ADEM
RESERVOIR WATER QUALITY MONITORING PROGRAM REPORT

1990 - 1995

ECOLOGICAL STUDIES SECTION • FIELD OPERATIONS DIVISION

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

ADEM
Reservoir Water Quality Monitoring Program
Report
1990 - 1995

Preface

Funding for this program is provided by federal/state matching grants available through Section 106 and 314 of the Clean Water Act.

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Ecological Studies Section
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Alabama Department of Environmental Management

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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. Funding for the assessments is provided in part 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 ensures continued eligibility for financial assistance under the Clean Lakes Program.

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 (Raschke 1985). 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 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 (currently Ecological 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.

Figure 1. Publicly owned lakes of Alabama.

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 Crk.
23. Logan-Martin
24. Martin
25. Mitchell
26. Neely Henry
27. Pickwick
28. Point A
29. Thurlow
30. Tuscaloosa
31. Upper Bear Crk.
32. Warrior
33. Weiss
34. Wheeler
35. Wilson
36. Yates
37. W. F. George
38. West Point
39. Purdy

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 (see TVA Program). 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.

TVA Reservoir Vital Signs Monitoring Program

Water quality monitoring of reservoirs of the Tennessee River system is conducted by the Tennessee Valley Authority (TVA) through its Reservoir Vital Signs Monitoring Program. Objectives of the program are to provide basic information on the "health" or integrity of the aquatic ecosystem in each TVA reservoir and to provide screening level information for describing how well each reservoir meets the "fishable" and "swimmable" goals of the Clean Water Act. Sampling activities involve examination of appropriate physical, chemical, and biological indicators in the forebay, mid-region, and headwaters areas of each reservoir. Initiated in 1990, the TVA program provides results of monitoring activities to ADEM on an annual basis through program reports.

Clean Lakes Program Phase I Diagnostic / Feasibility Studies

The Clean Lakes Program was established by Section 314 of the federal Water Pollution Act of 1972, with initial funding provided in 1976. Through the program, EPA provides financial and technical assistance to enable States, Indian tribes, and local communities to protect and restore the quality of their lakes. Currently, financial assistance is provided to the state of Alabama through LWQA grants and Phase I Diagnostic / Feasibility Studies.

The Phase I Diagnostic / Feasibility Study is a two-part study designed to determine a lake's current condition and develop a proposed program for protection and restoration of designated uses. Water quality data collected by the RWQM Program enables the ADEM to determine lakes in need of Clean Lakes Program Phase I Diagnostic / Feasibility Studies.

A list of the Clean Lakes Program Projects in Alabama appears in Table 1. Objectives of the West Point Phase I Diagnostic / Feasibility Study were as follows:

a) determine water quality conditions of West Point Reservoir and several of its important tributary streams and embayments and provide data needed to refine predictive water quality models generated for the reservoir;

b) refine temporal and spatial distribution of fecal coliform bacteria within the reservoir under varying hydrologic conditions;

c) determine the quality of bottom sediments and estimate sedimentation rates;

d) determine the quantity and distribution of toxic contaminants in fish and bottom sediments.

Objectives of the Weiss Reservoir Phase I Diagnostic / Feasibility Study were as follows;

a) determine current water quality conditions of the reservoir and several of its important tributary streams and embayments;

b) estimate nutrient loading from three gauged tributaries;

c) determine land use in a large portion of the watershed;

d) measure polychlorinated biphenyl (PCB) concentrations in reservoir sediments.

A Phase I Study of Walter F. George Reservoir was initiated during 1992. The Study followed an earlier Phase I Study conducted by the Georgia Department of Natural Resources (DNR) from 1990-1992 and a limited water quality study funded by the Corps of Engineers and conducted by Auburn University in 1992. Objectives of the Walter F.George Reservoir Phase I Diagnostic / Feasibility Study were as follows:

a) further document water quality conditions of W. F. George Reservoir and its important tributary streams and embayments;

b) estimate nutrient loading from the important Alabama tributaries;

Table 1. List of Clean Lakes Program Projects on Alabama reservoirs.

Name of Project	Type of Project	Conducting Agency	Initiation Date	Project Completion Date
West Point Reservoir	Phase I Diagnostic / Feasibility	Cooperative Agreement ADEM/Auburn University	Jun-90	Sep-92
W.F. George Reservoir	Phase I Diagnostic / Feasibility	Cooperative Agreement ADEM/Auburn University	Nov-90	Oct-94
Neely Henry Reservoir	Phase I Diagnostic / Feasibility	Cooperative Agreement ADEM/Auburn University	Nov-92	Apr-95
Weiss Reservoir	Phase I Diagnostic / Feasibility	Cooperative Agreement ADEM/Auburn University	Apr-93	Sep-93
Smith Reservoir	Phase I Diagnostic / Feasibility	Cooperative Agreement ADEM/Auburn University	Nov-94	Nov-96

c) to further review sources and estimate impacts of both point and nonpoint sources within the watershed contained in Alabama;

d) to identify the nutrient limiting phytoplankton biomass and production;

e) to identify and evaluate macrophyte distribution within the lake.

Objectives of the Neely Henry Reservoir Phase I Diagnostic / Feasibility Study were as follows:

a) further document water quality conditions of Neely Henry Reservoir and its important tributary streams and embayments;

b) estimate nutrient loading from the important tributaries;

c) to further review sources and estimate impacts of both point and nonpoint sources within the watershed;

d) to identify the nutrient limiting phytoplankton biomass and production;

e) to identify and evaluate macrophyte distribution within the reservoir;

f) to analyze for priority pollutants of interest in reservoir sediments and fish tissue.

Objectives of the Phase I Diagnostic/Feasibility Study of Lewis Smith Reservoir are as follows:

a) to determine current water quality conditions of Smith Lake and several of its important tributary streams and embayments;

b) to measure nutrient and sediment loading from five tributaries;

c) to determine land-use and land cover in a large portion of the watershed; and,

d) to estimate point and nonpoint source loading of Smith Lake.

All Clean Lakes Program Phase I Diagnostic/Feasibility Studies are being conducted through cooperative agreements between the ADEM and Auburn University. Study reports are available through the ADEM.

Fish Tissue Monitoring

The ADEM Fish Tissue Monitoring Program is conducted by the ADEM in cooperation with the Alabama Department of Public Health (ADPH), the Alabama Department of Conservation and Natural Resources (ADCNR), and the Tennessee Valley Authority (TVA). Initiated in 1991, the program's objective is the collection and analysis of fish tissue samples from all major reservoirs and streams in Alabama over a five-year period. Sampling is conducted by basin with 43 major reservoirs, 21 stream locations, and 20 state public fishing lakes sampled on a rotational basis. Additional waterbodies may also be monitored based on identified need.

Following collection, fish tissue samples are analyzed for concentrations of bioaccumulative contaminants and the results reviewed by the ADPH. Based on the results, fish consumption advisories are issued by the ADPH where needed. Most advisories to date have been issued following comparison of fish tissue contaminant levels with FDA and EPA action levels.

Each year, sampling locations for the program are established based on information available to the ADEM and input from the cooperating agencies. Waterbodies that have been identified as having elevated concentrations of bioaccumulated contaminants or those that have a high potential for contamination are closely monitored.

All results of fish tissue monitoring through 1995 are available in the ADEM Fish Tissue Monitoring Program Report (In Press).

MATERIALS AND METHODS

RWQM Sampling Locations

Reservoirs sampled 1990-1995 appear in Table 2. Locations of sampling sites appear in Table 3. 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.

Water Quality Assessment

Reservoirs were sampled once during the spring and once during the summer season. Sampling was conducted during a minimum time period and as closely as possible to dates from previous studies to reduce seasonal variability.

Monitoring and analyses were conducted in accordance with appropriate standard operating procedures. Water quality variables measured during 1990-1995 appear in Table 4.

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

A standard, 20 cm diameter Secchi disk with attenuating black and white quadrants was used to measure visibility. From 1990-1992, photic zone depth determinations were made by multiplying Secchi disk visibility by a factor of four. From 1993 to present, 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 composited 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 composited 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 composited photic zone sample through glass fiber filters immediately after collection of the composited 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.

Dissolved reactive phosphorus (orthophosphate in earlier RWQM reports) samples were collected by vacuum filtering 200-250 ml of the composited sample

Table 2. Reservoirs monitored for the ADEM Reservoir Water Quality Monitoring Program.

River Basin	Reservoir	Surface Area (acres)	Drainage Area (sq. miles)
Alabama			
	Woodruff	12,510	16,300
	Dannelly	17,200	20,700
	Claiborne	5,930	21,473
Cahaba			
	Purdy	1,050	43
Chattahoochee			
	West Point	25,299	3,376
	Harding	5,850	4,240
	W. F. George	45,200	7,460
Conecuh			
	Gantt	2,767	658
	Point A	900	1,277
	Frank Jackson	1,037	74
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
Escatawpa			
	Big Creek	3,600	105
Tallapoosa			
	Harris	10,660	1,453
	Martin	39,000	3,000
	Yates	1,980	3,250
	Thurlow	585	3,300
Tombigbee			
	Aliceville	8,300	5,785
	Gainesville	6,400	7,142
	Demopolis	10,000	15,385
	Coffeeville	8,800	18,417
Warrior			
	Tuscaloosa	5,885	416
	Inland	1,095	69
	Bankhead	9,200	3,969
	Holt	3,296	4,232
	Warrior	7,800	5,810
Yellow			
	Jackson	350	----

Table 3. Monitoring sites for the ADEM Reservoir Water Quality Monitoring Program.

Basin	Reservoir	Site	Latitude/ Longitude	County	Section, Township, Range	Station Description
Alabama						
	Woodruff	Sta. 1	32 19 42 86 46 52	Lowndes	SE 1/4, Sec 29, T16N, R13E	Lower reservoir. Deepest point, main river channel, dam forebay.
		Sta. 2	32 20 30 86 32 14	Lowndes	NE 1/4, Sec 27, T16N, R15E	Mid-reservoir. Deepest point, main river channel, immediately downstream of Tallawassee Creek confluence.
		Sta. 3	32 26 35 86 19 33	Montgomery	NW 1/4, Sec 24, T17N, R17E	Upper reservoir. Deepest point, main river channel, immediately downstream of Jackson Lake.
	Dannelly	Sta. 1	32 06 10 87 23 54	Wilcox	NW 1/4, Sec17, T13N, R7E	Lower reservoir. Deepest point, main river channel, dam forebay.
		Sta. 2	33 03 12 87 15 33	Wilcox	SW 1/4, Sec 34, T13 N, R8E	Mid-reservoir. Deepest point, main river channel, immediately upstream of Roland Cooper State Park.
		Sta. 3	32 09 55 87 06 55	Dallas	SW 1/4, Sec 19, T14N, R10E	Upper reservoir. Deepest point, main river channel, immediately upstream of Elm Bluff Park.
	Claiborne	Sta. 1	31 37 02 87 33 06	Monroe	NE 1/4, Sec 34, T8N, R5E	Lower reservoir. Deepest point, main river channel, dam forebay.
Cahaba						
	Purdy	Sta. 1	33 27 33 86 40 00	Shelby	SW 1/4, Sec 17, T18S, R1W	Lower reservoir. Deepest point, main river channel, dam forebay .
	Purdy	Sta. 2	33 28 50 86 37 40	Jefferson	Sec 10, T18S, R1W	Upper reservoir. Deepest point, main river channel, immediately upstream of Irondale Bridge.
Chattahoochee						
	West Point	Sta. 1	32 55 11 85 11 04	Troup, GA	---	Lower reservoir. Deepest point, main river channel, dam forebay .
		Sta. 2	32 59 54 85 12 01	Troup, GA	---	Deepest point, main creek channel, immediately downstream of Wehadkee / Veasey / Stroud Creeks confluence.
	Harding	Sta. 1	32 39 52 85 05 35	Lee	SW 1/4, Sec 01, T19N, R29E	Lower reservoir. Deepest point, main river channel, dam forebay.
		Sta. 2	32 41 19 85 07 12	Lee	NE 1/4, Sec 34, T20N, R29E	Deepest point, main creek channel, Halawakee Creek embayment. Approximately 0.6 miles upstream of Chattahoochee River confluence.

Table 3. Monitoring sites for the ADEM Reservoir Water Quality Monitoring Program.

Basin	Reservoir	Site	Latitude/ Longitude	County	Section, Township, Range	Station Description
	W. F. George	Sta. 1	31 37 48 85 04 27	Henry	SW 1/4, Sec 30, T8N, R30E	Lower reservoir. Deepest point, main river channel, dam forebay.
		Sta. 4	31 53 35 85 07 14	Barbour	SW 1/4, Sec 34, T11N, R 29E	Mid-reservoir. Deepest point, main river channel, approximately 0.25 miles upstream of U.S. Highway 82 causeway.
		Sta. 6	32 05 15 85 02 44	Russell	NE 1/4, Sec 29, T13N, R30E	Upper reservoir. Deepest point, main river channel, immediately downstream of Florence Marina State Park.
Conecuh	Gantt	Sta. 1	31 24 14 86 28 45	Covington	NW 1/4, Sec 17, T5N, R16E	Lower reservoir. Deepest point, main river channel, dam forebay.
	Point A	Sta. 1	31 21 57 86 31 01	Covington	NE 1/4, Sec 35, T5N, R15E	Lower reservoir. Deepest point, main river channel, dam forebay.
	Frank Jackson	Sta. 1	31 17 54 86 16 57	Covington	SE 1/4, Sec 19, T4N, R18E	Lower reservoir. Deepest point, main creek channel, dam forebay.
Coosa	Weiss	Sta. 1	34 10 24 85 45 17	Cherokee	SW 1/4, Sec 12, T10S, R8E	Lower reservoir. Deepest point, main river channel, power dam forebay.
		Sta. 2	34 12 54 85 36 38	Cherokee	NW 1/4, Sec 32, T9S, R10E	Mid-reservoir. Deepest point, main river channel, immediately upstream of causeway at Cedar Bluff.
		Sta. 3	34 12 38 85 32 52	Cherokee	SE 1/4, Sec 35, T9S, R10E	Upper reservoir. Deepest point, main river channel, at power line crossing upstream of Spring Creek.
		Sta. 4	34 10 45 85 29 04	Cherokee	SW 1/4, Sec 09, T10S, R11E	Deepest point, main river channel, immediately upstream of Mud Creek / Coosa River confluence.
	Neely-Henry	Sta. 1	33 47 05 86 03 14	Calhoun	SW 1/4, Sec 30, T14S, R6E	Lower reservoir. Deepest point, main river channel, dam forebay.
		Sta. 2	33 59 28 85 59 57	Etowah	NW 1/4, Sec 15, T12S, R6E	Upper reservoir. Deepest point, main river channel, immediately upstream of I-759 highway bridge.
	Logan-Martin	Sta. 1	33 25 39 86 20 00	Talladega	NW 1/4, Sec 33, T18S, R3E	Lower reservoir. Deepest point, main river channel, dam forebay.
		Sta. 2	33 35 39 86 12 50	Talladega	SW 1/4, Sec 34, T16S, R4E	Upper reservoir. Deepest point, main river channel. Downstream of I-20 bridge, Immediately upstream of Riverside Marina.

Table 3. Monitoring sites for the ADEM Reservoir Water Quality Monitoring Program.

Basin	Reservoir	Site	Latitude/ Longitude	County	Section, Township, Range	Station Description
	Lay	Sta. 1	32 58 05 86 31 01	Coosa	NW 1/4, Sec 19, T23N, R15E	Lower reservoir. Deepest point, main river channel, dam forebay ;
		Sta. 2	33 13 13 86 27 55	Talladega	NW 1/4, Sec 08, T21S, R2E	Upper reservoir. Deepest point, main river channel, upstream of Bullock's Islands.
		Sta. 3	33 06 35 86 29 25	Shelby	NE 1/4, Sec 24, T21S, R2E	Mid-reservoir. Mid-channel, immediately downstream of Peckerwood Creek / Coosa River confluence.
		Sta. 4	33 05 12 86 31 23	Shelby	NE 1/4, Sec 12, T24N, R15E	Spring Creek embayment. Deepest point of creek channel, approximately 0.25 miles from main river channel.
		Sta. 5	33 08 55 86 27 20	Talladega	NE 1/4, Sec 05, T22S, R2E	Cedar Creek embayment. Deepest point of creek channel near island downstream of highway bridge.
	Mitchell	Sta. 1	32 48 23 86 26 42	Coosa	NE 1/4, Sec 14, T21N, R16E	Lower reservoir. Deepest point, main river channel, dam forebay .
		Sta. 2	32 53 55 86 29 17	Coosa	NE 1/4, Sec 08, T22N, R16E	Upper reservoir. Deepest point, main river channel, downstream of Foshee Islands.
	Jordan	Sta. 1	32 37 20 86 15 41	Elmore	SW 1/4, Sec 15, T19N, R18E	Lower reservoir. Deepest point, main river channel, dam forebay .
		Sta. 2	32 40 33 86 19 47	Elmore	SE 1/4, Sec 35, T20N, R17E	Upper reservoir. Deepest point, main river channel, upstream of Weoka Creek / Coosa River confluence.
Escatawpa						
	Big Creek	Sta. 1	30 42 53 88 20 11	Mobile	NE 1/4, Sec 12, T4S, R4W	Lower reservoir. Deepest point, main creek channel, dam forebay .
Tallapoosa						
	Harris	Sta. 1	33 15 37 85 37 02	Randolph	NW 1/4, Sec 28, T20S, R10E	Lower reservoir. Deepest point, main river channel, dam forebay .
		Sta. 2	33 18 44 85 34 27	Randolph	NW 1/4, Sec 2, T20S, R10E	Mid-reservoir. Deepest point, main river channel, immediately upstream of Tallapoosa River / Little Tallapoosa River confluence .
		Sta. 3	33 24 27 85 35 33	Randolph	SW 1/4, Sec 34, T18S, R10E	Upper reservoir. Deepest point, main river channel, immediately downstream of Randolph County Highway 82 bridge.

Table 3. Monitoring sites for the ADEM Reservoir Water Quality Monitoring Program.

Basin	Reservoir	Site	Latitude/ Longitude	County	Section, Township, Range	Station Description
	Martin	Sta. 1	32 40 53 85 54 42	Elmore	SE 1/4, Sec 25, T20N, R21E	Lower reservoir. Deepest point, main river channel, dam forebay.
		Sta. 2	32 44 00 85 53 02	Tallapoosa	NW 1/4, Sec 8, T20N, R22E	Mid-reservoir. Deepest point, main river channel, at confluence of Blue Creek and Tallapoosa River.
		Sta. 3	32 44 34 85 57 47	Elmore	SW 1/4, Sec 4, T20N, R21E	Deepest point, main creek channel, immediately upstream of Alabama Highway 63 (Kowaliga) bridge.
		Sta. 4	32 51 45 85 54 10	Tallapoosa	SW 1/4, Sec 30, T22N, R22E	Upper reservoir. Deepest point, main river channel, upstream of Wind Creek State Park.
	Yates	Sta. 1	32 34 30 85 53 22	Elmore	SE 1/4, Sec 18, T18N, R22E	Lower reservoir. Deepest point, main river channel, dam forebay.
		Sta. 2	32 36 43 85 52 37	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
	Thurlow	Sta. 1	32 32 10 85 53 20	Elmore	SE 1/4, Sec 18, T18N, R22E	Lower reservoir. Deepest point, main river channel, dam forebay.
Tombigbee						
	Aliceville	Sta. 1	33 12 45 88 17 13	Pickens	SW 1/4, Sec 23, T21S, R17W	Lower reservoir. Deepest point, main river channel, dam forebay.
	Gainesville	Sta. 1	32 51 00 88 09 20	Greene	SW 1/4, Sec 36, T22N, R2W	Lower reservoir. Deepest point, main river channel, dam forebay.
	Demopolis	Sta. 1	32 31 13 87 52 40	Marengo	NW 1/4, Sec 22, T18N, R2E	Lower reservoir. Deepest point, main river channel, dam forebay.
	Coffeeville	Sta. 1	31 45 04 88 08 19	Clarke	SW 1/4, Sec 13, T9N, R2W	Lower reservoir. Deepest point, main river channel, dam forebay.

Table 3. Monitoring sites for the ADEM Reservoir Water Quality Monitoring Program.

Basin	Reservoir	Site	Latitude/ Longitude	County	Section, Township, Range	Station Description
Warrior						
	Smith	Sta. 1	33 56 37 87 06 20	Walker	NW 1/4, Sec 06, T13S, R5W	Lower reservoir. Deepest point, main river channel, dam forebay.
		Sta. 2	33 59 06 87 12 10	Walker	SE 1/4, Sec 19, T12S, R6W	Mid-reservoir. Deepest point, main river channel, at Duncan Creek / Sipsey River confluence. Downstream of Alabama Highway 257 bridge.
		Sta. 3	34 03 55 87 15 30	Winston	NE 1/4, Sec 27, T11S, R7W	Upper reservoir. Deepest point, main river channel, immediately downstream of Brushy Creek confluence.
	Tuscaloosa	Sta. 1	33 16 03 87 30 30	Tuscaloosa	NW 1/4, Sec 32, T20S, R9W	Lower reservoir. Deepest point, main river channel, dam forebay.
		Sta. 2	33 22 43 87 35 55	Tuscaloosa	SE 1/4, Sec 20, T19S, R10W	Upper reservoir. Deepest point, main river channel, immediately downstream of Binion Creek confluence.
	Inland	Sta. 1	33 50 08 86 33 03	Blount	NW 1/4, Sec 9, T14S, R1E	Lower reservoir. Deepest point, main river channel, dam forebay.
	Bankhead	Sta. 1	33 27 38 87 21 05	Tuscaloosa	NW 1/4, Sec 23, T18S, R8W	Lower reservoir. Deepest point, main river channel, dam forebay.
	Holt	Sta. 1	33 15 12 87 26 45	Tuscaloosa	NE 1/4, Sec 2, T21S, R9W	Lower reservoir. Deepest point, main river channel, dam forebay.
	Warrior	Sta. 1	32 46 49 87 50 18	Hale	NE 1/4, Sec 24, T21N, R2E	Lower reservoir. Deepest point, main river channel, dam forebay.
		Sta. 2	32 53 41 87 47 07	Greene	SE 1/4, Sec 9, T22N, R3E	Upper reservoir. Deepest point, main river channel, immediately downstream of Lock 8 Public Use Area.
Yellow						
	Jackson	Sta. 1	30 59 39 86 19 32	Covington	NE 1/4, Sec 27, T6N, R21W	Approximate center of lake.

Table 4. Water quality variables measured for the ADEM Reservoir Water Quality Monitoring Program.

Variable	Method	Reference
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
Total suspended solids	Filtration, drying	EPA-600/4-79-020
Specific conductance	Wheatstone bridge	APHA et al. 1992
Hardness	Titrametric, EDTA	EPA-600/4-79-020
Alkalinity	Potentiometric titration	EPA-600/4-79-020
Chemical		
Dissolved oxygen	Membrane electrode	APHA et al. 1992
pH	Glass electrode	APHA et al. 1992
Ammonia	Automated phenate	EPA-600/4-79-020
Nitrate + Nitrite	Cadmium reduction	EPA-600/4-79-020
Total Kjeldahl Nitrogen	Automated colorimetric	EPA-600/4-79-020
Dissolved reactive phosphorous	Automated single reagent	EPA-600/4-79-020
Total phosphorus	Persulfate digestion	EPA-600/4-79-020
Total organic carbon	Persulfate-ultraviolet	EPA-600/4-79-020
Biological		
Chlorophyll a	Spectrophotometric	APHA et al. 1992
Phytoplankton	Low magnification	APHA et al. 1992
Fecal coliform	Membrane filter	APHA et al. 1992

through 0.45 micron Millipore membrane filters and collecting the filtrate in acid-washed 250 ml Nalgene containers.

One thousand milliliters were collected from the composited photic zone sample of each station for phytoplankton identification and enumeration. Phytoplankton samples were collected during the Summer sampling session only. Each sample was placed in a 1-liter Nalgene jar containing thirty-six ml of merthiolate preservative (APHA et al. 1985). Dominant organisms were identified to species when possible using current and standard taxonomic references.

Finally, two half-gallon portions of the composited 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.

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).

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 - 70
Hypereutrophic:	TSI > 70

Quality Control / Quality Assurance

For quality control / quality assurance purposes, field duplicates of each sample type were collected at a minimum of 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.

All *in situ* measurements were replicated at sampling sites where duplicate samples were collected.

Data Management and Reportings

All water quality data collected from reservoirs will be compiled and stored in STORET. In addition, certain water quality parameters are entered into specific Ecological Studies Section databases for ease of recovery and graphic interpretation.

RESULTS AND DISCUSSION

Material in this section is divided by basin and reservoir. Topics presented for further discussion consist of the following:

a) discharge, from USGS stations located as closely upstream or downstream to reservoirs of the basin as possible, used as an indicator of flow conditions during the growing season;

b) total nitrogen (TN), total phosphorus (TP), dissolved reactive phosphorus (DRP), used as indicators of nutrient content and availability in the waterbody;

c) total suspended solids (TSS), used as an indicator of water clarity;

d) corrected chlorophyll a (chl. a), used as an indicator of algal productivity or biomass;

e) Carlson Trophic State Index (TSI) calculated from chlorophyll a concentrations as a means of trophic state classification of the reservoir ; and,

f) 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 topics 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 though every effort will be made to include them in future reports. However, all data collected for the RWQM Program appear in Appendix A.

With the exception of data from certain reservoirs collected in early September 1985 and 1994, all data graphically presented were collected during the month of August. To expand the database, data collected during the 1985 and 1989 reservoir studies (see **Introduction**), the Key Limnological Factors Study (ADCNR 1992), and Phase I Diagnostic/Feasibility Studies were included in the graphs. Unless otherwise indicated by an asterisk (*), bar graphs consist of means of the variables for all years depicted in the line graphs. No line graphs are included for discharge. 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 changes in the variables over time. 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 1990). Under extreme natural conditions such as drought the DO concentration may be as low as 4.0 mg/l.

For those unfamiliar with the process of eutrophication, it may be useful to discuss briefly the relationship of the topics listed above 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 plant nutrients (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.

Eutrophication of natural lakes can take thousands of years depending on the nature of the watershed and the lakes may never become eutrophic.

Almost all waterbodies monitored by the RWQM Program 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).

Regardless of a reservoir's trophic state, cultural eutrophication negatively affects biological communities of these waterbodies through changes in water quality variables such as dissolved oxygen, pH, water temperature, and light availability.
The effects of cultural eutrophication on a reservoir that is highly productive, however, 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.

I. Coosa River Basin

Precipitation and Discharge

Though variable across the state, rainfall in many areas was higher than normal during the growing seasons of 1989, 1991, and 1994 and lower than normal during the growing seasons of 1990, 1992, 1993, and 1995 (Appendix B). However, rainfall during August 1995 in the Gadsden area was 4.59 inches above normal.

The mean growing season (May-August) discharge for the basin measured at Jordan Dam was greater than the long-term mean (1913-1914, 1927-1995) in 1989 and 1991 (Fig. I.1). The mean growing season discharge was less than the long-term mean in 1985, 1990, and 1992-1995 with the lowest discharge of the years monitored occurring in 1995.

Weiss Reservoir

Nitrogen. Mean TN values were highest at the upper location of the reservoir (Fig. I.2). Total nitrogen concentrations of the riverine portion of Weiss near the stateline were higher in 1994 than in 1993 and 1995 (Fig. I.14). At the next downstream location in the upper portion of the reservoir, TN concentrations were higher in 1993 than in 1994 and 1995. At mid-reservoir, TN concentrations increased from 1989-1993, decreased in 1994 and increased slightly in 1995. In the lower reservoir, TN concentrations increased consistently from 1989-1994 and decreased in 1995.

Phosphorus. Mean TP and DRP values at the riverine, upper, and mid-reservoir locations of Weiss were much higher than at any other location in the Coosa River basin (Figs. I.4, I.5, I.6, I.7). Total phosphorus and DRP concentrations of the riverine portion of Weiss near the stateline increased from 1993-1995 and were much higher in 1995 than in the other years monitored (Figs. I.15, I.16). In the upper portion of the reservoir, TP concentrations were also highest in 1995. Dissolved reactive phosphorus concentrations in the upper reservoir increased in 1994-1995. At mid-reservoir, TP concentrations increased overall from 1985-1992, decreased in 1993, and increased again in 1994-1995. Dissolved reactive phosphorus concentrations varied little from 1989-1994 but increased noticeably in 1995. In the lower portion of the reservoir, TP concentrations followed the same pattern as at mid-reservoir but at lower concentrations while DRP values varied little from 1989-1995.

TN:TP ratios. Total nitrogen to total phosphorus ratios for all locations of Weiss Reservoir indicated nitrogen to be the limiting nutrient or that the ratio was within the optimum range for algal growth during all years monitored (Table I.1).

Suspended solids. The mean TSS value for mid-reservoir was the highest of all Coosa reservoir locations with the value from the upper reservoir location the third highest (Fig. I.8, I.9). Total suspended solids concentrations at the riverine location of Weiss decreased from 1993 to 1994 but increased noticeably in 1995 (Fig. I.17). In the upper portion of the reservoir, TSS concentrations decreased from 1989 to 1994 and increased in 1995. At mid-reservoir, TSS values decreased from 1992-1994 then increased slightly in 1995. At the lower reservoir, TSS values varied year to year from 1992-1995.

Chlorophyll a. Mean chlorophyll a values for the mid and lower portions of Weiss Reservoir were the highest of all Coosa reservoir locations (Figs. I.10, I.11). Chlorophyll a concentrations in the riverine portion of Weiss near the stateline were variable during the years monitored but highest in 1995 (Fig. I.18). Concentrations in the upper reservoir portion increased in 1992-1993 then decreased in 1994-1995. In the mid and lower portions of the reservoir, lowest chlorophyll a values were measured in 1993 with the highest values measured in 1994. The 1993 data were collected from Weiss less than 1 month after a large spill of wastewater (known as "black liquor") from the Inland Container pulpmill plant near Rome, GA entered the reservoir. Water quality data collected from the reservoir during the spill indicated that retention time of the spill was greatest in the mid and lower reservoir portions.

Trophic state. Mean TSI values for the riverine portion of Weiss and the upper reservoir were within the lower half of the eutrophic range while mean TSI values for the mid and lower portions of Weiss were within the upper half of the eutrophic range and the highest of all Coosa reservoir locations (Figs. I.12, I.13). Trophic state index values for all locations of Weiss were within the eutrophic range during all years monitored (Fig. I.19) with the exception of the riverine location near the stateline which was within the mesotrophic range in 1989 and 1994. During 1993 and 1995, TSI values in the riverine portion were within the upper half of the eutrophic range with 1995 values the highest for this portion of the reservoir. The upper reservoir has remained within the lower half of the eutrophic range through all years monitored. The mid and lower portions of the reservoir were within the upper half of the eutrophic range during all years except for 1993. Highest TSI values for these portions of the reservoir were recorded for 1994, when values approached hypereutrophic levels.

Dissolved oxygen. Dissolved oxygen concentrations were above the criterion limit at all locations during all years monitored (Fig. I.20). Concentrations measured in the riverine and upper reservoir portions of Weiss were fairly consistent in 1993 and 1994 and declined in 1995. In the mid-reservoir location, DO concentrations declined from 1989-1992 then increased through 1995. In the lower portion of the reservoir, DO concentrations decreased in 1990 and 1993 and were near the criterion limit. Concentrations were much higher in the lower portion of the reservoir in 1995. Increased DO concentrations in the mid and lower reservoir during August 1995 were likely due to above normal rainfall in the area during the month (Appendix B).

Discussion. As can be seen from the graphs of mean values, its position as the first reservoir on the Coosa River makes Weiss the primary recipient of nutrients originating upstream of the reservoir and the primary recipient of the effects of these nutrients on algal production. High nutrient concentrations apparent in the waters of the reservoir have stimulated algal growth to a highly eutrophic level with TSI values indicating near hypereutrophic conditions in 1994. Were it not for the shallow mean depth (3.1 meters) and relatively short retention time (18 days) of the reservoir, it is likely that the effect of the algal density on water quality parameters such as dissolved oxygen would be more pronounced. With the high concentrations of phosphorus available in Weiss, nitrogen may play a critical role. Nitrogen concentrations normally exceed phosphorus concentrations by an order of magnitude or more (Wetzel 1983). This rarely occurred in Weiss Reservoir and TN:TP ratios never indicated phosphorus to be the limiting nutrient. Should nitrogen content of Weiss Reservoir increase through point or nonpoint source additions to the Coosa River upstream or directly to the reservoir it is likely that algal growth will be further stimulated.

Withdrawal of water from the Coosa Basin in Georgia is likely in the future. Several alternatives for the West Georgia Regional Reservoir project are currently under review with certain withdrawal alternatives recommending effluent pump-back to the Coosa to minimize interbasin transfer (CH2M Hill, 1995). Should nutrient concentrations in the waters of the reservoir increase through direct additions of effluent or from decreased dilution caused by upstream water diversion, it is likely that algal growth will be stimulated and the trophic state increase. In addition, an increase in reservoir retention time brought about by diversion of water upstream of Weiss will only increase the magnitude of nutrient effects to the reservoir by allowing more time for algal proliferation.

Annual monitoring of Weiss Reservoir is recommended given the current water quality of the reservoir and the potential for further water quality degradation. Though data collection for the Phase I Diagnostic / Feasibility Study of Weiss was completed during 1993, more intensive monitoring of the reservoir along with others of the basin may be necessary to collect more current water quality data prior to water diversion in Georgia.

Neely Henry Reservoir

Nitrogen. The mean TN value for the lower portion of Neely Henry was higher than that of the upper portion (Fig. I.2), a situation that did not occur in any other reservoir in the basin and may serve as an indicator of the degree of nutrient loading directly to the reservoir. Total nitrogen concentrations were highest in Neely Henry in 1991 and declined from 1993-1995 (Fig. I.21).

Phosphorus. The mean TP value for the lower portion of Neely Henry was higher than that of the upper portion, which did not occur in any other reservoir in the basin and may serve as further indication of the degree of nutrient loading to the reservoir (Fig. I.4). Total phosphorus concentrations were highest in the upper reservoir in 1991 and 1995 and lowest in 1992 (Fig. I.22). In the lower reservoir, TP concentrations were relatively consistent with the highest values recorded in 1994 and the lowest values in 1992 and 1993. The mean DRP value for the upper reservoir was higher than that of the lower reservoir (Fig. I.6). Dissolved reactive phosphorus concentrations declined in the upper and lower portions of Neely Henry in 1992-1993 (Fig. I.23). In 1994-1995, DRP concentrations in both portions of the reservoir increased with highest value of all years monitored recorded in 1995.

TN:TP ratios. Total nitrogen to total phosphorus ratios for upper Neely Henry indicated phosphorus to be the limiting nutrient in 1991 and 1992 with nitrogen the limiting nutrient in 1993-1995 (Table I.1). For the lower reservoir, TN:TP ratios indicated phosphorus to be the limiting nutrient in 1991 with nitrogen the limiting nutrient in 1992 and 1994-1995. The TN:TP ratio for the lower reservoir was within the optimum range for algal growth in 1993.

Suspended solids. The mean TSS value for the upper portion of Neely Henry was the second highest of all Coosa reservoir locations (Figs. I.8, I.9). Total suspended solids concentrations in the upper reservoir decreased from 1991-1993 and increased in 1994-1995 (Fig. I.24). Highest concentrations in the upper reservoir were recorded in 1990 and 1995 with the lowest value recorded in 1993. In the lower reservoir, TSS concentrations decreased in 1990-1991, were relatively consistent through 1993, then increased in 1994-1995.

Chlorophyll a. The mean chlorophyll a value of the lower reservoir was above that of the upper reservoir (Fig. I.10). Mean values were less than those of the lower and mid portions of Weiss Reservoir. Chlorophyll a concentrations in the upper reservoir increased slowly from 1989 through 1992, decreased in 1993, then increased noticeably through 1995 (Fig. I.25). In the lower reservoir, concentrations decreased from 1989 to 1990 then increased noticeably through 1995. The 1993 data were collected from Neely Henry less than 1 month after a large spill of waste from the Inland Container pulpmill plant passed through Weiss Reservoir and entered Neely Henry.

Trophic state. Mean TSI values for both reservoir locations were at the midpoint of the eutrophic range (Fig. I.12). Trophic state index values were within the eutrophic range at both reservoir locations during all years monitored (Fig. I.26). Lowest TSI values were recorded for the upper portion in 1993 and the lower portion in 1990. Highest TSI values were recorded in 1995 at both reservoir locations when values approached hypereutrophic levels.

Dissolved oxygen. Dissolved oxygen concentrations in the upper portion of the reservoir were at or only slightly above the criterion limit from 1989-1994 (Fig. I.27). In the lower reservoir, DO concentrations were above the criterion limit in 1989, 1990, 1991, and 1995 but were below the criterion limit in 1991, 1992, and 1994. Concentrations were much higher in the upper and lower portions of the reservoir in 1995 and were likely due to above normal rainfall in the area during the month of August (Appendix B).

Discussion. Mean values for most variables declined downstream of Weiss in Neely Henry Reservoir though mean TN was higher than that of some Weiss locations. Mean TN, TP, and chlorophyll a were higher in the lower portion of Neely Henry than in the upper portion. This did not occur in other Coosa reservoirs and is considered an indication of the degree of nutrient loading directly to the reservoir and the effects of these nutrients on the algal population. Total nitrogen concentrations in Neely Henry Reservoir declined in 1994-1995 with nitrogen determined as the limiting nutrient during those years. Total phosphorus concentrations remained fairly consistent. However, DRP, TSS, chlorophyll a, and TSI values increased noticeably during this time period. Chlorophyll a concentrations and the TSI values calculated from these concentrations in 1995 were the highest recorded for Neely Henry Reservoir, with TSI values approaching hypereutrophic levels. Dissolved oxygen concentrations were below or near the criterion limit at both locations in several years monitored. These conditions have occurred though the retention time for Neely Henry is only 5.8 days.

Should water quality and flow conditions of recent years persist, it is considered important that there be no significant increase in nutrient loading to Neely Henry Reservoir in order to prevent further deterioration in water quality. If upstream water withdrawal occurs, decreasing dilution of discharges to Neely Henry and increasing the retention time of the reservoir, the current level of nutrient loading to the reservoir may likely prove too high to prevent deterioration in water quality.

Annual monitoring of Neely Henry Reservoir is recommended given the current water quality of the reservoir and the potential for further water quality degradation.

Logan Martin Reservoir

Nitrogen. The mean TN value of the upper reservoir of Logan Martin was greater than that of the lower reservoir and, with the exception of upper Weiss Reservoir, greater than that of any location upstream in Weiss or Neely Henry Reservoirs (Fig. I.2). Total nitrogen concentrations varied 1991-1993 and decreased in 1994-1995 (Fig. I.28).

Phosphorus. The mean TP value for the upper reservoir was higher than values of the upstream Neely Henry locations (Fig. I.4). Values for the lower reservoir were lower than all upstream Coosa reservoir locations. Total phosphorus concentrations in the upper reservoir were highest in 1990 and lowest in 1994 (Fig. I.29). In the lower reservoir, TP values were lowest in 1990 and highest in 1995. The mean DRP value was greater in the lower reservoir than in the upper reservoir (Fig. I.6), a situation uncommon in the Coosa reservoirs with the only other occurrence in Jordan Reservoir. Dissolved reactive phosphorus concentrations in the upper reservoir declined slightly from 1991 to 1992, were consistent from 1992-1994, then increased to their highest level of the monitoring period during 1995 (Fig. I.30). In the lower reservoir, DRP values decreased slightly from 1991-1992, increased sharply in 1993, decreased in 1994, and increased again in 1995.

TN:TP ratios. Total nitrogen to total phosphorus ratios of the upper reservoir indicated phosphorus to be the limiting nutrient in 1991 and 1993 with nitrogen the limiting nutrient in 1992 and 1995 (Table I.1). The TN:TP ratio for 1994 was within the optimum range for algal growth. For the lower reservoir, phosphorus was the limiting nutrient in 1991 and 1992 with nitrogen the limiting nutrient in 1995. The TN:TP ratio for 1993-1994 was within the optimum range for algal growth. Nitrogen was the limiting nutrient on fewer occasions in Logan Martin than in upstream Neely Henry.

Suspended solids. The mean TSS value for the upper reservoir was much higher than the lower reservoir (Fig. I.8) when compared to respective locations of most other Coosa reservoirs. The mean TSS value for the lower reservoir was below that of any upstream Coosa reservoir locations. Total suspended solids concentrations in the upper reservoir were lowest in 1990 with very high values in 1992 relative to other years monitored (Fig. I.31). High TSS values for 1992 were also recorded in downstream Lay, Mitchell, and Jordan Reservoirs. In the lower reservoir, TSS concentrations were relatively consistent with highest levels recorded in 1989 and lowest levels in 1994.

Chlorophyll a. The mean chlorophyll a value for the upper reservoir was higher than that of the lower reservoir which occurred at no other Coosa reservoirs (Fig. I.10). The mean value for the lower reservoir was below that of all upstream reservoir locations except upper Weiss Reservoir. Chlorophyll a concentrations were higher in the upper reservoir than in the lower portion in the years monitored with the exception of 1991 when values were similar in both locations (Fig,. I.32). Chlorophyll a concentrations in the upper reservoir increased from 1991-1994, with a slight decrease in 1995. Concentrations in the lower reservoir increased and decreased from year to year.

Trophic state. Mean TSI values for both portions of the reservoir were the same and were within the lower half of the eutrophic range (Fig. I.12). Trophic state index values for the upper reservoir were within the eutrophic range in all years except 1990, when values dropped into the mesotrophic range (Fig. I.33). From 1990 TSI values increased, entering the upper half of the eutrophic range in 1993-1995. In the lower reservoir, TSI values generally remained within or near the lower half of the eutrophic range.

Dissolved oxygen. Dissolved oxygen concentrations in the upper reservoir were just above the criterion limit in 1990-1992 but were higher in the other years monitored (Fig. I.34). In the lower reservoir, DO concentrations were above the criterion limit in 1989, 1990, 1992, 1993, and 1995. Concentrations in the lower reservoir were below the criterion limit in 1991 and 1994.

Discussion. Aside from PCB concentrations in fish collected from Logan Martin (ADEM, In Press), available data indicates fewer water quality concerns for Logan Martin than Neely Henry and Weiss. Nitrogen was the limiting nutrient on fewer occasions in Logan Martin than in Neely Henry. There were fewer occurrences of DO concentrations at or below the criterion limit in Logan Martin than in Neely Henry. Mean TSS, chlorophyll a, and TSI were all lower in Logan Martin than in Neely Henry and Weiss indicating a lower trophic state than in the upstream reservoirs. Mean TN and TP values in upper Logan Martin Reservoir were above those of Neely Henry Reservoir, however. In addition, chlorophyll a concentrations in the upper reservoir have increased substantially since 1991 with the trophic state of that portion of the reservoir increasing into the upper level of the eutrophic range since 1992.

Continued monitoring of the reservoir is important to evaluate overall water quality and determine if the trophic state of the upper reservoir continues to increase and if changes occur in the trophic state of the lower reservoir.

Lay Reservoir

Nitrogen. Mean TN values at four of the five Lay Reservoir locations were higher than the other Coosa reservoir locations (Figs. I.2, I.3) with the upper Lay Reservoir location the highest of all. The Spring Creek embayment location of Lay Reservoir was second only to the upper reservoir location. Total nitrogen concentrations in the upper reservoir varied from year to year but were highest in 1991 and lowest in 1994 (Fig. I.35). At mid-reservoir, TN values declined from 1991-1995. At the lower reservoir location, TN values increased slightly from 1991-1993, decreased sharply in 1994 with a slight increase in 1995. In the Cedar Creek embayment, TN concentrations were similar in 1992-1993 and decreased in 1994-1995. In the Spring Creek embayment, TN concentrations declined from 1992-1994 and were similar in 1994 and 1995.

Phosphorus. Mean TP values at mainstem locations of Lay decreased from upstream to downstream and approximated those of mainstem locations in Logan Martin (Figs. I.4, I.5). Mean TP values of the Cedar Creek and Spring Creek embayment locations were below those of upper and mid-reservoir mainstem locations but greater than the mean concentration of the lower mainstem reservoir location. Total phosphorus concentrations at the three mainstem locations declined sharply in 1992 followed by an increase at the upper station in 1993-1995, in the mid-reservoir station in 1994-1995, and in the lower reservoir station in 1995 (Fig. I.36). Total phosphorus concentrations at both the Cedar Creek and Spring Creek embayment locations increased from 1992-1995. Mean DRP values were highest at the upper reservoir location and the same at mid and lower reservoir locations (Fig. I.7). Values for the Cedar and Spring Creek embayment locations were lower than those of the mainstem. Dissolved reactive phosphorus concentrations increased to some degree at all locations in 1995. Dissolved reactive phosphorus concentrations in the upper reservoir location varied from year to year with a sharp decline in 1992 and a sharp increase in 1995 (Fig. I.37). At mid-reservoir, DRP concentrations decreased sharply in 1992 and increased in 1994-1995. In the lower reservoir, DRP concentrations varied little with the exception of a sharp increase in 1993 and a slight increase in 1995. In the Cedar and Spring Creek embayment locations, DRP concentrations varied little from 1992-1995 though both locations increased slightly in 1995.

TN:TP ratios. Total nitrogen to total phosphorus ratios were within the optimum range or indicated phosphorus to be the limiting nutrient in all locations of Lay 1991-1993 (Table I.1). Nitrogen was indicated to be the limiting nutrient at all locations in 1994-1995 with the exception of the upper reservoir in 1995 where the ratio was within the optimum range.

Suspended solids. Mean TSS values were highest for the upper reservoir location and declined downstream at the mainstem locations (Fig. I.9). At the Cedar and Spring Creek embayment locations, mean TSS values were similar to those of the mid-reservoir location. Total suspended solids concentrations in the upper reservoir dropped sharply in 1990, increased sharply in 1991, declined from 1992-1994, and increased in 1995 (Fig. I.38). At mid-reservoir, TSS concentrations declined sharply in 1991-1993 and increased sharply in 1994-1995. At the lower reservoir, TSS concentrations varied from year to year with lowest values recorded during 1990 and 1994 and highest values during 1991, 1993, 1995. In the Spring Creek embayment, TSS concentrations declined 1992-1994 and increased in 1995. In the Cedar Creek embayment, TSS concentrations increased in 1993 and decreased in 1994-1995.

Chlorophyll a. Mean chlorophyll a values of mainstem locations were highest at mid-reservoir and lowest at the upper reservoir (Fig. I.11). Mean concentrations at the upper reservoir of Lay were the lowest of all reservoir locations on the Coosa. Mean concentrations in the Spring and Cedar Creek embayments were similar to the mid-reservoir mean. Chlorophyll a concentrations increased in all mainstem locations in 1994-1995 (Fig. I.39). Chlorophyll a concentrations in the upper reservoir varied year to year and increased in 1994-1995. At mid-reservoir, concentrations varied slightly 1991-1993 then increased sharply in 1994-1995. In the lower reservoir, chlorophyll a concentrations varied slightly 1991-1993 then increased in 1994-1995 . In the Spring and Cedar Creek embayments, concentrations decreased in 1993, increased sharply in 1994, and decreased sharply in 1995.

Trophic state. Mean TSI values at all locations were within the eutrophic range with those of the upper and lower reservoir locations the lowest (Fig. I.13). Trophic state index values for all locations of the reservoir were within the eutrophic range in all years monitored (Fig. I.40). Values at all mainstem locations increased in 1994-1995 from those of 1993. At mid-reservoir, TSI values increased from the lower to upper level of the eutrophic range in 1994-1995. Highest TSI values for Lay Reservoir were recorded for the Cedar and Spring Creek embayment stations in 1994.

Dissolved oxygen. Dissolved oxygen concentrations in the upper reservoir were well above the criterion limit in 1990 and 1995, at or just above the limit in 1989, 1992, and 1994, and were below the limit in 1991 and 1993 (Fig. I.41). At mid-reservoir, values were well above the limit in 1992, 1993, and 1995, just above the limit in 1994, and below the limit in 1991. In the lower reservoir, values were above the criterion limit in 1989, 1990, 1992, 1993, and 1995 but were below the limit in 1991 and 1994. At the Cedar and Spring Creek embayment locations, DO values were well above the criterion limit in all years monitored.

Discussion. Available data indicated several water quality concerns for Lay Reservoir. Mean TN values in Lay Reservoir were the highest of all reservoirs in the Coosa basin. Mean TP values in Lay were slightly lower than in comparable locations of Logan Martin Reservoir though TP concentrations increased in 1994-1995. Mean DRP values were higher in Lay than in Logan Martin. Dissolved oxygen concentrations in the upper reservoir were frequently at or below the criterion limit while concentrations in the lower and mid-reservoir were near or below the limit on two occasions. Mean chlorophyll a values for upper Lay Reservoir were the lowest of the Coosa reservoir system. Further investigation may be necessary to determine cause of the reduction of chlorophyll a at this location. Chlorophyll a concentrations and TSI values increased at all mainstem locations in 1994-1995 with the TSI of mid-reservoir increasing into the upper level of the eutrophic range.

Annual monitoring of Lay Reservoir is recommended to further document nutrient concentrations and trophic state of the reservoir and to monitor DO concentrations, particularly in the upper portion of the reservoir.

Mitchell Reservoir

Nitrogen. Mean TN values declined substantially from Lay to Mitchell Reservoir. Mean total nitrogen concentrations were slightly higher in the upper reservoir than in the lower reservoir (Fig. I.3). Total nitrogen concentrations in the upper and lower reservoir declined sharply in 1992 from 1991, then were relatively consistent through 1995 (Fig. I.42).

Phosphorus. Mean TP values were higher in the upper reservoir than in the lower reservoir of Mitchell (Fig. I.5). Total phosphorus concentrations in the upper reservoir increased in 1991-1992, decreased in 1993, and increased sharply in 1994-1995 (Fig. I.43). In the lower reservoir, TP concentrations increased in 1991, decreased in 1992-1993, and increased sharply in 1994-1995. Mean DRP values were greater in the upper reservoir than in the lower reservoir of Mitchell (Fig. I.7). Dissolved reactive phosphorus concentrations in the upper reservoir declined from 1991-1994 and increased sharply in 1995 (Fig. I.44). In the lower reservoir, DRP concentrations varied year to year with a slight increase in 1995.

TN:TP ratios. Total nitrogen to total phosphorus ratios for the upper and lower portions of Mitchell Reservoir indicated phosphorus to be the limiting nutrient in 1991 with nitrogen the limiting nutrient 1992-1995 (Table I.1). Nitrogen was indicated as the limiting nutrient more often than any reservoir except Weiss.

Suspended solids. Mean TSS values were higher in the upper reservoir than in the lower portion (Fig. I.9). Total suspended solids concentrations in Mitchell Reservoir were similar at upper and lower reservoir locations in all years except 1989, when values were higher in the upper reservoir (Fig. I.45). As occurred in downstream Jordan Reservoir, TSS values in 1991-1992 increased markedly in both Mitchell locations, declined in 1993-1994, and increased slightly in 1995.

Chlorophyll a. Mean chlorophyll a values were higher in the lower reservoir than in the upper portion (Fig. I.11). Mean values at both locations of Mitchell Reservoir were higher than those of similar locations in Lay Reservoir. Chlorophyll a concentrations in the upper reservoir decreased from 1989-1992, increased from 1993-1994, and decreased in 1995 (Fig. I.46). In the lower reservoir, concentrations varied year to year from 1989-1993 then increased in 1994-1995.

Trophic state. Mean TSI values were similar for both portions of the reservoir and near the midpoint of the eutrophic range (Fig. I.13). Trophic state index values were within the eutrophic range for both locations in all years monitored (Fig. I.47). In the upper reservoir, TSI values decreased from 1989-1992 and increased from 1993-1995. In the lower reservoir, TSI values were more variable from year to year but increased from 1993-1995. Values in both reservoir locations increased into the upper level of the eutrophic range in 1995.

Dissolved oxygen. Dissolved oxygen concentrations in the upper reservoir were above the criterion limit in 1989 and 1993-1995 but were below the limit in 1990-1992 (Fig. I.48). In the lower reservoir, DO concentrations were above the limit in all years except 1991.

Discussion. Available data indicate several water quality concerns for Mitchell Reservoir. Highest phosphorus concentrations for Mitchell were recorded in 1994-1995 with TN:TP ratios indicating nitrogen-limited conditions four of the last five years monitored. Chlorophyll a and trophic state of the reservoir increased in 1994-1995. Low dissolved oxygen concentrations occurred frequently in the upper reservoir. It is recommended that monitoring continue on an annual basis to evaluate any further changes in trophic state and water quality and that more intensive study of the reservoir be conducted to determine causes if these conditions persist.

Jordan Reservoir

Nitrogen. Mean TN values in upper Jordan Reservoir were above those in the lower reservoir with both values above those of upstream Mitchell Reservoir (Fig. I.3). Total nitrogen concentrations in the upper and lower reservoir decreased in 1992 from 1991, increased in 1993, decreased in 1994, and were similar to 1994 in 1995 (Fig. I.49).

Phosphorus. Mean TP values were slightly higher in the upper reservoir than in the lower reservoir with values from both locations the lowest of all Coosa reservoir locations (Fig. I.5). Total phosphorus concentrations in the upper reservoir increased in 1991-1992, decreased in 1993, and increased sharply in 1994-1995 (Fig. I.50). In the lower reservoir, TP concentrations increased in 1991, decreased in 1992-1993, and increased in 1994-1995. The mean DRP value in the upper reservoir of Jordan was below that of the lower reservoir, which of the other Coosa reservoirs occurred only in Logan Martin (Fig. I.7). Dissolved reactive phosphorus concentrations in the upper reservoir were relatively consistent from 1991-1994 but increased sharply in 1995 (Fig. I.51). In the lower reservoir, DRP values were similar in 1991-1992 and 1994-1995 but were much higher in 1993.

TN:TP ratios. Total nitrogen to total phosphorus ratios for the upper and lower reservoir indicated phosphorus to be the limiting nutrient in 1991 and 1993 with nitrogen the limiting nutrient in 1994-1995 (Table I.1). During 1992, ratios at both reservoir locations were within the optimum range for algal growth.

Suspended solids. Mean TSS values were similar for the upper and lower portions of Jordan Reservoir (Fig. I.9). With the exception of mean TSS values from the lower portions of Logan Martin and Lay Reservoirs, values from Jordan were the lowest of the Coosa reservoirs. Total suspended solids concentrations were similar in the upper and lower reservoir in all years sampled, with values increasing from 1989-1992 and decreasing thereafter (Fig. I.52). Concentrations in most years were very similar in Jordan and Mitchell Reservoirs.

Chlorophyll a. Mean chlorophyll a values were similar in both reservoir locations of Jordan and with the exception of upper Lay Reservoir, the lowest of any location downstream of upper Weiss Reservoir (Fig. I.11). Chlorophyll a concentrations in both reservoir locations varied year to year though they increased sharply in 1994 before declining in 1995 (Fig. I.53).

Trophic state. Mean TSI values were within the eutrophic range and similar for both reservoir locations (Fig. I.13). With the exception of the upper portion of Lay Reservoir, mean TSI values for Jordan were the lowest of all Coosa reservoir locations. Trophic state index values for the upper reservoir were within the eutrophic range during all years except 1991, when values dropped into the mesotrophic range (Fig. I.54). In the lower reservoir, TSI values were within the eutrophic range in all years except 1993, when values dropped into the mesotrophic range. Highest TSI values for both locations of Jordan Reservoir were recorded in 1994 when values increased into the upper level of the eutrophic range.

Dissolved oxygen. Dissolved oxygen concentrations in the upper reservoir were above the criterion limit in 1990 and 1992-1994 (Fig. I.55). Concentrations were below the criterion limit in 1991 and were near the limit in 1995. In the lower reservoir, DO concentrations were above the criterion limit at all times though the value from 1991 was near the limit.

Discussion. Available monitoring data indicates few water quality concerns for Jordan Reservoir. Continued annual monitoring is recommended given the increases in TP concentrations in 1994-1995 and highly eutrophic TSI values recorded for 1994.

