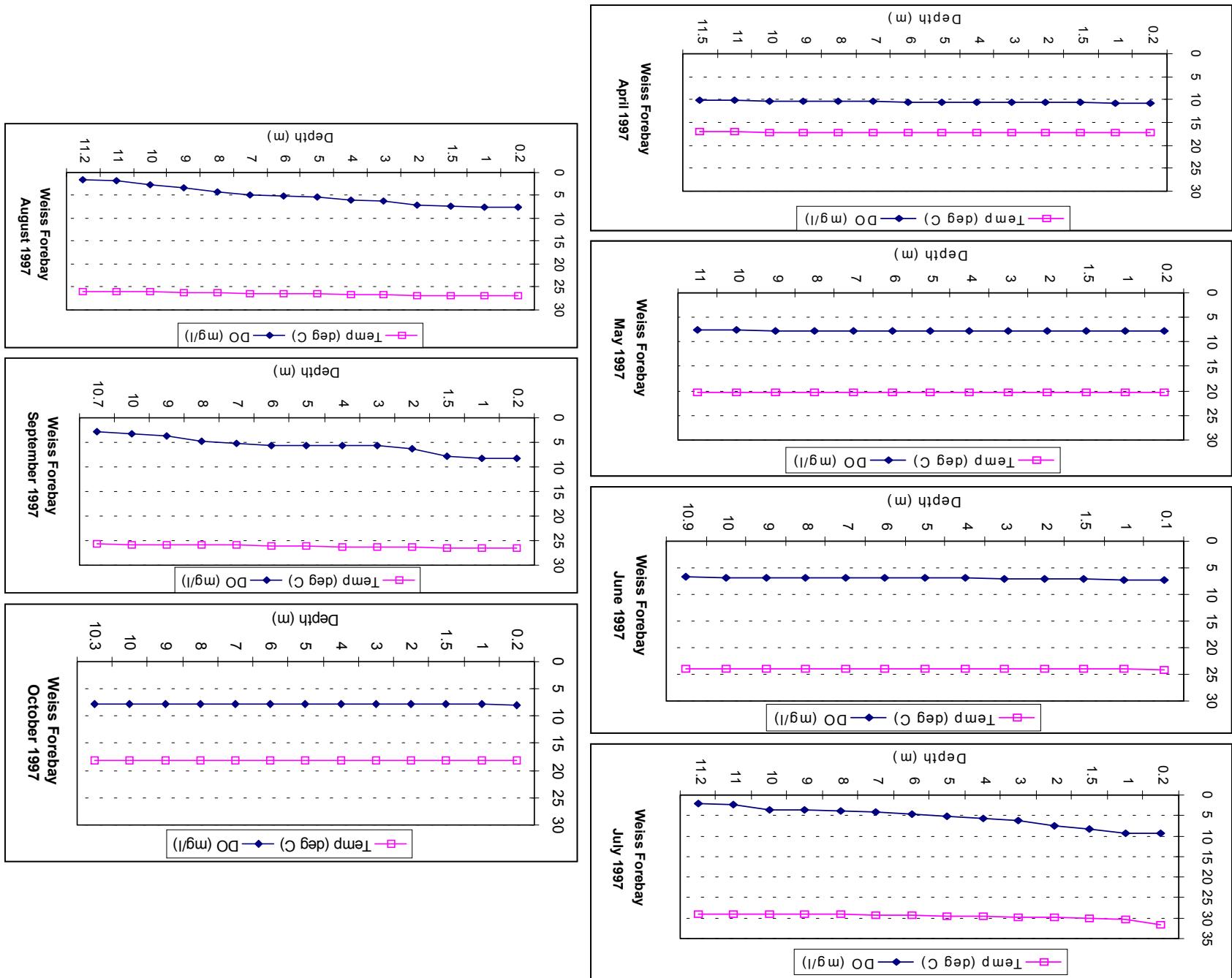


Figure I.11. Chlorophyll *a*, lake eman chlorophyll *a* vs. discharge, trophic state index (TSI), and dissolved oxygen (DO) of Weiss Reservoir, April October 1997.

Figure I.12. Depth profiles of dissolved oxygen (DO) and temperature (Temp) in the dam forebay of Weiss Reservoir April-October 1997.



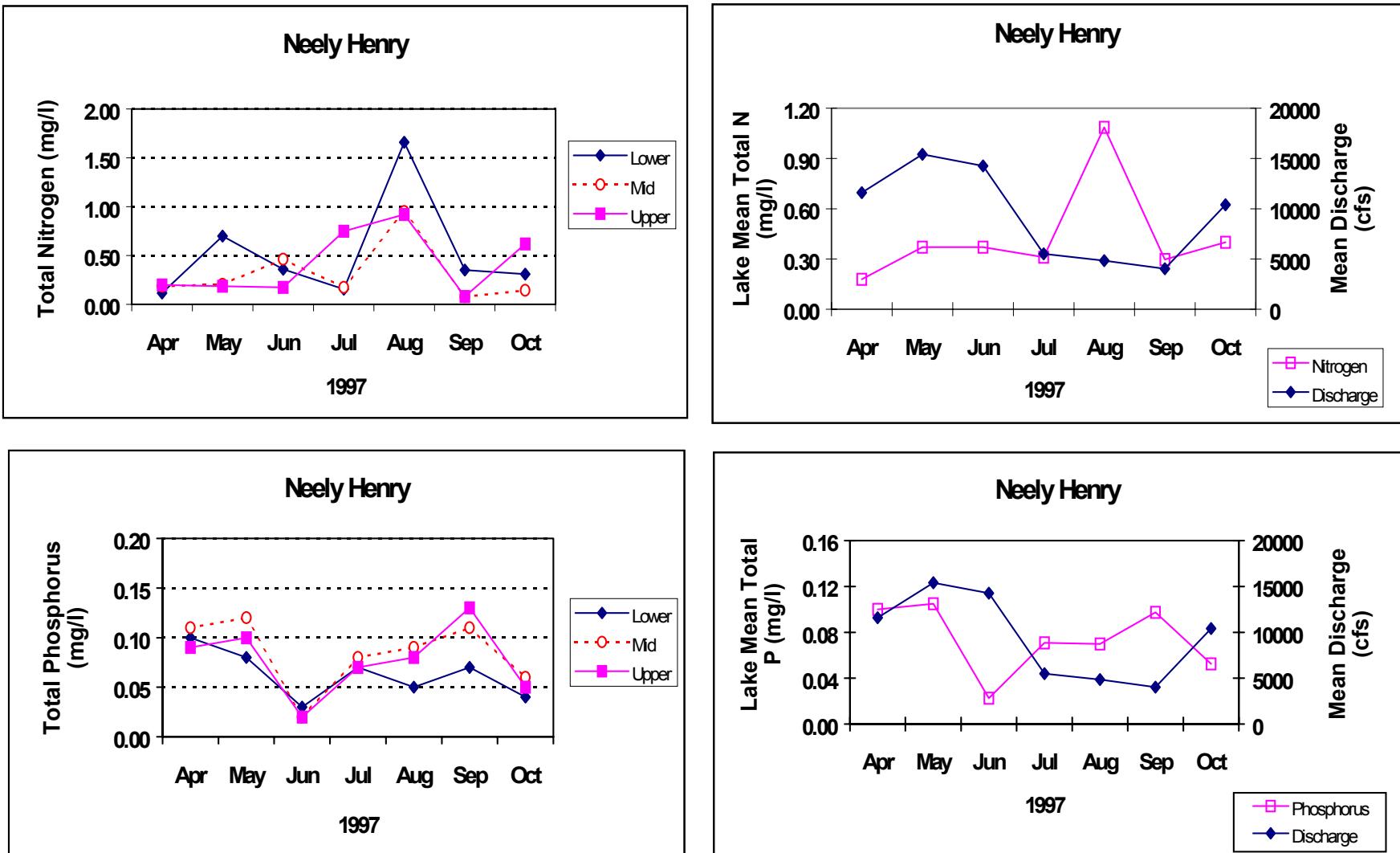


Figure I.13. Total nitrogen (TN), lake mean TN vs. discharge, total phosphorus (TP), and lake mean TP vs. discharge for Neely Henry Reservoir, April–October 1997.

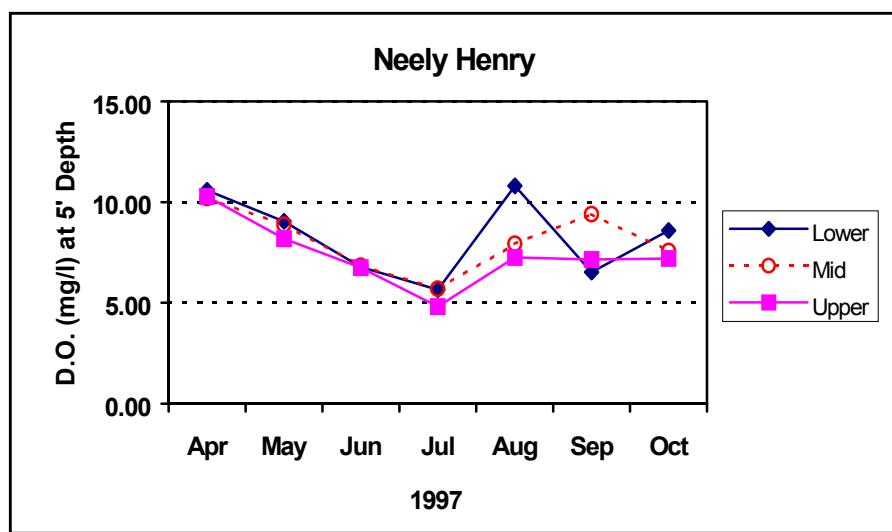
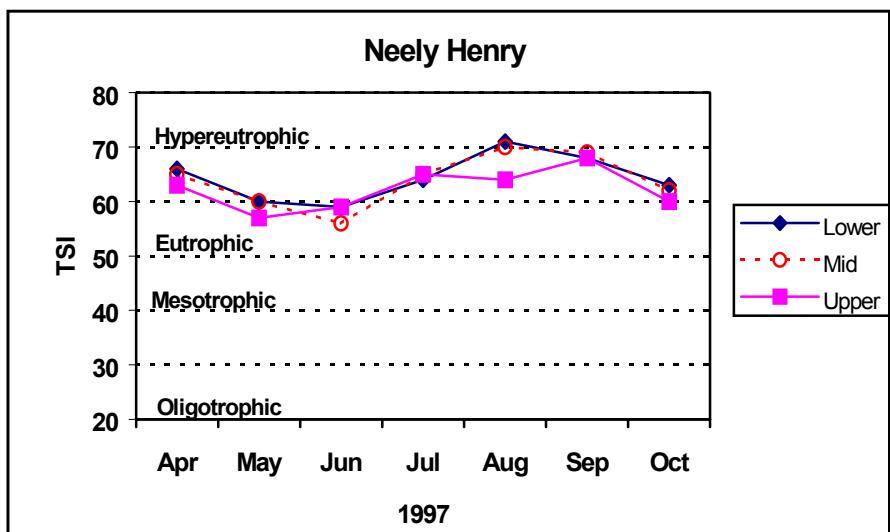
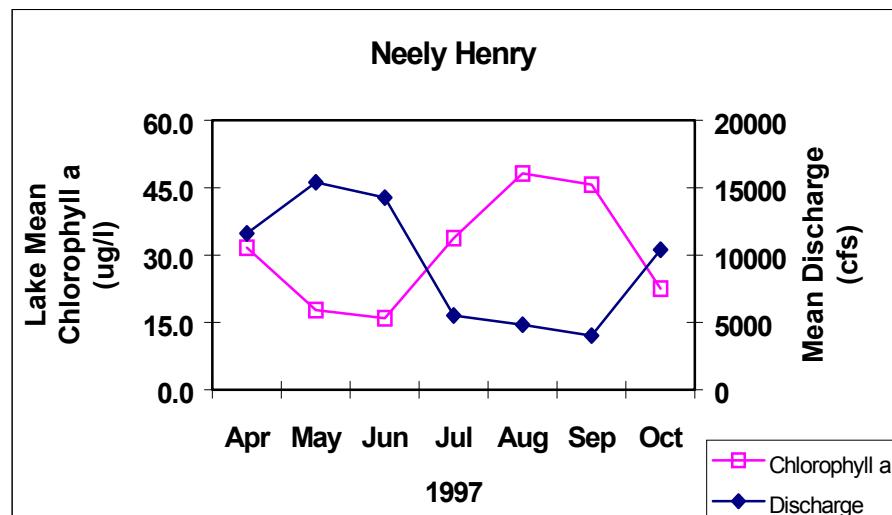
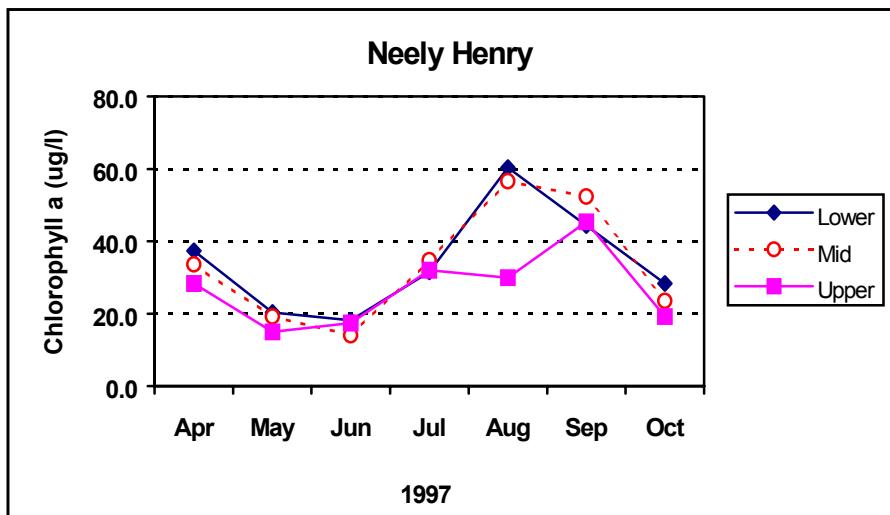
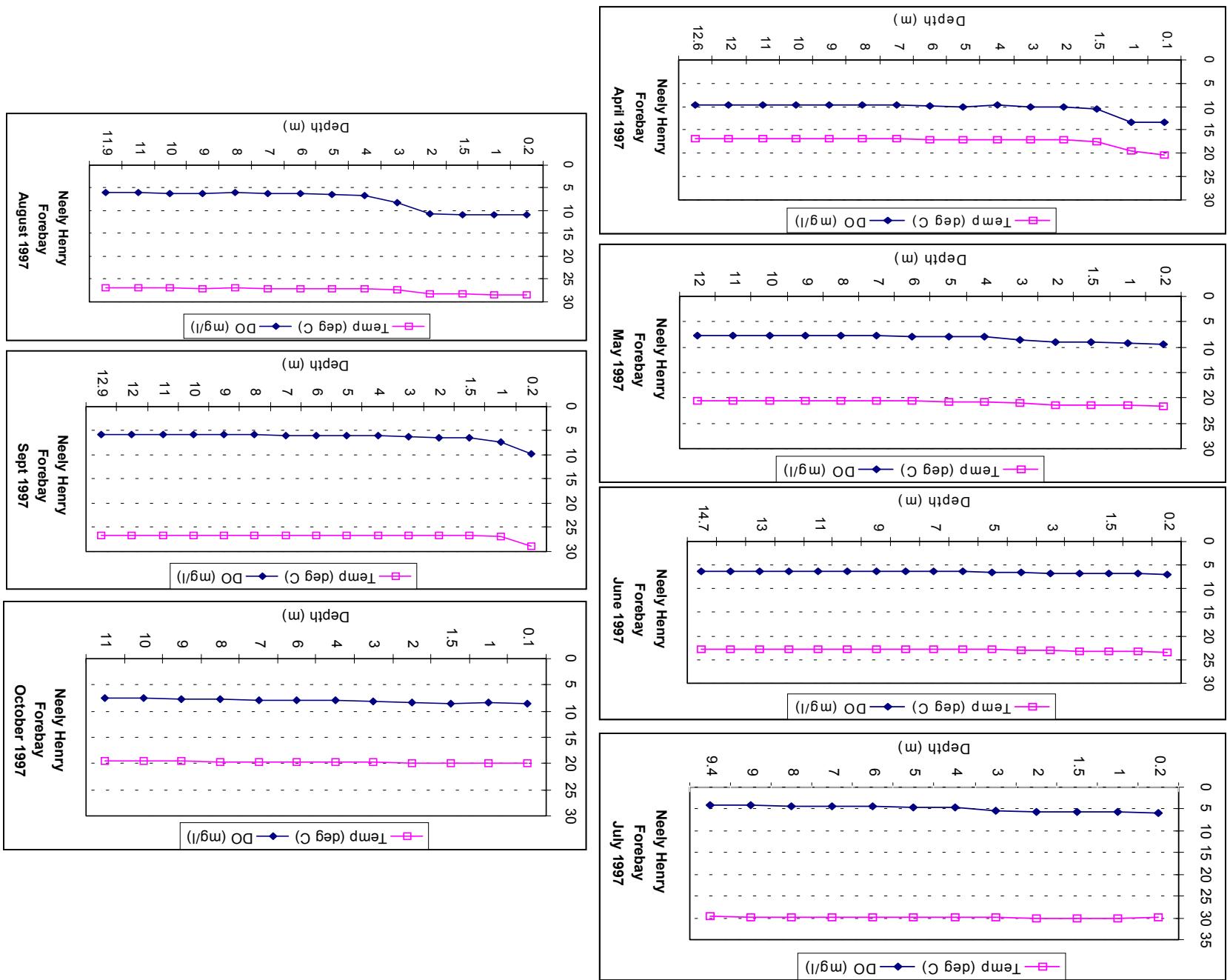


Figure I.14. Chlorophyll *a*, lake mean chlorophyll *a* vs. discharge, trophic state index (TSI) and dissolved oxygen (DO) for Neely Henry Reservoir, April-October 1997.

Figure I.15. Depth profiles of dissolved oxygen (DO) and temperature (Temp) in the dam forebay of Neely Henry Reservoir April-October 1997.



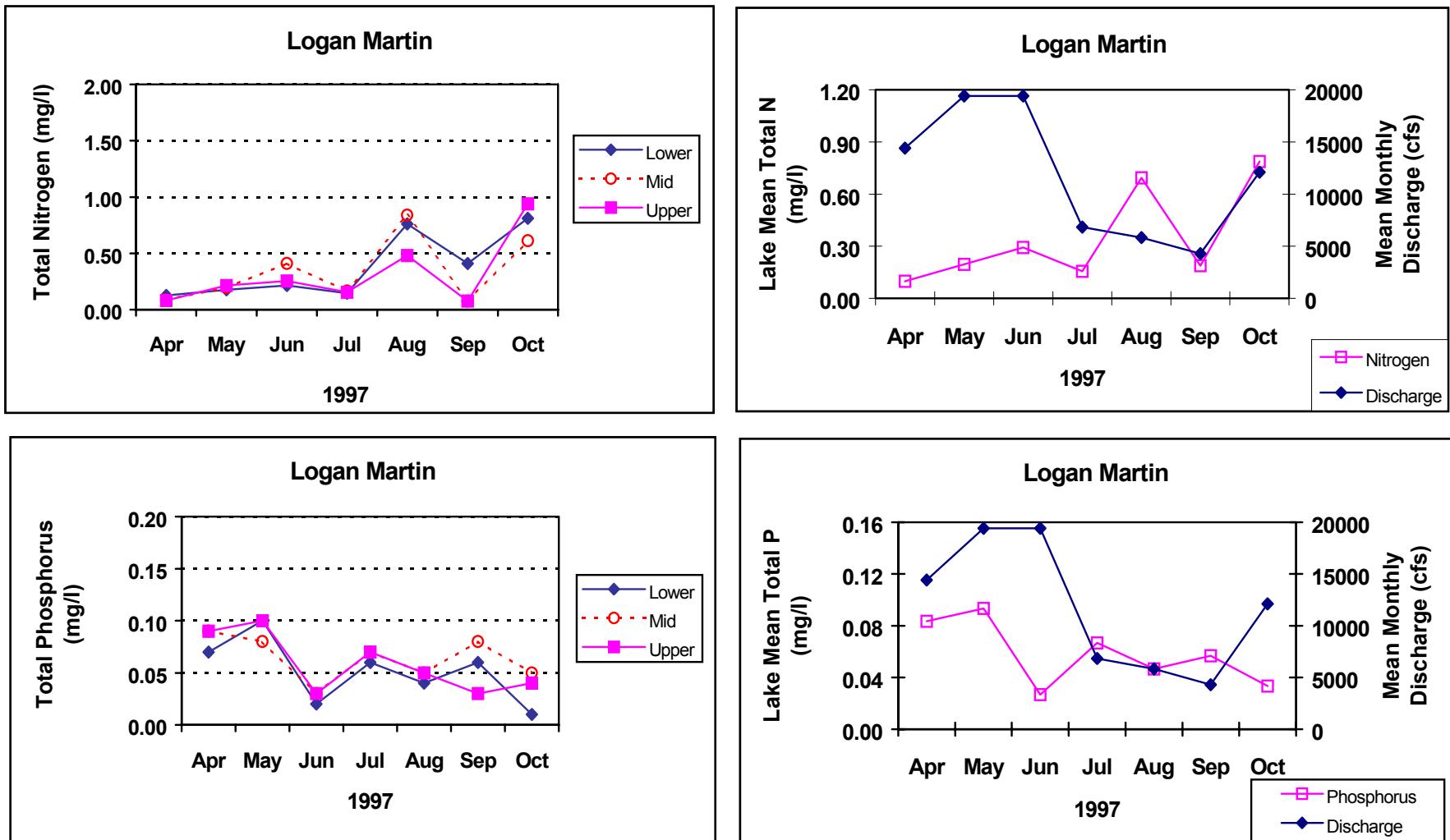


Figure I.16. Total nitrogen (TN), lake mean TN vs. discharge, total phosphorus (TP), and lake mean TP vs. discharge of Logan Martin Reservoir, April–October 1997.

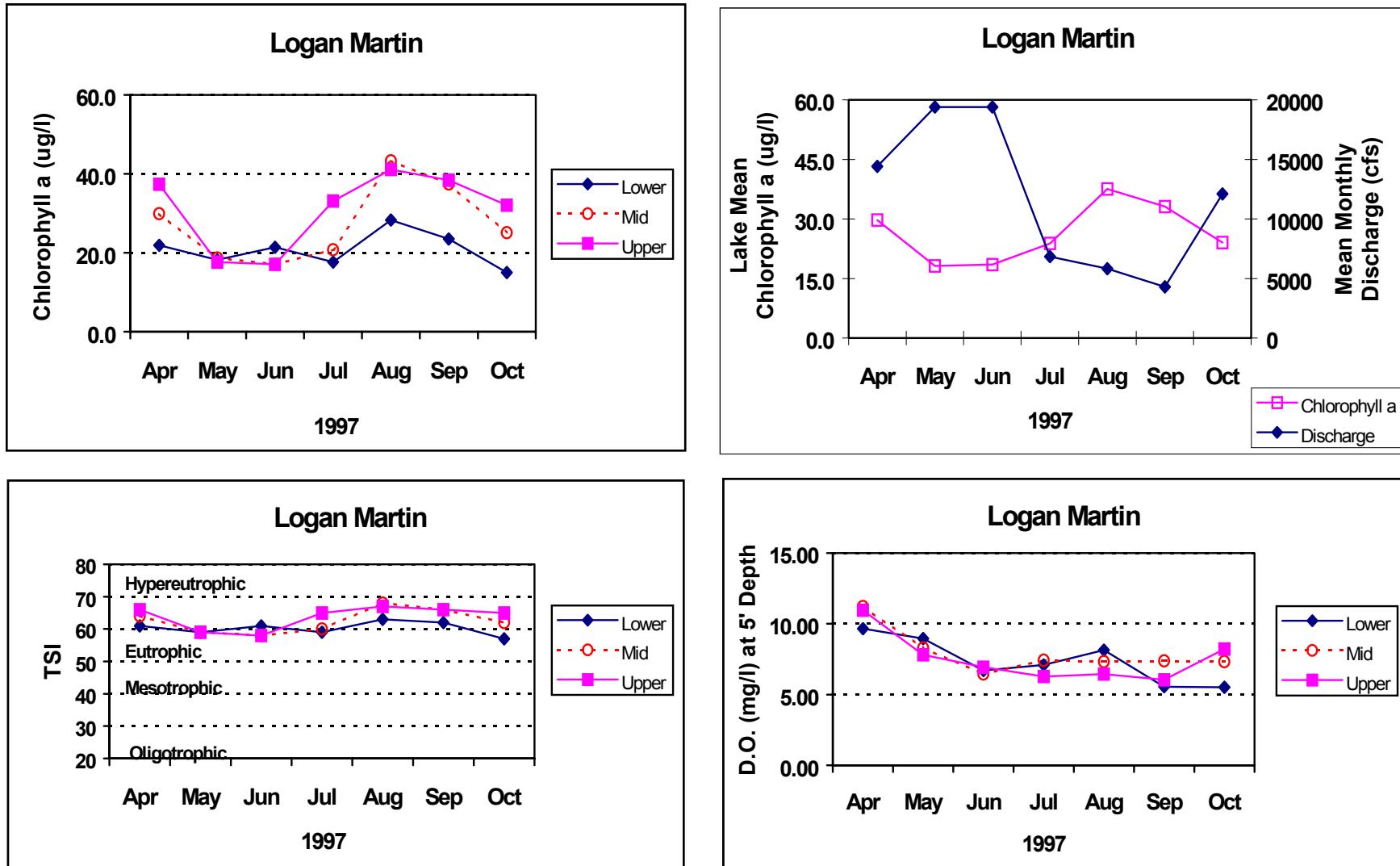
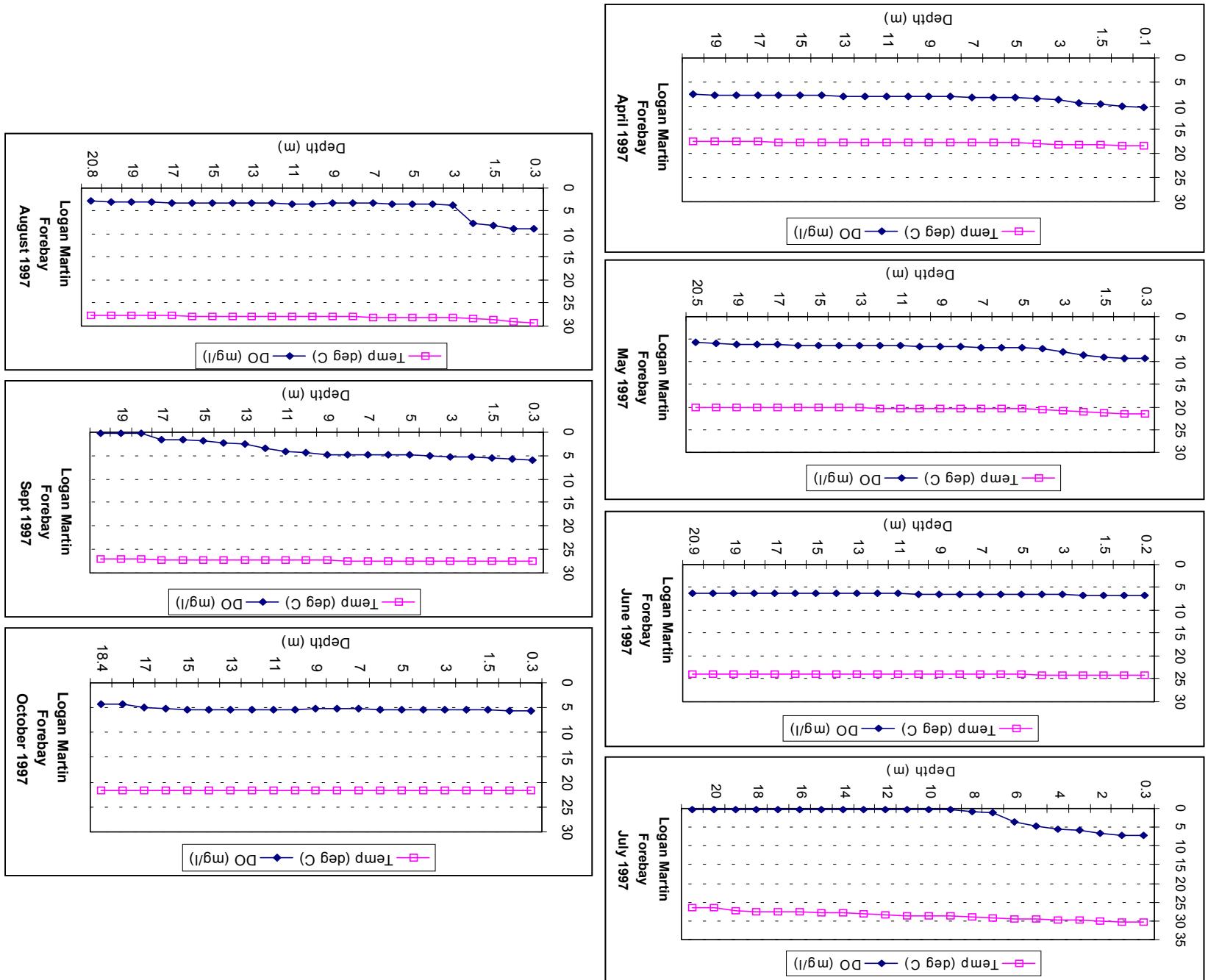


Figure I.17. Chlorophyll *a*, lake mean chlorophyll *a* vs. discharge, trophic state index (TSI), and dissolved oxygen (DO) of Logan Martin Reservoir, April–October 1997.

Figure I.18. Depth profiles of dissolved oxygen (DO) and temperature (Temp) in the dam forebay of Logan Martin Reservoir April-October 1997.



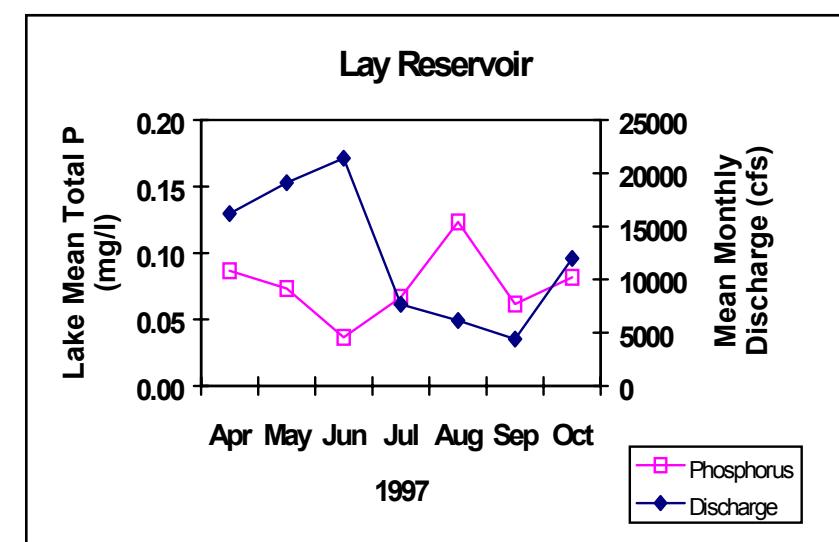
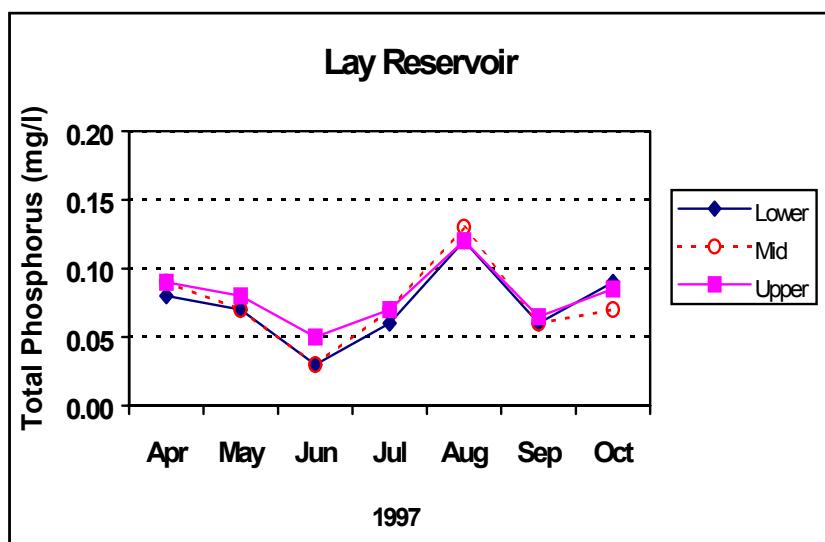
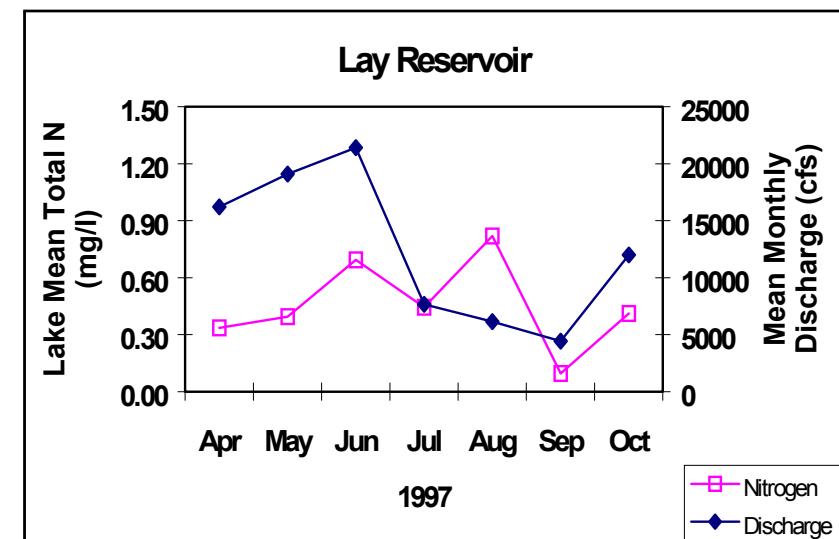
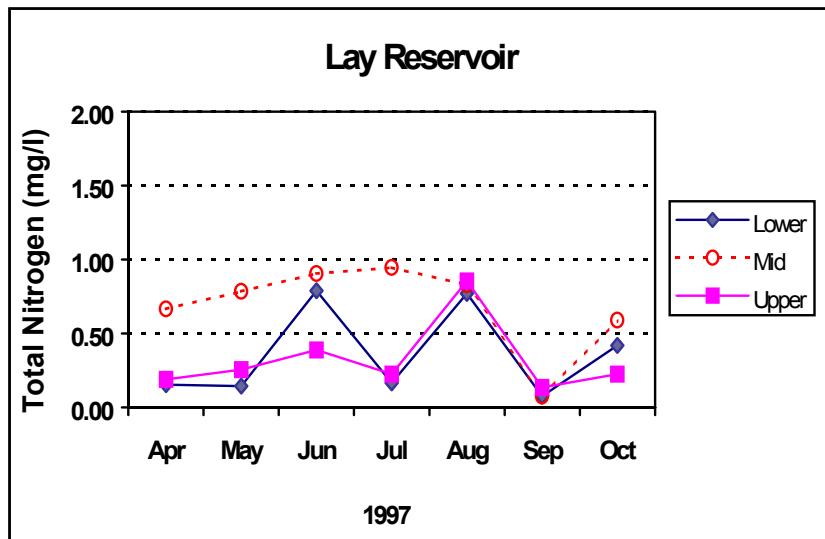


Figure I.19. Total nitrogen (TN), lake mean TN vs. discharge, total phosphorus (TP), lake mean TP vs. discharge of Lay Reservoir, April-October 1997.

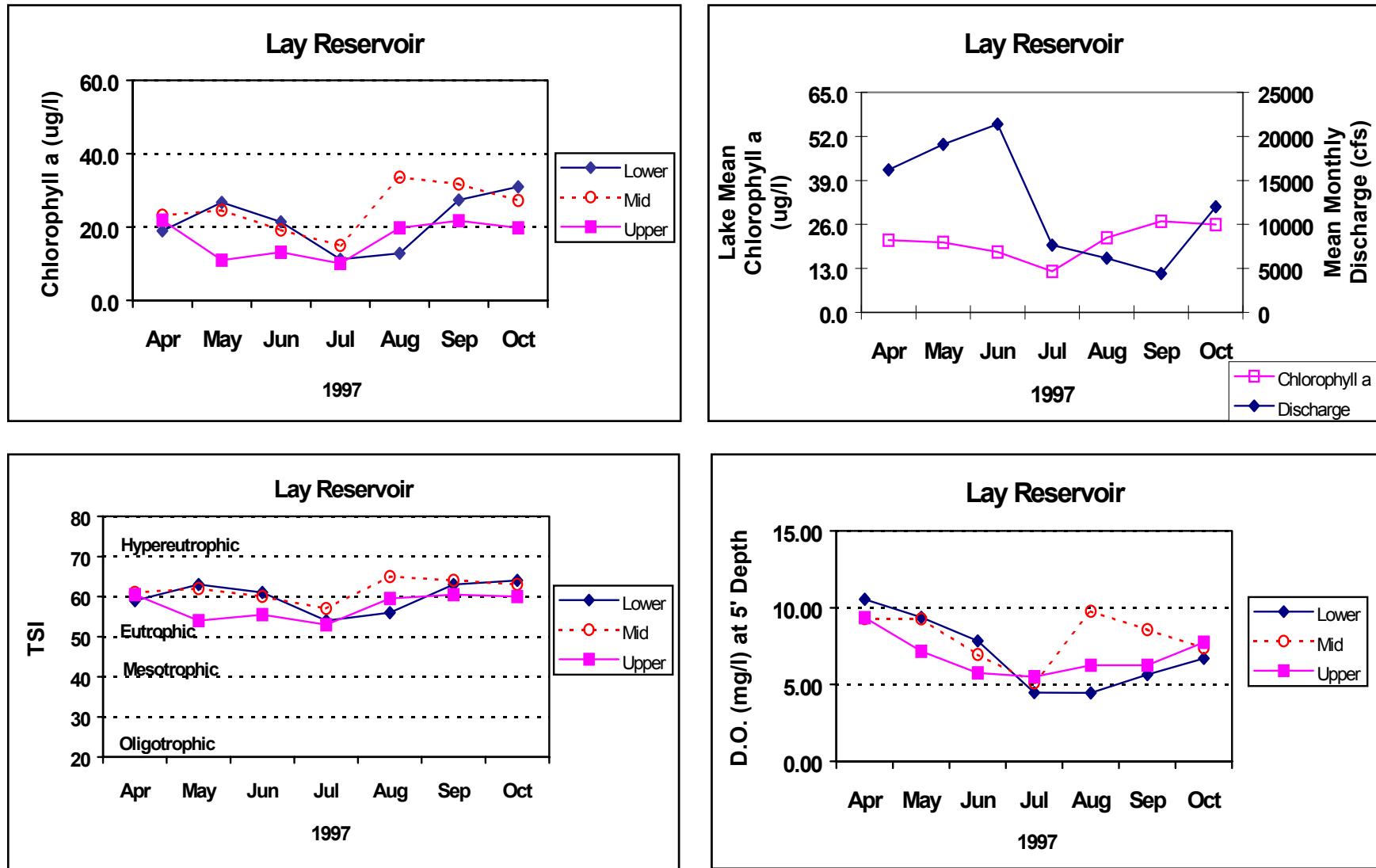
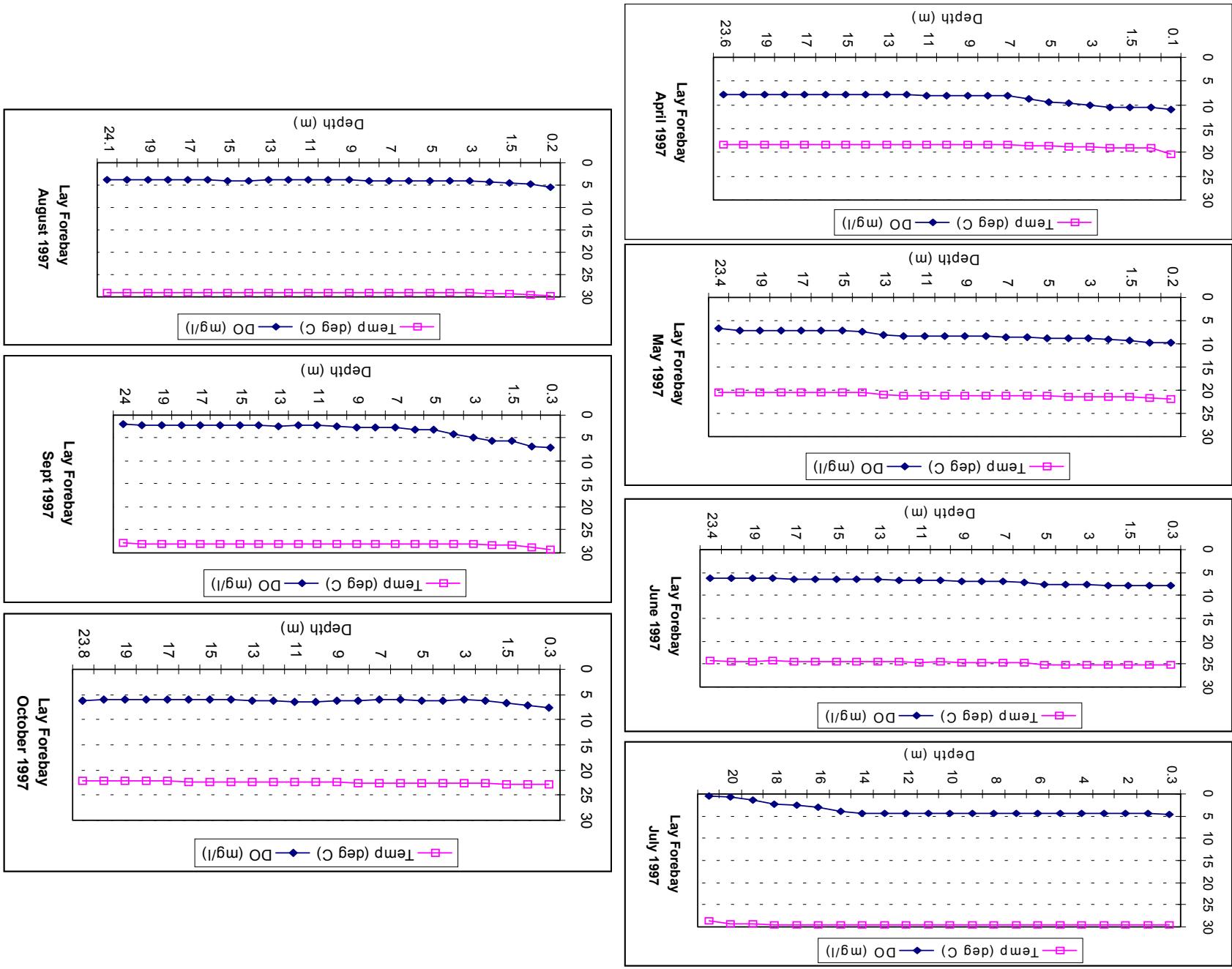


Figure I.20. Chlorophyll *a*, lake mean chlorophyll *a* vs. discharge, trophic state (TSI), and dissolved oxygen (DO) of Lay Reservoir, April-October 1997.

Figure I.21. Depth profiles of dissolved oxygen (DO) and temperature (Temp) in the dam forebay of Lay Reservoir April-October 1997



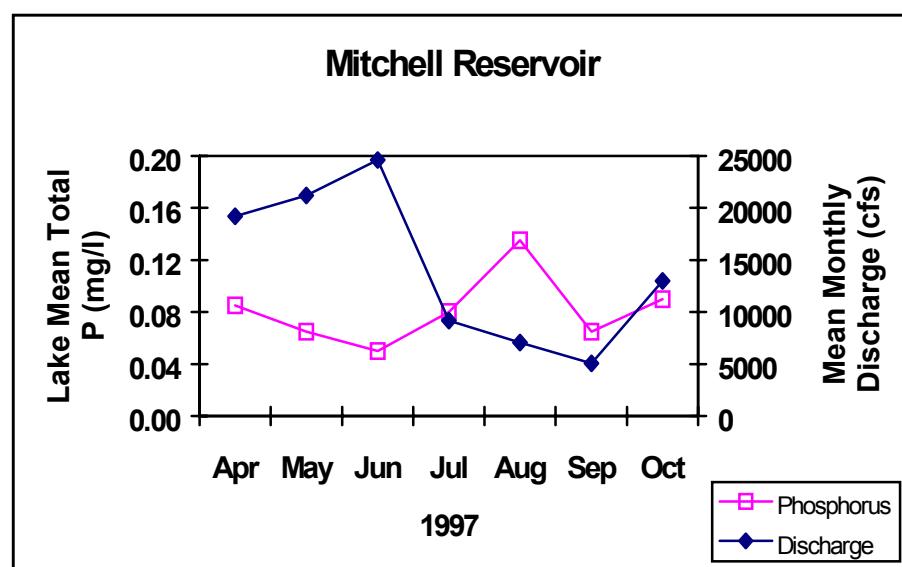
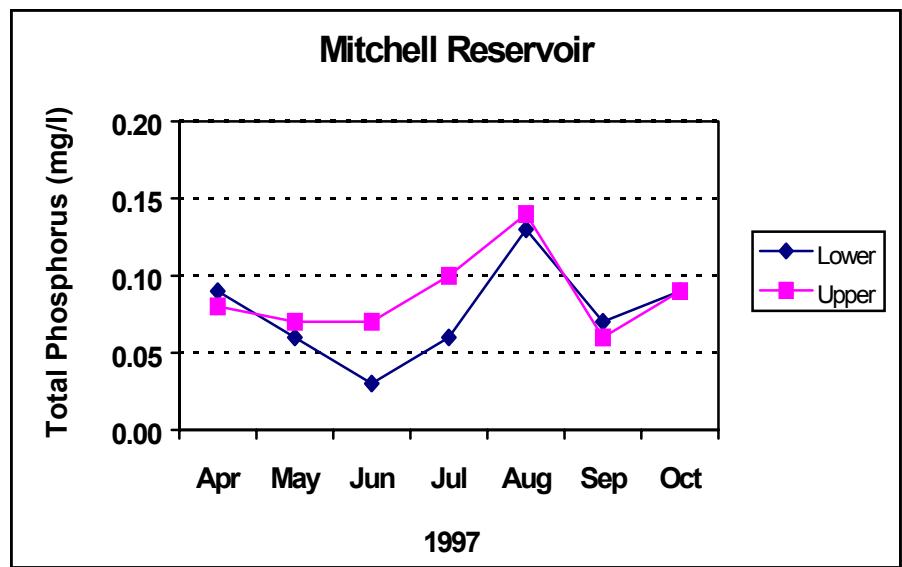
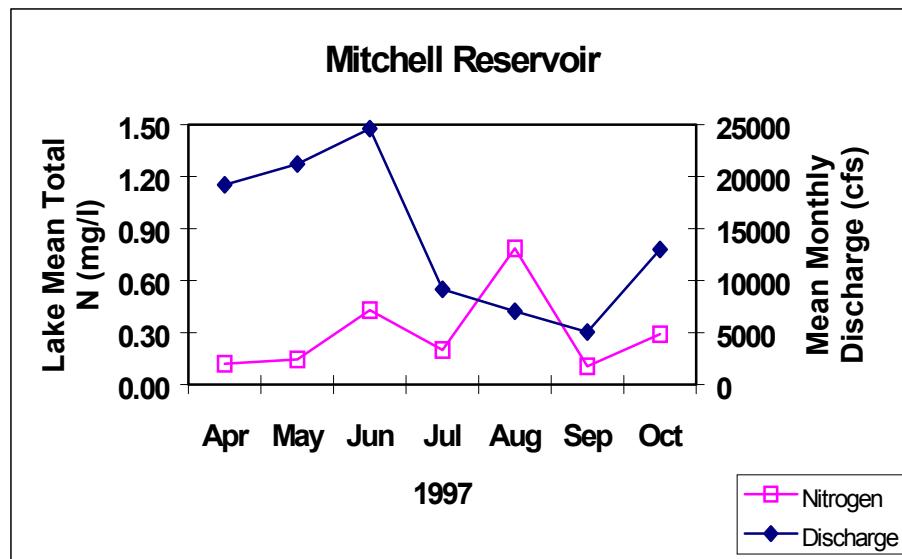
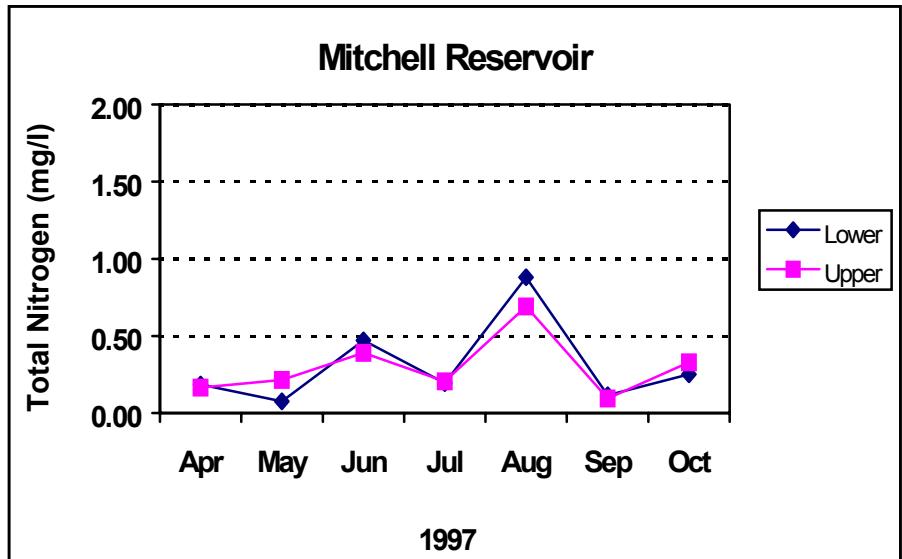


Figure I.22. Total nitrogen (TN), lake mean TN vs. discharge, total phosphorus (TP), and lake mean TP vs. discharge of Mitchell Reservoir, April–October 1997.

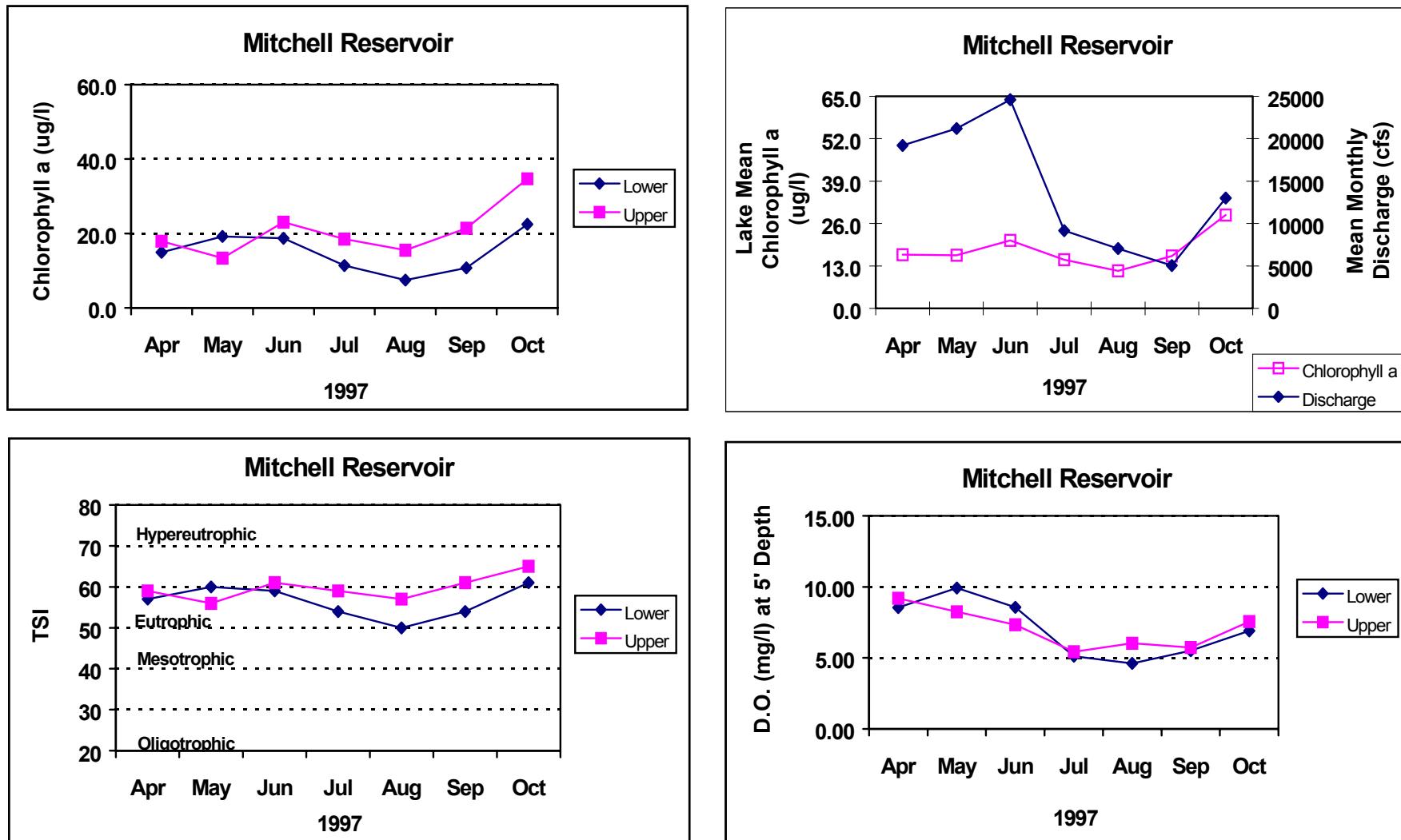
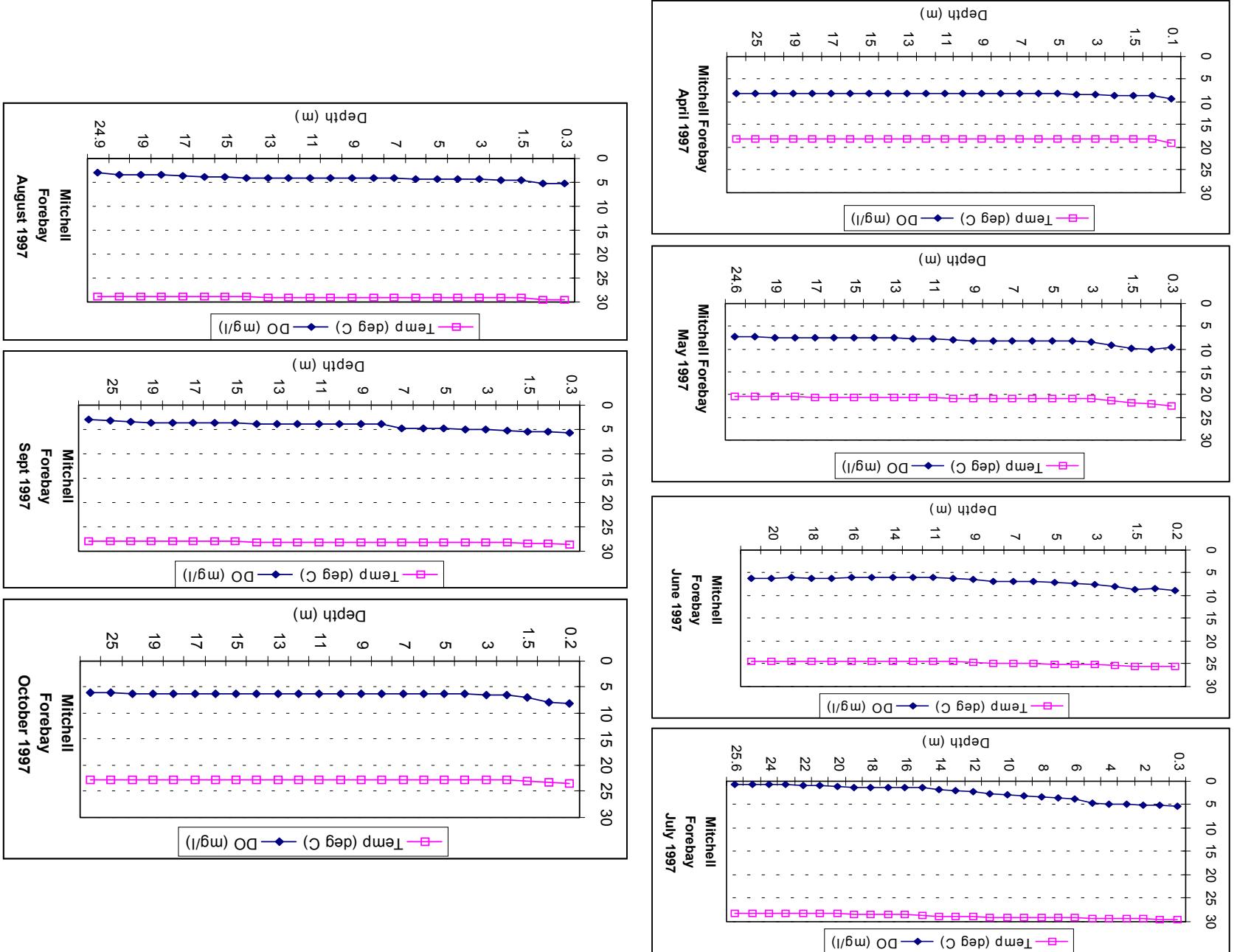


Figure I.23. Chlorophyll *a*, lake mean chlorophyll *a* vs. discharge, trophic state index (TSI), and dissolved oxygen (DO) of Mitchell Reservoir, April-October 1997.

Figure I.24. Depth profiles of dissolved oxygen (DO) and temperature (Temp) in the dam forebay of Mitchell Reservoir April-October 1997.



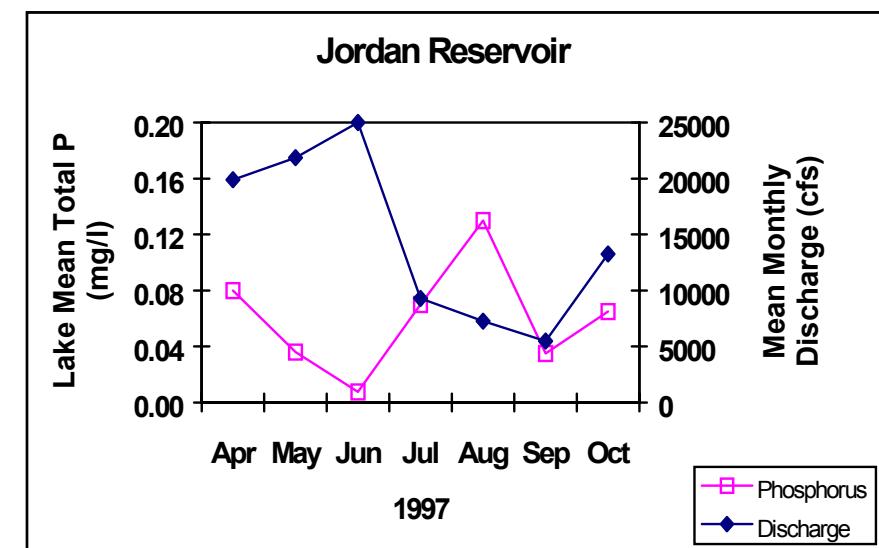
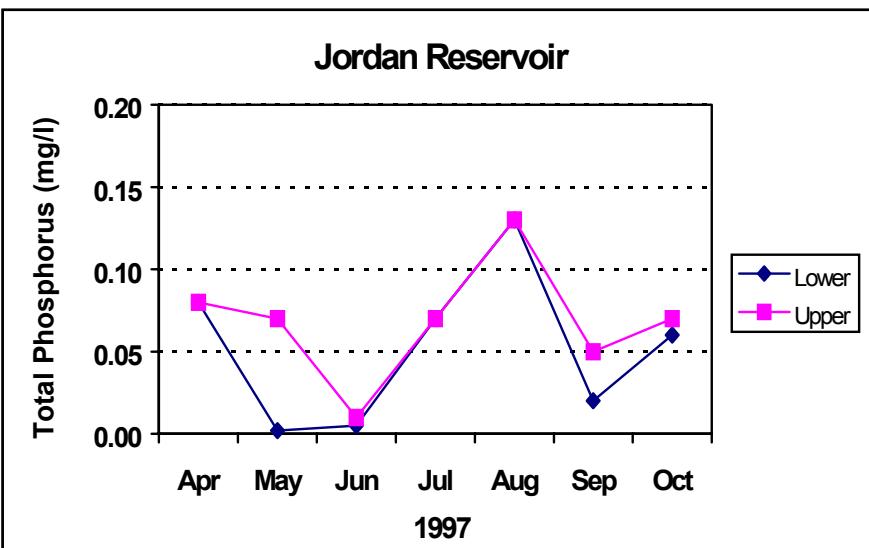
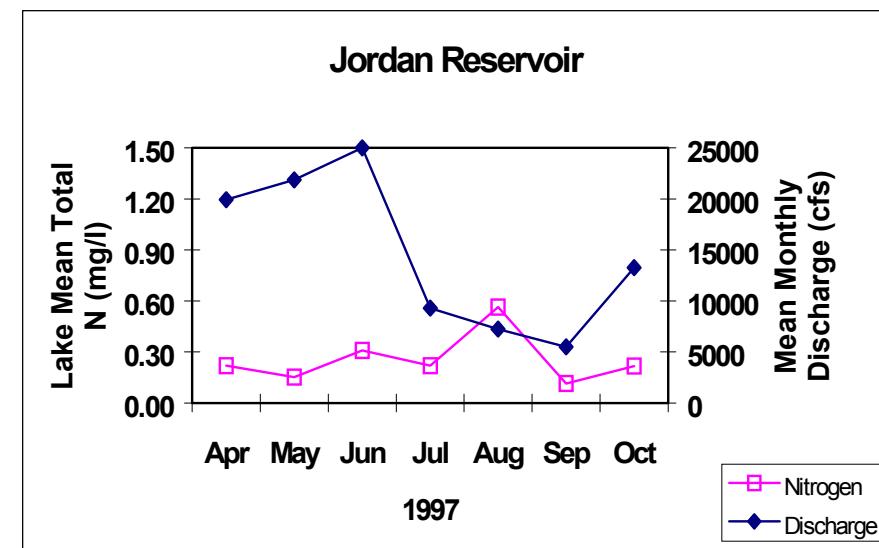
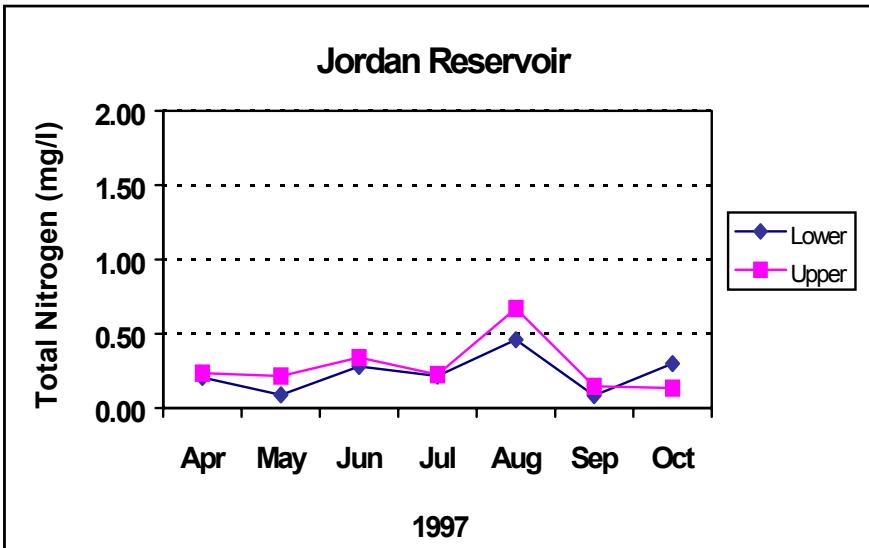


Figure I.25. Total nitrogen (TN), lake mean TN vs. discharge, total phosphorus (TP), and lake mean TP vs. discharge of Jordan Reservoir, April-October 1997.

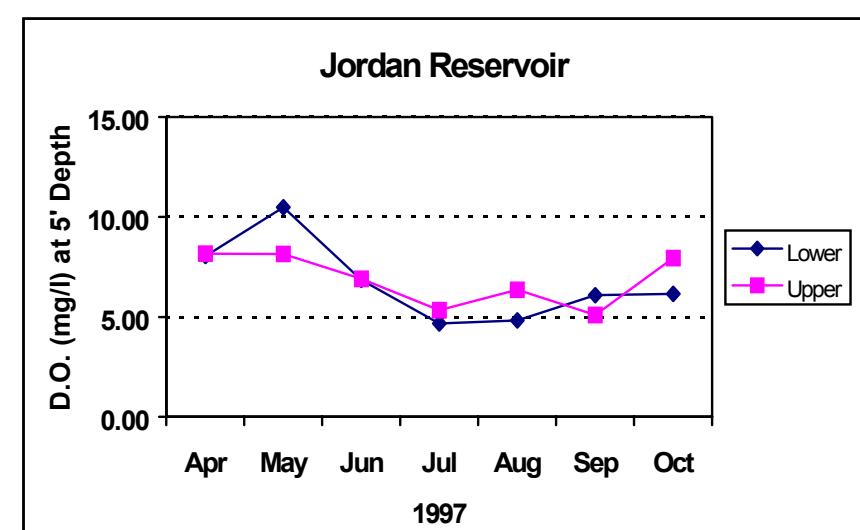
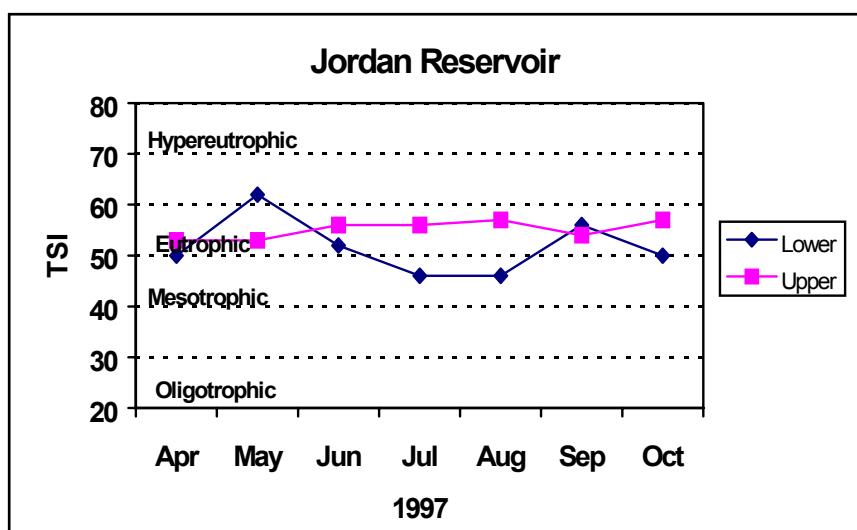
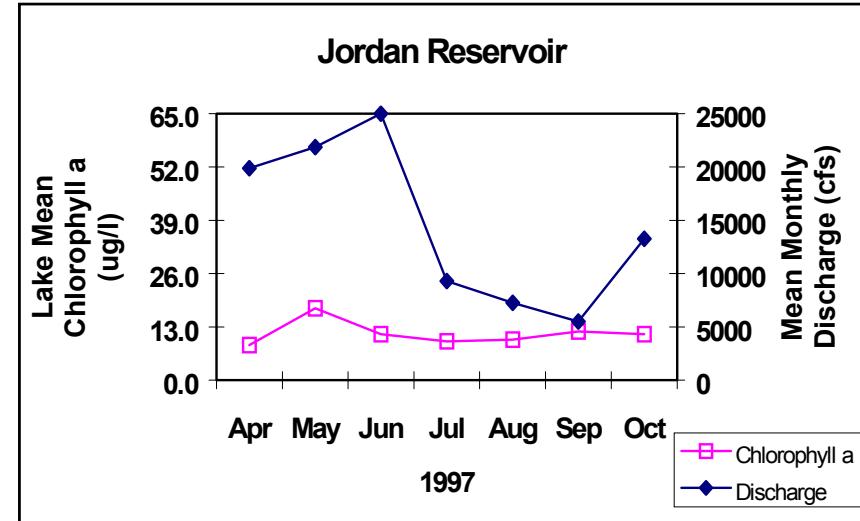
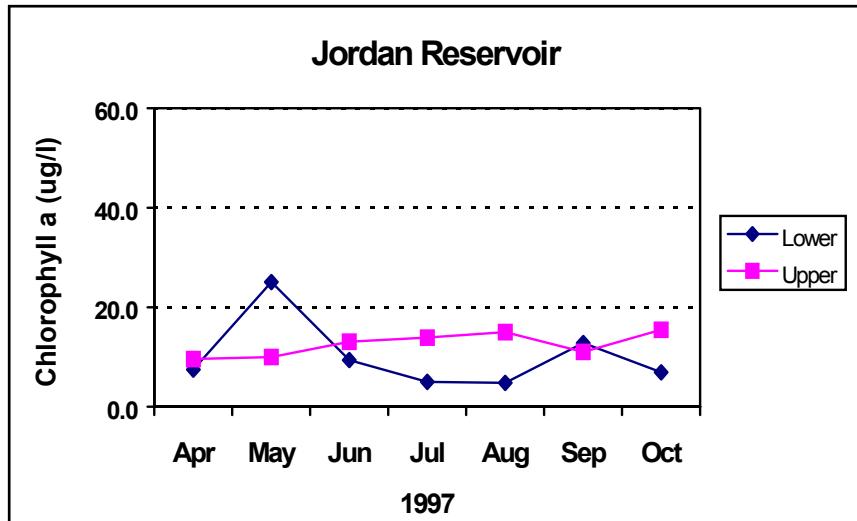
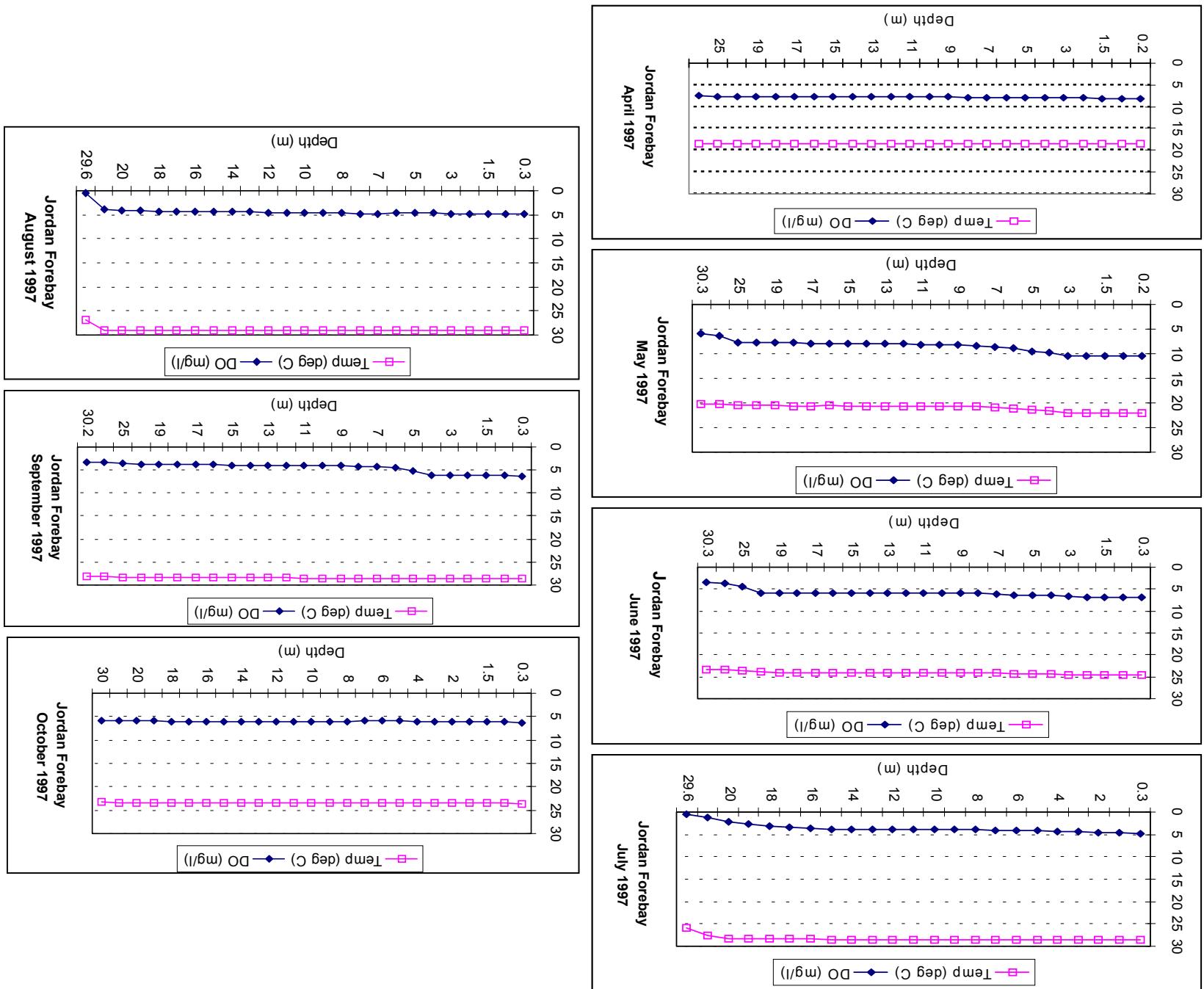