Fig. I.1

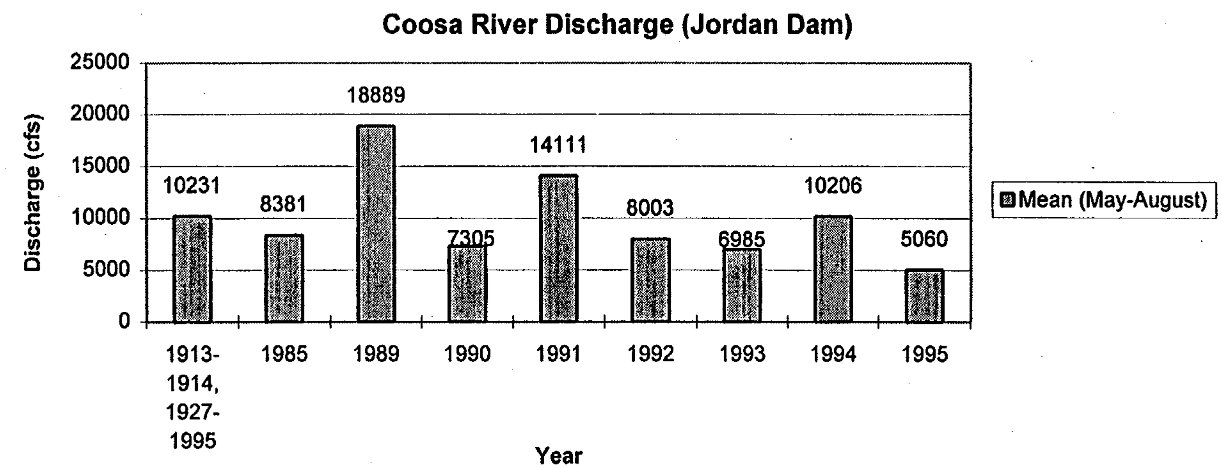

Coosa River Discharge (Jordan Dam)
Discharge (cfs)
25000
20000
15000
10000
5000
0
10231
8381
18889
7305
14111
8003
6985
10206
5060
1913-1914, 1927-1995
1985
1989
1990
1991
1992
1993
1994
1995
Year
Mean (May-August)

Fig. I.2

Upper Coosa River Reservoirs

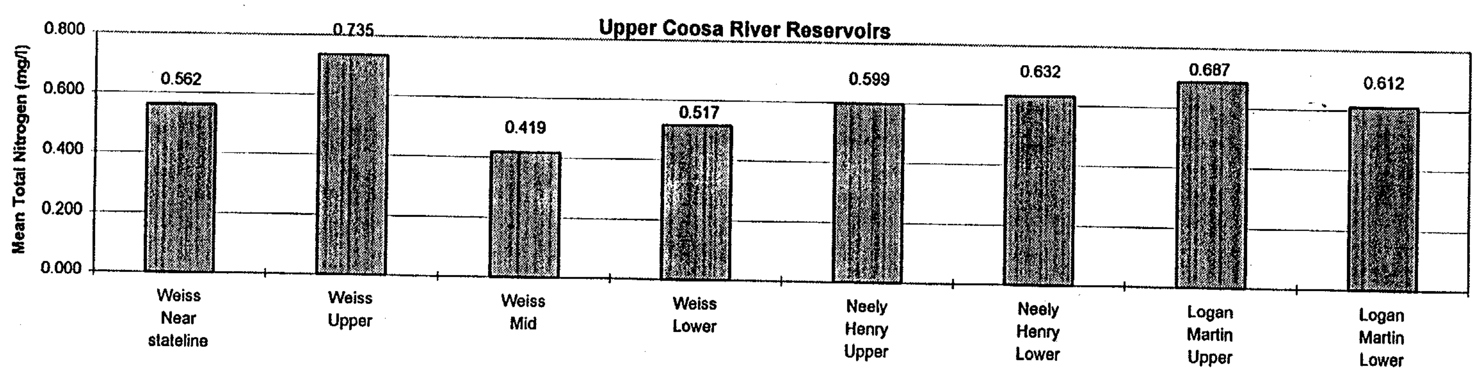


Fig. I.3

Lower Coosa River Reservoirs

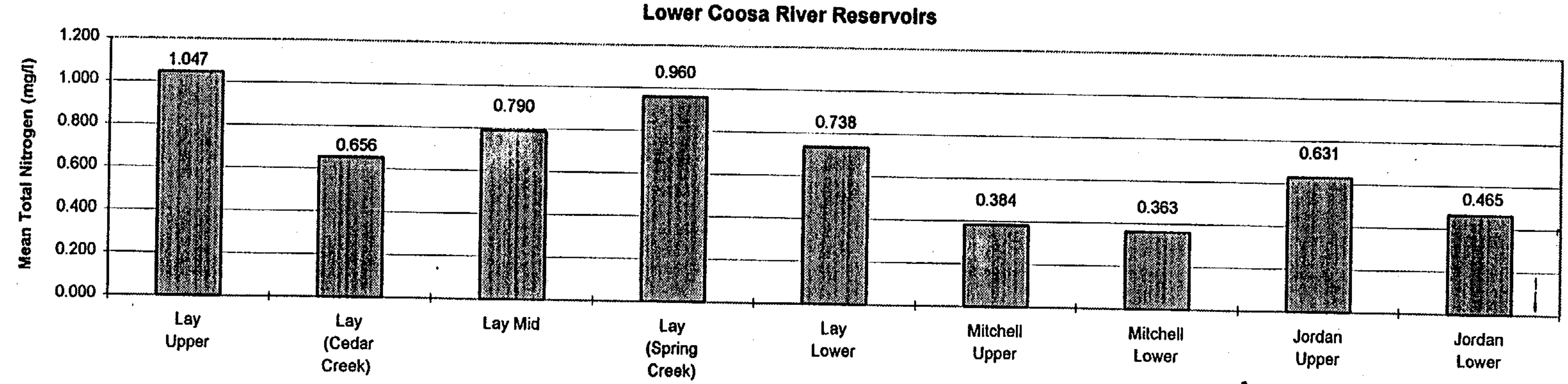


Fig. I.4

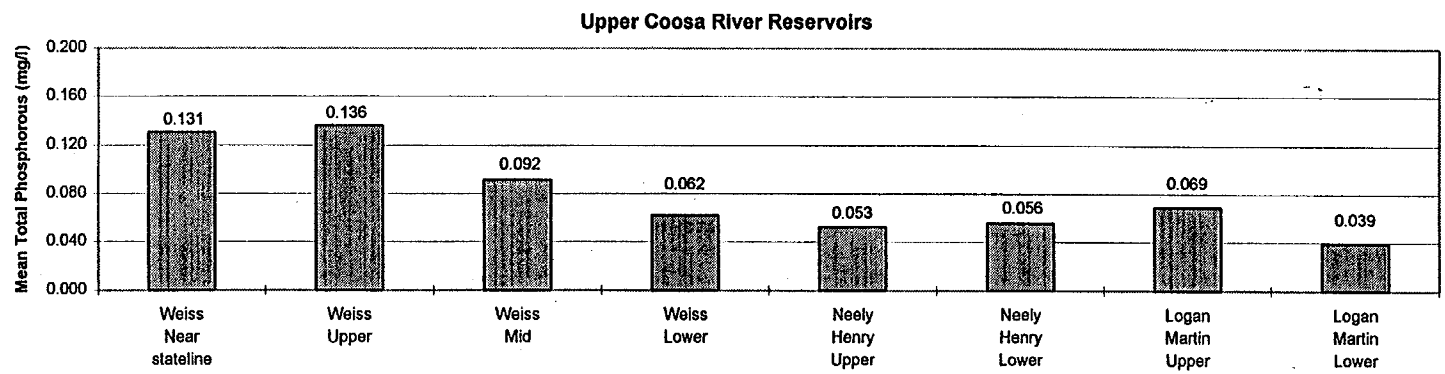
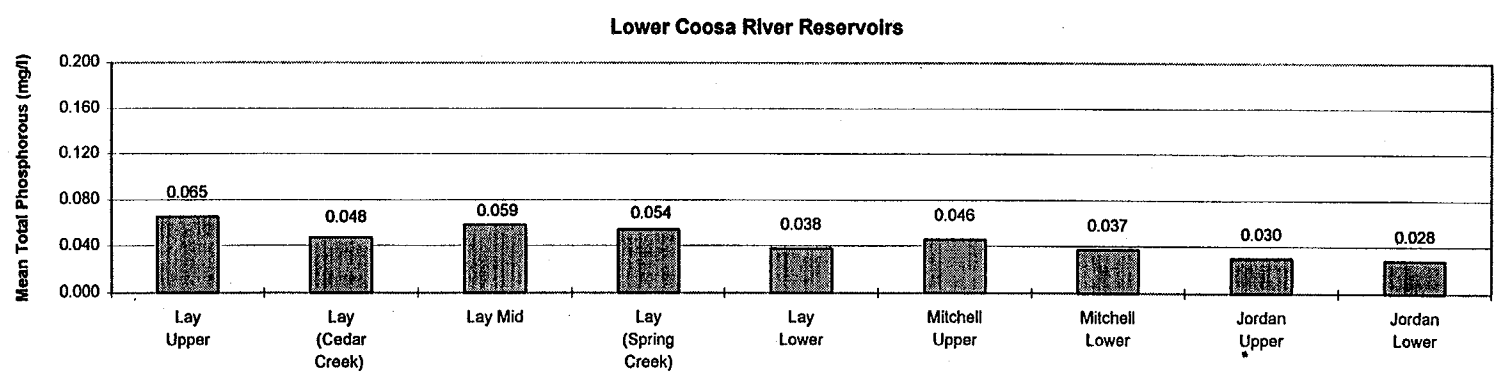

Upper Coosa River Reservoirs
Mean Total Phosphorous (mg/l)
0.200
0.160
0.120
0.080
0.040
0.000
0.131
0.136
0.092
0.062
0.053
0.056
0.069
0.039
Weiss Near stateline
Weiss Upper
Weiss Mid
Weiss Lower
Neely Henry Upper
Neely Henry Lower
Logan Martin Upper
Logan Martin Lower

Fig. I.5


Lower Coosa River Reservoirs
Mean Total Phosphorous (mg/l)
0.200
0.160
0.120
0.080
0.040
0.000
0.065
0.048
0.059
0.054
0.038
0.046
0.037
0.030
0.028
Lay Upper
Lay (Cedar Creek)
Lay Mid
Lay (Spring Creek)
Lay Lower
Mitchell Upper
Mitchell Lower
Jordan Upper
Jordan Lower

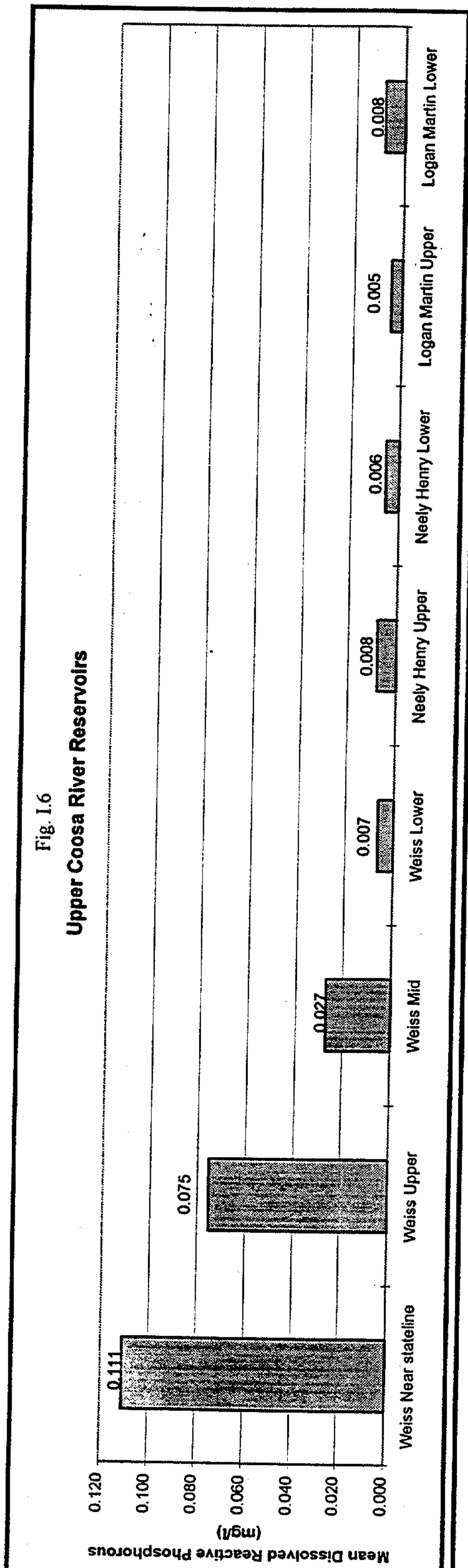


Fig. I.6

Upper Coosa River Reservoirs

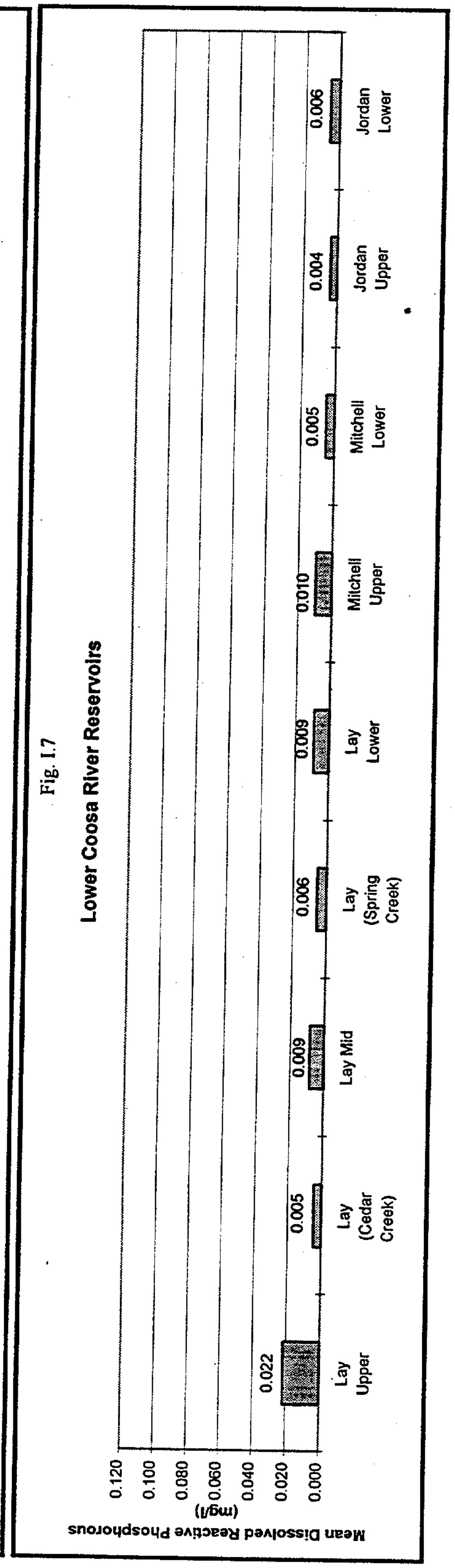


Fig. I.7

Lower Coosa River Reservoirs

Fig. I.8

Upper Coosa River Reservoirs

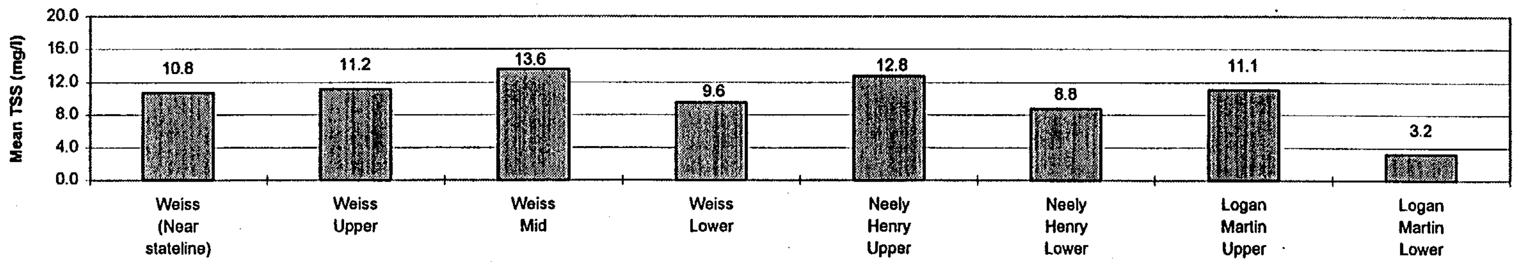


Fig. I.9

Lower Coosa River Reservoirs

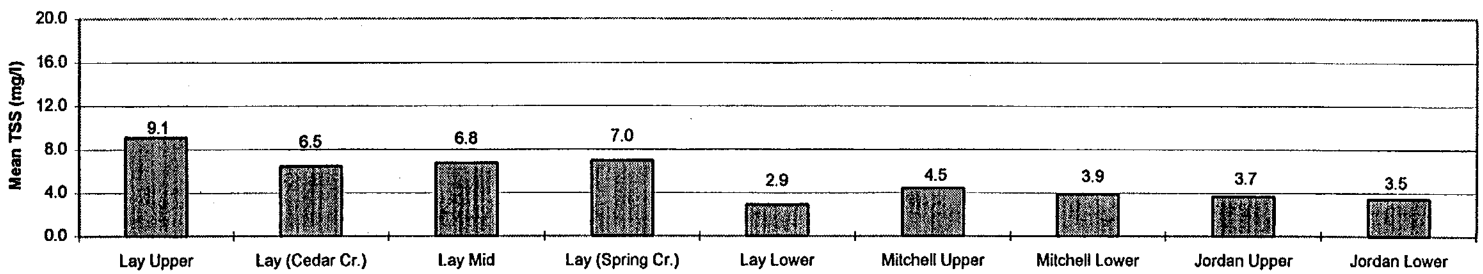


Fig. I.10

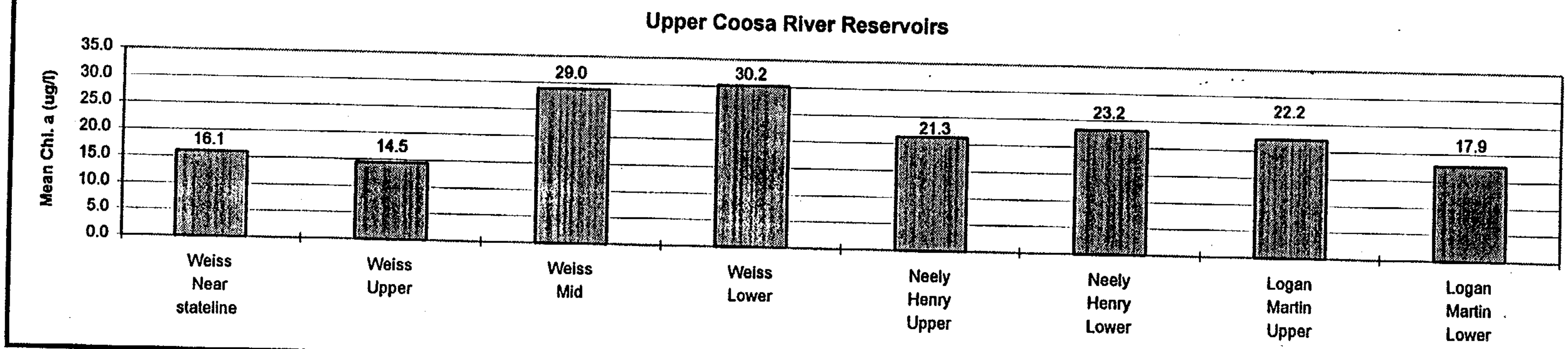


Fig. I.11

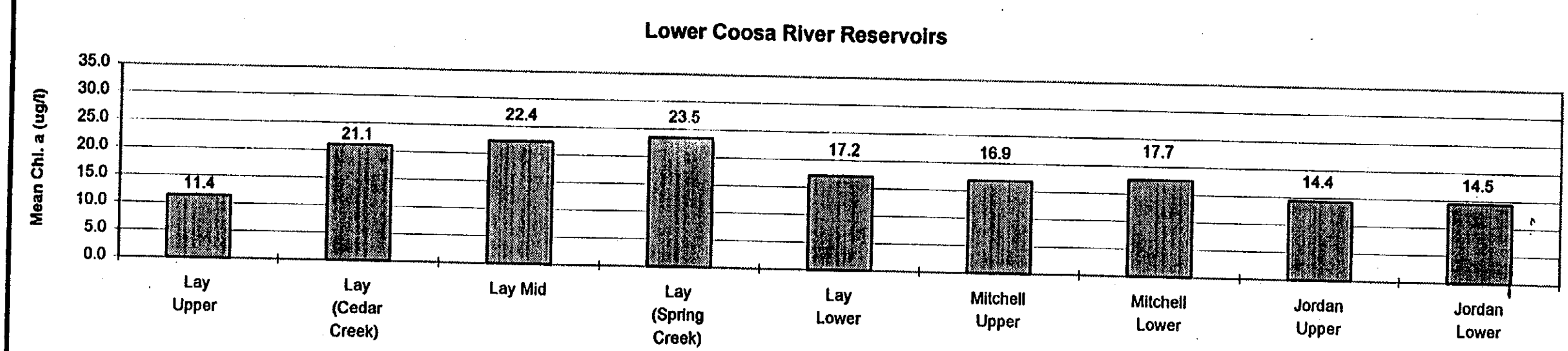


Fig. I.12
Upper Coosa River Reservoirs

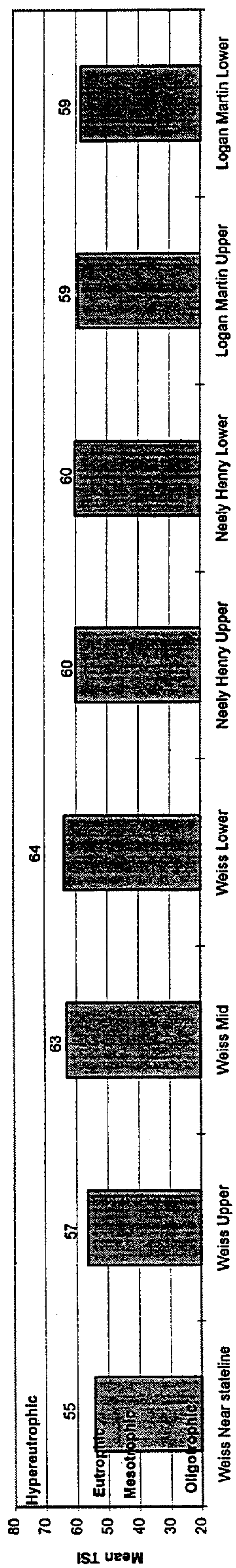


Fig. I.13
Lower Coosa River Reservoirs

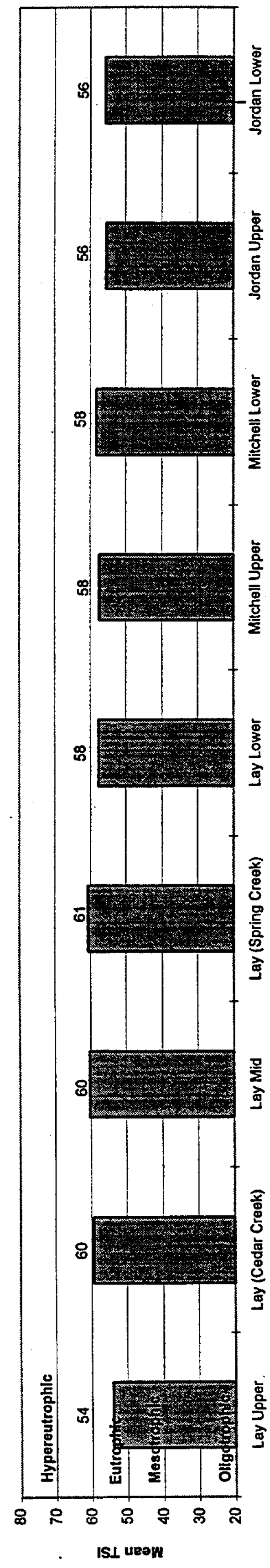


Fig. I.14

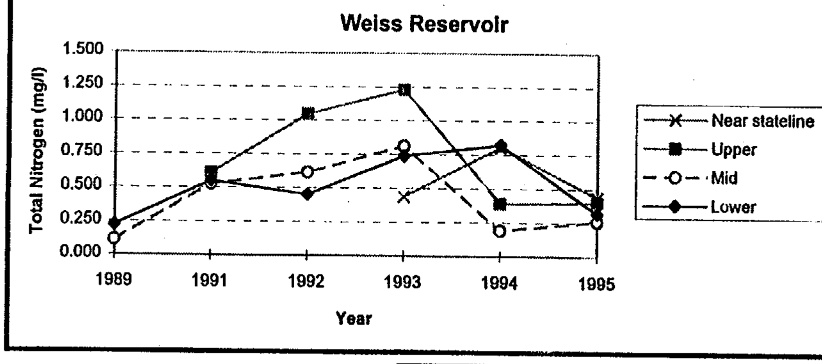


Fig. I.15

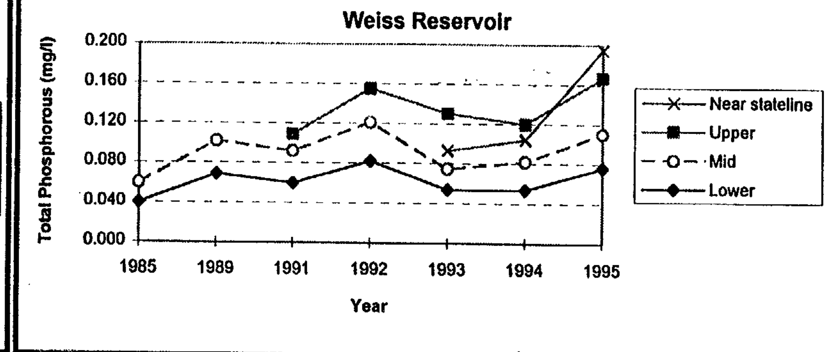


Fig. I.16

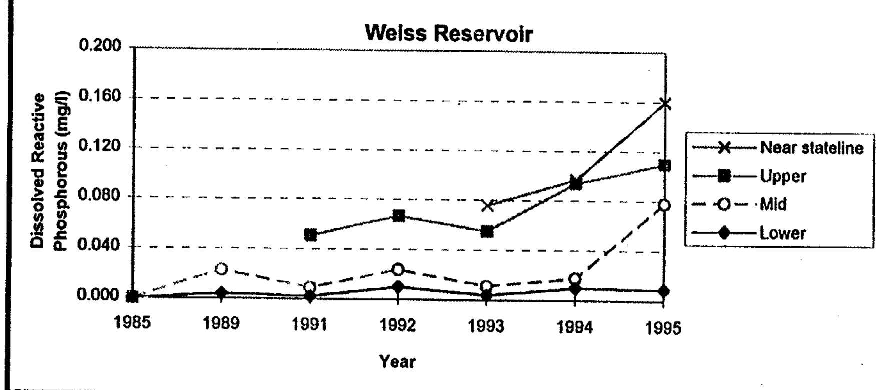


Fig. I.17
Weiss Reservoir

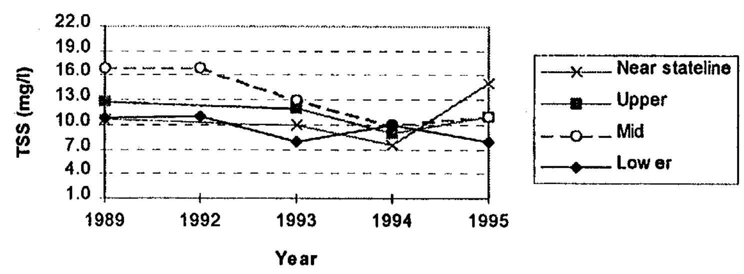


Fig. I.18
Weiss Reservoir

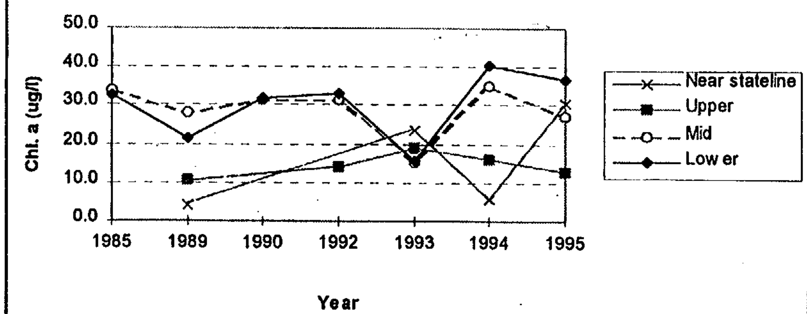


Fig. I.19
Weiss Reservoir

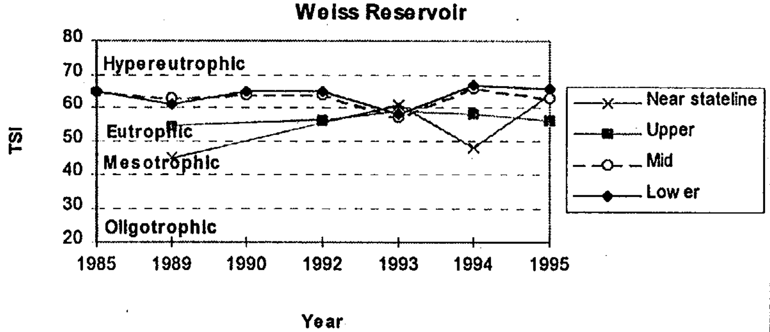


Fig. I.20
Weiss Reservoir

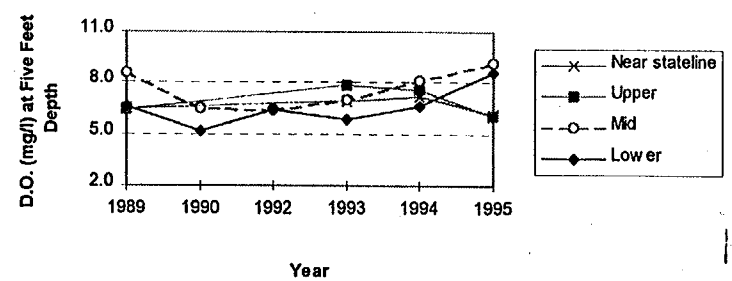


Fig. I.21

Neely Henry Reservoir

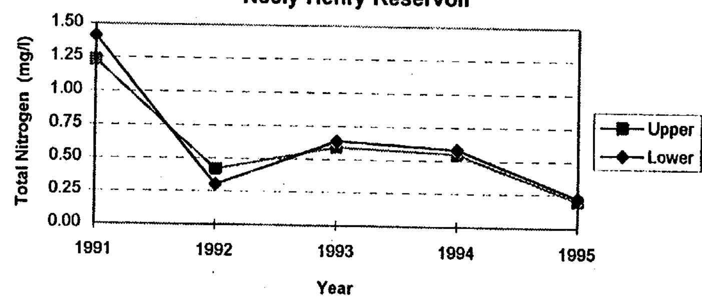


Fig. I.22

Neely Henry Reservoir

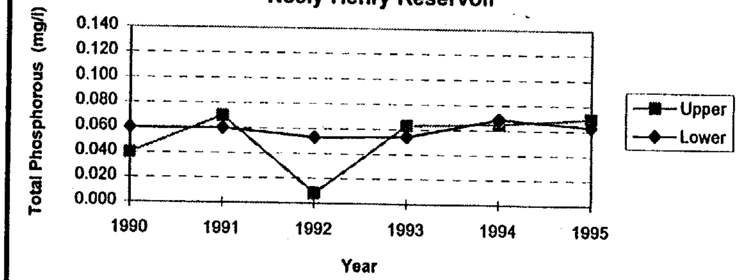


Fig. I.23

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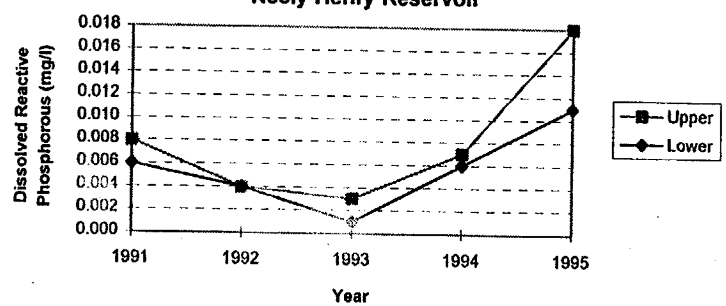

Fig. I.24
Neely Henry Reservoir

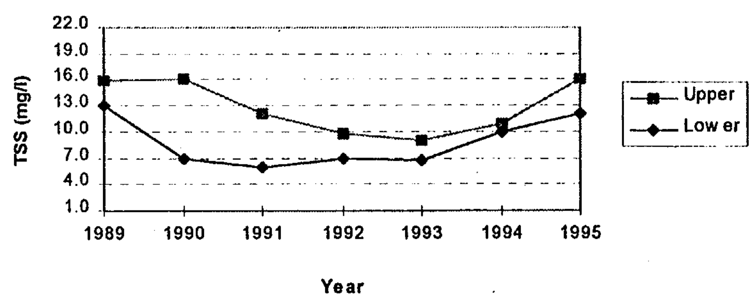

Fig. I.25
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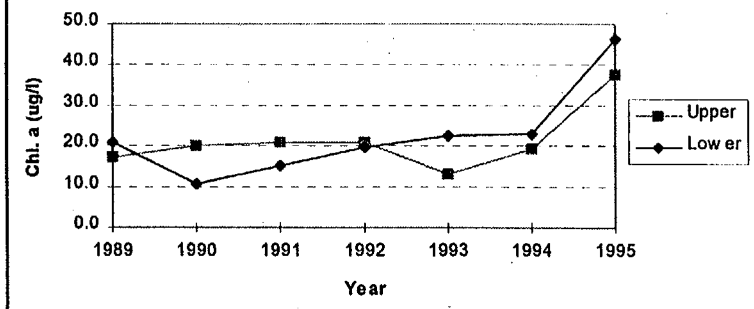


Fig. I.26
Neely Henry Reservoir

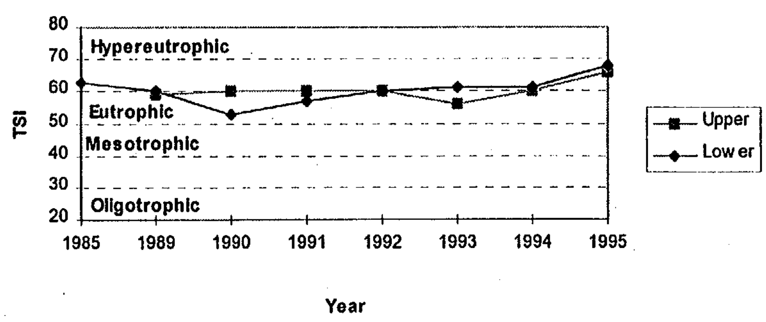


Fig. I.27
Neely Henry Reservoir

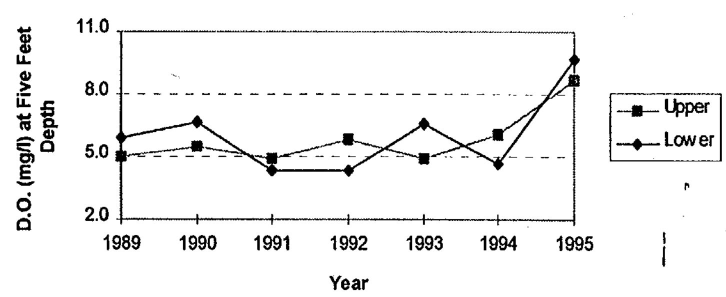


Fig. I.28

Logan Martin Reservoir

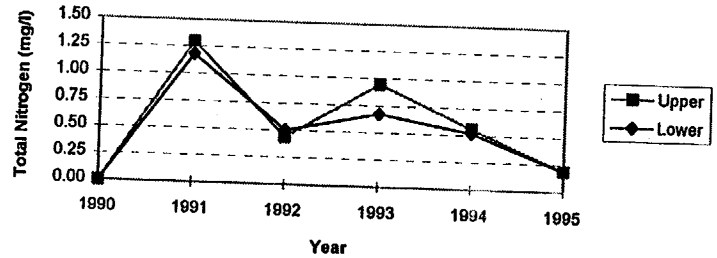


Fig. I.29

Logan Martin Reservoir

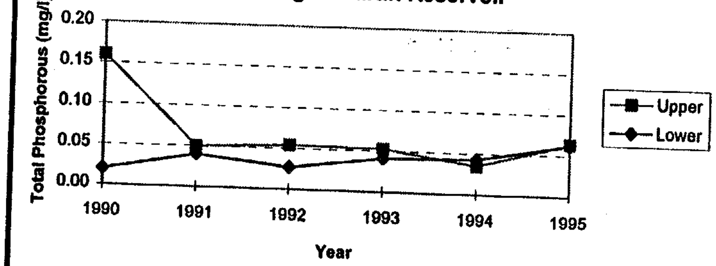


Fig. I.30

Logan Martin Reservoir

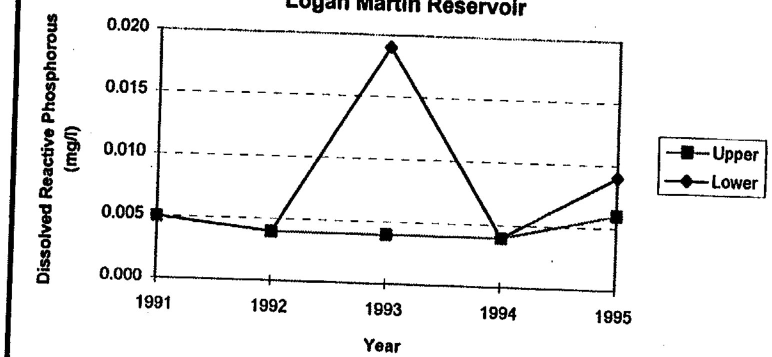


Fig. I.31
Logan Martin Reservoir

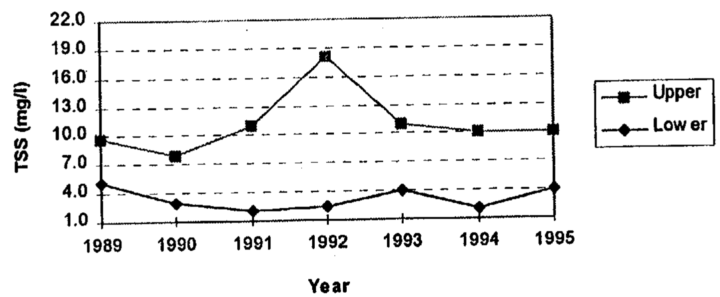


Fig. I.32
Logan Martin Reservoir

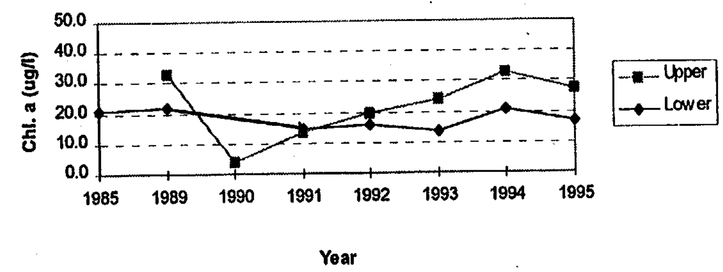


Fig. I.33
Logan Martin Reservoir

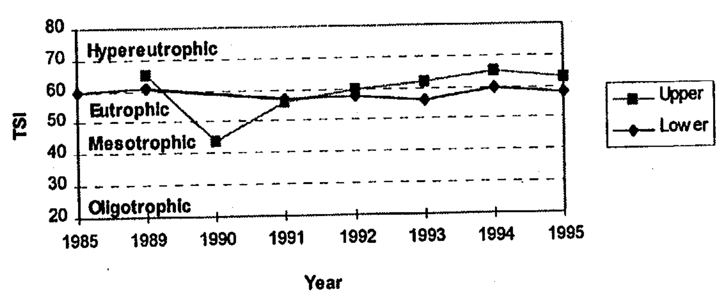


Fig. I.34
Logan Martin Reservoir

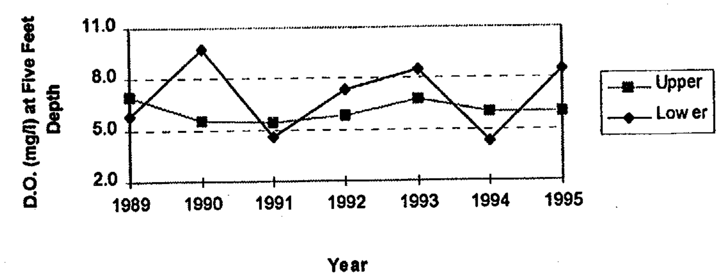


Fig. I.35

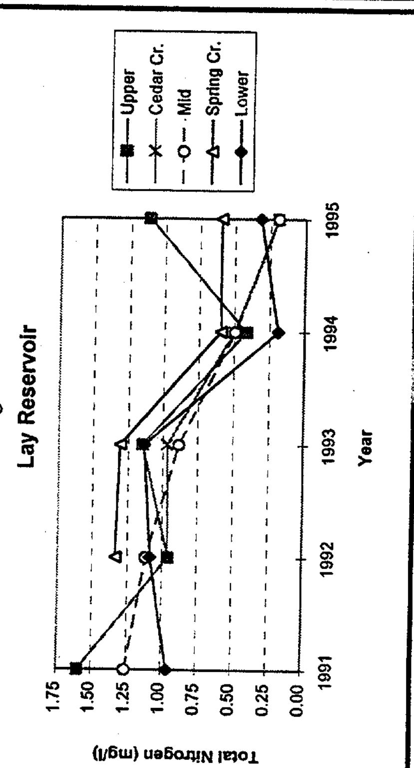


Fig. I.36

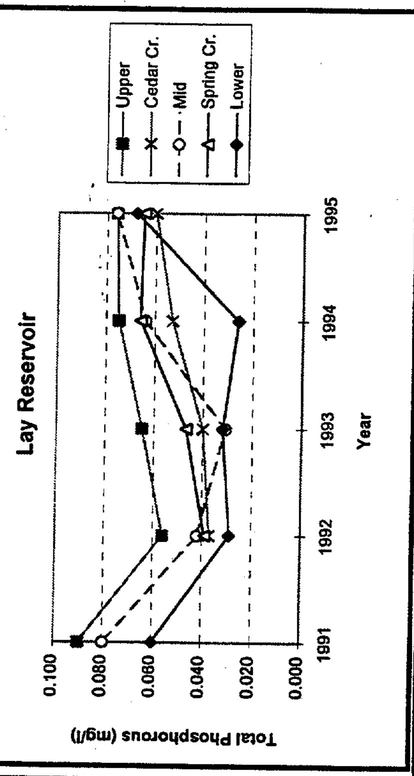
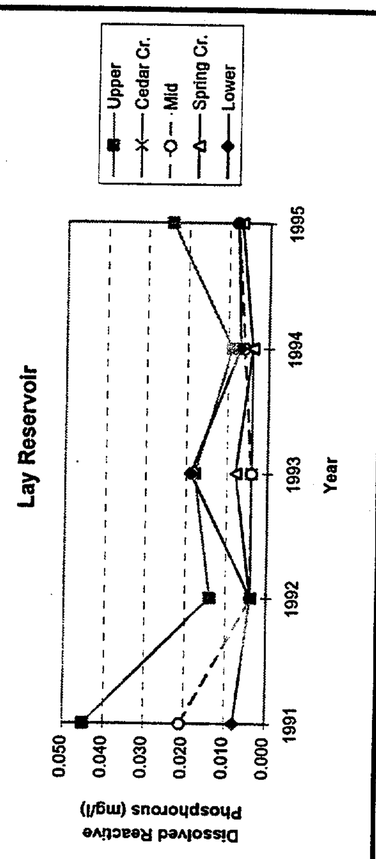


Fig. I.37



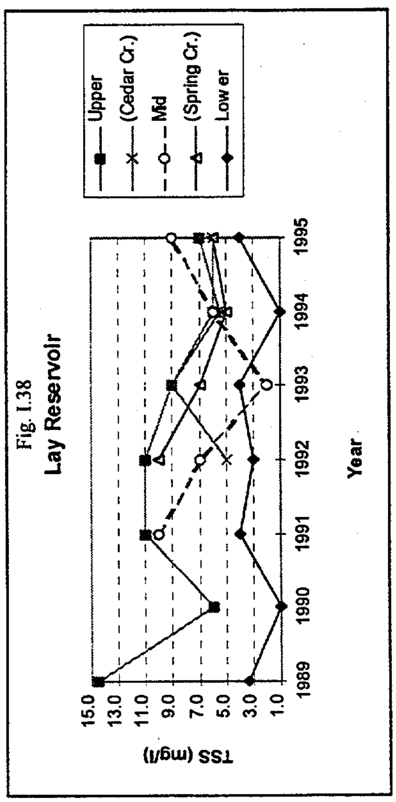


Fig. I.38
Lay Reservoir

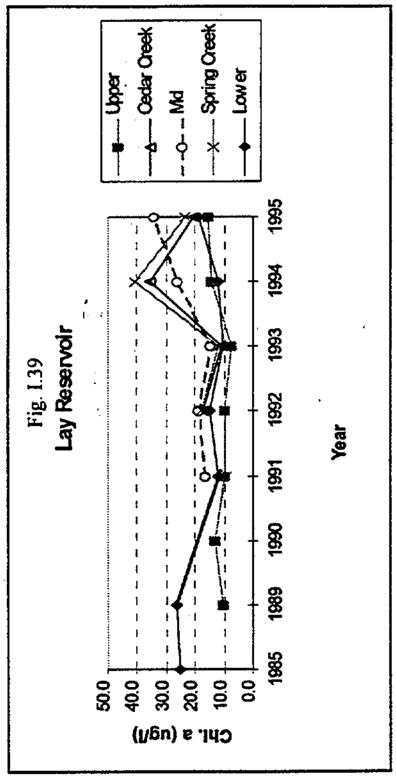


Fig. I.39
Lay Reservoir

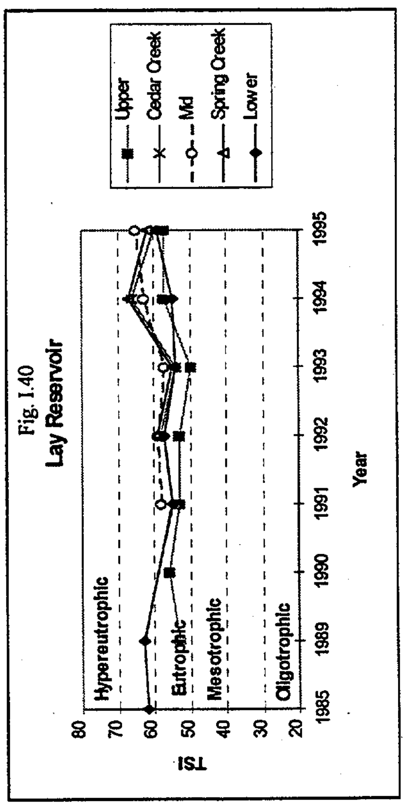


Fig. I.40
Lay Reservoir

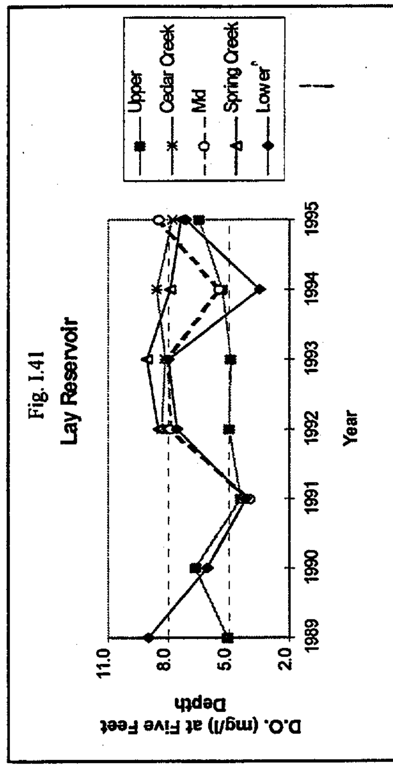


Fig. I.41
Lay Reservoir

Fig. I.42

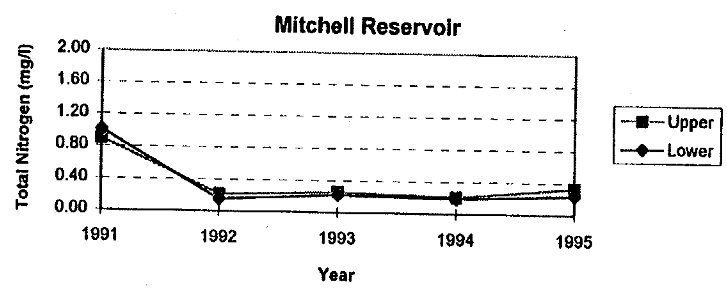
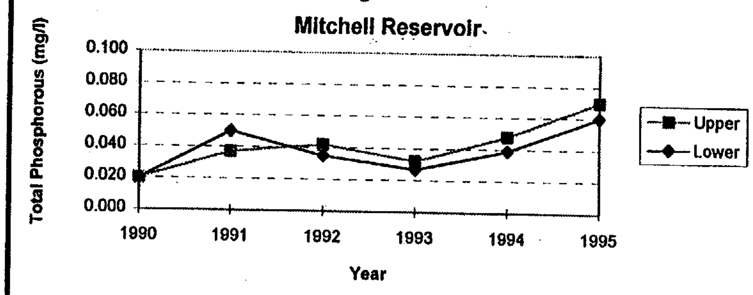


Fig. I.43



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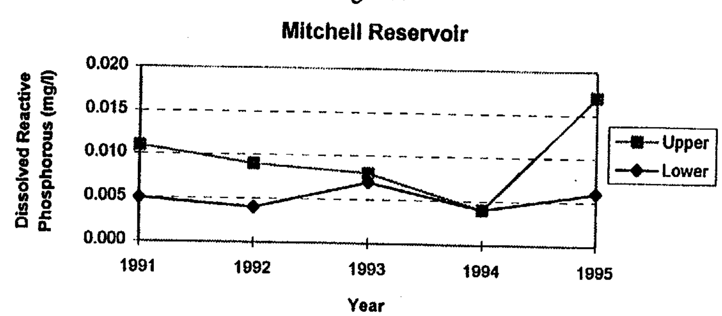

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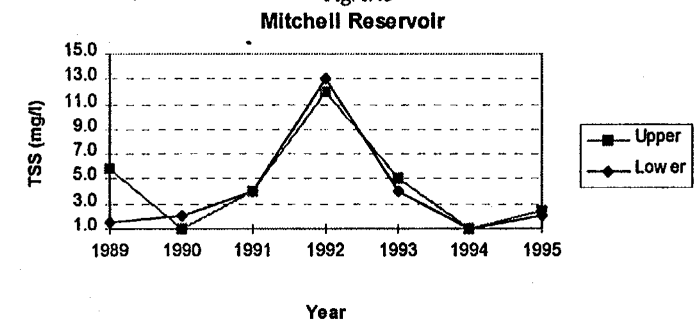
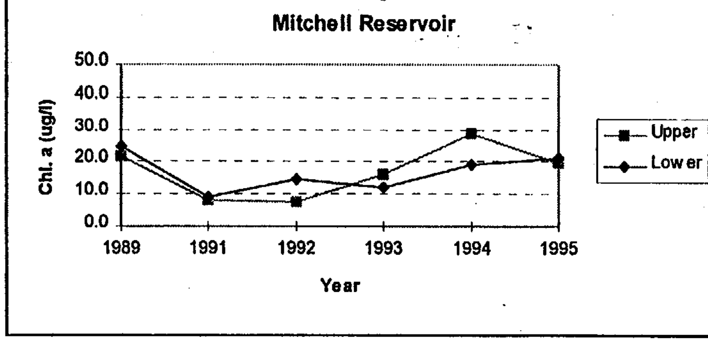


Fig. I.46



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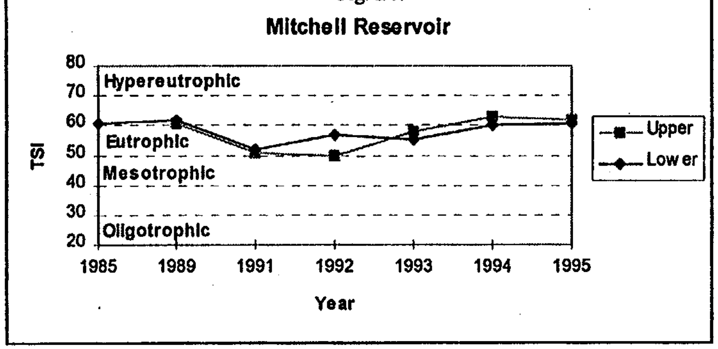


Fig. I.48

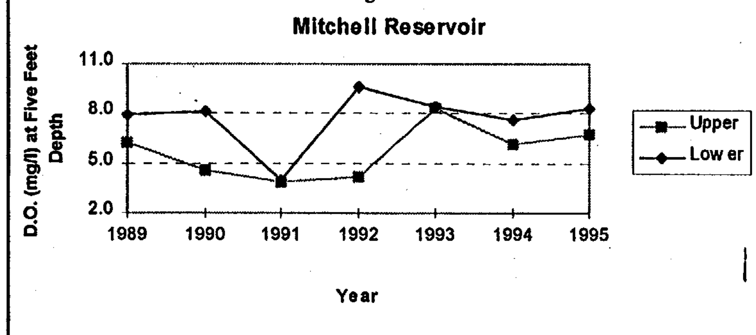


Fig. I.49

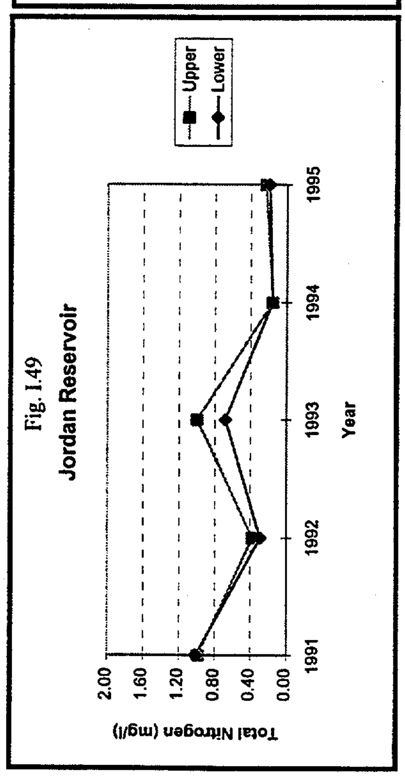


Fig. I.50

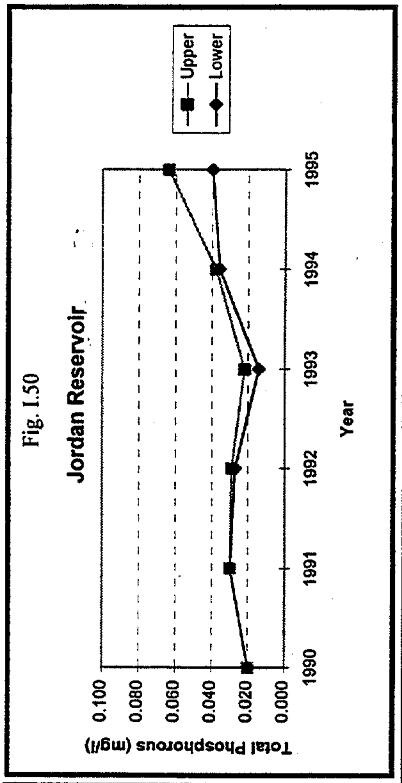


Fig. I.51

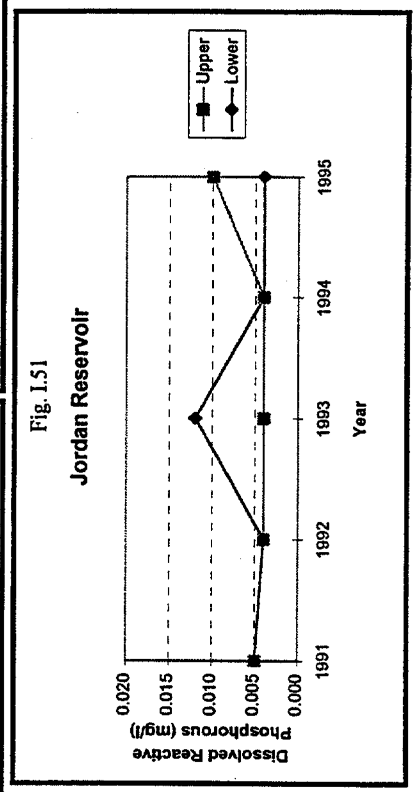
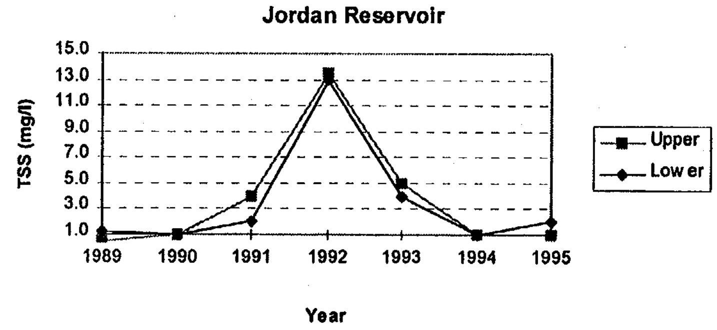


Fig. I.52



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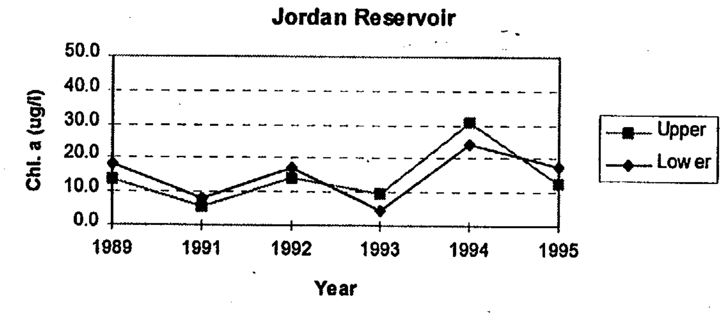

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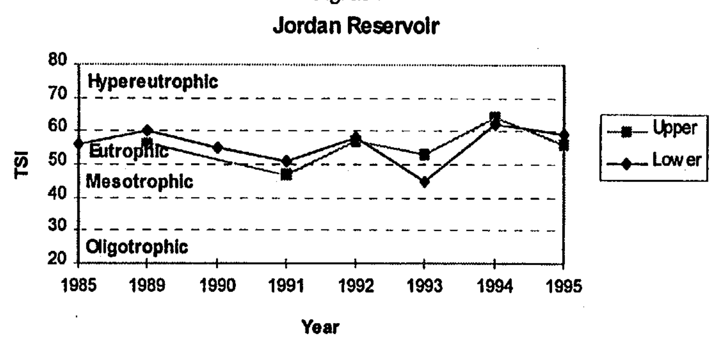


Fig. I.55

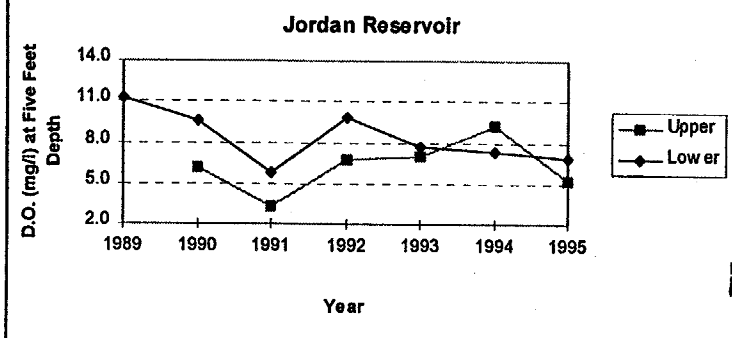


Table I.1. Nitrogen-phosphorus ratios (TN:TP) of RWQM locations in the Coosa Basin.

Reservoir	Location	Year (August)	TN:TP	Limiting nutrient
Weiss	Near stateline	1993	5:1	Nitrogen
		1994	8:1	Nitrogen
		1995	2:1	Nitrogen
	Upper	1991	6:1	Nitrogen
		1992	7:1	Nitrogen
		1993	9:1	Nitrogen
		1994	3:1	Nitrogen
		1995	2:1	Nitrogen
	Mid	1989	1:1	Nitrogen
		1991	6:1	Nitrogen
		1992	5:1	Nitrogen
		1993	11:1	Optimum
		1994	2:1	Nitrogen
		1995	2:1	Nitrogen
	Lower	1989	3:1	Nitrogen
		1991	9:1	Nitrogen
		1992	6:1	Nitrogen
		1993	14:1	Optimum
		1994	15:1	Optimum
		1995	4:1	Nitrogen
Neely Henry	Upper	1991	18:1	Phosphorus
		1992	53:1	Phosphorus
		1993	9:1	Nitrogen
		1994	8:1	Nitrogen
		1995	3:1	Nitrogen
	Lower	1991	24:1	Phosphorus
		1992	6:1	Nitrogen
		1993	12:1	Optimum
		1994	8:1	Nitrogen
		1995	4:1	Nitrogen

Table I.1. Nitrogen-phosphorus ratios (TN:TP) of RWQM locations in the Coosa Basin.

Reservoir	Location	Year (August)	TN:TP	Limiting nutrient
Logan Martin	Upper	1991	26:1	Phosphorus
		1992	8:1	Nitrogen
		1993	18:1	Phosphorus
		1994	16:1	Optimum
		1995	3:1	Nitrogen
	Lower	1991	30:1	Phosphorus
		1992	19:1	Phosphorus
		1993	16:1	Optimum
		1994	12:1	Optimum
		1995	3:1	Nitrogen
Lay	Upper	1991	18:1	Phosphorus
		1992	17:1	Phosphorus
		1993	18:1	Phosphorus
		1994	6:1	Nitrogen
		1995	15:1	Optimum
	Mid	1991	16:1	Optimum
		1992	27:1	Phosphorus
		1993	29:1	Phosphorus
		1994	8:1	Nitrogen
		1995	3:1	Nitrogen
	Lower	1991	16:1	Optimum
		1992	37:1	Phosphorus
		1993	35:1	Phosphorus
		1994	7:1	Nitrogen
		1995	5:1	Nitrogen
Mitchell	Upper	1991	24:1	Phosphorus
		1992	5:1	Nitrogen
		1993	8:1	Nitrogen
		1994	4:1	Nitrogen
		1995	5:1	Nitrogen
	Lower	1991	20:1	Phosphorus
		1992	4:1	Nitrogen
		1993	8:1	Nitrogen
		1994	5:1	Nitrogen
		1995	4:1	Nitrogen

Table I.1. Nitrogen-phosphorus ratios (TN:TP) of RWQM locations in the Coosa Basin.

Reservoir	Location	Year (August)	TN:TP	Limiting nutrient
Jordan	Upper	1991	33:1	Phosphorus
		1992	13:1	Optimum
		1993	46:1	Phosphorus
		1994	4:1	Nitrogen
		1995	4:1	Nitrogen
	Lower	1991	34:1	Phosphorus
		1992	11:1	Optimum
		1993	49:1	Phosphorus
		1994	4:1	Nitrogen
		1995	5:1	Nitrogen

Phosphorus Ltd. >16:1 Optimum 11-16:1 Nitrogen Ltd. <11:1
(Porcella et al. 1974)

II. Tallapoosa River Basin

Precipitation and Discharge

Though variable across the state, rainfall in many areas was higher than normal during the growing seasons of 1989, 1991, and 1994 and lower than normal during the growing seasons of 1990, 1992, 1993, and 1995 (Appendix B).

The mean growing season (May-August) discharge measured at Wadley, AL, located between Harris and Martin Reservoirs, was greater than the long-term mean (1964-1995) in 1989, 1991, and 1994 (Fig. II.1). The mean growing season discharge at Wadley, AL was less than the long-term mean in 1985, 1990, 1992, 1993, and 1995 with the lowest discharge of the years monitored occurring in 1995. The mean growing season (May-August) discharge measured at Tallassee, AL, (long-term mean 1929-1995), located immediately downstream of Thurlow Reservoir, followed the same pattern (Fig. II.2).

Harris Reservoir

Nitrogen. Mean TN values for Harris Reservoir were the highest of the Tallapoosa River reservoirs (Fig. II.3). Within the reservoir, mean TN values were highest in the lower portion. No line graphs of year-to-year nitrogen data are available for Harris because only two years of data were available for the lower and mid-reservoir locations with one year available for the upper reservoir.

Phosphorus. Mean TP values were also the highest of Tallapoosa River reservoirs though the 1994 concentration of the Sougahatchee Creek embayment of Yates Reservoir was higher (Fig. II.4). No line graphs of year-to-year total phosphorus data are available for Harris because only two years of data were available for the lower and mid-reservoir locations with one year available for the upper reservoir. Dissolved reactive phosphorus concentrations in Harris were usually below detection limits when sampled. Therefore, no mean or yearly graphs were developed.

TN:TP ratios. Total nitrogen to total phosphorus ratios indicated phosphorus as the limiting nutrient on all occasions with the exception of the mid-reservoir location in 1994 when the ratio was within the optimum range (Table II.1).

Suspended solids. Mean TSS values for Harris were the lowest overall of the Tallapoosa River reservoirs (Fig. II.5) with the exception of the mean value for the Sougahatchee Creek embayment of Yates Reservoir. At mid-reservoir, TSS concentrations increased from 1989 to 1991 and were essentially the same in 1991 and

1994 (Fig. II.8). At the lower reservoir, TSS concentrations varied little in the years monitored.

Chlorophyll a. Mean chlorophyll a values for Harris Reservoir were the highest overall of the Tallapoosa River reservoirs (Fig. II.6) though the 1994 concentration for the Sougahatchee Creek embayment of Yates Reservoir was higher. Within the reservoir, mean values declined from upstream to downstream locations. Chlorophyll a concentrations at mid-reservoir were slightly lower in 1991 than in 1989 but were much higher in 1994 (Fig. II.9). At the lower reservoir, concentrations increased in all years monitored 1985-1994.

Trophic state. Mean TSI values for mid-reservoir were within the lower half of the eutrophic range with mean values for the lower reservoir within the mesotrophic range (Fig. II.7). The single value for the upper reservoir was within the lower half of the eutrophic range. Trophic state index values at mid and lower reservoir locations increased from mesotrophic to eutrophic levels in the years monitored 1985-1994.

Dissolved oxygen. Dissolved oxygen concentrations in Harris were well above the criterion limit in all years monitored (Fig. II.11).

Discussion. Of primary concern for Harris Reservoir is the increasing trophic state observed in recent years and the potential for further increases. Withdrawal of water from the Tallapoosa Basin in Georgia is likely in the future. Several alternatives are currently under review with certain withdrawal alternatives recommending effluent pump-back to the Tallapoosa to minimize interbasin transfer (CH2M Hill, 1995). Reservoirs of the Tallapoosa River basin are relatively infertile when compared to those of the Coosa and Tombigbee Basins and algal populations would respond quickly to increases in available nutrients. Any significant increase in nutrient loading to Harris Reservoir especially when combined with an increase in reservoir retention time is likely to produce increases in trophic state in a relatively short period of time.

Available water quality data for Harris Reservoir is limited. Continued monitoring is very important to evaluate changes in trophic state and water quality as they occur in addition to continuing development of an adequate database for Harris Reservoir to aid in the analysis of trends in water quality.

Martin Reservoir

Nitrogen. Mean TN values for Martin Reservoir were less than those of upstream Harris Reservoir (Fig. II.3). Within the reservoir, mean TN values were greatest in the Blue Creek area and similar at all other locations. Total nitrogen concentrations were variable at all locations in years monitored (Fig. II.12).

Phosphorus. With the exception of the upper reservoir location, mean TP values were lowest in Martin of Tallapoosa reservoir locations (Fig. II.4). However, TP concentrations have increased at all reservoir locations in the years monitored (Fig. II.13). Dissolved reactive phosphorus concentrations in Martin were usually below detection limits when sampled. Therefore, no mean or yearly graphs were developed.

TN:TP ratios. Total nitrogen to total phosphorus ratios for Blue Creek, Kowaliga, and lower reservoir locations indicated phosphorus as the limiting nutrient at all locations in years monitored (Table II.1). At the upper reservoir location, TN:TP declined in each year monitored with phosphorus the limiting nutrient in 1989 and 1990, the ratio within the optimum range in 1992, and nitrogen the limiting nutrient in 1994.

Suspended solids. Mean TSS values for the upper reservoir were the highest of Tallapoosa reservoir locations with the exception of those of Yates Reservoir (Fig. II.5). Mean TSS values of other locations in Martin were below those of the upper reservoir with mean values of the lower reservoir the least of the Tallapoosa locations. Total suspended solids concentrations at all locations increased in 1992 from 1989 then decreased in 1994 with concentrations from 1994 similar at all locations (Fig. II.14).

Chlorophyll a. Mean chlorophyll a values of Martin were below those of comparable locations in upstream Harris Reservoir, with values from the Kowaliga arm the lowest of the reservoir (Fig. II.6). Chlorophyll a concentrations at all locations were highest in 1994 with concentrations from three of four monitoring locations increasing in the last two years monitored (Fig. II.15).

Trophic state. The mean TSI value for the upper reservoir was within the mesotrophic range while mean values from all other locations were within the oligotrophic range (Fig. II.7). For the upper reservoir, TSI values remained within the mesotrophic range until 1994 when values increased into the lower level of the eutrophic range (Fig. II.16). For the lower reservoir, TSI values varied between oligotrophic and mesotrophic levels. For the Blue Creek area, TSI values increased from oligotrophic levels in 1989 to mesotrophic levels in 1994. For the Kowaliga area, TSI values increased in the three years monitored but remained within the oligotrophic range.

Dissolved oxygen. Dissolved oxygen concentrations were above the criterion limit at all locations in all years monitored with only slight variation between years and locations (Fig. II.17).

Discussion. Current water quality concerns for Martin Reservoir include the increasing phosphorus concentrations of all monitoring locations . Phosphorus increases of the upper reservoir and the shift from phosphorus-limited to nitrogen-limited conditions are most notable. In addition to and likely related to the phosphorus increases are the increases in chlorophyll a concentrations and trophic state at all locations.

Future concerns include the potential for further increases in nutrient and trophic state given future upstream water diversion activities and effluent pump-back. Water quality effects to Martin Reservoir from water withdrawal activities will likely be buffered to some degree by the presence of Harris Reservoir upstream with the effect to Martin likely dependent on the magnitude of water diversion, effluent pump-back, and seasonal precipitation.

Continued monitoring is very important to evaluate changes in trophic state and water quality as they occur in addition to continuing development of an adequate database for Martin Reservoir to aid in the analysis of trends in water quality.

Yates Reservoir

Nitrogen. The mean TN value for lower Yates Reservoir were higher than those of three locations in Martin Reservoir (Fig. II.3). The value for the Sougahatchee Creek embayment was highest of all locations downstream of Harris Reservoir. Only two years of nitrogen data was available for Yates Reservoir, prohibiting development of line graphs for the years monitored.

Phosphorus. The mean TP value for lower Yates Reservoir were higher than those of three locations in upstream Martin Reservoir (Fig. II.4). The single TP concentration for the Sougahatchee embayment of Yates was much higher than those of other Tallapoosa locations monitored. Only two years of total phosphorus was available for Yates Reservoir, prohibiting development of line graphs for the years monitored. Dissolved reactive phosphorus concentrations in Yates were usually below detection limits when sampled. Therefore, no mean or yearly graphs were developed.

TN:TP ratios. Total nitrogen to total phosphorus ratios for Yates Reservoir in 1994 indicated nitrogen as the limiting nutrient in the Sougahatchee Creek embayment and phosphorus as the limiting nutrient in the lower reservoir location (Table II.1).

Suspended solids. The mean TSS value for lower Yates Reservoir and the value for Sougahatchee Creek embayment of Yates were highest of all Tallapoosa reservoir locations (Fig. II.5). In lower Yates Reservoir, TSS concentrations increased in the years monitored with a sharp increase in 1994 (Fig. II.18).

Chlorophyll a. The mean chlorophyll a value for lower Yates Reservoir was above those of most Martin Reservoir locations (Fig. II.6). The single concentration from the Sougahatchee Creek embayment of Yates was much higher than those of all Tallapoosa reservoir locations. Chlorophyll a concentrations were much higher in 1989 than in 1985 and declined slightly in 1994 (Fig. II.19).

Trophic state. The mean TSI value for lower Yates Reservoir was just within the mesotrophic range (Fig. II.7). The single TSI value for the Sougahatchee Creek embayment was within the hypereutrophic range. At the lower reservoir, TSI values increased from the oligotrophic level in 1985 to the lower eutrophic level in 1989 (Fig. II.20). Values declined slightly to the upper mesotrophic range in 1994.

Dissolved oxygen. Dissolved oxygen concentrations in the lower reservoir were just above the criterion limit in 1989 and 1994 and below the limit in 1990 (Fig. II.21). At the Sougahatchee Creek embayment, DO concentrations were below the limit in both years monitored.

Discussion. Effects to water quality of Yates Reservoir from future water diversion and effluent pump-back activities will likely be similar in nature though of a lesser degree than effects to upstream reservoirs. At present, primary water quality concerns for Yates Reservoir are low DO concentrations measured in the lower reservoir and Sougahatchee Creek embayment and the increase in trophic state of the lower reservoir from 1985. Given the higher mean TN, TP, TSS, and chlorophyll a concentrations of Yates as compared to most locations of Martin Reservoir, it appears evident that there is a considerable nutrient source directly to Yates Reservoir. Sougahatchee Creek enters the reservoir upstream of the monitoring site located in the dam forebay. Water quality data collected from Sougahatchee Creek embayment in 1990 and 1994 indicated very high nutrient and chlorophyll a concentrations in comparison to other Tallapoosa reservoir locations indicating that Sougahatchee Creek is at least a partial contributor to the higher concentrations measured in lower Yates Reservoir. Because of the shortage of monitoring data from the embayment, further study is recommended to more accurately determine water quality of the embayment and its effect on the water quality of Yates Reservoir.

With the increases in trophic state in the reservoir and the low DO concentrations indicated by the limited data available, it is important to continue monitoring of Yates Reservoir so that any further changes in trophic state and water quality can be measured in addition to continuing development of a database to aid in the analysis of trends in reservoir water quality.

Thurlow Reservoir

Nitrogen. The mean TN value for Thurlow Reservoir was below those of all other Tallapoosa reservoir locations with the exception of upper Martin Reservoir (Fig. II.3). Only two years of nitrogen data were available for Thurlow Reservoir, prohibiting development of line graphs for the years monitored.

Phosphorus. The mean TP value for Thurlow Reservoir was above those of lower Yates Reservoir and three of four Martin Reservoir locations (Fig. II.4). Only two years of total phosphorus data was available for Thurlow Reservoir, prohibiting development of line graphs for the years monitored. Dissolved reactive phosphorus concentrations in Thurlow were usually below detection limits when sampled. Therefore, no mean or yearly graphs were developed.

TN:TP ratios. Total nitrogen to total phosphorus ratios for Thurlow Reservoir in 1994 were within the optimum range (Table II.1).