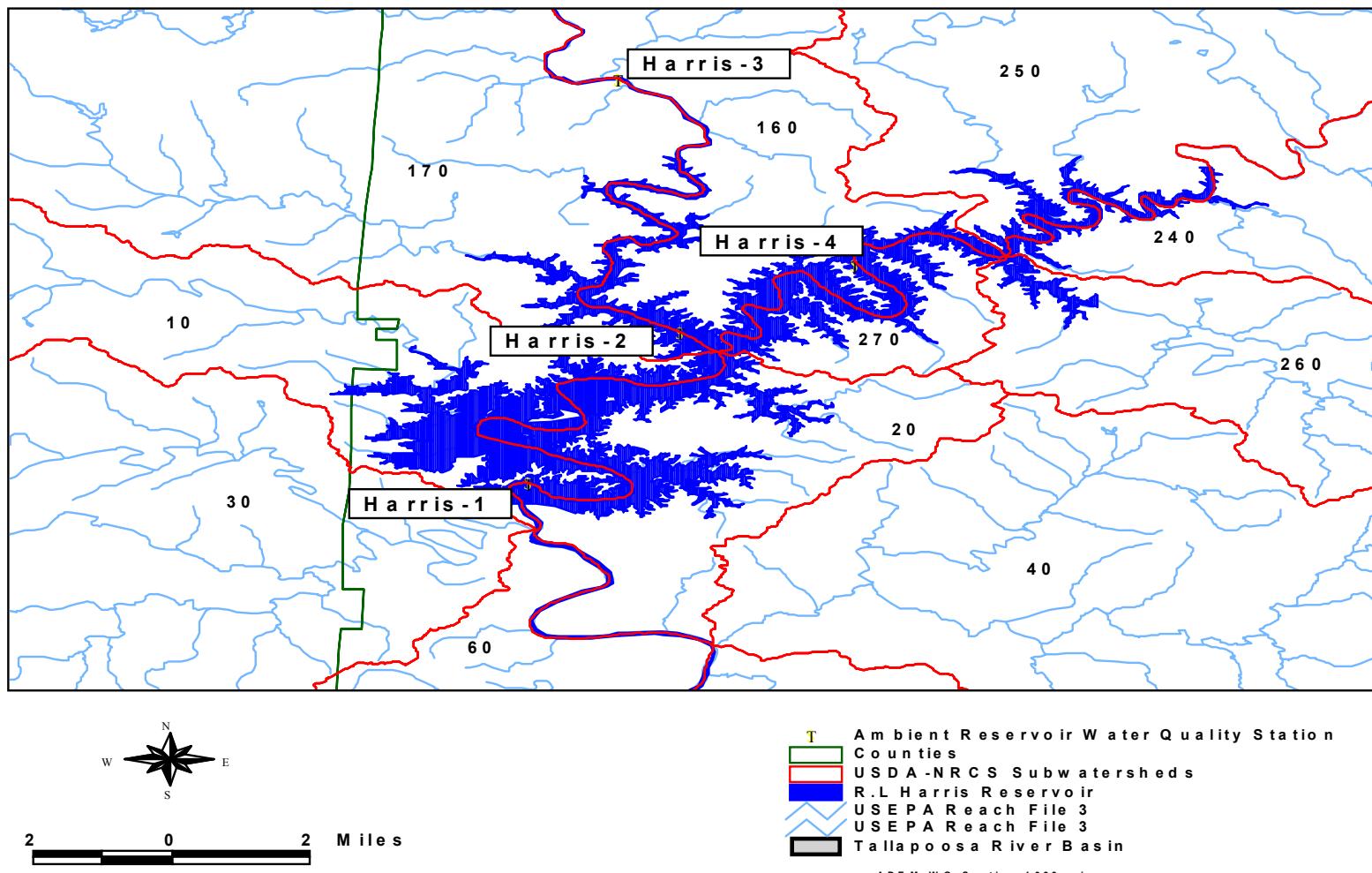
Figure I.26. Chlorophyll *a*, lake mean chlorophyll *a* vs. discharge, trophic state (TSI), and dissolved oxygen (DO) of Jordan Reservoir, April–October 1997.

Figure I.27. Depth profiles of dissolved oxygen (DO) and temperature (Temp) in the dam forebay of Jordan Reservoir April-October 1997.



II. TALLAPOOSA RIVER RESERVOIRS

Figure II.1
Harris Reservoir



Harris Reservoir

Nitrogen. Of Tallapoosa reservoir locations, the mean TN concentration for upper Harris Reservoir was second highest to those of Yates Reservoir (Fig. II.5). Within the reservoir, the mean TN value from the Little Tallapoosa River portion of Harris was second to that of the upper reservoir followed by values for the mid and lower locations.

Monthly TN concentrations for upper Harris Reservoir increased from April to their highest point in August (Fig. II.6). TN concentrations of other reservoir locations were variable April-July but increased to their highest points in August. TN concentrations at all locations decreased sharply in September.

Lake mean TN concentrations (mean of all stations) decreased April-June as lake discharge increased (Fig. II.6). Lake discharge decreased July-September as lake mean TN increased to its highest point in August and declined in September.

Phosphorus. Of Tallapoosa reservoir locations, the mean TP concentration for upper Harris Reservoir was second highest to Yates Reservoir (Fig. II.5). Within Harris, mean TP concentrations for the Little Tallapoosa and mid reservoir were below that of the upper reservoir , followed by the lower reservoir.

Monthly TP concentrations were variable at all locations (Fig. II.6). Highest concentrations in the upper reservoir occurred in July while highest concentrations in the other reservoir locations occurred April-May. Lowest concentrations at all locations occurred in June.

Lake mean TP concentrations (mean of all stations) were highest April-May and July with lake discharge increasing through June and decreasing afterward (Fig. II.6). Lowest lake mean TP concentrations occurred in June when lake discharge was greatest.

Algal Growth Potential Tests. Phosphorus was indicated as the limiting nutrient at all locations during August (Table II.1). Mean MSC values at the Little Tallapoosa, upper, mid, and lower reservoir locations (3.55, 4.55, 1.82, and 1.59 mg/l respectively) were below the maximum 5.0 mg/l level suggested to assure protection from nuisance algal blooms and fish-kills in southeastern lakes.

Chlorophyll a. Mean chlorophyll *a* concentrations in the upper, mid, and Little Tallapoosa reservoir locations were, with the exception of the Sougahatchee embayment of Yates Reservoir, highest overall of Tallapoosa locations (Fig. II.5). Within Harris, highest mean concentrations occurred in the Little Tallapoosa with lowest concentrations occurring in the lower reservoir.

Monthly chlorophyll *a* concentrations were variable at all locations (Fig. II.7). In the Little Tallapoosa location, lowest concentrations occurred in June and increased thereafter to their highest level in September. In the upper reservoir, highest concentrations occurred in May and lowest concentrations in April and June. At mid reservoir highest concentrations occurred in April and August with the lowest concentration occurring in June. In the lower reservoir, the highest concentration occurred in July and the lowest concentration in April.

Lake mean chlorophyll *a* concentrations (mean of all stations) were variable with lowest concentrations occurring during highest lake discharge in June (Fig. II.7). Mean concentrations were higher July-September as lake discharge decreased.

Trophic state. TSI values in the Little Tallapoosa location of Harris Reservoir were within the lower level of the eutrophic range in all months except June, when values were just within the mesotrophic range (Fig. II.7). In the upper reservoir, TSI values varied from oligotrophic levels in April and June to values in the middle of the eutrophic range in May. TSI values at mid reservoir were within the lower levels of the eutrophic range in all months except June when values were just within the mesotrophic range. In the lower reservoir, TSI values were within the mesotrophic range April-June then increased into the eutrophic range July-August. TSI values in the lower reservoir decreased into the mesotrophic range in September.

Dissolved oxygen/Temperature. DO concentrations in Harris were similar at all locations April-September with highest concentrations in May and lowest concentrations in July (Fig. II.7). Lowest concentrations occurred in the upper reservoir (6.54 mg/l) but were well above the criterion limit of 5.0 mg/l.

Depth profiles of dissolved oxygen from the dam forebay of Harris Reservoir indicated weak chemical stratification in April. Stratification became more pronounced monthly until essentially anoxic conditions occurred from a depth of 6m to the lake

bottom in August and September (Fig. II.8). Similar DO concentrations were observed in the water column at mid-reservoir and the Little Tallapoosa location in these months (Appendix).

Depth profiles of temperature indicated weak thermal stratification in April that intensified in the upper water column May-July as a pronounced thermocline developed at a depth of 3-7m (Fig. II.8). A pronounced thermocline also existed between 20 and 25m depth April-September. Highest water column temperatures occurred in July.

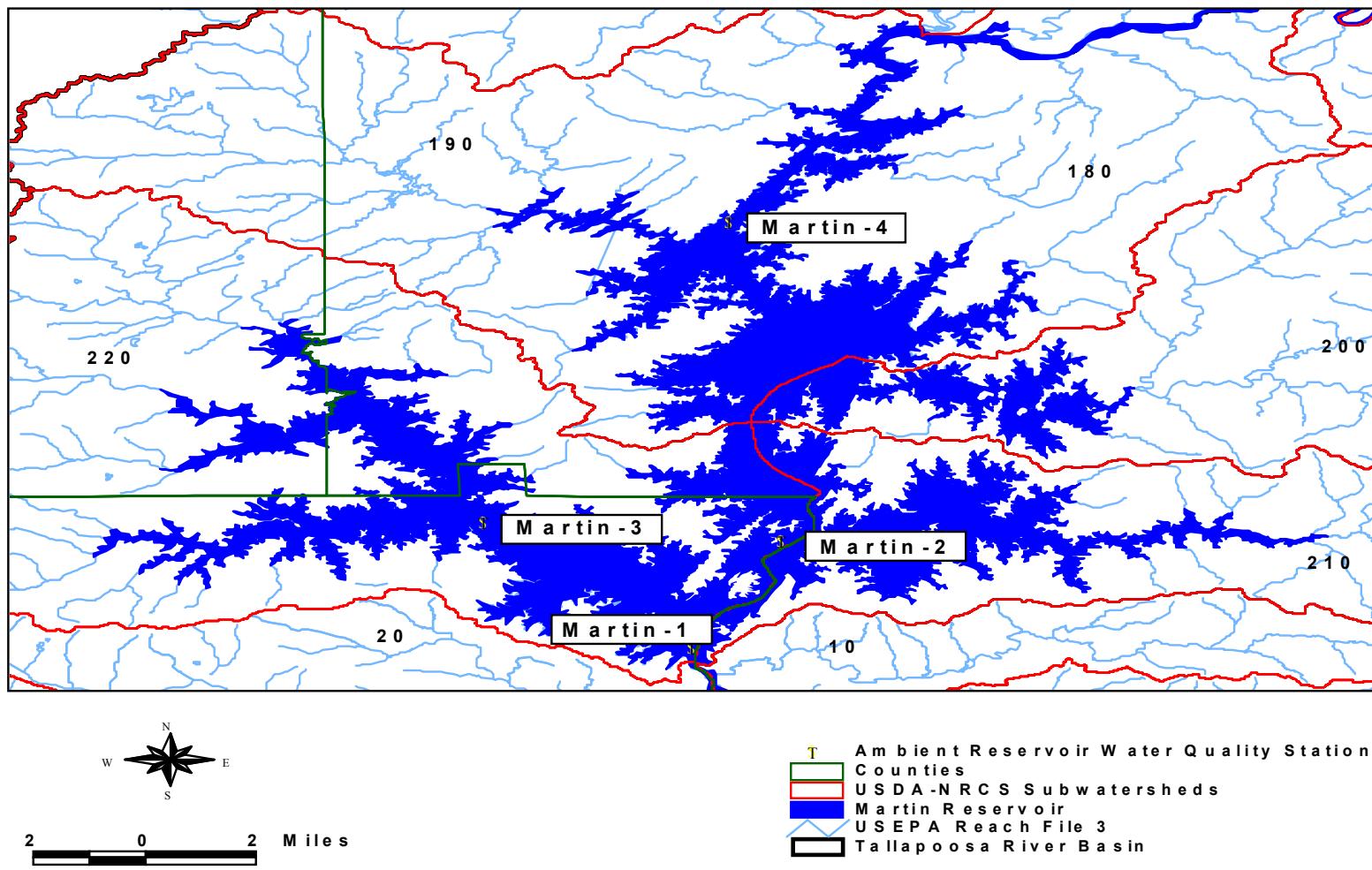
Discussion. Nutrient concentrations in upper Harris Reservoir were highest of mainstem Tallapoosa reservoir locations. However, phosphorus was indicated as the limiting nutrient at all locations of Harris in August and mean MSC values were below the maximum 5.0 mg/l level suggested to assure protection from nuisance algal blooms and fish-kills in southeastern lakes.

Mean chlorophyll *a* concentrations in several locations of Harris Reservoir were highest of mainstem Tallapoosa reservoir locations. However, TSI values derived from chlorophyll concentrations were never above the mid eutrophic range and on occasion dropped into the mesotrophic and oligotrophic range from April-September.

Dissolved oxygen concentrations were well above criterion limits April-September though large portions of the water column in the dam forebay were essentially anoxic in August and September. Similar DO concentrations were observed in the water column at mid-reservoir and the Little Tallapoosa location in these months.

Figure II.2

Martin Reservoir



Martin Reservoir

Nitrogen. Mean TN concentrations of Martin Reservoir were similar to those of Harris Reservoir (Fig. II.5). Highest mean TN concentrations occurred at mid-reservoir followed by the upper reservoir, Kowaliga, and the lower reservoir.

Monthly TN concentrations were similar at the upper reservoir, Kowaliga, and the lower reservoir and changed little April-July (Fig. II.9). TN concentrations increased greatly at these locations in August and decreased to the lowest levels in September. At mid reservoir, TN concentrations increased April-August then decreased to the lowest level in September.

Lake mean TN values (mean of all stations) changed little April-July, increased to the highest level in August, then decreased to the lowest level in September (Fig. II.9). Lake discharge during this period increased April-June then decreased through September.

Phosphorus. Mean TP concentrations for Martin Reservoir were similar to those of mid and lower Harris Reservoir (Fig. II.5). Highest mean TP occurred at the upper and lower reservoir locations, followed by Kowaliga and the mid reservoir respectively.

Monthly TP concentrations were variable at all locations April-September (Fig. II.9). Highest concentrations in the upper reservoir, Kowaliga, and mid reservoir occurred April-May and in the lower reservoir in July. Lowest concentrations at all locations occurred in June.

Lake mean TP concentrations (mean of all stations) were highest April-May and lowest in June when lake discharge was highest (Fig. II.9). Lake discharge increased April-June and decreased afterward.

Algal Growth Potential Tests. Phosphorus was indicated as the limiting nutrient in upper and lower Martin Reservoir in August (Table II.1). In the mid reservoir and Kowaliga, nitrogen and phosphorus were co-limiting. Mean MSC values for the upper, mid, Kowaliga, and lower reservoir locations (2.60, 1.83, 1.58, and 1.75 mg/l, respectively) were well below the maximum 5.0 mg/l level suggested to assure protection from nuisance algal blooms and fish-kills in southeastern lakes.

Chlorophyll a. Mean chlorophyll *a* concentrations for Martin Reservoir were, with the exception of the upper reservoir, much lower than those of upstream Harris Reservoir (Fig. II.5). Highest mean concentrations occurred in the upper reservoir, followed by the mid reservoir, lower reservoir, and Kowaliga respectively.

Monthly chlorophyll *a* concentrations in the upper reservoir increased April-July and decreased afterward (Fig. II.10). At mid-reservoir, concentrations were variable with highest concentrations in August and lowest concentrations in May and July. At Kowaliga, concentrations increased April-July and decreased afterward. Concentrations in the lower reservoir increased April-August and decreased in September.

Lake mean chlorophyll *a* concentrations (mean of all stations) increased April-August and declined in September (Fig. II.10). Lake discharge increased April-June then decreased afterward.

Trophic state. TSI values in the upper reservoir increased from the mesotrophic range in April to the lower levels of the eutrophic range May-September (Fig. II.10). At mid reservoir, TSI values varied from the oligotrophic range in May to the mesotrophic range in April and June-September. At Kowaliga, TSI values increased from the oligotrophic range in April-May to the mesotrophic range June-September. TSI values for the lower reservoir increased from the oligotrophic range in April-May to the mesotrophic range June-September.

Dissolved oxygen/Temperature. DO concentrations decreased at all locations April-May then increased August-September (Fig. II.10). Concentrations were well above the criterion limit of 5.0 mg/l April-September.

Depth profiles of dissolved oxygen from the dam forebay of Martin Reservoir indicated essentially isochemical conditions in April with stratification beginning in May and becoming more pronounced monthly (Fig. II.11). DO concentrations in the dam forebay decreased monthly until the water column was essentially anoxic from a depth of 11m to the lake bottom by September. Similar DO concentrations were observed in the water column at all reservoir locations during this month (Appendix).

Depth profiles of temperature indicated thermal stratification at one or more depths in the water column from April-September (Fig. II.11). An upper water column

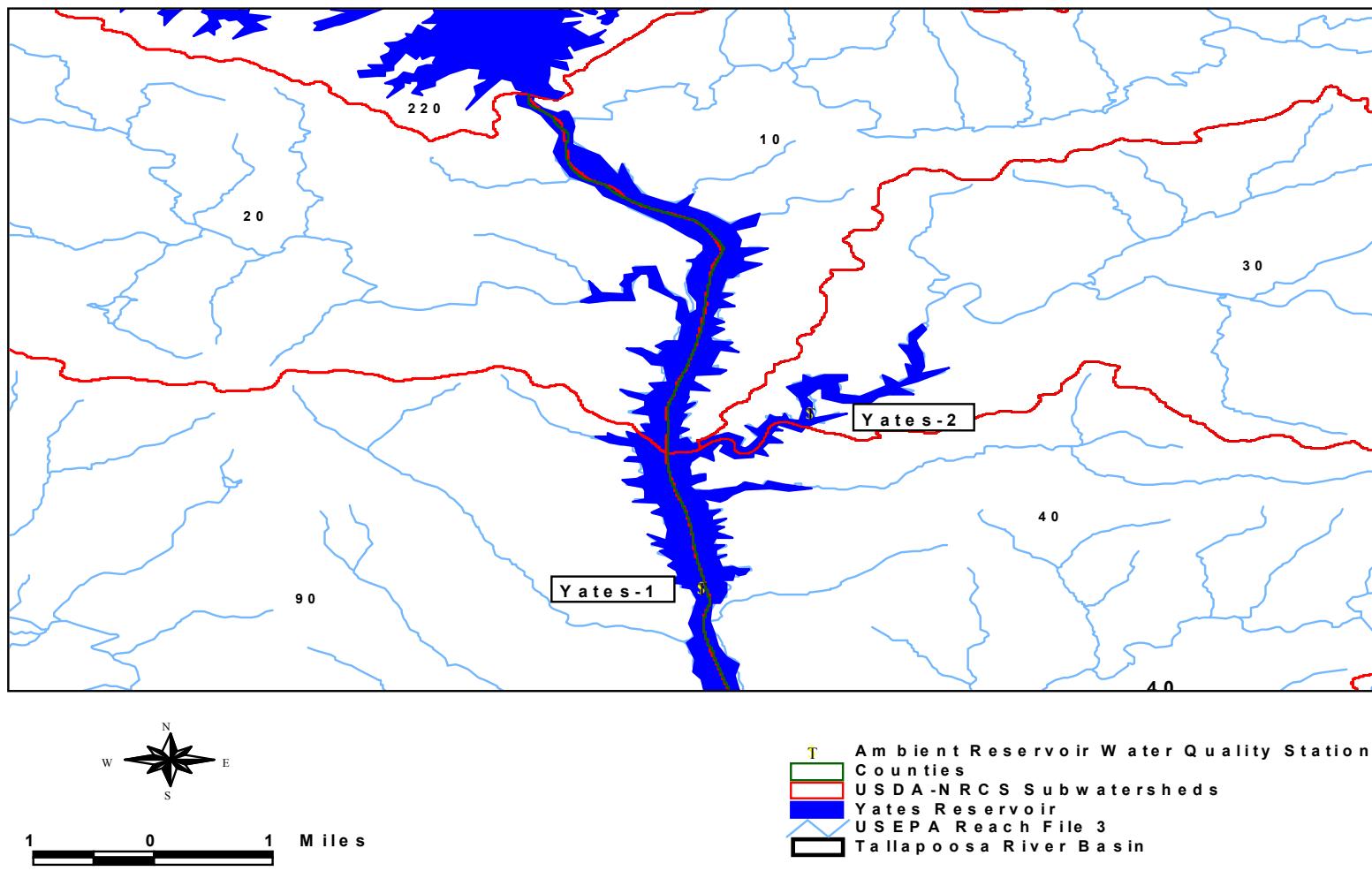
thermocline occurred at various depths while a lower water column thermocline persisted at approximately 25m depth April-September.

Discussion. Nutrient concentrations in Martin Reservoir were generally similar to those of Harris Reservoir. Phosphorus was indicated as the limiting or co-limiting nutrient at all locations in August and mean MSC values were below the maximum 5.0 mg/l level suggested to assure protection from nuisance algal blooms and fish-kills in southeastern lakes.

Mean chlorophyll *a* concentrations were, with the exception of the upper reservoir, much lower than those of Harris and similar to those of Yates and Thurlow Reservoirs. TSI values derived from chlorophyll concentrations were often within the oligotrophic to mesotrophic range with only the upper reservoir location reaching eutrophic levels.

DO concentrations were above criterion limits April-September. However, DO concentrations in the dam forebay decreased monthly until the majority of the water column was essentially anoxic in September. Similar DO concentrations were observed in the water column at all reservoir locations during this month

Figure II.3
Yates Reservoir



Yates Reservoir

Nitrogen. Mean TN concentrations in the Sougahatchee Creek embayment and lower Yates Reservoir were highest of Tallapoosa reservoir locations (Fig. II.5). Concentrations in lower Yates Reservoir were much higher than those of Martin Reservoir. Higher concentrations in Yates are likely attributable in part to the effects of Sougahatchee Creek, which enters Yates upstream of the lower reservoir location.

Monthly TN concentrations in lower Yates Reservoir increased April-August and declined in September (Fig. II.12). With the exception of decreased TN in July, concentrations in the Sougahatchee Creek embayment of Yates followed a similar pattern to those of the lower reservoir. TN concentrations in the lower reservoir increased April-August though lake discharge declined after June (Fig. II.12).

Phosphorus. Mean TP concentrations in the Sougahatchee Creek embayment and lower Yates Reservoir were, along with upper Harris Reservoir, highest of Tallapoosa reservoir locations (Fig. II.5). Concentrations in lower Yates Reservoir were higher than those of Martin Reservoir. Higher concentrations in Yates are likely attributable in part to the effects of Sougahatchee Creek, which enters Yates upstream of the lower reservoir location.

Monthly TP concentrations in Yates Reservoir were variable April-September. Highest concentrations in the Sougahatchee Creek embayment occurred in August and in the lower reservoir in July (Fig. II.13). Lowest concentrations occurred in June at both locations. TP concentrations in the lower reservoir declined as discharge increased April-June (Fig. II.13). Concentrations were variable July-September as discharge decreased.

Algal Growth Potential Tests. Nitrogen was indicated as the limiting nutrient in the Sougahatchee Creek embayment during August (Table II.1). The mean MSC value for the embayment (36.92) was well above the maximum 5.0 mg/l level suggested to assure protection from nuisance algal blooms and fish-kills in southeastern lakes. In the lower reservoir, phosphorus was indicated as the limiting nutrient in August. The mean MSC value for the lower reservoir (1.29 mg/l) was well below the maximum 5.0 mg/l

level suggested to assure protection from nuisance algal blooms and fish-kills in southeastern lakes.

Chlorophyll a. The mean chlorophyll *a* concentration for the Sougahatchee Creek embayment of Yates Reservoir was highest of Tallapoosa reservoir locations (Fig. II.5). The mean concentration for lower Yates Reservoir was higher than those of mid and lower Martin Reservoir. The higher concentration for Yates is likely attributable in part to the effects of Sougahatchee Creek, which enters Yates upstream of the lower reservoir location.

Monthly chlorophyll *a* concentrations for the Sougahatchee Creek embayment of Yates increased overall April-September, with the greatest increase occurring August-September (Fig. II.14). Concentrations in lower Yates Reservoir decreased April-June then were variable through September. Highest concentrations in lower Yates occurred in April and September with lowest concentrations occurring in June.

Chlorophyll *a* concentrations in lower Yates Reservoir declined as lake discharge increased April-June (Fig. II.14). Concentrations increased overall July-September as lake discharge declined.

Trophic state. TSI values for the Sougahatchee Creek embayment of Yates Reservoir increased from oligotrophic levels in April to highly eutrophic levels in September (Fig. II.15). In lower Yates Reservoir, TSI values decreased from lower eutrophic levels in April to oligotrophic levels in June. TSI values generally increased to lower eutrophic levels July-September.

Dissolved oxygen/Temperature. DO concentrations in the Sougahatchee Creek embayment of Yates Reservoir decreased April-August then increased in September (Fig. II.15). Concentrations were above the criterion limit of 5.0 mg/l in all months sampled. DO concentrations in lower Yates Reservoir decreased April-July then increased through September. Concentrations in July (5.74 mg/l) were near the criterion limit.

Depth profiles of dissolved oxygen in the dam forebay of Yates Reservoir indicated weak chemical stratification April-July (Fig. II.16). Stratification became more pronounced August-September with the development of a strong chemocline at 3-4 m depth in the latter month. Lowest water column DO concentrations occurred in

September. Anoxic conditions did not occur in the water column of lower Yates Reservoir in the months sampled.

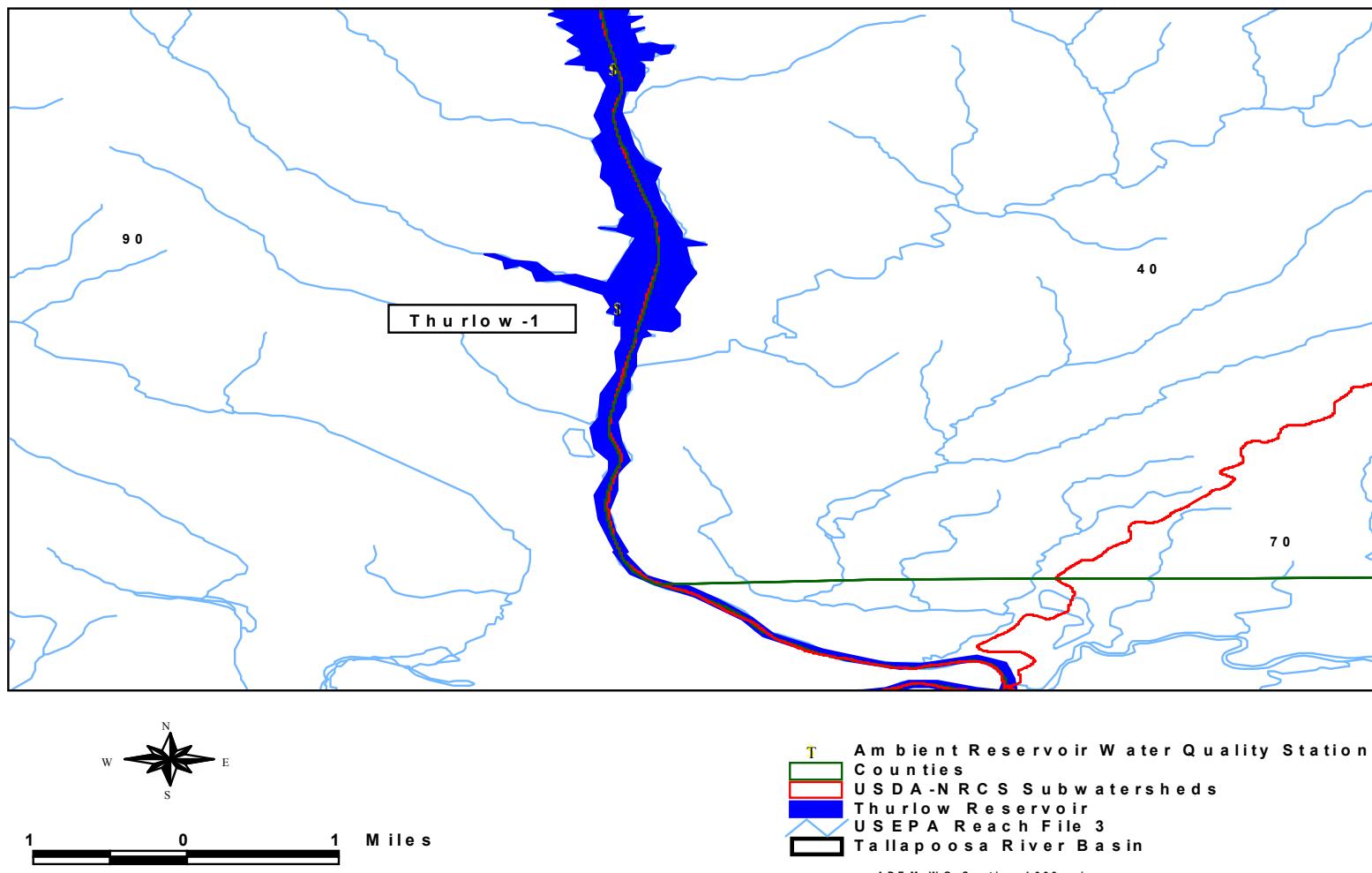
Depth profiles of temperature in the dam forebay of Yates Reservoir indicated weak thermal stratification April-May with a thermocline developing between the surface and 2m in June (Fig. II.16). Stratification broke down in July then began to develop again in August. By September, a strong thermocline developed at 3-4 m depth. Highest water column temperatures occurred in July.

Discussion. Nutrient concentrations in the Sougahatchee Creek embayment and lower Yates Reservoir were higher than those of most other Tallapoosa reservoir locations. The concentrations in the lower reservoir are likely attributable in part to the effects of Sougahatchee Creek, which enters Yates upstream of the lower reservoir location. Nitrogen was indicated as the limiting nutrient in the Sougahatchee Creek embayment with the mean MSC value over seven times the maximum 5.0 mg/l level suggested to assure protection from nuisance algal blooms and fish-kills in southeastern lakes. In the lower reservoir, however, phosphorus was indicated as the limiting nutrient and the mean MSC value was well below the maximum 5.0 mg/l level.

The mean chlorophyll *a* concentration for the Sougahatchee Creek embayment was highest of Tallapoosa reservoir locations while the mean concentration for lower Yates Reservoir was higher than those of mid and lower Martin Reservoir. The higher concentration for lower Yates Reservoir is likely attributable in part to the effects of Sougahatchee Creek, which enters Yates upstream of the lower reservoir location. TSI values derived from chlorophyll *a* concentrations indicated that the trophic state of the Sougahatchee Creek embayment increased from oligotrophic levels in April to highly eutrophic levels in September. TSI values for lower Yates Reservoir varied with values ranging from oligotrophic to eutrophic levels April-September.

DO concentrations for Yates Reservoir were above the criterion limit April-September though values in the lower reservoir during July were near the limit. Anoxic conditions did not occur in the water column of lower Yates Reservoir in the months sampled

Figure II.4
Thurlow Reservoir



Thurlow Reservoir

Nitrogen. Mean TN concentrations in Thurlow Reservoir were lower than those of Yates Reservoir (Fig. II.5). Concentrations in Thurlow were higher than a number of Harris and Martin Reservoir locations. Higher TN concentrations in Thurlow may be attributable in part to the effects of upstream Yates Reservoir.

Monthly TN concentrations in Thurlow increased April-August then declined in September (Fig. II.12). Highest concentrations occurred in August with lowest concentrations in September. TN concentrations in Thurlow increased April-August though lake discharge decreased after June (Fig. II.12).

Phosphorus. With the exception of upper Harris Reservoir and Yates Reservoir, mean TP concentrations in Thurlow were higher than those of other Tallapoosa reservoir locations (Fig. II.5). Higher TP concentrations in Thurlow may be attributable in part to the effects of upstream Yates Reservoir.

Monthly TP concentrations for Thurlow Reservoir were variable April-September (Fig. II.13). Highest concentrations occurred in August with lowest concentrations in June. TP concentrations declined April-June as lake discharge increased (Fig. II.13). In July-August, TP concentrations increased as lake discharge declined.