Suspended solids. The mean TSS value for Thurlow was below or similar to those of most upstream Tallapoosa reservoir locations (Fig. II.5). Total suspended solids concentrations in Thurlow varied little in the years monitored (Fig. II.18).

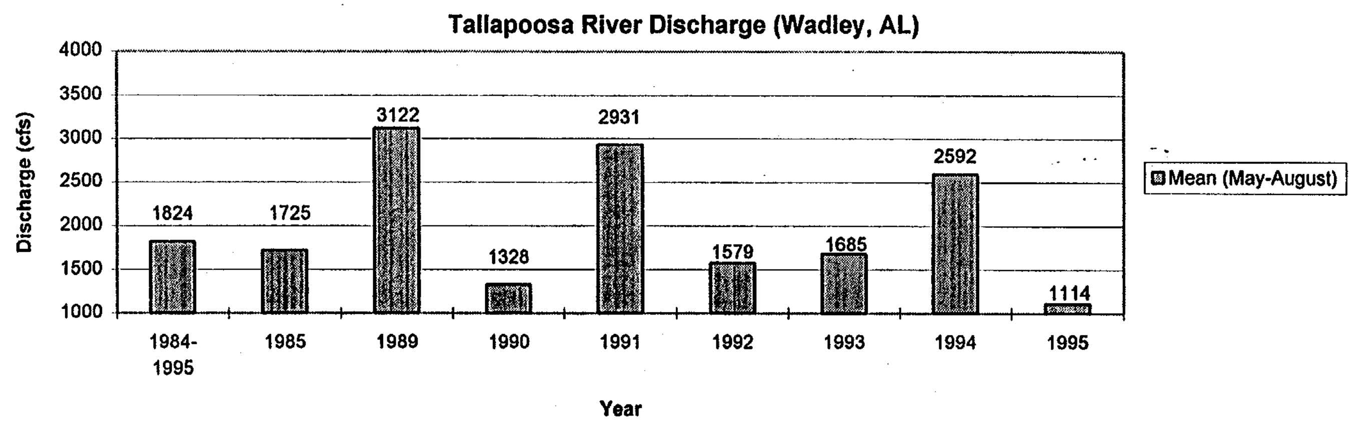
Chlorophyll a. The mean chlorophyll a concentration in Thurlow was the lowest of Tallapoosa reservoir locations with the exception of the Kowaliga arm of Martin Reservoir (Fig. II.6). Chlorophyll a concentrations in Thurlow Reservoir increased in years monitored (Fig. II.19).

Trophic state. The mean TSI value for Thurlow was within the oligotrophic range and the lowest of Tallapoosa locations with the exception the Kowaliga arm of Martin Reservoir (Fig. II.7). Trophic state index values for Thurlow increased from oligotrophic levels in 1985 to mesotrophic levels in 1994 (Fig. II.20).

Dissolved oxygen. Dissolved oxygen concentrations were above the criterion limit in 1989 and 1994 and below the limit in 1990 (Fig. II.21).

Discussion. Effects to water quality of Tallapoosa River reservoirs from future water withdrawal and effluent pump-back activities in Georgia would likely be least discernible in Thurlow Reservoir because of its most downstream location. At present, primary concerns for Thurlow Reservoir are low dissolved oxygen concentrations and increases in trophic state. With the increases in trophic state in the reservoir and the low DO concentrations indicated by the limited data available, it is important to continue monitoring of the reservoir so that any further changes in trophic state and water quality can be measured in addition to continuing development of a database to aid in the analysis of trends in water quality.

Fig. II.1



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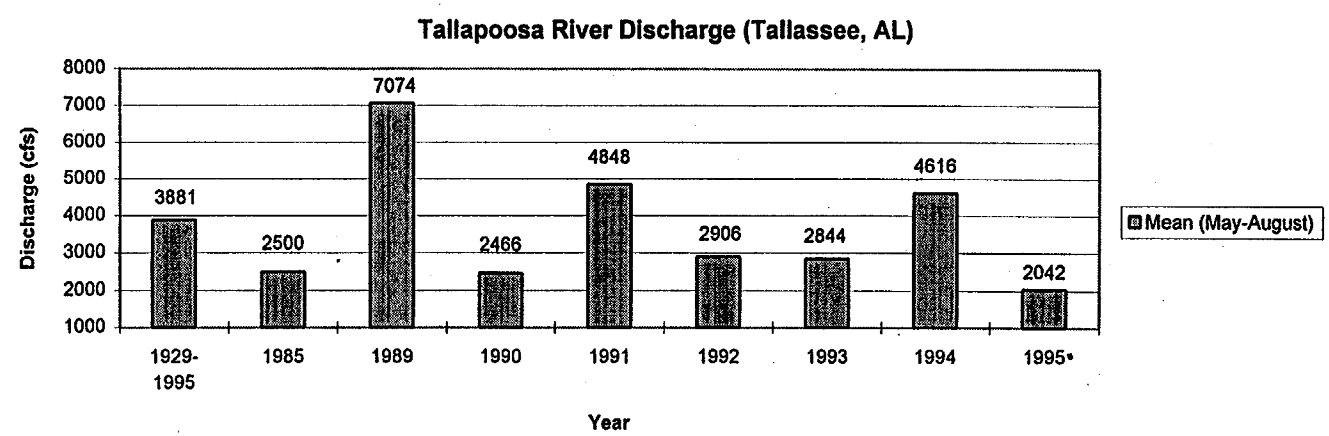

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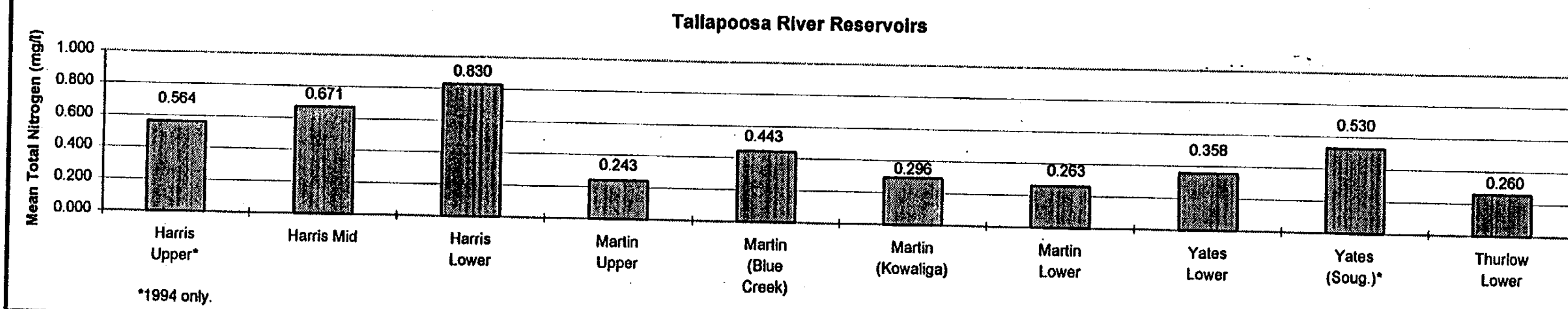

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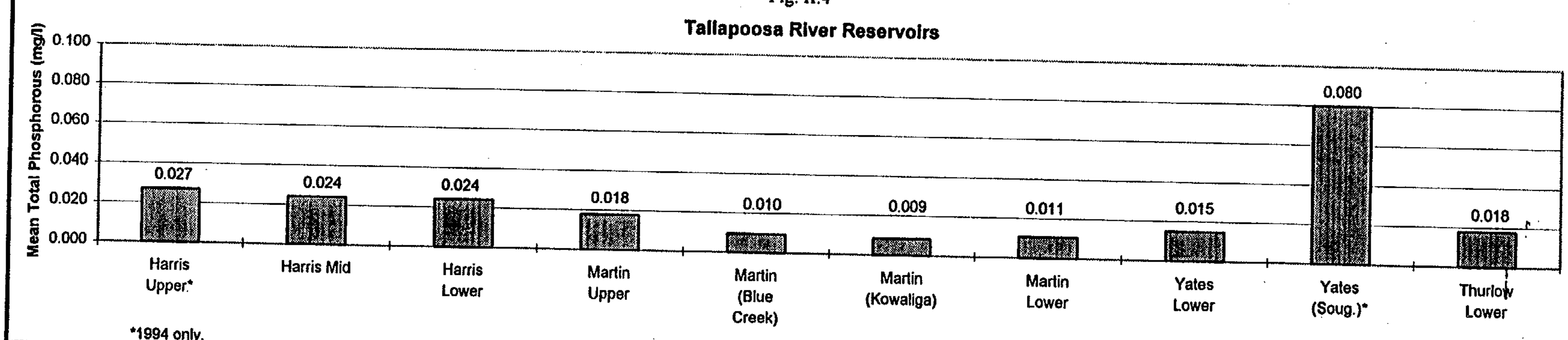

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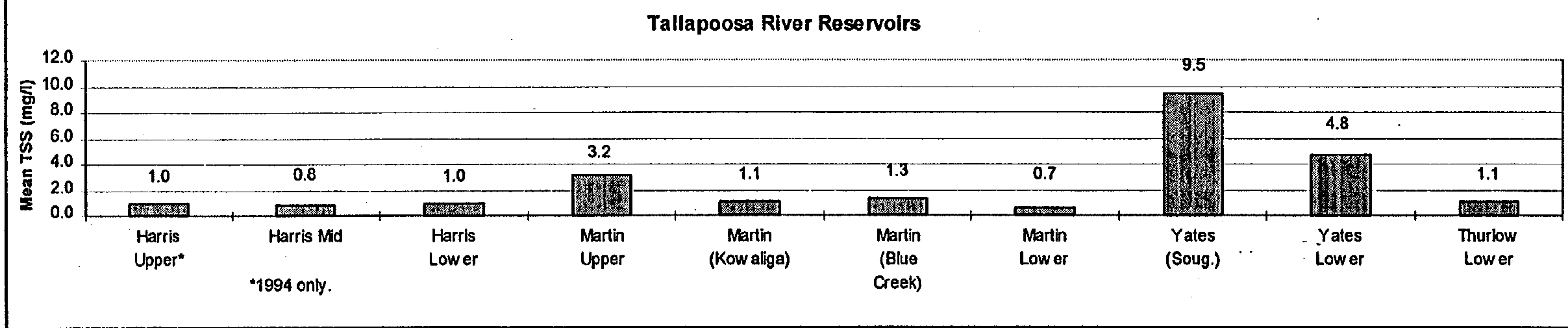

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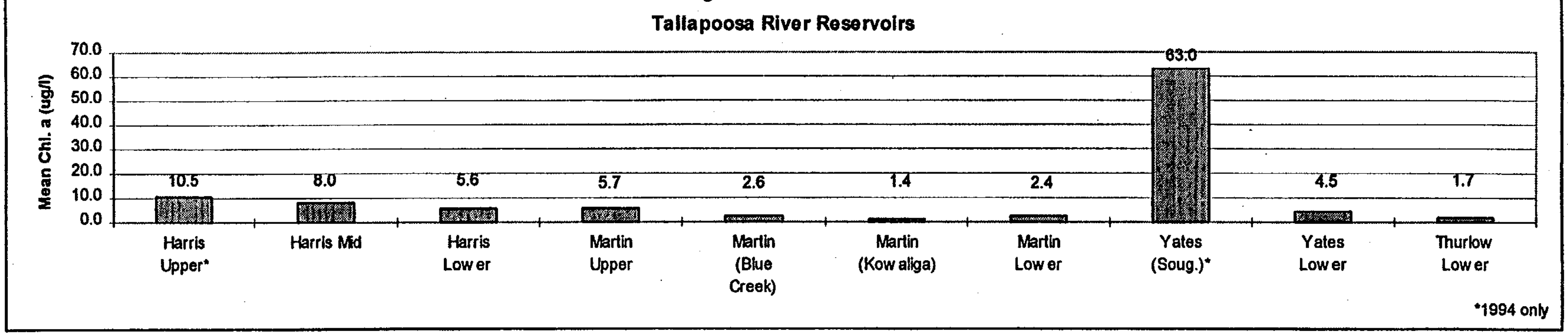

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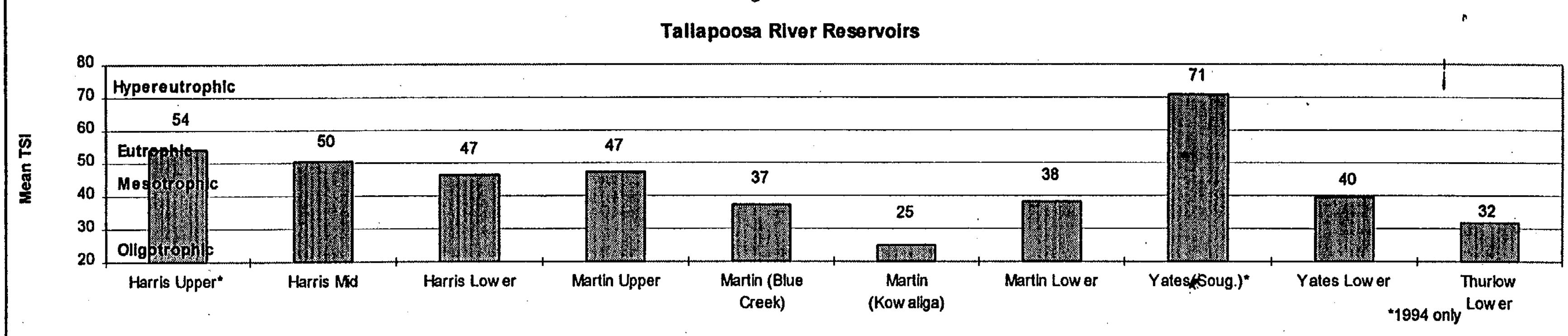

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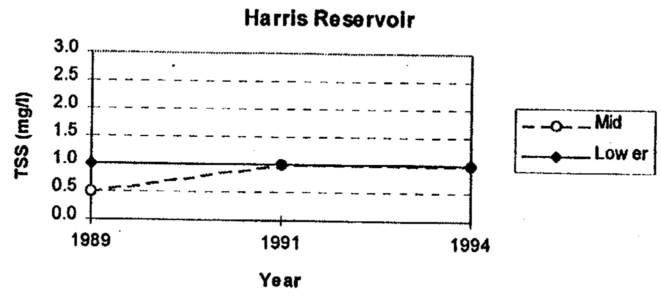

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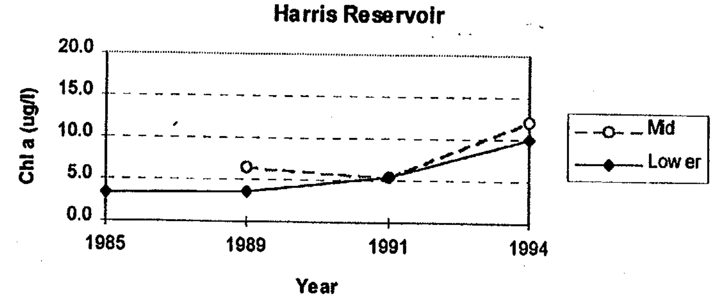

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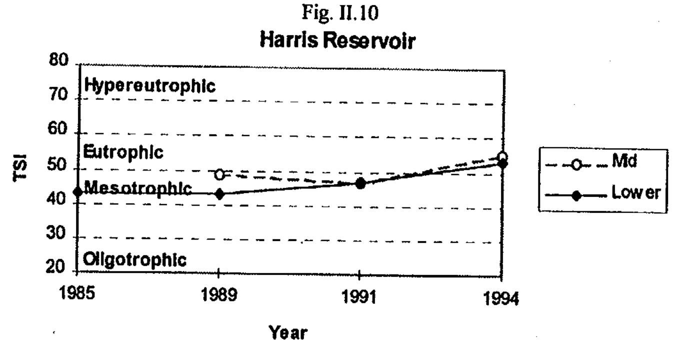

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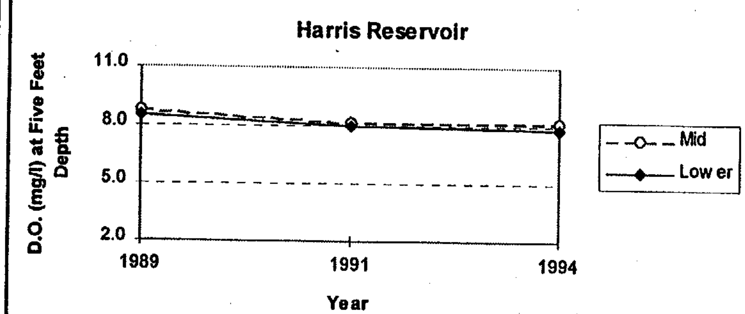

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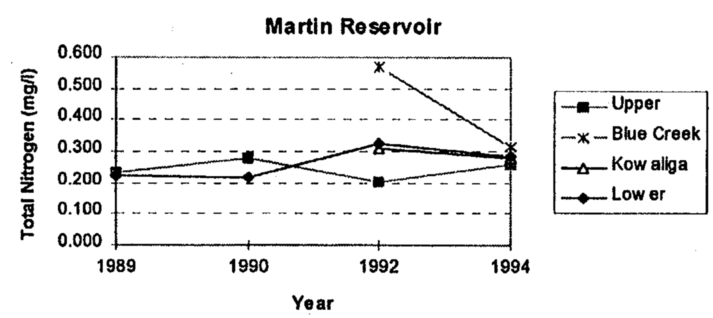

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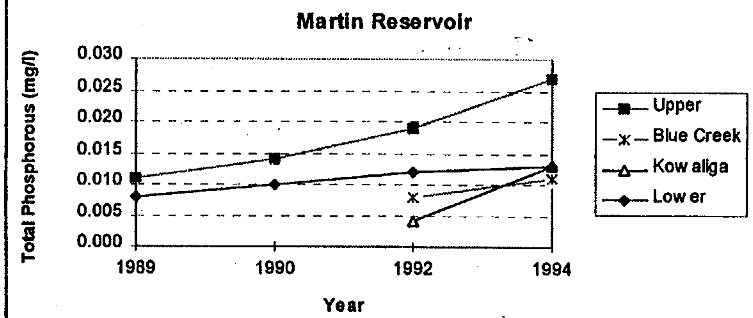

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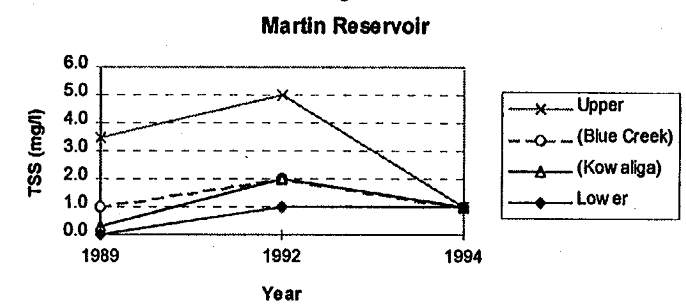


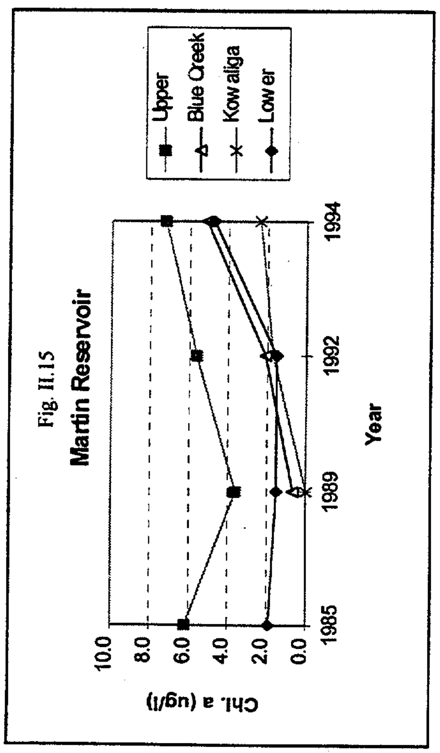


Fig. II.15
Martin Reservoir

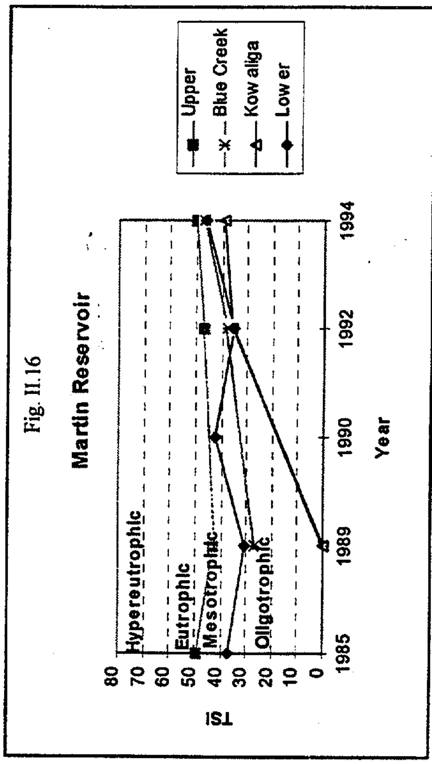


Fig. II.16
Martin Reservoir

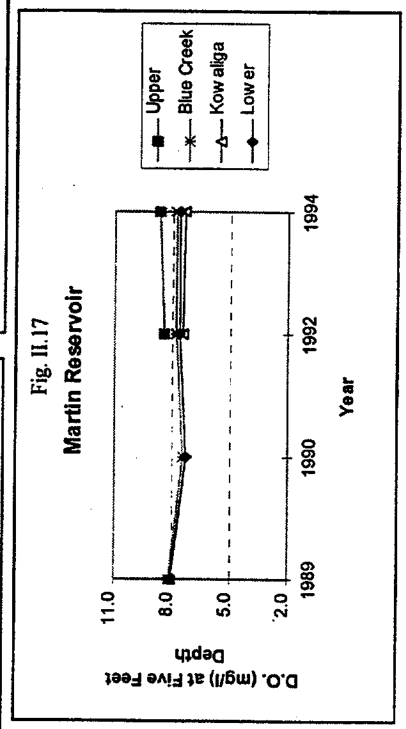


Fig. II.17
Martin Reservoir

Fig. II.18

Yates & Thurlow Reservoirs

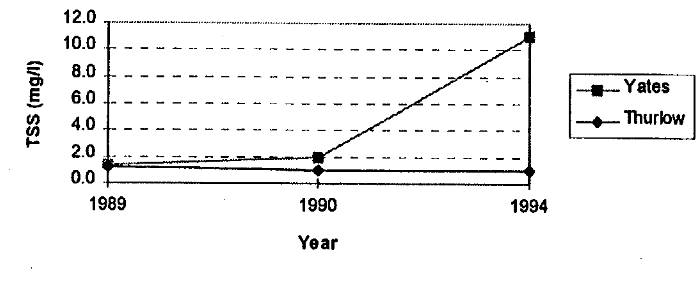


Fig. II.19

Yates & Thurlow Reservoirs

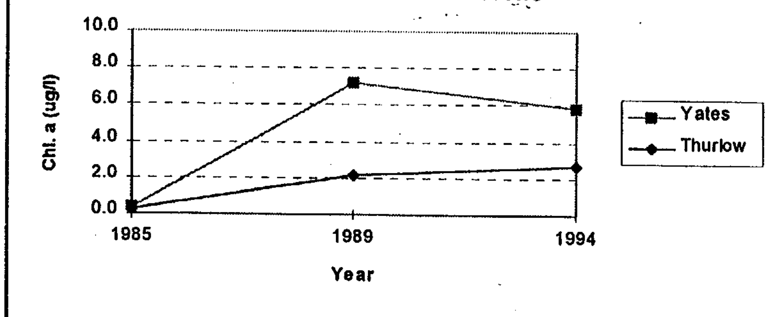


Fig. II.20

Yates and Thurlow Reservoirs

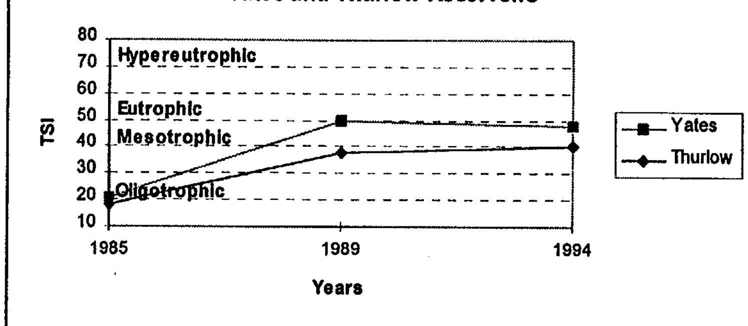


Fig. II.21

Yates & Thurlow Reservoirs

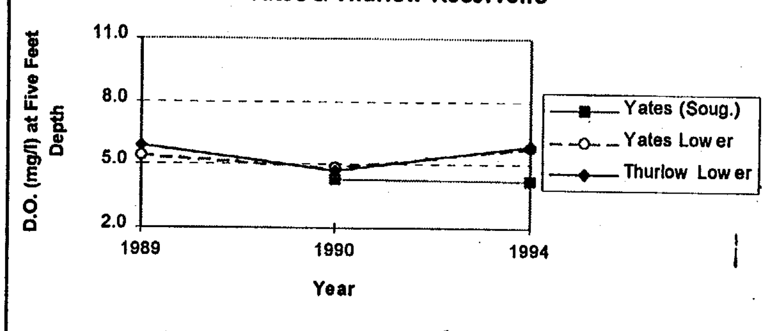


Table II.1. Nitrogen-Phosphorus ratios (TN:TP) of RWQM locations in the Tallapoosa Basin.

Reservoir	Location	Year (August)	TN:TP	Limiting nutrient
Harris	Upper	1994	21:1	Phosphorus
	Mid	1991	38:1	Phosphorus
		1994	11:1	Optimum
	Lower	1991	39:1	Phosphorus
		1994	28:1	Phosphorus
Martin	Upper	1989	21:1	Phosphorus
		1990	20:1	Phosphorus
		1992	11:1	Optimum
		1994	10:1	Nitrogen
	Blue Creek	1992	71:1	Phosphorus
		1994	29:1	Phosphorus
	Kowaliga	1992	78:1	Phosphorus
		1994	22:1	Phosphorus
	Lower	1989	28:1	Phosphorus
		1990	22:1	Phosphorus
		1992	27:1	Phosphorus
		1994	22:1	Phosphorus
Yates	Sougahatchee	1994	4:1	Nitrogen
	Lower	1994	24:1	Phosphorus
Thurlow	Lower	1994	14:1	Optimum

Phosphorus Ltd. > 16:1 Optimum 11-16:1 Nitrogen < 11:1 (Porcella et al. 1974)

III. Alabama River Basin

Precipitation and Discharge

Though variable across the state, rainfall in many areas was higher than normal during the growing seasons of 1989, 1991, and 1994 and lower than normal during the growing seasons of 1990, 1992, 1993, and 1995 (Appendix B).

The mean growing season (May-August) discharge for the basin measured at Claiborne Dam was greater than the long-term mean (1976-1995) in 1989, 1991, and 1994 (Fig. III.1). The mean growing season discharge was less than the long-term mean in 1985, 1990, 1992, 1993, and 1995 with the lowest discharge of the years monitored occurring in 1995.

Woodruff Reservoir

Nitrogen. Mean TN values in Woodruff were highest at mid-reservoir with values from all locations in Woodruff below those of downstream Dannelly and Claiborne (Fig. III.2). Total nitrogen concentrations were similar at all locations with the exception of much higher concentrations recorded at mid-reservoir in 1990 (Fig. III.8). In the upper and lower reservoir, TN concentrations decreased in 1989, 1990, and 1992 while concentrations at mid-reservoir increased in 1990 and decreased in 1992. In 1993 and 1995, TN concentrations increased at all locations.

Phosphorus. The mean TP value for the upper reservoir, located upstream of Montgomery, was the second lowest of the Alabama River reservoir stations with the value for the mid-reservoir, located downstream of Montgomery, the highest (Fig. III.3). Total phosphorus concentrations were highest in all portions of the reservoir in 1989 and appeared to decline overall through 1995 (Fig. III.9). The mean DRP concentrations in Woodruff were highest at mid-reservoir with values for the upper reservoir the lowest of all Alabama River reservoir locations (Fig. III.4). Dissolved reactive phosphorus concentrations were variable at all locations year to year though lowest values were recorded at all locations in 1992 (Fig. III.10).

TN:TP ratios. Total nitrogen to total phosphorus ratios indicated nitrogen to be the limiting nutrient most often in stations located downstream of Montgomery (Table III.1).

Suspended solids. The mean TSS value for mid-reservoir was the highest of all Alabama River reservoir locations (Fig. III.5). In 1992, TSS concentrations in the mid and lower reservoir were higher than in 1989 (Fig. III.11). Total suspended solids concentrations declined in the mid and lower reservoir in 1993 and 1995. Concentrations in the upper reservoir declined in 1993 and was similar to 1993 in 1995.

Chlorophyll a. Mean chlorophyll a values in Woodruff were greatest in the lower portion with this location the second highest of Alabama River reservoir locations (Fig.III.6). Chlorophyll a concentrations in the upper reservoir varied during the years monitored with highest concentrations in 1995 (Figs. III.12). At mid-reservoir, concentrations varied year to year with an increase in 1995 while concentrations in the lower reservoir decreased in 1990 and 1992 from 1989, then increased in 1993 and 1995.

Trophic state. Mean TSI values for all locations of Woodruff were within the eutrophic range with the value for the lower reservoir the second highest of Alabama River reservoir locations (Fig. III.7). Trophic state index values in the upper and mid-reservoir locations varied during the years monitored with the TSI of both locations increasing in 1995 (Fig. III.13). At the lower reservoir location, TSI values decreased from the upper to lower levels of the eutrophic range during 1989-1992 then increased into the upper level of the eutrophic range in 1993 and 1995.

Dissolved oxygen. Dissolved oxygen concentrations were above the criterion limit at all locations on all dates monitored (Fig. III.14).

Discussion. At present, few water quality concerns are indicated for Woodruff Reservoir. Point and nonpoint source effects from the Montgomery area are evident from higher mean concentrations of all variables at mid and lower reservoir locations, located downstream of Montgomery, than at the upper reservoir location upstream of the Montgomery area. Continued monitoring is important to document any further increases in trophic state beyond those of 1993 and 1995 and any changes in water quality that may occur as a result of changes in trophic state.

Dannelly Reservoir

Nitrogen. The mean TN values of Dannelly Reservoir were the highest of all Alabama River reservoir locations (Fig. III.2). Total nitrogen concentrations at mid and lower reservoir locations increased in 1991 and decreased in 1993 and 1995 with concentrations in the upper reservoir decreasing from 1993 to 1995 (Fig. III.15).

Phosphorus. Mean TP values of Dannelly were below those of Woodruff Reservoir (Fig. III.3). Within the reservoir, mean TP values increased from upstream to downstream. Total phosphorus concentrations in the mid and lower reservoir increased in 1991 and decreased in 1993 and 1995 with concentrations in the upper reservoir decreasing from 1993 to 1995 (Fig. III.16). The mean DRP values for Dannelly were highest at mid-reservoir and second highest of all Alabama River reservoir locations (Fig. III.4). In the upper reservoir, DRP concentrations decreased from 1993 to 1995 (Fig. III.17). At mid-reservoir, DRP concentrations were similar in 1990 and 1991 then decreased in 1993 and 1995. In the lower reservoir, DRP concentrations were similar in 1990 and 1991, decreased in 1993, then increased in 1995.

TN:TP ratios. Total nitrogen to total phosphorus ratios indicated phosphorus as the limiting nutrient in all Dannelly locations with the exception of the lower reservoir in 1995 when the ratio was within the optimum range (Table III.1).

Suspended solids. The mean TSS values for Dannelly were highest at mid-reservoir with this value the second highest of all Alabama River reservoir locations (Fig. III.5). The mean TSS values for the upper and lower reservoir were the same and the lowest of Alabama River reservoir locations. Total suspended solids concentrations were very consistent in the lower portion of the reservoir though they decreased slightly in 1990 (Fig. III.18). At mid-reservoir, TSS concentrations decreased in 1990, increased in 1991 and 1993 and decreased in 1995 with concentrations of the upper reservoir also decreasing in 1995.

Chlorophyll a. The mean chlorophyll a value of the upper reservoir was the highest of all Alabama River reservoir locations (Fig. III.6). Chlorophyll a concentrations in the upper reservoir were much higher in 1989 and 1995 than in 1985 and 1993 (Fig. III.19). Concentrations at mid-reservoir decreased in 1991 and 1993 and increased in 1995. In the lower reservoir, concentrations were higher in 1989 than in 1985 and decreased in 1991. Chlorophyll a concentrations in the lower reservoir increased in 1993 and 1995.

Trophic state. The mean TSI value of the upper portion of Dannelly was the most eutrophic of all Alabama River reservoir locations (Fig. III.7). Mean TSI values declined at mid and lower reservoir locations. Trophic state index values of all locations of Dannelly Reservoir were within the eutrophic range in all years monitored with all locations increasing in 1995 (Fig. III.20).

Dissolved oxygen. Dissolved oxygen (DO) concentrations in the upper reservoir were slightly above the criterion limit in 1993 and 1995 (Fig. III.21). Concentrations at mid-reservoir were above the criterion in 1989, slightly above the criterion in 1991 and 1993, and below the criterion in 1995. In the lower reservoir, DO concentrations were above the criterion in all years monitored though only slightly so in 1991.

Discussion. Available water quality data indicates that primary water quality concerns for Dannelly are increases in trophic state observed in the lower reservoir in 1993 and at all locations in 1995 as well as low DO concentrations observed primarily at mid and upper reservoir locations. Continued monitoring is recommended to further document any changes in trophic state as they occur and the effect on water quality.

Claiborne Reservoir

Nitrogen. The mean TN value for Claiborne was higher than those of Woodruff Reservoir and lower than those of Dannelly Reservoir (Fig. III.2). Total nitrogen concentrations in Claiborne decreased in 1993 and 1995 from 1991 (Fig. III.22).

Phosphorus. The mean TP value for the lower portion of Claiborne appears in Fig. III.3. Total phosphorus concentrations increased from 1990 to 1991 and decreased in 1993 and 1995 (Fig. III.23). The mean DRP value for the lower portion of Claiborne was the highest of all Alabama River reservoir locations (Fig. III.4). Dissolved reactive phosphorus concentrations increased from 1991 to 1993 and decreased in 1995 (Fig. III.24).

TN:TP ratios. Total nitrogen to total phosphorus ratios for Claiborne indicated phosphorus as the limiting nutrient in 1991 and 1993 with nitrogen the limiting nutrient in 1995 (Table III.1).

Suspended solids. The mean TSS value for the lower portion of Claiborne was below those of Woodruff but above the value for the lower portion of Dannelly (Fig. III.5). Total suspended solids decreased from 1989 to 1990, increased in 1991 and 1993, and decreased in 1995 (Fig. III.25).

Chlorophyll a. The mean chlorophyll a value for Claiborne was the lowest of all Alabama River reservoir locations (Fig. III.6). Chlorophyll a concentrations were highest in Claiborne in 1989, decreased in 1991, then increased in 1993 and 1995 (Fig. III.26).

Trophic state. The mean TSI value was within the lower half of eutrophic range and lowest of the Alabama River reservoir locations (Fig. III.7). Trophic state index values for Claiborne were within the eutrophic range in 1989, 1993, and 1995 and just within the mesotrophic range in 1991 (Fig. III.27).

Dissolved oxygen. Dissolved oxygen concentrations in the lower portion of Claiborne Reservoir varied little during the years monitored and were slightly above the criterion limit in all years (Fig. III.28).

Discussion. Few water quality concerns are indicated for Claiborne Reservoir by available data. Dissolved oxygen concentrations have been near the criterion limit in all years monitored and should be monitored regularly. Though TSI values for Claiborne have varied little in the years monitored, recent increases in reservoirs upstream of Claiborne suggest that regular monitoring of the reservoir continue.

Fig. III.1

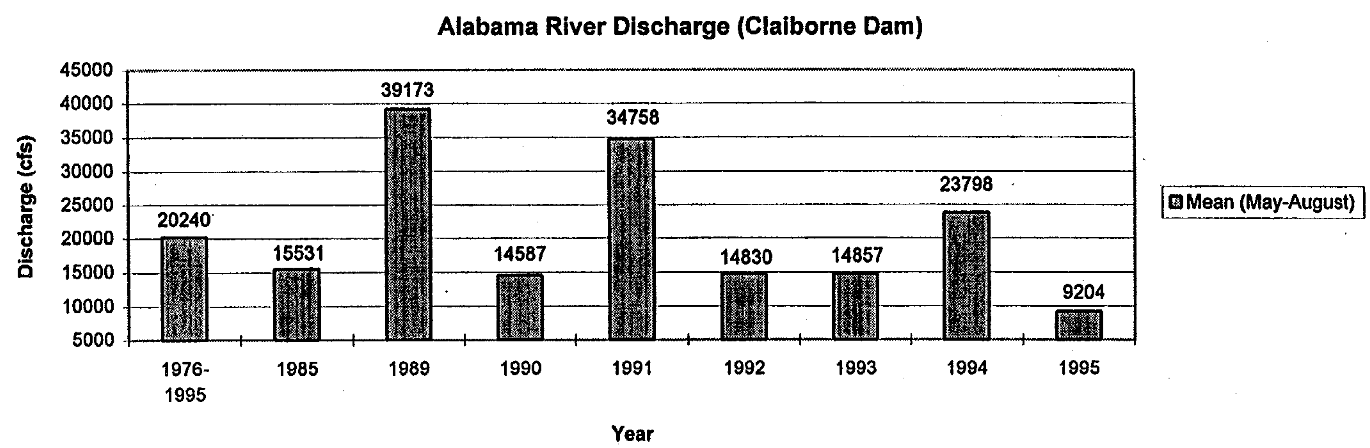

Alabama River Discharge (Claiborne Dam)
Discharge (cfs)
45000
40000
35000
30000
25000
20000
15000
10000
5000
20240
15531
39173
14587
34758
14830
14857
23798
9204
1976-1995
1985
1989
1990
1991
1992
1993
1994
1995
Year
Mean (May-August)

Fig. III.2

Alabama River Reservoirs

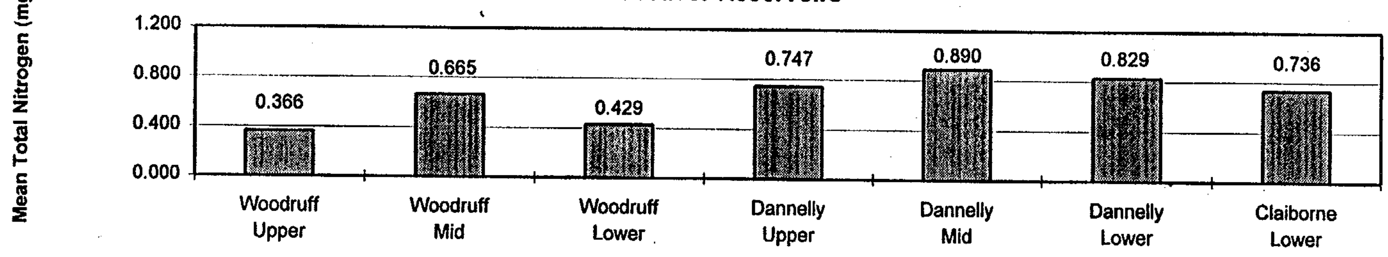


Fig. III.3

Alabama River Reservoirs

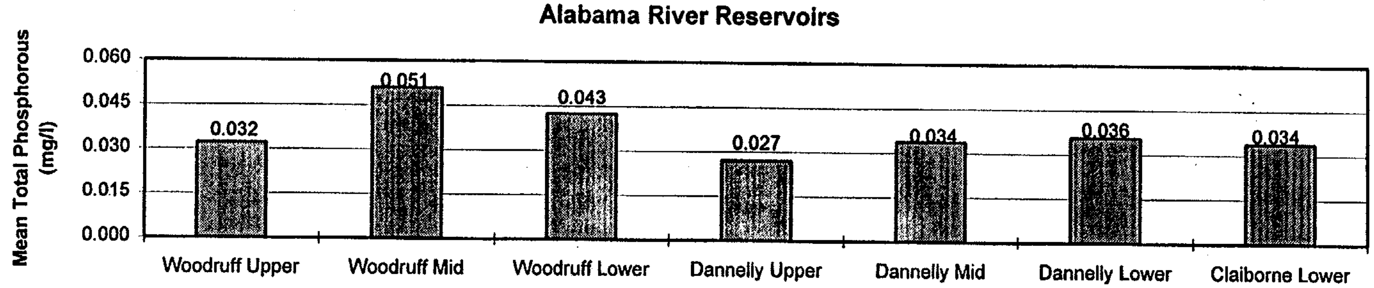


Fig. III.4

Alabama River Reservoirs

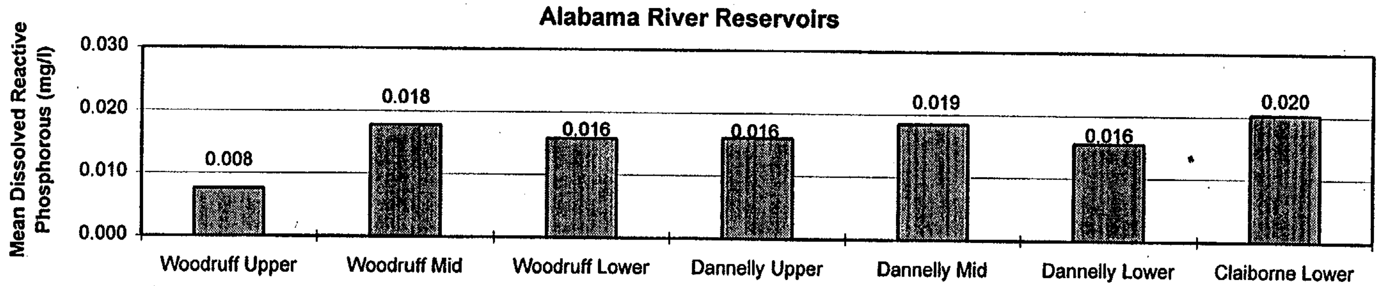


Fig. III.5

Alabama River Reservoirs

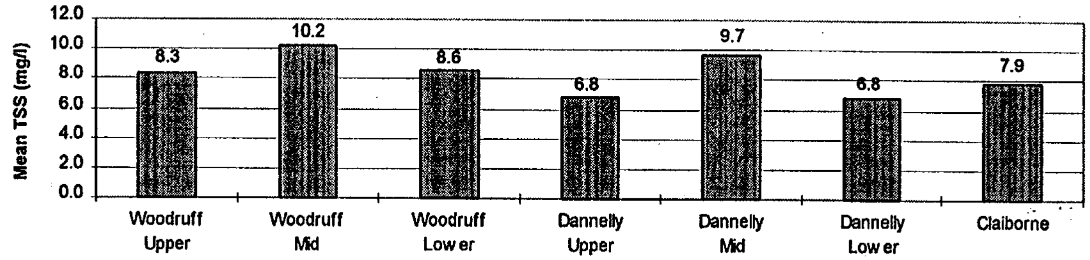


Fig. III.6

Alabama River Reservoirs

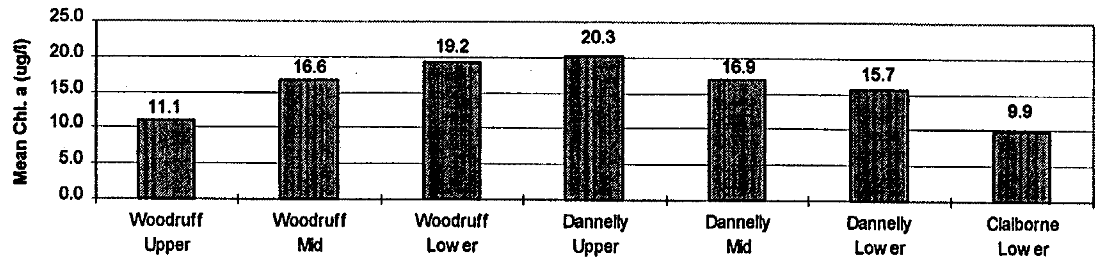
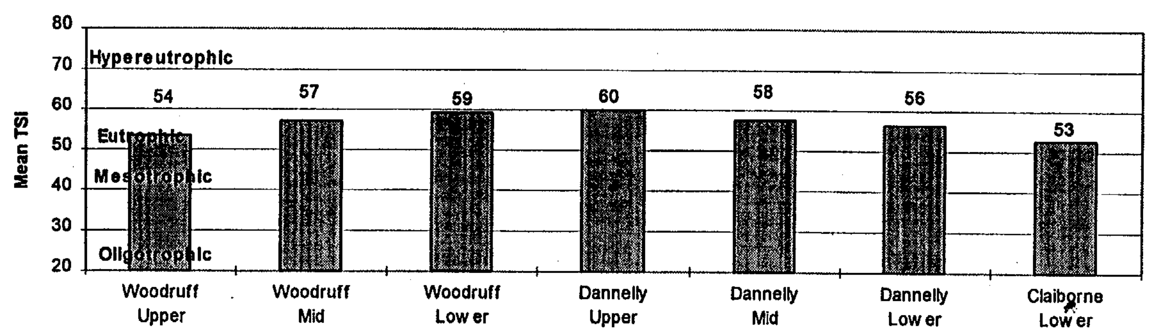


Fig.III.7

Alabama River Reservoirs



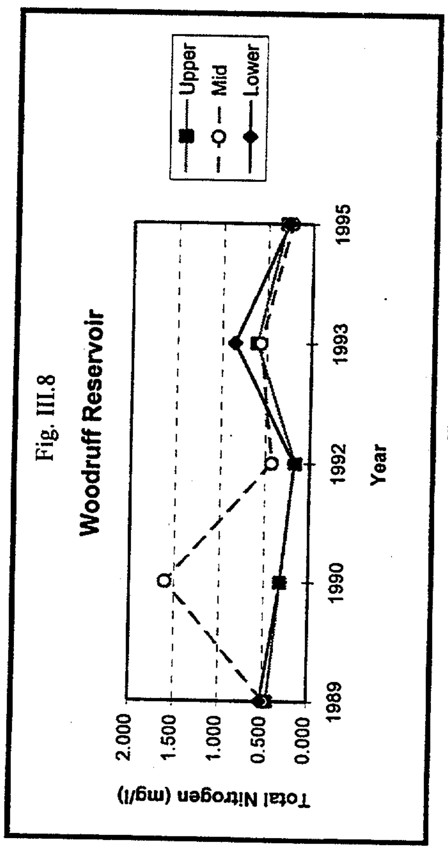


Fig. III.8

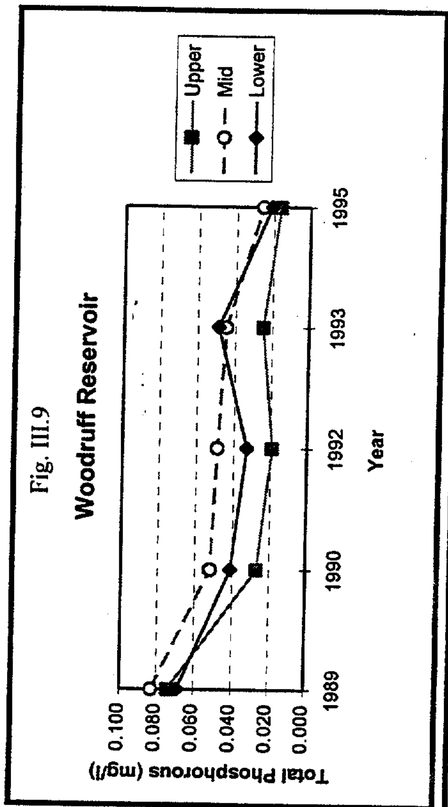


Fig. III.9

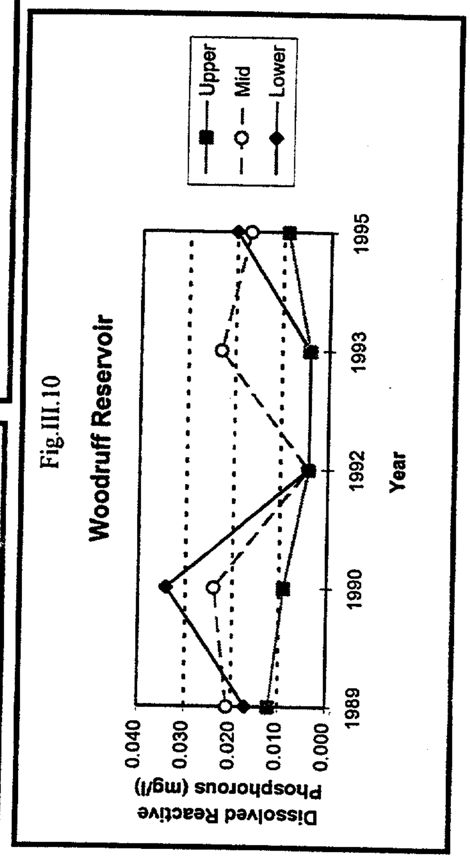


Fig.III.10

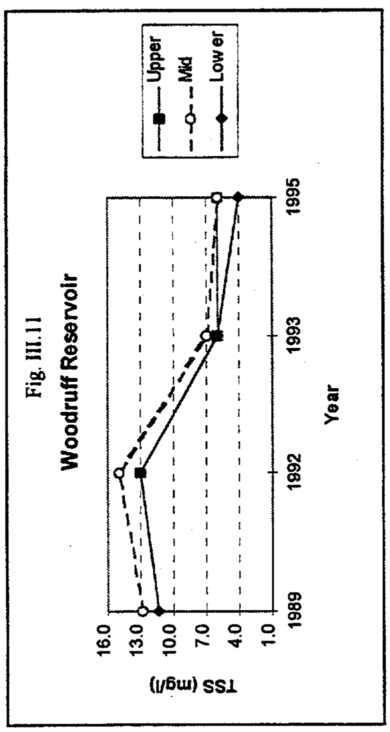


Fig. III.11

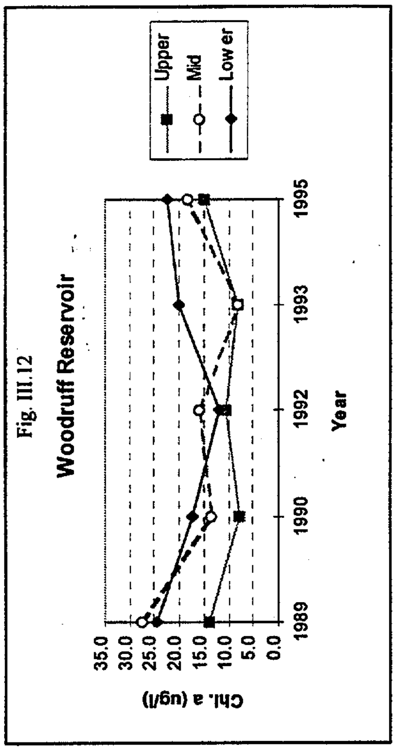


Fig. III.12

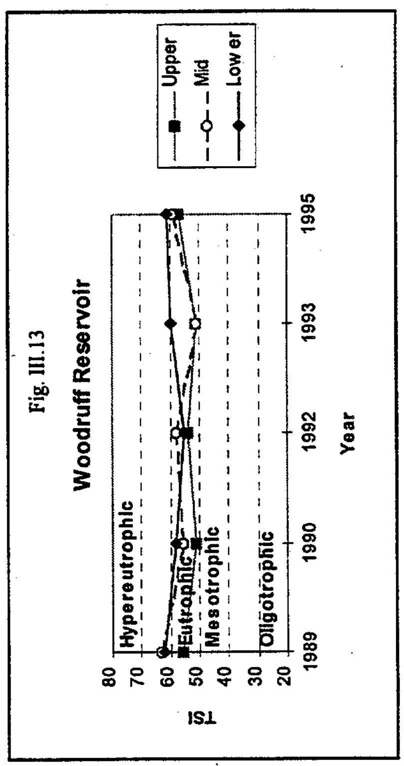


Fig. III.13

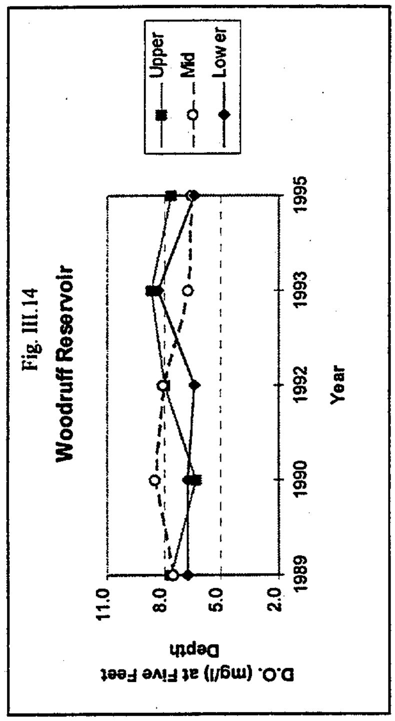


Fig. III.14

Fig. III.15

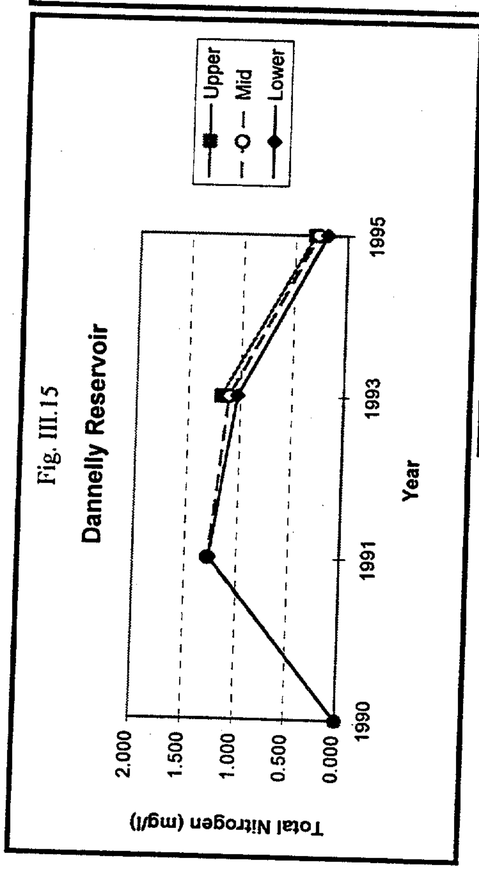


Fig. III.16

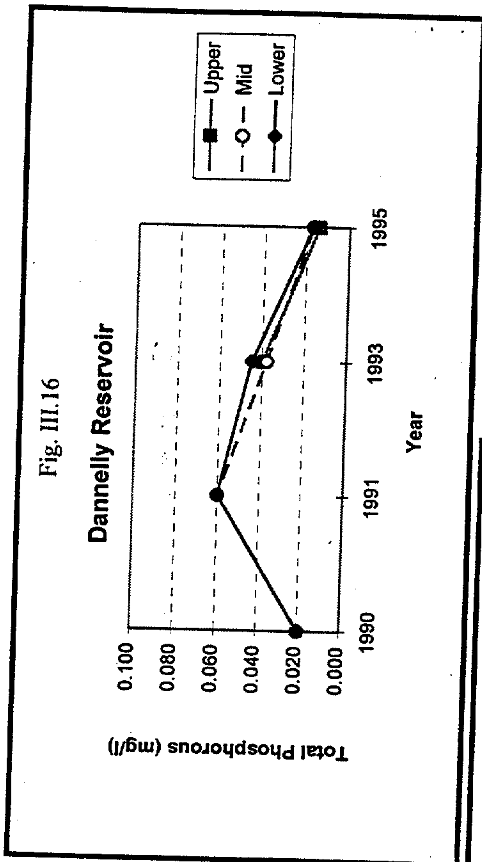


Fig. III.17

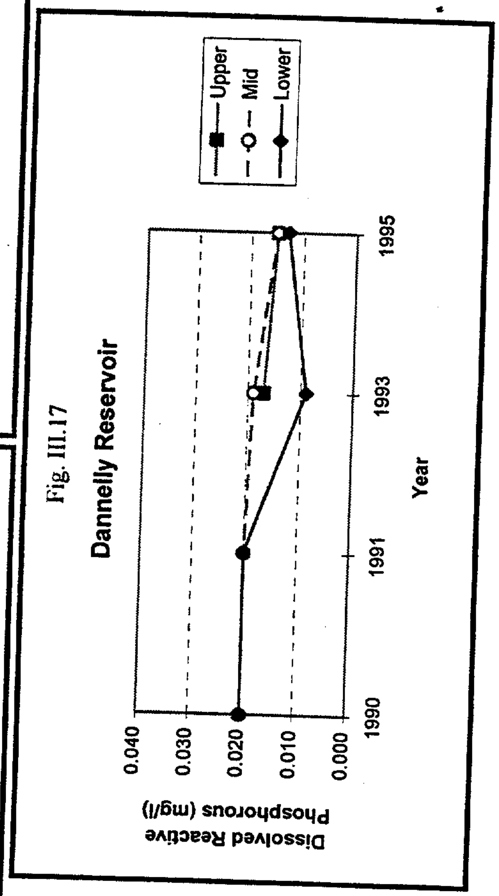


Fig. III.18

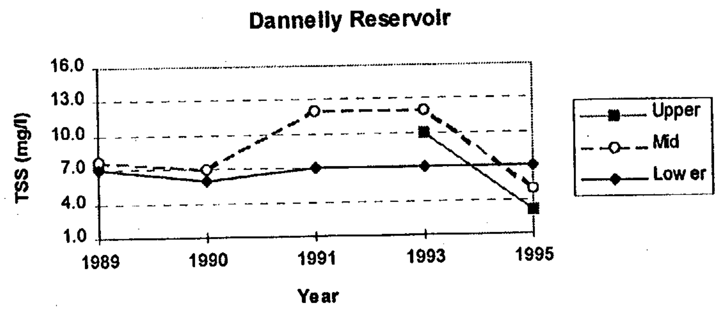


Fig. III.19

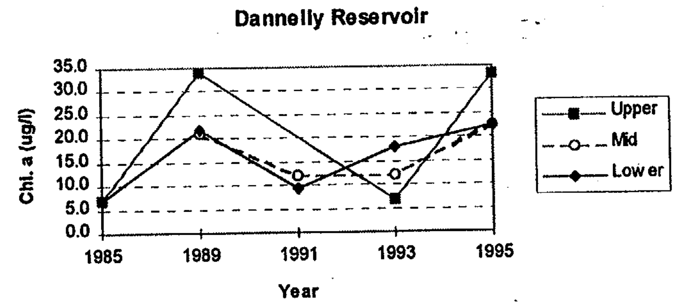


Fig. III.20

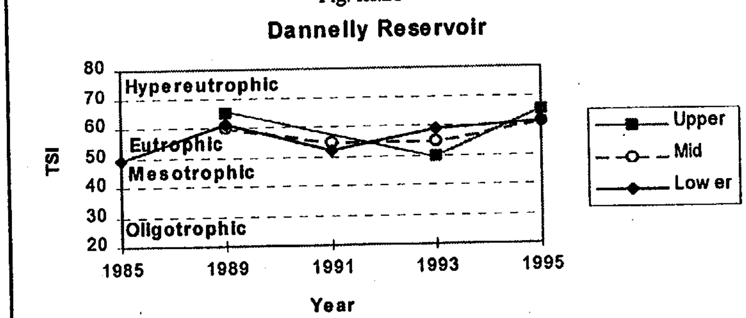


Fig. III.21

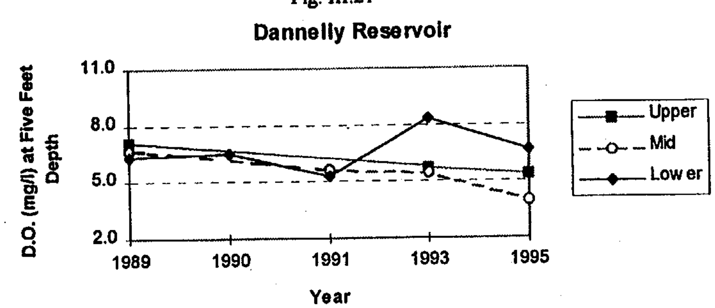


Fig. III.22

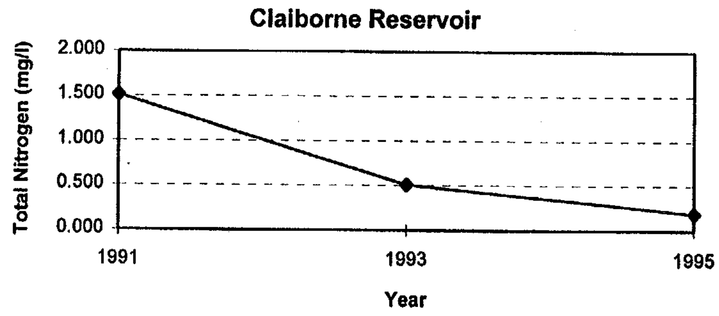


Fig. III.23

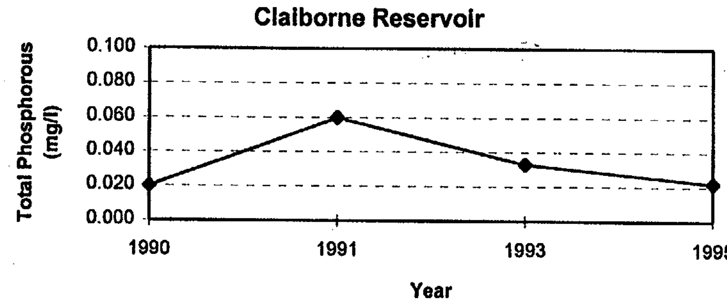


Fig. III.24

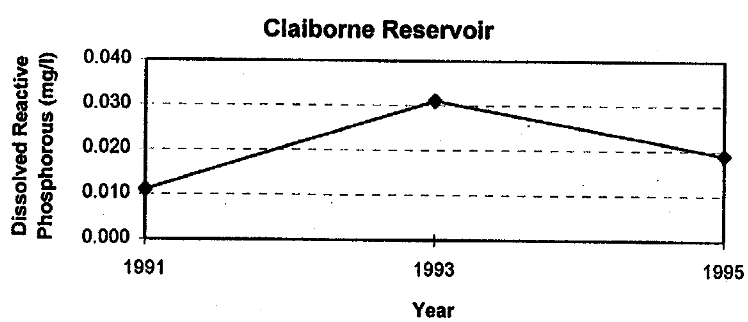


Fig. III.25

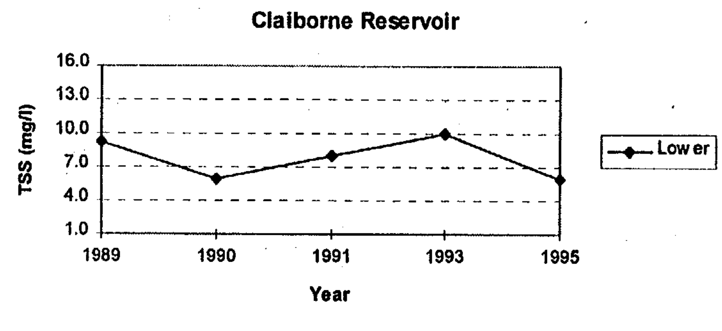


Fig. III.26

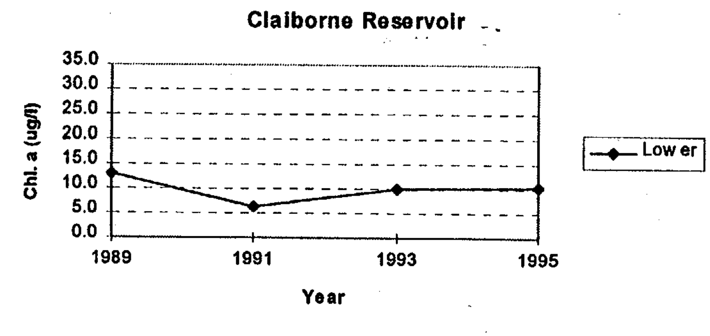


Fig. III.27

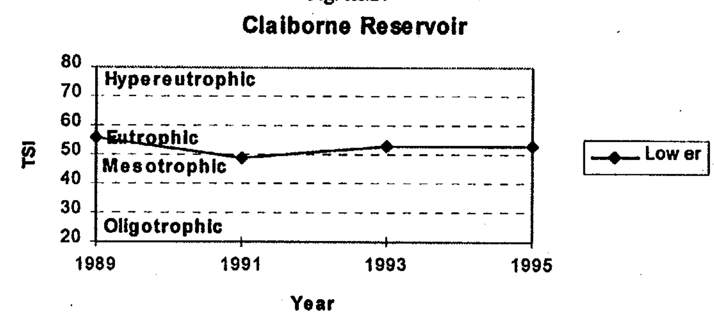


Fig. III.28

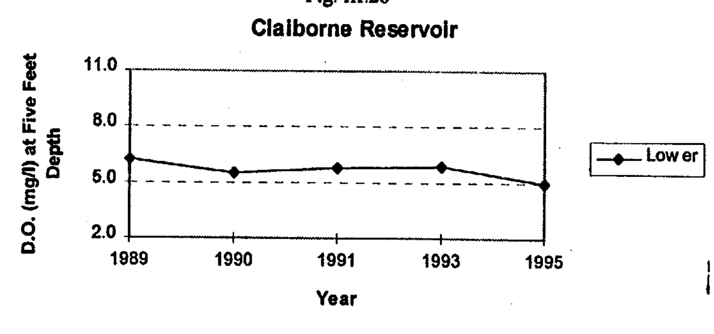


Table III.1. Nitrogen-Phosphorus ratios (TN:TP) of RWQM locations in the Alabama Basin.

Reservoir	Location	Year (August)	TN:TP	Limiting nutrient
Woodruff	Upper	1989	6:1	Nitrogen
		1990	12:1	Optimum
		1992	8:1	Nitrogen
		1993	24:1	Phosphorus
		1995	18:1	Phosphorus
	Mid	1989	6:1	Nitrogen
		1990	31:1	Phosphorus
		1992	9:1	Nitrogen
		1993	13:1	Optimum
		1995	9:1	Nitrogen
	Lower	1989	8:1	Nitrogen
		1990	8:1	Nitrogen
		1992	5:1	Nitrogen
		1993	18:1	Phosphorus
		1995	13:1	Optimum
Dannelly	Upper	1993	30:1	Phosphorus
		1995	22:1	Phosphorus
	Mid	1991	21:1	Phosphorus
		1993	29:1	Phosphorus
		1995	16:1	Phosphorus
	Lower	1991	21:1	Phosphorus
		1993	23:1	Phosphorus
		1995	11:1	Optimum
Claiborne	Lower	1991	25:1	Phosphorus
		1993	15:1	Phosphorus
		1995	9:1	Nitrogen

Phosphorus Ltd. >16:1
Optimum 11-16:1
Nitrogen <11:1
(Porcella et al. 1974)

IV. Chattahoochee River Basin

Precipitation and Discharge

Though variable across the state, rainfall in many areas was higher than normal during the growing seasons of 1989, 1991, and 1994 and lower than normal during the growing seasons of 1990, 1992, 1993, and 1995 (Appendix B).

The mean growing season (May-August) discharge measured at West Point, GA located downstream of West Point Reservoir, was greater than the long-term mean (1956-1995) in 1989, 1991, 1993, and 1994 (Fig. IV.1). The mean growing season discharge at West Point, GA was less than the long-term mean in 1985, 1990, 1992, and 1995 with lowest discharges of the years monitored occurring in 1985 and 1995. The mean growing season (May-August) discharge measured at Columbus, GA, located upstream of Walter F. George Reservoir, (long-term mean 1929-1995) followed the same pattern as discharge at West Point, GA (Fig. IV.2).

West Point Reservoir

Nitrogen. Mean TN values for the lower reservoir were above those of the Wehadkee Creek embayment (Fig. IV.3). Highest TN concentrations at both reservoir locations occurred in 1990 with concentrations decreasing in 1991 and 1992 and increasing in 1995 (Fig. IV.9).

Phosphorus. Mean TP values were similar to those of Harding Reservoir and lower Walter F. George Reservoir but below those of upper and mid Walter F. George Reservoir locations (Fig. IV.4). Total phosphorus concentrations were similar at both locations in all years monitored, declining in the lower reservoir in 1992 and 1995 and in Wehadkee Creek in 1995 (Fig. IV.10). Mean DRP values at both West Point Reservoir locations were lowest of Chattahoochee reservoir locations (Fig. IV.5). The mean value for the Wehadkee Creek embayment was above that of the lower reservoir. Dissolved reactive phosphorus concentrations varied little in the lower reservoir while those of the Wehadkee Creek embayment increased slightly in 1992 with a much larger increase in 1995 (Fig. IV.11).

TN:TP ratios. Total nitrogen to total phosphorus ratios indicated phosphorus to be the limiting nutrient at both locations of West Point Reservoir in all years monitored (Table IV.1).

Suspended solids. The mean TSS value for lower West Point Reservoir was below or similar to mean values for all other Chattahoochee reservoir locations (Fig.

IV.6). The mean TSS value for the Wehadkee Creek embayment was higher than the mean value for the lower reservoir. Total suspended solids concentrations varied during the years monitored but appeared to decline overall with lowest values at both locations measured in 1995 (Fig. IV.12).

Chlorophyll a. The mean chlorophyll a value for the Wehadkee Creek embayment was higher than the mean value for the lower reservoir and the second highest of the Chattahoochee reservoir locations (Fig. IV.7). The mean value for lower West Point Reservoir was second lowest of Chattahoochee locations. Chlorophyll a concentrations in the lower reservoir varied greatly in the years monitored with highest concentrations in 1995 (Fig. IV.13). Chlorophyll a concentrations in the Wehadkee creek embayment varied much less than in the lower reservoir with concentrations decreasing in 1991 and increasing in 1992 and 1995. Highest concentrations of the years monitored occurred in 1995.

Trophic state. Mean TSI values for West Point were highest in the Wehadkee Creek embayment with values for both locations within the lower half of the eutrophic range (Fig. IV.8). Mean TSI values for lower West Point Reservoir were lowest of Chattahoochee reservoir locations. Trophic state index values for the Wehadkee Creek embayment were within the lower half of the eutrophic range in all years monitored (Fig. IV.14). In the lower reservoir, TSI values varied in the years monitored with values for 1990 and 1992 within the mesotrophic range and values for 1991 and 1995 within the lower half of the eutrophic range.

Dissolved oxygen. Available DO concentrations for West Point Reservoir consists of data from 1992 and 1995 only. Dissolved oxygen concentrations were well above the criterion limit at the Wehadkee Creek embayment with concentrations of 7.4 mg/l in 1992 and 8.9 mg/l in 1995. At the lower reservoir, DO concentrations were well above the criterion limit with concentrations of 7.0 mg/l in 1992 and 8.6 mg/l in 1995.

Discussion. Water quality data collected fromWest Point Reservoir for the RWQM are limited. Few concerns are indicated by available data. Continued monitoring of the reservoir is important to the development of an adequate database to aid in the analysis of trends in water quality.

Harding Reservoir

Nitrogen. Mean TN values for lower Harding Reservoir were the second highest of Chattahoochee reservoir locations (Fig. IV.3). Total nitrogen concentrations at both locations decreased from 1991 to 1993 and increased in 1995 (Fig. IV.15).

Phosphorus. Mean TP values for both Harding locations were similar to those of West Point and lower W. F. George Reservoirs but below those of upper and mid W. F. George locations (Fig. IV.4). At both reservoir locations, TP increased in 1991 and decreased in 1993 and 1995 (Fig. IV.16). Mean DRP values were similar at both Harding locations and were highest of Chattahoochee reservoir locations (Fig. IV.5). Insufficient DRP data were available for line graphs of years monitored.

TN:TP ratios. Total nitrogen to total phosphorus ratios indicated phosphorus to be the limiting nutrient at both locations of Harding Reservoir in all years monitored with the exception of the Halawakee Creek embayment in 1993 when the ratio was within the optimum range (Table IV.1).

Suspended solids. Mean TSS values of both locations of Harding were similar to those of West Point and lower W.F. George Reservoirs but below those of upper and mid W.F. George locations (Fig. IV.6). In the Halawakee Creek embayment, TSS concentrations were similar in 1990 and 1991 then declined in 1993 and 1995 (Fig. IV.17). In the lower reservoir, TSS concentrations varied with the exception of similar values from 1993 and 1995.

Chlorophyll a. The mean chlorophyll a value for the lower reservoir was below that of all Chattahoochee reservoir locations (Fig. IV.7). Concentrations in the lower reservoir varied slightly during the years monitored while those of the Halawakee Creek embayment decreased in 1991 and increased in 1993 and 1995 (Fig. IV.18).

Trophic state. The mean TSI value for the lower reservoir was within the lower half of the eutrophic range and second lowest of Chattahoochee reservoir locations (Fig. IV.8). Mean values for the Halawakee Creek embayment were slightly above those of the lower reservoir but were also within the lower half of the eutrophic range. Trophic state index values at both locations remained within the lower half of the eutrophic range in the years monitored (Fig. IV.19).

Dissolved oxygen. Dissolved oxygen concentrations varied with concentrations well above the criterion limit at both locations in all years monitored (Fig. IV.20).

Discussion. Water quality data collected from Harding Reservoir is limited. Few concerns are indicated by available data. Continued monitoring of the reservoir is important to the development of an adequate database to aid in the analysis of trends in water quality.

Walter F. George Reservoir

Nitrogen. The mean TN value of the upper reservoir was the highest of the Chattahoochee reservoir locations with mean values declining at downstream locations (Fig. IV.3). In the upper reservoir, TN concentrations increased from 1992 to 1993 and declined in 1995 (Fig. IV.21). At mid and lower reservoir locations, TN concentrations increased in 1992-1993 and declined in 1995.

Phosphorus. The mean TP value for the upper reservoir was the highest of the Chattahoochee reservoir locations with values declining downstream (Fig. IV.4). Mean values for the upper and mid-reservoir were the highest of the Chattahoochee reservoir locations. In the upper reservoir, TP concentrations were similar in 1992 and 1993 then declined sharply in 1995 (Fig. IV.22). In the mid and lower reservoir, TP concentrations increased in 1992 and decreased in 1993 and 1995. During the drought year of 1995, TP concentrations were similar at all reservoir locations. Mean DRP concentrations were similar at all reservoir locations and lower than those of upstream Harding Reservoir (Fig. IV.5). In the mid and lower reservoir, DRP concentrations declined in 1992 and 1993 and increased sharply in 1995 (Fig. IV.23). Insufficient DRP data were available for a line graph of the upper reservoir.

TN:TP ratios. Total nitrogen to total phosphorus ratios were within the optimum range or indicated phosphorus to be the limiting nutrient at all locations during all years monitored with the exception of the lower reservoir in 1989 when nitrogen was indicated to be the limiting nutrient (Table IV.1).

Suspended solids. Mean TSS values of the upper and mid-reservoir were highest of all Chattahoochee reservoir locations (Fig. IV.6). At all reservoir locations, TSS concentrations increased in 1993 from those of 1992 then decreased in 1995 (Fig. IV.24).

Chlorophyll a. The mean chlorophyll a value for mid-reservoir was highest of all Chattahoochee reservoir locations with the mean value for the lower reservoir second highest of mainstem Chattahoochee locations (Fig. IV.7). Chlorophyll a concentrations of all locations were highest in 1995 (Fig. IV.25). In the upper reservoir, concentrations decreased in 1993 then increased in 1995 from those of 1992. In the mid-reservoir, concentrations decreased overall from 1989-1993, then increased in 1995. In the lower reservoir, concentrations increased in 1990-1991, decreased in 1992-1993, then increased in 1995.

Trophic state. Mean TSI values of all locations were within the lower half of the eutrophic range with the mean value of mid-reservoir the highest of Chattahoochee reservoir locations (Fig. IV.8). At all locations, TSI values remained in or near the lower half of the eutrophic range in all years monitored with the exception of the upper reservoir in 1993, which was within the mesotrophic range (Fig. IV.26). Lowest TSI values at all locations were in 1993 with highest values in 1995.

Dissolved oxygen. Dissolved oxygen concentrations were above the criterion limit at all locations in all years monitored though DO concentrations at upper and mid-reservoir locations were near the limit in 1993 (Fig. IV.27).

Discussion. Available data indicates few water quality concerns for W. F. George Reservoir at present. The effect of point and nonpoint sources between Harding Reservoir and lower W. F. George is evidenced by highest mean TN values for the upper reservoir, highest mean TP values for the upper and mid-reservoir, highest mean TSS values for the upper and mid-reservoir, highest mean chlorophyll a values for the mid and lower reservoir, and highest mean TSI values of all mainstem Chattahoochee reservoir locations. Given the effect of point and nonpoint sources on the water quality of W. F. George Reservoir, annual monitoring is recommended so that any changes in trophic state and water quality can be detected and to continue development of an adequate database to aid in the analysis of trends in water quality.

Fig. IV.1

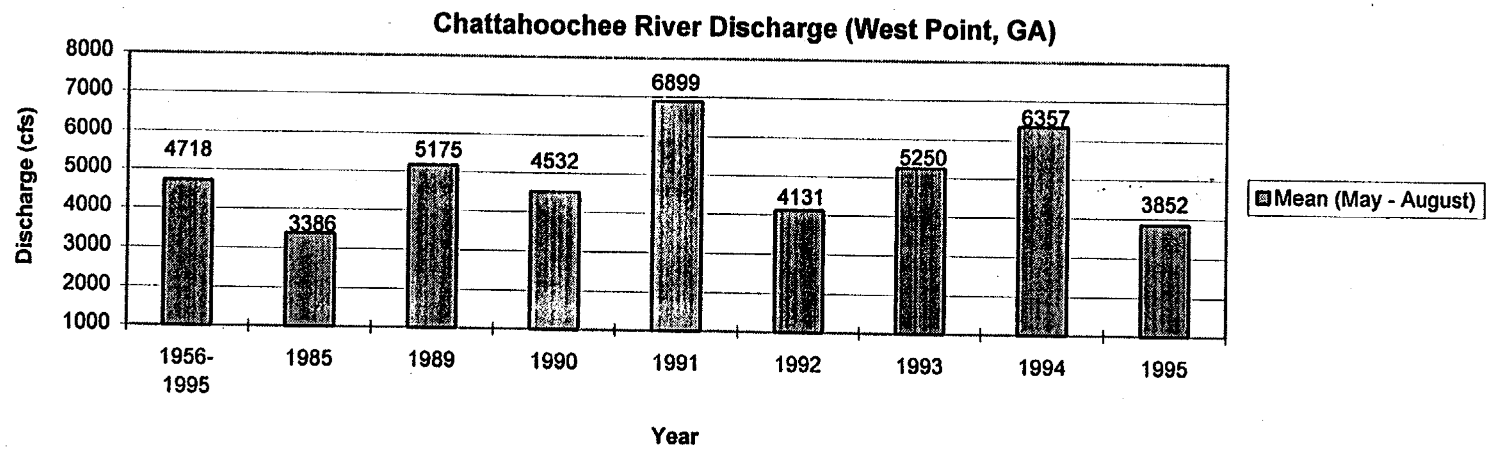
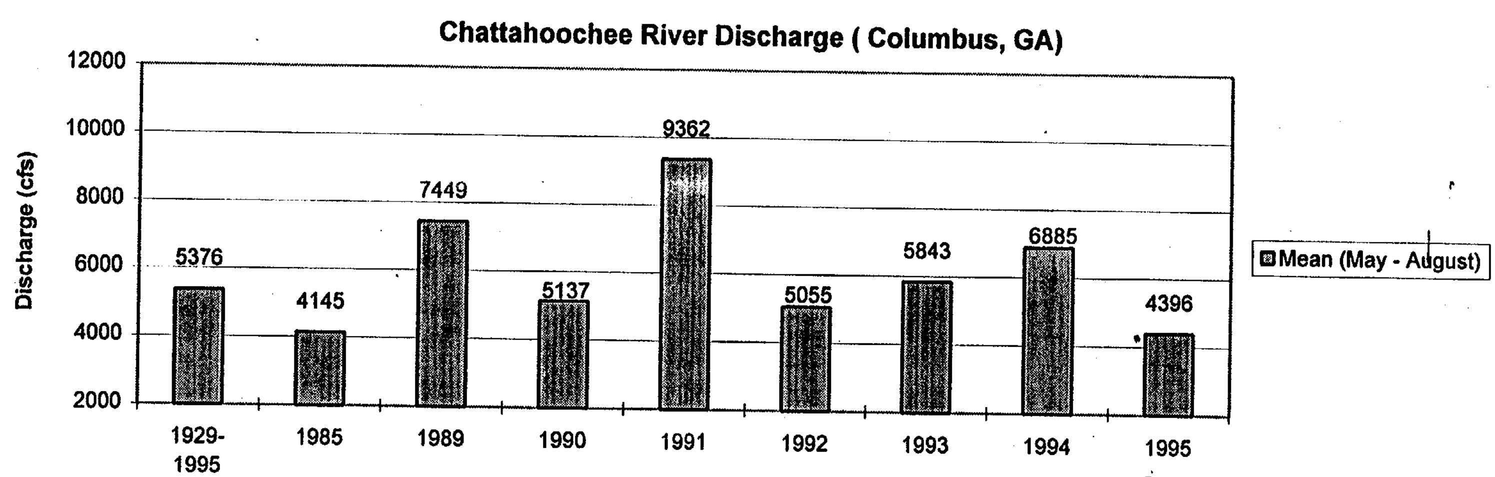


Fig. IV.2



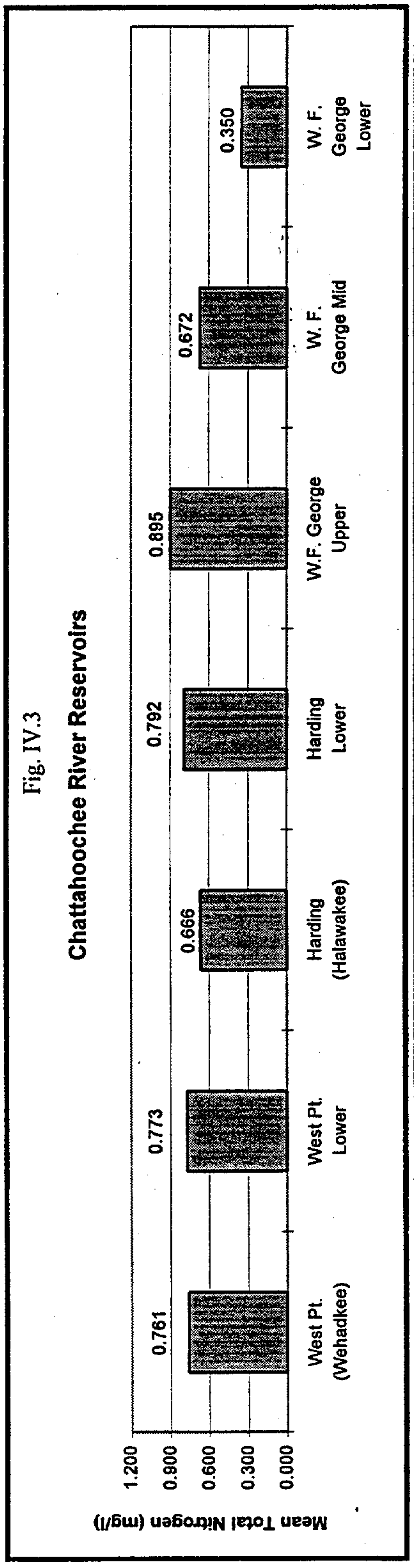


Fig. IV.3
Chattahoochee River Reservoirs
Mean Total Nitrogen (mg/l)
1.200
0.900
0.600
0.300
0.000
0.761
0.773
0.666
0.792
0.895
0.672
0.350
West Pt. (Wehadkee)
West Pt. Lower
Harding (Halawakee)
Harding Lower
W.F. George Upper
W. F. George Mid
W. F. George Lower

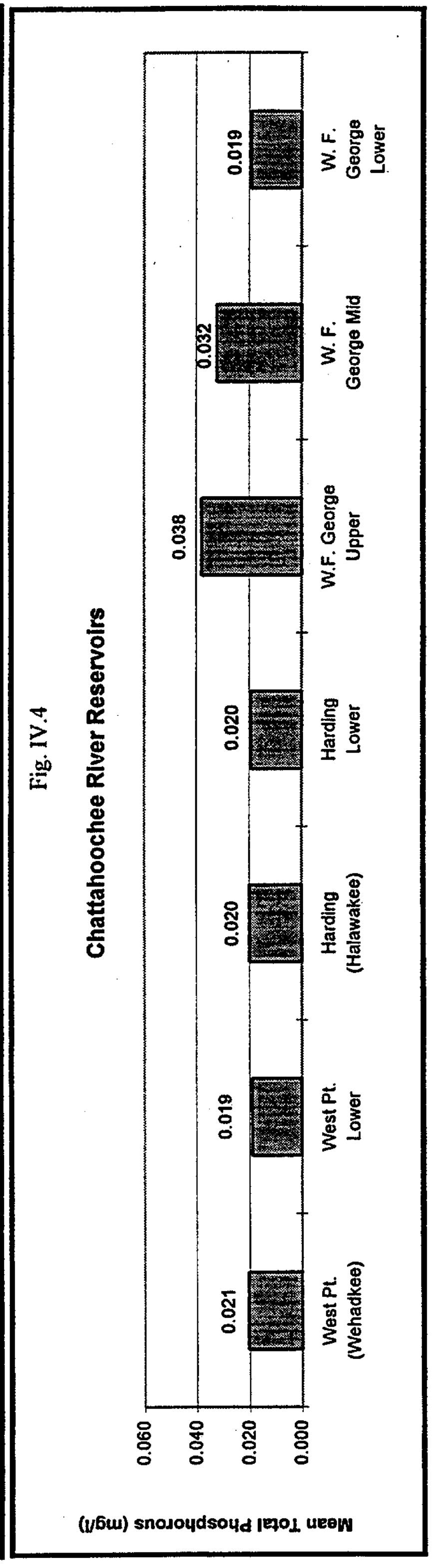


Fig. IV.4
Chattahoochee River Reservoirs
Mean Total Phosphorus (mg/l)
0.060
0.040
0.020
0.000
0.021
0.019
0.020
0.020
0.038
0.032
0.019
West Pt. (Wehadkee)
West Pt. Lower
Harding (Halawakee)
Harding Lower
W.F. George Upper
W. F. George Mid
W. F. George Lower

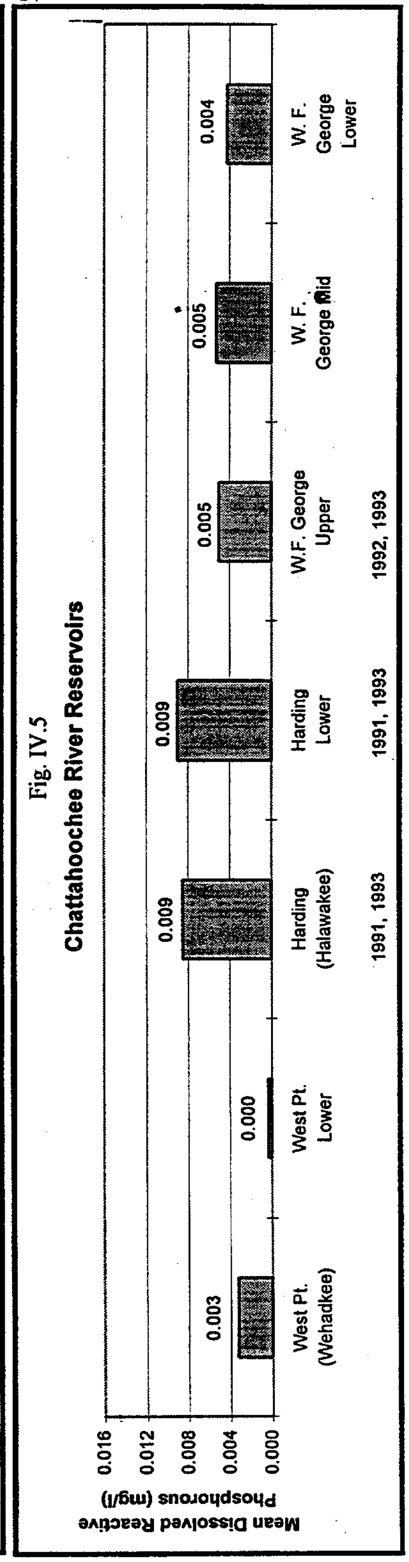


Fig. IV.5
Chattahoochee River Reservoirs
Mean Dissolved Reactive Phosphorous (mg/l)
0.016
0.012
0.008
0.004
0.000
0.003
0.000
0.009
0.009
0.005
0.005
0.004
West Pt. (Wehadkee)
West Pt. Lower
Harding (Halawakee)
Harding Lower
W.F. George Upper
W. F. George Mid
W. F. George Lower
1991, 1993
1991, 1993
1992, 1993

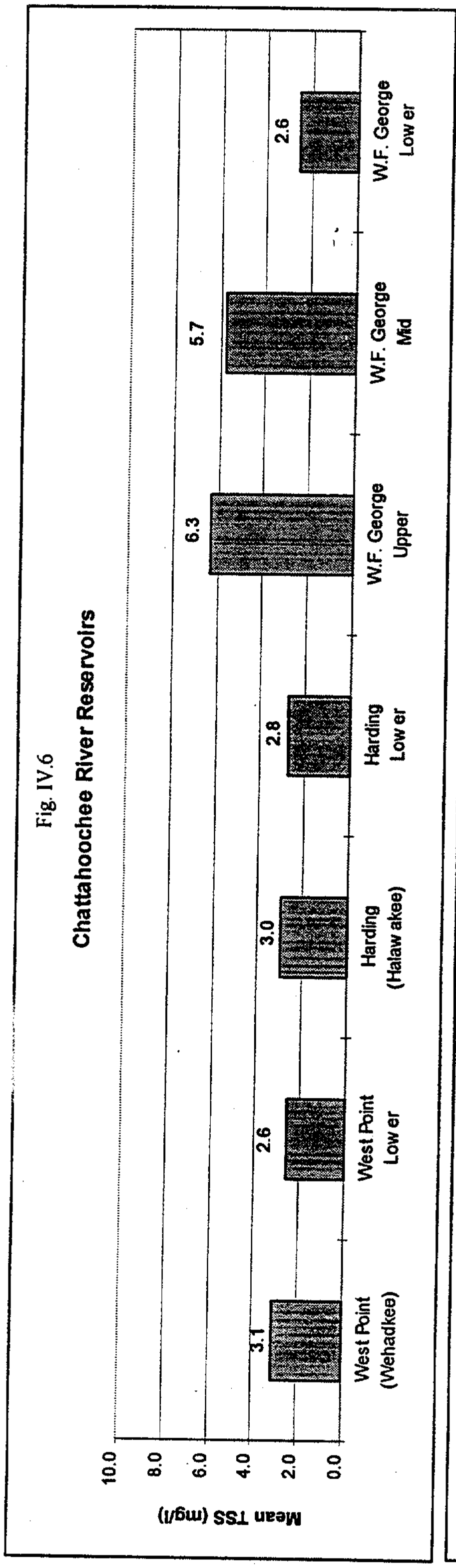


Fig. IV.6
Chattahoochee River Reservoirs

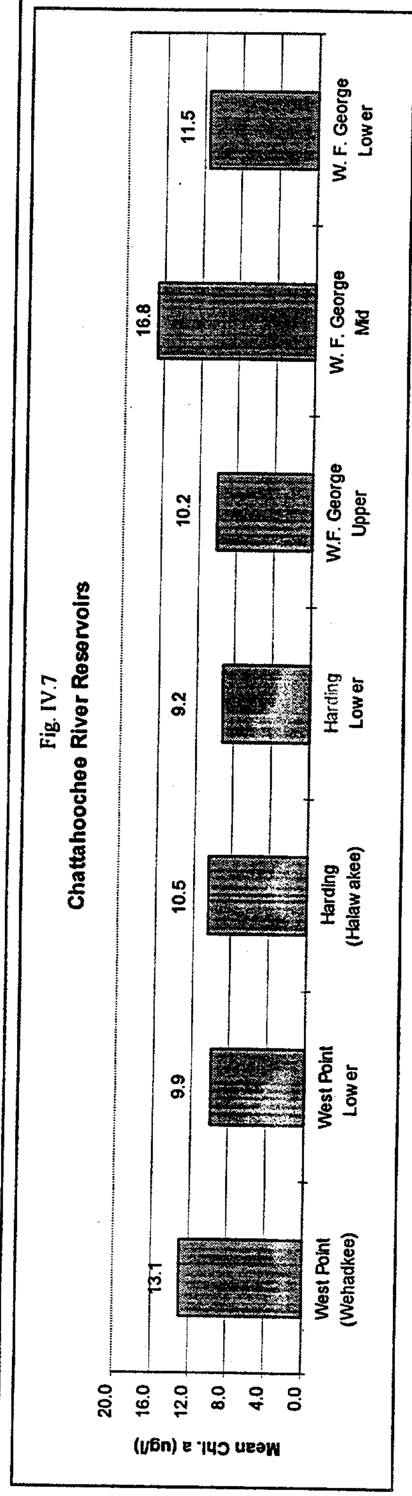


Fig. IV.7
Chattahoochee River Reservoirs

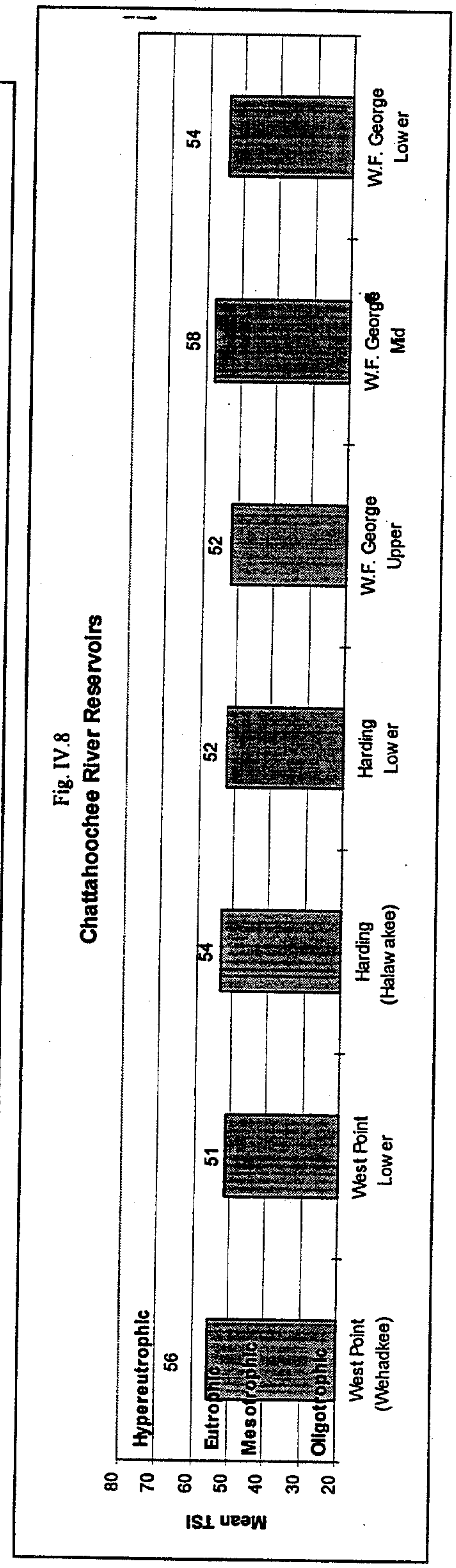


Fig. IV.8
Chattahoochee River Reservoirs

Fig. IV.9

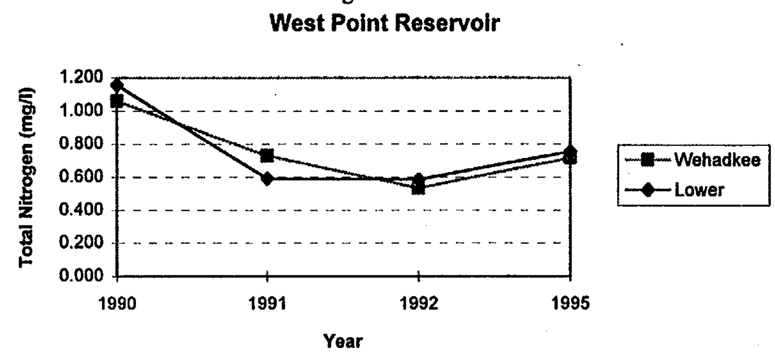


Fig. IV.10

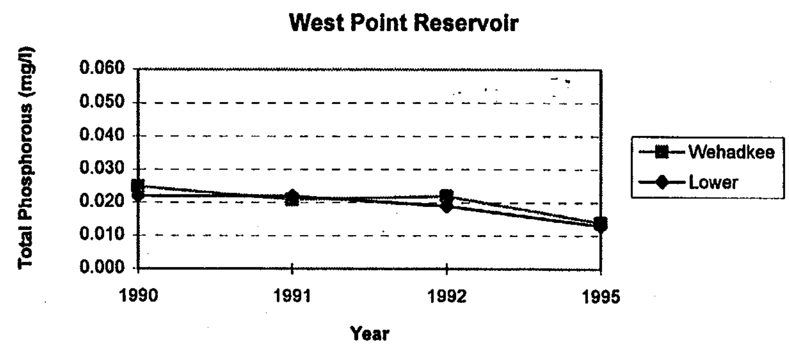


Fig. IV.11

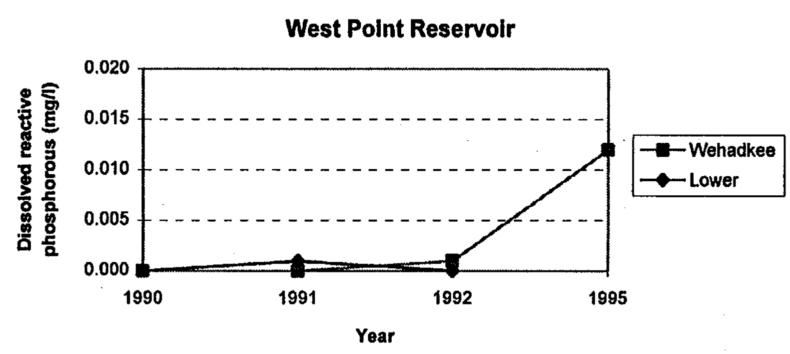


Fig. IV.12
West Point Reservoir

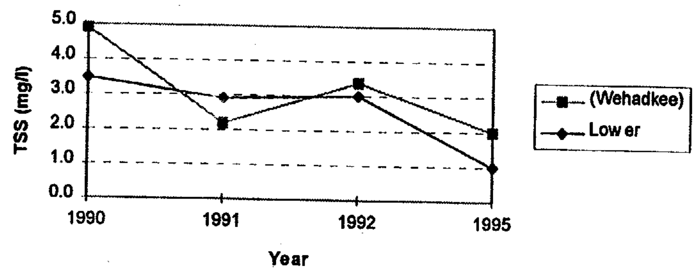


Fig. IV.13
West Point Reservoir

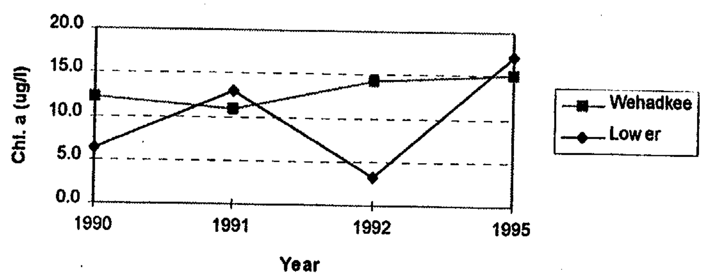


Fig. IV.14
West Point Reservoir

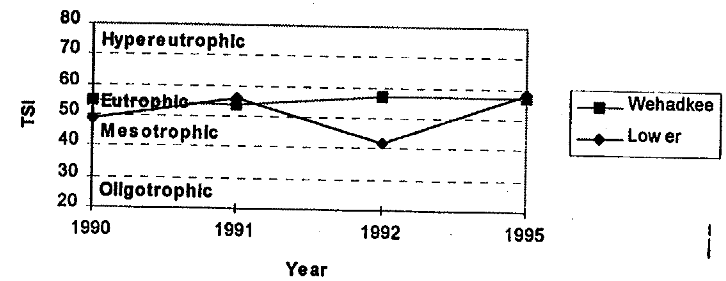


Fig. IV.15

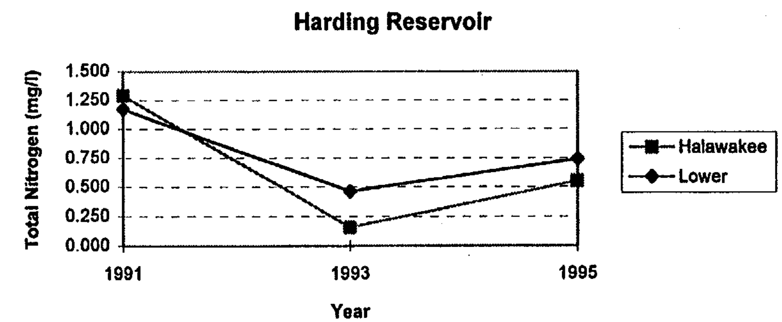
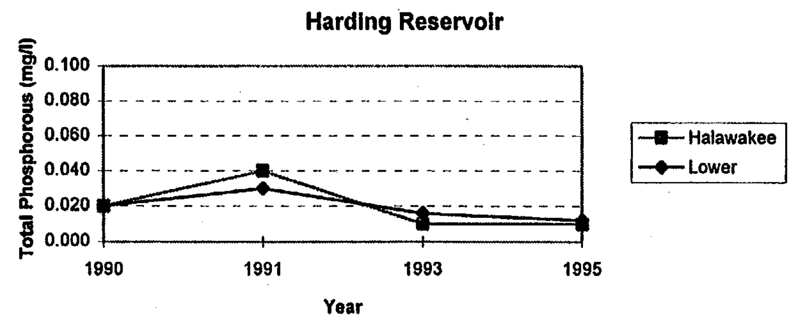


Fig. IV.16



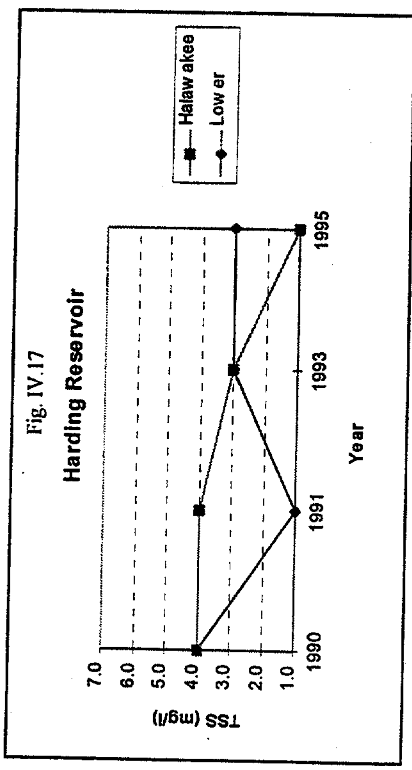


Fig. IV.17

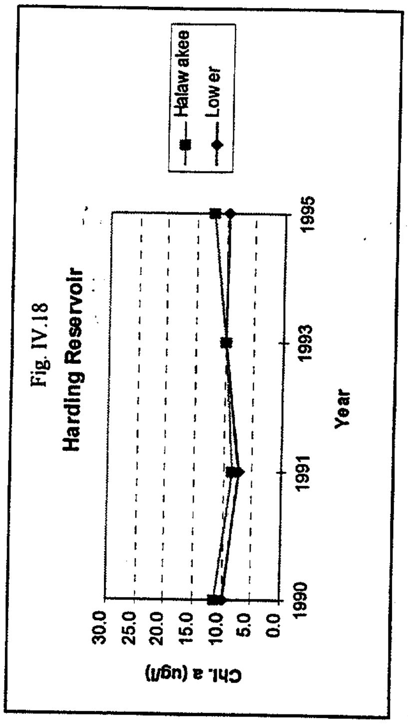


Fig. IV.18

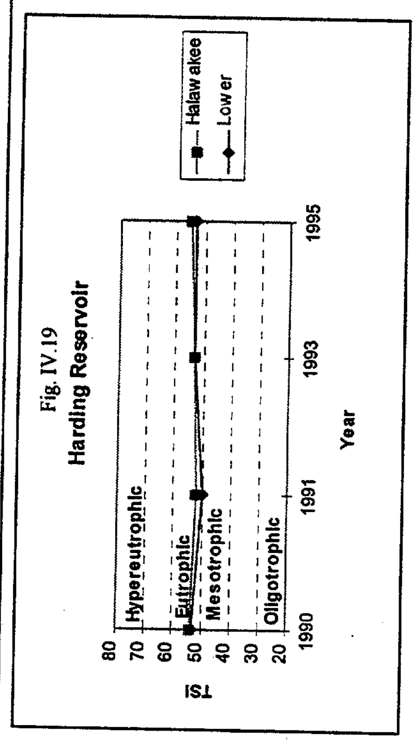


Fig. IV.19

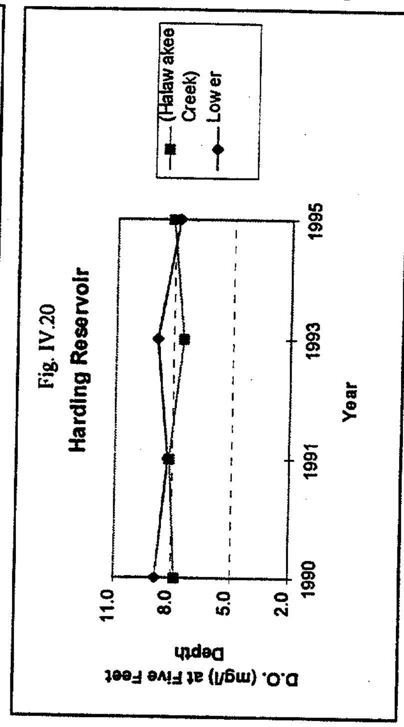


Fig. IV.20

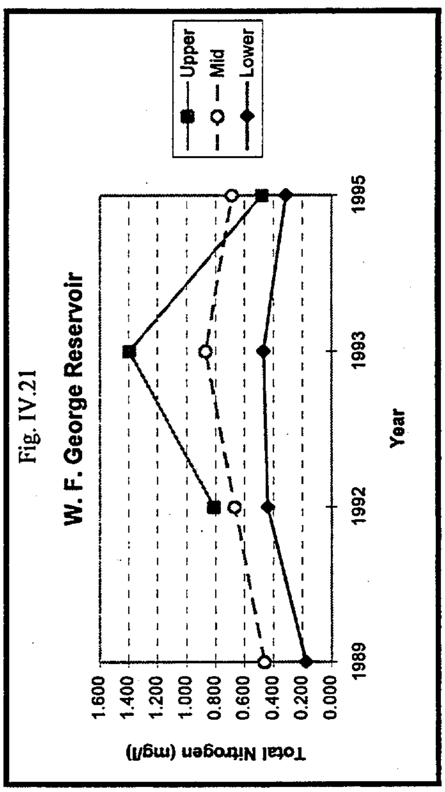


Fig. IV.21

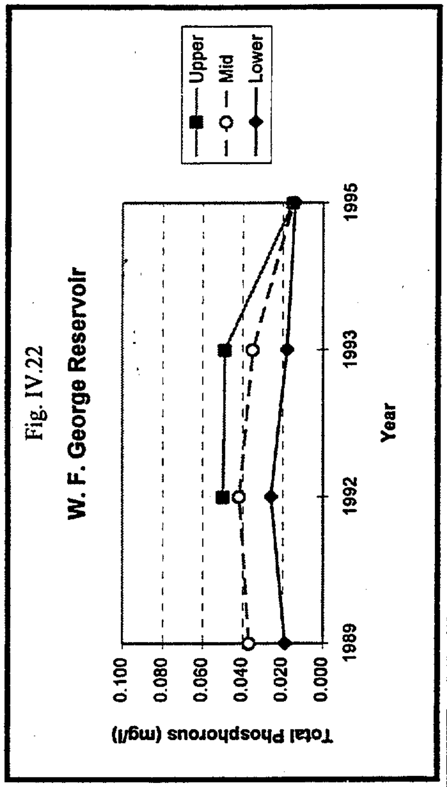


Fig. IV.22

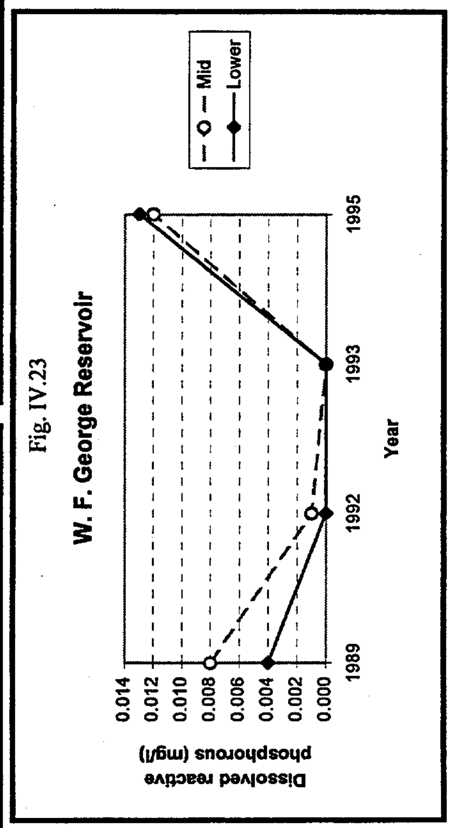


Fig. IV.23

Fig. IV.24

W. F. George Reservoir

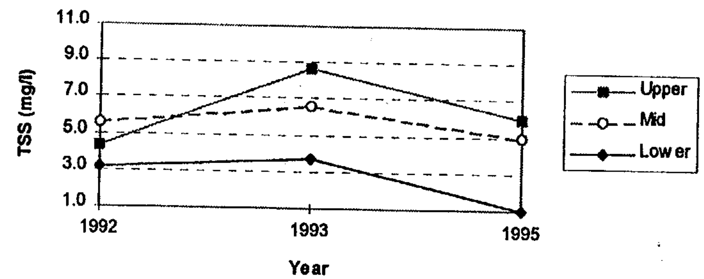


Fig. IV.25

Walter F. George Reservoir

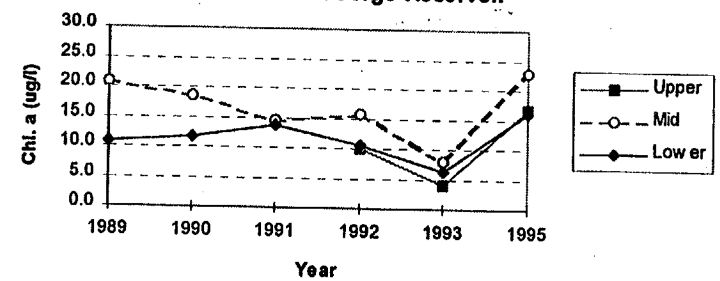


Fig. IV.26

Walter F. George Reservoir

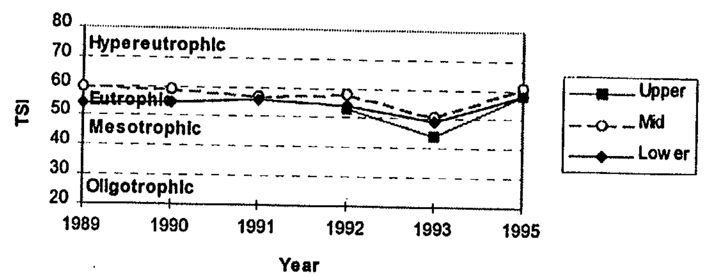


Fig. IV.27

W. F. George Reservoir

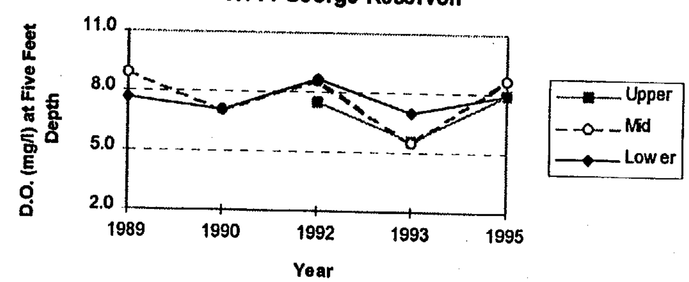


Table IV.1. Nitrogen-Phosphorus ratios (TN:TP) of RWQM locations in the Chattahoochee Basin

Reservoir	Location	Year (August)	TN:TP	Limiting nutrient
West Point	Wehadkee	1990	42:1	Phosphorus
		1991	35:1	Phosphorus
		1992	24:1	Phosphorus
		1995	51:1	Phosphorus
	Lower	1990	53:1	Phosphorus
		1991	27:1	Phosphorus
		1992	31:1	Phosphorus
		1995	58:1	Phosphorus
Harding	Halawakee	1991	32:1	Phosphorus
		1993	16:1	Optimum
		1995	55:1	Phosphorus
	Lower	1991	39:1	Phosphorus
		1993	29:1	Phosphorus
		1995	62:1	Phosphorus
W.F. George	Upper	1992	16:1	Optimum
		1993	28:1	Phosphorus
		1995	32:1	Phosphorus
	Mid	1989	13:1	Optimum
		1992	16:1	Optimum
		1993	25:1	Phosphorus
		1995	46:1	Phosphorus
	Lower	1989	9:1	Nitrogen
		1992	17:1	Phosphorus
		1993	26:1	Phosphorus
		1995	22:1	Phosphorus

Phosphorus Ltd. >16:1
Optimum 11-16:1
Nitrogen <11:1
(Porcella et al. 1974)

V. Warrior River Basin

Precipitation and Discharge

Though variable across the state, rainfall in many areas was higher than normal during the growing seasons of 1989, 1991, and 1994 and lower than normal during the growing seasons of 1990, 1992, 1993, and 1995 (Appendix B).

The mean growing season (May-August) discharge of the Sipsey Fork measured at Grayson, AL, located upstream of Smith Reservoir, was greater than the long-term mean (1967-1995) in 1985, 1989, and 1991 (Fig. V.1). The mean growing season discharge at Grayson, AL was less than the long-term mean in 1990, 1992, 1993, 1994, and 1995 with the lowest discharge of the years monitored occurring in 1992.

The mean growing season (May-August) discharge of the North River measured at Samantha, AL, immediately upstream of Lake Tuscaloosa, was greater than the long-term mean (1939-1954, 1969-1994) in 1985, 1989, and 1991 (Fig. V.2). Discharge was similar to the long-term mean in 1990 and less than the long-term mean in 1992-1994 with the lowest discharge of the years monitored occurring in 1992-1993.

The mean growing season (May-August) discharge of the Warrior River measured at the Bankhead Dam was greater than the long-term mean (1929-1936, 1977-1995) in 1985, 1989, and 1991 (Fig. V.3). Discharge was less than the long-term mean in 1990, and 1992-1995 with the lowest discharge of the years monitored occurring in 1992.

Smith Reservoir

Nitrogen. Mean TN values for Smith Reservoir were lowest of all locations in the Warrior Basin (Fig. V.4). Within the reservoir, mean TN values were least in the upper portion and greatest in the lower portion. In all reservoir locations, TN concentrations were greatest in 1991 when discharge was well above the long-term mean (Fig. V.9). Concentrations were much lower in 1993 and 1995 when discharge was below the long-term mean.

Phosphorus. Mean TP concentrations were highest in upper reservoir and declined downstream (Fig. V.5). Mean TP values for the mid and lower reservoir were among the lowest of locations in the Warrior Basin. At all reservoir locations, TP concentrations were highest in 1991 when discharge was above the long-term mean (Figs. V.1, V.10) and lowest in 1986, 1993, and 1995 when discharge was below the long-term mean. Dissolved reactive phosphorus concentrations in Smith Reservoir were usually below detection limits when sampled. Therefore, no mean or yearly graphs were developed.

TN:TP ratios. Total nitrogen to total phosphorus ratios for Smith Reservoir indicated phosphorus as the limiting nutrient at all locations in all years monitored with the exception of the the optimum range ratio for the upper reservoir in 1993 (Table V.1).

Suspended solids. Mean TSS values within the reservoir were highest at mid-reservoir and lowest at the lower reservoir (Fig. V.6). Mean TSS values of Smith Reservoir were similar to those of Bankhead and Holt Reservoirs. At the upper reservoir location, TSS concentrations increased in 1990, decreased in 1991 and 1993, then increased slightly in 1995 (Fig. V.11). At mid-reservoir, TSS concentrations varied during the years monitored except for similar concentrations of 1990-1991. At the lower reservoir, TSS concentrations varied least and were very similar in 1990, 1991, and 1993.

Chlorophyll a. Mean chlorophyll a values within the reservoir were lowest in the upper portion and increased downstream (Fig. V.7). Mean values of Smith Reservoir were well below those of Bankhead, Holt, and Warrior Reservoirs; similar to those of upper Tuscaloosa Reservoir; and, above those of lower Tuscaloosa and Inland Reservoirs. Chlorophyll a concentrations increased at all locations during 1989 and 1990 (Fig. V.12) when discharge of the Sipsey Fork was well above the long-term mean (Fig. V.1). Concentrations decreased in the upper reservoir during 1986, all locations in 1990 and 1993, and at the upper reservoir during 1995 when discharge was below the long-term mean.

Trophic state. Mean TSI values were within the mesotrophic range at all Smith Reservoir locations and lowest in the upper reservoir (Fig. V.8). Mean TSI values of Smith were above those of Inland and lower Tuscaloosa, similar to that of upper Tuscaloosa, and lower than those of Bankhead, Holt, and Warrior Reservoirs. At the upper and mid-reservoir, TSI values varied between oligotrophic and mesotrophic levels during the years monitored. At the lower reservoir, TSI values varied from oligotrophic to mesotrophic to eutrophic during the years monitored (Fig. V.13). Values were within or near the eutrophic range during 1989 and 1991 when discharge of the Sipsey Fork was well above the long-term mean and within or near the oligotrophic range during 1986, 1990, 1993, and 1995 when discharge was below the long-term mean.

Dissolved oxygen. Dissolved oxygen concentrations were well above the criterion limit at all locations in all years monitored (Fig. V.14). Dissolved oxygen concentrations at all locations were similar in each year with a slight overall decline during the years monitored.

Discussion. Available nutrient data from RWQM monitoring activities for Smith Reservoir are limited. Review of the data indicates that water quality concerns primarily involve nutrient additions to the reservoir and the effect of these nutrients on the trophic state of the reservoir. In comparison to many Alabama lakes, the topography of the watershed surrounding Smith Reservoir consists of high gradient slopes. Nutrients from nonpoint sources within the watershed enter the relatively infertile reservoir rapidly during substantial precipitation events and instigate an increase in trophic state. During 1991, discharge was above the long-term mean (Fig. V.1), phosphorus concentrations increased at all reservoir locations, and the trophic state of the reservoir at all locations increased. During 1986, 1993, and 1995 discharge was below normal, phosphorus concentrations decreased, and the trophic state at all locations decreased. Though nutrient data was not available for 1989, discharge was above normal and the lower reservoir increased to eutrophic levels from the oligotrophic levels observed in 1986.

It is important that point and nonpoint nutrient sources to Smith Reservoir be controlled as much as possible to protect water quality. The response of the reservoir to the influx of nutrients during high rainfall years is perhaps indicative of the response of the reservoir during years of normal to less than normal rainfall if nonpoint or point sources of nutrients in the watershed increase.

Continued regular monitoring is recommended so that any changes in trophic state and water quality can be detected and to continue development of an adequate database to aid in the analysis of trends in water quality.

Tuscaloosa Reservoir

Nitrogen. Mean TN values for Tuscaloosa Reservoir were much higher in the upper reservoir than in the lower portion (Fig. V.4). Mean TN values for upper Tuscaloosa Reservoir were above those of all other reservoir locations in the basin. Insufficient data were available for development of line graphs of nitrogen concentrations in the years monitored.

Phosphorus. Mean TP values were also much higher in the upper reservoir than in the lower portion (Fig. V.5). Mean TP values for the upper reservoir were the second highest of all reservoir locations in the basin. Insufficient data was available for development of line graphs of phosphorus concentrations in the years monitored. Dissolved reactive phosphorus concentrations in Tuscaloosa Reservoir were usually below detection limits when sampled. Therefore, no mean or yearly graphs were developed.

TN:TP ratios. Total nitrogen to total phosphorus ratios indicated phosphorus as the limiting nutrient at both reservoir locations in the years monitored (Table V.1).

Suspended solids. Mean TSS values for upper Tuscaloosa Reservoir were above those of the lower reservoir (Fig. V.6). Mean TSS values of Tuscaloosa Reservoir were similar to mean values of other reservoir locations in the basin with the exception of those of Warrior Reservoir, which were much higher. At upper Tuscaloosa Reservoir, TSS concentrations were highest in 1991 when growing season mean discharge of the North River was above the long-term mean, and lowest in 1993 and 1994 when discharge was below the long-term mean (Figs. V.2, V.15). At the lower reservoir, TSS concentrations were lowest in 1989 and consistent in all years monitored thereafter.

Chlorophyll a. Mean chlorophyll a values for upper Tuscaloosa Reservoir were above those of the lower portion (Fig. V.7). Mean values for the lower reservoir were the second lowest of reservoir locations in the basin. Chlorophyll a concentrations varied during the years monitored at both reservoir locations though concentrations in the lower reservoir increased overall (Fig. V.16).

Trophic state. Mean TSI values for the upper reservoir were within the mesotrophic range while those of the lower reservoir were within the oligotrophic range (Fig. V.8). At the upper reservoir, TSI values were within the mesotrophic range in 1991 and 1994 and within the oligotrophic range in 1993 (Fig. V.17). At the lower reservoir, TSI values were in or near the oligotrophic range in all years monitored until 1994, when values increased well into the mesotrophic range.

Dissolved oxygen. Dissolved oxygen concentrations at both reservoir locations were similar and above the criterion limit in all years monitored (Fig. V.18).

Discussion. Water quality data for Tuscaloosa Reservoir is limited, particularly with respect to nutrient concentrations. Because of recent increases in trophic state at both reservoir locations, continued regular monitoring is recommended so that any further changes in trophic state and water quality can be detected and to continue development of an adequate database to aid in the analysis of trends in water quality.

Inland Reservoir

Nitrogen. The mean TN value for Inland Reservoir was somewhat intermediate to those of other reservoirs in the basin (Fig. V.4). Insufficient data were available for development of line graphs of nitrogen concentrations in the years monitored.

Phosphorus. The mean TP value for Inland Reservoir was lowest of all reservoir locations in the basin (Fig. V.5). Insufficient data were available for development of line graphs of phosphorus concentrations in the years monitored. Dissolved reactive phosphorus concentrations in Inland Reservoir were usually below detection limits when sampled. Therefore, no mean or yearly graphs were developed.

TN:TP ratios. Total nitrogen to total phosphorus ratios indicated phosphorus as the limiting nutrient of Inland Reservoir in the years monitored (Table V.1).

Suspended solids. The mean TSS value for Inland Reservoir was, along with lower Tuscaloosa Reservoir, the least of reservoir locations in the basin (Fig. V.6). Concentrations were higher in 1992 and 1994 than in 1989 (Fig. V.19).

Chlorophyll a. The mean chlorophyll a value of Inland Reservoir was lowest of all locations in the basin (Fig. V.7). Chlorophyll a concentrations declined in 1989 and 1992 then increased in 1994 (Fig. V.20).

Trophic state. The mean TSI value for Inland Reservoir was within the oligotrophic range and lowest of the basin locations (Fig. V.8). Trophic state index values were bordering the oligotrophic to mesotrophic range in 1985, 1989, and 1994 with values of 1992 at zero (Fig. V.21).

Dissolved oxygen. Dissolved oxygen concentrations in Inland Reservoir were well above the criterion limit in the years monitored (Fig. V.22).

Discussion. Few water quality concerns are indicated for Inland Reservoir though available data is limited. Continued regular monitoring is recommended to continue development of an adequate database to aid in the analysis of trends in water quality.

Bankhead Reservoir

Nitrogen. The mean TN value for Bankhead Reservoir was higher than those of Smith, Inland, Holt, and lower Tuscaloosa Reservoirs and below those of upper Tuscaloosa, and Warrior Reservoirs (Fig. V.4). Insufficient data were available for development of line graphs of nitrogen concentrations in the years monitored.

Phosphorus. The mean TP value for Bankhead Reservoir was below those of upper Tuscaloosa and upper Warrior Reservoirs and above those of all other basin locations (Fig. V.5). Insufficient data were available for development of line graphs of total phosphorus concentrations in the years monitored. Dissolved reactive phosphorus concentrations in Bankhead Reservoir were usually below detection limits when sampled. Therefore, no mean or yearly graphs were developed.

TN:TP ratios. Total nitrogen to total phosphorus ratios for Bankhead indicated phosphorus as the limiting nutrient in the years monitored (Table V.1).

Suspended solids. The mean TSS value for Bankhead Reservoir was similar to those of Smith and Holt Reservoirs and well below those of Warrior Reservoir (Fig. V.6). Concentrations were highest in 1992 with lower values in 1989 and 1994 (Fig. V.23).

Chlorophyll a. The mean chlorophyll a concentration for Bankhead Reservoir was second highest in the basin to Warrior Reservoir and well above those of Smith, Tuscaloosa, and Warrior Reservoirs (Fig. V.7). Chlorophyll a concentrations in Bankhead were much higher in 1989 than in 1985 with values decreasing in 1992 then increasing slightly in 1994 (Fig. V.24).

Trophic state. The mean TSI value for Bankhead Reservoir was within the mesotrophic range and near the eutrophic level (Fig. V.8). The mean TSI value for Bankhead was above those of Inland, Smith, and Tuscaloosa Reservoirs and below those of Holt and Warrior Reservoirs. Trophic state index values for Bankhead Reservoir were much higher in 1989 than in 1985, increasing from oligotrophic to eutrophic levels (Fig. V.25). The value in 1992 was lower but remained within the eutrophic range with the value of 1994 similar to that of 1992.

Dissolved oxygen. Dissolved oxygen concentrations were well above the criterion limit in the high discharge year of 1989, were much lower during the low discharge year of 1992, then increased with increased discharge in 1994 (Figs. V.3, V.26).

Discussion. Available water quality data for Bankhead Reservoir is limited, especially with respect to nutrient concentrations. The increase in trophic state observed from 1985 to 1989 is substantial though TSI's declined to a lower level thereafter. Continued regular monitoring is recommended so that any further changes in trophic state and water quality can be detected and to continue development of an adequate database to aid in the analysis of trends in water quality.

Holt Reservoir

Nitrogen. The mean TN value for Holt Reservoir was above those of Smith and lower Tuscaloosa Reservoirs and below those of Inland, upper Tuscaloosa, Bankhead, and Warrior Reservoirs (Fig. V.4). Insufficient data were available for development of line graphs of nitrogen concentrations in the years monitored.

Phosphorus. The mean TP value for Holt Reservoir was second lowest of those in the basin (Fig. V.5). Insufficient data were available for development of line graphs of phosphorus concentrations in the years monitored. Dissolved reactive phosphorus concentrations in Holt Reservoir were usually below detection limits when sampled. Therefore, no mean or yearly graphs were developed.

TN:TP ratios. Total nitrogen to total phosphorus ratios indicated phosphorus as the limiting nutrient of Holt Reservoir in the years monitored (Table V.1).

Suspended solids. The mean TSS value for Holt Reservoir was much lower than those of the Warrior Reservoir and similar to those of other basin locations (Fig. V.6). Concentrations were higher in 1992 from 1989 then decreased in 1994 (Fig. V.23).

Chlorophyll a. The mean chlorophyll a value was above those of Inland, Smith, and Tuscaloosa Reservoirs and below those of Bankhead and Warrior Reservoirs (Fig. V.7). Chlorophyll a concentrations of Holt were similar in 1985, 1989, and 1992 but were much higher in 1994 (Fig. V.24).

Trophic state. The mean TSI value for Holt Reservoir was just within the eutrophic range and second highest of all basin locations (Fig. V.8). Trophic state index values were within the mesotrophic range in 1985, 1989, and 1992, increasing into the lower half of the eutrophic range in 1994 (Fig. V.25).

Dissolved oxygen. Dissolved oxygen concentrations were well above the criterion limit in the high discharge year of 1989, were much lower during the low discharge year of 1992, then increased with increased discharge in 1994 (Figs. V.3, V.26).

Discussion. Available water quality data for Holt Reservoir is limited, particularly with respect to nutrient concentrations. The increase in trophic state observed from 1992 to 1994 is substantial . Continued regular monitoring is recommended so that any further changes in trophic state and water quality can be detected and to continue development of an adequate database to aid in the analysis of trends in water quality.

Warrior Reservoir

Nitrogen. Mean TN values for Warrior Reservoir were second highest in the basin to those of upper Tuscaloosa Reservoir (Fig. V.4). Insufficient data were available for development of line graphs of nitrogen concentrations in the years monitored.

Phosphorus. The mean TP value for upper Warrior Reservoir was highest of all basin locations (Fig. V.5). The mean TP value for lower Warrior Reservoir was similar to those of lower Bankhead Reservoir, lower Tuscaloosa Reservoir, and upper Smith Reservoir. Insufficient data was available for development of line graphs of phosphorus concentrations in the years monitored. Dissolved reactive phosphorus concentrations in Warrior Reservoir were usually below detection limits when sampled. Therefore, no mean or yearly graphs were developed.

TN:TP ratios. Total nitrogen to total phosphorus ratios indicated phosphorus as the limiting nutrient of Warrior Reservoir at both locations in the years monitored (Table V.1).

Suspended solids. Mean TSS values for Warrior Reservoir were highest of all locations in the basin (Fig. V.6). In the upper reservoir, TSS concentrations were alike in the two years monitored (Fig. V.23). In the lower reservoir, TSS concentrations were higher in 1994 than in 1992 with the values of 1994 similar to those of the upper reservoir.

Chlorophyll a. Mean chlorophyll a values for Warrior Reservoir were highest of all basin locations (Fig. V.6). Chlorophyll a concentrations were similar at both locations in both years monitored and similar to those of Bankhead Reservoir during those years (Fig. V.24).

Trophic state. Mean TSI values for Warrior Reservoir were in the lower half of the eutrophic range at both locations and were highest of those in the basin (Fig. V.8). Trophic state index values for Warrior Reservoir were similar and within the lower half of the eutrophic range in both years monitored with values similar to Bankhead Reservoir in those years (Fig. V.25).

Dissolved oxygen. Dissolved oxygen concentrations were higher in 1992 than in 1994, and similar at both locations in the years monitored (Fig. V.26).

Discussion. Available water quality data for Warrior Reservoir is limited, particularly with respect to nutrient concentrations. Mean values of all parameters of Warrior Reservoir were highest or among the highest of all basin locations. Likely causes are the effects of point and nonpoint sources from the city of Tuscaloosa, the entry of the river into the more fertile Coastal Plain soils area of Alabama, and increased agricultural activity along this portion of the Black Warrior River. Continued regular monitoring is recommended for development of an adequate database to aid in the analysis of trends in water quality.