Algal Growth Potential Tests. Phosphorus was indicated as the limiting nutrient in Thurlow Reservoir in August (Table II.1). Mean MSC values for Thurlow (1.39 mg/l) were well below the maximum 5.0 mg/l level suggested to assure protection from nuisance algal blooms and fish-kills in southeastern lakes.

Chlorophyll a. Mean chlorophyll *a* concentrations for Thurlow Reservoir were less than those of Yates Reservoir but greater than those of mid and lower Martin Reservoir (Fig. II.5) Higher chlorophyll *a* concentrations in Thurlow may be attributable in part to the effects of upstream Yates Reservoir.

Monthly chlorophyll *a* concentrations in Thurlow Reservoir were very similar to those of lower Yates Reservoir (Fig. II.14). Concentrations decreased April-June then were variable through September. Highest concentrations occurred in April with lowest concentrations in June and August.

Chlorophyll a concentrations declined as lake discharge increased April-June (Fig. II.14). Concentrations increased overall July-September as lake discharge declined.

Trophic state. TSI values in Thurlow Reservoir were very similar to those of lower Yates Reservoir (Fig. II.15). TSI values in Thurlow decreased from lower eutrophic levels in April to oligotrophic levels in June. TSI values generally increased to lower eutrophic levels July-September.

Dissolved oxygen/Temperature. DO concentrations in Thurlow Reservoir were above criterion limits of 5.0 mg/l in the months sampled (Fig. II.15). Highest concentrations occurred in April with lowest concentrations in August.

Depth profiles of dissolved oxygen and temperature in the dam forebay of Thurlow Reservoir indicate essentially isothermal and isochemical conditions April-May and July-August (Fig. II.17). Thermal stratification developed in the upper water column in June and weak chemical stratification developed in September. Anoxic conditions did not develop in the water column April-September.

Discussion. Nutrient concentrations in Thurlow Reservoir were higher than a number of other Tallapoosa Reservoir locations. Higher concentrations in Thurlow may be attributable in part to the effects of upstream Yates Reservoir. Phosphorus was indicated as the limiting nutrient in August, however, and mean MSC values were well below the maximum 5.0 mg/l level suggested to assure protection from nuisance algal blooms and fish-kills in southeastern lakes.

Chlorophyll a concentrations in Thurlow were higher than those of mid and lower Martin Reservoir. Higher *chlorophyll a* concentrations in Thurlow may be attributable in part to the effects of upstream Yates Reservoir. TSI values derived from these concentrations were very similar to those of lower Yates Reservoir. TSI values decreased from lower eutrophic levels in April to oligotrophic levels in June. TSI values generally increased to lower eutrophic levels July-September.

DO concentrations for Thurlow Reservoir were above the criterion limit April-September. Anoxic conditions did not occur in the water column of Thurlow Reservoir in the months sampled.

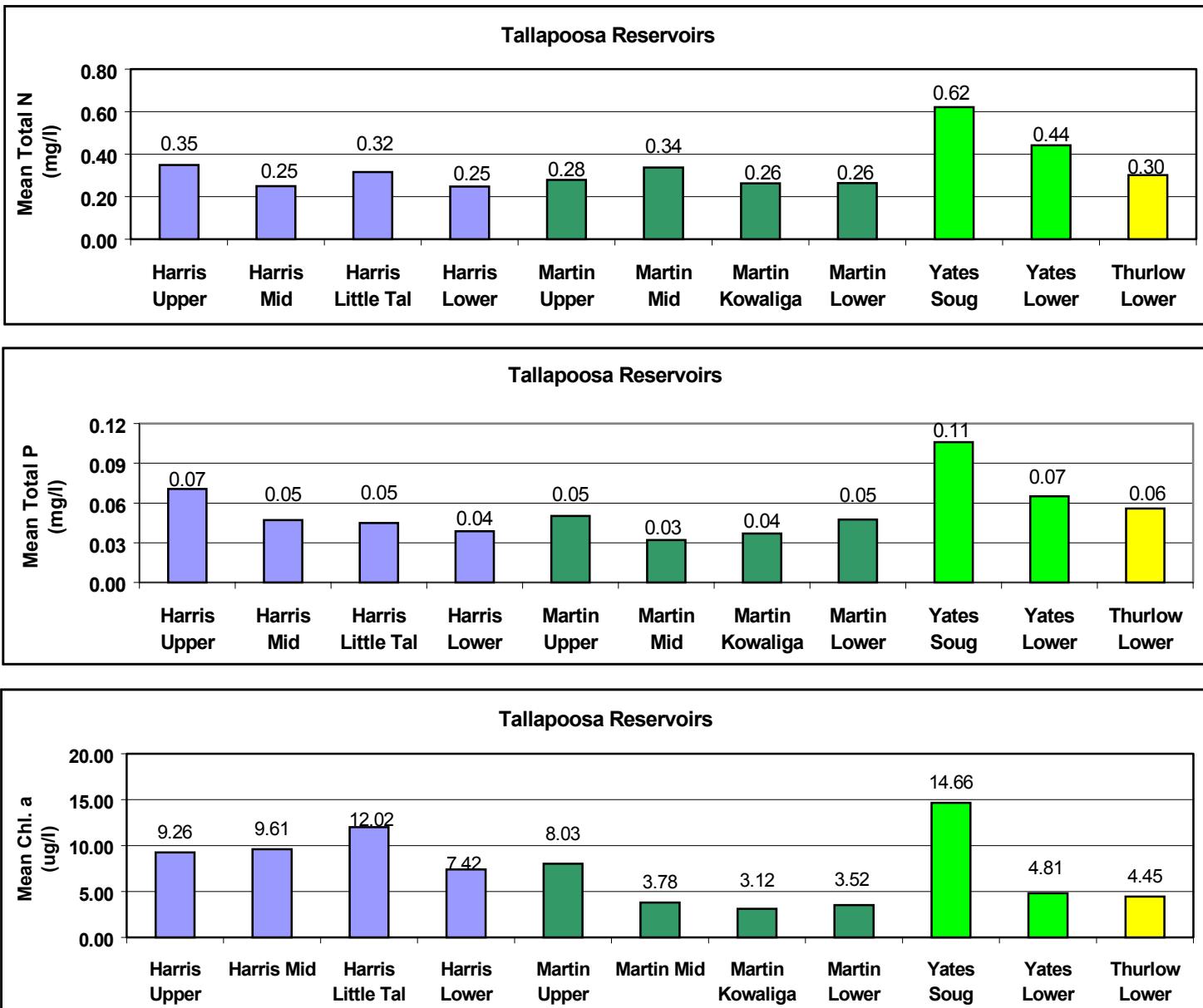


Figure II.5. Mean total nitrogen (TN), mean total phosphorus (TP), and mean chlorophyll *a* concentrations of Tallapoosa reservoir locations, April–October 1997.

Table II.1. Algal growth potential testing (AGPT) of Tallapoosa River reservoirs, August 1997.

Reservoir	Location	Date	Mean MSC (mg/l)			Limiting Nutrient
			C	C+N	C+P	
Harris	Little Tallapoosa	8/14/97	3.55	3.38	9.45	Phosphorus
	Upper	8/14/97	4.55	4.31	6.69	Phosphorus
	Mid	8/14/97	1.82	1.70	2.83	Phosphorus
	Lower	8/14/97	1.59	1.46	3.43	Phosphorus
Martin	Upper	8/14/97	2.60	3.18	3.53	Phosphorus
	Mid	8/14/97	1.83	2.15	2.20	Co-limiting
	Kowaliga	8/14/97	1.58	1.78	1.72	Co-limiting
	Lower	8/14/97	1.75	1.72	2.80	Phosphorus
Yates	Sougahatchee	8/12/97	36.92	70.91	37.97	Nitrogen
	Lower	8/12/97	1.29	1.32	12.92	Phosphorus
Thurlow	Lower	8/12/97	1.39	1.65	16.69	Phosphorus

MSC = Maximum Standing Crop

C = Control; C+N = Control + Nitrogen; C+P = Control + Phosphorus

Values in **bold** print are significantly different from control.

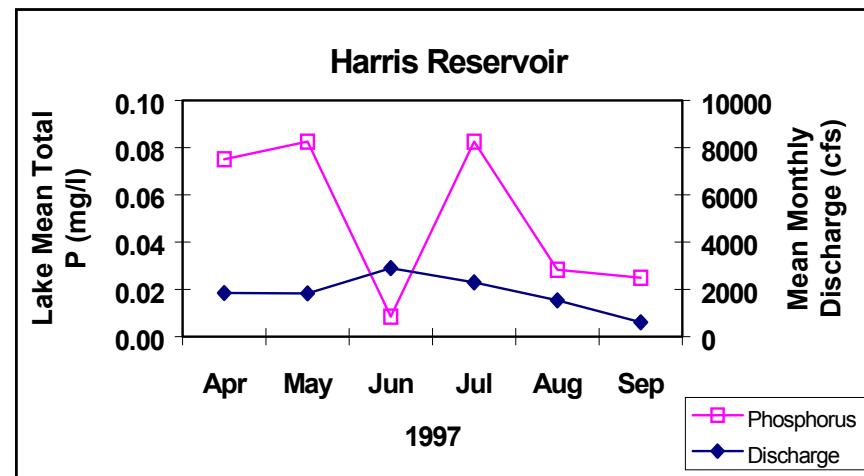
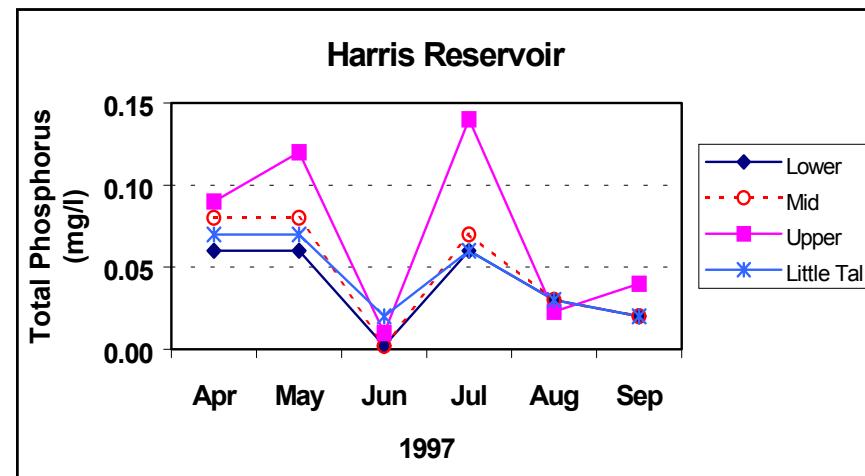
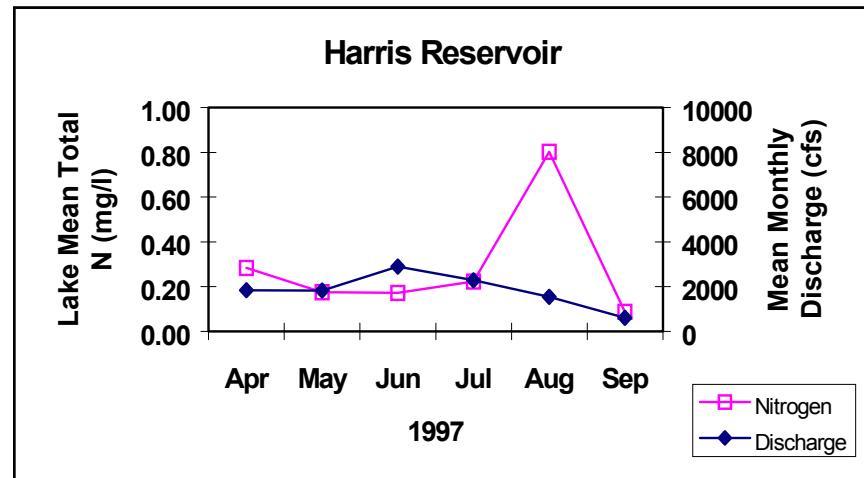
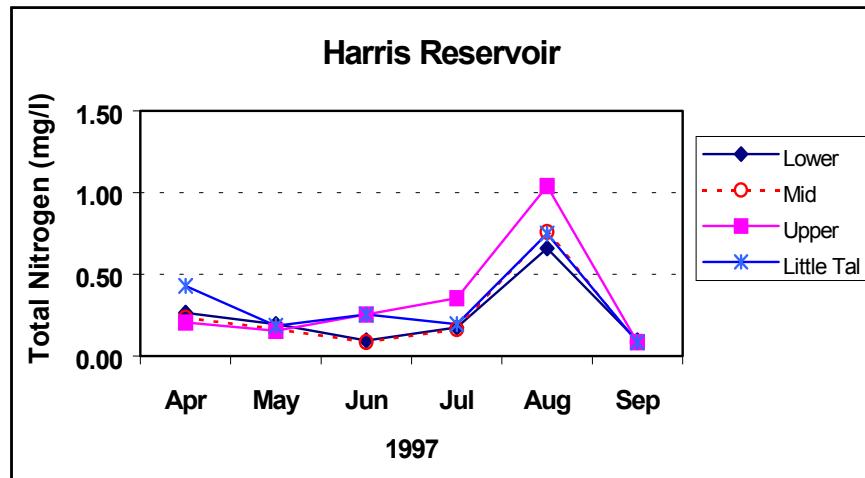


Figure II.6. Total nitrogen (TN), lake mean TN vs. discharge, total phosphorus (TP), lake mean TP vs. discharge of Harris Reservoir, April-September 1997.

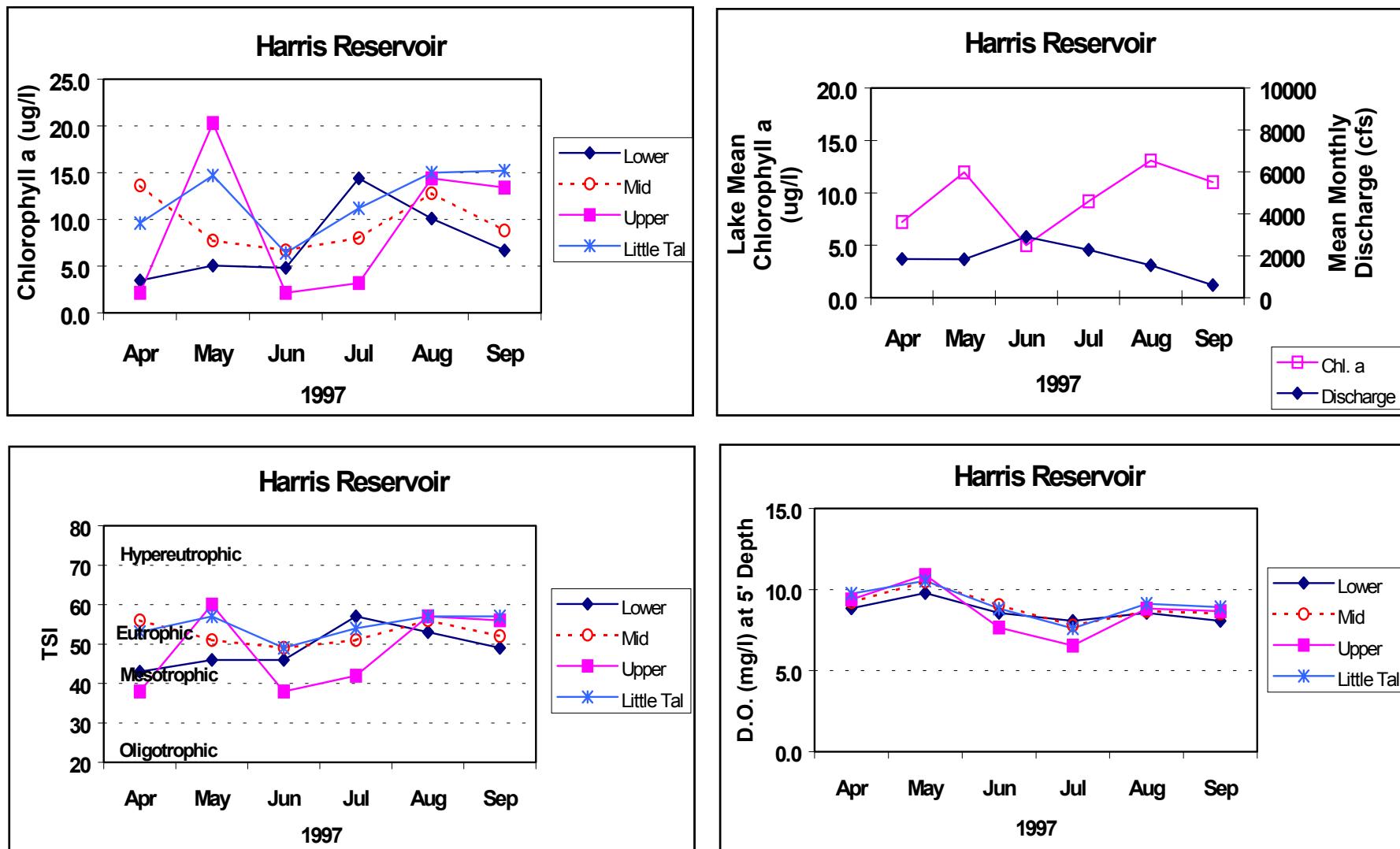
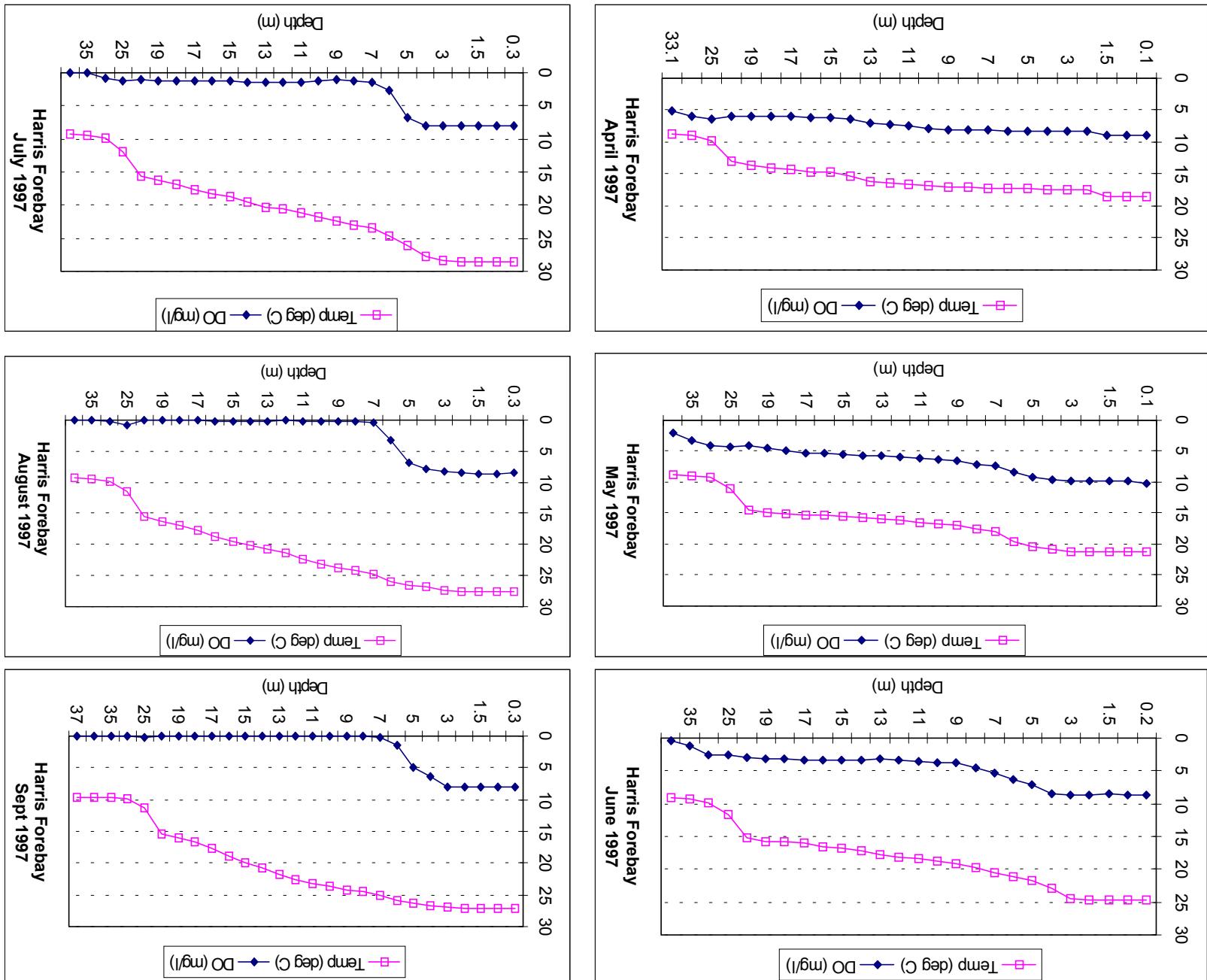


Figure II.7. Chlorophyll *a*, lake mean chlorophyll *a* vs. discharge, trophic state index (TSI), and dissolved oxygen (DO) of Harris Reservoir, April-September 1997.

Figure II.8. Depth profiles of dissolved oxygen (DO) and temperature (Temp) in the dam forebay of Harris Reservoir, April-September 1997.



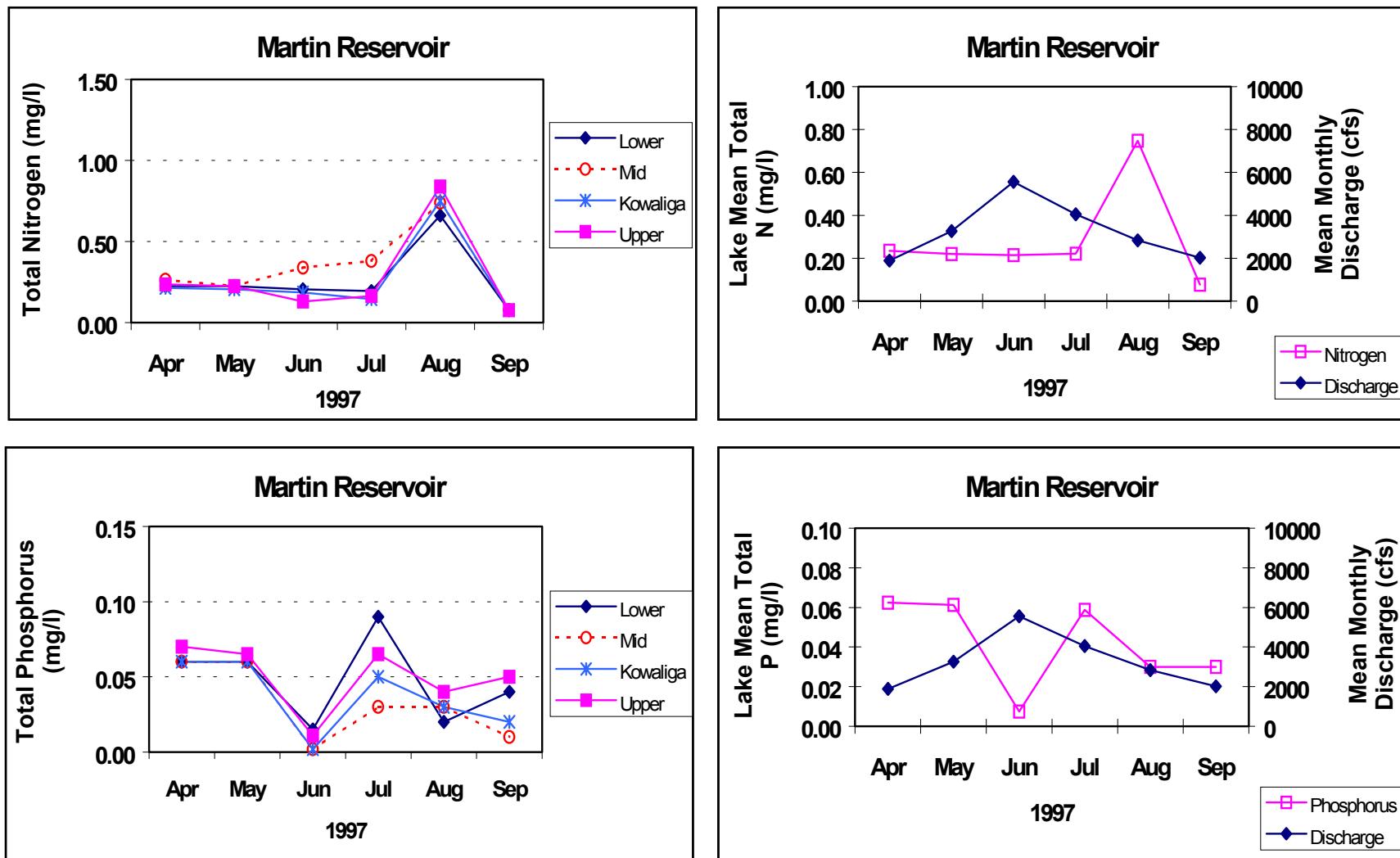


Figure II.9. Total nitrogen (TN), lake mean TN vs. discharge, total phosphorus (TP), lake mean TP vs. discharge of Martin Reservoir, April-September 1997.

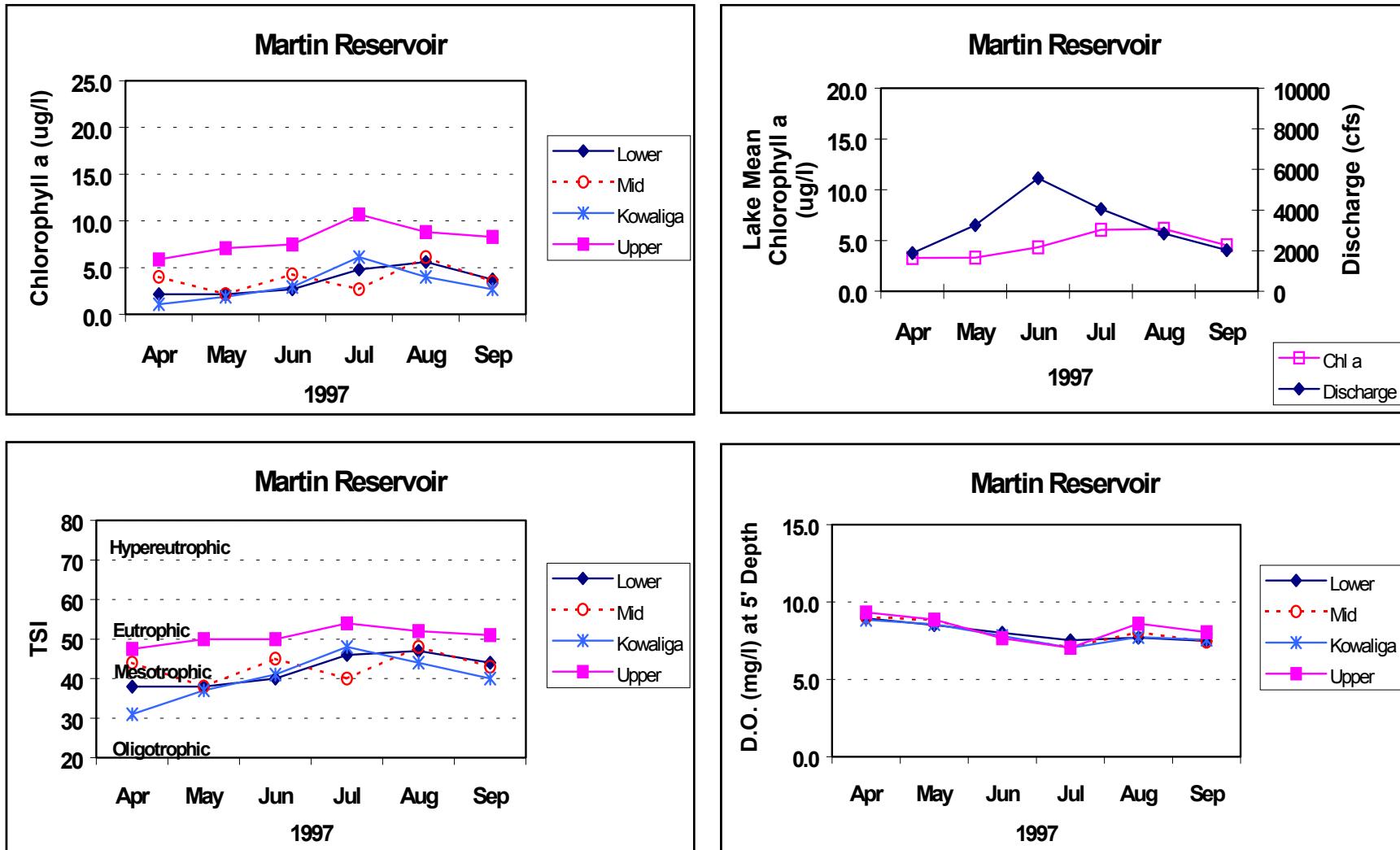
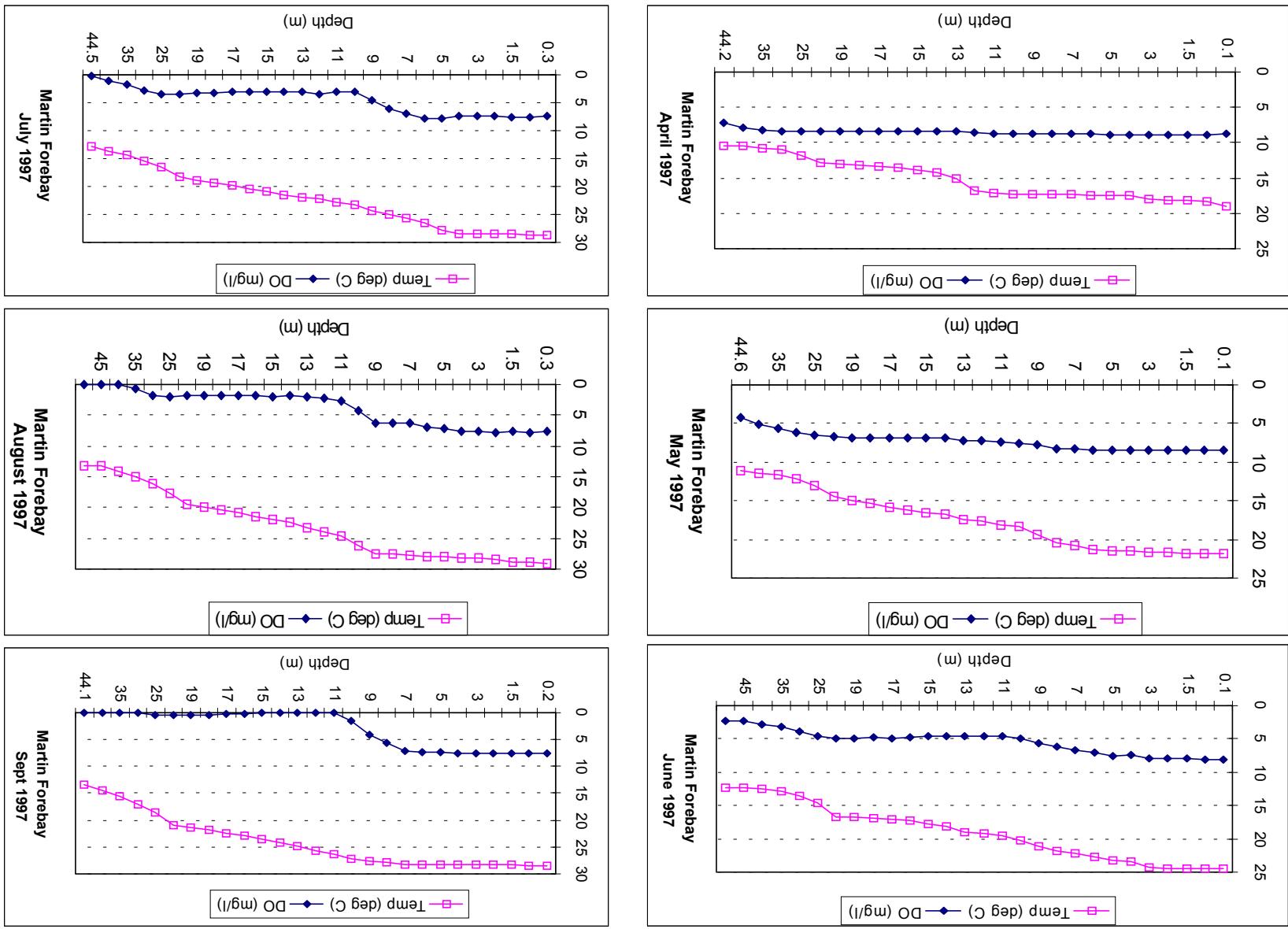


Figure II.10. Chlorophyll *a*, lake mean chlorophyll *a* vs. discharge, trophic state index (TSI), and dissolved oxygen (DO) of Martin Reservoir, April-September 1997.

Figure II.11. Depth profiles of dissolved oxygen (DO) and temperature (Temp) in the dam forebay of Martin Reservoir April-September 1997.



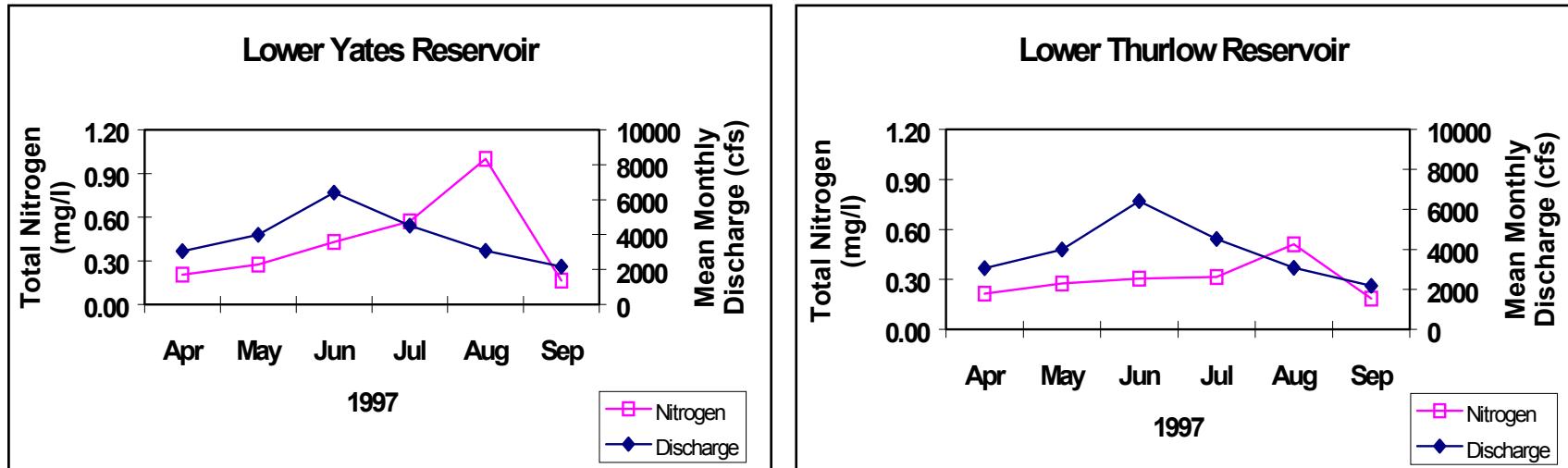
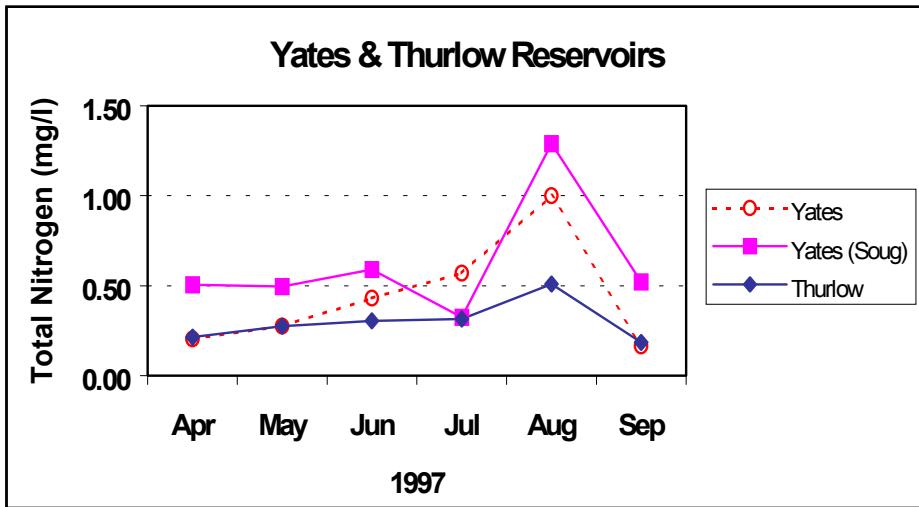


Figure II.121. Total nitrogen (TN) and TN vs. discharge of Yates and Thurlow Reservoirs, April-September 1997.