Fig. V.1

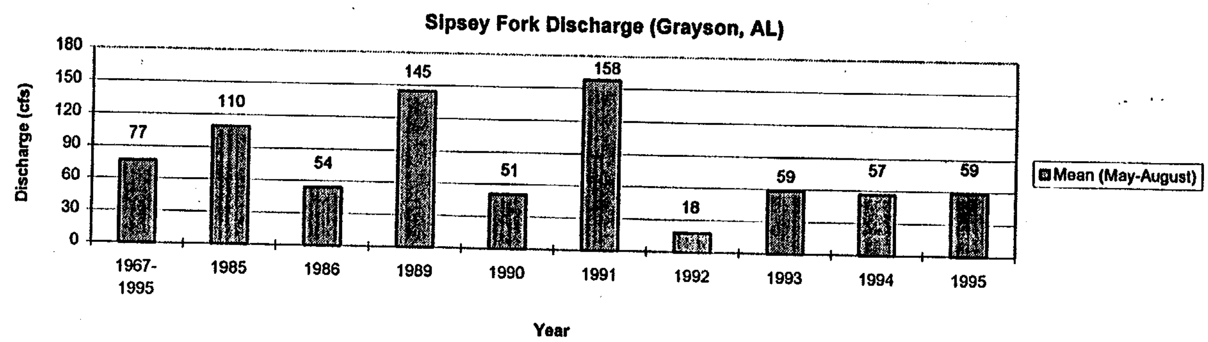


Fig. V.2

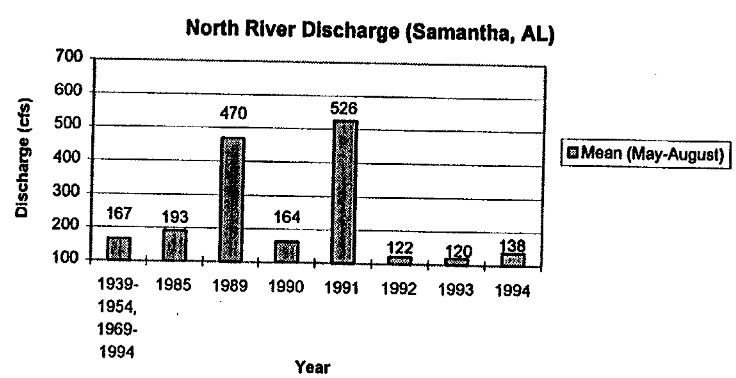


Fig. V.3

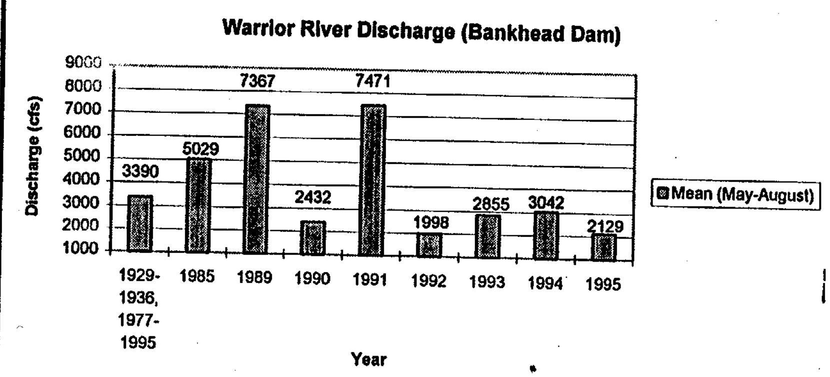
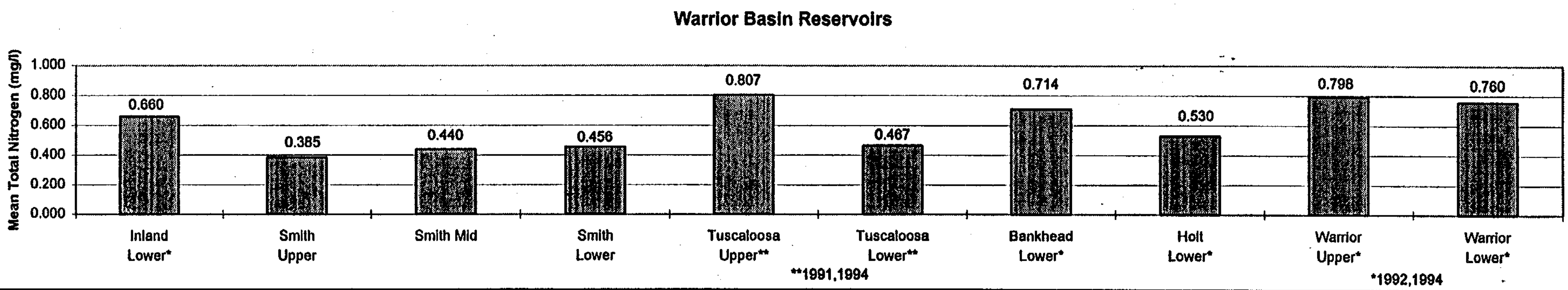
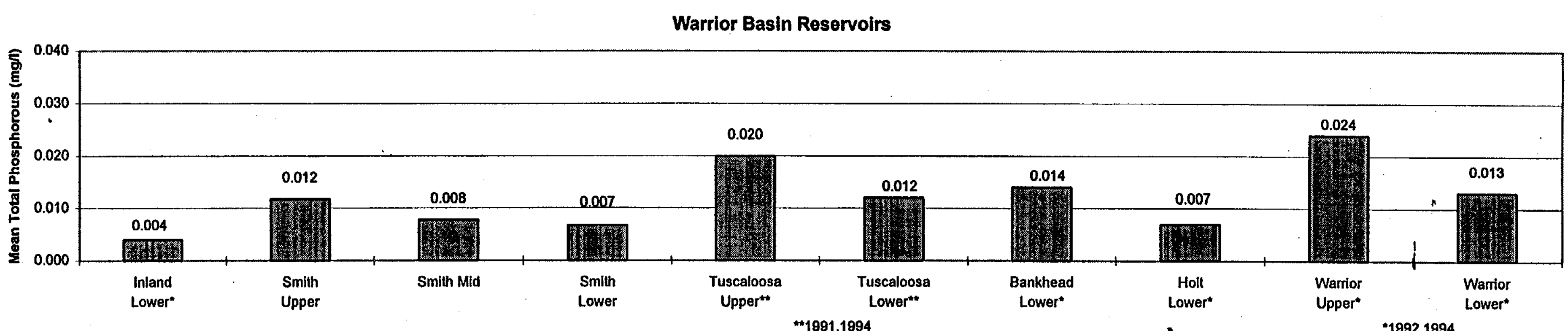


Fig. V.4



Warrior Basin Reservoirs
Mean Total Nitrogen (mg/l)
1.000
0.800
0.600
0.400
0.200
0.000
0.660
0.385
0.440
0.456
0.807
0.467
0.714
0.530
0.798
0.760
Inland Lower*
Smith Upper
Smith Mid
Smith Lower
Tuscaloosa Upper**
Tuscaloosa Lower**
Bankhead Lower*
Holt Lower*
Warrior Upper*
Warrior Lower*
**1991,1994
*1992,1994

Fig. V.5



Warrior Basin Reservoirs
Mean Total Phosphorous (mg/l)
0.040
0.030
0.020
0.010
0.000
0.004
0.012
0.008
0.007
0.020
0.012
0.014
0.007
0.024
0.013
Inland Lower*
Smith Upper
Smith Mid
Smith Lower
Tuscaloosa Upper**
Tuscaloosa Lower**
Bankhead Lower*
Holt Lower*
Warrior Upper*
Warrior Lower*
**1991,1994
*1992,1994

Fig. V.6
Warrior River Basin Reservoirs

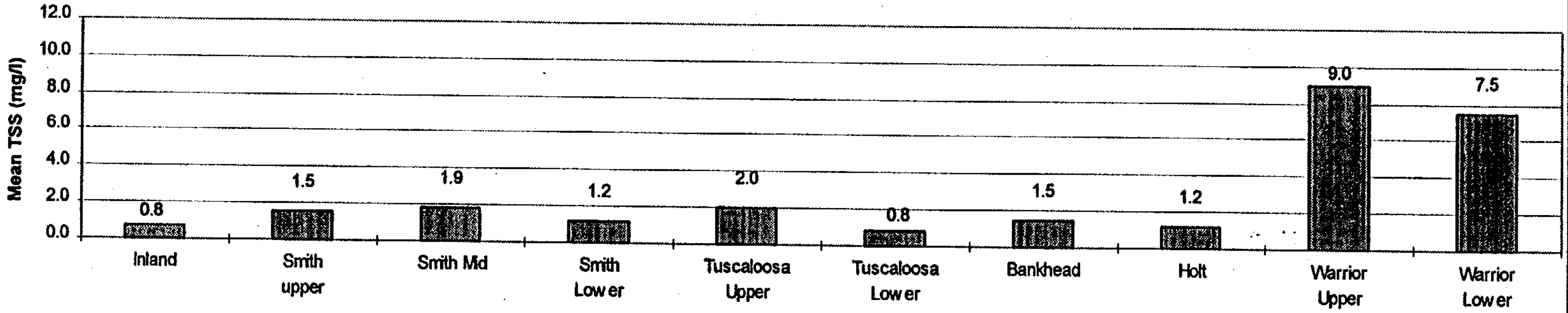


Fig. V.7
Warrior Basin Reservoirs

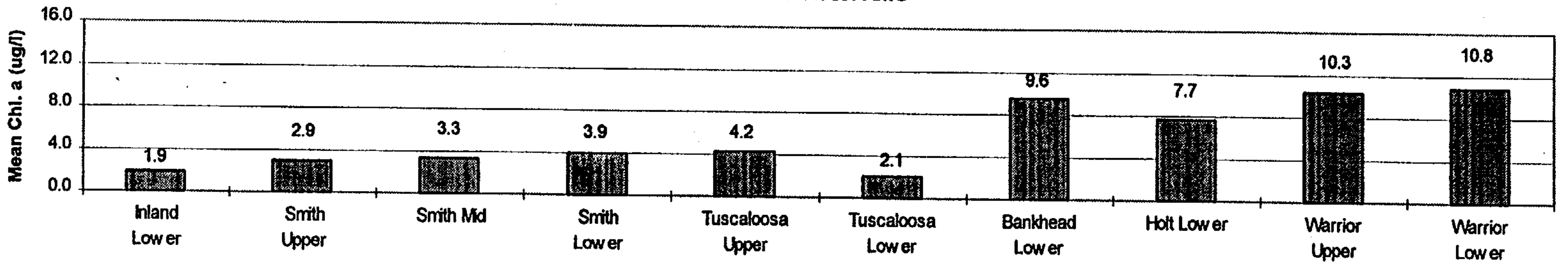
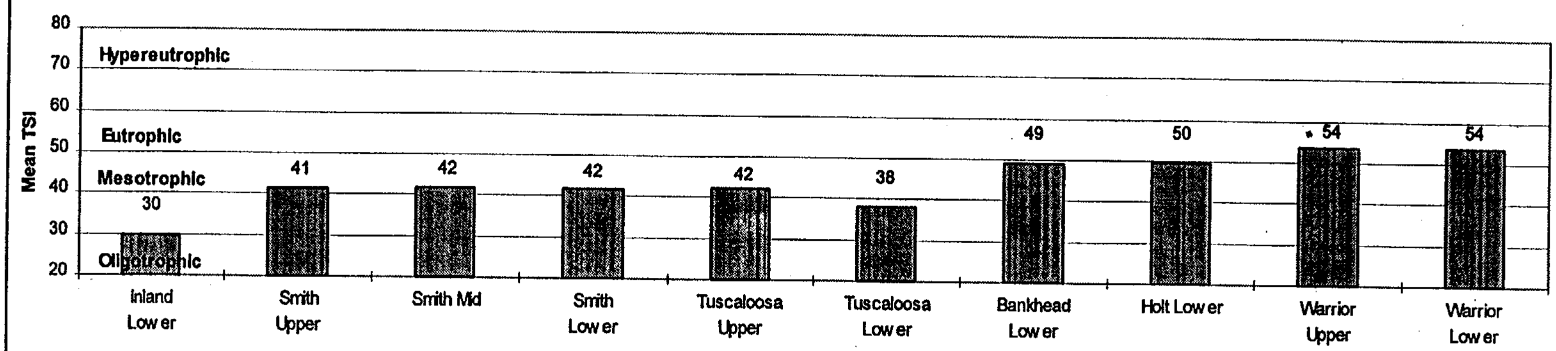


Fig. V.8
Warrior River Basin Reservoirs



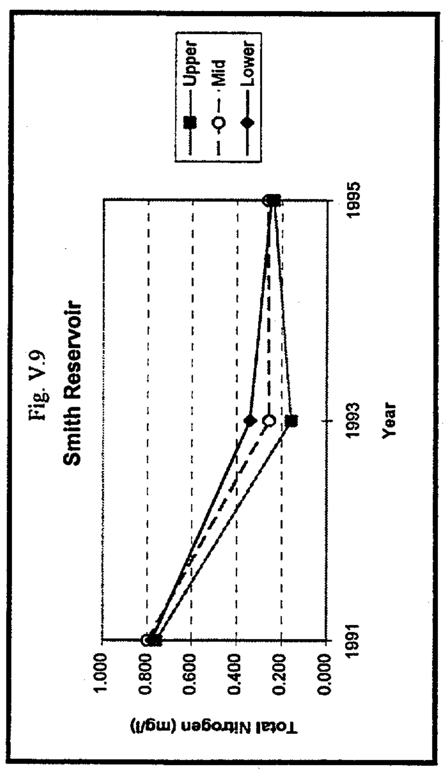


Fig. V.9
Smith Reservoir

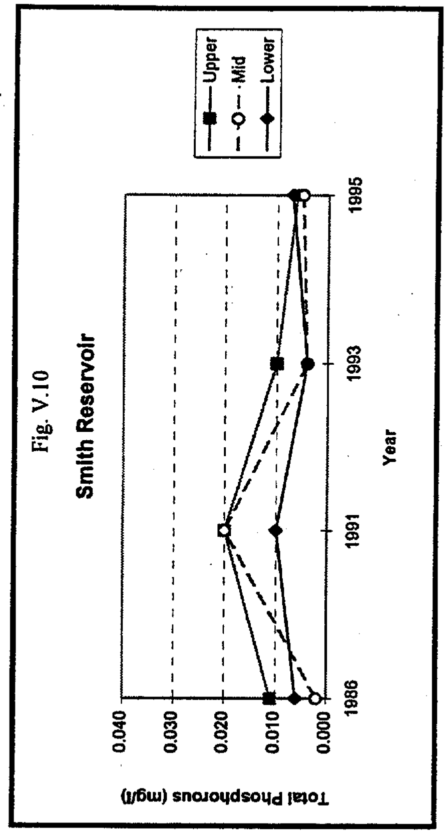


Fig. V.10
Smith Reservoir

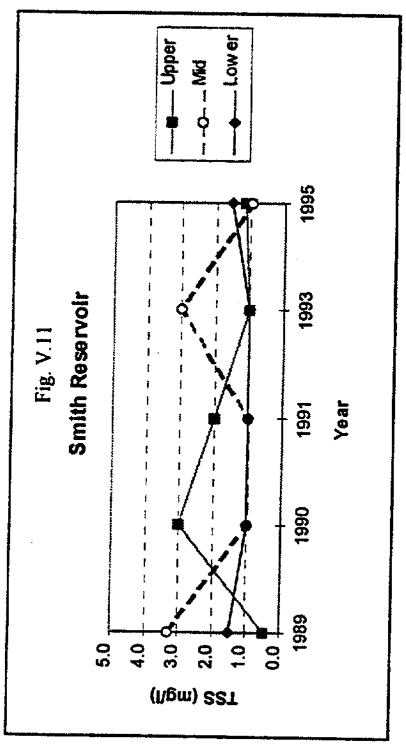


Fig. V.11
Smith Reservoir

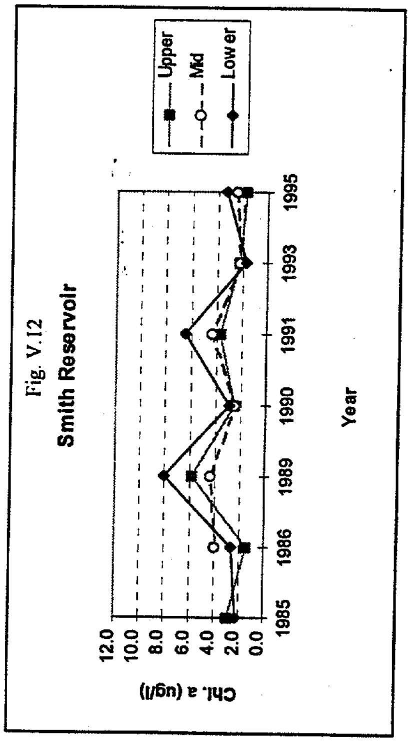


Fig. V.12
Smith Reservoir

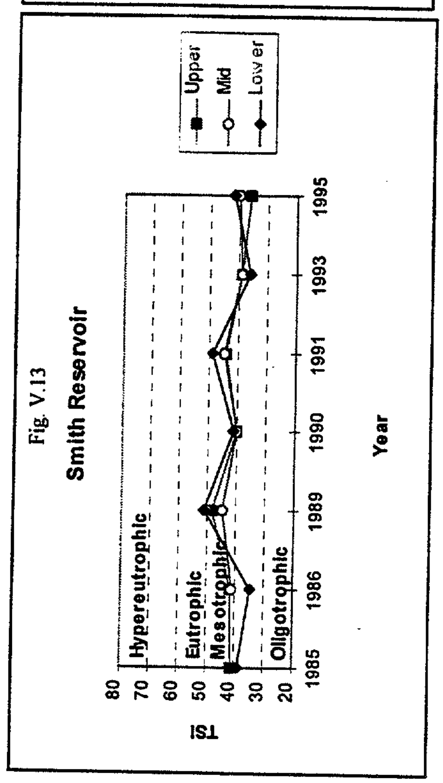


Fig. V.13
Smith Reservoir

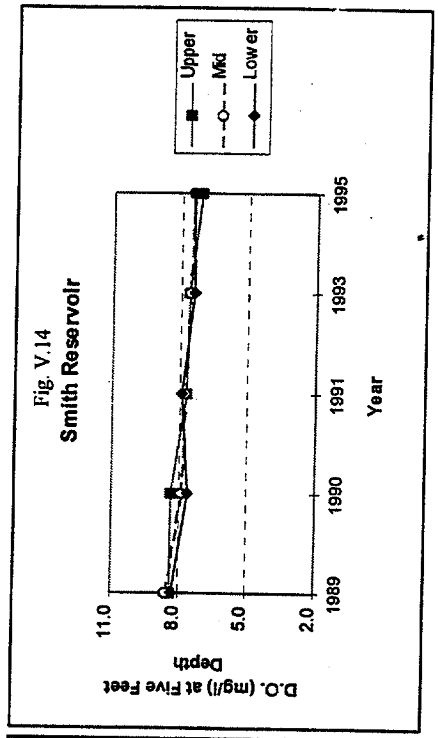


Fig. V.14
Smith Reservoir

Fig. V.15

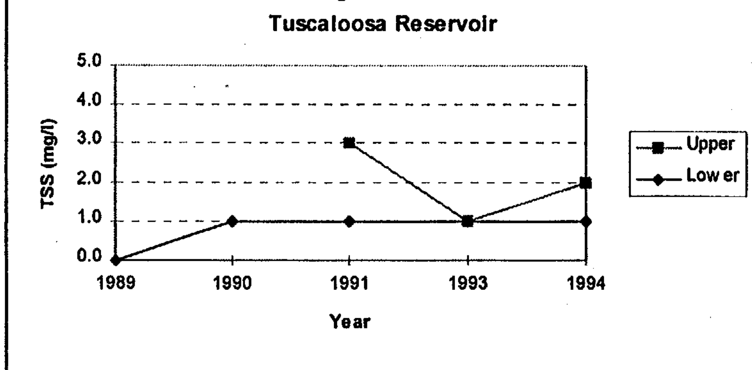


Fig. V.16

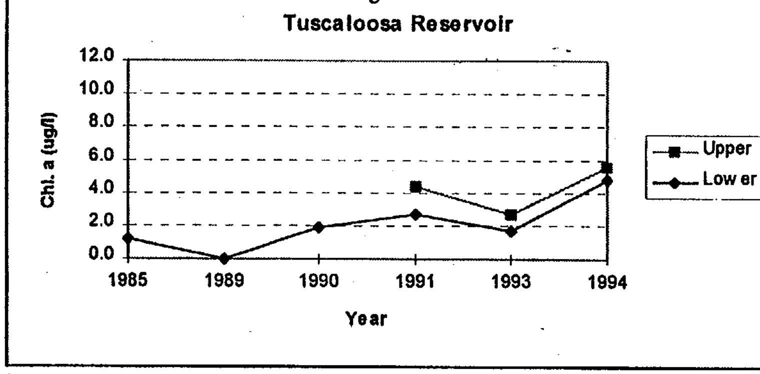


Fig. V.17

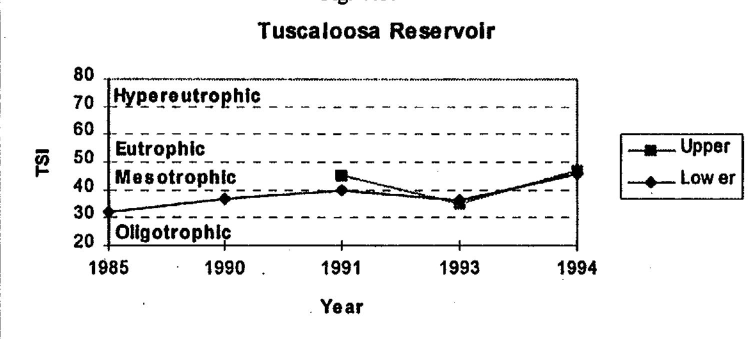


Fig. V.18

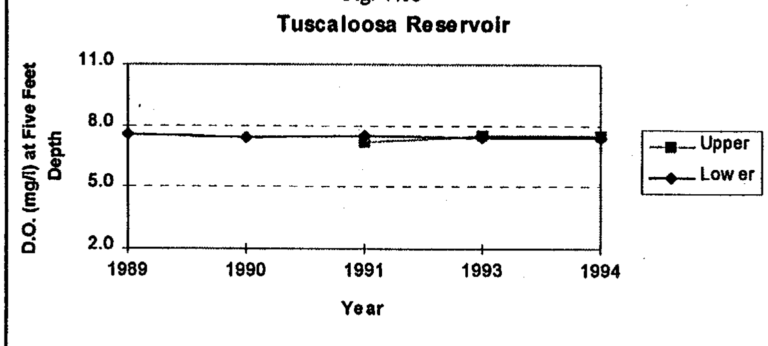


Fig. V.19
Inland Reservoir

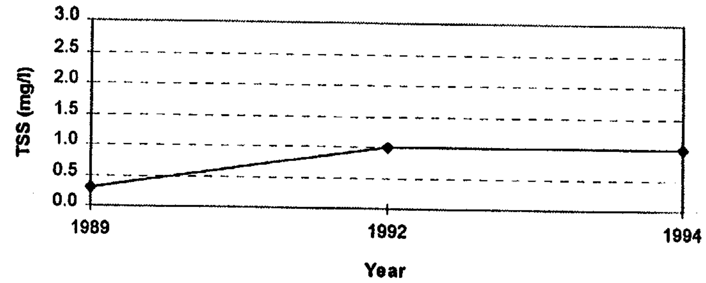


Fig. V.20
Inland Reservoir

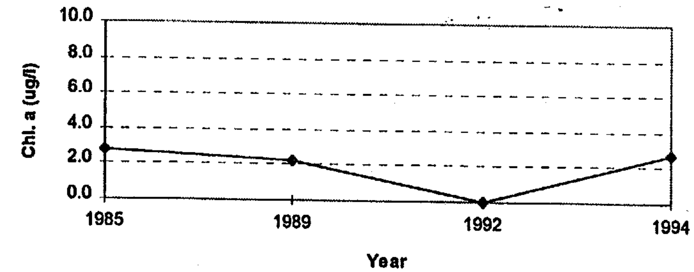


Fig. V.21
Inland Reservoir

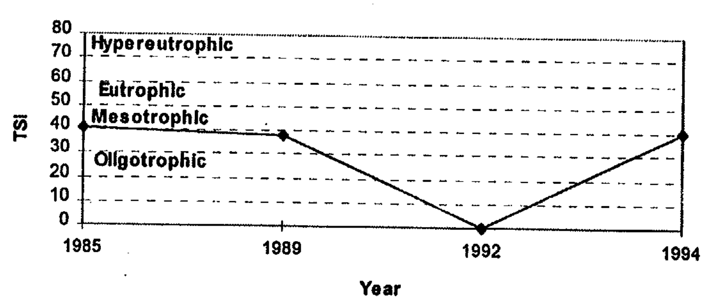


Fig. V.22
Inland Reservoir

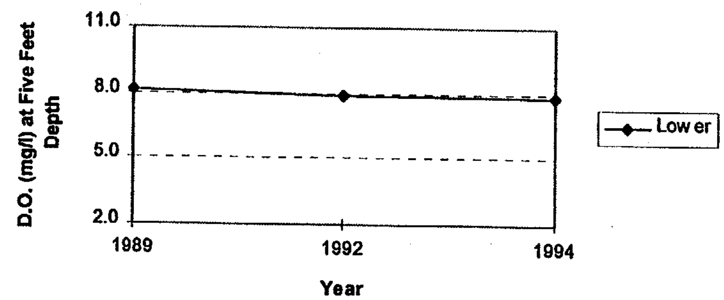


Fig. V.23

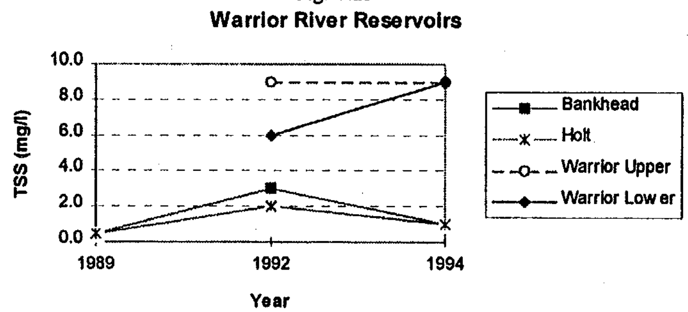


Fig. V.24

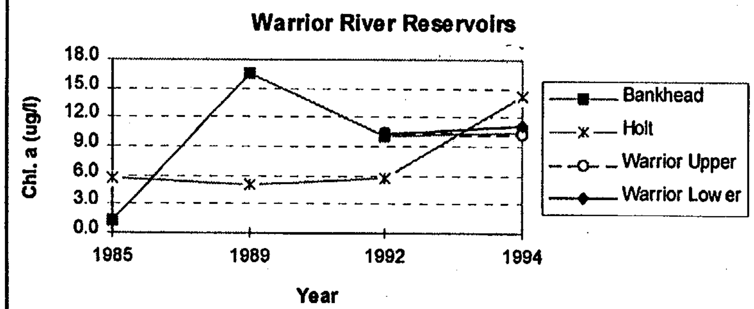


Fig. V.25

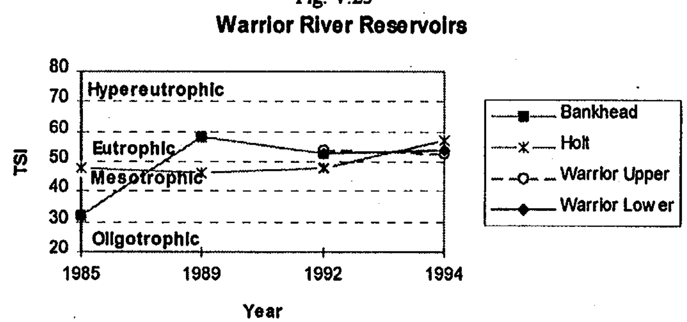


Fig. V.26

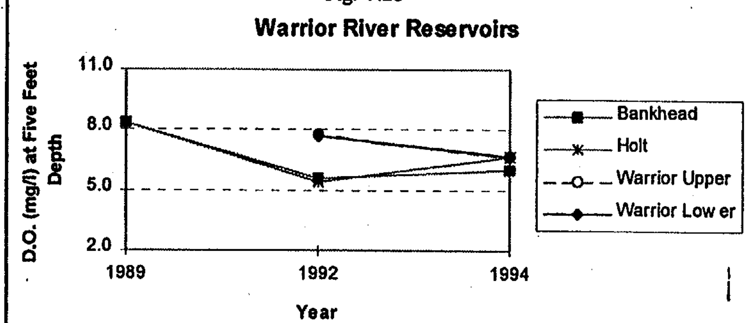


Table V.1. Nitrogen-Phosphorus ratios (TN:TP) of RWQM locations in the Warrior River Basin.

Reservoir	Location	Year (August)	TN:TP	Limiting nutrient
Inland	Lower	1992	250:1	Phosphorus
		1994	80:1	Phosphorus
Smith	Upper	1991	38:1	Phosphorus
		1993	16:1	Optimum
		1995	40:1	Phosphorus
	Mid	1991	40:1	Phosphorus
		1993	64:1	Phosphorus
		1995	53:1	Phosphorus
	Lower	1991	78:1	Phosphorus
		1993	85:1	Phosphorus
		1995	36:1	Phosphorus
Tuscaloosa	Upper	1991	34:1	Phosphorus
		1994	58:1	Phosphorus
	Lower	1991	37:1	Phosphorus
		1994	48:1	Phosphorus
Bankhead	Lower	1992	63:1	Phosphorus
		1994	39:1	Phosphorus
Holt	Lower	1992	122:1	Phosphorus
		1994	41:1	Phosphorus
Warrior	Upper	1992	34:1	Phosphorus
		1994	32:1	Phosphorus
	Lower	1992	46:1	Phosphorus
		1994	81:1	Phosphorus

Phosphorus Ltd. >16:1
Optimum 11-16:1
Nitrogen <11:1
(Porcella et al. 1974)

VI. Tombigbee River Basin

Precipitation and Discharge

Though variable across the state, rainfall in many areas was higher than normal during the growing seasons of 1989, 1991, and 1994 and lower than normal during the growing seasons of 1990, 1992, 1993, and 1995 (Appendix B).

The mean growing season (May-August) discharge of the Tombigbee River measured at Bevill Lock and Dam was greater than the long-term (1981-1995) mean in 1989, 1991, and 1994 (Fig. VI.1). The mean growing season discharge at Bevill Lock and Dam was less than the long-term mean in 1985, 1990, 1992, 1993, and 1995 with the lowest discharge of the years monitored occurring in 1992.

The mean growing season (May-August) discharge of the Tombigbee River measured at Demopolis, AL was greater than the long-term mean (1928-1994) in 1985, 1989, 1991, and 1994 (VI.2). Discharge was less than the long-term mean in 1990, 1992, and 1993 with the lowest discharge of the years monitored occurring in 1992.

Aliceville Reservoir

Nitrogen. The mean TN value for Aliceville Reservoir was lowest of Tombigbee Basin reservoirs (Fig. VI.3). Insufficient data were available for development of line graphs of nitrogen concentrations in the years monitored.

Phosphorus. The mean TP value for Aliceville Reservoir was highest of Tombigbee Basin reservoirs (Fig. VI.4). Insufficient data were available for development of line graphs of total phosphorus concentrations in the years monitored. The mean DRP value for Aliceville Reservoir was lowest of Tombigbee Basin reservoirs (Fig. VI.5). Insufficient data was available for development of line graphs of DRP concentrations in the years monitored.

TN:TP ratios. Total nitrogen to total phosphorus ratios for Aliceville Reservoir were within the optimum range in 1992 and indicated nitrogen as the limiting nutrient in 1995 (Table VI.1).

Suspended solids. The mean TSS value for Aliceville Reservoir was highest of the Tombigbee Basin locations (Fig. VI.6). Total suspended solids concentrations were highest in 1989, decreased in 1992, and were similar to 1992 in 1995 (Fig. VI.9).

Chlorophyll a. The mean chlorophyll a value for Aliceville Reservoir was highest of Tombigbee Basin locations and similar to that of Coffeeville Reservoir (Fig.

VI.7). Chlorophyll a concentrations in Aliceville Reservoir increased every year monitored with greatest increases observed in 1992 and 1995 (Fig. VI.10).

Trophic state. The mean TSI value for Aliceville Reservoir was within the lower half of the eutrophic range and similar to that of Coffeeville Reservoir (Fig. VI.8). Over the years monitored, TSI values for Aliceville Reservoir increased from the lower half of the eutrophic range to the upper half of the eutrophic range (Fig. VI.11).

Dissolved oxygen. Dissolved oxygen concentrations of Aliceville Reservoir were above the criterion limit in all years monitored (Fig. VI.12).

Discussion. Available water quality data for Aliceville Reservoir is limited, particularly in regard to nutrient concentrations. The increase in trophic state of the reservoir is cause for concern. As the most upstream reservoir on the Tombigbee River near the Alabama-Mississippi stateline, it is likely that many of the effects to water quality resulting in the trophic state increase originate from point and nonpoint sources in Mississippi. Continued regular monitoring is recommended so that any further changes in trophic state and water quality can be detected and to continue development of an adequate database to aid in the analysis of trends in water quality.

Gainesville Reservoir

Nitrogen. The mean TN value for Gainesville Reservoir was above that of Aliceville but below that of Demopolis and Coffeeville Reservoirs (Fig. VI.3). Insufficient data were available for development of line graphs of nitrogen concentrations in the years monitored.

Phosphorus. The mean TP value for Gainesville Reservoir was below that of Aliceville but above that of Demopolis and Coffeeville Reservoirs (Fig. VI.4). Insufficient data were available for development of line graphs of total phosphorus concentrations in the years monitored. The mean DRP value for Gainesville Reservoir was above that of Aliceville and Demopolis but below that of Coffeeville Reservoir (Fig. VI.5). Insufficient data were available for development of line graphs of DRP concentrations in the years monitored.

TN:TP ratios. Total nitrogen to total phosphorus ratios for Gainesville Reservoir were within the optimum range in 1992 and 1995 (Table VI.1).

Suspended solids. The mean TSS value for Gainesville Reservoir was below that of Aliceville and Coffeeville but above that of Demopolis (Fig. VI.6). Concentrations in the years monitored were highest in 1989, decreased in 1992, and increased slightly in 1995 from 1992 (Fig. VI.9).

Chlorophyll a. The mean chlorophyll a value for Gainesville Reservoir was below that of Aliceville and Coffeeville Reservoirs but above that of Demopolis Reservoir (Fig. VI.7). Chlorophyll a concentrations in Gainesville Reservoir were similar in 1985 and 1989 but increased sharply in 1992 and 1995 along with those of Aliceville Reservoir (Fig. VI.10).

Trophic state. The mean TSI value for Gainesville Reservoir was within the lower half of the eutrophic range, below that of Aliceville and Coffeeville Reservoirs and above that of Demopolis Reservoir (Fig. VI.8). In the years monitored, TSI values increased sharply from the upper mesotrophic conditions of 1989 to the upper half of the eutrophic range in 1995 (Fig. VI.11).

Dissolved oxygen. Dissolved oxygen concentrations in Gainesville Reservoir were similar to those of Aliceville and Demopolis Reservoirs and were above the criterion limit in all years monitored (Fig. VI.12).

Discussion. Available water quality data for Gainesville Reservoir is limited, particularly in regard to nutrient concentrations. The trophic condition of Gainesville Reservoir appears similar to that of Aliceville Reservoir with the increase in trophic state of the reservoir cause for concern. Continued regular monitoring is recommended so that any further changes in trophic state and water quality can be detected and to continue development of an adequate database to aid in the analysis of trends in water quality.

Demopolis Reservoir

Nitrogen. The mean TN value for Demopolis Reservoir was highest of basin locations (Fig. VI.3). Insufficient data were available for development of line graphs of nitrogen concentrations in the years monitored.

Phosphorus. The mean TP value for Demopolis Reservoir was lowest of basin locations (Fig. VI.4). Insufficient data were available for development of line graphs of total phosphorus concentrations in the years monitored. The mean DRP value for Demopolis Reservoir was above that of Aliceville but below that of Coffeeville and Gainesville Reservoirs (Fig. VI.5). Insufficient data were available for development of line graphs of DRP concentrations in the years monitored.

TN:TP ratios. Total nitrogen to total phosphorus ratios for Demopolis Reservoir indicated phosphorus to be the limiting nutrient in 1992 and 1995 (Table VI.1).

Suspended solids. The mean TSS value for Demopolis Reservoir was lowest of basin locations (Fig. VI.6). In the years monitored, TSS concentrations were similar to those of Gainesville Reservoir with highest concentrations in 1989, lower concentrations in 1992, and a slight increase in 1995 (Fig. ?).

Chlorophyll a. The mean chlorophyll a value for Demopolis Reservoir was lowest of basin locations (Fig. VI.7). In the years monitored, chlorophyll a concentrations in Demopolis Reservoir increased along with those of Aliceville and Gainesville Reservoirs until 1995, when concentrations in Demopolis decreased sharply (Fig. VI.10).

Trophic state. The mean TSI value for Demopolis Reservoir was within the lower half of the eutrophic range and lowest of basin locations (Fig. VI.8). In the years monitored, TSI values were within the upper mesotrophic range in 1985, increased into the lower half of the eutrophic range in 1989 and 1992, and decreased into the upper mesotrophic range in 1995 (Fig. VI.11).

Dissolved oxygen. Dissolved oxygen concentrations in Demopolis Reservoir were similar to those of Aliceville and Gainesville Reservoirs and were above the criterion limit in all years monitored (Fig. VI.12).

Discussion. Available water quality data for Demopolis Reservoir is limited, particularly in regard to nutrient concentrations. The trophic state of Demopolis Reservoir increased along with those of Aliceville and Gainesville Reservoirs until 1995 when the TSI declined. Continued regular monitoring is recommended so that any further changes in trophic state and water quality can be detected and to continue development of an adequate database to aid in the analysis of trends in water quality.

Coffeeville Reservoir

Nitrogen. The mean TN value for Coffeeville Reservoir was second only to that of Demopolis Reservoir (Fig. VI.3). Insufficient data were available for development of line graphs of nitrogen concentrations in the years monitored.

Phosphorus. The mean TP value for Coffeeville Reservoir was slightly above that of Demopolis Reservoir and below those of Aliceville and Gainesville Reservoirs (Fig. VI.4). Insufficient data were available for development of line graphs of total phosphorus concentrations in the years monitored. The mean DRP value for Coffeeville Reservoir was highest of basin locations (Fig. VI.5). Insufficient data were available for development of line graphs of DRP concentrations in the years monitored.

TN:TP ratios. Total nitrogen to total phosphorus ratios for Coffeeville Reservoir indicated phosphorus to be the limiting nutrient in 1992 with the ratio within the optimum range in 1995 (Table VI.1).

Suspended solids. The mean TSS value for Coffeeville Reservoir was second only to that of Aliceville Reservoir of basin locations (Fig. VI.6). In the two years monitored, TSS concentrations were similar to those of other basin reservoirs in 1992 and were higher than other basin reservoirs in 1995 (Fig. VI.9).

Chlorophyll a. The mean chlorophyll a value for Coffeeville Reservoir was second only to that of Aliceville Reservoir of basin locations (Fig. VI.7). In the two years monitored, chlorophyll a concentrations in Coffeeville increased along with those of Aliceville and Gainesville Reservoirs (Fig. VI.10).

Trophic state. The mean TSI value for Coffeeville Reservoir was within the lower half of the eutrophic range and similar to that of Aliceville Reservoir (Fig. VI.8). In the two years monitored, TSI values were within the lower half of the eutrophic range in 1992, and increased into the upper half of the eutrophic range in 1995 (Fig. VI.11).

Dissolved oxygen. Dissolved oxygen concentrations in Coffeeville Reservoir were above the criterion limit in the years monitored (Fig. VI.12).

Discussion. Available water quality data for Coffeeville Reservoir is limited. As in Aliceville and Gainesville Reservoirs, the trophic state of Coffeeville Reservoir increased substantially from 1992 to 1995. Continued regular monitoring is recommended so that any further changes in trophic state and water quality can be detected and to continue development of an adequate database to aid in the analysis of trends in water quality.

Fig. VI.1

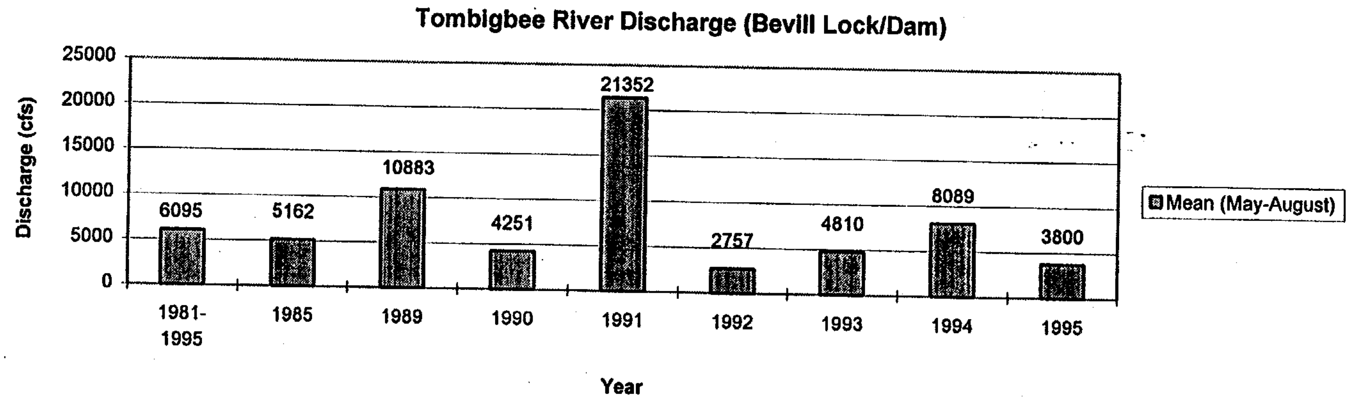


Fig. VI.2

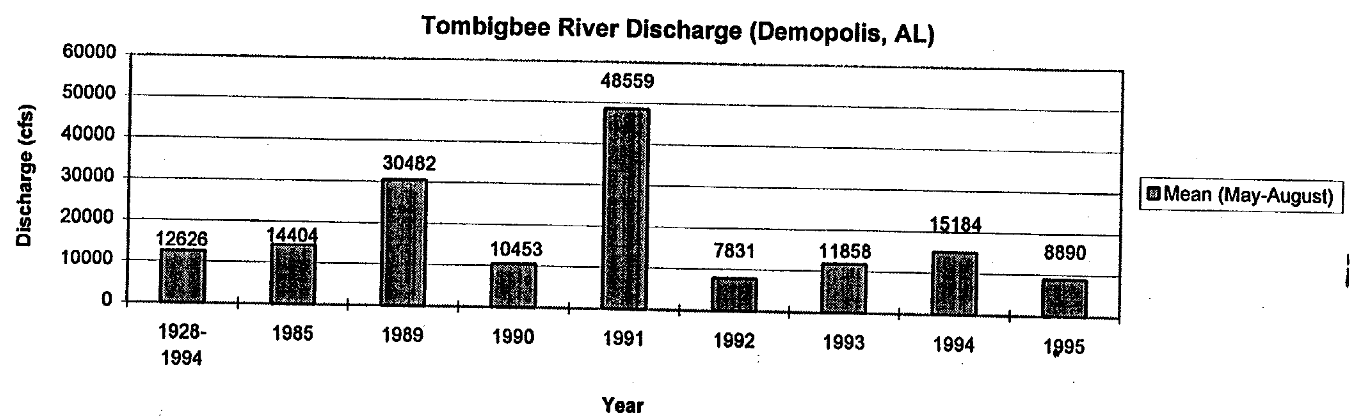


Fig. VI.3

Tombigbee River Reservoirs

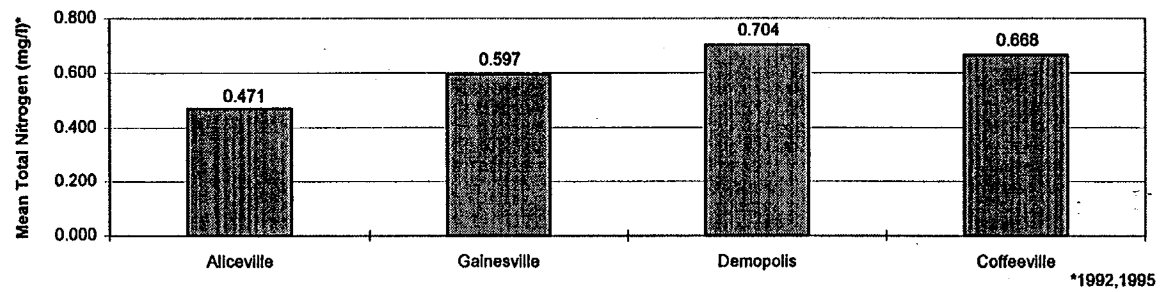


Fig. VI.4

Tombigbee River Reservoirs

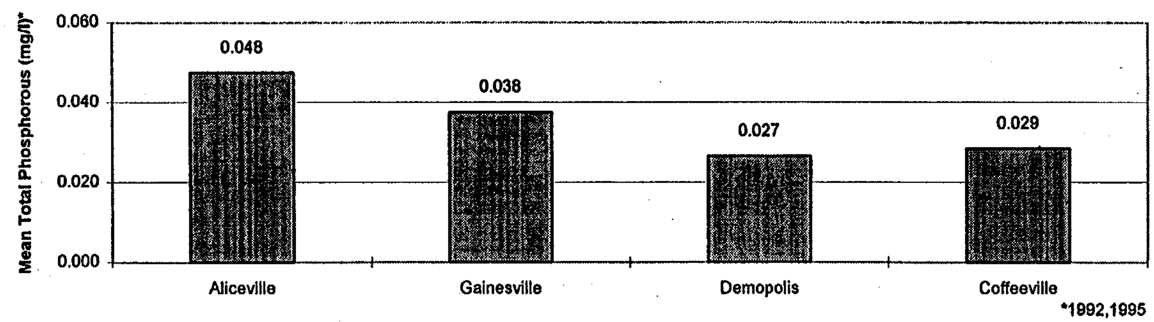


Fig. VI.5

Tombigbee River Reservoirs

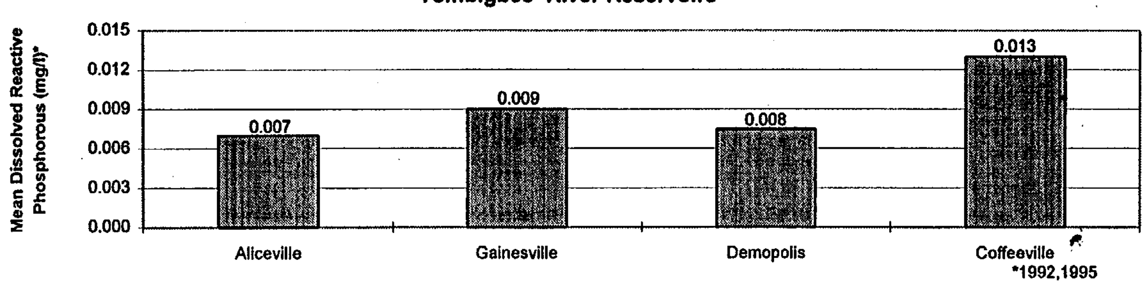


Fig. VI.6

Tombigbee River Reservoirs

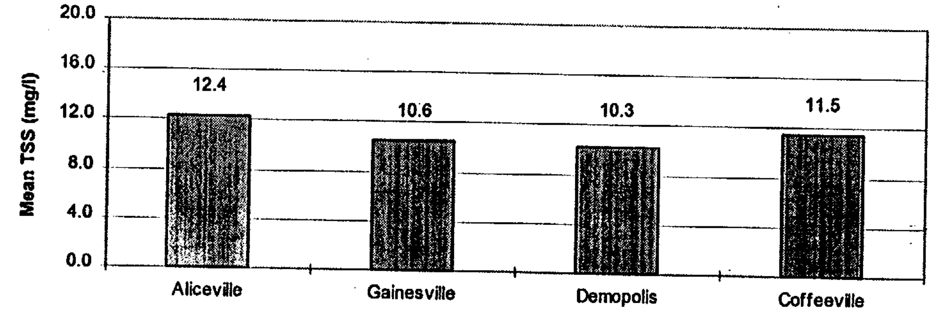


Fig. VI.7

Tombigbee River Reservoirs

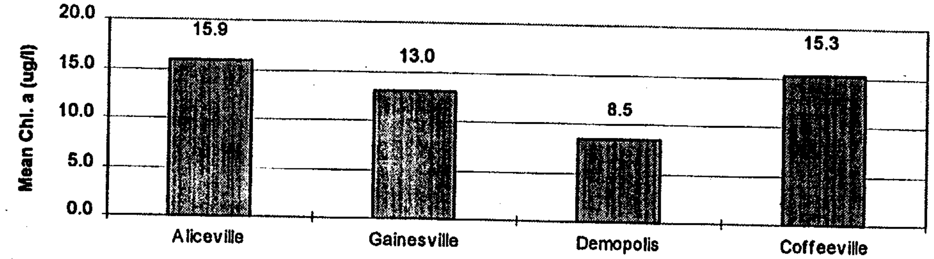


Fig. VI.8

Tombigbee River Reservoirs

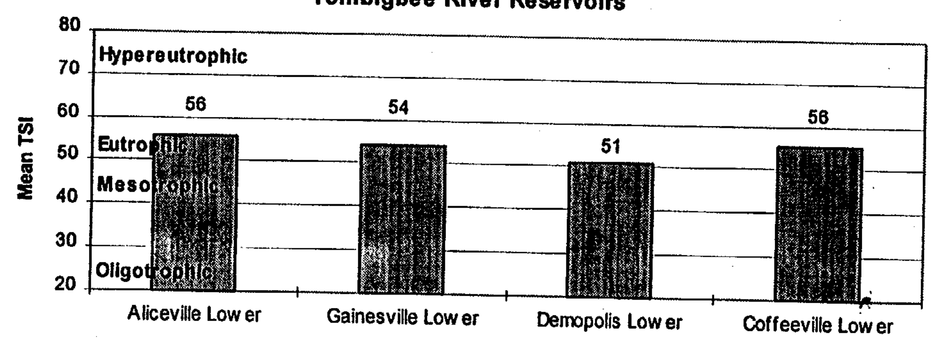


Fig. VI.9

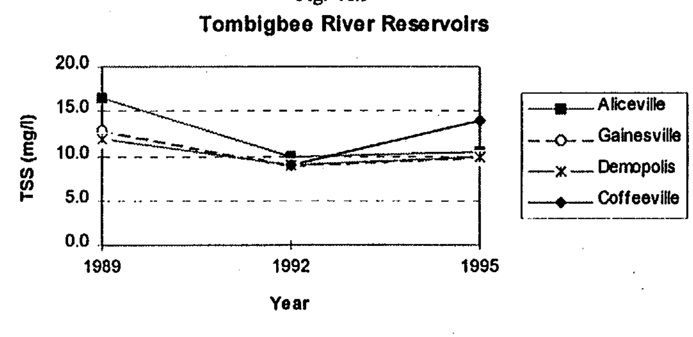


Fig. VI.10

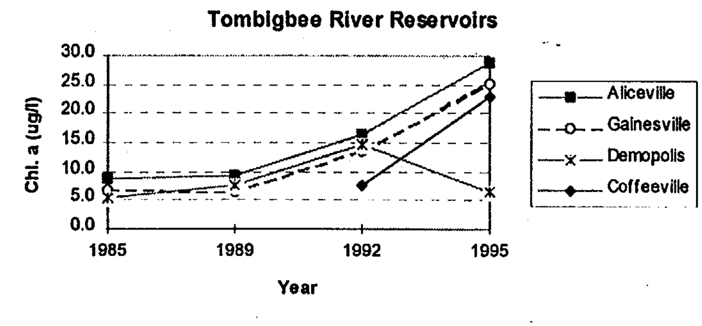


Fig. VI.11

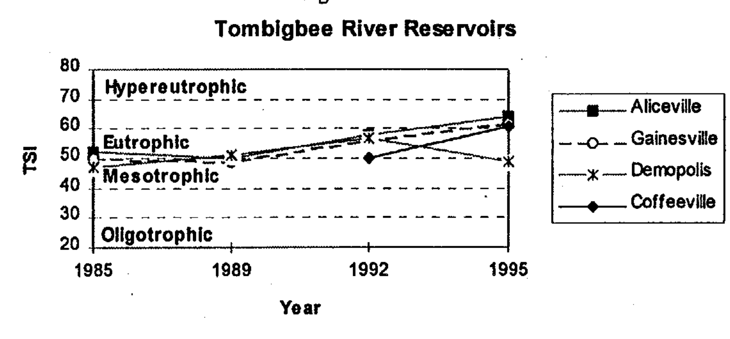


Fig. VI.12

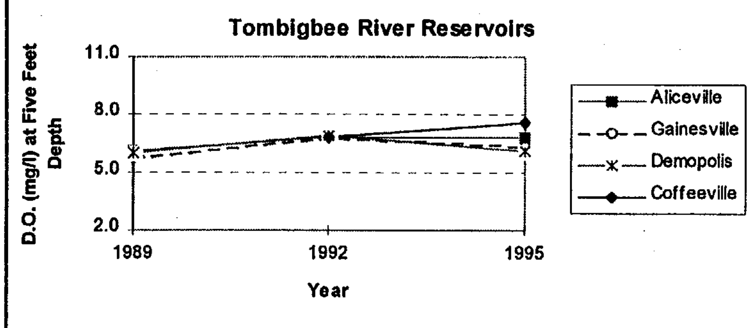


Table VI.1. Nitrogen-Phosphorus ratios (TN:TP) of RWQM locations in the Tombigbee River Basin.

Reservoir	Location	Year (August)	TN:TP	Limiting nutrient
Aliceville	Lower	1992	11:1	Optimum
		1995	8:1	Nitrogen
Gainesville	Lower	1992	16:1	Optimum
		1995	15:1	Optimum
Demopolis	Lower	1992	23:1	Phosphorus
		1995	33:1	Phosphorus
Coffeeville	Lower	1992	32:1	Phosphorus
		1995	14:1	Optimum

Phosphorus Ltd. >16:1
Optimum 11-16:1
Nitrogen <11:1
(Porcella et al. 1974)

VII. Conecuh River Basin

Precipitation and Discharge

Though variable across the state, rainfall in many areas was higher than normal during the growing seasons of 1989, 1991, and 1994 and lower than normal during the growing seasons of 1990, 1992, 1993, and 1995 (Appendix B).

The mean growing season (May-August) discharge of the Conecuh River measured at Brantley, AL was greater than the long-term mean (1938-1995) in 1989, 1991, and 1994 (Fig. VII.1). The mean growing season discharge at Brantley, AL was less than the long-term mean in 1985, 1990, 1992, 1993, and 1995 with the lowest discharge of the years monitored occurring in 1985 and 1995.

Gantt Reservoir

Nitrogen. The mean TN value for Gantt Reservoir was much lower than that of Point A Reservoir (Fig. VII.2). Insufficient data were available for development of line graphs of nitrogen concentrations in the years monitored

Phosphorus. The mean TP value for Gantt Reservoir was slightly lower than that of Point A Reservoir (Fig. VII.3). During the years monitored TP concentrations were similar until 1995 when concentrations were much higher than in previous years (Fig. VII.4). Insufficient data were available for development of graphs of DRP concentrations.

TN:TP ratios. Total nitrogen to total phosphorus ratios for Gantt Reservoir indicated nitrogen to be the limiting nutrient in 1993 and 1995 (Table VII.1).

Suspended solids. The mean TSS value for Gantt Reservoir was slightly lower than that of Point A Reservoir (Fig. VII.6). In the years monitored, TSS concentrations were similar except for much higher concentrations in 1990 (Fig. VII.7).

Chlorophyll a. The mean chlorophyll a concentration for Gantt Reservoir was lower than that of Point A Reservoir (Fig. VII.8). Chlorophyll a concentrations increased at Gantt Reservoir in all years monitored (Fig. 9).

Trophic state. The mean TSI value for Gantt Reservoir was within the lower mesotrophic range and below that of Point A Reservoir (Fig. VII.10). Trophic state index values were within the oligotrophic range when first monitored in 1985 (Fig. VII.11).

When monitored in 1989, TSI values had increased into the lower mesotrophic range with those of following years increasing into the upper mesotrophic range.

Dissolved oxygen. Dissolved oxygen concentrations in Gantt Reservoir were lowest in 1989, increasing in all years monitored thereafter (Fig. VII.13). Concentrations were above the criterion limit in all years monitored.

Discussion. Available water quality data for Gantt Reservoir is limited particularly in regard to nutrient concentrations. The increase in total phosphorus concentrations and trophic state of the reservoir is cause for concern. Continued regular monitoring is recommended so that any further changes in trophic state and water quality can be detected and to continue development of an adequate database to aid in the analysis of trends in water quality. More intensive study of the Conecuh River and its tributaries may be required to determine causes of nutrient and trophic state increase.

Point A Reservoir

Nitrogen. The mean TN value for Point A Reservoir was much higher than that of Gantt Reservoir (Fig. VII.2). Insufficient data were available for development of line graphs of nitrogen concentrations in the years monitored.

Phosphorus. The mean TP value for Point A Reservoir was slightly higher than that of Gantt Reservoir (Fig. VII.3). In the years monitored, TP concentrations of Point A were lowest in 1993 but increased along with the TP concentrations of Gantt Reservoir in 1995 (Fig. VII.5). Insufficient data were available for development of graphs of DRP concentrations.

TN:TP ratios. Total nitrogen to total phosphorus ratios for Gantt Reservoir indicated phosphorus to be the limiting nutrient in 1993 and nitrogen the limiting nutrient in1995 (Table VII.1).

Suspended solids. The mean TSS value for Point A Reservoir was slightly higher than that of Gantt Reservoir (Fig. VII.6). In the years monitored, TSS concentrations were lowest in 1989 and higher in 1993 and 1995 (Fig. VII.7).

Chlorophyll a. The mean chlorophyll a value for Point A Reservoir was much higher than that of Gantt Reservoir (Fig. VII.8). Chlorophyll a concentrations in Point A were similar in 1989, 1990, and 1993 but increased sharply along with those of Gantt Reservoir in 1995 (Fig. VII.9).

Trophic state. The mean TSI value for Point A Reservoir was in the upper mesotrophic range (Fig. VII.10). In 1985, 1989, and 1993 TSI values were within the upper mesotrophic range (Fig. VII.11). In 1995, the TSI value increased into the lower eutrophic range.

Dissolved oxygen. Dissolved oxygen concentrations in Point A Reservoir were lowest in 1989 and higher in 1993 and 1995 (Fig. VII.13). Concentrations were above the criterion limit in all years monitored.

Discussion. Available water quality data for Point A Reservoir is limited, particularly in regard to nutrient concentrations. Repeated draining of the reservoir during dam construction activities has interrupted monitoring activities. The increase in total phosphorus concentration and trophic state of the reservoir is cause for concern. Continued regular monitoring is recommended so that any further changes in trophic state and water quality can be detected and to continue development of an adequate database to aid in the analysis of trends in water quality. More intensive study of the Conecuh River and its tributaries may be required to determine causes of nutrient and trophic state increase.

Fig. VII.1

Conecuh River Discharge (Brantley, AL)

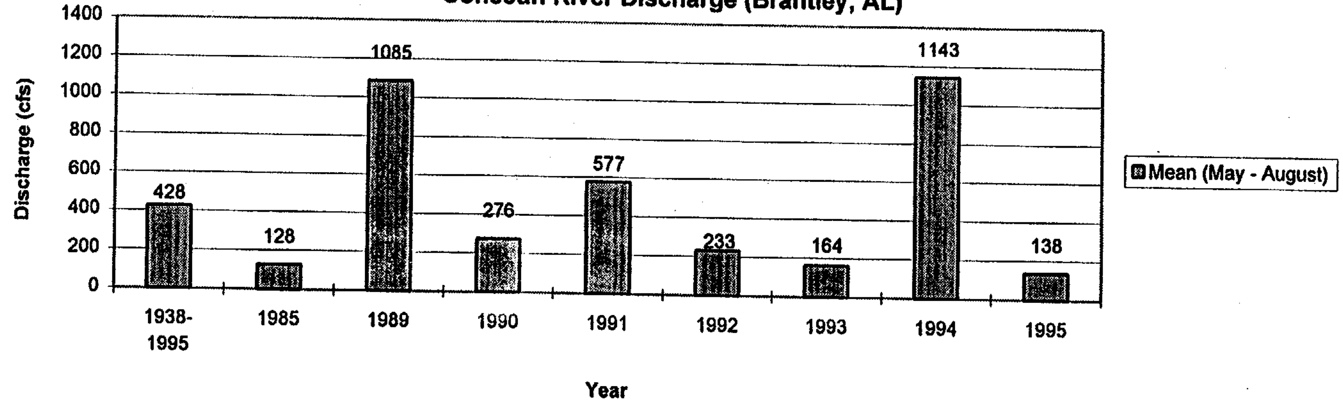


Fig. VII.2

Conecuh River Reservoirs

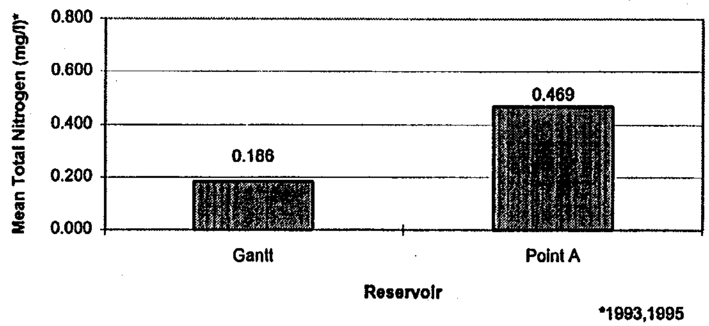


Fig. VII.3

Conecuh River Reservoirs

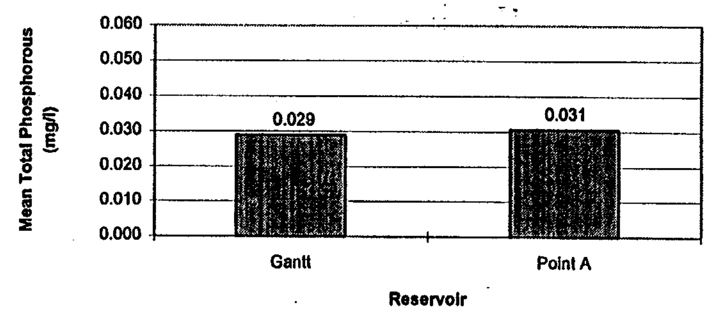


Fig. VII.4

Gantt Reservoir

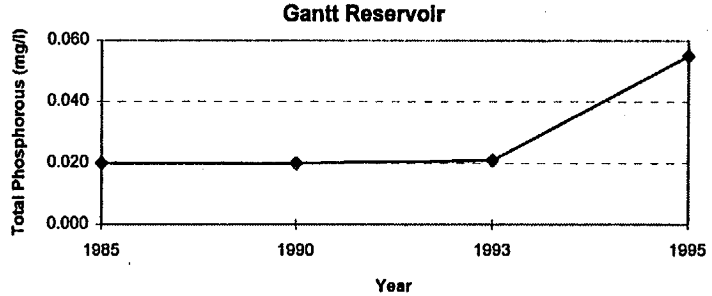


Fig. VII.5

Point A Reservoir

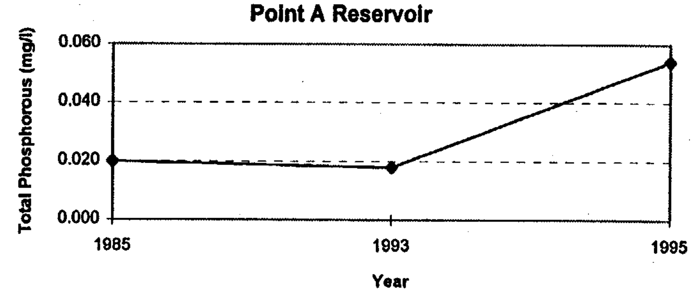


Fig. VII.6

Conecuh River Reservoirs

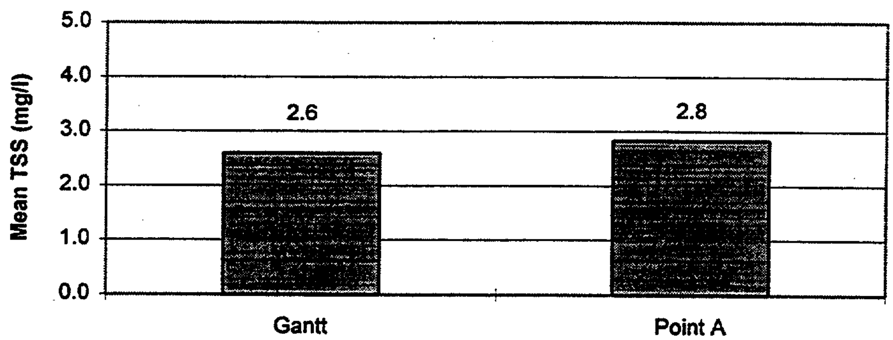


Fig. VII.7

Conecuh River Reservoirs

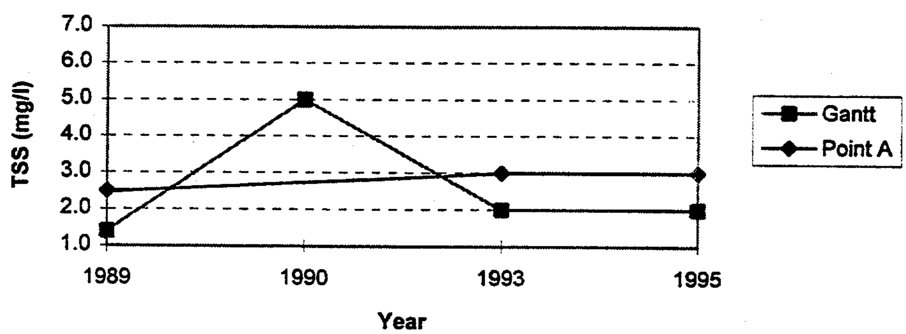


Fig. VII.8

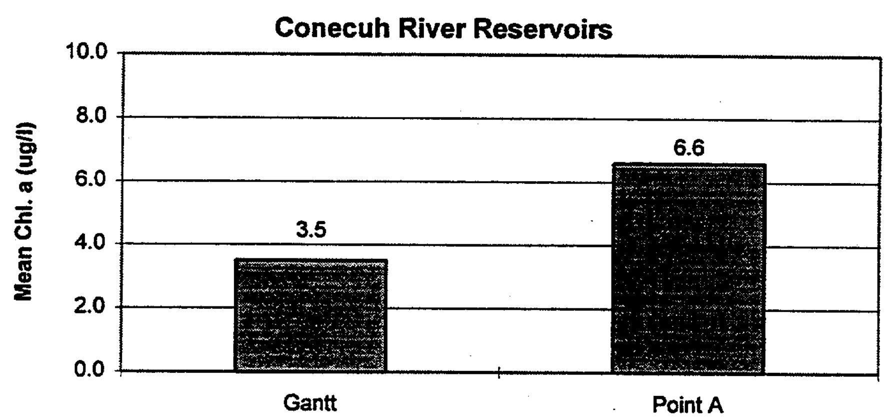


Fig. VII.9

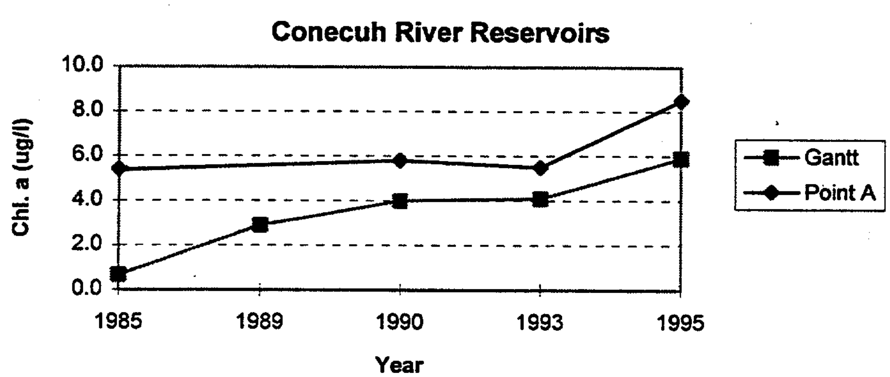


Fig. VII.10

Conecuh River Reservoirs

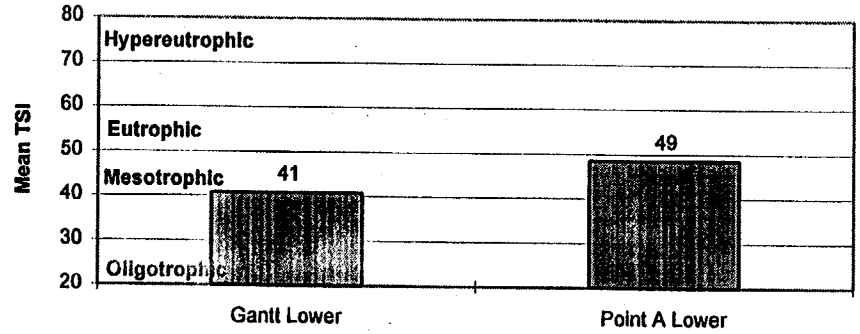


Fig. VII.11

Gantt Reservoir

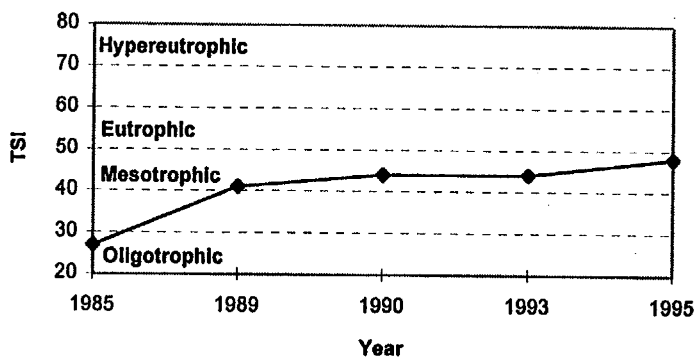


Fig. VII.12

Point A Reservoir

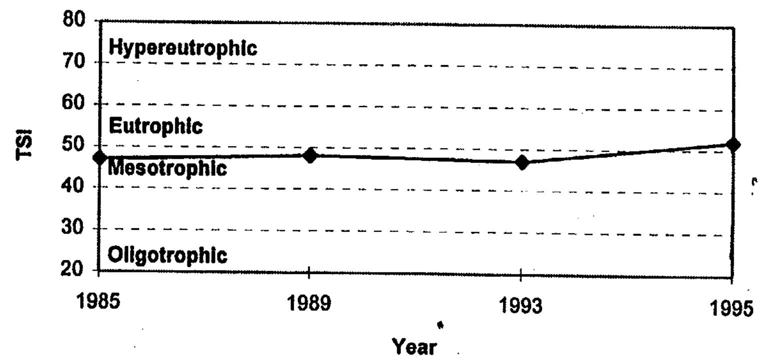


Fig. VII.13

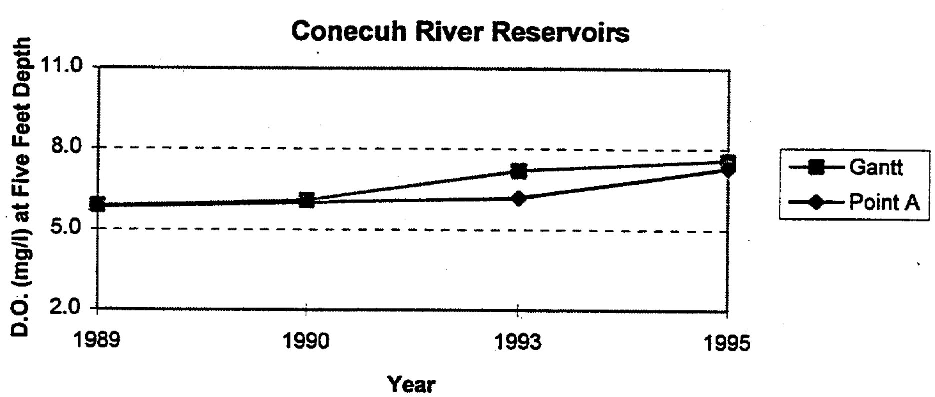

Conecuh River Reservoirs
D.O. (mg/l) at Five Feet Depth
11.0
8.0
5.0
2.0
1989
1990
1993
1995
Year
Gantt
Point A

Table VII.1. Nitrogen-Phosphorus ratios (TN:TP) of RWQM locations in the Conecuh River Basin.

Reservoir	Location	Year (August)	TN:TP	Limiting nutrient
Gantt	Lower	1993	9:1	Nitrogen
		1995	4:1	Nitrogen
Point A	Lower	1993	40:1	Phosphorus
		1995	4:1	Nitrogen

Phosphorus Ltd. >16:1
Optimum 11-16:1
Nitrogen <11:1
(Porcella et al. 1974)

VIII. Escatawpa River Basin

Precipitation and Discharge

Though variable across the state, rainfall in many areas was higher than normal during the growing seasons of 1989, 1991, and 1994 and lower than normal during the growing seasons of 1990, 1992, 1993, and 1995 (Appendix B).

The mean growing season (May-August) discharge of Big Creek measured near Wilmer, AL was greater than the long-term mean (1990-1995) in 1991, 1993, and 1995 (Fig. VIII.1). The mean growing season discharge of Big Creek was less than the long-term mean in 1992 and 1994 with the lowest discharge of the years monitored occurring in 1985 and 1992.

Big Creek Reservoir

Nitrogen. The mean TN value for Big Creek Reservoir appears in Figure VIII.2. Insufficient data were available for development of line graphs of nitrogen concentrations in the years monitored.

Phosphorus. The mean TP value for Big Creek Reservoir appears in Figure VIII.3. Insufficient data were available for development of line graphs of TP concentrations in the years monitored. Insufficient data were available for development of mean DRP values and of DRP concentrations in the years monitored.

TN:TP ratios. Total nitrogen to total phosphorus ratios for Big Creek Reservoir indicated phosphorus to be the limiting nutrient in 1992 and 1995 though the ratio was much lower in 1995 (Table VIII.1).

Suspended solids. The mean TSS value for Big Creek Reservoir appears in Figure VIII.4. In the years monitored, TSS concentrations were lowest in 1989, increased sharply in 1992, then decreased in 1995 (Fig. VII.5).

Chlorophyll a. The mean chlorophyll a value for Big Creek Reservoir appears in Figure VIII.6. Concentrations increased in all years monitored with the greatest increase observed in 1995 (Fig. VIII.7).

Trophic state. The mean TSI value for Big Creek Reservoir was just within the lower half of the eutrophic range (Fig. VIII.8). The initial TSI value from 1985 was within the oligotrophic range with an increase into the mesotrophic range in 1989, an increase into the lower half of the eutrophic range in 1992, and an increase into the upper half of the eutrophic range in 1995 (Fig. VIII.9).

Dissolved oxygen. Dissolved oxygen concentrations in Big Creek Reservoir were above the criterion limit in all years monitored (Fig. VIII.10).

Discussion. Available water quality data for Big Creek Reservoir is limited, particularly in regard to nutrient concentrations. The increase in trophic state of the reservoir observed in all years monitored is cause for concern. Continued regular monitoring is recommended so that any further changes in trophic state and water quality can be detected and to continue development of an adequate database to aid in the analysis of trends in water quality. More intensive study may be required to identify causes of the trophic state increase and effects to water quality from the increase.

Fig. VIII.1

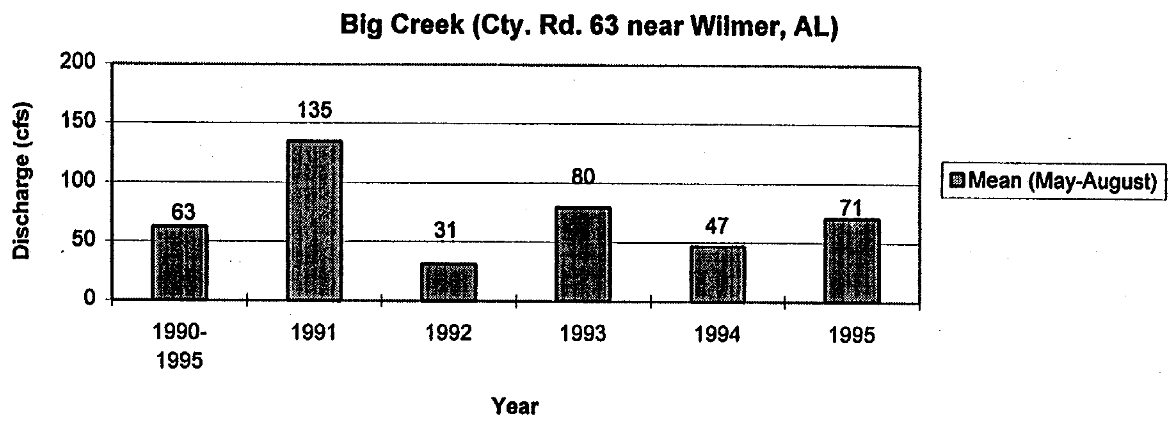

Big Creek (Cty. Rd. 63 near Wilmer, AL)
Discharge (cfs)
200
150
100
50
0
63
135
31
80
47
71
1990-1995
1991
1992
1993
1994
1995
Year
Mean (May-August)

Fig. VIII.2

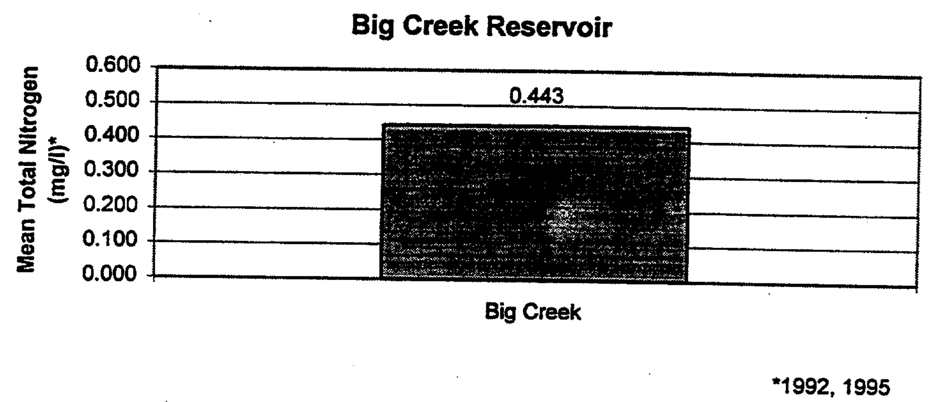


Fig. VIII.3

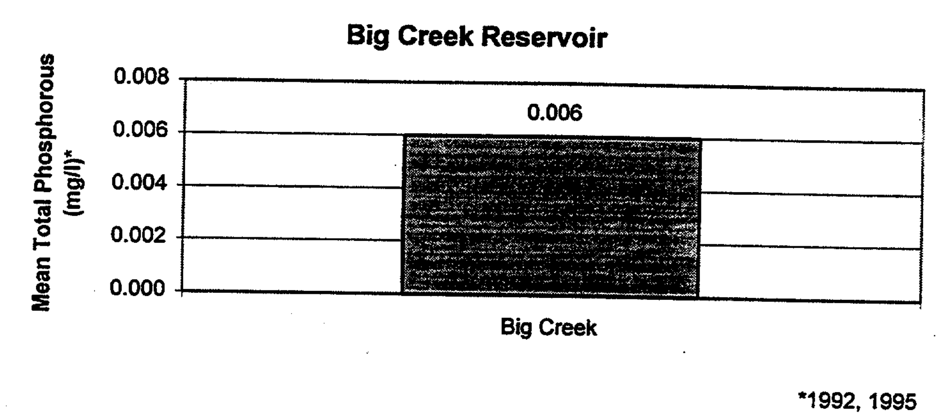


Fig. VIII.4

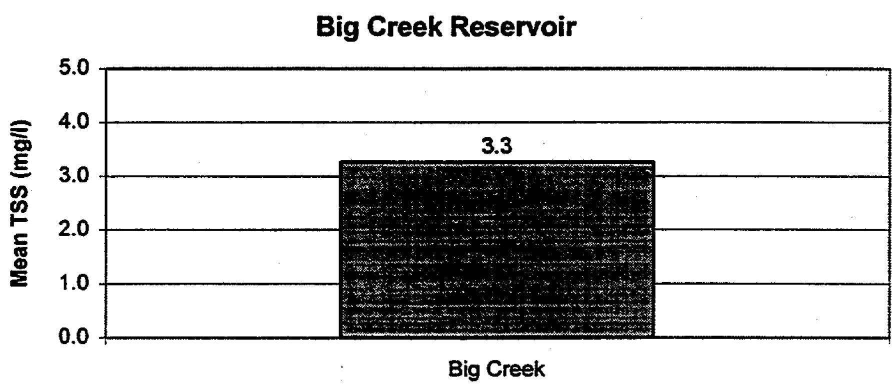


Fig. VIII.5

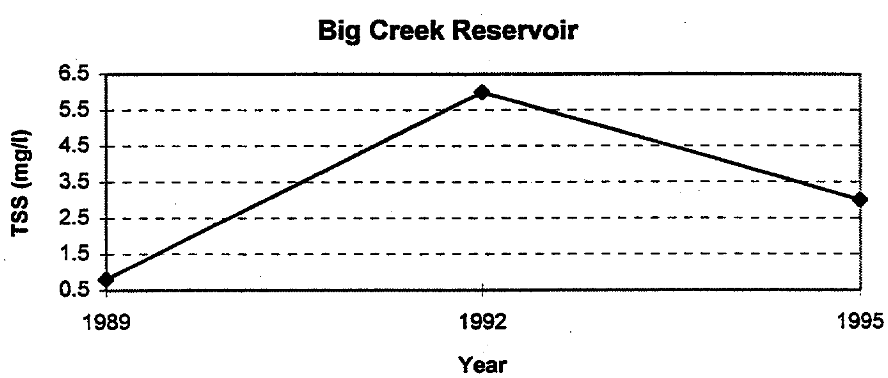


Fig. VIII.6

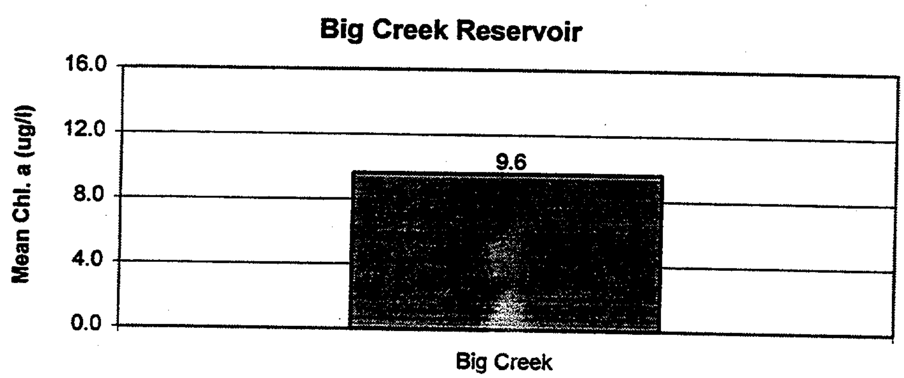


Fig. VIII.7

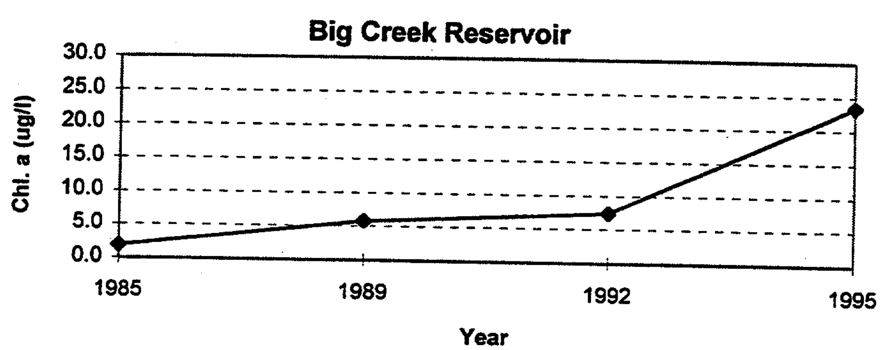


Fig. VIII.8

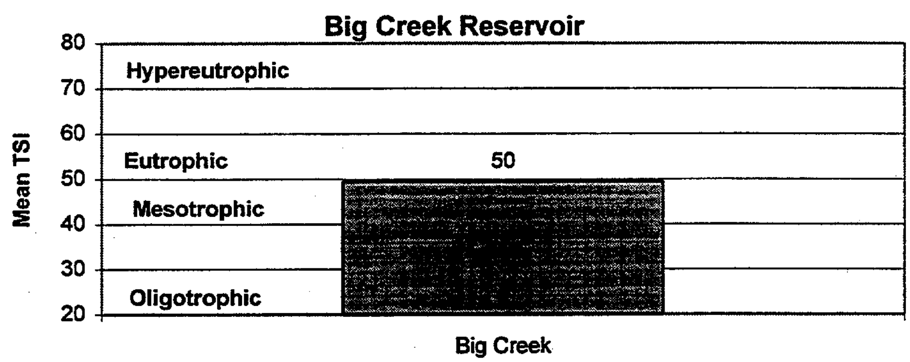


Fig. VIII.9

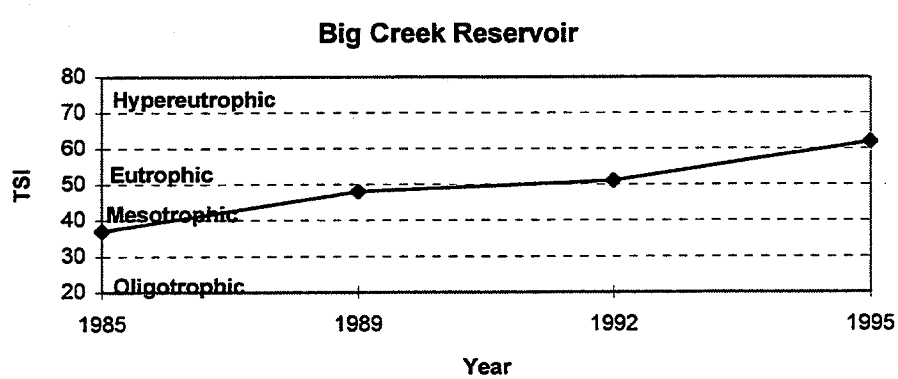


Fig. VIII.10

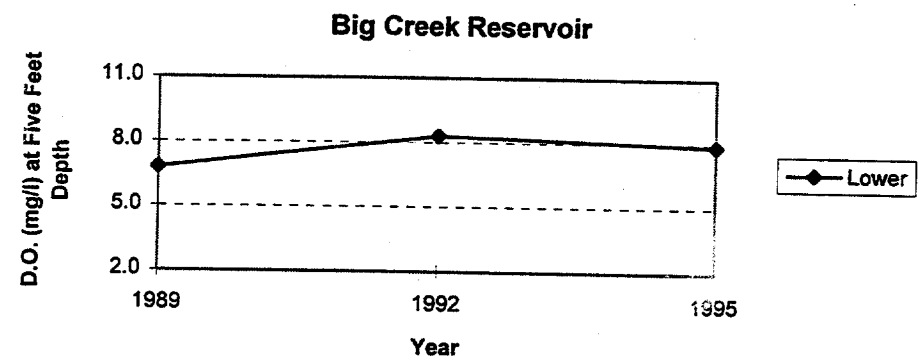

Big Creek Reservoir
D.O. (mg/l) at Five Feet Depth
11.0
8.0
5.0
2.0
1989
1992
1995
Year
Lower

Table VIII.1. Nitrogen-Phosphorus ratios (TN:TP) of RWQM locations in Big Creek Reservoir.

Reservoir	Location	Year (August)	TN:TP	Limiting nutrient
Big Creek	Lower	1992	126:1	Phosphorus
		1995	37:1	Phosphorus

Phosphorus Ltd. >16:1
Optimum 11-16:1
Nitrogen <11:1
(Porcella et al. 1974)

IX. Cahaba River Basin

Precipitation and Discharge

Though variable across the state, rainfall in many areas was higher than normal during the growing seasons of 1989, 1991, and 1994 and lower than normal during the growing seasons of 1990, 1992, 1993, and 1995 (Appendix B).

The mean growing season discharge (May-August) of the Little Cahaba River measured at Jefferson Park was greater than the long-term mean (1986-1995) in 1989, 1991, 1993, and 1994 (Fig. IX.1). Discharge was less than the long-term mean in 1990, 1992, and 1995 with the lowest discharge of the years monitored occurring in 1992 and 1995.

Purdy Reservoir

Nitrogen. The mean TN value for the upper portion of Purdy Reservoir was greater than that of the lower portion of the reservoir (Fig. IX.2). Insufficient data were available for development of line graphs of nitrogen concentrations in the years monitored.

Phosphorus. The mean TP value for the upper portion of Purdy Reservoir was greater than that of the lower portion of the reservoir (Fig. IX.3). Insufficient data were available for development of line graphs of TP concentrations in the years monitored. The mean DRP value for the upper reservoir was less than that of the lower reservoir (Fig. IX.4). Insufficient data were available for development of line graphs of DRP concentrations in the years monitored.

TN:TP ratios. Total nitrogen to total phosphorus ratios indicated phosphorus as the limiting nutrient at both reservoir locations in 1993 with the ratio lower and within the optimum range at both reservoir locations in 1995 (Table IX.1).

Suspended solids. The mean TSS value of the upper reservoir was much greater than that of the lower reservoir (Fig. IX.5). In the lower reservoir, the greatest TSS concentration was measured in 1989 with the least concentration measured in 1993 (Fig. IX.6). In the upper reservoir, only two years of TSS data have been collected with the least concentrations measured in 1993 and the greatest concentrations measured in 1995.

Chlorophyll a. The mean chlorophyll a value for the upper reservoir was greater than that of the lower reservoir (Fig. IX.7). In the lower reservoir, concentrations were greatest in 1985 with those of 1989, 1993, and 1995 alike and lower than those of 1985

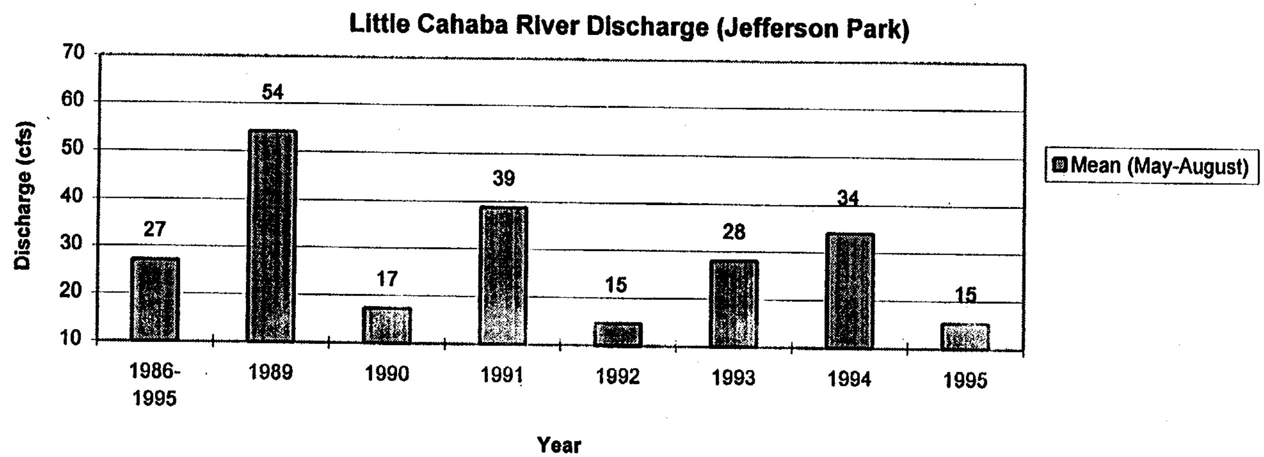
(Fig. IX.8). Only two years of chlorophyll a data have been collected from the upper reservoir with the concentrations from 1995 greater than those of 1993.

Trophic state. The mean TSI value for the upper reservoir was greater than that of the lower reservoir with mean values from both locations within the lower half of the eutrophic range (Fig. IX.9). In the lower reservoir, TSI values were within the lower half of the eutrophic range in all years monitored (Fig. IX.10). In the upper reservoir, only two years of chlorophyll a data have been collected for TSI calculation with the values of 1995 higher than those of 1992.

Dissolved oxygen. Dissolved oxygen concentrations were above the criterion limit at both locations in all years monitored (Fig. IX.11). Highest D.O. concentrations were measured in 1993 at both locations with the lowest D.O. measured in 1995.

Discussion. Water quality data for Purdy Reservoir are limited though few concerns are indicated by the data available. Continued regular monitoring is recommended so that any changes in water quality can be detected and to continue development of an adequate database to aid in the analysis of trends in water quality.

Fig. IX.1



Little Cahaba River Discharge (Jefferson Park)
Discharge (cfs)
70
60
50
40
30
20
10
27
54
17
39
15
28
34
15
1986-1995
1989
1990
1991
1992
1993
1994
1995
Year
Mean (May-August)

Fig. IX.2

Purdy Reservoir

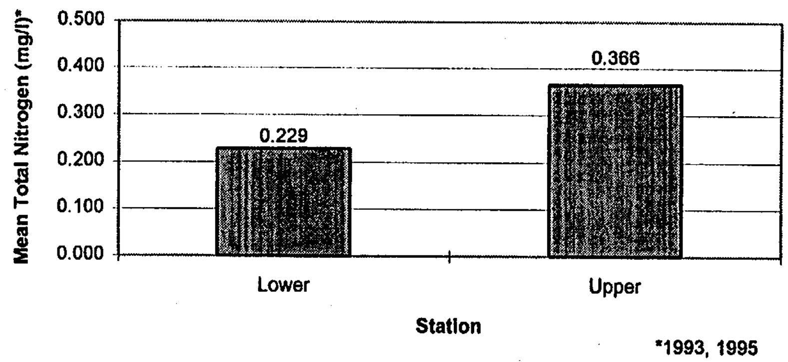


Fig. IX.3

Purdy Reservoir

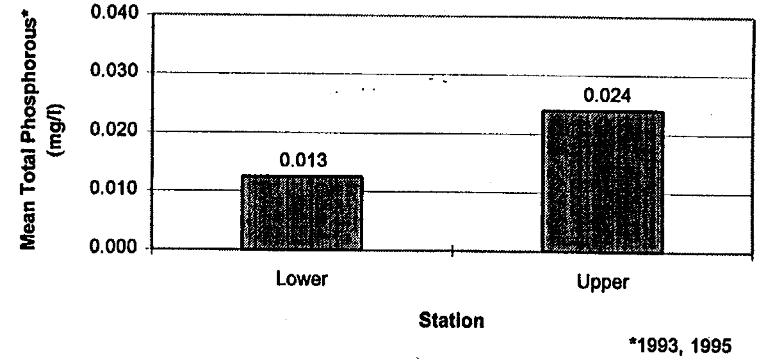


Fig. IX.4

Purdy Reservoir

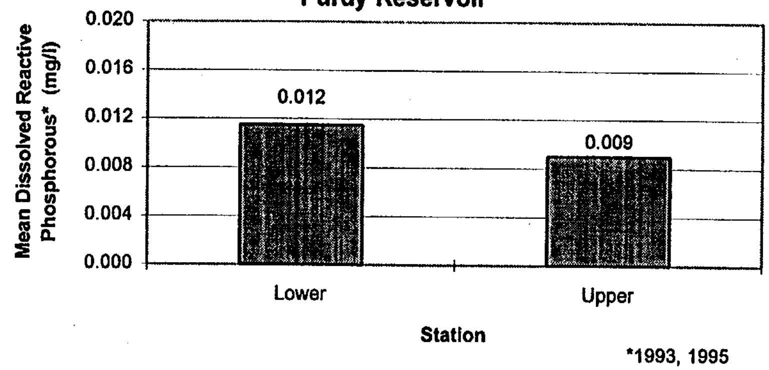


Fig. IX.5

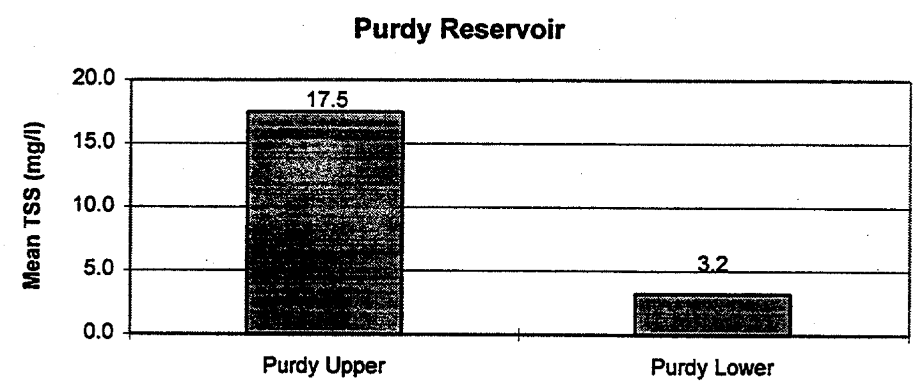


Fig. IX.6

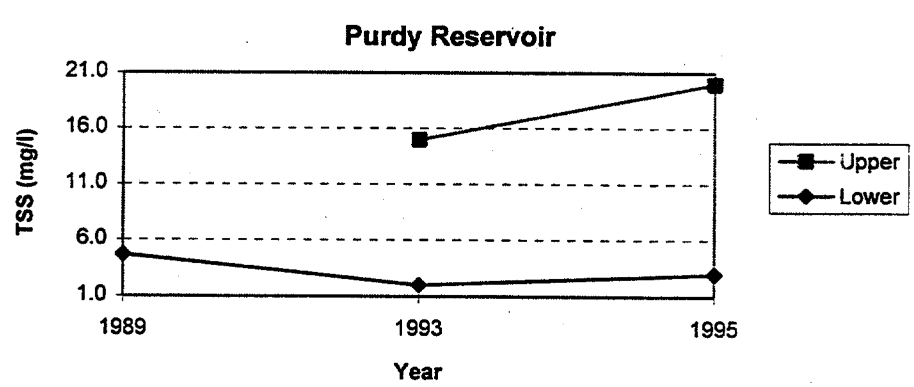


Fig. IX.7

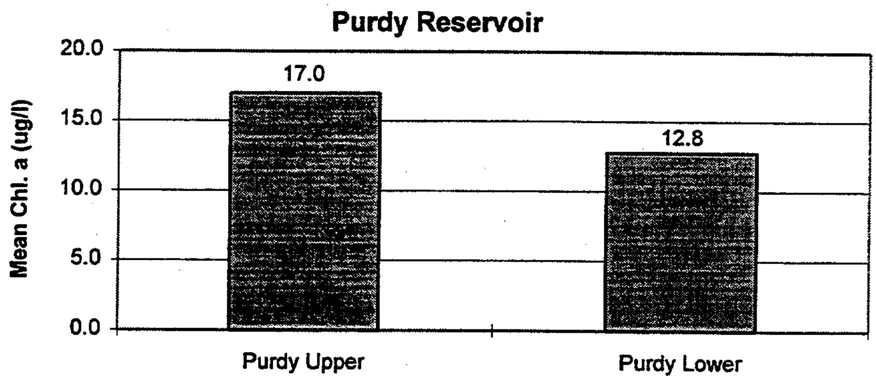


Fig. IX.8

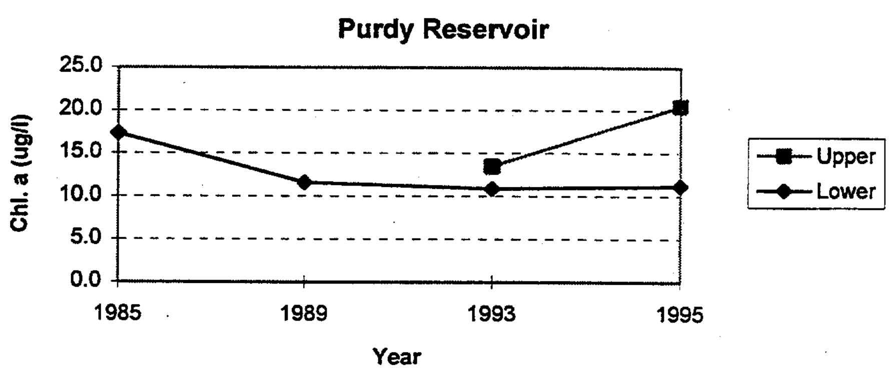


Fig. IX.9

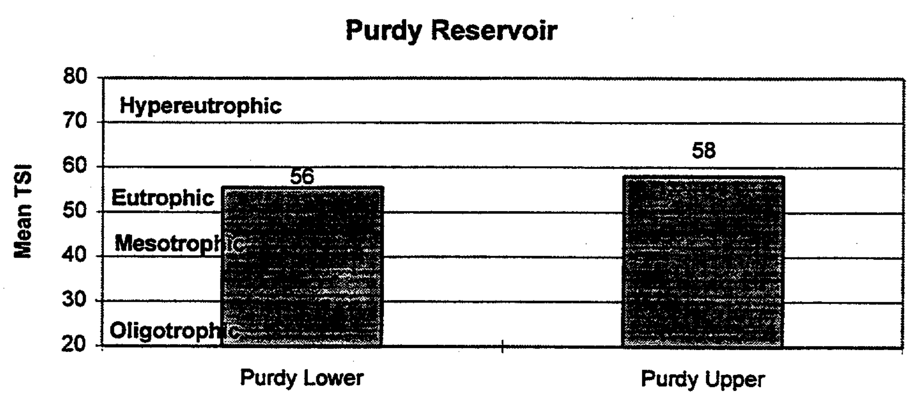


Fig. IX.10

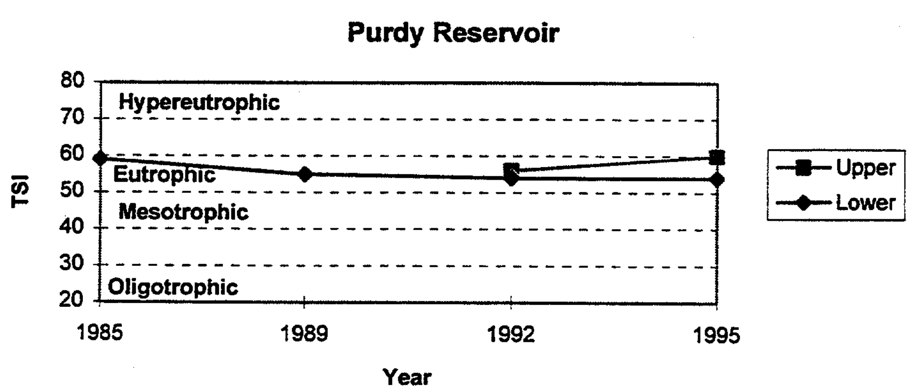
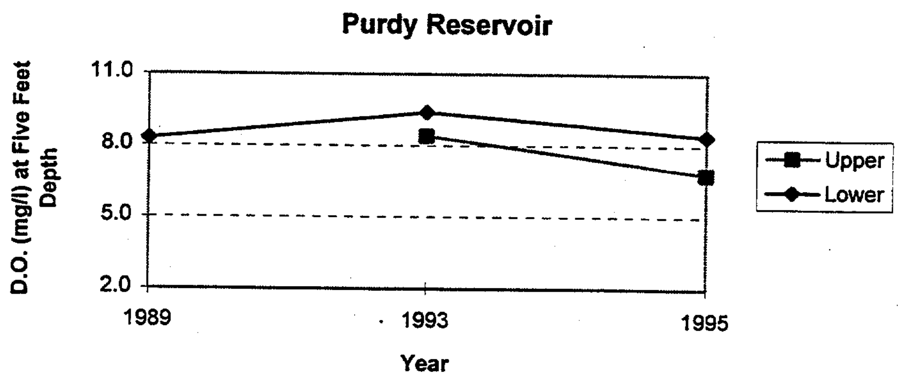


Fig. IX.11



Purdy Reservoir
D.O. (mg/l) at Five Feet Depth
11.0
8.0
5.0
2.0
1989
1993
1995
Year
Upper
Lower

Table IX.1. Nitrogen-Phosphorus ratios (TN:TP) of RWQM locations in Purdy Reservoir.

Reservoir	Location	Year (August)	TN:TP	Limiting nutrient
Purdy	Upper	1993	18:1	Phosphorus
		1995	14:1	Optimum
Purdy	Lower	1993	25:1	Phosphorus
		1995	13:1	Optimum

Phosphorus Ltd. >16:1
Optimum 11-16:1
Nitrogen <11:1
(Porcella et al. 1974)

X. Yellow River Basin

Precipitation and Discharge

Though variable across the state, rainfall in most areas was higher than normal during the growing seasons of 1989, 1991, and 1994 and lower than normal during the growing seasons of 1990, 1992, 1993, and 1995 (Appendix B).

No discharge data was available for Lake Jackson.

Lake Jackson

Nitrogen. The mean TN value for Lake Jackson appears in Figure X.1. Insufficient data were available for development of line graphs of nitrogen concentrations in the years monitored.

Phosphorus. The mean TP value for Lake Jackson appears in Figure X.2. Insufficient data were available for development of line graphs of TP concentrations in the years monitored. Insufficient data were available for development of graphs of mean DRP values or of line graphs of DRP concentrations in the years monitored.

TN:TP ratios. Total nitrogen to total phosphorus ratios indicated phosphorus as the limiting nutrient in 1993 and nitrogen as the limiting nutrient in 1995 (Table X.1).

Suspended solids. The mean TSS value for Lake Jackson appears in Figure X.3. In the years monitored, TSS concentrations were highest in 1993 and lowest in 1995 (Fig. X.4).

Chlorophyll a. The mean chlorophyll a value for Lake Jackson appears in Figure X.5. In the years monitored, chlorophyll a concentrations were highest in 1993 and lowest in 1990 (Fig. X.6).

Trophic state. The mean TSI value for Lake Jackson was on the border between an oligotrophic and mesotrophic state (Fig. X.7). Trophic state index values were within the oligotrophic range in 1990, increased into the mesotrophic range in 1993, and decreased to the point between an oligotrophic and mesotrophic state in 1995 (Fig. X.8).

Dissolved oxygen. Dissolved oxygen concentrations in Lake Jackson were above the criterion limit in all years monitored (Fig. X.9).

Discussion. Water quality data for Lake Jackson are limited though few concerns are indicated by the data available. Continued regular monitoring is recommended so that any changes in water quality can be detected and to continue development of an adequate database to aid in the analysis of trends in water quality.

Fig. X.1

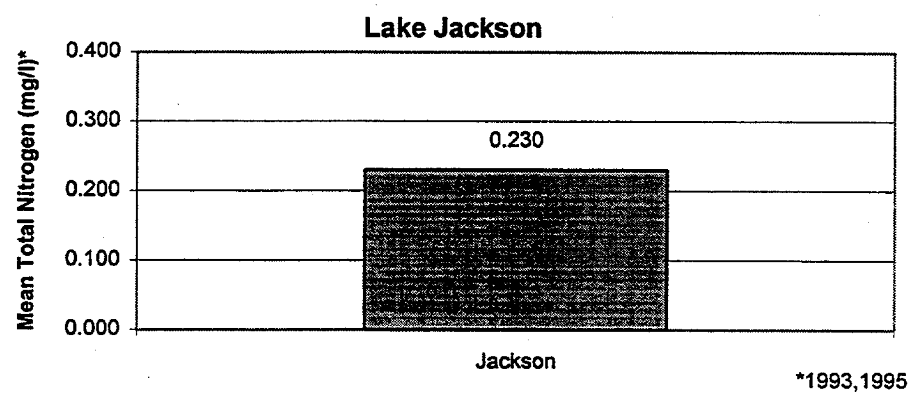

Lake Jackson
Mean Total Nitrogen (mg/l)*
0.400
0.300
0.200
0.100
0.000
0.230
Jackson
*1993,1995

Fig. X.2

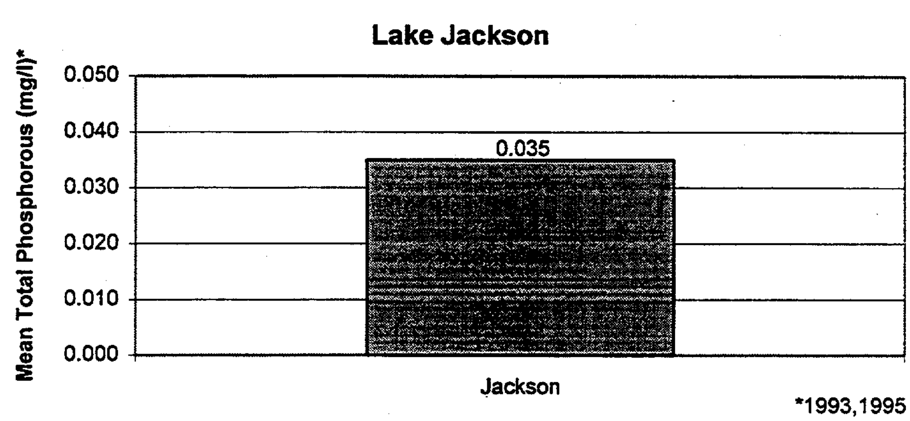

Lake Jackson
Mean Total Phosphorous (mg/l)*
0.050
0.040
0.030
0.020
0.010
0.000
0.035
Jackson
*1993,1995

Fig. X.3

Lake Jackson

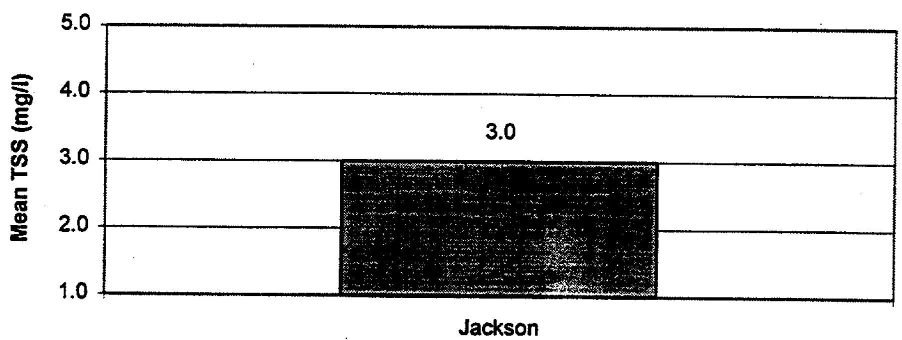


Fig. X.4

Lake Jackson

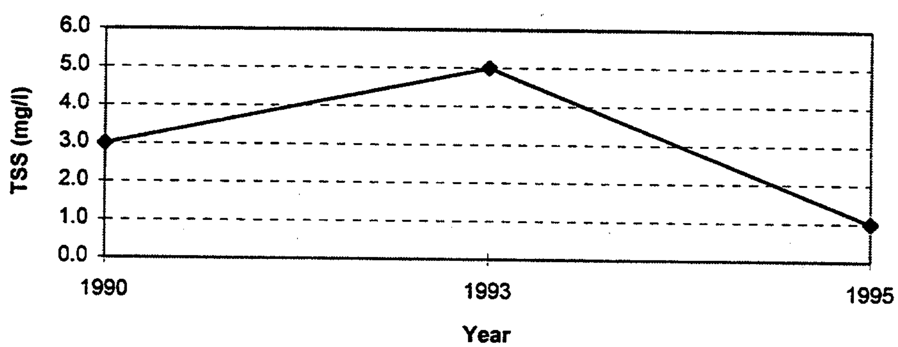


Fig. X.5

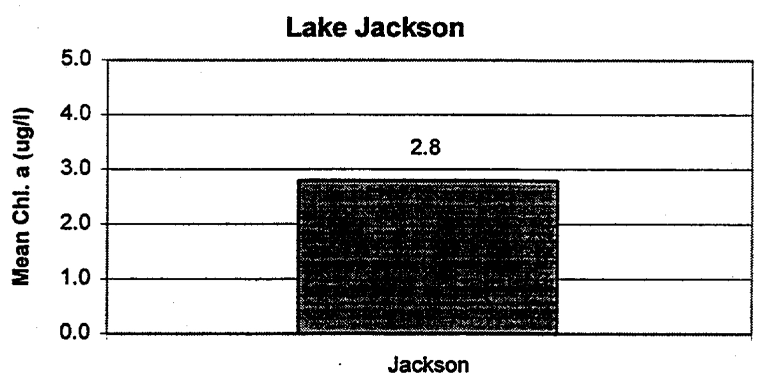

Lake Jackson
Mean Chl. a (ug/l)
5.0
4.0
3.0
2.0
1.0
0.0
2.8
Jackson

Fig. X.6

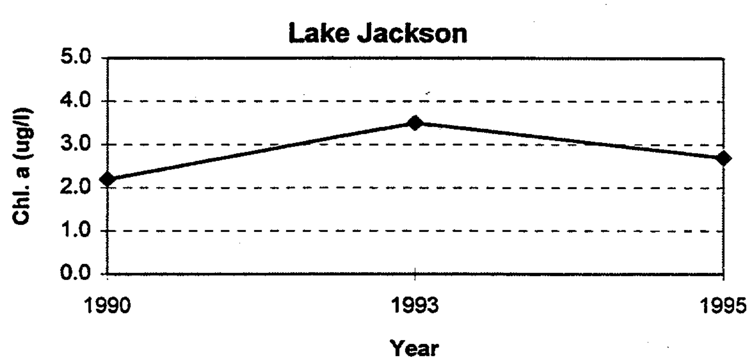

Lake Jackson
Chl. a (ug/l)
5.0
4.0
3.0
2.0
1.0
0.0
1990
1993
1995
Year

Fig. X.7

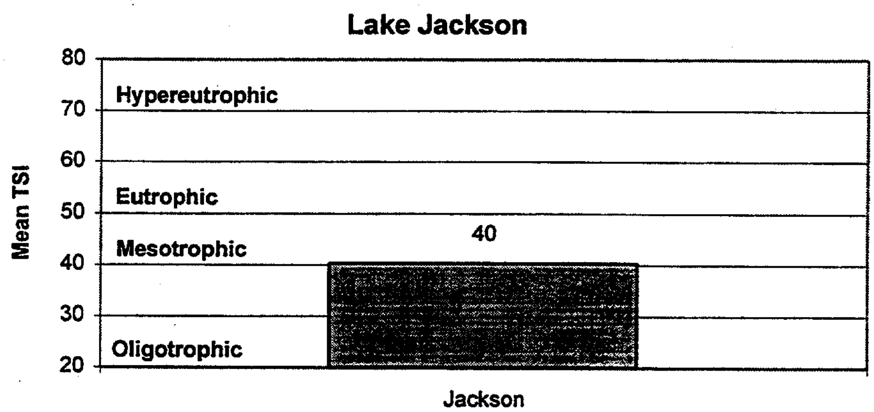

Lake Jackson
80
70
60
50
40
30
20
Mean TSI
Hypereutrophic
Eutrophic
Mesotrophic
Oligotrophic
40
Jackson

Fig. X.8

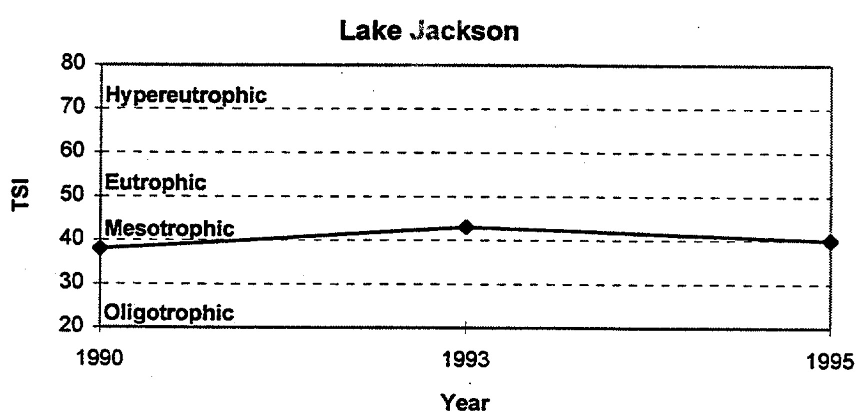
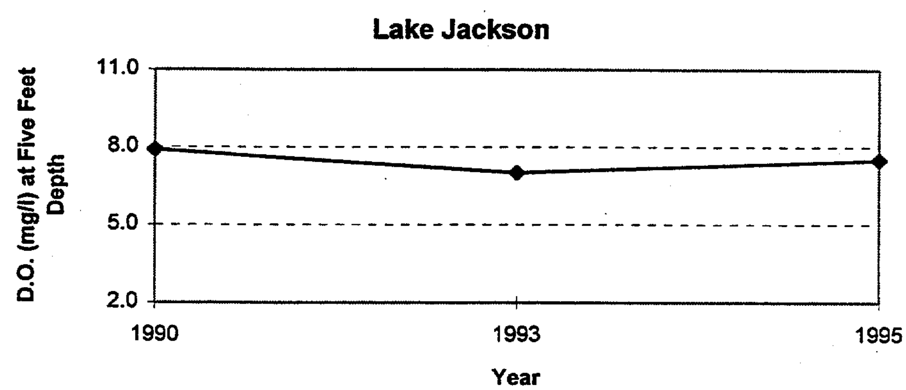

Lake Jackson
80
70
60
50
40
30
20
TSI
Hypereutrophic
Eutrophic
Mesotrophic
Oligotrophic
1990
1993
1995
Year

Fig. X.9



Lake Jackson
D.O. (mg/l) at Five Feet Depth
11.0
8.0
5.0
2.0
1990
1993
1995
Year

Table X.1. Nitrogen-Phosphorus ratios (TN:TP) of RWQM locations in Lake Jackson.

Reservoir	Location	Year (August)	TN:TP	Limiting nutrient
Jackson	Mid-lake	1993	19:1	Phosphorus
		1995	3:1	Nitrogen

Phosphorus Ltd. >16:1
Optimum 11-16:1
Nitrogen <11:1
(Porcella et al. 1974)

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ADEM RESERVOIR WATER QUALITY MONITORING PROGRAM REPORT APPENDIX 1990 - 1995

ECOLOGICAL STUDIES SECTION • FIELD OPERATIONS DIVISION
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Appendix A

ADEM
Reservoir Water Quality Monitoring Program
1990-1995

Vertical Profile Measurements
and
Results of Laboratory Analyses

Key to Abbreviations
1990 - 1995

Sta = Station
Rep = Repetition
Temp = Temperature (°C)
DO = Dissolved oxygen (mg/l)
SpCond = Specific conductance (mS/cm)
Turb = Turbidity (NTU)
Alk = Alkalinity (mg/l)
Hard = Hardness (mg/l)
TDS = Total dissolved solids (mg/l)
TSS = Total suspended solids (mg/l)
NH_3-N = Total ammonia (mg/l)
NO_3+NO_2 = Nitrate + Nitrite (mg/l)
TKN = Total Kjeldahl nitrogen (mg/l)
TP = Total phosphorus (mg/l)
PO4-P = Dissolved reactive phosphorus (mg/l)
TOC = Total organic carbon (mg/l)
Chl. a = Corrected chlorophyll a (ug/l)
TSI = Trophic state index
Colif = Fecal coliform (per 100 ml)

Reservoir Water Quality Monitoring Program 1990-1995
Alabama River Basin

				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Woodruff	1	A	4/29/92	0.89	3.6	---	----	---	---	-----	---	35.0	---	84.0	16.0	<0.030	0.210	0.295	1.690	0.005	4.46	7.2	50	8*
						0.3	19.2	6.3	8.4	0.090														
						1.0	19.0	6.6	8.4	0.089														
						1.5	18.9	6.7	8.4	0.089														
						5.0	18.9	6.9	8.3	0.089														
						10.0	18.8	6.9	8.2	0.087														
						16.0	18.8	7.0	8.2	0.086														
Woodruff	1	A	5/5/93	0.91	3.2	---	----	---	---	-----	6.4	39.0	54.0	90.0	12.0	<0.015	0.260	0.358	0.054	0.009	3.61	5.7	48.0	3*
						0.3	21.3	7.1	8.5	0.099														
						1.0	20.0	7.1	8.3	0.098														
						1.5	19.9	7.1	8.3	0.098														
						2.0	19.9	7.1	8.3	0.098														
						5.0	19.6	7.1	8.3	0.097														
						10.0	19.6	7.1	8.2	0.097														
						11.0	19.5	7.1	8.2	0.096														
Woodruff	1	A	8/11/92	1.12	4.5	---	----	---	---	-----	7.1	48.0	---	81.0	13.0	<0.015	0.027	<0.150	0.033	<0.004	3.54	12.0	55	3*
						0.3	30.0	7.1	7.2	0.130														
						1.0	29.7	7.1	6.5	0.131														
						1.5	29.7	7.1	6.4	0.131														
						5.0	29.7	7.1	6.4	0.130														
						10.0	29.6	7.2	5.3	0.130														
						16.0	29.5	7.1	4.3	0.133														
Woodruff	1	A	8/18/93	1.02	4.1	---	----	---	---	----	7.0	43.0	57.0	77.0	6.0	<0.015	0.036	0.824	0.049	<0.004	4.42	20.0	60	1*
						0.1	32.5	8.4	9.8	0.117														
						1.0	30.9	8.5	10.3	0.118														
						1.5	30.6	8.0	8.3	0.115														
						2.0	30.3	7.5	7.1	0.118														
						3.0	29.8	7.2	6.2	0.114														
						5.0	29.4	7.1	5.1	0.117														
						7.0	29.2	7.0	4.7	0.114														
						9.0	29.1	6.9	4.4	0.125														
						10.0	29.1	6.9	4.4	0.124														
						15.0	29.0	6.9	4.2	0.119														
						16.6	29.0	6.9	4.1	0.124														

Reservoir Water Quality Monitoring Program 1990-1995
Alabama River Basin

				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Woodruff	2	A	4/29/92	0.99	4.0	---	----	---	---	-----	---	36.0	---	83.0	8.0	<0.030	0.210	0.521	0.038	<0.004	5.21	9.7	53	7*
						0.3	18.7	6.8	8.9	0.089														
						1.0	18.5	7.1	8.8	0.089														
						1.5	18.5	7.1	8.9	0.089														
						4.0	18.3	7.1	8.8	0.089														
						9.0	18.2	7.1	8.8	0.089														
Woodruff	2	A	5/5/93	----	3.1	---	----	---	---	-----	6.8	36.0	57.0	86.0	10.0	<0.015	0.142	0.434	0.038	<0.004	4.27	3.9	44	33*
						0.3	20.0	7.2	8.7	0.093														
						1.0	20.0	7.1	8.7	0.093														
						1.5	20.0	7.1	8.7	0.093														
						2.0	19.9	7.1	8.7	0.093														
						5.0	19.8	7.1	8.7	0.093														
						10.0	19.8	7.1	8.7	0.092														
Woodruff	2	A	8/11/92	0.85	3.4	---	----	---	---	----	8.5	51.0	---	88.0	15.0	<0.015	0.044	0.386	0.049	<0.004	8.57	15.9	58	4*
						0.3	31.9	7.7	9.1	0.049														
						1.0	30.1	7.8	8.7	0.140														
						1.5	29.7	7.6	8.1	0.136														
						5.0	29.3	7.1	7.3	0.134														
						10.0	29.3	7.1	7.3	0.136														
						14.0	29.3	7.2	7.1	0.150														
Woodruff	2	A	8/19/93	1.10	2.7	---	----	---	---	-----	8.5	48.0	65.0	90.0	7.0	<0.015	0.028	0.544	0.045	0.023	3.84	8.1	51	8*
						0.1	30.3	7.3	7.3	0.128														
						1.0	30.1	7.2	6.9	0.128														
						1.5	30.1	7.2	6.8	0.127														
						2.0	30.1	7.2	6.7	0.127														
						5.0	30.1	7.2	6.6	0.127														
						8.0	29.9	7.1	5.8	0.125														
						10.0	29.9	7.1	5.8	0.125														
						11.0	29.8	7.1	5.7	0.126														
						12.0	29.8	7.1	5.6	0.126														
Woodruff	3	A	4/29/92	1.16	4.6	---	----	---	---	-----	---	34.0	---	76.0	3.0	<0.030	0.200	0.560	0.029	<0.006	4.43	9.0	52	5*
						0.3	18.6	6.9	9.5	0.079														
						1.0	18.2	7.1	9.2	0.079														
						1.5	18.2	7.1	9.2	0.079														
						4.0	18.1	7.2	9.2	0.079														
						8.0	18.1	7.2	9.2	0.078														

Reservoir Water Quality Monitoring Program 1990-1995
Alabama River Basin

Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Woodruff	3	A	5/6/93	0.93	3.5	---	----	---	---	-----	7.1	34.0	52.0	86.0	10.0	<0.015	0.190	0.504	0.037	0.005	4.03	4.0	44	103
						0.3	19.4	7.3	8.8	0.086														
						1.0	19.3	7.2	8.8	0.086														
						1.5	19.3	7.1	8.8	0.088														
						2.0	19.3	7.1	8.7	0.088														
						5.0	19.3	7.1	8.7	0.087														
						9.0	19.3	7.1	8.7	0.086														
Woodruff	3	A	8/11/92	1.54	6.2	---	----	---	---	----	5.3	56.0	---	90.0	13.0	<0.015	0.010	<0.150	0.019	<0.004	6.27	10.7	54	6*
						0.3	32.4	7.8	8.4	0.152														
						1.0	31.9	7.8	8.3	0.152														
						1.5	31.3	7.6	8.0	0.152														
						3.0	30.5	7.6	7.9	0.152														
						5.0	30.1	7.4	7.0	0.152														
						10.0	30.0	7.5	6.8	0.152														
Woodruff	3	A	8/19/93	1.36	5.5	---	----	---	---	----	3.1	40.0	60.0	69.0	6.0	<0.015	0.051	0.561	0.025	0.004	2.88	8.3	51	4*
						0.3	30.6	7.6	8.4	0.116														
						1.0	29.8	7.7	8.7	0.114														
						1.5	29.5	7.6	8.7	0.113														
						2.0	29.4	7.6	8.6	0.111														
						5.0	28.8	7.3	7.9	0.109														
						10.0	28.7	7.2	7.3	0.109														
						13.0	28.7	7.2	6.8	0.105														
Woodruff	1	A	50395	1.05	2.4	---	---	---	---	---	7.9	39	55.0	15.0	9.0	<0.015	0.140	<0.150	0.031	0.005	5.12	8.5	52	5*
						0.1	20.98	6.34	7.77	0.103														
						1	20.96	6.49	7.68	0.105														
						1.5	20.96	6.55	7.68	0.103														
						2	20.94	6.63	7.66	0.103														
						3	20.96	6.69	7.59	0.105														
						4	20.96	6.72	7.56	0.104														
						5	20.96	6.77	7.52	0.102														
						10	20.99	6.91	7.44	0.110														
						15	20.99	6.99	7.37	0.111														
						16	20.99	7.00	7.36	0.102														
						16.7	20.99	7.00	7.35	0.110														

Reservoir Water Quality Monitoring Program 1990-1995
Alabama River Basin

				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Woodruff	1	A	82295	1.01	3.2	---	---	---	---	---	4.0	52	46.9	116.0	4.0	<0.015	0.050	0.214	0.021	0.020	3.98	22.4	61	12*
						0.1	32.50	8.19	8.29	0.131														
						1	31.60	7.84	6.85	0.131														
						1.5	31.31	7.72	6.38	0.133														
						2	31.10	7.66	6.33	0.131														
						3	30.61	7.51	5.46	0.131														
						4	30.57	7.45	5.22	0.130														
						5	30.55	7.41	5.02	0.134														
						10	30.49	7.34	4.74	0.136														
						15	30.45	7.32	4.60	0.131														
						16	30.47	7.31	4.58	0.135														
						16.3	30.45	7.31	4.59	0.138														
Woodruff	2	A	50395	1.07	2.5	---	---	---	---	---	6.9	40	53.0	19.0	20.0	<0.015	0.150	<0.150	0.028	0.007	4.84	16.3	58	120
						0.1	21.71	6.50	8.88	0.106														
						1	21.38	6.70	8.43	0.108														
						1.5	21.36	6.80	8.40	0.109														
						2	21.36	6.88	8.37	0.110														
						3	21.36	6.92	8.36	0.107														
						4	21.36	6.96	8.32	0.104														
						5	21.36	6.99	8.30	0.111														
						10	21.36	7.08	8.23	0.099														
						13	21.36	7.09	8.22	0.097														
						13.5	21.36	7.10	8.22	0.119														
Woodruff	2	A	82395	0.91	2.3	---	---	---	---	---	5.4	58	51.8	121.0	6.0	<0.015	0.080	<0.150	0.026	0.017	3.35	18.2	59	9*
						0.1	30.34	7.15	7.51	0.159														
						1	30.30	7.43	6.72	0.161														
						1.5	30.32	7.47	6.63	0.163														
						2	30.28	7.47	6.41	0.165														
						3	30.26	7.47	6.31	0.162														
						4	30.28	7.48	6.25	0.165														
						5	30.28	7.49	6.20	0.159														
						10	30.28	7.51	6.11	0.161														
						11	30.28	7.53	5.90	0.174														
						12	30.34	7.56	5.74	0.227														
						13	30.32	7.56	5.53	0.255														
						14	30.32	7.57	5.40	0.278														
						14.3	30.32	7.58	5.32	0.273														

Reservoir Water Quality Monitoring Program 1990-1995
Alabama River Basin

Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Woodruff	3	A	50395	1.2	3.2	---	---	---	---	---	7.1	36	52.0	69.0	28.0	<0.015	0.160	<0.150	0.018	0.008	4.52	6.9	50	55
						0.1	20.64	6.66	8.66	0.094														
						1	20.59	6.87	8.42	0.092														
						1.5	20.64	6.90	8.37	0.092														
						2	20.57	6.97	8.29	0.090														
						3	20.50	6.99	8.20	0.089														
						4	20.52	7.01	8.15	0.098														
						5	20.47	7.01	8.13	0.098														
						10	20.43	7.06	8.01	0.089														
						10.2	20.45	7.06	7.99	0.096														
Woodruff	3	A	82395	1.12	3.7	---	---	---	---	---	3.7	55	53.3	105.0	6.0	<0.015	0.140	<0.150	0.016	0.009	3.51	15.0	57	13*
						0.1	29.68	7.53	8.95	0.140														
						1	29.26	7.55	8.81	0.140														
						1.5	28.98	7.46	7.64	0.141														
						2	28.90	7.43	7.34	0.141														
						3	28.89	7.42	7.18	0.140														
						4	28.87	7.42	7.13	0.140														
						5	28.87	7.42	7.08	0.139														
						10	28.85	7.43	6.89	0.139														
						13	28.83	7.43	6.84	0.139														
						13.9	28.83	7.43	6.82	0.139														
Dannelly	1		4/24/90	0.89	3.6	---	----	---	---	-----	8.0	35.0		89.0	9.0	<0.10	0.17	---	0.04	0.015	3.70	---	--	1*
						0.3	20.6	7.4	9.3	0.101														
						2.0	20.3	7.3	8.8	0.101														
						4.0	20.2	7.2	8.5	0.102														
						8.0	20.0	7.2	8.2	0.102														
						12.0	19.8	7.2	8.0	0.103														
						14.0	19.6	7.1	7.9	0.101														
Dannelly	1		4/30/91	0.68	2.7	---	----	---	---	-----	----	42.0		71.0	24.0	<0.01	0.16	0.52	0.05	<0.005	5.60	6.8	49	--
						0.3	21.3	7.0	7.4	0.121														
						1.0	21.3	7.1	7.2	0.121														
						5.0	21.2	7.2	7.2	0.121														
						10.0	21.1	7.2	7.1	0.121														
						14.0	21.1	7.3	7.1	0.121														