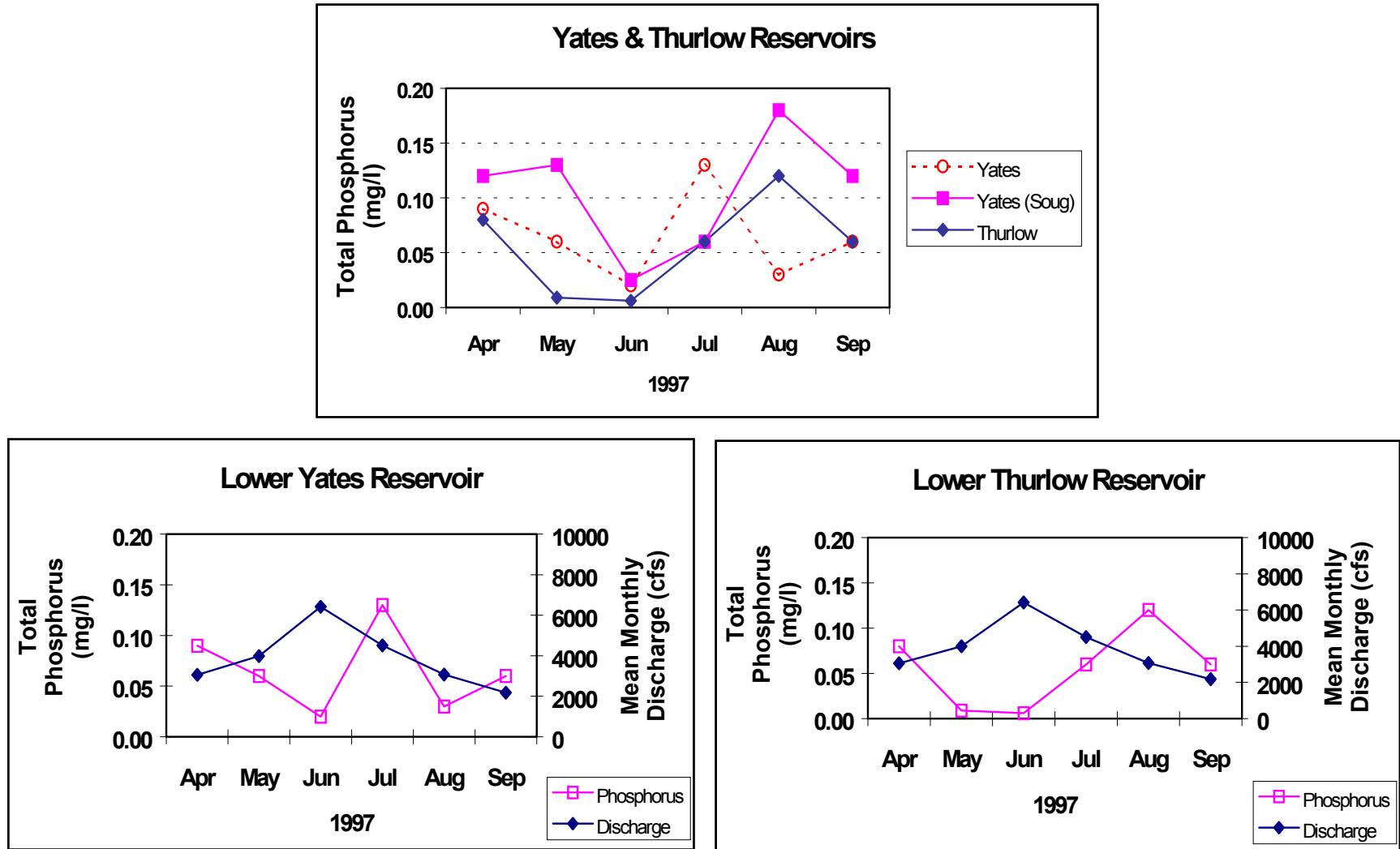


Figure II.13. Total phosphorus (TP) and TP vs. discharge of Yates and Thurlow Reservoirs, April-September 1997.

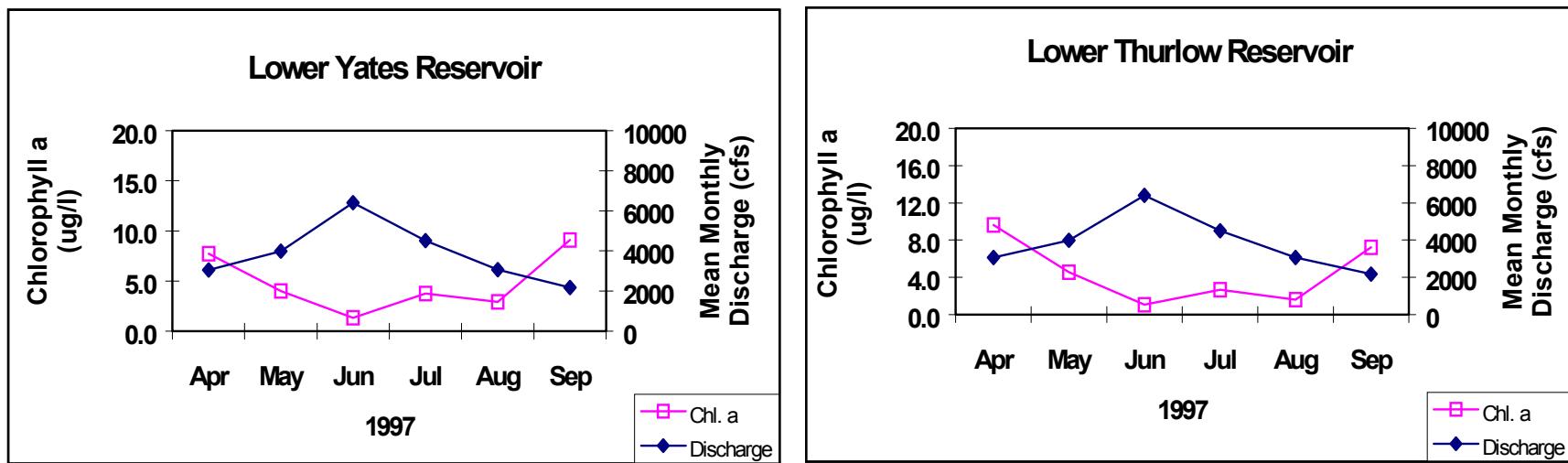
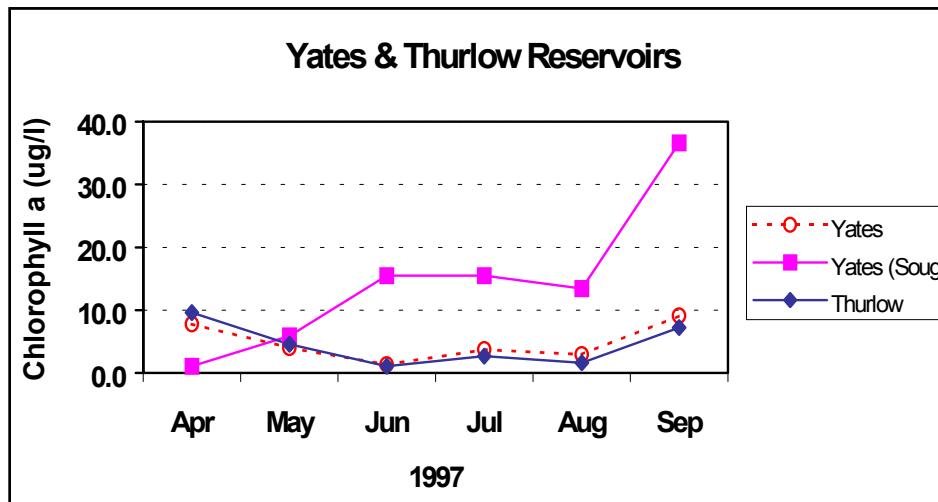


Figure II.14. Chlorophyll *a* and chlorophyll *a* vs. discharge of Yates and Thurlow Reservoirs, April-September 1997.

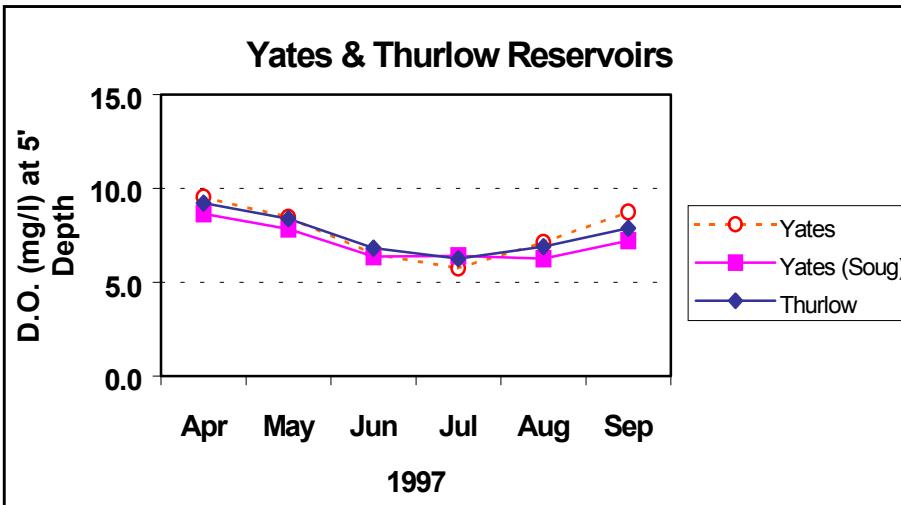
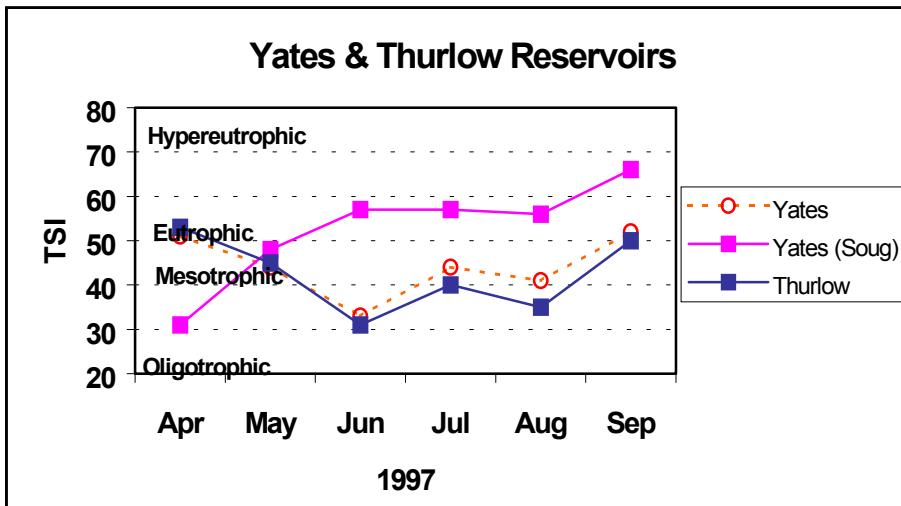


Figure II.15. Trophic state index (TSI) and dissolved oxygen (DO) of Yates and Thurlow Reservoirs, April-September 1997.

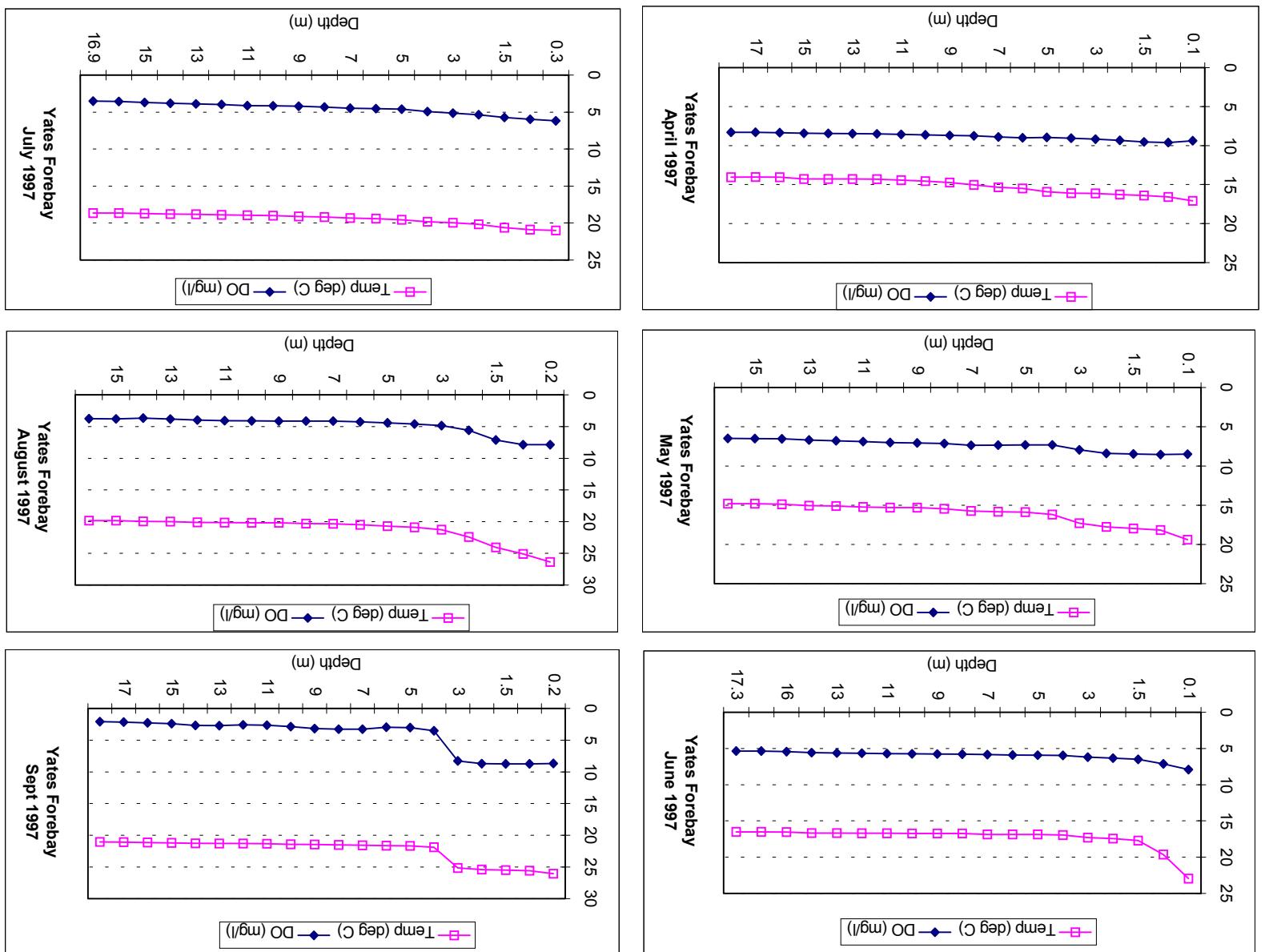
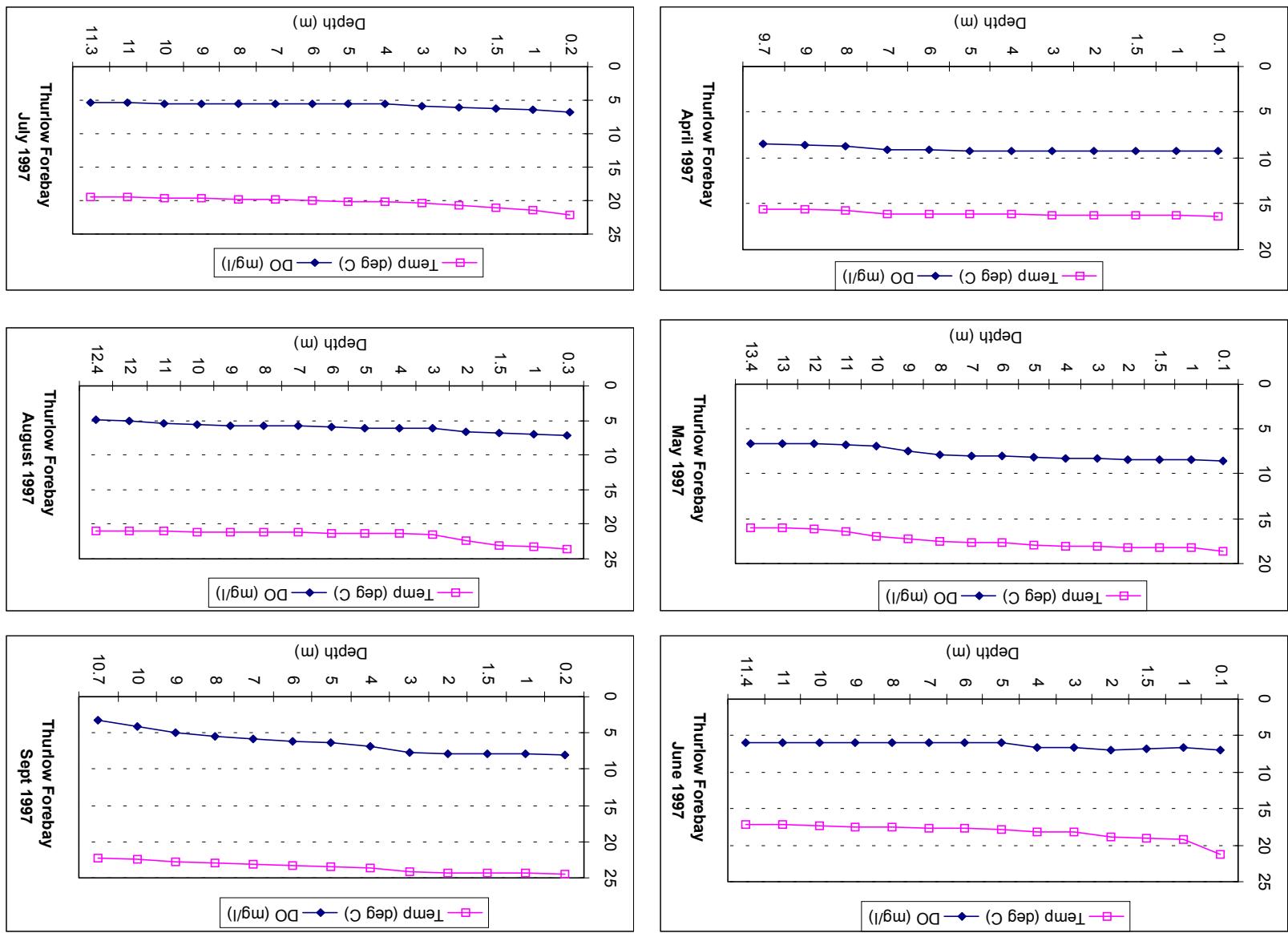


Figure II.16. Depth profiles of dissolved oxygen (DO) and temperature (Temp) in the dam forebay of Yates Reservoir, April-September 1997.

Figure II.17. Depth profiles of dissolved oxygen (DO) and temperature (Temp) in the dam forebay of Thurlow Reservoir April-September 1997.



LITERATURE CITED

- Alabama Department of Environmental Management (ADEM). 1990. Water quality report to Congress. Alabama Department of Environmental Management (ADEM), Montgomery, Alabama. 198 pp.
- Alabama Department of Environmental Management (ADEM) Field Operations Division. 1992. Standard operating procedures and quality control assurance manual. Volume I. Physical/Chemical.
- Alabama Department of Environmental Management (ADEM) Water Division. 1997. Water Quality Criteria. Water Quality Program. Chapter 335-6-10. 54pp.
- American Public Health Association, American Water Works Association and Water Pollution Control Federation. 1992. Standard methods for the examination of water and wastewater. 18th ed. APHA, Washington, D.C.
- Carlson, R.E. 1977. A trophic state index. Limnology and Oceanography. 22(2):361-369.
- Lind, O.T. 1979. Handbook of common methods in limnology. The C.V. Mosby Co., St. Louis, Missouri. 199 pp.
- Raschke, R.L. and D.A. Schultz. 1987. The use of the algal growth potential test for data assessment. Journal of Water Pollution Control Federation 59(4):222-227.
- U.S. Environmental Protection Agency. 1983. Methods for the chemical analysis of water and wastes. Environmental Monitoring and Support Laboratory, Cincinnati, Ohio. EPA-600/4-79-020.
- U.S. Environmental Protection Agency. 1990. The lake and reservoir restoration guidance manual. 2nd edition. EPA-440/4-90-006. U.S.E.P.A. Office of Water. Washington, D.C. 326 pp.
- Welch, E.B. 1992. Ecological Effects of Wastewater. 2nd edition. Chapman and Hall Publishers. London, England. 425 pp.
- Wetzel, R.G. 1983. Limnology. 2nd edition. Saunders College Publishing. Philadelphia, Pennsylvania. 858 pp.

APPENDIX

Reservoir Water Quality Monitoring Program
Coosa River Basin

Reservoirs	Sta	Rep	Date	Time	Secchi	85328 Photic- zone	00078	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613
							MMDDYY	HHMMSS	m	m	Depth	Temp degC	pH units	DO mg/l	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	TOC mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	P mg/l
Jordan	1	A	41597	83010	1.5	3.4	----	----	----	----	----	5.0	47.0	44.6	114.0	4.0	3.29	<0.015	0.13	<0.15	0.08	0.007	7.48	50	1*
							0.2	18.59	6.49	8.24	0.119														
							1	18.59	6.65	8.11	0.120														
							1.5	18.58	6.73	8.05	0.120														
							2	18.55	6.80	7.99	0.119														
							3	18.56	6.88	7.92	0.118														
							4	18.56	6.91	7.89	0.117														
							5	18.58	6.94	7.84	0.121														
							6	18.58	6.96	7.82	0.124														
							7	18.58	6.96	7.83	0.129														
							8	18.58	6.98	7.82	0.126														
							9	18.58	6.99	7.79	0.127														
							10	18.58	7.00	7.78	0.133														
							11	18.58	7.00	7.77	0.113														
							12	18.58	7.01	7.76	0.129														
							13	18.58	7.01	7.74	0.113														
							14	18.56	7.01	7.74	0.132														
							15	18.58	7.01	7.72	0.117														
							16	18.56	7.02	7.71	0.120														
							17	18.56	7.02	7.69	0.124														
							18	18.56	7.02	7.67	0.126														
							19	18.55	7.02	7.63	0.125														
							20	18.53	7.02	7.62	0.130														
							25	18.50	7.03	7.57	0.125														
							29.8	18.43	7.01	7.37	0.123														
Jordan	1	A	51397	730	1.3	3.3	----	----	----	----	----	5.8	46.0	41.9	49.0	5.0	3.90	<0.015	0.01	<0.15	<0.004	<0.004	25.10	62	1*
							0.2	22.10	7.74	10.41	0.107														
							1	22.14	8.02	10.47	0.107														
							1.5	22.13	8.08	10.49	0.107														
							2	22.13	8.13	10.52	0.107														
							3	22.01	8.06	10.38	0.107														
							4	21.54	7.65	9.81	0.108														
							5	21.33	7.44	9.51	0.107														
							6	21.10	7.24	8.87	0.106														
							7	20.96	7.17	8.70	0.107														
							8	20.78	7.09	8.35	0.109														
							9	20.70	7.06	8.22	0.108														

Reservoir Water Quality Monitoring Program
Coosa River Basin

Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	Photic-																NO3+	Total	Ortho	32211	85329	31613
								00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650						
			MMDDYY	HHMMSS	m	m	m	degC	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	ug/l	per 100ml					
Jordan	1	A	61797	74214	1.7	3.71	---	---	---	---	---	5.2	44.0	41.1	74.0	7.0	1.62	<0.015	0.11	0.17	0.005	0.005	9.35	52	4*				
							0.3	24.54	6.52	6.92	0.108																		
							1	24.54	6.66	6.90	0.108																		
							1.5	24.53	6.71	6.85	0.109																		
							2	24.50	6.74	6.80	0.109																		
							3	24.48	6.74	6.62	0.109																		
							4	24.45	6.74	6.51	0.110																		
							5	24.41	6.74	6.44	0.110																		
							6	24.36	6.73	6.30	0.110																		
							7	24.17	6.71	6.03	0.110																		
							8	24.12	6.70	6.00	0.110																		
							9	24.08	6.70	5.99	0.110																		
							10	24.06	6.70	5.99	0.110																		
							11	24.06	6.70	5.99	0.110																		
							12	24.06	6.70	5.98	0.110																		
							13	24.06	6.70	5.98	0.110																		
							14	24.05	6.71	5.98	0.110																		
							15	24.05	6.71	5.97	0.110																		
							16	24.05	6.71	5.96	0.110																		
							17	24.05	6.71	5.95	0.110																		
							18	24.01	6.71	5.92	0.110																		
							19	23.99	6.71	5.88	0.110																		
							20	23.94	6.70	5.82	0.109																		

Reservoir Water Quality Monitoring Program Coosa River Basin

Reservoir Water Quality Monitoring Program Coosa River Basin

Reservoir Water Quality Monitoring Program Coosa River Basin

Reservoir Water Quality Monitoring Program
Coosa River Basin

Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	Temp	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a	TSI	Colif.	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613
																										MMDDYY	HHMMSS	Photic-	m	m	m	degC	units	mg/l	mS/cm	NTU	mg/l								
								2	18.22	7.01	8.17	0.118																																	
								3	18.24	7.04	8.16	0.118																																	
								4	18.21	7.05	8.1	0.118																																	
								5	18.21	7.07	8.08	0.119																																	
								6	18.21	7.07	8.06	0.119																																	
								7	18.21	7.08	8.04	0.119																																	
								8	18.21	7.08	8.04	0.12																																	
								9	18.2	7.09	8.03	0.12																																	
								10	18.19	7.09	8.02	0.12																																	
								11	18.21	7.09	8.03	0.12																																	
								12	18.21	7.1	8.04	0.121																																	
								13	18.21	7.1	8.04	0.119																																	
								14	18.21	7.11	8.04	0.118																																	
								15	18.21	7.11	8.04	0.118																																	
								16	18.21	7.11	8.02	0.126																																	
								17	18.21	7.11	8.03	0.114																																	
								18	18.21	7.12	8.02	0.119																																	
								19	18.21	7.12	8.01	0.11																																	
								20	18.21	7.12	8	0.103																																	
								25	18.21	7.12	7.99	0.123																																	
								27.1	18.21	7.12	7.98	0.139																																	
Jordan	2	A	51397	82100	1.0	2.43	----	----	----	----	----	10.8	44.0	39.8	32.0	7.0	3.26	<0.015	0.14	<0.15	0.07	0.008	9.97	53	2*																				
							0.2	20.77	6.49	8.13	0.105																																		
							1	20.70	6.70	8.11	0.105																																		
							1.5	20.67	6.77	8.14	0.105																																		
							2	20.68	6.83	8.06	0.105																																		
							3	20.66	6.87	8.02	0.106																																		
							4	20.66	6.88	8.02	0.105																																		
							5	20.66	6.89	8.02	0.105																																		
							6	20.66	6.90	8.02	0.105																																		
							7	20.67	6.91	8.07	0.105																																		
							8	20.66	6.93	8.07	0.105																																		
							9	20.64	6.94	8.03	0.105																																		
							10	20.63	6.93	8.01	0.105																																		
							11	20.62	6.94	8.00	0.105																																		
							12	20.62	6.94	8.00	0.105																																		
							13	20.64	6.94	7.99	0.105																																		

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	Photic-																32211	85329	31613
								00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650			
					m	m	m	degC	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a	TSI	Colif.	
																									per 100ml	
Mitchell	1	A	51397	1100	1.0	2.84	---	----	----	----	----	9.9	43.0	40.1	31.0	6.0	3.94	<0.015	0.08	<0.15	0.06	<0.004	19.22	60	<1	
							0.3	22.47	7.41	9.69	0.104															
							1	21.95	7.73	10.03	0.105															
							1.5	21.68	7.73	9.92	0.104															
							2	21.32	7.48	9.20	0.105															
							3	20.95	7.16	8.46	0.105															
							4	20.95	7.08	8.29	0.105															
							5	20.93	7.06	8.22	0.105															
							6	20.95	7.05	8.23	0.105															
							7	20.95	7.05	8.22	0.105															
							8	20.95	7.05	8.21	0.105															
							9	20.95	7.03	8.14	0.105															
							10	20.82	7.02	8.07	0.105															
							11	20.62	6.96	7.73	0.105															
							12	20.62	6.95	7.64	0.105															
							13	20.58	6.94	7.60	0.105															
							14	20.58	6.94	7.59	0.105															
							15	20.56	6.93	7.58	0.105															
							16	20.56	6.93	7.55	0.105															
							17	20.55	6.93	7.53	0.105															
							18	20.48	6.91	7.42	0.105															
							19	20.48	6.91	7.41	0.105															
							20	20.46	6.90	7.36	0.105															
							24.6	20.46	6.90	7.34	0.105															
Mitchell	1	A	61797	102231	1.3	3	---	----	----	----	----	5.5	50.0	52.1	75.0	7.0	0.91	<0.015	0.06	0.41	0.03	0.009	18.70	59	2*	
							0.2	25.65	7.53	8.83	0.119															

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	00078 85328		Photic-																
								MMDDYY	HHMMSS	m	m	degC	pH	DO units	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	TOC mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	P mg/l	P mg/l
Mitchell	1	A	91597	110354	1.6	4.15	---	---	---	---	---	3.6	64.0	62.4	106.0	3.0	1.07	<0.015	0.04	<0.15	0.07	<0.004	10.70	54	<1	
							0.3	28.64	7.24	5.69	0.149															
							1	28.48	7.3	5.56	0.149															
							1.5	28.46	7.32	5.51	0.149															
							2	28.23	7.28	5.24	0.15															
							3	28.19	7.26	5.08	0.15															
							4	28.17	7.26	4.99	0.15															
							5	28.15	7.24	4.77	0.151															
							6	28.15	7.23	4.73	0.15															
							7	28.15	7.23	4.66	0.151															
							8	28.13	7.14	3.87	0.151															
							9	28.09	7.13	3.81	0.15															
							10	28.09	7.13	3.85	0.151															
							11	28.09	7.13	3.82	0.15															
							12	28.07	7.13	3.86	0.151															
							13	28.07	7.13	3.87	0.15															
							14	28.07	7.13	3.88	0.151															
							15	28.05	7.11	3.56	0.15															
							16	28.05	7.11	3.59	0.15															
							17	28.04	7.11	3.68	0.15															
							18	28.04	7.11	3.67	0.15															
							19	28.02	7.11	3.62	0.15															
							20	28.02	7.11	3.48	0.151															
							25	28	7.1	3.2	0.151															
							28	28	7.1	2.97	0.151															
Mitchell	1	A	102197	132239	1.5	3.59	---	---	---	---	---	4.8	76.0	69.7	114.0	4.0	4.04	<0.015	0.08	0.17	0.09	0.003	22.43	61	6*	
							0.2	23.41	7.63	8.09	0.18															
							1	23.28	7.63	7.88	0.181															
							1.5	23.05	7.51	6.91	0.18															
							2	22.87	7.4	6.55	0.181															
							3	22.86	7.36	6.43	0.18															
							4	22.8	7.35	6.37	0.181															
							5	22.78	7.34	6.35	0.18															
							6	22.8	7.34	6.32	0.18															
							7	22.78	7.34	6.34	0.18															
							8	22.8	7.33	6.3	0.18															
							9	22.78	7.34	6.33	0.18															

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Reservoirs	Sta	Rep	Date	Time	Secchi	Photic-	zone	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613					
								MMDDYY	HHMMSS	m	m	m	degC	pH	DO units	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	TOC mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	P mg/l	P mg/l	Chl.a ug/l	Ortho	Total	Colif. per 100ml	
Mitchell	2	A	102197	140451	1.0	2.43	---	---	---	---	---	---	0.3	27.63	7.17	3.97	0.167	12	27.63	7.17	3.97	0.167	13	27.63	7.16	3.86	0.167	13.2	27.63	7.15	3.83	0.167
Lay	1	A	41597	143541	1.0	2.61	---	---	---	---	---	---	0.1	20.40	7.90	10.93	0.122	1	19.10	8.02	10.59	0.121	1.5	19.01	8.03	10.55	0.124	2	19.01	8.02	10.44	0.123
													3	18.91	7.95	10.03	0.124	4	18.71	7.83	9.67	0.124	5	18.64	7.76	9.37	0.125	6	18.52	7.53	8.73	0.124
													7	18.37	7.43	8.14	0.124	8	18.35	7.38	8.06	0.129	9	18.34	7.35	8.03	0.123	10	18.33	7.33	8.00	0.131
													11	18.33	7.31	7.96	0.128	12	18.31	7.30	7.92	0.134	13	18.30	7.28	7.89	0.120	14	18.28	7.28	7.89	0.134

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613
								MMDDYY	HHMMSS	m	m	m	degC	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P
								15	18.29	7.28	7.89	0.137															
								16	18.30	7.28	7.88	0.114															
								17	18.30	7.28	7.87	0.140															
								18	18.30	7.28	7.87	0.114															
								19	18.29	7.27	7.86	0.124															
								20	18.28	7.27	7.85	0.134															
								23.6	18.26	7.27	7.80	0.130															
Lay	1	A	51397	1355	0.9	2.53	---	---	---	---	---	---	10.7	44.0	38.4	72.0	8.0	3.72	<0.015	0.07	<0.15	0.07	<0.004	26.70	63	1*	
								0.2	21.88	7.80	9.76	0.106															
								1	21.75	7.83	9.73	0.106															
								1.5	21.49	7.62	9.37	0.106															
								2	21.40	7.45	9.08	0.106															
								3	21.35	7.38	8.92	0.106															
								4	21.33	7.36	8.83	0.106															
								5	21.30	7.34	8.76	0.106															
								6	21.23	7.29	8.65	0.106															
								7	21.14	7.25	8.51	0.107															
								8	21.10	7.21	8.39	0.107															
								9	21.09	7.20	8.36	0.106															
								10	21.10	7.19	8.33	0.107															
								11	21.10	7.19	8.33	0.106															
								12	21.09	7.18	8.31	0.106															
								13	21.02	7.17	8.21	0.107															
								14	20.53	6.99	7.32	0.107															
								15	20.53	6.97	7.21	0.107															
								16	20.53	6.95	7.20	0.107															
								17	20.49	6.94	7.15	0.107															
								18	20.48	6.94	7.12	0.107															
								19	20.48	6.94	7.11	0.107															
								20	20.46	6.93	7.06	0.107															
								23.4	20.41	6.89	6.73	0.108															
Lay	1	A	61797	125920	1.2	2.94	---	---	---	---	---	7.7	50.0	51.3	47.0	8.0	0.82	<0.015	0.08	0.71	0.03	0.008	21.40	61	15*		
								0.3	25.24	6.58	7.79	0.120															
								1	25.22	6.98	7.81	0.119															
								1.5	25.22	7.13	7.83	0.119															
								2	25.20	7.18	7.78	0.120															