Reservoir Water Quality Monitoring Program 1990-1995
Alabama River Basin

				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Dannelly	2		4/24/90	0.97	3.9	---	----	---	---	-----	7.0	33.0		93.0	7.0	<0.10	0.26	---	0.05	<0.010	3.60	---	--	4*
						0.3	20.7	7.3	9.2	0.099														
						1.5	20.1	7.2	8.5	0.097														
						5.0	20.0	7.2	8.4	0.097														
						8.0	20.0	7.2	8.4	0.098														
						12.0	19.9	7.2	8.4	0.098														
						14.0	19.9	7.2	8.3	0.099														
Dannelly	2		4/30/91	0.62	2.5	---	----	---	---	-----	----	42.0		64.0	20.0	<0.01	0.15	0.35	0.06	<0.005	6.50	8.8	52	--
						0.3	21.1	7.1	7.6	0.111														
						1.0	21.0	7.2	7.5	0.112														
						5.0	21.0	7.2	7.4	0.112														
						10.0	20.9	7.2	7.5	0.112														
						15.0	20.9	7.3	7.4	0.113														
Dannelly	1		8/20/90	0.97	3.9	---	----	---	---	-----	4.0	50.0		106.0	6.0	<0.10	<0.04	---	<0.02	<0.020	3.40	---	--	<1
						0.3	33.0	7.8	7.1	0.180														
						1.5	30.7	7.4	6.5	0.179														
						3.0	30.6	7.3	5.0	0.179														
						5.0	30.6	7.3	4.8	0.179														
						10.0	30.5	7.2	4.1	0.179														
						13.0	30.4	7.3	4.6	0.180														
Dannelly	1		8/12/91	0.75	3.0	---	----	---	---	-----	----	43.0		102.0	7.0	<0.01	0.14	1.13	0.06	0.020	4.90	9.4	52	<2
						0.3	32.1	7.5	7.2	0.106														
						1.0	31.8	7.5	6.9	0.105														
						1.4	31.1	7.2	5.3	0.105														
						5.0	30.9	7.1	5.0	0.106														
						10.0	30.8	7.1	5.3	0.106														
						13.0	30.6	7.1	5.0	0.106														
Dannelly	2		8/20/90	0.95	3.8	---	---	---	---	-----	4.0	48.0		119.0	7.0	<0.10	<0.04	---	<0.02	<0.020	4.60	---	--	2*
						0.3	33.4	8.6	7.9	0.170														
						1.5	30.4	7.5	5.7	0.172														
						5.0	30.4	7.4	5.1	0.172														
						10.0	30.4	7.4	4.9	0.173														
						13.0	30.4	7.3	4.9	0.173														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Dannelly	2		8/12/91	0.85	3.4	---	----	---	---	-----	---	46.0		93.0	12.0	<0.01	0.13	1.15	0.06	0.02	5.00	12.0	55	2*
						0.3	32.7	7.7	7.5	0.116														
						1.0	32.4	7.6	6.9	0.116														
						1.4	31.5	7.4	5.6	0.116														
						5.0	31.0	7.1	5.2	0.116														
						10.0	31.0	7.1	5.2	0.116														
						13.0	31.0	7.1	5.2	0.116														
Dannelly	1	A	5/4/93	0.78	2.8	---	----	---	---	-----	8.9	40.0	56.0	94.0	9.0	<0.015	0.220	0.326	0.048	0.004	5.65	5.7	48	1*
						0.1	22.2	7.5	9.2	0.104														
						1.0	21.3	7.4	8.8	0.103														
						1.5	20.4	7.3	8.7	0.102														
						2.0	20.1	7.3	8.5	0.102														
						5.0	19.9	7.2	8.5	0.102														
						10.0	19.9	7.2	8.5	0.102														
						15.6	19.8	7.2	8.4	0.102														
Dannelly	1	A	8/17/93	1.14	3.5	---	----	---	---	-----	8.0	50.0	74.0	91.0	7.0	<0.015	0.040	0.988	0.045	0.009	4.19	18.1	59	3*
						0.1	34.4	8.5	9.4	0.136														
						1.0	31.8	8.8	10.9	0.135														
						1.5	31.3	8.4	8.3	0.137														
						2.0	30.9	7.8	6.5	0.136														
						5.0	30.1	7.2	4.3	0.136														
						10.0	29.9	7.1	4.1	0.131														
						16.0	29.9	7.1	3.6	0.133														
Dannelly	2	A	5/4/93	1.14	4.5	---	----	---	---	-----	5.6	41.0	53.0	96.0	8.0	<0.015	0.230	<0.150	0.052	0.004	4.25	8.0	51	4*
						0.1	22.2	7.5	9.6	0.105														
						1.0	21.1	7.4	9.3	0.105														
						1.5	20.5	7.3	9.0	0.105														
						2.0	20.5	7.3	8.9	0.105														
						5.0	19.8	7.2	8.6	0.104														
						11.0	19.7	7.2	8.5	0.104														
						14.7	19.7	7.2	8.5	0.104														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Dannelly	2	A	8/17/93	1.02	2.7	---	----	---	---	-----	9.0	51.0	68.0	110.0	12.0	<0.015	0.160	0.949	0.038	0.019	4.35	12.1	55	<1
						0.1	35.0	8.7	11.0	0.135														
						1.0	30.9	7.5	5.8	0.136														
						1.5	30.6	7.3	5.5	0.135														
						2.0	30.6	7.3	5.5	0.136														
						5.0	30.5	7.2	5.3	0.136														
						10.0	30.4	7.2	4.7	0.136														
						14.0	30.4	7.2	4.6	0.136														
Dannelly	3	A	5/4/93	1.26	4.7	---	----	---	---	-----	5.0	44.0	60.0	96.0	8.0	<0.015	0.230	<0.150	0.041	<0.004	3.69	10.3	53	2*
						0.1	21.1	7.5	9.5	0.113														
						1.0	21.0	7.4	9.3	0.114														
						1.5	20.9	7.4	9.2	0.113														
						2.0	20.6	7.4	9.1	0.113														
						5.0	20.2	7.3	8.9	0.113														
						9.0	20.2	7.3	8.8	0.113														
						12.0	20.2	7.3	8.8	0.113														
Dannelly	3	A	8/18/93	0.83	2.8	---	----	---	---	-----	11.0	49.0	65.0	85.0	10.0	<0.015	0.190	0.993	0.040	0.017	4.57	7.1	50	6*
						0.1	30.2	7.2	6.0	0.132														
						1.0	30.1	7.2	5.7	0.131														
						1.5	30.1	7.2	5.7	0.133														
						2.0	30.1	7.2	5.7	0.134														
						5.0	30.1	7.2	5.7	0.135														
						10.0	30.1	7.2	5.6	0.131														
						13.0	30.1	7.2	5.6	0.130														
Dannelly	1	A	50295	1.04	2.4	---	---	---	---	---	8.7	37	56.0	15.0	8.0	<0.015	0.180	<0.150	0.023	0.011	5.93	12.6	55	7*
						0.1	21.33	6.47	7.81	0.100														
						1	21.33	6.58	7.79	0.100														
						1.5	21.33	6.65	7.77	0.099														
						2	21.31	6.72	7.75	0.099														
						3	21.31	6.77	7.70	0.099														
						4	21.27	6.83	7.69	0.098														
						5	21.26	6.85	7.68	0.103														
						10	21.17	6.85	7.55	0.094														
						15	21.01	7.03	7.58	0.102														
						15.6	20.99	7.05	7.57	0.098														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Dannelly	1	A	82295	1.03	2.7	---	---	---	---	---	3.9	60	52.3	118.0	7.0	<0.015	0.040	<0.150	0.017	0.013	4.09	22.4	61	1*
						0.2	32.40	8.34	7.67	0.151														
						1	31.94	8.27	7.12	0.151														
						1.5	31.82	8.18	6.70	0.151														
						2	31.63	8.03	6.03	0.151														
						3	31.41	7.78	5.08	0.152														
						4	31.32	7.68	4.62	0.152														
						5	31.32	7.64	4.54	0.152														
						10	31.15	7.50	3.95	0.152														
						14	30.85	7.38	3.13	0.153														
						15	30.75	7.30	1.81	0.154														
Dannelly	2	A	50295	0.96	2.5	---	---	---	---	---	7.1	37	58.0	9.0	10.0	<0.015	0.220	<0.150	0.026	0.016	5.34	12.0	55	13*
						0.1	21.49	6.53	8.50	0.100														
						1	21.34	6.73	8.29	0.100														
						1.5	21.29	6.85	8.17	0.103														
						2	21.22	6.90	7.96	0.103														
						3	21.20	6.94	7.91	0.104														
						4	21.17	6.98	7.83	0.098														
						5	21.13	7.02	7.71	0.103														
						10	21.10	7.06	7.59	0.099														
						14	21.10	7.09	7.53	0.096														
						14.3	21.10	7.10	7.54	0.098														
Dannelly	2	A	82295	1.04	3.1	---	---	---	---	---	3.8	63	55.3	126.0	5.0	<0.015	0.130	<0.150	0.017	<0.015	4.87	22.4	61	<1
						0.2	32.71	7.83	6.73	0.164														
						1	32.04	7.55	4.58	0.164														
						1.5	31.73	7.43	4.02	0.164														
						2	31.68	7.40	3.78	0.164														
						3	31.65	7.37	3.60	0.164														
						4	31.64	7.37	3.59	0.164														
						5	31.65	7.36	3.55	0.164														
						10	31.57	7.34	3.32	0.164														
						13	31.45	7.35	3.38	0.164														
						13.7	31.43	7.35	3.38	0.161														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Dannelly	3	A	50295	1.14	2.5	---	---	---	---	---	5.4	43	57.0	22.0	7.0	<0.015	0.220	<0.150	0.025	0.015	5.95	11.2	54	18*
						0.1	22.07	6.29	9.38	0.114														
						1	21.59	6.71	8.56	0.118														
						1.5	21.40	6.84	8.22	0.119														
						2	21.34	6.91	8.04	0.118														
						3	21.24	6.96	7.88	0.118														
						4	21.19	6.99	7.72	0.122														
						5	21.19	7.02	7.69	0.119														
						10	21.13	7.11	7.42	0.118														
						11	21.13	7.12	7.37	0.110														
						12	21.13	7.12	7.36	0.123														
						12.7	21.13	7.13	7.34	0.111														
Dannelly	3	A	82295	0.92	2.5	---	---	---	---	---	3.7	57	53.7	120.0	3.0	<0.015	0.160	<0.150	0.014	<0.015	4.62	33.1	65	<1
						0.2	33.93	8.59	9.41	0.156														
						1	31.99	8.10	6.62	0.157														
						1.5	31.72	7.73	5.44	0.157														
						2	31.65	7.57	4.61	0.159														
						3	31.56	7.52	4.26	0.159														
						4	31.54	7.49	4.19	0.159														
						5	31.52	7.47	4.17	0.157														
						10	31.50	7.41	3.94	0.157														
						12.3	31.50	7.40	3.89	0.162														
Claiborne	1		4/24/90	0.80	3.2	---	----	---	---	----	7.0	34.0		91.0	7.0	<0.10	0.22	---	0.04	0.020	4.40	2.0	37	5*
						0.3	22.5	7.1	9.2	0.099														
						1.5	20.7	7.2	8.5	0.098														
						4.0	20.3	7.1	8.1	0.098														
						6.0	20.3	7.2	8.1	0.098														
						8.0	20.3	7.1	8.0	0.098														
Claiborne	1		4/30/91	0.38	1.5	---	----	---	---	----	----	41.0		63.0	44.0	<0.01	0.08	0.54	0.06	<0.005	5.30	8.2	51	--
						0.3	21.0	6.9	8.2	0.108														
						1.0	21.0	6.9	8.0	0.114														
						5.0	21.0	7.0	8.0	0.115														
						8.0	21.0	7.1	8.0	0.115														
Claiborne	1		8/20/90	0.86	3.4	---	----	---	---	----	5.0	50.0		105.0	6.0	<0.10	<0.04	---	<0.02	<0.020	4.10	---	--	<1
						0.3	31.1	7.4	6.8	0.178														
						1.5	30.5	7.4	5.5	0.178														
						5.0	30.5	7.3	5.4	0.178														
						7.0	30.5	7.3	5.3	0.178														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Claiborne	1		8/12/91	0.75	3.0	---	---	---	---	----	----	43.0		106.0	8.0	<0.01	0.19	1.32	0.06	0.011	4.70	6.4	49	1*
						0.3	31.1	7.0	6.0	0.110														
						1.0	31.1	7.1	5.8	0.110														
						5.0	30.9	7.1	5.3	0.109														
						8.5	30.9	7.1	5.3	0.109														
Claiborne	1	A	5/4/93	0.92	3.0	---	----	---	---	----	7.6	42.0	55.0	96.0	9.0	<0.015	0.220	0.295	0.056	0.010	3.82	5.3	47	3*
						0.3	21.1	7.4	8.4	0.107														
						1.0	20.6	7.3	8.3	0.107														
						1.5	20.5	7.2	8.3	0.107														
						2.0	20.5	7.2	8.3	0.107														
						5.0	20.4	7.2	8.2	0.107														
						7.0	20.4	7.2	8.2	0.107														
						8.9	20.4	7.2	8.2	0.106														
Claiborne	1	A	50295	1.16	2.4	---	---	---	---	---	8.1	38	56.0	25.0	9.0	<0.015	0.200	<0.150	0.042	0.016	6.78	10.4	54	5*
						0.1	21.68	6.47	7.44	0.102														
						1	21.69	6.63	7.44	0.102														
						1.5	21.69	6.72	7.45	0.103														
						2	21.69	6.79	7.45	0.103														
						3	21.68	6.82	7.44	0.104														
						4	21.68	6.86	7.46	0.102														
						5	21.69	6.91	7.43	0.102														
						6	21.68	6.93	7.43	0.102														
						7	21.68	6.97	7.41	0.102														
						8	21.68	7.01	7.41	0.102														
						9	21.68	7.02	7.41	0.102														
						10	21.68	7.03	7.41	0.102														
						10.5	21.68	7.04	7.40	0.102														
Claiborne	1	A	8/17/93	0.95	3.2	---	----	---	---	----	11.0	50.0	68.0	91.0	10.0	<0.015	0.036	0.472	0.033	0.031	10.90	9.9	53	7*
						0.1	32.0	7.5	6.7	0.136														
						1.0	31.4	7.4	6.6	0.135														
						1.5	31.2	7.3	5.9	0.138														
						2.0	31.2	7.3	5.9	0.135														
						5.0	31.1	7.2	5.5	0.133														
						7.0	31.1	7.2	5.5	0.138														
						9.0	31.1	7.2	5.5	0.142														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Claiborne	1	A	82295	1.65	3.0	---	---	---	---	---	4.5	57	51.4	111.0	6.0	<0.015	0.040	<0.150	0.022	0.019	4.33	10.2	53	<1
						0.1	32.32	7.31	5.54	0.049														
						1	32.15	7.38	5.43	0.142														
						1.5	32.02	7.39	5.02	0.143														
						2	31.92	7.38	4.78	0.142														
						3	31.92	7.39	4.65	0.143														
						4	31.90	7.39	4.59	0.140														
						5	31.92	7.39	4.56	0.140														
						6	31.90	7.40	4.55	0.143														
						7	31.90	7.40	4.54	0.143														
						8	31.90	7.41	4.50	0.144														
						9	31.92	7.41	4.48	0.145														
						10	31.90	7.41	4.46	0.138														
						10.4	31.90	7.41	4.42	0.139														

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Cahaba River Basin

Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Purdy	1	A	5/11/93	2.83	7.1	---	----	---	---	-----	3.7	107.0	128.0	169.0	4.0	<0.015	<0.003	0.725	0.034	0.008	2.97	3.7	43	<1
						0.3	24.6	8.2	8.8	0.230														
						1.0	24.6	8.2	8.8	0.231														
						1.5	24.5	8.2	8.8	0.231														
						2.0	24.4	8.2	8.7	0.231														
						3.0	20.0	8.1	9.2	0.231														
						4.0	18.9	7.7	7.5	0.235														
						5.0	17.6	7.4	5.7	0.237														
						7.0	14.6	7.2	4.0	0.242														
						10.0	12.2	7.1	2.2	0.241														
						15.0	12.0	7.1	2.3	0.243														
						16.0	11.8	7.0	0.9	0.245														
Purdy	1	A	8/24/93	1.60	5.6	---	----	---	---	-----	3.5	87.0	113.0	137.0	2.0	<0.015	0.009	0.269	0.011	0.009	3.65	10.9	54	<1
						0.3	30.1	8.2	9.4	0.188														
						1.0	30.2	8.2	9.4	0.190														
						1.5	30.0	8.2	9.4	0.188														
						2.0	29.9	8.2	9.4	0.189														
						3.0	29.8	8.2	9.0	0.190														
						4.0	28.8	7.6	3.2	0.215														
						5.0	28.4	7.4	0.7	0.221														
						7.0	27.4	7.2	0.5	0.225														
						9.5	26.0	7.2	0.4	0.240														
Purdy	2	A	5/11/93	1.34	3.1	---	----	---	---	-----	9.0	115.0	138.0	184.0	7.0	<0.015	0.130	0.331	0.044	0.007	3.36	7.9	51	2*
						0.1	24.8	8.3	9.9	0.231														
						1.0	24.3	8.2	9.4	0.233														
						1.5	24.2	8.1	9.4	0.239														
						2.0	23.2	7.7	8.1	0.270														
						3.0	20.9	7.3	5.5	0.315														
						4.0	19.0	7.1	1.8	0.283														
Purdy	2	A	8/24/93	0.66	2.2	---	----	---	---	-----	9.5	82.0	110.0	140.0	15.0	<0.015	0.012	0.253	0.015	<0.004	24.10	13.5	56	7*
						0.1	31.0	8.2	8.3	0.190														
						0.5	30.3	8.2	8.4	0.191														
						1.0	30.0	8.1	8.0	0.193														

Reservoir Water Quality Monitoring Program 1990-1995
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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Purdy	1	A	50995	2.43	7.00	---	---	---	---	---	1.7	113	122.3	164.0	3.0	<0.015	0.030	0.211	0.017	0.004	7.72	11.2	54	<1
						0.1	21.89	8.21	9.73	0.227														
						1	21.82	8.33	9.71	0.228														
						1.5	21.75	8.39	9.74	0.226														
						2	21.56	8.42	9.77	0.227														
						3	20.42	8.33	9.01	0.231														
						4	19.33	8.10	7.74	0.231														
						5	17.60	7.66	4.39	0.240														
						6	16.00	7.50	1.55	0.246														
						7	14.27	7.46	0.37	0.240														
						8	12.73	7.41	0.10	0.248														
						9	12.55	7.36	0.08	0.243														
						10	12.54	7.35	0.08	0.243														
						11	12.45	7.33	0.07	0.257														
						12	12.42	7.30	0.06	0.240														
						13	12.40	7.29	0.06	0.241														
						14	12.35	7.28	0.06	0.246														
						15	12.29	7.28	0.06	0.244														
						15.6	12.35	7.26	0.05	0.250														
Purdy	1	B	50995	2.44	6.94	---	---	---	---	---	1.7	115	116.0	176.0	<1.0	<0.015	0.030	<0.150	0.018	0.011	7.18	11.0	54	<1
						0.1	21.82	8.34	9.53	0.228														
						1	21.79	8.39	9.60	0.227														
						1.5	21.82	8.45	9.64	0.228														
						2	21.57	8.44	9.65	0.230														
						3	19.93	8.34	8.93	0.237														
						4	19.25	8.20	7.81	0.237														
						5	17.82	7.89	4.52	0.245														
						6	15.69	7.68	1.76	0.247														
						7	13.97	7.57	0.15	0.244														
						8	12.83	7.52	0.09	0.244														
						9	12.60	7.46	0.07	0.244														
						10	12.53	7.44	0.06	0.239														
						15	12.26	7.30	0.04	0.237														
						15.6	12.26	7.29	0.04	0.251														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Purdy	1	A	82495	1.83	6.10	---	---	---	---	---	2.2	87	92.8	145.0	3.0	0.105	0.030	<0.150	0.014	0.014	3.30	11.2	54	<1
						0.1	30.52	8.00	8.30	0.185														
						1	30.58	8.23	8.35	0.185														
						1.5	30.54	8.26	8.35	0.185														
						2	30.52	8.27	8.37	0.185														
						3	30.52	8.30	8.38	0.185														
						4	30.49	8.30	8.35	0.185														
						5	30.19	7.86	4.07	0.194														
						6	29.16	7.35	0.17	0.219														
						7	28.37	7.28	0.12	0.228														
						8	28.01	7.18	0.10	0.227														
						9	27.70	7.13	0.10	0.228														
						10	27.43	7.07	0.09	0.231														
						11	27.10	7.03	0.09	0.233														
						12	26.86	7.00	0.09	0.236														
						13	26.50	6.96	0.09	0.239														
						14	25.62	6.93	0.12	0.241														
						14.2	20.96	6.97	2.03	0.242														
Purdy	2	A	50995	1.34	3.68	---	---	---	---	---	5.3	117	122.1	173.0	7.0	<0.015	0.080	0.161	0.020	0.013	13.17	8.5	52	1*
						0.1	23.76	7.94	10.11	0.227														
						1	23.72	8.28	10.03	0.226														
						1.5	23.68	8.33	10.02	0.227														
						2	23.68	8.37	9.97	0.228														
						3	22.46	8.14	9.25	0.263														
						4	20.64	7.81	6.98	0.310														
						4.5	20.57	7.78	6.94	0.306														
Purdy	2	A	82495	0.52	1.73	---	---	---	---	---	21.0	95	100.7	158.0	21.0	<0.015	0.110	0.351	0.033	0.014	3.18	20.6	60	3*
						0.1	29.10	7.97	8.52	0.202														
						1	28.82	8.02	7.80	0.201														
						1.5	28.41	7.85	6.71	0.223														
						2	27.41	7.67	6.64	0.312														
						2.5	26.88	7.60	6.27	0.341														
Purdy	2	B	82495	0.54	1.58	---	---	---	---	---	22.0	94	100.8	166.0	19.0	<0.015	0.120	<0.150	0.035	0.014	2.99	20.3	60	2*
						0.1	29.16	8.19	8.72	0.203														
						1	28.96	8.13	8.11	0.202														
						1.5	28.30	7.89	6.78	0.232														
						2	27.31	7.65	6.34	0.330														
						2.4	26.86	7.61	6.22	0.340														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
West Point	1	A	5/19/92	2.80	11.2	---	----	---	---	-----	2.5	19.5	19.1	---	2.1	0.065	0.439	0.327	0.021	0.000	3.42	4.7	46	---
						0.0	25.3	8.9	9.6	0.073														
						1.0	25.2	8.9	9.7	0.073														
						2.0	24.8	8.9	9.9	0.073														
						3.0	23.1	9.0	10.4	0.072														
						4.0	21.7	8.7	9.7	0.072														
						5.0	20.6	7.6	8.1	0.071														
						6.0	19.6	7.1	6.3	0.071														
						7.0	19.0	6.9	5.6	0.071														
						9.0	18.5	6.8	5.5	0.071														
						11.0	17.8	6.7	5.1	0.073														
						12.0	17.0	6.6	3.8	0.071														
						13.0	16.4	6.6	3.3	0.074														
						14.0	15.7	6.5	2.4	0.067														
						15.0	15.4	6.5	2.3	0.066														
						18.0	14.9	6.4	1.7	0.066														
						19.0	14.8	6.4	1.5	0.067														
						20.0	14.7	6.4	1.5	0.067														
						22.0	14.6	6.4	1.5	0.068														
						23.0	14.5	6.4	1.2	0.072														
West Point	1	A	8/25/92	2.01	8.0	---	----	---	---	-----	3.2	20.5	21.7	---	3.0	0.016	0.157	0.430	0.019	0.000	3.55	3.3	42	---
						0.0	27.3	7.7	7.2	0.082														
						1.0	27.4	7.7	7.1	0.083														
						2.0	27.4	7.7	7.0	0.082														
						3.0	27.4	7.7	7.0	0.082														
						5.0	27.4	7.7	6.9	0.082														
						7.0	27.4	7.6	6.8	0.082														
						9.0	27.4	7.6	6.8	0.082														
						10.0	27.4	7.5	6.7	0.082														
						11.0	26.6	6.7	0.3	0.086														
						13.0	25.7	6.6	0.2	0.088														
						15.0	25.2	6.6	0.2	0.088														
						20.0	24.5	6.5	0.2	0.083														
						23.0	23.0	6.8	0.1	0.118														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
West Point	2	A	5/19/92	2.23	8.9	---	----	---	---	-----	2.8	20.0	18.6	---	2.7	0.082	0.449	0.376	0.023	0.000	3.46	5.1	47	---
						0.0	25.8	9.0	10.3	0.075														
						1.0	25.3	9.0	10.6	0.074														
						2.0	24.6	9.2	11.7	0.078														
						3.0	23.2	9.0	10.8	0.074														
						4.0	21.7	7.9	8.7	0.071														
						5.0	20.4	7.2	6.6	0.074														
						6.0	18.9	6.7	5.9	0.073														
						7.0	17.9	6.7	5.5	0.072														
						8.0	17.9	6.7	5.3	0.062														
						10.0	17.5	6.5	4.5	0.058														
						12.0	16.6	6.4	2.1	0.055														
						13.0	15.7	6.4	0.6	0.058														
						14.0	15.2	6.3	0.4	0.066														
						15.0	15.0	6.5	0.3	0.068														
West Point	2	A	8/25/92	1.80	7.2	---	----	---	---	-----	3.3	21.3	21.0	---	3.4	0.027	0.205	0.330	0.022	0.001	4.09	14.2	57	---
						0.0	27.7	8.1	7.7	0.083														
						1.0	27.7	8.2	7.6	0.083														
						2.0	27.6	8.1	7.4	0.083														
						3.0	27.4	7.9	7.3	0.082														
						4.0	27.3	7.7	7.0	0.081														
						5.0	27.3	7.5	6.6	0.080														
						7.0	27.3	7.4	6.5	0.080														
						8.0	27.3	7.4	6.5	0.080														
						9.0	27.3	7.2	5.4	0.080														
						10.0	26.4	6.7	0.2	0.076														
						11.0	26.0	6.6	0.1	0.061														
						12.0	25.5	6.4	0.2	0.045														
						13.0	25.0	6.3	0.1	0.043														
						15.0	24.4	6.4	0.1	0.056														
						17.0	23.9	6.6	0.1	0.071														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
West Point	1	A	50395	---	6.73	---	---	---	---	---	2.2	19	33.0	56.0	2.0	<0.015	0.490	0.253	0.010	0.005	2.65	8.2	51	<1
						0.2	21.34	6.82	8.55	0.066														
						1	21.24	6.93	8.59	0.067														
						1.5	21.15	6.99	8.62	0.066														
						2	21.08	7.04	8.53	0.067														
						3	21.03	7.05	8.38	0.067														
						4	20.99	7.08	8.27	0.067														
						5	20.98	7.09	8.22	0.067														
						6	20.96	7.09	8.22	0.068														
						7	20.94	7.10	8.18	0.067														
						8	20.91	7.09	8.10	0.068														
						9	20.78	7.08	7.97	0.070														
						10	20.00	6.93	6.49	0.063														
						11	18.25	6.58	4.06	0.060														
						12	17.32	6.50	3.52	0.064														
						13	16.72	6.43	3.09	0.063														
						14	16.23	6.40	2.86	0.060														
						15	15.70	6.38	2.57	0.059														
						16	15.33	6.35	2.14	0.058														
						17	14.96	6.33	1.62	0.058														
						18	14.77	6.32	1.42	0.059														
						19	14.63	6.31	1.32	0.058														
						20	14.47	6.31	1.28	0.059														
						21	14.36	6.31	1.10	0.058														
						22	14.18	6.31	0.93	0.058														
						23	13.96	6.30	0.82	0.059														
						23.6	13.89	6.31	0.73	0.059														
West Point	1	A	82395	1.42	6.08	---	---	---	---	---	2.4	25	21.8	325.0	1.0	<0.015	0.350	0.406	0.013	0.015	3.22	17.1	58	<1
						0.1	31.00	8.77	8.52	0.094														
						1	30.98	8.85	8.60	0.094														
						1.5	30.96	8.86	8.63	0.094														
						2	30.60	8.86	8.57	0.095														
						3	30.47	8.85	8.54	0.094														
						5	29.99	8.67	7.62	0.093														
						6	29.55	8.10	5.93	0.092														
						7	28.63	7.05	1.48	0.093														
						8	28.24	6.84	0.35	0.093														
						9	27.66	6.66	0.12	0.093														
						10	27.20	6.57	0.11	0.094														
						15	25.82	6.34	0.09	0.092														
						17.1	25.62	6.32	0.08	0.094														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
West Point	2	A	50395	---	6.73	---	---	---	---	---	2.8	17	32.0	3.0	<1.0	<0.015	0.450	<0.150	0.014	0.006	3.26	7.2	50	1*
						0.2	21.78	6.72	8.38	0.062														
						1	21.71	6.84	8.47	0.062														
						1.5	21.47	7.05	8.62	0.062														
						2	21.36	7.12	8.58	0.062														
						3	21.31	7.17	8.48	0.062														
						4	21.27	7.17	8.38	0.063														
						5	21.27	7.18	8.29	0.062														
						6	21.19	7.13	7.97	0.065														
						7	20.11	6.75	5.20	0.075														
						8	18.99	6.58	3.53	0.074														
						9	18.29	6.50	2.81	0.071														
						10	17.74	6.49	2.69	0.062														
						11	17.30	6.43	2.48	0.055														
						12	16.68	6.38	2.04	0.049														
						13	15.91	6.32	1.06	0.048														
						14	15.00	6.33	0.33	0.054														
						14.8	14.88	6.34	0.29	0.056														
West Point	2	A	82395	1.42	5.83	---	---	---	---	---	2.9	25	21.4	88.0	2.0	<0.015	0.300	0.417	0.014	0.012	3.15	15.0	57	<1
						0.1	30.56	8.73	8.69	0.093														
						1	30.49	8.80	8.81	0.093														
						1.5	30.31	8.85	8.90	0.092														
						2	30.23	8.87	8.92	0.092														
						3	30.11	8.85	8.68	0.091														
						4	30.01	8.81	8.49	0.092														
						5	29.79	8.41	7.05	0.091														
						6	28.96	7.50	2.52	0.086														
						7	28.41	6.79	0.39	0.084														
						8	27.95	6.68	0.12	0.086														
						9	27.33	6.59	0.10	0.092														
						10	26.95	6.48	0.10	0.094														
						11	26.56	6.43	0.08	0.095														
						12	26.09	6.41	0.08	0.099														
						12.4	25.92	6.43	0.08	0.107														

Reservoir Water Quality Monitoring Program 1990-1995
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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Harding	1		5/2/90	1.66	6.6	---	----	---	----	----	6.0	17.0		59.0	7.0	<0.20	0.18	---	<0.02	<0.010	3.30	8.0	51	<1
						0.3	24.7	9.1	10.8	0.057														
						1.5	22.6	8.8	10.3	0.056														
						4.0	20.2	6.8	8.4	0.057														
						10.0	18.5	6.8	7.3	0.055														
						15.0	17.3	7.0	6.2	0.053														
						20.0	16.3	6.7	5.7	0.053														
						25.0	15.9	6.6	4.0	0.055														
						28.0	15.7	6.6	4.1	0.057														
Harding	1		5/1/91	1.17	4.7	---	----	---	---	-----	----	20.0		44.0	5.0	<0.01	0.36	0.70	0.04	0.011	4.40	5.8	48	--
						0.3	21.4	6.5	9.1	0.068														
						1.0	21.3	6.7	9.2	0.068														
						2.0	20.6	6.8	8.6	0.068														
						5.0	19.7	6.7	7.4	0.069														
						10.0	19.1	6.7	7.2	0.069														
						15.0	18.3	6.7	6.0	0.070														
						20.0	15.7	6.6	2.9	0.068														
						28.0	13.9	6.5	1.1	0.075														
Harding	1		8/30/90	1.74	7.0	---	----	---	---	-----	3.0	24.0		60.0	4.0	<0.10	0.34	---	<0.02	<0.020	4.20	9.8	53	5*
						0.3	29.5	8.2	9.3	0.089														
						1.5	29.6	8.4	8.9	0.089														
						3.0	29.5	8.3	8.7	0.089														
						5.0	28.8	7.3	5.7	0.089														
						10.0	28.2	6.8	3.0	0.088														
						15.0	27.7	6.6	2.0	0.088														
						20.0	25.5	6.6	0.1	0.091														
						28.0	28.0	7.2	0.1	0.120														
Harding	1		8/13/91	1.82	7.3	---	----	---	---	-----	11.0	24.0		79.0	1.0	<0.01	0.40	0.82	0.03	0.014	3.10	7.5	50	2*
						0.3	28.9	7.6	8.4	0.069														
						1.0	28.8	7.8	8.5	0.068														
						1.4	28.8	7.7	8.3	0.068														
						2.0	28.8	7.7	8.3	0.068														
						5.0	28.2	6.7	4.6	0.070														
						10.0	27.6	6.4	3.3	0.070														
						15.0	27.1	6.3	1.8	0.070														

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Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Harding	2		5/2/90	0.73	2.9	---	----	---	---	-----	11.0	17.0		57.0	8.0	<0.20	0.22	---	0.03	0.160	4.00	5.0	46	56
						0.3	22.2	7.0	9.1	0.053														
						1.5	21.6	7.0	8.9	0.053														
						5.0	20.5	6.9	8.8	0.056														
						10.0	18.9	6.8	8.6	0.058														
						13.0	18.9	6.8	8.6	0.058														
Harding	2		5/1/91	1.04	4.2	---	----	---	---	-----	----	19.0		53.0	7.0	<0.01	0.40	0.33	0.03	0.012	4.50	0.5	24	--
						0.3	21.8	6.6	9.4	0.067														
						1.0	20.1	6.7	8.2	0.068														
						5.0	19.7	6.7	8.1	0.068														
						10.0	19.0	6.7	6.7	0.069														
						12.5	17.6	6.6	2.7	0.066														
Harding	2		8/30/90	1.52	6.1	---	----	---	---	-----	3.0	23.0		56.0	4.0	<0.20	0.26	---	<0.02	<0.020	3.70	11.2	54	8*
						0.3	28.9	6.8	8.3	0.088														
						1.5	28.9	7.2	7.9	0.088														
						5.0	28.5	7.0	7.2	0.089														
						10.0	28.0	6.8	5.0	0.089														
						11.0	27.8	6.6	2.0	0.089														
						12.0	27.3	6.5	0.1	0.092														
						13.0	26.8	6.6	0.1	0.101														
Harding	2		8/13/91	1.67	6.7	---	----	---	---	-----	15.0	25.0		125.0	4.0	<0.01	0.36	0.98	0.04	0.013	3.90	8.5	52	3*
						0.3	28.2	7.0	8.4	0.070														
						1.0	28.2	7.1	8.3	0.069														
						1.4	28.2	7.2	8.2	0.069														
						5.0	27.7	6.7	6.6	0.065														
						10.0	27.2	6.6	6.0	0.065														
						12.5	26.4	6.3	0.5	0.071														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Harding	1	A	5/11/93	1.92	5.9	---	----	---	----	-----	3.5	19.0	53.0	67.0	2.0	<0.015	0.410	<0.150	0.030	<0.004	1.70	7.7	51	<1
						0.3	22.9	8.3	11.1	0.060														
						1.0	22.3	8.5	11.1	0.060														
						1.5	21.8	8.2	10.9	0.060														
						2.0	21.4	7.8	10.3	0.059														
						3.0	20.8	7.4	9.3	0.060														
						5.0	20.1	7.1	9.0	0.061														
						11.0	19.0	6.8	8.1	0.059														
						15.0	18.3	6.8	7.6	0.059														
						20.0	17.0	6.6	6.0	0.059														
						25.0	15.4	6.5	4.0	0.061														
						29.0	14.7	6.5	2.9	0.063														
Harding	1	A	8/23/93	1.92	7.7	---	----	---	---	-----	2.3	22.0	37.0	44.0	3.0	<0.015	0.016	0.448	0.016	<0.004	4.80	9.9	53	<1
						0.1	30.5	8.6	8.9	0.077														
						1.0	30.0	8.6	9.1	0.076														
						1.5	29.9	8.5	8.9	0.076														
						2.0	29.7	8.4	8.6	0.076														
						4.0	29.2	8.0	8.2	0.076														
						5.0	28.7	6.9	6.2	0.079														
						6.0	28.4	6.5	4.6	0.081														
						7.0	28.3	6.5	4.2	0.080														
						8.0	28.2	6.4	3.9	0.077														
						9.0	28.0	6.4	3.4	0.074														
						10.0	27.9	6.3	2.3	0.083														
						11.0	27.9	6.2	1.6	0.066														
						13.0	27.7	6.2	1.2	0.071														
						14.0	27.5	6.2	0.8	0.078														
						15.0	27.3	6.2	0.3	0.072														
						20.0	23.4	6.4	0.0	0.079														
						25.0	17.8	6.8	0.0	0.115														
						28.0	16.9	7.1	0.0	0.122														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Harding	2	A	5/11/93	1.88	6.4	---	----	---	----	-----	3.7	18.0	31.0	61.0	2.0	<0.015	0.410	0.161	0.028	0.009	2.13	6.9	50	1*
						0.1	24.1	8.6	11.5	0.059														
						1.0	23.3	8.7	11.5	0.060														
						1.5	21.8	8.5	11.4	0.060														
						2.0	21.5	8.3	10.5	0.060														
						3.0	20.7	7.7	9.7	0.061														
						5.0	20.2	7.3	9.1	0.061														
						7.0	19.8	6.9	8.8	0.061														
						9.0	19.4	6.8	8.2	0.060														
						11.0	17.8	6.9	5.7	0.056														
						13.0	17.4	6.7	3.8	0.057														
Harding	2	A	8/23/93	1.78	5.6	---	----	---	---	-----	3.0	21.0	40.0	51.0	3.0	<0.015	0.007	<0.150	0.010	<0.004	3.45	9.9	53	2*
						0.1	30.9	8.1	8.7	0.076														
						1.0	29.5	8.3	9.0	0.078														
						1.5	29.2	7.9	7.5	0.077														
						2.0	29.1	7.7	8.4	0.077														
						3.0	29.0	7.2	6.6	0.078														
						5.0	28.7	6.8	6.1	0.079														
						7.0	28.6	6.8	6.1	0.079														
						8.0	28.4	6.7	5.5	0.079														
						9.0	28.3	6.5	3.4	0.078														
						10.0	27.9	6.2	1.0	0.076														
						11.0	27.4	6.3	0.4	0.073														
						13.0	26.2	6.6	0.3	0.101														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Harding	1	A	50395	---	5.13	---	---	---	---	---	3.0	17	30.0	51.0	4.0	<0.015	0.310	<0.150	0.008	0.014	3.03	7.7	51	<1
						0.2	21.16	6.58	8.44	0.057														
						1	21.12	6.62	8.47	0.057														
						1.5	21.10	6.71	8.49	0.057														
						2	21.08	6.76	8.50	0.057														
						3	21.08	6.82	8.51	0.057														
						5	21.06	6.88	8.50	0.058														
						7	20.87	6.90	8.39	0.059														
						8	20.56	6.85	7.90	0.058														
						9	19.69	6.75	7.38	0.058														
						10	19.24	6.69	7.00	0.059														
						11	18.68	6.65	6.71	0.059														
						12	18.30	6.59	6.13	0.058														
						13	18.19	6.55	5.65	0.058														
						15	17.83	6.51	5.31	0.058														
						16	17.41	6.47	4.75	0.057														
						17	16.60	6.42	4.05	0.056														
						18	16.03	6.37	3.38	0.054														
						20	15.15	6.35	3.20	0.055														
						21	14.55	6.32	2.81	0.056														
						23	13.99	6.30	2.08	0.057														
						25	13.77	6.30	1.89	0.058														
						27	13.64	6.29	1.65	0.059														
						28	13.41	6.29	1.29	0.061														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Harding	1	A	82395	2.06	5.36	---	---	---	---	---	2.1	24	20.7	83.0	3.0	<0.015	0.410	0.331	0.012	0.013	2.75	9.6	53	3*
						0.1	29.73	6.37	7.76	0.088														
						1	29.73	6.78	7.81	0.089														
						1.5	29.73	6.86	7.81	0.089														
						2	29.73	6.92	7.80	0.089														
						3	29.59	6.88	7.15	0.089														
						4	29.24	6.66	5.26	0.091														
						5	29.18	6.60	5.38	0.090														
						6	29.14	6.56	4.91	0.090														
						7	29.06	6.48	4.07	0.090														
						8	28.86	6.45	3.82	0.090														
						9	28.78	6.51	5.09	0.090														
						10	28.49	6.54	5.29	0.089														
						11	28.39	6.53	5.08	0.089														
						12	28.18	6.45	3.60	0.090														
						13	28.08	6.33	1.14	0.089														
						14	27.95	6.30	0.97	0.089														
						15	27.93	6.26	0.39	0.090														
						17	27.24	6.24	0.10	0.092														
						18	25.64	6.27	0.08	0.093														
						19	23.84	6.29	0.11	0.093														
						20	21.48	6.34	0.10	0.093														
						21	19.02	6.43	0.08	0.095														
						22	18.05	6.47	0.08	0.096														
						23	17.07	6.51	0.07	0.099														
						24	16.73	6.55	0.07	0.099														
						26	16.31	6.63	0.08	0.103														
						27.8	15.98	6.69	0.07	0.108														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Harding	2	A	50395	---	4.26	---	---	---	---	---	3.1	17	30.0	56.0	3.0	<0.015	0.300	<0.150	0.017	0.004	3.94	8.5	52	3*
						0.2	21.03	6.71	8.58	0.056														
						1	20.98	6.86	8.72	0.056														
						1.5	20.94	6.92	8.72	0.057														
						2	20.78	6.95	8.65	0.057														
						3	20.71	6.95	8.56	0.058														
						5	20.07	6.85	8.08	0.061														
						6	19.98	6.83	8.04	0.061														
						7	19.42	6.75	7.43	0.059														
						8	19.19	6.70	7.11	0.060														
						9	18.78	6.63	6.56	0.058														
						10	18.54	6.58	6.02	0.058														
						11	18.02	6.50	4.78	0.058														
						12	17.95	6.48	4.48	0.058														
						13	16.87	6.40	1.93	0.058														
						14	16.80	6.39	1.70	0.058														
						14.7	16.68	6.38	1.36	0.058														
Harding	2	A	82395	1.65	4.46	---	---	---	---	---	2.7	24	20.6	89.0	1.0	<0.015	0.400	<0.015	0.010	0.011	2.78	12.3	55	1*
						0.1	29.97	6.52	8.16	0.088														
						1	29.95	7.00	8.17	0.089														
						1.5	29.91	7.08	8.12	0.089														
						2	29.89	7.12	7.97	0.088														
						3	29.43	6.85	6.02	0.089														
						4	29.24	6.77	6.20	0.089														
						5	28.94	6.72	5.90	0.090														
						6	28.90	6.70	6.01	0.090														
						7	28.69	6.69	6.37	0.088														
						8	28.67	6.68	6.40	0.088														
						9	28.45	6.63	5.70	0.089														
						10	28.24	6.55	4.46	0.089														
						11	28.20	6.52	4.64	0.088														
						12	28.01	6.49	4.35	0.089														
						13	27.54	6.40	1.45	0.092														
						14	27.35	6.36	0.33	0.094														
						15	26.37	6.39	0.12	0.114														
						16	26.29	6.48	0.09	0.118														
						16.6	26.22	6.51	0.10	0.119														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
W.F. George	1	A	5/4/93	0.96	3.8	---	----	---	---	-----	10.8	19.0	16.6	---	5.0	0.117	0.223	0.434	0.033	0.002	3.20	2.4	39	---
						0.0	21.0	7.3	8.2	0.062														
						1.0	19.9	7.2	8.3	0.063														
						2.0	19.7	7.2	8.1	0.063														
						3.0	19.7	7.1	8.0	0.063														
						5.0	19.4	7.1	8.0	0.061														
						7.0	19.3	7.1	7.9	0.061														
						9.0	18.7	7.0	6.8	0.063														
						10.0	18.6	6.9	6.5	0.063														
						14.0	18.4	6.8	6.3	0.063														
						20.0	18.2	6.7	6.0	0.064														
						22.0	18.2	6.7	5.9	0.064														
W.F. George	1	A	8/4/92	1.76	6.9	---	----	---	---	-----	2.8	22.0	21.0	---	3.2	0.013	0.002	0.439	0.026	0.000	4.06	10.7	54	---
						0.0	30.6	9.0	8.9	0.099														
						1.0	30.5	9.1	8.8	0.089														
						2.0	30.4	9.0	8.7	0.089														
						3.0	30.4	9.0	8.6	0.089														
						4.0	30.0	8.5	7.5	0.087														
						5.0	29.8	7.9	6.1	0.087														
						6.0	29.5	7.5	5.1	0.087														
						7.0	29.2	7.1	3.4	0.088														
						8.0	29.1	7.0	2.9	0.088														
						9.0	28.9	6.9	1.8	0.088														
						10.0	28.8	6.8	1.3	0.088														
						12.0	28.5	6.7	0.3	0.089														
						14.0	28.3	6.7	0.2	0.091														
						20.0	28.0	6.7	0.2	0.094														
						27.0	26.4	6.8	0.2	0.109														
W.F. George	1	A	8/3/93	1.85	7.4	---	----	---	---	-----	2.6	22.3	20.2	---	3.7	0.055	0.016	0.454	0.018	0.000	4.15	6.3	49	---
						0.0	30.6	8.2	7.0	0.084														
						1.0	30.6	8.2	7.0	0.084														
						3.0	30.5	8.2	6.9	0.084														
						5.0	30.4	8.0	6.5	0.083														
						7.0	30.4	7.8	6.5	0.083														
						9.0	30.1	7.3	3.1	0.084														
						10.0	29.8	7.0	1.6	0.084														
						11.0	29.4	6.7	0.1	0.087														
						14.0	28.7	6.5	0.0	0.091														
						22.0	27.4	6.6	0.0	0.098														
						27.0	26.7	6.6	0.0	0.101														

Reservoir Water Quality Monitoring Program 1990-1995
Chattahoochee River Basin

				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
W.F. George	4	A	5/26/92	1.28	5.1	---	----	---	---	-----	5.2	18.5	19.4	---	4.6	0.086	0.135	0.549	0.032	0.002	3.93	8.2	51	---
						0.0	25.7	9.0	9.8	0.084														
						1.0	25.7	9.0	9.7	0.084														
						2.0	25.5	8.9	9.1	0.083														
						3.0	25.3	8.7	8.6	0.082														
						4.0	24.9	8.2	7.5	0.082														
						5.0	23.0	7.5	5.3	0.083														
						6.0	21.4	7.1	3.8	0.083														
						7.0	20.1	6.9	2.8	0.083														
						8.0	19.8	6.7	2.6	0.083														
						10.0	19.5	6.6	2.3	0.084														
						12.0	19.3	6.6	2.0	0.084														
						14.0	19.2	6.6	2.0	0.084														
						16.0	19.2	6.5	2.0	0.084														
						18.0	19.1	6.5	1.9	0.084														
						20.0	19.1	6.5	1.8	0.084														
W.F. George	4	A	5/4/93	1.22	4.9	---	----	---	---	-----	9.1	16.3	18.7	---	7.8	0.081	0.337	0.467	0.038	0.002	3.022	6.3	49	---
						0.0	22.0	7.0	8.9	0.072														
						1.0	21.6	7.3	8.6	0.072														
						2.0	20.6	7.3	8.2	0.073														
						3.0	20.4	7.3	8.2	0.073														
						5.0	20.4	7.3	8.1	0.074														
						7.0	20.3	7.3	8.0	0.073														
						9.0	20.2	7.2	7.9	0.074														
						11.0	20.0	7.2	7.4	0.075														
						13.0	19.8	7.2	7.1	0.075														
						15.0	19.7	7.1	6.9	0.075														
						17.0	19.6	7.0	6.9	0.075														

Reservoir Water Quality Monitoring Program 1990-1995
Chattahoochee River Basin

Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
W.F. George	4	A	8/4/92	1.21	4.8	---	----	---	---	-----	5.3	22.5	20.1	---	5.6	0.083	0.111	0.557	0.042	0.001	3.99	15.6	58	---
						0.0	31.2	8.6	8.4	0.093														
						1.0	30.9	8.7	8.7	0.093														
						2.0	30.4	8.6	8.6	0.093														
						3.0	30.2	8.3	7.9	0.091														
						4.0	30.0	7.2	5.9	0.091														
						5.0	29.7	6.8	4.7	0.092														
						6.0	29.5	6.7	4.0	0.092														
						7.0	29.4	6.6	3.4	0.093														
						8.0	29.4	6.5	3.3	0.093														
						9.0	29.2	6.5	2.2	0.094														
						10.0	29.1	6.4	1.7	0.094														
						12.0	28.8	6.4	0.8	0.095														
						14.0	28.5	6.4	0.3	0.096														
						16.0	28.8	6.4	0.2	0.096														
						21.0	27.6	6.5	0.2	0.102														
W.F. George	4	A	8/3/93	1.50	6.0	---	----	---	---	-----	5.6	22.3	21.0	---	6.6	0.134	0.177	0.691	0.035	0.000	3.80	7.9	51	---
						0.0	30.8	7.4	6.2	0.092														
						1.0	30.7	7.4	5.9	0.092														
						2.0	30.6	7.3	5.5	0.092														
						3.0	30.4	7.2	5.1	0.092														
						5.0	30.2	7.1	4.6	0.092														
						7.0	29.6	7.0	3.8	0.091														
						9.0	29.4	7.0	4.2	0.091														
						11.0	29.3	6.9	2.8	0.091														
						13.0	28.7	6.8	0.3	0.096														
						15.0	28.4	6.8	0.2	0.097														
						17.0	27.9	6.8	0.1	0.098														
						19.0	27.8	6.8	0.1	0.098														
						20.0	27.6	6.8	0.1	0.100														
W.F. George	6	A	5/26/92	1.12	4.5	---	----	---	---		8.8	20.0	20.5	---	7.3	0.212	0.376	0.64	0.056	0.007	3.26	9.6	53	---
						0.0	24.2	7.3	8.4	0.093														
						1.0	24.2	7.3	8.3	0.093														
						3.0	23.9	7.0	6.9	0.099														
						6.0	23.5	6.9	5.8	0.113														
						8.0	23.2	6.9	5.4	0.121														
						10.0	22.7	6.9	3.9	0.153														
						12.0	20.8	6.8	3.2	0.147														
						13.0	20.1	6.8	3.1	0.126														
						15.0	19.9	6.7	3.0	0.123														

Reservoir Water Quality Monitoring Program 1990-1995
Chattahoochee River Basin

				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
W.F. George	6	A	5/4/93	0.96	3.84	---	----	---	---	-----	15.2	16.3	18.1	---	8.7	0.173	0.334	0.559	0.052	0.010	2.83	3.1	42	---
						0.0	20.2	7.1	8.3	0.075														
						1.0	19.8	7.0	8.2	0.075														
						2.0	19.7	6.9	8.2	0.075														
						3.0	19.7	6.9	8.1	0.075														
						5.0	19.7	6.9	8.1	0.075														
						7.0	19.7	6.9	8.1	0.075														
						9.0	19.7	6.9	8.2	0.075														
						11.0	19.7	6.8	8.2	0.075														
						13.0	19.7	6.9	8.2	0.075														
						15.0	19.6	6.9	8.1	0.075														
W.F. George	6	A	8/4/92	1.16	4.6	---	----	---	---	-----	6.8	24.0	20.8	---	4.3	0.15	0.279	0.532	0.050	0.001	3.523	10.0	53	---
						0.0	30.0	7.3	7.9	0.094														
						1.0	29.9	7.3	7.9	0.094														
						2.0	29.7	7.1	7.5	0.095														
						3.0	29.7	7.1	7.4	0.095														
						4.0	29.7	7.1	7.3	0.095														
						5.0	29.7	7.0	7.3	0.095														
						6.0	29.7	7.1	7.3	0.095														
						7.0	29.7	7.0	7.0	0.099														
						8.0	29.6	7.0	7.0	0.099														
						9.0	29.6	7.0	7.0	0.099														
						10.0	29.6	6.9	6.7	0.101														
						12.0	29.5	6.8	6.3	0.104														
						14.0	29.5	6.8	6.1	0.106														
						15.0	29.5	6.8	5.9	0.107														
W.F. George	6	A	8/3/93	1.28	5.1	---	----	---	---	-----	14.4	23.0	20.5	---	8.7	0.294	0.401	0.993	0.049	0.009	3.73	3.9	44	---
						0.0	30.5	7.0	5.9	0.101														
						1.0	30.4	7.0	5.8	0.101														
						2.0	30.3	7.0	5.6	0.101														
						3.0	30.3	7.0	5.5	0.101														
						5.0	30.2	7.0	5.5	0.100														
						7.0	30.2	7.0	5.5	0.101														
						9.0	30.1	7.0	5.5	0.101														
						11.0	30.1	7.0	5.5	0.100														
						13.0	30.0	7.0	5.4	0.101														
						15.0	29.9	7.0	5.3	0.101														

Reservoir Water Quality Monitoring Program 1990-1995
Chattahoochee River Basin

Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
W.F. George	1	A	50295	2.49	6.32	---	---	---	---	---	2.0	17	32.0	51.0	3.0	<0.015	0.250	<0.150	0.011	0.012	4.73	8.8	52	<1
						0.2	21.94	6.68	8.34	0.062														
						1	21.94	6.91	8.37	0.062														
						1.5	21.94	7.02	8.38	0.063														
						2	21.91	7.19	8.45	0.062														
						3	21.84	7.20	8.44	0.063														
						4	21.80	7.21	8.40	0.062														
						5	21.71	7.19	8.35	0.062														
						6	21.59	7.15	8.24	0.062														
						7	21.50	7.12	8.12	0.062														
						8	21.29	7.05	7.86	0.063														
						9	20.91	6.91	7.12	0.062														
						10	20.80	6.84	6.80	0.062														
						15	20.30	6.67	5.79	0.062														
						20	19.69	6.56	4.66	0.064														
						22.7	19.34	6.52	3.83	0.064														
W. F. George	1	A	82295	1.6	6.11	---	---	---	---	---	2.3	25	20.4	84.0	1.0	<0.015	0.030	0.284	0.014	0.013	3.50	16.0	58	<1
						0	31.04	7.75	7.76	0.088														
						1	30.82	8.20	7.91	0.089														
						1.5	30.60	8.27	7.92	0.089														
						2	30.52	8.30	7.85	0.089														
						3	30.41	8.21	7.51	0.089														
						4	30.37	8.12	7.32	0.089														
						5	30.25	7.70	6.68	0.091														
						6	30.19	7.37	5.66	0.092														
						7	29.87	6.96	3.48	0.096														
						8	29.39	6.73	1.32	0.094														
						9	29.10	6.60	0.50	0.094														
						10	28.98	6.53	0.17	0.094														
						15	28.65	6.43	0.08	0.096														
						17	28.53	6.42	0.09	0.095														
						17.6	28.51	6.42	0.08	0.096														

Reservoir Water Quality Monitoring Program 1990-1995
Chattahoochee River Basin

Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
W.F. George	4	A	50295	1.4	3.86	---	---	---	---	---	3.9	20	33.0	65.0	5.0	<0.015	0.260	<0.150	0.015	0.008	4.75	---	---	3*
						0.2	23.15	6.48	7.96	0.074														
						1	23.10	6.85	7.99	0.074														
						1.5	22.96	6.89	7.93	0.075														
						2	22.83	6.91	7.85	0.075														
						3	22.78	6.90	7.80	0.075														
						4	22.71	6.90	7.76	0.075														
						5	22.58	6.91	7.68	0.075														
						10	22.30	6.85	7.13	0.075														
						11	22.23	6.84	6.97	0.075														
						12	21.89	6.71	5.99	0.075														
						13	21.64	6.65	5.46	0.075														
						14	21.52	6.64	5.24	0.076														
						15	21.40	6.62	5.05	0.075														
						20	21.05	6.58	4.44	0.075														
W. F. George	4	A	82295	1.34	3.79	---	---	---	---	---	4.0	23	20.7	92.0	5.0	<0.015	0.260	0.428	0.015	0.012	3.48	23.0	61	<1
						0.1	31.83	7.98	8.73	0.095														
						1	31.60	8.15	8.75	0.097														
						1.5	31.45	8.17	8.65	0.096														
						2	31.41	8.19	8.57	0.096														
						3	31.37	8.16	8.42	0.096														
						4	31.35	8.13	8.34	0.096														
						5	31.35	8.09	8.25	0.096														
						6	30.74	7.75	7.25	0.096														
						7	30.64	7.54	7.11	0.096														
						8	30.58	7.38	6.74	0.096														
						9	30.45	7.18	5.91	0.096														
						10	30.29	6.96	4.92	0.097														
						11	30.23	6.89	4.89	0.097														
						12	30.23	6.85	4.99	0.097														
						13	30.19	6.87	5.16	0.097														
						14	30.15	6.80	4.46	0.098														
						15	29.93	6.70	3.02	0.099														
						16	29.69	6.59	1.56	0.101														
						17	29.59	6.55	1.26	0.101														
						18	29.59	6.52	1.07	0.101														
						18.6	29.47	6.50	0.49	0.103														

Reservoir Water Quality Monitoring Program 1990-1995
Chattahoochee River Basin

Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
W.F. George	6	A	50295	---	2.78	---	---	---	---	---	6.1	19	31.0	65.0	7.0	<0.015	0.310	<0.150	0.028	0.006	3.64	19.5	60	1*
						0.2	22.49	6.65	8.58	0.072														
						1	22.53	6.98	8.90	0.072														
						1.5	22.55	7.00	8.92	0.072														
						2	22.51	7.06	8.97	0.072														
						3	22.53	7.06	8.96	0.072														
						4	22.53	7.07	8.95	0.072														
						5	22.44	7.05	8.86	0.072														
						10	22.01	6.98	8.41	0.074														
						11	21.94	6.96	8.22	0.074														
						12	21.78	6.92	7.93	0.078														
						13	21.68	6.88	7.81	0.079														
						14	21.64	6.87	7.74	0.081														
						15	21.61	6.86	7.65	0.084														
						15.3	21.57	6.85	7.48	0.085														
W.F. George	6	A	82295	1.16	2.94	---	---	---	---	---	5.5	26	21.3	97.0	6.0	<0.015	0.330	<0.150	0.015	0.016	3.06	16.6	58	<1
						0.1	31.89	6.58	8.19	0.095														
						1	31.89	6.86	8.24	0.095														
						1.5	31.68	6.96	7.90	0.095														
						2	31.60	6.97	7.60	0.096														
						3	31.29	6.94	7.30	0.097														
						4	30.68	6.82	6.33	0.098														
						5	30.66	6.80	6.30	0.097														
						10	30.58	6.79	6.21	0.099														
						11	30.58	6.79	6.22	0.099														
						12	30.58	6.79	6.21	0.099														

Reservoir Water Quality Monitoring Program 1990-1995
Conecuh River Basin

				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Gantt	1		5/3/90	0.46	1.8	---	----	---	---	----	20.0	2.0		86.0	7.0	<0.10	0.18	---	0.05	<0.010	6.10	---	--	23
						0.3	26.1	6.7	7.1	0.062														
						1.5	24.5	6.8	7.0	0.061														
						5.0	24.2	6.7	6.3	0.062														
						8.0	23.7	6.7	5.9	0.061														
Gantt	1		8/27/90	1.51	6.0	---	----	---	---	----	7.0	30.0		54.0	5.0	<0.10	<0.04	---	<0.02	<0.010	8.70	4.0	44	<1
						0.3	30.9	7.2	7.4	0.077														
						1.5	30.8	7.2	6.1	0.076														
						3.0	29.6	6.8	2.7	0.080														
						4.0	29.2	6.7	2.0	0.082														
						5.0	28.9	6.7	1.0	0.083														
						6.0	28.6	6.7	0.2	0.087														
						8.0	27.8	6.7	0.1	0.100														
Gantt	1	A	4/29/93	0.76	1.93	---	----	---	---	----	22.0	23.0	53.0	59.0	3.0	<0.015	0.230	0.639	0.035	<0.004	6.35	2.4	39	2*
						0.3	22.8	6.8	8.2	0.056														
						1.0	21.8	6.9	8.0	0.056														
						1.5	21.7	6.9	7.9	0.056														
						2.0	21.6	6.9	7.9	0.056														
						5.0	20.6	6.9	7.2	0.055														
						8.0	19.5	6.7	6.4	0.055														
Gantt	1	A	8/11/93	1.88	2.8	---	----	---	---	----	3.5	36.0	53.0	61.0	2.0	<0.015	0.004	0.178	0.021	<0.004	4.18	4.1	44	2*
						0.3	31.4	7.3	7.3	0.072														
						1.0	30.9	7.3	7.2	0.071														
						1.5	30.4	7.3	7.2	0.071														
						2.0	30.3	6.9	7.0	0.073														
						3.0	29.9	6.8	5.4	0.070														
						4.0	29.4	6.7	4.3	0.069														
						5.0	29.2	6.7	3.7	0.075														
						6.0	28.8	6.5	1.4	0.073														
						7.0	28.1	6.6	0.1	0.094														
						9.0	25.7	6.8	0.1	0.118														

Reservoir Water Quality Monitoring Program 1990-1995
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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Gantt	1	A	51095	0.67	1.40	---	---	---	---	---	26.0	18	22.1	79.0	5.0	<0.015	0.230	0.300	0.080	0.013	6.26	3.5	43	157
						0.1	23.59	6.59	7.18	0.055														
						0.5	23.57	6.70	7.13	0.055														
						1	23.48	6.71	7.15	0.055														
						1.5	23.39	6.72	7.16	0.055														
						2	23.37	6.75	7.18	0.055														
						3	22.90	6.71	6.84	0.055														
						4	22.63	6.62	6.24	0.056														
						5	22.01	6.54	5.61	0.056														
						6	21.22	6.48	4.99	0.055														
						7	21.13	6.47	4.60	0.057														
						8	20.99	6.46	4.51	0.056														
						9	20.70	6.42	4.00	0.056														
						9.4	20.54	6.41	3.76	0.056														
Gantt	1	B	51095	0.67	1.31	---	---	---	---	---	26.0	19	21.0	78.0	7.0	<0.015	0.220	0.288	0.070	0.016	6.56	19.2	60	290
						0.1	23.59	6.80	7.05	0.055														
						0.5	23.55	6.81	7.14	0.055														
						1	23.50	6.80	7.15	0.055														
						1.5	23.46	6.80	7.15	0.055														
						2	23.42	6.81	7.17	0.055														
						3	23.01	6.79	6.81	0.055														
						4	22.83	6.69	6.41	0.056														
						5	21.98	6.57	5.54	0.055														
						6	21.26	6.50	5.07	0.054														
						7	21.23	6.49	4.75	0.057														
						8	21.06	6.48	4.52	0.057														
						9	20.63	6.44	3.90	0.056														
						9.4	20.56	6.43	3.80	0.056														
Gantt	1	A	83095	2.09	4.77	---	---	---	---	---	2.4	30	30.8	83.0	2.0	<0.015	0.040	<0.150	0.055	0.007	4.63	5.9	48	2*
						0.1	31.85	6.99	7.45	0.073														
						1	31.47	7.44	7.68	0.072														
						1.5	31.15	7.51	7.56	0.073														
						2	31.04	7.47	7.47	0.073														
						3	30.88	7.36	7.30	0.073														
						4	30.15	7.02	5.00	0.073														
						5	29.43	6.57	3.12	0.071														
						6	28.67	6.38	0.15	0.069														
						7	27.28	6.40	0.11	0.084														
						8	26.37	6.49	0.10	0.097														
						8.4	26.09	6.56	0.09	0.101														

Reservoir Water Quality Monitoring Program 1990-1995
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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Point A	1	A	4/29/93	0.76	1.97	---	----	---	---	-----	20.0	22.0	55.0	58.0	2.0	<0.015	0.260	0.569	0.032	<0.004	5.57	2.8	41	33
						0.3	20.9	6.8	8.2	0.057														
						1.0	20.8	6.8	8.1	0.057														
						1.5	20.6	6.9	8.0	0.057														
						2.0	20.6	6.8	7.9	0.057														
						3.0	20.3	6.9	7.9	0.059														
						5.0	19.3	6.9	7.9	0.067														
						7.0	19.2	6.9	7.8	0.068														
Point A	1	A	51095	0.76	1.53	---	---	---	---	---	23.0	20	23.0	76.0	4.0	<0.015	0.230	0.364	0.080	0.011	5.83	3.2	42	49113
						0.1	23.28	6.32	7.07	0.056														
						0.5	23.28	6.40	7.06	0.056														
						1	23.27	6.52	7.07	0.056														
						1.5	23.24	6.66	7.10	0.056														
						2	23.21	6.67	7.12	0.056														
						3	22.87	6.67	6.44	0.058														
						4	22.24	6.57	5.50	0.063														
						5	21.47	6.53	4.81	0.063														
						6	20.96	6.49	4.24	0.065														
						6.2	20.84	6.49	3.88	0.066														
Point A	1	A	83095	1.6	3.52	---	---	---	---	---	3.2	27	28.9	84.0	3.0	<0.015	0.070	<0.150	0.054	0.007	5.26	8.5	52	3*
						0.1	30.96	6.75	7.38	0.070														
						1	30.47	6.98	7.39	0.070														
						1.5	30.43	7.02	7.26	0.071														
						2	30.39	7.05	7.24	0.071														
						3	29.18	6.65	4.41	0.069														
						4	28.22	6.52	3.63	0.071														
						5	27.87	6.44	3.14	0.070														
						6	27.62	6.41	3.69	0.069														
						7	27.37	6.35	2.14	0.072														
						7.2	27.35	6.34	2.05	0.072														