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	Temp	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a	TSI	Colif	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613
Lay	1	A	81197	134039	1.6	3.55	---	---	---	---	---	---	4.8	60.0	58.7	106.0	6.0	1.69	<0.015	0.11	0.66	0.12	0.01	12.80	56	<1																			
							0.2	29.84	7.24	5.42	0.142																																		
							1	29.48	7.26	4.87	0.142																																		
							1.5	29.25	7.23	4.46	0.143																																		
							2	29.21	7.22	4.2	0.143																																		
							3	29.11	7.22	4.03	0.144																																		
							4	29.11	7.22	4.03	0.144																																		
							5	29.11	7.23	4.01	0.144																																		
							6	29.11	7.23	4.1	0.145																																		
							7	29.11	7.24	4.07	0.145																																		
							8	29.09	7.24	3.97	0.145																																		
							9	29.09	7.23	3.89	0.146																																		
							10	29.09	7.23	3.89	0.146																																		
							11	29.09	7.24	3.9	0.146																																		
							12	29.09	7.24	3.89	0.146																																		
							13	29.09	7.24	3.92	0.146																																		
							14	29.09	7.25	4	0.146																																		
							15	29.07	7.25	3.94	0.146																																		
							16	29.05	7.25	3.85	0.145																																		
							17	29.05	7.25	3.82	0.145																																		
							18	29.03	7.24	3.8	0.146																																		
							19	29.01	7.25	3.79	0.146																																		
							20	28.97	7.26	3.84	0.147																																		
							24.1	28.93	7.25	3.74	0.15																																		
Lay	1	A	91597	131559	1.1	3.48	---	---	---	---	---	4.0	72.0	66.3	114.0	6.0	1.34	<0.015	<0.003	<0.15	<0.06	<0.004	27.4	63	<1																				
							0.3	29.31	7.79	7.09	0.17																																		
							1	28.7	7.76	6.79	0.169																																		
							1.5	28.35	7.56	5.64	0.169																																		
							2	28.27	7.51	5.71	0.168																																		
							3	28.13	7.36	4.8	0.169																																		
							4	28.09	7.27	4.21	0.17																																		

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	Temp	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a	TSI	Colif.	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613
																										MMDDYY	HHMMSS	Photic-	m	m	m	degC	units	mg/l	mS/cm	NTU	mg/l								
								5	28.07	7.16	3.07	0.17																																	
								6	28.07	7.15	3.05	0.171																																	
								7	28.05	7.12	2.75	0.171																																	
								8	28.05	7.11	2.69	0.172																																	
								9	28.05	7.11	2.67	0.173																																	
								10	28.04	7.1	2.55	0.173																																	
								11	28.02	7.08	2.26	0.171																																	
								12	28.02	7.07	2.25	0.171																																	
								13	28	7.09	2.45	0.17																																	
								14	28	7.08	2.28	0.171																																	
								15	28	7.07	2.19	0.171																																	
								16	27.96	7.07	2.21	0.171																																	
								17	27.94	7.08	2.21	0.172																																	
								18	27.94	7.08	2.25	0.173																																	
								19	27.94	7.08	2.23	0.173																																	
								20	27.94	7.08	2.23	0.173																																	
								21	27.94	7.08	2.23	0.173																																	
								22	27.94	7.08	2.23	0.173																																	
								23	27.94	7.08	2.23	0.173																																	
								24	27.88	7.09	1.96	0.176																																	
Lay	1 A	102197	154103	1.2	2.76	---	---	---	---	---	---	6.9	78.0	70.6	121.0	5.0	4.42	<0.015	0.07	0.35	0.09	0.008	30.97	64	3*																				
						0.3	22.95	7.47	7.51	0.193																																			
						1	22.86	7.46	7.15	0.193																																			
						1.5	22.77	7.41	6.69	0.193																																			
						2	22.61	7.35	6.16	0.193																																			
						3	22.62	7.34	6.11	0.193																																			
						4	22.61	7.34	6.12	0.194																																			
						5	22.6	7.34	6.12	0.194																																			
						6	22.61	7.34	6.09	0.194																																			
						7	22.6	7.34	6.08	0.195																																			
						8	22.54	7.35	6.19	0.194																																			
						9	22.5	7.37	6.33	0.193																																			
						10	22.47	7.38	6.42	0.194																																			
						11	22.45	7.39	6.44	0.192																																			
						12	22.42	7.38	6.34	0.191																																			
						13	22.39	7.38	6.32	0.191																																			
						14	22.36	7.35	6.05	0.189																																			
						15	22.29	7.34	6.01	0.19																																			
						16	22.27	7.34	5.97	0.19																																			
						17	22.23	7.33	5.95	0.192																																			

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Reservoirs	Sta	Rep	Date	Time	Secchi	85328 Photic- zone	Depth	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613	
								mm	m	m	degC	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a
								18	22.18	7.34	6.01	0.191														
								19	22.18	7.35	6.09	0.191														
								20	22.16	7.35	6.11	0.192														
								23.8	22.07	7.38	6.31	0.193														
Lay	3	A	41597	153050	0.9	2.14	---	---	---	---	---	---	11.7	49.0	47.4	105.0	11.0	4.43	<0.015	0.09	<0.15	0.09	0.009	23.23	61	5*
							0.1	20.36	7.56	10.02	0.119															
							1	19.87	7.72	9.62	0.119															
							1.5	19.03	7.62	9.29	0.119															
							2	18.79	7.56	9.16	0.120															
							3	18.29	7.43	8.48	0.118															
							4	18.26	7.37	8.42	0.123															
							5	18.14	7.33	8.23	0.122															
							6	18.06	7.30	8.15	0.122															
							7	18.07	7.27	8.09	0.124															
							8	18.04	7.26	8.05	0.124															
							9	18.04	7.26	8.04	0.120															
							10	18.03	7.25	8.00	0.124															
							11	18.00	7.25	7.96	0.121															
							12	17.94	7.23	7.87	0.114															
							13	17.93	7.23	7.84	0.125															
							13.3	17.92	7.23	7.83	0.134															
Lay	3	A	51397	1500	0.8	2.33	---	---	---	---	---	---	14.9	43.0	40.8	60.0	10.0	4.10	<0.015	0.12	<0.15	0.07	0.004	24.56	62	5*
							0.3	22.54	7.29	9.39	0.105															
							1	22.41	7.47	9.29	0.104															
							1.5	22.38	7.47	9.26	0.104															
							2	22.32	7.44	9.04	0.104															
							3	21.49	7.19	8.20	0.104															
							4	21.13	7.05	7.72	0.105															
							5	21.12	7.02	7.67	0.105															
							6	21.09	7.02	7.68	0.105															
							7	21.09	7.02	7.70	0.105															
							8	21.07	7.02	7.67	0.105															
							9	21.07	7.02	7.68	0.105															
							10	21.07	7.02	7.72	0.105															
							11	21.06	7.03	7.71	0.105															
							12	21.05	7.02	7.69	0.105															

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Reservoirs	Sta	Rep	Date	Time	Secchi	85328 Photic- zone	Depth	00078	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613																																																												
								m	m	m	degC	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a	TSI	Colif. per 100ml																																																										
Lay	3	A	61797	1236	0.9	2.16	12.9	12.9	21.05	7.02	7.66	0.105	---	---	---	12.3	51.0	56.9	70.0	14.0	0.69	<0.015	0.12	<0.150	0.03	0.019	19.20	60	27																																																									
Lay	3	A	72397	94927	1.1	2.12	0.2	24.41	6.74	7.01	0.122	1	24.37	6.88	7.01	0.122	1.5	24.39	6.95	6.94	0.122	2	24.39	6.97	6.93	0.122	3	24.34	6.99	6.88	0.122	4	24.36	6.99	6.81	0.122	5	24.32	6.99	6.71	0.122	6	24.30	7.01	6.78	0.122	7	24.32	7.01	6.70	0.122	8	24.30	7.01	6.69	0.122	9	24.30	7.01	6.71	0.122	10	24.32	7.02	6.70	0.122	11	24.30	7.01	6.65	0.122	12	24.30	7.01	6.64	0.122	14	24.30	7.01	6.65	0.122	14.6	24.30	7.01	6.65	0.122
Lay	3	A	81197	143007	1.0	2.33	0.3	29.42	7.16	5.42	0.139	1.5	29.29	7.22	5.11	0.139	2	29.29	7.23	5.10	0.139	3	29.27	7.23	5.04	0.139	4	29.27	7.23	5.02	0.139	5	29.27	7.22	5.02	0.139	6	29.27	7.22	5.00	0.139	7	29.27	7.23	4.99	0.139	8	29.25	7.22	4.87	0.140	9	29.23	7.19	4.52	0.139	10	29.21	7.19	4.58	0.140	11	29.21	7.20	4.68	0.140	12	29.19	7.21	4.73	0.140	13	29.19	7.21	4.77	0.140	13.8	29.15	7.22	4.71	0.140					
Lay	3	A	81197	143007	1.0	2.33	---	---	---	---	---	---	7.2	64.0	62.0	111.0	7.0	1.99	<0.015	0.06	0.06	0.77	0.13	0.003	33.60	65	2*																																																											

Reservoir Water Quality Monitoring Program Coosa River Basin

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Reservoirs	Sta	Rep	Date	Time	Secchi	Photic-	Depth	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613			
								MMDDYY	HHMMSS	zone	m	m	degC	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a	Ortho	Total
										2	22.16	7.47	7.38	0.193																
										3	21.83	7.34	6.45	0.193																
										4	21.72	7.3	6.15	0.193																
										5	21.72	7.29	6.09	0.193																
										6	21.69	7.28	6.06	0.193																
										7	21.7	7.28	6.05	0.192																
										8	21.67	7.27	6.02	0.192																
										9	21.67	7.28	6.09	0.192																
										10	21.67	7.29	6.13	0.192																
										11	21.61	7.3	6.3	0.192																
										12	21.6	7.31	6.32	0.192																
										13	21.6	7.32	6.29	0.192																
Lay	2	A	41597	164357	0.9	2.12	---	---	---	---	---	---	---	9.8	51.0	47.7	100.0	9.0	4.61	<0.015	0.11	<0.15	0.09	0.009	21.09	60	10*			
										0.1	20.00	7.48	9.82	0.124																
										1	19.72	7.69	9.86	0.124																
										1.5	19.01	7.67	9.56	0.130																
										2	18.50	7.43	8.85	0.129																
										3	18.50	7.35	8.54	0.133																
										4	18.49	7.33	8.45	0.129																
										4.2	18.45	7.32	8.40	0.134																
Lay	2	B	41597	165246	0.9	2.05	---	---	---	---	---	---	---	10.0	50.0	47.4	108.0	10.0	4.62	<0.015	0.12	<0.15	0.09	0.009	22.70	61	9*			
										0.1	19.77	7.44	9.58	0.129																
										1	19.88	7.71	9.53	0.128																
										1.5	18.84	7.66	9.13	0.129																
										2	18.69	7.57	8.90	0.130																
										3	18.50	7.43	8.40	0.130																
										4	18.46	7.38	8.30	0.133																
										4.3	18.45	7.37	8.30	0.129																
Lay	2	A	51397	1550	0.8	1.85	---	---	---	---	---	---	---	20.2	38.0	37.1	44.0	15.0	4.55	<0.015	0.18	<0.15	0.08	0.01	10.15	53	5*			
										0.2	21.32	6.64	7.29	0.100																
										1	21.28	6.81	7.20	0.099																
										1.5	21.26	6.87	7.18	0.099																
										2	21.24	6.87	7.16	0.099																
										3	21.24	6.88	7.15	0.099																
										4	21.26	6.88	7.14	0.099																
										4.4	21.24	6.89	7.15	0.099																
Lay	2	B	51397	1615	0.7	1.84	---	---	---	---	---	---	---	20.9	40.0	37.7	44.0	15.0	4.08	<0.015	0.18	<0.15	0.08	0.011	11.75	55	3*			

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	00078 85328		00010 00400 00300 00095 82078 00410 00900 00515 00530 00680 00610 00620 00625 00650 00660 32211 85329 31613																	
								m	m	degC	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a	TSI	Colif per 100ml
Lay	2	A	81197	152834	0.9	2.07	---	---	---	---	---	---	11.8	64.0	61.6	114.0	13.0	1.42	<0.015	0.17	0.59	0.11	0.008	16.60	58	4*	
							0.3	29.7	7.12	5.57	0.152		1	29.7	7.22	5.51	0.152										
							1.5	29.66	7.35	5.5	0.152		2	29.64	7.35	5.45	0.152										
							3	29.62	7.36	5.45	0.152		4	29.64	7.36	5.44	0.152										
							4.8	29.62	7.37	5.43	0.153																
Lay	2	B	81197	153700	0.9	2.23	---	---	---	---	---	---	10.8	63.0	61.9	112.0	9.0	1.56	<0.015	0.16	0.79	0.13	0.008	23.00	61	6*	
							0.3	29.6	7.37	5.52	0.152		1	29.6	7.36	5.52	0.152										
							1.5	29.58	7.36	5.5	0.152		2	29.58	7.37	5.47	0.152										
							3	29.58	7.36	5.46	0.152		4	29.58	7.37	5.44	0.152										
							4.8	29.6	7.37	5.45	0.152																
Lay	2	A	91597	150043	0.9	2.47	---	---	---	---	---	---	7.9	74.0	71.8	96.0	9.0	0.90	<0.015	0.07	<0.15	0.07	<0.004	20.60	60	2*	
							0.3	29.92	7.54	6.65	0.167		1	29.74	7.52	6.45	0.168										
							1.5	29.52	7.49	6.32	0.169		2	29.48	7.47	6.2	0.169										
							3	29.39	7.44	6.02	0.169		4	29.23	7.41	5.84	0.169										
							4.5	28.97	7.36	5.25	0.171																
Lay	2	B	91597	150654	0.9	2.52	---	---	---	---	---	---	7.7	74.0	70.2	113.0	9.0	1.07	<0.015	0.05	<0.15	0.06	<0.004	22.8	61	1*	
							0.3	29.86	7.55	6.53	0.168		1	29.66	7.52	6.4	0.168										
							1.5	29.5	7.48	6.17	0.169		2	29.46	7.47	6.1	0.17										
							3	29.41	7.45	5.94	0.171		4	29.19	7.41	5.79	0.169										
							4.5	28.93	7.37	5.25	0.17																
Lay	2	A	102197	171347	1.0	2.4	---	---	---	---	---	---	8.9	78.0	73.7	123.0	4.0	3.63	<0.015	0.15	<0.15	0.09	0.011	20.29	60	12*	
							0.3	23.31	7.4	7.86	0.197		1	23.28	7.45	7.83	0.197										
							1.5	23.29	7.53	7.79	0.197		2	23.21	7.53	7.75	0.197										

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	Temp	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a	TSI	31613	
																									00078	85328
				MMDDYY	HHMMSS	m	m	degC	units	mg/l	mS/cm	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	ug/l	per 100ml				
Lay	2	B	102197	171846	1.0	2.41	---	---	---	---	---	---	3	22.71	7.45	7.21	0.185									
													4	22.36	7.41	7.15	0.184									
													4.3	22.33	7.41	7.13	0.184									
Logan Martin	1	A	41697	100149	1.0	2.88	---	---	---	---	---	---	8.8	76.0	74.8	114.0	5.0	4.18	<0.015	0.15	<0.15	0.08	0.006	19.22	60	3*
													0.4	23.29	7.53	7.77	0.196									
													1	23.26	7.53	7.75	0.197									
													1.5	23.22	7.54	7.71	0.196									
													2	23.19	7.53	7.69	0.195									
													3	22.82	7.48	7.41	0.186									
													4	22.36	7.42	7.11	0.183									
													4.3	22.35	7.41	7.11	0.184									
Logan Martin	1	A	51497	1000	0.8	2.27	---	---	---	---	---	6.9	48.0	45.3	59.0	8.0	4.00	<0.015	0.05	<0.15	0.07	0.006	21.89	61	<1	
													0.1	18.43	7.52	10.26	0.111									
													1	18.43	7.76	10.06	0.112									
													1.5	18.20	7.67	9.65	0.112									
													2	18.17	7.60	9.32	0.113									
													3	18.04	7.45	8.71	0.113									
													4	17.80	7.33	8.37	0.113									
													5	17.70	7.30	8.27	0.113									
													6	17.66	7.28	8.27	0.118									
													7	17.63	7.26	8.20	0.120									
													8	17.63	7.25	8.12	0.107									
													9	17.59	7.23	8.05	0.123									
													10	17.58	7.22	7.97	0.116									
													11	17.58	7.22	7.97	0.123									
													12	17.58	7.22	7.95	0.121									
													13	17.58	7.22	7.94	0.117									
													14	17.56	7.21	7.85	0.121									
													15	17.53	7.21	7.78	0.120									
													16	17.53	7.21	7.78	0.124									
													17	17.51	7.20	7.73	0.113									
													18	17.51	7.20	7.70	0.118									
													19	17.51	7.20	7.69	0.125									
													19.5	17.50	7.21	7.67	0.118									
Logan Martin	1	A	51497	1000	0.8	2.27	---	---	---	---	---	12.4	35.0	37.7	213.0	9.0	4.43	<0.015	0.10	<0.15	0.1	0.008	18.20	59	1*	
													0.3	21.42	6.79	9.25	0.085									
													1	21.46	7.06	9.21	0.086									
													1.5	21.32	7.12	8.95	0.086									

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Reservoirs	Sta	Rep	Date	Time	Secchi	85328 zone	Depth m	00078 Photic-																		
								00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613	
								degC	pH	DO units	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	TOC mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	P mg/l	P mg/l	Chl.a ug/l	TSI	Colif per 100ml	
Logan Martin	3	A	61897	102736	0.7	1.54	---	---	---	---	---	30.5	44.0	44.7	78.0	20.0	1.78	<0.015	0.17	0.24	0.03	0.014	17.10	58	177	
							0.3	23.63	6.41	6.48	0.105															
							1	23.63	6.57	6.43	0.105															
							1.5	23.65	6.70	6.45	0.106															
							2	23.65	6.74	6.45	0.105															
							3	23.59	6.77	6.41	0.105															
							4	23.59	6.78	6.41	0.105															
							5	23.59	6.79	6.41	0.105															
							6	23.61	6.80	6.39	0.105															
							7	23.59	6.80	6.39	0.104															
							8	23.56	6.80	6.39	0.104															
							9	23.59	6.80	6.39	0.104															
							10	23.52	6.80	6.38	0.103															
							11	23.52	6.80	6.37	0.103															
							12	23.54	6.80	6.38	0.103															
							13	23.59	6.80	6.38	0.104															
							14	23.49	6.80	6.36	0.103															
							15	23.49	6.79	6.34	0.103															
							15.4	23.49	6.79	6.34	0.103															
Logan Martin	3	A	72397	143548	1.1	2.74	---	---	---	---	---	7.7	58.0	56.6	27.0	3.0	0.72	<0.015	0.09	<0.15	0.07	0.07	0.001	20.80	60	1*
							0.3	30.71	7.97	7.69	0.134															
							1.5	30.61	8.01	7.42	0.135															
							2	30.14	7.72	6.54	0.136															
							3	30.02	7.65	6.40	0.136															
							4	29.84	7.54	5.97	0.135															
							5	29.64	7.42	5.24	0.136															
							6	29.58	7.40	5.23	0.135															
							7	29.58	7.39	5.17	0.135															
							8	29.56	7.38	4.99	0.135															
							9	29.23	7.25	3.79	0.142															
							10	28.60	7.11	1.96	0.161															
							11	28.07	7.12	1.87	0.178															
							12	27.65	7.13	1.41	0.184															
							13	27.42	7.14	1.37	0.191															
							14	27.21	7.14	0.97	0.194															
							15	27.15	7.15	0.85	0.193															
							15.3	27.15	7.15	0.82	0.193															
Logan Martin	3	A	81297	110518	0.8	2.6	---	---	---	---	---	7.7	60.0	59.4	42.0	6.0	1.46	<0.015	0.04	0.80	0.05	0.002	43.30	68	1*	
							0.3	29.13	8.65	10.62	0.134															

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613					
								MMDDYY	HHMMSS	m	m	m	degC	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a	TSI	Colif per 100ml		
										11	29.72	7.34	4.85	0.135																		
Logan Martin	2	A	81297	115057	0.6	1.96	---	---	---	---	---	---	---	0.3	28.76	8.04	8.72	0.135	14.1	59.0	59.5	68.0	11.0	1.66	<0.015	0.06	0.42	0.05	0.002	41.10	67	3*
											1	27.73	7.83	7.2	0.136																	
											1.5	27.61	7.64	6.45	0.136																	
											2	27.57	7.55	6.03	0.136																	
											3	27.55	7.5	5.95	0.136																	
											4	27.53	7.47	5.91	0.136																	
											5	27.53	7.45	5.93	0.136																	
											6	27.53	7.45	5.87	0.136																	
											7	27.5	7.44	5.82	0.136																	
											8	27.5	7.43	5.83	0.135																	
											9	27.48	7.43	5.81	0.135																	
											10	27.48	7.43	5.77	0.136																	
											11	27.48	7.42	5.74	0.136																	
											11.3	27.46	7.42	5.7	0.137																	
Logan Martin	2	A	91697	113410	0.6	1.9	---	---	---	---	---	---	---	0.3	27.67	8.18	8.09	0.179	14.2	75.0	68.0	107.0	10.0	1.18	<0.015	<0.003	<0.15	0.03	0.002	38.40	66	1*
											1	26.98	7.72	6.33	0.18																	
											1.5	26.92	7.6	6.04	0.18																	
											2	26.91	7.56	5.92	0.18																	
											3	26.89	7.55	5.86	0.18																	
											4	26.83	7.53	5.82	0.18																	
											5	26.81	7.53	5.81	0.18																	
											6	26.75	7.51	5.74	0.18																	
											7	26.73	7.5	5.69	0.18																	
											8	26.73	7.49	5.63	0.18																	
											9	26.72	7.48	5.54	0.18																	
											9.1	26.72	7.48	5.51	0.181																	
Logan Martin	2	A	102297	122623	0.6	1.71	---	---	---	---	---	---	---	0.3	20.37	7.54	8.29	0.161	18.2	66.0	64.2	95.0	15.0	3.36	<0.015	0.07	0.87	0.04	0.001	32.04	65	6*
											1	20.32	7.59	8.27	0.161																	
											1.5	20.3	7.62	8.21	0.161																	
											2	20.29	7.64	8.1	0.161																	
											3	20.11	7.58	7.94	0.161																	
											4	20.09	7.57	7.9	0.161																	
											5	20.04	7.56	7.84	0.161																	
											6	19.99	7.52	7.63	0.161																	

Reservoir Water Quality Monitoring Program
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Reservoirs	Sta	Rep	Date	Time	Secchi	85328 Photic- zone	Depth	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613	
								mm	m	m	degC	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a
								7	19.97	7.51	7.6	0.161														
								8	19.96	7.5	7.59	0.161														
								9	19.97	7.5	7.57	0.161														
								9.7	19.97	7.52	7.56	0.161														
Neely Henry	1	A	41697	150710	0.5	2.22	---	---	---	---	---	---	10.7	51.0	37.4	79.0	12.0	4.88	<0.015	0.04	<0.15	0.1	0.007	37.38	66	2*
							0.1	20.47	8.78	13.33	0.115															
							1	19.54	8.80	13.39	0.116															
							1.5	17.41	8.33	10.58	0.118															
							2	17.18	8.12	10.07	0.119															
							3	17.06	8.04	9.97	0.116															
							4	17.01	7.93	9.74	0.117															
							5	17.08	8.05	10.18	0.123															
							6	17.06	7.98	9.91	0.114															
							7	16.94	7.88	9.56	0.114															
							8	16.92	7.89	9.72	0.114															
							9	16.89	7.90	9.72	0.124															
							10	16.89	7.89	9.67	0.115															
							11	16.86	7.87	9.63	0.118															
							12	16.86	7.86	9.59	0.114															
							12.6	16.86	7.85	9.58	0.116															
Neely Henry	1	A	51497	1420	0.5	2.32	---	---	---	---	---	19.7	36.0	37.7	102.0	16.0	4.58	<0.015	0.12	0.58	0.08	0.007	20.30	60	5*	
							0.2	21.58	7.04	9.45	0.085															
							1	21.42	7.07	9.19	0.085															
							1.5	21.49	7.12	9.04	0.085															
							2	21.37	7.11	8.90	0.085															
							3	20.93	7.06	8.65	0.086															
							4	20.76	6.97	8.02	0.086															
							5	20.76	6.94	7.97	0.086															
							6	20.67	6.93	7.86	0.086															
							7	20.65	6.92	7.82	0.086															

Reservoir Water Quality Monitoring Program Coosa River Basin

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613	
								MMDDYY	HHMMSS	m	m	m	degC	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a
										1.5	19.97	7.78	8.59	0.156														
										2	19.84	7.74	8.33	0.157														
										3	19.78	7.69	8.12	0.157														
										4	19.73	7.65	8.01	0.157														
										6	19.7	7.62	7.91	0.157														
										7	19.7	7.62	7.89	0.157														
										8	19.63	7.57	7.66	0.158														
										9	19.6	7.55	7.61	0.158														
										10	19.59	7.55	7.59	0.158														
										11	19.56	7.52	7.43	0.158														
Neely Henry	3	A	41697	161557	0.5	1.88	---	---	---	---	---	15.5	49.0	45.4	60.0	16.0	4.32	<0.015	0.11	<0.15	0.11	0.013	33.64	65	74			
							0.1	18.79	8.30	11.36	0.113																	
							1	17.78	8.16	10.73	0.113																	
							1.5	17.55	7.95	10.19	0.114																	
							2	17.57	7.95	10.24	0.114																	
							3	17.60	7.96	10.21	0.114																	
							4	17.47	7.86	9.97	0.117																	
							5	17.26	7.80	9.81	0.118																	
							6	17.29	7.77	9.66	0.115																	
							7	17.21	7.73	9.60	0.112																	
							8	17.22	7.72	9.58	0.114																	
							9	17.19	7.72	9.57	0.114																	
							10	17.19	7.71	9.53	0.111																	
							11	17.26	7.72	9.58	0.113																	
							12	17.26	7.72	9.58	0.110																	
							13	17.27	7.73	9.57	0.116																	
							13.5	17.29	7.72	9.55	0.122																	
Neely Henry	3	A	51497	1556	0.6	1.79	---	---	---	---	---	29.0	34.0	35.9	115.0	20.0	4.93	<0.015	0.13	<0.15	0.12	0.006	19.20	60	13*			
							0.2	21.14	6.99	8.48	0.083																	
							1	21.40	7.10	8.60	0.083																	
							1.5	21.47	7.17	8.88	0.083																	
							2	21.44	7.19	8.84	0.083																	
							3	21.14	7.07	8.42	0.082																	
							4	21.24	7.07	8.46	0.082																	
							5	21.19	7.09	8.52	0.083																	
							6	20.88	7.00	8.00	0.082																	
							7	21.10	7.02	8.11	0.082																	
							8	20.84	6.99	8.02	0.082																	
							9	20.56	6.95	7.84	0.083																	

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	Temp	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a	TSI	31613		
																									NO3+	Total	Ortho
Neely Henry	3	A	81297	152845	0.7	1.87	---	---	---	---	---	13.6	61.0	59.7	67.0	11.0	1.73	<0.015	0.06	0.89	0.09	0.005	56.60	70		16*	
							0.2	29.23	8.94	12.77	0.145																
							1	27.13	8.24	8.74	0.148																
							1.5	27.21	8.13	7.93	0.145																
							2	27.4	8.31	7.64	0.145																
							3	26.87	7.77	6.83	0.15																
							4	26.98	7.85	7.2	0.149																
							5	26.98	7.96	7.9	0.149																
							6	26.96	7.86	7.38	0.149																
							7	26.98	8.04	7.72	0.149																
							8	26.92	7.77	6.73	0.149																
							9	26.68	7.54	6	0.151																
							10	26.7	7.49	5.9	0.152																
							11	26.68	7.49	5.92	0.152																
							12	26.7	7.5	5.95	0.152																
							13	26.7	7.5	5.95	0.152																
							13.9	26.68	7.49	5.96	0.152																
Neely Henry	3 A		91697	145704	0.8	1.72	---	---	---	---	---	13.8	67.0	64.1	104.0	14.0	1.51	<0.015	<0.003	<0.015	0.11	<0.004	52.3	69		14*	
							0.2	30.38	8.77	11.22	0.177																
							1	27.78	8.67	10.42	0.178																
							1.5	27.48	8.61	9.41	0.179																
							2	26.92	8.01	7.56	0.18																
							3	26.89	7.9	7.16	0.18																
							4	26.85	7.82	6.82	0.18																
							5	26.85	7.79	6.73	0.181																
							6	26.72	7.59	6.02	0.182																
							7	26.72	7.59	6	0.181																
							8	26.72	7.57	5.94	0.182																
							9	26.72	7.58	5.93	0.182																
							10	26.72	7.58	5.95	0.182																
							11	26.72	7.59	6.01	0.181																
							12	26.72	7.59	5.96	0.181																
							13	26.73	7.6	6.01	0.181																
							13.5	26.73	7.61	6.01	0.181																
Neely Henry	3	A	102297	155223	0.8	1.92	---	---	---	---	---	15.8	59.0	59.2	92.0	16.0	3.88	<0.015	0.07	<0.15	0.06	0.009	23.5	62		100	
							0.3	19.96	7.37	7.7	0.152																
							1	19.94	7.41	7.62	0.153																
							1.5	19.91	7.45	7.58	0.153																
							2	19.94	7.48	7.51	0.153																

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613
								MMDDYY	HHMMSS	m	m	m	degC	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P
										3	19.92	7.48	7.48	0.153													
										4	19.78	7.45	7.21	0.154													
										5	19.75	7.43	7.13	0.154													
										6	19.71	7.41	7.06	0.154													
										7	19.71	7.41	7.05	0.153													
										8	19.7	7.4	6.99	0.154													
										9	19.69	7.39	6.98	0.154													
										10	19.66	7.39	6.95	0.154													
										11	19.66	7.39	6.89	0.154													
										12	19.66	7.38	6.88	0.154													
										13	19.66	7.38	6.85	0.154													
										13.5	19.66	7.38	6.84	0.154													
Neely Henry	4	A	41697	170045	0.5	---	---	---	---	---	14.1	51.0	47.2	65.0	12.0	3.99	<0.015	0.14	<0.15	0.1	0.014	27.23	63	25			
										0.1	17.67	7.82	10.46	0.120													
										1	17.41	7.79	10.16	0.119													
										1.5	17.41	7.78	10.13	0.119													
										2	17.36	7.76	9.85	0.118													
										3	17.36	7.76	9.82	0.118													
										4	17.39	7.77	9.85	0.118													
										5	17.36	7.76	9.82	0.118													
										6	17.36	7.77	9.81	0.118													
										7	17.39	7.77	9.82	0.119													
										8	17.39	7.78	9.85	0.118													
										9	17.41	7.78	9.81	0.118													
										10	17.40	7.79	9.85	0.120													
										11	17.43	7.80	9.84	0.120													
										10.9	17.43	7.79	9.82	0.119													
Neely Henry	4	A	51497	1556	0.6	1.97	---	---	---	---	20.0	37.0	39.6	117.0	13.0	4.50	<0.015	0.18	0.21	0.12	0.014	16.60	58	71*			
										0	21.00	6.93	8.10	0.085													
										1	21.16	6.94	8.11	0.087													
										1	20.91	6.94	8.10	0.085													
										1.5	21.00	6.94	8.07	0.085													
										2	20.93	6.93	8.01	0.085													
										3	20.93	6.94	8.02	0.085													
										4	20.91	6.93	7.95	0.085													
										5	20.81	6.92	7.91	0.087													
										6	20.81	6.92	7.87	0.085													
										7	20.88	6.93	7.87	0.085													
										8	20.93	6.94	7.93	0.085													

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Reservoirs	Sta	Rep	Date	Time	Secchi	85328 Photic- zone	Depth	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613	
								mm	m	m	degC	pH units	DO mg/l	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	TOC mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	P mg/l	P mg/l	Chl.a ug/l
								9	20.82	6.93	7.87	0.086														
								10	20.86	6.94	7.90	0.085														
								11	20.81	6.94	7.88	0.086														
								11.2	20.86	6.95	7.90	0.086														
Neely Henry	4	A	61897	162320	0.4	1.41	---	---	---	---	---	---	38.2	45.0	43.8	61.0	32.0	0.91	<0.015	0.14	0.35	0.02	0.015	14.00	56	450
								0.2	23.25	6.96	6.81	0.111														
								1	23.27	6.97	6.81	0.111														
								1.5	23.27	6.99	6.77	0.111														
								2	23.25	6.99	6.77	0.111														
								3	23.25	6.99	6.76	0.110														
								4	23.25	6.99	6.76	0.111														
								5	23.25	7.00	6.75	0.111														
								6	23.25	7.00	6.74	0.110														
								7	23.25	7.00	6.74	0.110														
								8	23.25	7.01	6.73	0.110														
								9	23.27	7.01	6.73	0.110														
								10	23.27	7.00	6.73	0.110														
Neely Henry	4	A	72497	90229	0.9	2.19	---	---	---	---	---	---	12.0	59.0	55.1	62.0	10.0	1.36	<0.015	0.09	<0.15	0.063	0.007	36.80	66	26
								0.2	30.04	7.47	6.09	0.136														
								1	30.02	7.55	5.90	0.136														
								1.5	29.98	7.54	5.70	0.136														
								2	29.98	7.53	5.58	0.137														
								3	29.98	7.51	5.50	0.137														
								4	29.96	7.49	5.43	0.137														
								5	29.94	7.49	5.38	0.138														
								6	29.92	7.49	5.34	0.138														
								7	29.90	7.49	5.37	0.138														
								8	29.88	7.49	5.35	0.138														
								91	29.88	7.48	5.28	0.139														
								10	29.84	7.47	5.24	0.139														
								11	29.84	7.47	5.25	0.139														
								12.1	29.82	7.48	5.28	0.138														
Neely Henry	4	A	81297	160742	0.8	2.05	---	---	---	---	---	---	12.0	58.0	55.5	74.0	8.0	4.25	<0.015	0.05	0.76	0.06	0.006	45.90	68	29
								0.2	29.41	8.75	10.98	0.135														
								1	28.38	8.65	10.42	0.136														
								1.5	28.36	8.67	10.42	0.134														
								2	28.15	8.64	10.2	0.134														
								3	27.09	7.98	8.25	0.137														

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	Temp	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a	TSI	Colif.	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613
																										MMDDYY	HHMMSS	Photic-	m	m	m	degC	units	mg/l	mS/cm	NTU	mg/l								
								4	26.98	7.43	5.41	0.137																																	
								5	26.94	7.39	5.31	0.137																																	
								6	26.94	7.38	5.3	0.137																																	
								7	26.94	7.37	5.27	0.137																																	
								8	26.94	7.36	5.26	0.137																																	
								9	26.94	7.36	5.27	0.137																																	
								10	26.94	7.37	5.31	0.137																																	
								11	26.96	7.37	5.3	0.137																																	
								12	26.96	7.37	5.31	0.137																																	
								12.4	26.96	7.37	5.33	0.137																																	
Neely Henry	4	A	91697	153623	0.8	2.1	---	---	---	---	---	---	11.1	66.0	63.0	108.0	9.0	1.26	<0.015	0.02	0.66	0.08	0.007	40.60	67	14*																			
								0.1	28.83	8.49	9.4	0.176																																	
								1	28.36	8.33	8.74	0.179																																	
								1.5	28.09	8.22	7.72	0.18																																	
								2	27.57	8.01	7.63	0.179																																	
								3	26.94	7.58	5.03	0.182																																	
								4	26.72	7.38	5.02	0.183																																	
								5	26.7	7.36	4.9	0.184																																	
								6	26.72	7.36	4.88	0.184																																	
								7	26.72	7.36	4.93	0.184																																	
								8	26.7	7.36	4.89	0.184																																	
								9	26.73	7.36	4.92	0.183																																	
								10	26.73	7.37	4.93	0.184																																	
								11	26.73	7.36	4.9	0.183																																	
								11.5	26.72	7.36	4.87	0.183																																	
Neely Henry	4	A	102297	162724	0.9	1.72	---	---	---	---	---	---	16.6	60.0	57.2	93.0	11.0	3.77	<0.015	0.06	0.46	0.06	0.012	19.22	60	67																			
								0.2	19.7	7.35	7.48	0.149																																	
								1	19.7	7.37	7.18	0.15																																	

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613
								MMDDYY	HHMMSS	m	m	m	degC	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P
										1.5	19.71	7.39	7.24	0.149													
										2	19.7	7.41	7.26	0.149													
										3	19.71	7.38	7.14	0.15													
										4	19.7	7.36	6.97	0.149													
										5	19.7	7.36	6.96	0.15													
										6	19.7	7.37	6.98	0.149													
										7	19.7	7.36	6.95	0.15													
										8	19.66	7.36	6.89	0.151													
										9	19.68	7.35	6.84	0.15													
										10	19.68	7.35	6.82	0.15													
										11	19.66	7.35	6.79	0.15													
										12	19.66	7.35	6.8	0.151													
										12.2	19.66	7.35	6.8	0.151													
Neely Henry	2	A	41697	174811	0.5	1.52	---	---	---	---	---	16.7	45.0	43.9	68.0	17.0	3.92	<0.015	0.12	<0.15	0.09	0.009	28.30	63	5*		
										0.1	17.58	7.54	10.44	0.108													
										1	17.58	7.57	10.33	0.108													
										1.5	17.58	7.60	10.29	0.108													
										2	17.58	7.61	10.20	0.108													
										3	17.58	7.62	10.11	0.109													
										4	17.58	7.63	9.98	0.108													
										5	17.58	7.65	9.76	0.113													
										6	17.56	7.65	9.74	0.104													
										7	17.58	7.65	9.72	0.114													
										7.8	17.58	7.65	9.70	0.113													
Neely Henry	2	A	51497	1630	0.6	1.72	---	---	---	---	---	21.1	34.0	33.8	104.0	19.0	4.41	<0.015	0.11	<0.15	0.1	<0.004	15.00	57	6*		
										0.2	20.77	6.92	8.21	0.079													
										1	20.77	6.95	8.20	0.079													
										1.5	20.77	6.95	8.19	0.079													
										2	20.77	6.96	8.15	0.079													
										3	20.74	6.97	8.11	0.079													
										4	20.76	6.97	8.11	0.079													
										5	20.77	6.98	8.10	0.079													
										6	20.74	6.97	8.10	0.079													
										7	20.74	6.98	8.09	0.079													
										8	20.72	6.98	8.09	0.079													
Neely Henry	2	A	61897	171344	0.4	1.19	---	---	---	---	---	31.1	45.0	45.5	27.0	25.0	1.04	0.05	0.10	<0.15	0.02	0.01	17.40	59	350		
										0.3	23.77	7.00	6.78	0.111													
										1	23.77	7.04	6.76	0.112													

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613	
								MMDDYY	HHMMSS	m	m	m	degC	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a
										1.5	23.77	7.05	6.75	0.112														
										2	23.77	7.05	6.75	0.113														
										3	23.77	7.06	6.73	0.113														
										4	23.77	7.06	6.71	0.113														
										5	23.77	7.06	6.69	0.112														
										6	23.77	7.07	6.66	0.112														
										7	23.77	7.07	6.48	0.112														
										8	23.77	7.07	6.51	0.112														
										8.9	23.77	7.07	6.15	0.112														
Neely Henry	2	A	72497	93552	0.9	2.38	---	---	---	---	---	---	---	---	10.6	57.0	49.9	53.0	9.0	0.69	<0.015	0.08	0.67	0.07	0.006	32.00	65	20
										0.2	29.92	7.44	5.67	0.129														
										1	29.84	7.48	5.36	0.130														
										1.5	29.80	7.43	4.82	0.131														
										2	29.80	7.42	4.78	0.131														
										3	29.80	7.41	4.71	0.130														
										4	29.80	7.40	4.69	0.131														
										5	29.80	7.40	4.65	0.131														
										6	29.78	7.41	4.68	0.131														
										7	29.78	7.40	4.63	0.131														
										8.1	29.74	7.41	4.81	0.131														
Neely Henry	2	A	81297	164947	0.7	2.14	---	---	---	---	---	---	---	15.1	55.0	53.2	57.0	13.0	1.22	<0.015	0.11	0.81	0.08	0.01	29.90	64	7*	
										0.2	29.94	8.66	10.1	0.128														
										1	27.86	7.96	7.66	0.129														
										1.5	28.33	8.1	7.25	0.129														
										2	27.38	7.57	6.47	0.13														
										3	27.17	7.46	6.15	0.129														
										4	27.11	7.44	6.01	0.129														
										5	27.11	7.44	6.02	0.129														
										6	27.04	7.43	6.01	0.129														
										7	27.02	7.42	5.98	0.129														
										8	27.02	7.42	5.94	0.129														
										8.2	27.02	7.42	5.94	0.129														
Neely Henry	2	A	91697	161506	0.8	2.01	---	---	---	---	---	---	---	10.7	66.0	59.7	100.0	10.0	1.05	<0.015	0.00	<0.15	0.13	<0.004	45.40	68	2*	
										0.1	28.5	8.63	10.08	0.169														
										1	27.55	8.53	9.03	0.17														
										1.5	26.83	8.1	7.15	0.171														
										2	26.55	7.63	6.1	0.171														
										3	26.49	7.5	5.79	0.172														

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Reservoirs	Sta	Rep	Date	Time	Secchi	85328 Photic- zone	Depth	00078		00010 00400 00300 00095 82078 00410 00900 00515 00530 00680 00610 00620 00625 00650 00660 32211 85329 31613	NO3+ Total Ortho	TKN	P	P	Chl.a	TSI	Colif per 100ml								
								MMDDYY	HHMMSS	m	m	degC	pH	DO units	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	TOC mg/l	NH3-N mg/l	NO2 mg/l	P mg/l	Chl.a ug/l
Weiss	1	A	51597	725	0.6	1.63	---	---	---	---	---	21.8	34.0	35.0	98.0	18.0	3.11	<0.015	0.11	<0.15	0.1	<0.004	14.40	57	4*
							0.2	20.25	6.80	7.82	0.082														
							1	20.25	6.83	7.80	0.082														
							1.5	20.26	6.84	7.79	0.082														
							2	20.25	6.85	7.78	0.082														
							3	20.26	6.86	7.79	0.082														
							4	20.26	6.86	7.80	0.082														
							5	20.26	6.87	7.80	0.082														
							6	20.24	6.80	7.76	0.082														
							7	20.24	6.83	7.80	0.082														
							8	20.23	6.86	7.81	0.082														
							9	20.24	6.88	7.77	0.082														
							10	20.25	6.86	7.61	0.082														
							11	20.26	6.86	7.53	0.082														
Weiss	1	A	61997	82953	0.6	2.03	---	---	---	---	---	18.1	50.0	48.9	151.0	14.0	1.08	0.02	0.14	0.35	0.01	0.009	22.40	61	3*
							0.1	24.08	7.19	7.22	0.121														
							1	23.99	7.17	7.19	0.121														
							1.5	23.97	7.16	7.17	0.121														
							2	23.94	7.17	7.15	0.121														
							3	23.92	7.15	7.01	0.121														
							4	23.90	7.13	6.95	0.122														
							5	23.90	7.13	6.93	0.121														
							6	23.88	7.12	6.91	0.121														
							7	23.88	7.12	6.88	0.121														
							8	23.88	7.12	6.87	0.121														
							9	23.88	7.12	6.84	0.121														
							10	23.89	7.12	6.83	0.121														
							10.9	23.88	7.11	6.77	0.122														
Weiss	1	A	72497	123635	0.9	1.97	---	---	---	---	---	9.8	57.0	49.2	55.0	10.0	1.08	<0.015	0.07	1.00	0.08	0.007	55.00	70	12*
							0.2	31.73	8.78	9.22	0.130														
							1	30.22	8.81	9.25	0.131														
							1.5	29.96	8.67	8.37	0.131														
							2	29.84	8.48	7.51	0.131														

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613				
								MMDDYY	HHMMSS	m	m	m	degC	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a	TSI	Colif per 100ml	
										3	19.87	7.10	8.67	0.090																	
										4	19.85	7.10	8.60	0.090																	
										5	19.85	7.10	8.54	0.090																	
										6	19.84	7.10	8.53	0.090																	
										7	19.67	7.11	8.48	0.092																	
										8	19.50	7.03	8.08	0.092																	
										9	19.10	6.96	7.70	0.091																	
										10	18.41	6.85	6.99	0.091																	
										11	18.37	6.80	6.79	0.091																	
										11.4	18.36	6.78	6.77	0.091																	
Weiss	2	A	61997	92924	0.5	1.41	---	---	---	0.1	24.91	7.01	7.44	0.132				22.0	53.0	56.8	106.0	14.0	1.69	<0.015	0.34	0.39	0.034	0.034	18.20	59	43
										1	23.88	6.91	6.56	0.132																	
										1.5	23.85	6.90	6.44	0.132																	
										2	23.79	6.88	6.33	0.132																	
										3	23.78	6.88	6.30	0.131																	
										4	23.63	6.85	6.10	0.130																	
										5	23.54	6.82	5.96	0.130																	
										6	23.52	6.82	5.86	0.128																	
										7	23.50	6.81	5.82	0.128																	
										8	23.45	6.79	5.53	0.126																	
										9	23.27	6.76	5.18	0.125																	
										10	22.82	6.69	4.05	0.124																	
										11	22.27	6.61	3.26	0.124																	
										11.4	22.28	6.60	3.23	0.124																	
Weiss	2	A	72497	133143	0.8	1.72	---	---	---	0.2	29.96	8.50	8.29	0.130				16.8	53.0	51.6	60.0	16.0	0.67	<0.015	0.08	<0.15	0.08	0.017	43.30	68	1*
										1	29.62	8.44	7.67	0.130																	
										1.5	29.19	8.15	6.95	0.130																	
										2	29.03	7.93	6.54	0.131																	
										3	28.97	7.67	5.68	0.131																	
										4	28.95	7.64	5.56	0.131																	
										5	28.85	7.57	5.45	0.131																	
										6	28.74	7.63	5.88	0.130																	
										7	28.64	7.69	6.07	0.129																	
										8	28.58	7.72	6.24	0.129																	
										9	28.40	7.58	5.58	0.129																	
										10	28.21	7.36	4.39	0.130																	
										11	28.17	7.28	3.91	0.130																	

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	Temp	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a	TSI	31613	
																									00078	85328
					Photic-	m	m	degC	units	mg/l	mS/cm	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	ug/l		Colif.		
																							per 100ml			
Weiss	2	A	81397	91153	0.9	2.29	---	---	---	---	---	---	9.9	53.0	49.9	13.0	9.0	3.75	<0.015	0.06	1.00	0.06	0.002	39.50	67	3*
													0.2	27.82	9.13	11.59	0.127									
													1	27.82	9.13	11.63	0.127									
													1.5	27.78	9.11	11.46	0.127									
													2	27.55	9.07	11.33	0.127									
													3	26.04	8.26	7.42	0.129									
													4	25.5	7.8	5.32	0.129									
													5	25.18	7.52	4.82	0.129									
													6	24.92	7.38	4.57	0.131									
													7	24.72	7.32	4.43	0.13									
													8	24.48	7.28	4.3	0.131									
													9	24.27	7.21	4.02	0.132									
													10	24.1	7.17	3.73	0.133									
													11	24.06	7.14	3.35	0.134									
													11.6	24.05	7.12	3.11	0.135									
Weiss	2	A	91797	90519	0.8	1.65	---	---	---	---	---	---	13.0	63.0	57	104.0	7.0	0.78	<0.015	<0.003	<0.15	0.17	0.007	30.4	64	2*
													0.2	26.33	8.53	8.83	0.158									
													1	26.28	8.45	8.29	0.159									
													1.5	26.12	8.16	7.34	0.16									
													2	26.06	7.92	6.73	0.159									
													3	25.91	7.64	5.88	0.16									
													4	25.82	7.48	5.39	0.161									
													5	25.81	7.41	5.16	0.16									
													6	25.75	7.39	5.09	0.161									
													7	25.66	7.37	5.05	0.16									
													8	25.59	7.35	4.88	0.16									
													9	25.5	7.34	4.7	0.16									
													10	25.46	7.25	3.84	0.161									
													10.8	25.45	7.23	3.64	0.163									

Reservoir Water Quality Monitoring Program
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Reservoirs	Sta	Rep	Date	Time	Secchi	85328 Photic- zone	00078	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613
							MMDDYY	HHMMSS	m	m	Depth	Temp degC	pH units	DO mg/l	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	TOC mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	P mg/l
Weiss	2	A	102397	91253	0.6	1.33	---	---	---	---	---	23.7	55.0	53.1	90.0	12.0	3	<0.015	0.21	0.2	0.07	0.03	24.56	62	3*
					0.2		17.76	7.22	8.6	0.146															
					1		17.77	7.36	8.57	0.147															
					1.5		17.76	7.41	8.49	0.147															
					2		17.77	7.42	8.48	0.147															
					3		17.74	7.44	8.47	0.147															
					4		17.73	7.45	8.44	0.148															
					5		17.7	7.46	8.47	0.147															
					6		17.61	7.51	8.58	0.147															
					7		17.6	7.52	8.58	0.146															
					8		17.56	7.54	8.61	0.147															
					9		17.4	7.52	8.53	0.148															
					10		16.89	7.52	8.52	0.148															
					10.5		16.84	7.52	8.51	0.147															
Weiss	3	A	41797	110848	0.7	1.9	---	---	---	---	---	14.4	56.0	50.5	106.0	11.0	2.98	<0.015	0.30	<0.15	0.1	0.034	6.94	50	26
					0.2		16.89	7.17	9.87	0.127															
					1		16.90	7.19	9.76	0.127															
					1.5		16.92	7.20	9.69	0.127															
					2		16.89	7.20	9.63	0.128															
					3		16.87	7.21	9.50	0.128															
					4		16.90	7.22	9.45	0.128															
					5		16.89	7.22	9.31	0.128															
					6		16.83	7.11	9.05	0.128															
					8		16.82	7.19	9.07	0.128															
					9.1		16.82	7.20	9.02	0.129															
Weiss	3	A	51597	935	0.5	1.64	---	---	---	---	---	18.0	39.0	38.4	117.0	16.0	1.59	<0.015	0.26	0.36	0.14	0.01	10.10	53	9*
					0.3		20.26	7.17	9.19	0.094															
					1		18.96	7.07	8.64	0.098															
					1		19.03	7.02	8.42	0.099															
					1.5		18.74	6.96	8.27	0.100															
					2		18.71	6.96	8.28	0.100															
					3		18.58	6.94	8.15	0.100															
					4		18.58	6.94	8.12	0.100															
					5		18.56	6.93	8.10	0.100															
					6		18.55	6.93	8.10	0.100															
					7		18.55	6.93	8.09	0.100															
					8		18.56	6.93	8.08	0.100															
					9		18.56	6.93	8.07	0.100															

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Reservoirs	Sta	Rep	Date	Time	Secchi	85328 Photic- zone	Depth	00078	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613	
								m	m	m	degC	pH	DO units	mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	TOC mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	P mg/l	P mg/l	Chl.a ug/l	TSI
Weiss	3	A	61997	102325	0.3	1.05	---	---	---	---	---	---	---	52.3	38.0	41.8	148.0	32.0	1.74	0.03	0.37	0.29	0.08	0.058	0.53	24	570
					0.1		22.18	6.57	6.15	0.096																	
					1		22.04	6.60	6.17	0.099																	
					1.5		22.02	6.61	6.14	0.100																	
					2		22.00	6.62	6.14	0.100																	
					3		21.98	6.62	6.13	0.098																	
					4		21.94	6.62	6.11	0.098																	
					5		21.91	6.62	6.11	0.098																	
					6		21.91	6.62	6.10	0.098																	
					7		21.92	6.62	6.09	0.099																	
					8		21.91	6.62	6.08	0.098																	
					9		21.91	6.62	6.07	0.099																	
					9.9		21.91	6.62	6.06	0.098																	
Weiss	3	A	72497	142908	0.9	2.33	---	---	---	---	---	---	---	14.1	55.0	54.0	48.0	11.0	0.65	<0.015	0.37	<0.15	0.09	0.056	20.80	60	33*
					0.3		30.34	7.38	6.59	0.148																	
					1		30.14	7.34	6.40	0.148																	
					1.5		30.06	7.32	6.26	0.148																	
					2		29.94	7.30	6.11	0.148																	
					3		29.90	7.29	6.06	0.148																	
					4		29.88	7.29	6.02	0.148																	
					5		29.86	7.29	6.00	0.148																	
					6		29.84	7.29	5.96	0.148																	
					7		29.80	7.28	5.90	0.148																	
					8		29.80	7.28	5.89	0.148																	
					8.9		29.78	7.28	5.89	0.147																	
Weiss	3	A	81397	100416	0.9	1.62	---	---	---	---	---	---	---	17.5	54.0	53.3	86.0	12.0	2.75	<0.015	0.30	0.51	0.1	0.052	13.40	56	41
					0.3		26.55	7.97	8.1	0.133																	
					1		25.74	7.7	7.39	0.137																	
					1.5		25.61	7.55	7.18	0.138																	
					2		25.26	7.48	6.96	0.139																	
					3		25.26	7.43	6.85	0.139																	
					4		25.18	7.42	6.81	0.138																	
					5		25.13	7.4	6.75	0.138																	

Reservoir Water Quality Monitoring Program
Coosa River Basin

Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	Temp	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a	TSI	Colif	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613
Weiss	3	A	91797	95227	1.0	1.84	---	---	---	---	---	---	12.0	56.0	54.3	111.0	8.0	0.96	<0.015	0.19	<0.15	0.12	0.073	20.80	60	6*																			
							0.3	26.64	8.02	8.67	0.152																																		
							1	26.23	7.77	7.93	0.152																																		
							1.5	26.21	7.71	7.87	0.152																																		
							2	26.17	7.66	7.78	0.152																																		
							3	26	7.48	6.87	0.153																																		
							4	25.83	7.32	6.37	0.155																																		
							5	25.81	7.29	6.28	0.156																																		
							6	25.81	7.29	6.23	0.156																																		
							7	25.8	7.27	6.14	0.156																																		
							8	25.8	7.26	6.12	0.156																																		
							8.3	25.8	7.26	6.1	0.156																																		
Weiss	3	A	102397	100513	1.0	1.96	---	---	---	---	---	12.9	66.0	61.6	109.0	10.0	2.77	<0.015	0.34	0.37	0.14	0.13	8.01	51	6*																				
							0.2	18.7	7.25	8.21	0.176																																		
							1	18.67	7.28	8.11	0.176																																		
							1.5	18.67	7.3	8.02	0.176																																		
							2	18.7	7.31	7.96	0.176																																		
							3	18.6	7.31	7.95	0.176																																		
							4	18.46	7.32	7.97	0.175																																		
							5	18.31	7.32	7.98	0.175																																		
							6	18.26	7.32	7.96	0.175																																		
							7	18.24	7.33	7.95	0.174																																		
							8	18.24	7.33	7.94	0.175																																		
							8.7	18.21	7.33	7.93	0.175																																		
Weiss	4	A	41797	115610	0.7	2.36	---	---	---	---	---	14.2	50.0	49.4	114.0	10.0	2.99	<0.015	0.32	<0.15	0.08	0.05	6.41	49	18*																				
							0.1	17.21	7.15	10.2	0.122																																		
							1	16.65	7.15	9.86	0.122																																		
							1.5	16.65	7.14	9.71	0.122																																		

Reservoir Water Quality Monitoring Program
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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613	
								MMDDYY	HHMMSS	m	m	m	degC	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a
										2	16.65	7.14	9.64	0.122														
										2	16.65	7.17	9.34	0.122														
										3	16.62	7.16	9.23	0.122														
										4	16.63	7.15	9.18	0.122														
										5	16.63	7.16	9.17	0.122														
										6	16.65	7.16	9.15	0.122														
										7	16.65	7.16	9.11	0.123														
										8	16.63	7.16	9.1	0.123														
										9	16.63	7.16	9.07	0.123														
Weiss	4	B	41797	120836	0.6	2.27	---	---	---	---	---	---	---	14.1	49.0	46.4	101.0	9.0	2.66	<0.015	0.32	<0.15	0.1	0.049	6.94	50	24	
							0.1	17.19	7.20	9.49	0.121																	
							1	16.94	7.20	9.29	0.125																	
							1.5	16.68	7.18	9.19	0.126																	
							2	16.67	7.17	9.12	0.124																	
							3	16.65	7.17	9.10	0.126																	
							4	16.65	7.16	9.07	0.126																	
							5	16.65	7.16	9.06	0.119																	
							6	16.65	7.16	9.05	0.120																	
							7	16.67	7.16	9.04	0.129																	
							8	16.65	7.16	9.03	0.125																	
							8.9	16.65	7.16	9.02	0.125																	
Weiss	4	A	51597	1008	0.7	2	---	---	---	---	---	---	---	16.4	40.0	42.8	91.0	14.0	0.75	<0.015	0.36	<0.15	0.1	0.04	5.34	47	45	
							0.2	18.36	6.89	8.25	0.104																	
							1	18.31	6.90	8.27	0.104																	
							1.5	18.28	6.92	8.23	0.104																	
							2	18.22	6.93	8.26	0.104																	
							3	18.22	6.93	8.23	0.104																	
							4	18.21	6.94	8.23	0.104																	
							5	18.20	6.94	8.22	0.104																	
							6	18.20	6.95	8.21	0.104																	
							7	18.22	6.95	8.20	0.104																	
							7	18.21	6.95	8.22	0.104																	
							8	18.21	6.95	8.21	0.104																	
							9	18.21	6.95	8.20	0.104																	
							9.7	18.21	6.95	8.20	0.104																	
Weiss	4	B	51597	1010	0.7	1.96	---	---	---	---	---	---	---	16.4	40.0	41.4	106.0	17.0	0.92	<0.015	0.34	0.15	0.1	0.04	5.87	48	35	
							0.3	18.24	6.96	8.22	0.104																	
							1	18.24	6.96	8.22	0.104																	

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613		
								MMDDYY	HHMMSS	m	m	m	degC	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a	TSI
										1.5	18.26	6.96	8.23	0.104															
										2	18.24	6.97	8.22	0.104															
										3	18.24	6.97	8.21	0.104															
										4	18.21	6.96	8.21	0.104															
										5	18.19	6.96	8.20	0.104															
										6	18.20	6.97	8.20	0.104															
										7	18.19	6.97	8.19	0.104															
										8	18.21	6.97	8.19	0.104															
										9	18.21	6.97	8.19	0.104															
										9.3	18.21	6.97	8.18	0.104															
Weiss	4	A	61997	111014	0.3	1.15	---	---	---	---	---	50.7	38.0	39.0	96.0	28.0	1.89	<0.015	0.35	0.38	0.06	0.055	1.60	35	450				
										0.2	21.83	6.59	6.11	0.095															
										1	21.77	6.59	6.10	0.095															
										1.5	21.77	6.59	6.10	0.095															
										2	21.81	6.59	6.11	0.095															
										3	21.81	6.60	6.10	0.095															
										4	21.77	6.60	6.10	0.095															
										5	21.76	6.60	6.10	0.095															
										6	21.74	6.60	6.08	0.095															
										7	21.76	6.60	6.08	0.095															
										8	21.74	6.60	6.08	0.095															
										9	21.76	6.60	6.08	0.094															
										9.8	21.76	6.60	6.06	0.094															
Weiss	4	B	61997	111940	0.3	1.18	---	---	---	---	---	54.3	38.0	39.8	101.0	40.0	1.75	0.04	0.35	0.63	0.06	0.056	2.14	38	>730				
										0.2	21.93	6.61	6.06	0.095															
										1	21.77	6.61	6.09	0.095															
										1.5	21.79	6.61	6.09	0.095															
										2	21.77	6.61	6.09	0.095															
										3	21.76	6.61	6.07	0.095															
										4	21.77	6.61	6.09	0.095															
										5	21.77	6.61	6.07	0.095															
										6	21.77	6.61	6.06	0.095															
										7	21.77	6.61	6.06	0.095															
										8	21.79	6.61	6.06	0.095															
										9	21.77	6.61	6.06	0.095															
										9.3	21.77	6.62	6.05	0.095															
Weiss	4	A	72497	150457	1.0	2.25	---	---	---	---	---	10.6	70.0	67.4	85.0	8.0	0.89	<0.015	0.39	<0.15	0.11	0.073	27.20	63	36				
										0.1	31.82	7.69	7.95	0.174															

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Reservoirs	Sta	Rep	Date	Time	Secchi	85328 Photic- zone	Depth	00078	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613		
								MMDDYY	HHMMSS	m	m	m	degC	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	TOC	NH3-N	NO2	TKN	P	P	Chl.a
Weiss	4	B	72497	151454	0.9	2.28	---	---	---	---	---	---	---	10.8	70.0	67.3	89.0	4.0	0.92	<0.015	0.39	<0.15	0.1	0.07	25.10	62	44	
														0.2	31.88	7.88	8.19	0.176										
														1	31.05	7.70	7.51	0.176										
														1.5	30.99	7.64	7.26	0.175										
														2	30.93	7.61	7.22	0.175										
														3	30.71	7.53	6.80	0.176										
														4	30.65	7.52	6.77	0.177										
														5	30.63	7.52	6.73	0.177										
														6	30.63	7.52	6.76	0.177										
														7	30.63	7.52	6.75	0.177										
														8	30.61	7.52	6.71	0.177										
														9	30.61	7.52	6.71	0.177										
														9.5	30.61	7.52	6.71	0.177										
Weiss	4	A	81397	104016	0.8	2.14	---	---	---	---	---	---	---	14.4	53.0	51.0	70.0	8.0	3.19	<0.015	0.46	0.61	0.13	0.087	12.80	56	>75	
														0.3	24.98	7.27	7.43	0.141										
														1	24.92	7.31	7.18	0.141										
														1.5	24.85	7.33	7.07	0.141										
														2	24.78	7.33	6.94	0.142										
														3	24.67	7.34	6.8	0.141										
														4	24.63	7.34	6.73	0.142										
														5	24.58	7.33	6.67	0.141										
														6	24.59	7.33	6.63	0.141										
														7	24.56	7.33	6.61	0.141										
														8	24.58	7.33	6.61	0.141										
														9	24.58	7.33	6.59	0.141										
														9.7	24.58	7.33	6.59	0.141										
Weiss	4	B	81397	104756	0.9	1.95	---	---	---	---	---	---	---	15.6	54.0	54.6	46.0	8.0	2.80	<0.015	0.36	0.52	0.12	0.08	12.30	55	22	

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Reservoirs	Sta	Rep	Date	Time	Secchi	85328 Photic- zone	Depth	00078	00010	00400	00300	00095	82078	00410	00900	00515	00530	00680	00610	00620	00625	00650	00660	32211	85329	31613		
								m	m	m	degC	pH	DO units	mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	TOC mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	P mg/l	P mg/l	Total ug/l	Ortho ug/l	Chl.a
Weiss	4	A	102397	103928	1.0	2.05	---	---	---	---	---	---	---	---	12.2	61.0	60.4	104.0	8.0	3.13	<0.015	0.36	0.31	0.17	0.14	6.94	50	7*
							0.3	18.92	7.06	8.06	0.172																	
							1	18.86	7.18	8.02	0.172																	
							1.5	18.8	7.25	7.94	0.173																	
							2	18.8	7.28	7.92	0.173																	
							3	18.82	7.31	7.95	0.172																	
							4	18.82	7.32	7.91	0.173																	
							5	18.82	7.32	7.88	0.173																	
							6	18.8	7.32	7.9	0.173																	
							7	18.8	7.32	7.91	0.173																	
							8	18.82	7.32	7.9	0.172																	
							9	18.82	7.33	7.89	0.174																	
							9.3	18.82	7.34	7.89	0.173																	
Weiss	4	B	102397	104609	1.0	1.91	---	---	---	---	---	---	---	---	12.0	61.0	57.7	108.0	13.0	2.46	<0.015	0.36	0.17	0.15	0.13	7.48	50	5*
							0.2	19.01	7.35	8.03	0.172																	
							1	18.86	7.34	7.93	0.173																	
							1.5	18.82	7.32	7.89	0.172																	
							2	18.8	7.32	7.84	0.172																	
							3	18.8	7.32	7.84	0.172																	
							4	18.8	7.32	7.82	0.172																	
							5	18.8	7.32	7.83	0.173																	
							6	18.8	7.32	7.86	0.172																	
							7	18.8	7.32	7.85	0.172																	
							8	18.8	7.32	7.86	0.173																	
							9	18.82	7.32	7.86	0.172																	
							9.3	18.82	7.33	7.87	0.172																	

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Reservoirs	Sta	Rep	Date	Time	Secchi	85328 Photic- zone	Water Quality Parameters																	
							00078	00010	00400	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	32211	85329	31613
				MMDDYY	HHMMSS	m	m	degC	pH units	DO mg/l	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	P mg/l	P mg/l	ug/l	TSI	Colif per 100ml	
Thurlow	1	A	41597	---	2.1	4.85	---	---	---	---	---	4.14	12.0	10.8	66.0	<1.0	<0.015	0.14	<0.15	0.08	0.005	9.61	53	<1
							0.1	16.32	6.52	9.18	0.049													
							1	16.28	6.64	9.2	0.048													
							1.5	16.23	6.72	9.22	0.049													
							2	16.21	6.77	9.22	0.048													
							3	16.2	6.81	9.22	0.048													
							4	16.16	6.83	9.18	0.048													
							5	16.15	6.84	9.17	0.047													
							6	16.13	6.85	9.13	0.046													
							7	16.08	6.85	9.05	0.045													
							8	15.65	6.76	8.74	0.044													
							9	15.57	6.7	8.53	0.044													
							9.7	15.55	6.67	8.45	0.044													
Thurlow	1	A	51297	94650	1.74	4.86	---	---	---	---	---	5.97	15.0	10.1	14.0	1.0	<0.015	0.20	<0.15	0.009	<0.01	4.54	45	1*
							0.1	18.67	5.96	8.54	0.042													
							0.9	18.25	6.08	8.43	0.041													
							1.5	18.21	6.15	8.39	0.041													
							2	18.19	6.19	8.35	0.039													
							3	18.07	6.24	8.28	0.041													
							4	18.02	6.25	8.22	0.038													
							5	17.96	6.27	8.16	0.046													
							6	17.68	6.28	8.06	0.041													
							7	17.59	6.29	8.02	0.035													
							8	17.46	6.28	7.84	0.036													
							9	17.29	6.25	7.51	0.051													
							10	16.94	6.19	6.96	0.046													
							11	16.38	6.13	6.7	0.046													
							12	16.11	6.14	6.63	0.041													
							13	16.03	6.12	6.65	0.042													
							13.4	16.03	6.12	6.63	0.042													
Thurlow	1	A	61797	93532	0.56	3.18	---	---	---	---	---	7.73	14.0	10.1	5.0	4.0	<0.015	0.23	<0.15	0.006	0.006	1.07	31	>1720
							0.1	21.24	6.01	6.92	0.04													
							1	19.27	6.16	6.69	0.04													
							1.5	19.01	6.2	6.83	0.04													
							2	18.82	6.23	6.92	0.041													
							3	18.25	6.22	6.62	0.041													
							4	18.12	6.22	6.63	0.041													
							5	17.82	6.19	6	0.041													
							6	17.7	6.17	5.92	0.041													

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Reservoirs	Sta	Rep	Date	Time	Secchi	85328 Photic- zone	Depth	00078	00010	00400	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	32211	85329	31613	
								m	m	degC	pH	DO units	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	Total P mg/l	Ortho P mg/l	Chl a ug/l	TSI	Colif per 100ml
								45.5	12.27	6.21	2.29	0.038														
Martin	1	A	72397	100938	2.97	8.47	---	---	---	---	---	---	1.33	13	9.1	26	<1.0	<0.015	0.12	<0.15	0.09	0.006	4.81	46	2*	
								0.3	28.72	6.51	7.5	0.036														
								1	28.66	7.08	7.54	0.037														
								1.5	28.58	7.58	7.52	0.039														
								2	28.56	7.7	7.48	0.039														
								3	28.5	7.72	7.45	0.04														
								4	28.44	7.76	7.38	0.036														
								5	27.88	7.7	7.76	0.039														
								6	26.58	7.61	7.8	0.042														
								7	25.76	7.37	6.85	0.041														
								8	24.9	7.06	5.99	0.038														
								9	24.35	6.73	4.56	0.041														
								10	23.35	6.31	3.02	0.039														
								11	22.74	6.17	3	0.039														
								12	22.18	6.12	3.56	0.043														
								13	21.89	6.03	3.11	0.038														
								14	21.44	6	3.09	0.038														
								15	20.95	5.97	3.13	0.04														
								16	20.43	5.96	3.13	0.043														
								17	19.83	5.9	3.12	0.038														
								18	19.26	5.94	3.28	0.032														
								19	18.84	5.88	3.29	0.042														
								20	18.23	5.87	3.42	0.046														
								25	16.6	5.85	3.4	0.05														
								30	15.4	5.8	2.74	0.034														
								35	14.25	5.71	1.81	0.049														
								40	13.66	5.7	1.02	0.052														
								44.5	12.88	5.66	0.17	0.054														
Martin	1	A	81497	103648	3.07	9.41	---	---	---	---	---	---	1.28	13	9.1	199	1	<0.015	0.04	0.62	0.02	0.004	5.61	47	1*	
								0.3	29.09	7.16	7.72	0.035														
								1	28.93	7.31	7.73	0.035														
								1.5	28.78	7.45	7.7	0.037														
								2	28.44	7.55	7.74	0.036														
								3	28.19	7.53	7.67	0.034														
								4	28.17	7.52	7.59	0.038														
								5	28	7.44	7.09	0.039														

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Reservoirs	Sta	Rep	Date	Time	Secchi	85328 Photic- zone	Depth	00078	00010	00400	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	32211	85329	31613	
								MMDDYY	HHMMSS	m	m	degC	pH	DO units	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	Total P mg/l	Ortho P mg/l	Chl a ug/l	TSI
										42	10.6	6.09	6.74	0.042												
Martin	2	A	51397	112521	2.88	6.88	---	---	---	---	---	---	---	2.83	13.0	9.7	<1.0	1.0	<0.015	0.15	<0.15	0.06	0.003	2.14	38	<1
										0.1	22.35	6.18	9.02	0.035												
										1	21.88	6.49	8.97	0.034												
										1.5	21.78	6.68	8.85	0.037												
										2	21.6	6.79	8.82	0.037												
										3	21.52	6.81	8.79	0.035												
										4	21.37	6.81	8.72	0.036												
										5	20.7	6.76	8.47	0.035												
										6	20.28	6.71	8.16	0.037												
										7	20.1	6.62	8.07	0.036												
										8	19.72	6.53	7.82	0.037												
										9	18.91	6.46	7.62	0.038												
										10	18.07	6.39	7.4	0.039												
										11	17.78	6.37	7.34	0.039												
										12	17.49	6.34	7.21	0.039												
										13	17.19	6.3	7.04	0.039												
										14	16.89	6.25	6.9	0.039												
										15	16.57	6.21	6.69	0.039												
										16	16.29	6.18	6.63	0.04												
										17	15.78	6.14	6.36	0.04												
										18	15.41	6.12	6.34	0.041												
										19	14.81	6.09	6.23	0.041												
										20	14.26	6.09	6.38	0.04												
										25	13	6.06	6.09	0.042												
										30	12.4	5.98	5.55	0.042												
										35	11.93	5.95	5.09	0.043												
										40	11.56	5.91	4.56	0.043												
										41.8	11.42	5.89	4.05	0.044												
Martin	2	A	61897	115510	3.73	6.26	---	---	---	---	---	---	---	1.56	14.0	9.9	70.0	<1.0	<0.015	0.13	0.21	<0.004	<0.004	4.27	45	<1
										0.2	24.67	6.61	7.66	0.036												
										1	24.63	6.77	7.69	0.036												
										1.5	24.63	6.89	7.69	0.036												
										2	24.66	7.05	7.66	0.036												
										3	24.61	7.1	7.63	0.037												
										4	24.5	7.13	7.54	0.037												
										5	23.45	6.99	7.05	0.038												

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Reservoirs	Sta	Rep	Date	Time	Secchi	85328 Photic- zone	Depth m	00078	00010	00400	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	32211	85329	31613	
								HHMMSS	m	degC	pH units	DO mg/l	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	Total P mg/l	Ortho P mg/l	Chl a ug/l	TSI	Colif per 100ml	
Martin	2	A	91797	114915	4.3	10.12	---	---	---	---	---	---	---	1.37	16	9.9	398	<1.0	<0.015	<0.003	<0.15	0.01	0.001	3.47	43	<1
						0.3	28.97	6.78	7.3	0.037																
						1	28.44	6.98	7.42	0.035																
						1.5	28.33	7.01	7.43	0.039																
						2	28.23	7.03	7.41	0.038																
						3	28.14	7.02	7.4	0.035																
						4	28.09	7	7.4	0.033																
						5	28.06	7.01	7.37	0.035																
						6	28.04	6.92	7.18	0.035																
						7	28	6.87	7.06	0.032																
						8	27.78	6.51	5.76	0.033																
						9	27.59	6.26	4.74	0.035																
						10	27.15	5.9	1.3	0.041																
						11	26.58	5.81	0.1	0.036																
						12	25.79	5.8	0.09	0.045																
						13	24.91	5.77	0.07	0.044																
						14	24.4	5.77	0.06	0.047																
						15	23.68	5.73	0.07	0.049																
						16	23.06	5.7	0.06	0.049																
						17	22.15	5.69	0.15	0.033																
						18	21.79	5.71	0.19	0.032																
						19	21.2	5.7	0.28	0.038																
						20	20.7	5.7	0.3	0.046																
						25	18.49	5.72	0.14	0.044																
						30	16.77	5.88	0.05	0.057																
						35	15.62	6.09	0.04	0.04																
						40	14.39	6.47	0.06	0.102																
						40.6	14.25	6.54	0.06	0.092																
Martin	3	A	41697	---	2.95	6.5	---	---	---	---	---	---	3.57	13.0	8.1	27.0	<1.0	<0.015	0.14	<0.150	0.06	0.006	1.07	31	<1	
						0.1	18.43	6.36	8.69	0.038																
						1	18.17	6.52	8.8	0.038																
						1.5	18	6.59	8.84	0.038																
						2	17.71	6.65	8.91	0.038																
						3	17.63	6.69	8.91	0.038																
						4	17.56	6.69	8.91	0.038																
						5	17.49	6.7	8.9	0.038																
						6	17.41	6.71	8.93	0.037																

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Reservoirs	Sta	Rep	Date	Time	Secchi	85328 Photic- zone	Depth m	00078	00010	00400	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	32211	85329	31613
								HHMMSS	m	degC	pH units	DO mg/l	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	Total P mg/l	Ortho P mg/l	Chl a ug/l	TSI	Colif per 100ml
Martin	3	A	72397	90822	2.71	8.28	---	---	---	---	---	1.67	12	9.0	<1.0	<1.0	<0.015	0.07	<0.15	0.05	0.005	6.14	48	<1	
								0.2	28.88	7.17	7	0.04													
								1	28.84	7.19	7.01	0.04													
								1.5	28.82	7.22	7.05	0.039													
								2	28.84	7.21	7.04	0.039													
								3	28.84	7.23	7.03	0.04													
								4	28.84	7.23	7.01	0.04													
								5	28.84	7.23	6.99	0.04													
								6	28.82	7.22	6.98	0.034													
								7	26.88	7.01	6.37	0.036													
								8	24.37	6.77	5.69	0.037													
								9	24.09	6.6	5.43	0.042													
								10	23.51	6.44	4.88	0.044													
								11	22.49	6.38	4.44	0.038													
								12	22.25	6.27	3.83	0.045													
								13	21.45	6.19	3.68	0.046													
								14	21.15	6.15	3.59	0.038													
								15	20.74	6.13	3.4	0.036													
								16	19.57	6.1	3.2	0.034													
								17	19.26	6.07	2.8	0.033													
								18	18.71	6.07	2.84	0.042													
								19	18.22	6.05	2.8	0.037													
								20	17.8	6.04	2.64	0.039													
								25	16.66	6.03	1.38	0.044													
								26.4	16.4	6.04	0.61	0.048													
Martin	3	A	81497	94146	3.03	9.48	---	---	---	---	---	1.45	14	8.9	138	1	<0.015	0.04	0.71	0.03	0.003	4.01	44	2*	
								0.3	29.57	6.58	7.6	0.036													
								1	29.53	6.98	7.69	0.037													
								1.5	29.29	7.3	7.73	0.038													
								2	29.21	7.43	7.75	0.037													
								3	28.88	7.48	7.74	0.039													
								4	28.5	7.45	7.59	0.036													
								5	28.17	7.42	7.53	0.038													
								6	27.98	7.33	7.22	0.038													
								7	27.96	7.25	7.16	0.035													
								8	27.86	7.15	6.93	0.039													
								9	27.63	7.06	6.41	0.038													
								10	25.85	6.67	3.69	0.04													

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	32211	85329	31613
								MMDDYY	HHMMSS	m	m	degC	pH	DO units	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	P mg/l	P mg/l	Chl a ug/l
								0.1	20.25	6.77	9.24	0.038														
								1	19.73	6.82	9.28	0.037														
								1.5	18.96	6.83	9.33	0.036														
								2	18.25	6.79	9.23	0.035														
								3	17.65	6.69	8.92	0.035														
								4	17.45	6.61	8.76	0.036														
								5	17.28	6.54	8.56	0.037														
								6	17.19	6.51	8.48	0.035														
								7	17.16	6.47	8.42	0.035														
								8	17.14	6.45	8.4	0.035														
								9	17.11	6.44	8.37	0.035														
								10	17.09	6.43	8.34	0.035														
								11	16.91	6.4	8.2	0.036														
								12	16.37	6.3	7.79	0.039														
								13	15.44	6.21	7.35	0.04														
								14	14.52	6.13	6.63	0.042														
								15	13.97	6.07	6.2	0.044														
								16	13.57	6.04	5.75	0.044														
								17	13.29	6.02	5.7	0.044														
								17.5	13.17	6.03	5.75	0.042														
Martin	4	B	41697	---	1.32	3.4	---	---	---	---	---	---	---	8.18	10.0	8.5	13.0	2.0	<0.015	0.16	<0.15	0.07	0.006	4.54	45	2*
								0.2	19.86	6.93	9.27	0.037														
								1	19.56	6.96	9.35	0.037														
								1.5	19.26	6.95	9.32	0.037														
								2	18.86	6.92	9.3	0.036														
								3	17.61	6.73	8.85	0.036														
								4	17.43	6.62	8.69	0.036														
								5	17.28	6.56	8.55	0.036														
								6	17.21	6.53	8.46	0.035														
								7	17.19	6.5	8.42	0.035														
								8	17.14	6.48	8.41	0.035														
								9	17.11	6.46	8.38	0.035														
								10	17.1	6.45	8.36	0.035														
								11	16.92	6.42	8.22	0.036														
								12	16.29	6.3	7.7	0.039														
								13	15.61	6.25	7.49	0.039														
								14	14.52	6.13	6.43	0.043														
								15	13.93	6.09	6.21	0.044														

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Reservoirs	Sta	Rep	Date	Time	Secchi	Photic- zone	Depth	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	32211	85329	31613				
								MMDDYY	HHMMSS	m	m	Temp degC	pH units	DO mg/l	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	Total P mg/l	Ortho P mg/l	Chl a ug/l	TSI	Colif per 100ml		
Martin	4	A	51397	134518	4.18	1.63	---	---	---	---	---	---	16	13.58	6.04	5.74	0.044													
													17	13.2	6.04	5.73	0.043													
													17.5	13.1	6.04	5.79	0.042													
Martin	4	B	51397	141050	1.66	4.28	---	---	---	---	---	---	0.1	22.71	6.38	9.01	0.033	5.57	12.0	8.9	<1.0	<1.0	<0.015	0.15	<0.15	0.07	0.004	7.74	51	<1
													1	22.44	6.81	9.02	0.035													
													1.5	21.77	6.85	8.94	0.033													
													2	21.1	6.81	8.89	0.034													
													3	20.73	6.67	8.25	0.035													
													4	20.28	6.54	7.75	0.036													
													5	20.02	6.38	7.43	0.032													
													6	19.41	6.4	7.1	0.039													
													7	18.9	6.31	6.78	0.039													
													8	18.7	6.27	6.63	0.046													
													9	18.57	6.23	6.45	0.038													
													10	18.16	6.18	5.76	0.041													
													11	17.85	6.19	5.75	0.055													
													12	17.51	6.18	5.5	0.059													
													13	17.23	6.17	5.44	0.055													
													14	16.9	6.15	4.99	0.06													
													15	16.73	6.15	5.71	0.042													
													16	15.98	6.08	4.21	0.055													
													17	15.5	6.04	3.47	0.045													
													17.5	15.46	6.03	3.2	0.042													
Martin	4	B	51397	141050	1.66	4.28	---	---	---	---	---	---	0.1	22.73	6.44	8.79	0.035	5.73	12.0	9.6	1.0	<1.0	<0.015	0.15	<0.15	0.06	0.004	6.41	49	1*
													1	22.59	6.65	8.81	0.035													
													1.5	21.59	6.76	8.81	0.034													
													2	21.2	6.79	8.7	0.034													
													3	20.7	6.64	8.17	0.035													
													4	20.13	6.48	7.42	0.034													
													5	19.92	6.39	7.24	0.034													
													6	19.22	6.33	6.82	0.037													
													7	18.86	6.25	6.6	0.039													
													8	18.68	6.22	6.39	0.039													
													9	18.42	6.2	6.18	0.042													
													10	18.19	6.18	5.75	0.044													

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Reservoirs	Sta	Rep	Date	Time	Secchi	85328	Photic- zone	00078	00010	00400	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	32211	85329	31613	
								MMDDYY	HHMMSS	m	m	degC	pH	DO units	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	NO3+ mg/l	Total P mg/l	Ortho P mg/l
Martin	4	A	72397	122338	1.55	4.63	---	---	---	---	---	---	3.87	14	9.3	6	<1.0	<0.015	0.09	<0.15	0.07	0.004	8.54	52	10*	
							0.3	29.99	6.49	7.02	0.039															
							1	29.73	6.87	7.07	0.04															
							1.5	29.65	7.03	7.11	0.039															
							2	29.57	7.2	7.18	0.038															
							3	29.41	7.29	7.09	0.041															
							4	29.27	7.16	6.73	0.037															
							5	29.17	7.05	6.53	0.041															
							6	29.16	6.94	6.42	0.041															
							7	28.68	6.82	6.01	0.041															
							8	27.59	6.6	4.95	0.044															
							9	27.34	6.47	4.65	0.031															
							10	25.28	6.38	2.88	0.049															
							11	23.55	6.19	1.69	0.045															
							12	22.93	6.08	1.83	0.051															
							13	22.28	6.04	1.43	0.049															
							14	21.35	5.97	0.87	0.043															
							15	20.95	5.97	0.17	0.043															
							16	20.56	5.99	0.11	0.053															
							17	19.77	6.11	0.1	0.052															
							17.4	19.46	6.1	0.08	0.063															
Martin	4	B	72397	123509	1.6	4.16	---	---	---	---	---	3.83	13	8.6	5	<1.0	<0.015	0.09	<0.15	0.06	0.005	12.8	56	7*		
							0.3	30.01	7.18	6.92	0.038															
							1	29.91	7.34	6.94	0.037															
							1.5	29.71	7.39	6.99	0.038															
							2	29.67	7.43	7.02	0.037															

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Reservoirs	Sta	Rep	Date	Time	Secchi	85328 Photic- zone	Depth	00078	00010	00400	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	32211	85329	31613	
								HHMMSS	m	m	degC	pH	DO units	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	Total P mg/l	Ortho P mg/l	Chl a ug/l	TSI	Colif per 100ml
Martin	4	B	81497	125102	1.91	6.43	---	---	---	---	---	---	---	2.21	15	9.7	560	1	<0.015	0.05	0.7	0.04	0.004	8.01	51	<1
								0.2	30.76	8.23	8.43	0.04														
								1	30.7	8.26	8.45	0.043														
								1.5	30.41	8.31	8.6	0.039														
								2	29.31	8.42	9.07	0.041														
								3	28.37	8.36	8.52	0.042														
								4	28.02	8.13	7.78	0.043														
								5	27.75	7.93	7.09	0.041														
								6	27.32	7.62	6.61	0.037														
								7	27.06	7.38	6.49	0.039														
								8	26.71	7.2	6.49	0.04														
								9	26.5	7.03	6.56	0.042														
								10	25.57	6.83	6.19	0.04														
								11	25.32	6.69	6.12	0.036														
								12	25.32	6.63	6.08	0.033														
								13	24.52	6.5	3.07	0.045														
								14	22.63	6.3	0.46	0.039														
								15	22.09	6.19	0.15	0.045														
								16	21.47	6.21	0.11	0.05														
								17	21.17	6.25	0.1	0.057														
								17.5	21.09	6.26	0.09	0.054														
Martin	4	A	91797	132029	2.95	7.38	---	---	---	---	---	---	1.97	15	10	285	<1.0	<0.015	<0.003	<0.15	0.06	0.003	8.28	51	<1	
								0.3	28.65	7.37	7.95	0.041														
								1	27.96	7.53	8.12	0.041														
								1.5	27.83	7.57	8.06	0.041														
								2	27.63	7.51	7.99	0.04														
								3	27.51	7.54	8.03	0.041														
								4	27.44	7.32	7.61	0.04														
								5	27.38	7.03	7.24	0.04														
								6	27.33	6.9	6.88	0.041														
								7	27.2	6.6	6	0.04														
								8	27.08	6.53	5.93	0.04														
								9	27.09	6.51	5.93	0.04														
								10	26.96	6.47	5.84	0.04														
								11	26.69	6.33	4.91	0.04														
								12	26.17	6.22	4.16	0.04														
								13	25.49	6.14	0.93	0.051														

Reservoir Water Quality Monitoring Program
Tallapoosa River Basin

Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	32211	85329	31613
								MMDDYY	HHMMSS	m	m	degC	pH	DO units	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	Total P mg/l	Ortho P mg/l	Chl a ug/l
										14	24.2	6.21	0.13	0.06												
										15	23.1	6.34	0.09	0.066												
										16	22.33	6.47	0.07	0.074												
										16.8	21.95	6.53	0.07	0.077												
Martin	4	B	91797	134023	3.06	7.41	---	---	---	---	---	---	---	2.09	16	9.7	476	<1.0	<0.015	<0.003	<0.15	0.04	<0.004	8.28	51	3*
										0.3	29.01	7.56	7.87	0.041												
										1	27.92	7.64	8.08	0.041												
										1.5	27.8	7.67	8.04	0.04												
										2	27.63	7.57	7.99	0.04												
										3	27.5	7.56	7.96	0.04												
										4	27.4	7.33	7.49	0.04												
										5	27.36	7.02	7.06	0.041												
										6	27.3	6.76	6.42	0.041												
										7	27.21	6.59	6.03	0.04												
										8	27.13	6.48	5.76	0.04												
										9	27.06	6.47	5.86	0.04												
										10	26.92	6.45	5.69	0.04												
										11	26.67	6.35	4.96	0.04												
										12	26.22	6.23	4.14	0.041												
										13	25.58	6.14	1.31	0.05												
										14	24	6.25	0.07	0.06												
										15	23.08	6.36	0.05	0.069												
										16	22.56	6.43	0.05	0.071												
										16.5	22.04	6.51	0.06	0.074												
Harris	1	A	41797	---	1.53	3.7	---	---	---	0.1	18.58	6.37	8.92	0.032											<1	
										1	18.54	6.43	8.93	0.032												
										1.5	18.41	6.42	8.84	0.031												
										2	17.52	6.32	8.39	0.032												
										3	17.44	6.28	8.35	0.032												
										4	17.39	6.27	8.31	0.032												
										5	17.34	6.26	8.25	0.032												
										6	17.32	6.25	8.25	0.032												
										7	17.19	6.23	8.19	0.032												
										8	17.12	6.25	8.12	0.032												
										9	16.92	6.2	7.98	0.032												
										10	16.89	6.17	7.91	0.032												

Reservoir Water Quality Monitoring Program
Tallapoosa River Basin

Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	32211	85329	31613
								MMDDYY	HHMMSS	m	m	degC	pH	DO units	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	Total P mg/l	Ortho P mg/l	Chl a ug/l
										11	16.57	6.09	7.52	0.032												
										12	16.33	6.03	7.17	0.033												
										13	16.12	5.99	6.94	0.032												
										14	15.27	5.91	6.47	0.034												
										15	14.77	5.85	6.15	0.034												
										16	14.66	5.84	6.08	0.034												
										17	14.19	5.85	6.03	0.034												
										18	13.96	5.83	6	0.035												
										19	13.54	5.82	5.92	0.035												
										20	13.02	5.79	5.87	0.034												
										25	9.8	5.79	6.32	0.038												
										30	8.87	5.78	5.88	0.04												
										33.1	8.67	5.76	5.18	0.04												
Harris	1	A	51497	75837	2.18	4.6	---	---	---	0.1	21.15	6.38	10.14	0.032											<1	
										1	21.16	6.71	9.86	0.03												
										1.5	21.18	6.78	9.79	0.032												
										2	21.15	6.84	9.76	0.031												
										3	21.14	6.89	9.71	0.031												
										4	20.81	6.86	9.5	0.03												
										5	20.32	6.76	9.18	0.034												
										6	19.67	6.65	8.41	0.031												
										7	17.97	6.37	7.41	0.035												
										8	17.48	6.24	7.13	0.037												
										9	16.99	6.13	6.57	0.039												
										10	16.72	6.06	6.38	0.035												
										11	16.45	6.01	6.21	0.038												
										12	16.2	5.95	5.94	0.033												
										13	16.01	5.92	5.79	0.036												
										14	15.78	5.91	5.69	0.035												
										15	15.59	5.89	5.54	0.041												
										16	15.39	5.87	5.34	0.035												
										17	15.31	5.86	5.25	0.042												
										18	15.1	5.84	4.96	0.048												
										19	14.81	5.79	4.52	0.05												
										20	14.4	5.74	4.01	0.043												
										25	10.96	5.71	4.19	0.036												
										30	9.24	5.74	4.18	0.049												

Reservoir Water Quality Monitoring Program
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Reservoirs	Sta	Rep	Date	Time	Secchi	Photic- zone	Depth	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	32211	85329	31613
								MMDDYY	HHMMSS	m	m	degC	pH	DO units	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	Total P mg/l	Ortho P mg/l	Chl a ug/l
Harris	1	A	61997	82429	2.35	5.25	---	35	8.92	5.72	3.18	0.064														
								38.1	8.78	5.73	2.09	0.055														
Harris	1	A	72497	84107	2.38	5.64	---	0.2	24.71	7.83	8.59	0.032														
								1	24.65	8.04	8.61	0.031														
								1.5	24.67	8.21	8.57	0.037														
								2	24.6	8.24	8.59	0.031														
								3	24.49	8.24	8.62	0.035														
								4	22.93	7.77	8.4	0.031														
								5	21.66	7.47	7.03	0.031														
								6	21.15	7.16	6.26	0.035														
								7	20.5	6.86	5.27	0.042														
								8	19.83	6.59	4.46	0.04														
								9	19.11	6.46	3.84	0.04														
								10	18.74	6.33	3.68	0.036														
								11	18.43	6.25	3.57	0.036														
								12	18.16	6.18	3.37	0.034														
								13	17.72	6.15	3.22	0.037														
								14	17.14	6.17	3.27	0.034														
								15	16.7	6.15	3.33	0.035														
								16	16.53	6.13	3.33	0.04														
								17	16.08	6.11	3.32	0.037														
								18	15.86	6.12	3.23	0.037														
								19	15.71	6.1	3.19	0.04														
								20	15.28	6.09	2.97	0.04														
								25	11.66	6.03	2.57	0.043														
								30	9.86	6.06	2.54	0.041														
								35	9.34	6.04	1.1	0.042														
								38.4	9.01	6.05	0.3	0.037														
Harris	1	A	72497	84107	2.38	5.64	---	0.3	28.54	7.58	8.05	0.035														
								1	28.54	7.64	8.07	0.035														
								1.5	28.55	7.75	8.06	0.035														
								2	28.54	7.82	8.06	0.035														
								3	28.35	7.79	8.08	0.035														
								4	27.69	7.65	8.07	0.036														
								5	26.08	7.44	6.83	0.039														

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	32211	85329	31613
								MMDDYY	HHMMSS	m	m	degC	pH	DO units	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	Total P mg/l	Ortho P mg/l	Chl a ug/l
										0.1	18.51	6.24	9.31	0.034												
										1	18.42	6.39	9.29	0.035												
										1.5	18.3	6.45	9.22	0.035												
										2	18.11	6.45	9.14	0.035												
										3	17.8	6.42	8.88	0.035												
										4	17.24	6.25	8.12	0.034												
										5	17.15	6.16	7.83	0.033												
										6	17.09	6.07	7.51	0.032												
										7	17	6.02	7.4	0.031												
										8	16.7	6.01	7.59	0.032												
										9	16.58	6.03	7.72	0.033												
										10	16.43	6.03	7.7	0.033												
										11	16.08	6.05	7.64	0.034												
										12	15.96	6.04	7.55	0.033												
										13	15.76	6.02	7.37	0.033												
										14	15.5	5.98	6.95	0.033												
										15	15.23	5.94	6.35	0.036												
										16	14.93	5.9	6.03	0.037												
										17	14.65	5.86	5.63	0.038												
										18	14.37	5.8	5.04	0.038												
										19	14.1	5.78	4.75	0.038												
										20	13.71	5.76	4.3	0.038												
										25	10.49	5.82	0.82	0.051												
										26.6	10.11	5.83	0.72	0.052												
Harris	2	A	51497	103511	2.14	5.19	---	---	---	0.1	22.06	7.44	10.62	0.033											<1	
										1	21.91	7.55	10.55	0.033												
										1.5	21.77	7.58	10.49	0.033												
										2	21.71	7.64	10.34	0.034												
										3	21.42	7.61	10.22	0.033												
										4	20.28	7.21	9.1	0.034												
										5	19.18	6.84	7.78	0.034												
										6	18.42	6.61	7.18	0.034												
										7	18.04	6.46	6.91	0.034												
										8	17.58	6.29	6.81	0.034												
										9	17.19	6.18	6.76	0.034												
										10	16.97	6.11	6.81	0.034												
										11	16.7	6.1	6.96	0.034												

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Reservoirs	Sta	Rep	Date	Time	Secchi	Photic- zone	Depth	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	32211	85329	31613	
								MMDDYY	HHMMSS	m	m	degC	pH	DO units	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	Total P mg/l	Ortho P mg/l	Chl a ug/l	TSI
										1	16.29	6.39	9.34	0.038													
										1.5	16.25	6.44	9.39	0.037													
										2	16.16	6.45	9.32	0.037													
										3	15.8	6.44	9.32	0.037													
										4	15.35	6.42	9.24	0.038													
										5	15.28	6.41	9.18	0.038													
										6	15.22	6.4	9.14	0.038													
										7	15.1	6.38	9	0.037													
										7.4	15.08	6.38	8.98	0.037													
Harris	3	A	51497	114239	1.01	3.05	---	---	---	---	---	---	---	9.23	13.0	11.1	75.0	1.0	<0.015	0.08	<0.15	0.12	<0.004	20.3	60	6*	
										0.1	20.64	7.45	11.01	0.035													
										1	20.23	7.47	10.95	0.034													
										1.5	19.67	7.41	10.89	0.033													
										2	19.45	7.18	10.28	0.034													
										3	19.34	6.97	9.67	0.039													
										4	18.9	6.77	9.18	0.038													
										5	18.74	6.67	9.07	0.038													
										6	18.38	6.5	8.04	0.042													
										7	17.87	6.36	7.5	0.045													
										7.2	17.85	6.3	7.36	0.044													
Harris	3	A	61997	113905	0.57	1.5	---	---	---	---	---	---	---	34.1	15.0	12.1	97.0	14.0	<0.015	0.18	<0.150	0.01	0.01	2.14	38	163	
										0.3	24.85	6.33	7.62	0.036													
										1	21.59	6.42	7.76	0.034													
										1.5	21.34	6.45	7.66	0.039													
										2	21.31	6.45	7.62	0.038													
										3	21.26	6.46	7.57	0.033													
										4	21.27	6.45	7.51	0.04													
										5	21.2	6.48	7.43	0.038													
										6	21.2	6.47	7.41	0.035													
										7	21.19	6.44	7.34	0.035													
										8	21.15	6.46	7.27	0.035													
										9	21.12	6.42	7.14	0.032													
										9.3	21.12	6.4	7.09	0.035													
Harris	3	A	72497	120902	0.16	0.81	---	---	---	---	---	---	---	84.2	11	8.7	20	42	<0.015	0.28	<0.15	0.14	0.017	3.2	42	>1590	
										0.3	25.2	6.09	6.62	0.033													
										1	24.71	6.12	6.65	0.033													

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	32211	85329	31613
								MMDDYY	HHMMSS	m	m	degC	pH	DO units	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	Total P mg/l	Ortho P mg/l	Chl a ug/l	TSI
								3	18.1	6.96	9.32	0.039														
								4	17.52	6.66	8.53	0.039														
								5	17.27	6.46	7.94	0.039														
								6	17.01	6.33	7.6	0.04														
								7	16.87	6.27	7.47	0.041														
								8	16.6	6.24	7.28	0.041														
								9	16.45	6.17	6.92	0.041														
								10	16.25	6.11	6.55	0.042														
								11	15.93	6.03	5.75	0.042														
								12	15.73	5.99	5.4	0.041														
								13	15.36	5.95	4.44	0.043														
								14	15.21	5.94	4.11	0.043														
								15	15.13	5.92	3.8	0.043														
								16	14.92	5.89	2.92	0.044														
								16.7	14.57	5.87	1.99	0.046														
Harris	4	A	51497	94316	1.67	4.7	---	---	---	---	---	4.07	12.0	9.8	9.0	3.0	<0.015	0.11	<0.15	0.07	0.004	14.7	57	#VALUE!		
								0.1	21.87	8.28	10.56	0.036														
								1	21.71	8.35	10.56	0.035														
								1.5	21.52	8.35	10.54	0.04														
								2	21.43	8.34	10.56	0.035														
								3	21.08	8.24	10.34	0.035														
								4	20.58	7.66	9.43	0.035														
								5	19.42	7.28	6.69	0.039														
								6	18.5	6.94	6.19	0.037														
								7	17.93	6.74	5.98	0.041														
								8	17.71	6.56	5.92	0.042														
								9	17.37	6.41	5.9	0.037														
								10	16.82	6.33	5.89	0.04														
								11	16.62	6.22	5.97	0.033														
								12	16.25	6.14	5.93	0.045														
								13	16.05	6.05	5.52	0.046														
								14	15.88	5.93	4.96	0.045														
								15	15.7	5.85	4.25	0.048														
								16	15.58	5.79	3.43	0.047														
								17	15.46	5.77	3.05	0.048														
								18	15.31	5.72	2.23	0.056														
Harris	4	A	61997	94630	2.14	4.8	---	---	---	---	---	9.04	13.0	10.2	69.0	2.0	<0.015	0.18	<0.150	0.02	<0.004	6.41	49	1*		

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Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	32211	85329	31613
								MMDDYY	HHMMSS	m	m	degC	pH	DO units	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	Total P mg/l	Ortho P mg/l	Chl a ug/l
										0.2	25.74	7.78	9.06	0.038												
										1	25.46	7.99	8.97	0.038												
										1.5	25.39	8	8.83	0.036												
										2	25.32	7.76	8.51	0.038												
										3	25	7.51	8.17	0.034												
										4	23.74	6.89	5.99	0.037												
										5	22.68	6.59	5.22	0.044												
										6	22.02	6.42	4.91	0.037												
										7	21.59	6.27	4.78	0.04												
										8	21.01	6.18	4.54	0.039												
										9	20.43	6.16	4.49	0.036												
										10	19.82	6.13	4.19	0.039												
										11	19.22	6.13	3.96	0.039												
										12	18.79	6.09	3.07	0.051												
										13	18.45	6.08	2.16	0.046												
										14	17.89	5.99	0.55	0.053												
										15	17.45	5.99	0.16	0.052												
										16	16.81	6.05	0.13	0.061												
										17	16.35	6.11	0.11	0.065												
										18	16.08	6.22	0.11	0.054												
										19	15.58	6.35	0.1	0.071												
										19.2	15.47	6.38	0.09	0.06												
Harris	4	A	72497		100659	1.32	3.7	---	---	---	---	---	---	6.34	13	8.0	24	3	<0.015	0.12	<0.15	0.06	0.003	11.2	54	16*
								0.2	29.29	6.3	7.58	0.039														
								1	29.12	6.64	7.67	0.038														
								1.5	29.05	6.9	7.61	0.038														
								2	28.97	6.92	7.07	0.039														
								3	28.31	6.69	5.87	0.041														
								4	27.3	6.36	4.51	0.037														
								5	26.47	6.14	3.8	0.038														
								6	25.62	6.08	3.28	0.04														
								7	24.77	5.99	2.66	0.036														
								8	24.26	5.94	1.31	0.043														
								9	23.88	5.94	0.33	0.043														
								10	23.21	5.91	0.15	0.037														
								11	22.49	5.92	0.13	0.041														
								12	21.96	5.94	0.11	0.039														
								13	21.2	5.96	0.11	0.048														

Reservoir Water Quality Monitoring Program
Tallapoosa River Basin

Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	32211	85329	31613
								MMDDYY	HHMMSS	m	m	degC	pH	DO units	SpCond mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO2 mg/l	TKN mg/l	Total P mg/l	Ortho P mg/l	Chl a ug/l
										14	20.45	6.02	0.1	0.042												
										15	19.77	6.19	0.09	0.058												
										16	19.34	6.26	0.08	0.058												
										17	18.55	6.35	0.1	0.082												
										18	17.84	6.44	0.08	0.076												
										18.9	16.89	6.54	0.09	0.087												
Harris	4	A	81497	101249	1.48	4.7	---	---	---	---	---	---	---	3.41	13.0	9.0	27.0	1.0	<0.015	0.08	0.67	0.03	0.004	15	57	<1
										0.3	28.07	7.23	9.2	0.039												
										1	27.86	7.76	9.21	0.035												
										1.5	27.71	8.05	9.12	0.038												
										2	27.32	7.89	8.76	0.039												
										3	26.65	7.58	6.6	0.037												
										4	26.18	7.27	4.94	0.034												
										5	25.92	6.99	3.6	0.034												
										6	25.09	6.34	1.8	0.042												
										7	24.84	6.08	1.85	0.036												
										8	24.48	5.99	1.82	0.036												
										9	23.97	5.96	1.58	0.046												
										10	23.57	5.96	1.77	0.041												
										11	22.9	5.97	1.72	0.048												
										12	22.34	5.95	0.74	0.05												
										13	21.68	6.05	0.28	0.061												
										14	20.87	6.4	0.09	0.077												
										15	20.23	6.49	0.08	0.083												
										16	18.91	6.55	0.09	0.088												
										17	18.03	6.6	0.08	0.095												
										18	17.11	6.68	0.08	0.106												
										18.5	16.91	6.71	0.07	0.105												
Harris	4	A	91897	95536	2.34	6.04	---	---	---	---	---	---	---	2.75	14	10.4	244	<1.0	<0.015	0.01	<0.15	0.02	<0.004	15.2	57	<1
										0.3	27.02	7.49	8.96	0.039												
										1	27.06	7.76	8.92	0.037												
										1.5	27.01	7.76	8.91	0.036												
										2	26.97	7.74	8.87	0.039												
										3	26.51	7.38	8.05	0.037												
										4	26.29	6.93	6.95	0.039												
										5	26.02	6.6	6.32	0.037												
										6	25.55	5.94	1.63	0.041												

Reservoir Water Quality Monitoring Program
Tallapoosa River Basin

Reservoirs	Sta	Rep	Date	Time	Secchi	zone	Depth	Photic-														00650	00660	32211	85329	31613
								00078	85328	00010	00400	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625					
					m	m	degC	pH	DO	SpCond	Turb	Alk	Hard	TDS	TSS	NH ₃ -N	NO ₂	TKN	mg/l	mg/l	ug/l		per 100ml			
								7	25.09	5.89	0.6	0.046														
								8	24.38	5.92	1.16	0.042														
								9	24.08	5.95	2.12	0.043														
								10	23.79	5.92	0.62	0.048														
								11	23.38	6.06	0.14	0.054														
								12	22.84	6.19	0.11	0.055														
								13	21.95	6.34	0.1	0.064														
								14	21.29	6.44	0.09	0.09														
								15	19.96	6.66	0.09	0.111														
								16	19.52	6.7	0.07	0.114														
								17	18.59	6.75	0.06	0.114														
								17.6	17.84	6.82	0.07	0.12														