Reservoir Water Quality Monitoring Program 1990-1995
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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
F. Jackson	1		4/19/90	0.58	2.3	---	----	---	---	----	28.0	10.0		67.0	7.0	0.16	0.15	---	<0.02	0.030	4.70	---	--	2*
						0.3	21.5	7.0	8.4	0.024														
						1.5	21.3	6.9	8.2	0.024														
						4.0	21.1	6.8	7.7	0.024														
						6.0	18.1	6.4	4.1	0.026														
F. Jackson	1		8/27/90	1.25	5.0	---	----	---	---	----	14.0	22.0		40.0	7.0	0.32	<0.04	---	<0.02	<0.010	8.60	16.6	58	<1
						0.3	32.2	6.7	7.3	0.035														
						1.5	30.2	6.6	5.2	0.035														
						3.0	28.6	6.1	0.3	0.040														
						4.0	26.4	6.6	0.2	0.122														
						5.0	24.2	6.8	0.1	0.179														
						6.0	23.2	6.9	0.1	0.208														
F. Jackson	1	A	4/28/93	1.10	3.2	---	----	---	---	----	10.0	9.0	40.0	31.0	1.0	<0.015	0.154	0.540	0.027	<0.004	5.00	7.9	51	2*
						0.3	21.9	6.3	9.0	0.028														
						1.0	21.7	6.4	8.8	0.028														
						1.5	21.5	6.5	8.8	0.027														
						2.0	21.4	6.5	8.7	0.028														
						3.0	21.3	6.5	8.5	0.027														
						4.0	20.9	6.4	8.1	0.026														
						5.0	20.4	6.4	7.5	0.027														
						6.0	18.2	6.0	3.5	0.032														
F. Jackson	1	A	8/10/93	1.39	1.9	---	----	---	---	----	4.6	12.0	35.0	39.0	2.0	<0.015	0.110	1.360	0.022	<0.004	5.46	4.8	46	1*
						0.1	30.2	6.1	6.4	0.033														
						1.0	29.8	6.2	6.3	0.033														
						1.5	29.7	6.1	6.2	0.033														
						2.0	29.5	6.1	6.1	0.033														
						3.0	28.7	5.9	3.4	0.033														
						4.0	26.4	6.0	0.1	0.069														
						5.0	23.8	6.5	0.1	0.119														
						6.0	22.1	6.7	0.1	0.147														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Frank Jackson	1	A	50995	1.5	2.53	---	---	---	---	---	5.0	9	8.3	45.0	3.0	<0.015	0.170	0.160	0.050	0.006	4.26	4.0	44	2*
						0.1	23.66	6.27	6.92	0.029														
						1	23.57	6.20	6.82	0.029														
						1.5	23.14	6.14	6.32	0.029														
						2	23.06	6.12	6.11	0.029														
						3	22.01	6.03	5.25	0.028														
						4	21.31	5.91	3.67	0.030														
						5	20.91	5.86	2.41	0.032														
						6	19.79	5.82	0.26	0.035														
						6.3	19.43	5.86	0.17	0.037														
Frank Jackson	1	A	82995	1.68	3.22	---	---	---	---	---	2.6	10	9.0	170.0	<1.0	<0.015	0.050	<0.150	0.059	0.006	4.84	4.8	46	1*
						0.1	30.41	5.95	6.34	0.031														
						1	30.35	6.04	6.31	0.031														
						1.5	30.29	6.09	6.29	0.031														
						2	30.27	6.14	6.28	0.031														
						3	30.25	6.14	6.25	0.031														
						4	30.19	6.14	6.22	0.031														
						5	28.37	5.80	1.44	0.034														
						6	26.07	6.04	0.11	0.075														
						6.5	25.43	6.16	0.10	0.087														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Weiss	1	A	5/5/92	0.74	3.0	---	----	---	---	-----	14.0	54.0	---	---	16.0	0.046	0.002	0.475	0.070	0.002	3.26	15.8	58	---
						0.0	19.5	8.4	9.0	0.144														
						1.0	19.4	8.3	8.9	0.144														
						2.0	19.4	8.3	8.8	0.144														
						4.0	19.3	8.2	8.7	0.145														
						6.0	19.2	8.1	8.7	0.144														
						8.0	18.9	8.1	8.5	0.144														
						9.0	18.6	7.6	6.4	0.146														
Weiss	1	A	5/05/93	0.70	2.2	---	----	---	---	-----	7.7	50.0	69.0	105.0	11.0	<0.015	0.120	0.553	0.060	0.009	3.22	14.7	57	30*
						0.3	20.7	8.0	9.2	0.124														
						1.0	20.9	8.0	9.1	0.124														
						1.5	20.1	7.7	8.5	0.123														
						2.0	20.3	7.8	8.6	0.123														
						5.0	19.6	7.5	8.1	0.124														
						10.0	19.4	7.5	7.9	0.122														
						15.0	19.4	7.4	7.8	0.123														
						16.0	19.3	7.4	7.8	0.130														
Weiss	1	A	8/18/92	0.93	3.7	---	----	---	---	-----	9.4	59.8	---	---	11.0	0.032	0.005	0.446	0.082	0.010	6.41	32.9	65	---
						0.0	27.4	8.3	7.6	0.143														
						1.0	27.1	8.3	7.0	0.142														
						2.0	27.1	8.0	6.4	0.143														
						3.0	27.1	8.0	6.3	0.143														
						4.0	27.1	8.0	6.4	0.143														
						5.0	27.1	8.0	6.3	0.143														
						6.0	27.0	7.7	4.8	0.143														
						7.0	26.9	7.6	4.6	0.133														
						8.0	26.8	7.5	3.8	0.144														
Weiss	1	A	8/18/93	0.97	2.4	---	----	---	---	-----	5.5	65.0	77.0	102.0	8.0	<0.015	0.018	0.720	0.054	0.004	4.12	15.6	58	<1
						0.3	29.0	8.4	7.8	0.162														
						1.0	28.8	7.7	5.9	0.163														
						1.5	28.7	7.8	5.8	0.162														
						2.0	28.7	7.6	4.8	0.162														
						4.0	28.6	7.4	3.9	0.163														
						5.0	28.5	7.3	3.6	0.163														
						6.0	27.8	7.1	2.7	0.164														
						7.0	27.5	7.1	1.7	0.170														
						8.0	27.4	7.0	1.0	0.171														
						9.0	27.3	7.0	0.6	0.171														
						10.0	27.3	7.0	0.6	0.170														
						15.0	27.0	7.0	0.4	0.179														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Weiss	2	A	5/5/92	0.50	2.0	---	----	---	---	-----	17.7	47.5	---	---	18.0	0.128	0.006	0.643	0.088	0.003	5.97	26.5	63	---
						0.0	19.9	8.8	10.8	0.130														
						1.0	19.7	8.7	10.5	0.130														
						2.0	19.5	8.7	10.1	0.131														
						4.0	18.8	8.1	8.9	0.131														
						6.0	18.6	7.9	8.5	0.131														
						8.0	17.7	7.6	7.5	0.131														
						10.0	17.7	7.5	7.4	0.131														
						12.0	17.6	7.5	7.2	0.132														
						13.0	17.6	7.4	7.1	0.132														
Weiss	2	A	5/06/93	0.72	2.3	---	----	---	---	-----	6.2	49.0	72.0	115.0	8.0	<0.015	0.270	0.565	0.071	0.005	3.89	16.7	58	22
						0.3	20.4	7.4	9.1	0.127														
						1.0	20.0	7.2	8.4	0.130														
						1.5	19.9	7.2	8.3	0.128														
						2.0	19.8	7.3	8.4	0.127														
						5.0	18.9	7.0	7.4	0.128														
						10.0	18.2	6.9	6.7	0.125														
						12.0	18.0	6.9	6.6	0.120														
Weiss	2	A	8/18/92	0.51	2.0	---	----	---	---	-----	21.0	46.8	---	---	17.0	0.043	0.022	0.592	0.121	0.024	5.86	31.6	64	---
						0.0	25.1	7.5	6.8	0.128														
						1.0	25.1	7.4	6.5	0.127														
						2.0	25.1	7.3	6.4	0.127														
						3.0	25.1	7.3	6.2	0.126														
						4.0	25.1	7.2	6.0	0.126														
						5.0	25.1	7.2	5.8	0.125														
						6.0	25.0	7.2	5.8	0.124														
						7.0	24.9	7.1	5.4	0.119														
						8.0	24.8	7.0	5.2	0.118														
						9.0	24.6	7.0	4.7	0.114														
						10.0	24.2	6.9	4.0	0.109														
						11.0	24.1	6.8	3.8	0.108														
						12.0	24.1	6.8	3.6	0.108														
						13.0	24.1	6.8	3.4	0.108														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Weiss	2	A	8/19/93	0.73	1.9	---	----	---	---	-----	8.0	64.0	79.0	105.0	13.0	<0.015	0.017	0.772	0.078	0.016	4.60	15.2	57	3*
						0.3	29.4	8.0	7.2	0.168														
						1.0	29.4	8.1	7.1	0.168														
						1.5	29.5	8.1	7.0	0.168														
						2.0	29.5	8.1	6.8	0.167														
						3.0	29.2	7.8	5.9	0.169														
						4.0	28.9	7.4	4.9	0.172														
						5.0	28.6	7.1	3.4	0.176														
						6.0	28.3	7.0	2.3	0.176														
						7.0	27.7	6.9	1.3	0.175														
						8.0	27.3	6.8	0.4	0.176														
						9.0	27.2	6.8	0.4	0.176														
						10.0	27.2	6.8	0.4	0.177														
Weiss	3	A	5/06/93	0.61	1.8	---	----	---	---	-----	18.5	44.0	64.0	116.0	15.0	<0.015	0.330	0.515	0.072	0.024	4.34	7.6	50	240
						0.3	19.3	6.8	7.5	0.109														
						1.0	19.1	6.8	7.5	0.109														
						1.5	19.1	6.8	7.4	0.110														
						2.0	19.1	6.8	7.4	0.110														
						5.0	18.9	6.8	7.1	0.108														
						7.0	18.7	6.8	7.0	0.108														
						10.0	18.6	6.8	7.0	0.108														
Weiss	3	A	8/19/93	0.72	1.7	---	----	---	---	-----	8.1	64.0	82.0	121.0	12.0	<0.015	0.180	1.050	0.130	0.055	4.06	19.0	59	1*
						0.3	29.7	8.0	8.3	0.192														
						1.0	29.7	8.0	8.0	0.192														
						1.5	29.6	7.9	7.8	0.192														
						2.0	29.5	7.8	7.3	0.192														
						3.0	29.1	7.5	6.2	0.195														
						4.0	28.7	7.3	5.6	0.195														
						5.0	28.2	7.2	4.6	0.197														
						6.0	28.1	7.1	4.4	0.197														
						7.0	28.0	7.1	4.4	0.197														
Weiss	4	A	5/06/93	0.51	1.8	---	----	---	---	-----	23.0	39.0	64.0	100.0	17.0	<0.015	0.360	0.367	0.093	0.031	3.98	3.5	43	193
						0.3	19.1	6.7	7.0	0.107														
						1.0	19.0	6.7	6.8	0.106														
						1.5	18.9	6.7	6.7	0.107														
						2.0	18.9	6.7	6.6	0.106														
						5.0	18.9	6.7	6.6	0.107														
						7.0	18.9	6.7	6.6	0.106														
						10.0	18.9	6.7	6.6	0.108														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Weiss	4	A	8/19/93	0.74	1.7	---	----	---	---	-----	6.6	65.0	82.0	122.0	10.0	<0.015	0.290	<0.150	0.170	0.076	4.36	23.4	61	4*
						0.3	30.7	8.0	9.0	0.194														
						1.0	30.2	7.6	7.6	0.194														
						1.5	30.0	7.4	6.9	0.194														
						2.0	30.0	7.4	6.8	0.195														
						3.0	29.9	7.4	6.7	0.194														
						4.0	29.1	7.3	5.6	0.194														
						5.0	28.4	7.2	5.3	0.192														
						6.0	27.9	7.2	5.1	0.192														
						7.0	27.7	7.2	4.9	0.192														
						8.0	27.6	7.1	4.5	0.193														
						9.0	27.5	7.1	4.0	0.194														
Weiss	1	A	50494	0.65	2.67	---	---	---	---	---	7.1	33	47.0	57.0	11.0	<0.015	0.033	0.484	0.052	0.013	2.98	9.1	52	1*
						0.1	21.06	7.47	8.37	0.090														
						1	20.96	7.51	8.23	0.089														
						1.5	20.96	7.52	8.14	0.091														
						2	20.89	7.51	8.01	0.092														
						3	20.85	7.50	7.44	0.092														
						4	20.82	7.48	7.08	0.092														
						5	20.75	7.47	7.15	0.090														
						10	20.10	7.33	6.66	0.095														
						11.3	20.10	7.32	6.38	0.094														
Weiss	1	A	90794	0.67	1.94	---	---	---	---	---	11.0	54	68.0	98.0	10.0	<0.015	0.036	0.787	0.054	0.010	3.40	40.6	67	<1
						0.1	27.74	8.21	10.49	0.145														
						1	26.93	8.00	7.27	0.147														
						1.5	26.86	7.86	6.58	0.146														
						2	26.74	7.66	5.51	0.145														
						3	26.68	7.52	5.28	0.148														
						4	26.65	7.45	5.20	0.143														
						5	26.72	7.36	4.86	0.142														
						9	26.61	7.22	3.97	0.152														
						10	26.55	7.14	2.82	0.145														
						11.2	26.51	7.06	2.03	0.148														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Weiss	1	A	83195	0.68	2.5	---	---	---	---	---	5.3	65	61.0	88.0	8.0	<0.015	0.030	0.286	0.076	0.009	4.30	36.9	66	1*
						0.2	29.56	8.73	10.15	0.175														
						1	29.46	8.72	9.43	0.175														
						1.5	29.34	8.68	8.64	0.173														
						2	29.24	8.52	7.74	0.172														
						3	29.06	8.26	6.19	0.176														
						4	28.75	8.04	5.87	0.175														
						5	28.43	7.72	3.66	0.177														
						6	28.36	7.62	3.30	0.174														
						7	28.26	7.50	2.52	0.175														
						8	28.14	7.41	1.51	0.177														
						9	28.12	7.38	1.43	0.171														
						10	28.03	7.31	0.47	0.173														
						10.9	27.97	7.29	0.15	0.179														
Weiss	2	A	50594	0.55	2.02	---	---	---	---	---	8.2	39	52.0	59.0	13.0	<0.015	0.130	0.472	0.069	0.032	3.02	17.0	58	2*
						0.1	18.54	7.38	9.20	0.102														
						1	18.50	7.48	8.77	0.102														
						1.5	18.49	7.49	8.72	0.102														
						2	18.49	7.49	8.65	0.101														
						3	18.43	7.50	8.56	0.102														
						4	18.35	7.54	8.53	0.102														
						5	18.33	7.53	8.44	0.102														
						10	18.20	7.53	7.86	0.103														
						11	18.20	7.51	7.77	0.103														
						11.9	18.20	7.51	7.45	0.103														
Weiss	2	A	90894	0.74	1.87	---	---	---	---	---	13.5	47	62.0	92.0	10.0	<0.015	0.040	<0.150	0.082	0.018	4.79	35.2	66	1*
						0.2	25.76	7.57	8.10	0.130														
						1	25.78	7.81	8.14	0.130														
						1.5	25.82	7.92	8.11	0.130														
						2	25.80	7.98	8.12	0.129														
						3	25.78	7.91	7.77	0.129														
						4	25.74	7.80	7.39	0.132														
						5	25.67	7.51	6.41	0.134														
						10	25.56	7.07	4.71	0.134														
						11	25.56	7.03	4.58	0.138														
						12	25.52	7.01	3.91	0.127														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Weiss	2	A	83195	0.58	1.96	---	---	---	---	---	7.8	59	53.8	91.0	11.0	0.049	0.040	0.219	0.110	0.078	4.52	27.2	63	<1
						0.2	31.24	8.62	11.33	0.163														
						1	29.98	8.84	10.74	0.163														
						1.5	29.76	8.74	9.19	0.162														
						2	28.75	7.93	4.63	0.163														
						3	28.28	7.64	3.38	0.162														
						4	28.05	7.50	2.81	0.163														
						5	27.87	7.41	2.73	0.163														
						6	27.72	7.37	2.74	0.163														
						7	27.58	7.35	2.61	0.163														
						8	27.51	7.32	2.55	0.163														
						9	27.41	7.29	2.27	0.158														
						10	27.39	7.26	1.95	0.162														
						11	27.37	7.22	1.56	0.165														
						11.6	27.33	7.19	0.65	0.165														
Weiss	3	A	50594	0.64	2.35	---	---	---	---	---	8.9	55	67.0	94.0	12.0	<0.015	0.440	0.199	0.910	0.217	2.36	5.0	46	7*
						0.1	18.45	7.03	8.19	0.149														
						1	18.26	7.17	7.66	0.148														
						1.5	18.23	7.20	7.62	0.148														
						2	18.18	7.23	7.63	0.148														
						3	18.16	7.26	7.57	0.148														
						4	18.13	7.28	7.39	0.148														
						5	18.13	7.30	7.39	0.148														
						10	18.13	7.34	7.06	0.149														
Weiss	3	A	90894	0.74	1.90	---	---	---	---	---	13.5	50	63.0	106.0	9.0	<0.015	0.240	<0.150	0.120	<0.094	3.98	16.0	58	6*
						0.2	25.32	6.72	8.10	0.139														
						1	25.00	6.93	7.21	0.144														
						1.5	25.19	7.13	7.58	0.140														
						2	25.06	7.13	7.41	0.143														
						3	25.04	7.12	7.19	0.143														
						4	24.98	7.12	7.05	0.144														
						5	25.00	7.11	7.04	0.144														
						9.9	24.98	7.12	6.95	0.144														

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Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Weiss	3	A	83195	0.64	1.92	---	---	---	---	---	8.2	55	50.6	93.0	11.0	<0.015	0.220	0.180	0.167	0.110	3.80	12.8	56	1*
						0.1	31.48	7.95	9.28	0.154														
						1	28.85	7.56	7.01	0.157														
						1.5	28.26	7.42	6.03	0.159														
						2	28.20	7.38	5.97	0.152														
						3	28.10	7.36	5.78	0.158														
						4	28.06	7.34	5.67	0.160														
						5	28.08	7.33	5.60	0.160														
						6	28.05	7.33	5.58	0.158														
						7	28.03	7.32	5.48	0.160														
						8	28.03	7.30	5.35	0.166														
						8.7	28.03	7.30	5.31	0.159														
Weiss	4	A	50594	0.58	2.27	---	---	---	---	---	12.0	48	64.0	87.0	14.0	<0.015	0.450	0.260	0.110	0.342	1.95	4.3	45	87
						0.1	17.18	6.86	7.55	0.131														
						1	17.13	6.99	7.53	0.134														
						1.5	17.06	7.05	7.51	0.134														
						2	17.06	7.08	7.50	0.129														
						3	17.04	7.09	7.43	0.134														
						4	17.06	7.11	7.40	0.129														
						5	17.04	7.13	7.40	0.135														
						9.1	17.08	7.16	7.37	0.136														
Weiss	4	B	50594	0.57	2.23	---	---	---	---	---	13.0	47	65.0	88.0	12.0	<0.015	0.450	<0.150	0.120	0.339	2.50	4.3	45	103
						0.1	17.09	7.17	7.36	0.131														
						1	17.08	7.11	7.38	0.132														
						1.5	17.06	7.13	7.39	0.129														
						2	17.08	7.13	7.39	0.133														
						3	17.08	7.14	7.37	0.134														
						4	17.06	7.15	7.37	0.128														
						5	17.06	7.16	7.37	0.135														
						9	17.08	7.19	7.36	0.130														
Weiss	4	A	90894	0.96	2.34	---	---	---	---	---	12.0	60	77.0	120.0	8.0	<0.015	0.440	0.365	0.104	0.097	2.85	5.9	48	12*
						0.2	25.50	6.75	7.19	0.164														
						1	25.52	6.98	7.18	0.166														
						1.5	25.50	7.06	7.15	0.165														
						2	25.50	7.14	7.15	0.162														
						3	25.50	7.17	7.14	0.165														
						4	25.50	7.21	7.13	0.167														
						5	25.50	7.23	7.13	0.167														
						9.7	25.50	7.26	6.88	0.166														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Weiss	4	B	90894	0.90	2.37	---	---	---	---	---	12.5	59	80.0	120.0	7.0	<0.015	0.480	<0.150	0.114	0.101	2.81	5.9	48	10*
						0.2	25.52	7.26	7.13	0.165														
						1	25.52	7.25	7.12	0.164														
						1.5	25.50	7.26	7.13	0.165														
						2	25.50	7.26	7.11	0.165														
						3	25.52	7.27	7.12	0.165														
						4	25.52	7.28	7.12	0.165														
						5	25.52	7.28	7.10	0.165														
						9.6	25.52	7.28	6.71	0.165														
Weiss	4	A	83195	0.41	1.24	---	---	---	---	---	27.0	55	53.3	137.0	15.0	<0.015	0.290	<0.150	0.195	0.160	4.36	27.8	63	9*
						0.1	31.75	8.37	10.52	0.161														
						1	28.61	7.58	6.03	0.163														
						1.5	28.55	7.52	6.04	0.161														
						2	28.24	7.39	5.40	0.160														
						3	28.14	7.37	5.32	0.158														
						4	28.06	7.34	5.09	0.158														
						5	27.99	7.31	4.87	0.158														
						6	27.79	7.29	4.79	0.154														
						7	27.72	7.28	4.76	0.154														
						8	27.68	7.28	4.74	0.149														
						9	27.66	7.27	4.73	0.153														
						9.6	27.64	7.27	4.72	0.154														
Weiss	4	B	83195	0.41	1.25	---	---	---	---	---	27.0	57	53.3	145.0	15.0	0.065	0.279	<0.150	0.192	0.160	4.44	33.6	65	4*
						0.2	30.99	8.41	9.82	0.160														
						1	28.63	7.67	6.11	0.161														
						1.5	28.59	7.58	6.08	0.162														
						2	28.38	7.47	5.48	0.162														
						3	28.14	7.43	5.29	0.160														
						4	28.05	7.39	5.08	0.159														
						5	28.03	7.35	4.96	0.159														
						6	27.79	7.31	4.75	0.156														
						7	27.77	7.29	4.74	0.155														
						8	27.70	7.29	4.72	0.154														
						9	27.66	7.28	4.70	0.154														
						9.6	27.64	7.28	4.69	0.153														
Neely-Henry	1		4/30/90	0.94	3.8	---	----	---	----	-----	5.0	44.0		85.0	11.0	0.30	<0.04	---	0.04	<0.010	3.40	16.0	58	2*
						0.3	23.2	8.7	10.5	0.109														
						1.5	22.6	8.6	10.1	0.109														
						5.0	21.4	7.8	8.1	0.110														
						10.0	21.0	7.6	7.5	0.108														

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			00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Neely-Henry	1	5/9/91	0.55	2.2	---	----	---	---	-----	----	41.0		83.0	15.0	<0.01	0.19	0.44	0.24	<0.005	5.50	9.9	53	--
					0.3	20.0	6.6	7.9	0.100														
					1.0	19.9	6.8	7.5	0.101														
					5.0	19.8	7.0	7.5	0.100														
					10.0	19.7	7.0	7.4	0.101														
Neely-Henry	1	8/14/90	0.72	2.9	---	----	---	---	-----	3.0	67.0		108.0	7.0	<0.20	<0.04	---	0.06	<0.020	3.30	10.7	53	7*
					0.3	30.1	8.7	8.9	0.171														
					1.5	29.3	8.2	6.7	0.180														
					3.0	29.0	7.7	5.4	0.172														
					5.0	28.9	7.5	3.3	0.174														
					10.0	28.7	7.4	2.7	0.174														
Neely-Henry	1	8/15/91	0.82	3.3	---	----	---	---	-----	15.0	60.0		75.0	6.0	0.08	0.14	1.27	0.06	0.006	5.80	15.0	57	1*
					0.3	29.8	7.4	5.8	0.140														
					1.0	29.2	7.2	4.6	0.141														
					1.4	29.2	7.2	4.3	0.141														
					5.0	29.1	7.1	4.2	0.141														
					10.0	29.1	7.1	4.2	0.141														
Neely-Henry	2	4/30/90	0.78	3.1	---	----	---	---	-----	9.0	42.0		86.0	9.0	0.60	0.10	---	0.06	<0.010	2.70	18.0	59	17*
					0.3	22.0	8.2	9.0	0.107														
					1.5	21.5	8.0	8.7	0.108														
					5.0	21.4	7.9	8.6	0.108														
					8.0	21.4	7.9	8.6	0.108														
Neely-Henry	2	5/9/91	0.42	1.7	---	----	---	---	-----	----	39.0		70.0	28.0	<0.01	0.20	0.40	0.08	<0.005	6.00	11.5	55	--
					0.3	19.6	6.7	7.8	0.095														
					1.0	19.6	6.9	7.8	0.095														
					5.0	19.5	7.0	7.7	0.095														
					8.0	19.5	7.1	7.7	0.095														
Neely-Henry	2	8/14/90	0.73	2.9	---	----	---	---	-----	8.0	55.0		91.0	16.0	<0.20	<0.04	---	0.04	<0.020	5.10	20.0	60	9*
					0.3	29.0	7.6	5.6	0.149														
					1.5	29.0	7.6	5.5	0.150														
					5.0	28.9	7.6	5.4	0.150														
					8.0	28.9	7.5	5.4	0.150														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Neely-Henry	2		8/15/91	0.75	3.0	---	----	---	---	-----	19.0	61.0		72.0	12.0	<0.01	0.20	1.03	0.07	0.008	4.20	20.7	60	36
						0.3	28.0	7.2	5.1	0.136														
						1.0	28.1	7.2	4.9	0.136														
						1.4	28.2	7.2	4.9	0.136														
						5.0	28.2	7.2	4.6	0.136														
						7.0	28.3	7.2	4.4	0.137														
Neely Henry	1	A	5/7/92	0.91	3.6	---	----	---	---	-----	7.7	55.0	---	88.0	13.0	<0.030	<0.003	1.120	0.042	<0.004	5.47	10.1	53	<2
						0.3	19.9	7.3	7.7	0.141														
						1.0	19.9	7.4	7.7	0.141														
						1.5	19.9	7.5	7.7	0.141														
						2.0	20.0	7.5	7.6	0.141														
						5.0	20.0	7.5	7.5	0.141														
						10.5	19.9	7.5	7.5	0.140														
Neely Henry	1	A	5/18/93	1.08	5.8	---	----	---	---	-----	7.2	53.8	53.3	----	6.9	0.087	0.028	0.467	0.050	0.003	2.86	8.8	52	---
						0.0	23.8	7.9	7.9	0.134														
						1.0	24.1	7.8	7.8	0.134														
						2.0	24.1	7.7	7.2	0.134														
						3.0	23.7	7.7	6.8	0.135														
						5.0	23.5	7.6	6.7	0.135														
						7.0	23.4	7.5	6.4	0.135														
						9.0	23.1	7.4	5.7	0.137														
						11.0	23.1	7.4	5.6	0.137														
						13.0	22.9	7.3	5.0	0.137														
Neely Henry	1	A	8/13/92	0.92	3.7	---	----	---	---	-----	6.2	60.0	---	94.0	7.0	<0.015	0.003	0.299	0.053	<0.004	8.39	19.6	60	1*
						0.3	29.3	7.6	4.5	0.147														
						1.0	29.3	7.5	4.3	0.147														
						1.5	29.3	7.6	4.3	0.147														
						2.0	29.3	7.6	4.4	0.147														
						5.0	29.3	7.5	4.3	0.148														
						10.0	29.2	7.3	1.3	0.154														
						12.0	29.0	7.2	0.2	0.151														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Neely Henry	1	A	8/17/93	1.09	4.0	---	----	---	---	-----	4.4	75.8	72.0	----	6.7	0.038	0.016	0.624	0.054	0.001	6.40	22.6	61	---
						0.0	29.8	9.0	12.0	0.190														
						1.0	30.0	9.1	11.9	0.190														
						2.0	29.4	8.4	6.6	0.192														
						3.0	29.0	7.8	3.0	0.192														
						4.0	28.8	7.6	2.3	0.192														
						5.0	28.7	7.5	1.6	0.192														
						7.0	28.6	7.4	0.6	0.193														
						8.0	28.6	7.3	0.3	0.193														
Neely Henry	2	A	5/7/92	0.82	3.3	---	----	---	---	-----	8.0	59.0	---	74.0	14.0	<0.030	0.008	1.040	0.040	0.010	4.69	8.1	51	4*
						0.3	20.0	7.2	8.3	0.141														
						1.0	20.1	7.5	8.2	0.142														
						1.5	20.1	7.6	8.4	0.142														
						2.0	20.1	7.6	8.2	0.142														
						5.0	20.1	7.7	8.1	0.142														
						7.5	20.1	7.7	8.0	0.142														
Neely Henry	2	A	8/13/92	0.54	3.3	---	----	---	---	-----	---	59.0	---	85.0	9.0	<0.015	0.037	0.385	0.008	<0.004	6.88	21.1	60	20
						0.3	29.2	7.7	5.8	0.151														
						1.0	29.2	7.7	5.8	0.152														
						1.5	29.2	7.7	5.8	0.152														
						2.0	29.2	7.7	5.8	0.152														
						5.0	29.2	7.7	5.7	0.150														
						7.0	29.2	7.7	5.7	0.152														
						9.0	29.2	7.7	5.7	0.151														
						10.9	29.2	7.7	5.6	0.154														
Neely Henry	1	A	81794	0.81	2.01	---	---	---	---	---	9.2	54	51.5	---	9.9	0.071	0.003	0.581	0.069	0.006	4.64	23.1	61	---
						0	28.33	7.46	5.92	0.137														
						1	28.48	7.35	4.79	0.137														
						1.5	---	---	4.66	---														
						2	28.36	7.24	4.63	0.137														
						3	28.35	7.23	4.53	0.137														
						5	28.35	7.27	4.92	0.136														
						7	28.35	7.24	4.95	0.136														
						9	28.35	7.25	4.97	0.136														
						10	28.35	7.26	4.97	0.136														
						11	28.35	7.25	4.99	0.136														
						12	28.35	7.25	5.01	0.136														
						13	28.35	7.25	5.05	0.136														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Neely Henry	1	A	83095	0.78	2.36	---	---	---	---	---	6.0	69	68.0	90.0	12.0	<0.015	0.040	0.182	0.063	0.011	4.51	46.5	68	<1
						0.1	32.33	8.92	11.03	0.177														
						1	30.37	9.03	11.76	0.177														
						1.5	29.83	8.82	9.70	0.178														
						2	29.42	8.34	6.74	0.181														
						3	29.29	8.21	6.71	0.181														
						4	29.20	7.84	5.26	0.183														
						5	29.13	7.75	4.82	0.177														
						6	29.11	7.70	4.57	0.177														
						7	29.09	7.66	4.73	0.178														
						8	29.05	7.63	4.36	0.185														
						9	29.04	7.55	3.68	0.184														
						10	29.04	7.52	3.43	0.179														
Neely Henry	2	A	81794	0.98	2.18	---	---	---	---	---	11.9	48	47.2	---	11.0	0.063	0.030	0.518	0.065	0.007	4.25	19.2	60	---
						0	27.95	7.37	6.21	0.117														
						1	27.93	7.43	6.17	0.117														
						2	27.95	7.44	6.09	0.117														
						3	27.98	7.44	6.06	0.117														
						4	27.98	7.42	6.05	0.117														
						5	27.97	7.41	6.05	0.117														
						6	27.97	7.40	6.06	0.117														
						7	27.97	7.38	6.08	0.117														
						8	27.96	7.38	6.08	0.117														
						9	27.94	7.38	6.13	0.117														
Neely Henry	2	A	83095	0.62	2.09	---	---	---	---	---	8.6	70	64.8	95.0	16.0	0.048	0.050	0.151	0.070	0.018	3.83	37.9	66	1*
						0.1	31.15	8.92	11.57	0.172														
						1	29.81	8.63	8.59	0.172														
						1.5	29.58	8.48	8.66	0.174														
						2	29.44	8.36	7.75	0.171														
						3	29.06	8.08	6.85	0.176														
						4	29.07	8.08	6.93	0.168														
						5	29.07	8.09	7.00	0.173														
						6	29.05	8.07	6.94	0.179														
						7	29.05	8.08	6.99	0.177														
						8	29.08	8.09	7.01	0.178														
						8.2	29.08	8.09	6.97	0.179														

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Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Logan-Martin	1		4/30/90	1.52	6.1	---	----	---	---	-----	3.0	40.0		87.0	2.0	0.30	0.08	---	0.03	0.015	3.30	5.0	46	1*
						0.3	21.1	7.9	8.7	0.101														
						1.5	20.3	7.8	8.6	0.101														
						5.0	19.5	7.5	7.4	0.102														
						10.0	18.7	7.4	7.1	0.101														
						14.0	18.2	7.2	6.5	0.101														
Logan Martin	1		5/8/91	0.80	3.2	---	----	---	---	-----	----	47.0		90.0	10.0	<0.01	0.16	0.56	0.08	<0.005	5.60	10.7	54	--
						0.3	20.5	7.0	7.7	0.113														
						1.0	20.5	7.2	7.6	0.113														
						5.0	20.5	7.3	7.5	0.113														
						10.0	20.5	7.3	7.5	0.113														
						19.0	20.5	7.3	7.3	0.113														
Logan-Martin	1		8/14/90	1.29	5.2	---	----	---	---	-----	2.0	64.0		99.0	3.0	<0.20	<0.04	---	<0.02	<0.020	3.50	---	--	<1
						0.3	30.9	8.7	9.5	0.159														
						1.5	30.2	8.8	9.8	0.159														
						3.0	29.5	8.2	7.5	0.160														
						5.0	29.2	7.7	5.0	0.160														
						7.0	28.9	7.2	3.1	0.158														
						11.0	28.7	7.1	1.5	0.157														
						13.0	28.6	7.0	0.1	0.156														
						20.0	27.7	7.1	0.2	0.183														
Logan Martin	1		8/15/91	1.50	6.0	---	----	---	---	-----	11.0	65.0		84.0	2.0	<0.01	0.12	1.06	0.04	<0.005	6.00	14.6	57	1*
						0.3	31.2	8.0	6.9	0.144														
						1.0	29.8	7.6	5.2	0.146														
						1.4	29.7	7.5	4.6	0.146														
						5.0	29.5	7.3	4.0	0.147														
						10.0	29.5	7.3	3.5	0.148														
						15.0	29.5	7.2	3.4	0.148														
Logan-Martin	2		4/30/90	0.61	2.4	---	----	---	---	-----	8.0	40.0		93.0	14.0	<0.20	0.06	---	0.03	<0.010	3.80	9.0	52	2*
						0.3	23.0	8.1	9.3	0.103														
						1.5	21.4	7.8	8.9	0.103														
						5.0	21.2	7.6	8.5	0.102														
						10.0	21.2	7.5	7.9	0.103														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Logan Martin	2		5/8/91	0.65	2.6	---	----	---	---	-----	---	42.0		82.0	20.0	<0.01	0.21	0.27	0.26	<0.005	5.70	9.5	53	--
						0.3	20.1	7.0	7.5	0.101														
						1.0	20.1	7.1	7.4	0.101														
						5.0	20.1	7.2	7.4	0.101														
						10.0	20.1	7.2	7.4	0.101														
Logan Martin	2		8/14/90	0.82	3.3	---	----	---	---	-----	5.0	67.0		109.0	8.0	<0.20	<0.04	---	0.16	<0.020	3.30	4.0	44	<1
						0.3	31.2	8.5	8.6	0.174														
						1.5	29.5	7.5	5.5	0.175														
						5.0	29.4	7.4	4.9	0.175														
						10.0	29.3	7.4	4.6	0.176														
Logan Martin	2		8/15/91	0.80	3.2	---	----	---	---	-----	19.0	63.0		81.0	11.0	<0.01	0.23	1.07	0.05	<0.005	4.70	14.0	56	2*
						0.3	31.2	7.6	7.2	0.142														
						1.0	29.4	7.4	5.9	0.143														
						1.4	29.3	7.3	5.4	0.143														
						2.0	29.2	7.2	5.3	0.142														
						5.0	29.0	7.1	4.4	0.143														
						10.0	29.0	7.1	4.3	0.142														
Logan Martin	1	A	5/7/92	1.40	5.6	---	----	---	---	-----	4.2	52.0	---	62.0	5.0	<0.030	0.013	1.100	0.026	0.007	6.23	8.4	51	<2
						0.3	19.5	7.4	8.4	0.128														
						1.0	19.6	7.6	8.3	0.128														
						1.5	19.6	7.6	8.3	0.128														
						6.0	19.7	7.6	8.3	0.127														
						12.0	19.7	7.6	8.1	0.127														
						16.0	19.7	7.6	8.0	0.127														
Logan Martin	1	A	5/5/93	1.32	4.3	---	----	---	---	-----	3.1	52.0	74.0	105.0	4.0	<0.015	0.016	0.472	0.043	<0.004	3.49	9.3	52	<1
						0.1	21.6	7.6	8.2	0.127														
						1.0	20.4	7.6	8.0	0.127														
						1.5	20.2	7.5	7.9	0.125														
						2.0	20.1	7.5	7.8	0.127														
						5.0	19.5	7.2	6.9	0.127														
						10.0	19.3	7.1	6.6	0.130														
						15.0	19.3	7.1	6.4	0.127														
						20.0	19.1	7.0	5.9	0.131														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Logan Martin	1	A	8/13/92	1.78	7.1	---	----	---	---	-----	2.6	60.0	---	103.0	3.0	<0.015	0.003	0.623	0.026	<0.004	6.29	15.1	57	<2
						0.3	29.4	8.6	7.6	0.150														
						1.0	29.4	8.6	7.5	0.151														
						1.5	29.4	8.6	7.5	0.150														
						5.0	29.2	8.3	6.4	0.152														
						6.0	29.2	7.7	4.1	0.154														
						7.0	29.1	7.4	2.5	0.150														
						10.0	28.9	7.2	0.2	0.154														
						20.0	27.7	7.3	0.1	0.196														
Logan Martin	1	B	8/13/92	1.76	7.0	---	----	---	---	-----	2.2	61.0	---	97.0	2.0	<0.015	<0.003	0.375	0.028	<0.004	6.08	16.3	58	<2
						0.3	29.4	8.6	7.2	0.152														
						1.0	29.4	8.6	7.2	0.152														
						1.5	29.4	8.6	7.2	0.152														
						5.0	29.3	8.2	6.3	0.153														
						6.0	29.2	8.1	5.8	0.152														
						7.0	29.1	7.5	2.6	0.153														
						10.0	28.9	7.2	0.2	0.155														
						20.0	27.7	7.2	0.1	0.196														
Logan Martin	1	A	8/18/93	1.6	4.9	---	----	---	---	-----	2.2	66.0	87.0	91.0	4.0	<0.015	0.005	0.666	0.041	0.019	3.66	13.8	56	<1
						0.3	30.4	8.5	8.7	0.157														
						1.0	30.4	8.5	8.7	0.157														
						1.5	30.3	8.4	8.5	0.157														
						2.0	30.0	8.2	8.0	0.157														
						3.0	29.6	7.6	5.6	0.158														
						4.0	29.3	7.4	4.2	0.158														
						5.0	29.2	7.2	3.0	0.158														
						6.0	29.1	7.1	2.3	0.158														
						7.0	29.0	7.1	1.4	0.159														
						10.0	28.8	7.0	0.4	0.162														
						15.0	28.5	7.0	0.4	0.173														
						20.0	28.0	7.0	0.4	0.188														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Logan Martin	2	A	5/7/92	0.76	3.0	---	----	---	---	-----	16.0	56.0	---	80.0	16.0	<0.030	0.011	0.950	0.040	0.006	9.57	7.3	50	3*
						0.3	19.6	7.5	8.3	0.134														
						1.0	19.7	7.5	8.2	0.134														
						1.5	19.7	7.5	8.2	0.134														
						4.0	19.7	7.6	8.1	0.134														
						6.0	19.8	7.5	8.1	0.134														
						8.0	19.8	7.5	7.9	0.134														
						10.0	19.8	7.7	7.7	0.134														
Logan Martin	2	A	5/05/93	0.77	2.7	---	----	---	---	-----	7.6	50.0	70.0	85.0	12.0	<0.015	0.110	0.384	0.050	0.015	2.96	15.8	58	4*
						0.3	21.1	7.5	8.2	0.123														
						1.0	20.6	7.4	7.8	0.122														
						1.5	20.1	7.4	7.6	0.121														
						2.0	19.9	7.3	7.5	0.123														
						5.0	19.9	7.2	7.3	0.122														
						10.6	19.8	7.2	7.3	0.120														
Logan Martin	2	A	8/13/92	0.54	2.2	---	----	---	---	-----	---	64.0	---	116.0	18.0	<0.015	0.004	0.435	0.054	<0.004	8.14	19.6	60	3*
						0.3	29.2	7.7	5.8	0.151														
						1.0	29.2	7.7	5.8	0.152														
						1.5	29.2	7.7	5.8	0.152														
						5.0	29.2	7.7	5.7	0.150														
						10.0	29.2	7.7	5.7	0.148														
						10.9	29.2	7.7	5.7	0.154														
Logan Martin	2	A	8/18/93	0.87	2.5	---	----	---	---	-----	6.4	73.0	87.0	105.0	11.0	<0.015	0.008	0.940	0.053	<0.004	3.74	24.4	62	<1
						0.3	31.2	8.1	7.9	0.169														
						1.0	30.6	8.2	6.7	0.170														
						1.5	30.3	8.0	6.8	0.170														
						2.0	30.3	7.8	6.3	0.170														
						3.0	30.1	7.5	5.3	0.170														
						5.0	30.1	7.4	5.0	0.170														
						10.0	29.8	7.2	3.3	0.171														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Logan Martin	1	A	50494	1.05	3.53	---	---	---	---	---	5.5	38	50.0	62.0	4.0	<0.029	0.071	0.471	0.056	0.070	3.85	2.0	37	1*
						0.1	22.23	6.76	6.61	0.096														
						1	22.19	6.90	6.68	0.097														
						1.5	22.19	6.95	6.77	0.097														
						2	22.18	7.01	6.65	0.098														
						3	22.18	7.05	6.57	0.097														
						4	22.18	7.08	6.67	0.095														
						5	22.18	7.10	6.66	0.098														
						10	22.18	7.14	6.77	0.093														
						15	22.18	7.15	7.12	0.104														
						20	21.71	7.05	3.89	0.097														
						20.3	21.24	6.94	2.61	0.111														
Logan Martin	1	A	90794	1.39	3.84	---	---	---	---	---	3.4	55	70.0	95.0	2.0	<0.015	0.040	0.477	0.043	0.004	3.54	20.8	60	<1
						0.1	28.18	6.74	4.73	0.143														
						1	28.01	6.92	4.66	0.143														
						1.5	27.77	6.99	4.34	0.143														
						2	27.74	7.03	4.05	0.142														
						3	27.72	7.03	4.00	0.143														
						4	27.70	7.04	4.13	0.142														
						5	27.70	7.05	3.67	0.149														
						10	27.70	7.12	4.24	0.131														
						15	27.66	7.15	4.21	0.156														
						18	27.60	6.97	1.88	0.141														
						19	27.87	6.87	0.17	0.150														
						20	27.18	6.83	0.09	0.169														
Logan Martin	1	A	83095	1.46	5.17	---	---	---	---	---	1.9	70	70.8	98.0	4.0	<0.015	0.040	<0.150	0.062	0.009	3.71	17.1	58	<1
						0.1	30.48	8.72	9.03	0.176														
						1	30.22	8.74	8.66	0.175														
						1.5	30.18	8.72	8.46	0.175														
						2	30.16	8.71	8.34	0.176														
						3	30.12	8.67	8.07	0.176														
						4	29.82	8.13	5.12	0.178														
						5	29.50	7.78	3.27	0.178														
						6	29.40	7.64	2.62	0.177														
						7	29.36	7.57	2.37	0.177														
						8	29.30	7.47	2.14	0.177														
						9	29.24	7.42	1.84	0.178														
						10	29.18	7.37	1.41	0.178														
						15	28.96	7.24	0.09	0.181														
						19.8	28.47	7.23	0.05	0.182														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Logan Martin	2	A	50494	0.79	3.21	---	---	---	---	---	6.5	40	53.0	56.0	9.0	<0.029	0.100	0.323	0.049	0.015	2.84	6.0	48	2*
						0.1	21.96	7.13	7.28	0.100														
						1	21.71	7.11	6.86	0.101														
						1.5	21.64	7.13	6.77	0.101														
						2	21.63	7.14	6.71	0.101														
						3	21.61	7.16	6.55	0.101														
						4	21.59	7.17	6.54	0.103														
						5	21.59	7.18	6.47	0.103														
						10	21.57	7.20	6.19	0.111														
						10.9	21.57	7.21	6.08	0.089														
Logan Martin	2	A	90794	0.79	2.30	---	---	---	---	---	7.6	52	69.0	100.0	10.0	<0.015	0.012	0.545	0.035	0.004	3.23	33.1	65	<1
						0.1	29.28	7.19	9.01	0.139														
						1	27.62	7.25	6.85	0.141														
						1.5	27.43	7.20	5.95	0.140														
						2	27.37	7.16	5.71	0.140														
						3	27.33	7.16	5.89	0.140														
						4	27.33	7.17	5.88	0.140														
						5	27.29	7.16	5.60	0.141														
						10	27.26	7.13	5.02	0.141														
						11	27.24	7.12	5.03	0.142														
						11.6	27.22	7.12	4.99	0.142														
Logan Martin	2	A	83095	0.88	2.35	---	---	---	---	---	6.4	74	72.7	110.0	10.0	<0.015	0.040	<0.150	0.064	0.006	3.49	27.2	63	3*
						0.1	30.89	8.39	8.67	0.185														
						1	29.78	7.99	6.51	0.186														
						1.5	29.72	7.89	6.00	0.186														
						2	29.70	7.83	5.80	0.188														
						3	29.68	7.82	5.81	0.184														
						4	29.68	7.82	5.76	0.188														
						5	29.68	7.82	5.77	0.188														
						6	29.66	7.82	5.75	0.188														
						7	29.66	7.81	5.72	0.187														
						8	29.64	7.80	5.64	0.188														
						9	29.62	7.77	5.43	0.183														
						10	29.56	7.72	5.01	0.186														
						10.4	29.52	7.71	4.95	0.186														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Lay	1		4/30/90	1.61	6.4	---	----	---	---	-----	3.0	41.0		86.0	3.0	0.70	0.10	---	<0.02	0.060	4.70	7.0	50	<1
						0.3	21.6	7.4	9.0	0.110														
						1.5	21.4	7.5	8.4	0.110														
						5.0	21.3	7.6	8.3	0.110														
						10.0	20.9	7.4	7.6	0.110														
						15.0	19.6	7.2	6.7	0.109														
						20.0	18.6	7.1	5.8	0.110														
						24.0	18.4	7.0	5.0	0.109														
Lay	1		5/8/91	0.98	3.9	---	----	---	---	-----	----	46.0		83.0	10.0	<0.01	0.15	0.73	0.06	<0.005	4.90	11.5	55	--
						0.3	21.0	6.7	7.7	0.116														
						1.0	21.0	6.9	7.5	0.116														
						5.0	20.9	7.0	7.2	0.116														
						10.0	20.9	7.1	6.9	0.118														
						20.0	20.9	7.2	6.9	0.118														
						25.0	20.9	7.2	6.9	0.119														
Lay	1		8/14/90	1.50	6.0	---	----	---	---	-----	1.0	64.0		110.0	1.0	<0.20	<0.04	---	<0.02	<0.020	4.60	87.3	74	3*
						0.3	29.4	7.4	6.4	0.182														
						1.5	29.4	7.5	6.1	0.182														
						3.0	29.3	7.5	5.7	0.182														
						5.0	29.3	7.4	5.5	0.181														
						7.0	29.2	7.2	3.2	0.181														
						15.0	29.1	7.1	2.1	0.183														
						17.0	29.1	7.1	1.9	0.183														
						20.0	29.0	7.0	0.8	0.184														
						24.0	28.9	7.0	0.2	0.187														
Lay	1		8/14/91	1.54	6.2	---	----	---	---	-----	10.0	65.0		94.0	4.0	<0.01	0.13	0.83	0.06	0.008	4.90	11.9	55	<1
						0.3	30.3	7.2	4.6	0.161														
						1.0	30.4	7.2	4.4	0.160														
						1.4	30.4	7.2	4.2	0.161														
						5.0	30.4	7.2	3.3	0.161														
						10.0	30.4	7.1	3.3	0.161														
						20.0	30.4	7.0	2.1	0.160														
						23.0	30.3	7.1	2.5	0.161														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Lay	2		4/30/90	1.02	4.1	---	----	---	---	-----	4.0	48.0		106.0	7.0	0.90	0.16	---	0.05	<0.010	5.10	4.0	44	2*
						0.3	21.2	7.4	7.9	0.150														
						1.5	19.6	7.3	7.2	0.143														
						4.0	19.5	7.3	7.0	0.142														
						4.5	19.5	7.3	7.0	0.142														
Lay	2		5/8/91	0.75	3.0	---	----	---	---	-----	----	50.0		86.0	13.0	<0.01	0.18	0.49	0.07	<0.005	4.70	8.9	52	--
						0.3	20.5	7.0	7.8	0.116														
						1.0	20.5	7.3	7.7	0.116														
						2.0	20.5	7.3	7.5	0.116														
						5.0	20.5	7.3	7.5	0.117														
Lay	2		8/14/90	0.98	3.9	---	----	---	---	-----	3.0	66.0		107.0	6.0	<0.20	<0.04	---	0.03	<0.020	17.8	13.4	56	5*
						0.3	31.2	7.7	8.0	0.180														
						1.5	30.1	7.6	6.7	0.175														
						3.0	29.6	7.5	5.7	0.177														
						4.0	29.4	7.4	5.4	0.176														
Lay	2		8/14/91	0.95	3.8	---	----	---	---	-----	15.0	69.0		104.0	11.0	0.12	0.27	1.33	0.09	0.045	6.80	9.6	53	4*
						0.3	29.6	7.2	4.6	0.176														
						1.0	29.6	7.2	4.5	0.177														
						1.4	29.7	7.2	4.4	0.177														
						5.0	29.7	7.2	4.4	0.177														
Lay	3		5/8/91	0.77	3.1	---	----	---	---	-----	----	49.0		87.0	13.0	<0.01	0.16	0.42	0.07	<0.005	5.50	9.1	52	--
						0.3	20.8	7.1	7.7	0.114														
						1.0	20.9	7.1	7.6	0.114														
						5.0	20.9	7.2	7.6	0.114														
						10.0	20.9	7.3	7.5	0.115														
						14.0	20.9	7.3	7.5	0.115														
Lay	3		8/14/91	0.85	3.4	---	----	---	---	-----	17.0	70.0		102.0	10.0	<0.01	0.20	1.06	0.08	0.021	6.70	16.6	58	1*
						0.3	30.4	7.2	4.3	0.170														
						1.0	30.5	7.2	4.1	0.171														
						1.4	30.5	7.2	4.0	0.171														
						5.0	30.5	7.2	3.8	0.171														
						10.0	30.5	7.2	3.8	0.171														
						12.0	30.5	7.2	3.7	0.171														
						22.0	17.7	7.2	7.2	0.086														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Lay	1	A	5/6/92	1.69	6.8	---	----	---	---	-----	2.1	51.0	---	71.0	6.0	0.717	0.013	<0.150	0.023	<0.004	8.44	10.4	54	<2
						0.3	21.3	7.4	9.6	0.123														
						1.0	21.4	7.8	9.6	0.123														
						1.5	21.4	8.0	9.6	0.123														
						5.0	21.3	8.1	9.5	0.124														
						10.0	21.2	8.0	9.2	0.124														
						11.0	21.1	7.7	8.7	0.125														
						12.0	19.4	7.3	6.6	0.126														
						15.0	19.2	7.4	6.5	0.126														
						20.0	19.0	7.2	5.5	0.124														
						23.0	18.9	7.0	4.2	0.125														
Lay	1	A	5/4/93	1.18	3.2	---	----	---	---	-----	5.7	51.0	71.0	106.0	8.0	<0.015	0.150	0.818	0.048	0.007	4.02	5.3	47	---
						0.3	20.6	7.2	7.3	0.132														
						1.0	20.5	7.2	7.2	0.132														
						1.5	20.3	7.2	7.2	0.131														
						2.0	20.3	7.2	7.1	0.133														
						5.0	19.9	7.1	6.8	0.133														
						10.0	19.9	7.1	6.8	0.135														
						15.0	19.9	7.0	6.7	0.132														
						20.0	19.7	7.0	6.4	0.132														
						24.0	18.9	6.7	4.4	0.115														
Lay	1	B	5/4/93	1.10	3.0	---	----	---	---	-----	5.3	52.0	70.0	103.0	6.0	<0.015	0.160	0.493	0.055	<0.004	4.12	5.7	48	---
						0.3	20.9	7.2	7.4	0.132														
						1.0	20.6	7.2	7.2	0.132														
						1.5	20.4	7.2	7.1	0.132														
						2.0	20.1	7.1	7.0	0.131														
						5.0	19.9	7.1	6.8	0.132														
						10.0	19.9	7.1	6.8	0.132														
						15.0	19.9	7.0	7.0	0.132														
						20.0	19.8	7.0	6.7	0.128														
						24.0	18.9	6.5	4.5	0.115														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Lay	1	A	8/12/92	1.58	6.3	---	----	---	---	-----	1.9	67.0	---	97.0	3.0	<0.015	<0.003	1.087	0.029	<0.004	11.60	14.8	57	<2
						0.3	31.1	8.6	8.6	0.176														
						1.0	30.4	8.5	8.2	0.176														
						1.5	30.3	8.3	7.6	0.177														
						5.0	30.0	7.9	6.1	0.178														
						6.0	29.9	7.5	4.2	0.179														
						7.0	29.9	7.4	3.7	0.179														
						10.0	29.8	7.3	3.1	0.178														
						15.0	29.6	7.2	1.6	0.172														
						20.0	29.5	7.1	0.4	0.181														
						23.7	29.2	7.2	0.2	0.172														
Lay	1	A	8/17/93	1.72	5.1	---	----	---	---	-----	1.5	68.0	85.0	106.0	4.0	<0.015	0.015	1.120	0.032	0.019	4.43	10.5	54	<1
						0.3	32.0	8.1	7.9	0.174														
						1.0	30.4	8.2	8.1	0.174														
						1.5	30.3	8.2	8.0	0.174														
						2.0	30.3	8.2	7.9	0.174														
						3.0	30.2	8.1	7.4	0.174														
						4.0	30.0	7.5	5.1	0.173														
						5.0	29.9	7.4	4.9	0.173														
						10.0	29.6	7.2	3.2	0.172														
						15.0	29.5	7.1	1.9	0.172														
						20.0	29.2	6.9	0.5	0.173														
						24.0	29.0	7.0	0.5	0.181														
Lay	2	A	5/6/92	0.86	3.4	---	----	---	---	-----	7.3	63.0	---	97.0	13.0	<0.030	0.170	0.635	0.052	0.017	7.57	5.6	47	3*
						0.3	22.0	7.4	7.2	0.178														
						1.0	22.0	7.4	7.1	0.177														
						1.5	22.0	7.4	7.1	0.177														
						2.0	22.0	7.3	7.1	0.177														
						4.0	22.0	7.3	7.0	0.177														
Lay	2	A	5/4/93	1.02	2.2	---	----	---	---	-----	5.2	55.0	73.0	122.0	9.0	<0.015	0.160	0.241	0.033	0.008	3.39	8.1	51	---
						0.1	19.7	7.1	7.9	0.137														
						1.0	19.7	7.1	7.2	0.136														
						1.5	19.7	7.1	7.0	0.137														
						2.0	19.7	7.1	7.0	0.137														
						3.0	19.7	7.1	6.8	0.136														
						4.0	19.6	7.1	6.8	0.137														
						4.6	19.6	7.1	6.8	0.138														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Lay	2	A	8/12/92	0.95	3.8	---	----	---	---	-----	8.5	69.0	---	113.0	11.0	<0.015	0.070	0.887	0.056	<0.014	11.70	9.7	53	1*
						0.3	31.5	7.5	5.0	0.187														
						1.0	31.5	7.5	5.0	0.187														
						1.5	31.5	7.5	5.0	0.187														
						2.0	31.5	7.5	5.0	0.188														
						4.0	31.5	7.5	4.9	0.189														
Lay	2	A	8/17/93	1.60	2.1	---	----	---	---	-----	7.1	72.0	85.0	119.0	9.0	<0.015	0.194	0.953	0.065	0.018	4.64	7.3	50	9*
						0.3	32.7	7.2	6.2	0.190														
						1.0	32.1	7.2	4.9	0.191														
						1.5	32.1	7.2	4.9	0.191														
						2.0	32.0	7.2	4.9	0.191														
						3.0	31.9	7.2	4.8	0.191														
						4.0	31.9	7.2	4.7	0.192														
						5.0	31.9	7.2	4.7	0.191														
Lay	3	A	5/6/92	1.22	4.9	---	----	---	---	-----	4.6	59.0	---	69.0	7.0	<0.030	0.014	0.491	0.025	0.005	5.22	12.9	56	<2
						0.3	21.0	8.0	9.3	0.141														
						1.0	21.1	7.9	9.0	0.140														
						1.5	21.1	7.9	9.0	0.140														
						5.0	21.0	7.7	8.4	0.141														
						7.0	20.8	7.4	7.0	0.140														
						8.0	19.5	7.1	5.2	0.135														
						10.0	19.2	7.3	5.4	0.134														
						12.0	19.2	7.1	5.0	0.133														
Lay	3	A	5/4/93	0.99	3.0	---	----	---	---	-----	5.7	53.0	74.0	102.0	9.0	<0.015	0.180	0.216	0.047	0.004	4.79	8.7	52	---
						0.3	20.9	7.3	7.8	0.138														
						1.0	20.9	7.3	7.6	0.138														
						1.5	20.7	7.3	7.5	0.138														
						2.0	20.6	7.2	7.4	0.138														
						5.0	19.8	7.1	6.8	0.140														
						10.1	19.7	7.0	6.7	0.139														
						15.0	19.6	7.0	6.7	0.141														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Lay	3	A	8/12/92	1.15	4.6	---	----	---	---	-----	3.7	66.0	---	120.0	7.0	0.510	<0.003	1.118	0.042	<0.004	6.05	18.7	59	<2
						0.3	32.7	8.5	8.5	0.183														
						1.0	31.4	8.5	8.4	0.182														
						1.5	31.1	8.2	7.9	0.184														
						5.0	30.5	8.1	6.1	0.183														
						7.0	30.5	7.7	5.7	0.182														
						8.0	30.0	7.3	2.9	0.181														
						10.0	29.8	7.2	1.1	0.182														
						14.0	29.6	7.2	0.2	0.181														
Lay	3	A	8/17/93	1.2	3.3	---	----	---	---	-----	3.4	75.0	92.0	122.0	2.0	<0.015	0.010	0.876	0.031	<0.004	5.40	15.2	57	<1
						0.3	33.2	8.4	10.0	0.187														
						1.0	31.7	8.5	9.6	0.189														
						1.5	31.1	8.2	8.1	0.188														
						2.0	31.1	8.0	7.4	0.190														
						3.0	30.9	7.6	5.8	0.192														
						4.0	30.6	7.4	4.2	0.190														
						5.0	30.5	7.3	3.9	0.189														
						7.0	30.2	7.2	3.2	0.185														
						9.0	29.8	7.1	1.5	0.184														
						10.0	29.6	7.0	0.9	0.184														
						13.0	29.4	7.0	0.5	0.187														
Lay	4	A	5/6/92	1.34	5.4	---	----	---	---	-----	4.0	54.0	---	68.0	7.0	<0.030	0.003	0.920	0.026	0.005	7.40	8.5	52	<2
						0.3	21.5	8.3	9.5	0.134														
						1.0	21.5	8.3	9.4	0.134														
						1.5	21.6	8.3	9.4	0.134														
						3.0	21.6	8.3	9.3	0.134														
						4.0	21.6	8.2	8.9	0.134														
						5.0	21.2	7.8	7.9	0.135														
						6.0	19.8	7.0	2.1	0.138														
Lay	4	A	5/4/93	1.00	3.2	---	----	---	---	-----	4.8	52.0	72.0	108.0	9.0	<0.015	0.120	0.333	0.044	<0.004	4.36	8.3	51	---
						0.3	21.3	7.7	8.6	0.132														
						1.0	21.3	7.7	8.5	0.131														
						2.0	20.1	7.4	7.7	0.132														
						5.0	19.6	7.1	6.8	0.138														
						6.0	19.6	7.0	6.6	0.138														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Lay	4	A	8/12/92	1.19	4.8	---	----	---	---	-----	3.9	66.0	---	109.0	10.0	0.960	<0.003	1.335	0.039	<0.004	6.90	17.9	59	<2
						0.3	32.2	8.9	9.0	0.171														
						1.0	30.8	8.7	8.8	0.174														
						1.5	30.6	8.6	8.5	0.177														
						2.0	30.5	8.4	7.8	0.179														
						3.0	30.4	8.1	6.7	0.181														
						4.0	30.3	7.5	4.7	0.182														
						5.0	29.9	7.3	1.9	0.181														
						6.0	29.6	7.2	0.2	0.177														
Lay	4	A	8/17/93	1.45	3.3	---	----	---	---	-----	2.4	73.0	89.0	118.0	7.0	<0.015	0.008	1.300	0.047	0.008	4.47	11.9	55	<1
						0.3	32.2	8.4	9.3	0.182														
						1.0	31.7	8.5	9.4	0.183														
						1.5	31.5	8.4	9.1	0.182														
						2.0	31.3	8.3	8.4	0.183														
						3.0	30.6	7.8	6.0	0.184														
						4.0	30.1	7.5	4.8	0.182														
						5.0	29.8	7.3	3.6	0.181														
						6.0	29.3	7.1	0.5	0.183														
Lay	5	A	5/6/92	1.01	4.0	---	----	---	---	-----	6.2	55.0	---	67.0	10.0	<0.030	0.008	0.703	0.026	0.005	6.64	10.5	54	3*
						0.3	21.1	7.9	8.7	0.143														
						1.0	21.1	7.9	8.7	0.143														
						1.5	21.2	7.9	8.7	0.143														
						2.0	21.2	7.9	8.7	0.143														
						4.0	21.2	7.8	8.5	0.143														
						5.0	20.5	7.3	6.2	0.141														
						6.0	20.1	7.2	5.7	0.140														
Lay	5	A	5/04/93	0.83	2.9	---	----	---	---	-----	5.2	56.0	78.0	103.0	7.0	<0.015	0.100	0.367	0.030	<0.004	4.17	10.3	53	---
						0.1	21.8	7.7	8.8	0.138														
						1.0	21.7	7.7	8.5	0.139														
						1.5	21.6	7.7	8.3	0.140														
						2.0	21.5	7.7	8.2	0.138														
						3.0	21.2	7.6	7.6	0.143														
						4.0	20.3	7.2	6.3	0.148														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Lay	5	A	8/12/92	1.07	4.3	---	----	---	---	-----	4.5	68.0	---	108.0	5.0	<0.015	0.003	0.958	0.037	<0.004	11.04	17.1	58	<2
						0.3	31.0	8.6	8.5	0.180														
						1.0	31.0	8.6	8.5	0.181														
						1.5	31.0	8.5	8.3	0.182														
						2.0	30.7	8.5	7.9	0.183														
						3.0	30.4	7.9	5.9	0.184														
						4.0	29.9	7.4	2.5	0.183														
						4.4	29.8	7.3	1.7	0.184														
Lay	5	A	8/17/93	1.15	3.5	---	----	---	---	-----	4.6	74.0	92.0	109.0	9.0	<0.015	0.013	0.957	0.040	<0.004	5.79	10.7	54	<1
						0.3	32.6	8.5	9.9	0.186														
						1.0	31.8	8.5	9.4	0.186														
						1.5	31.2	8.3	8.2	0.184														
						2.0	31.1	8.2	8.0	0.183														
						3.0	30.6	8.0	6.4	0.183														
						4.0	29.5	7.4	1.5	0.182														
Lay	1	A	50394	1.60	4.05	---	---	---	---	---	3.2	39	52.0	72.0	2.0	<0.029	0.061	0.476	0.039	0.010	3.81	3.5	43	<1
						0.1	23.30	7.01	7.56	0.101														
						1	23.29	7.09	7.48	0.101														
						1.5	23.30	7.13	7.40	0.102														
						2	23.32	7.16	7.36	0.102														
						3	23.32	7.18	7.33	0.102														
						4	23.32	7.18	7.30	0.102														
						5	23.32	7.20	7.22	0.102														
						10	22.73	7.11	6.41	0.103														
						15	22.10	7.03	5.54	0.102														
						20	21.68	6.93	4.82	0.099														
						23.7	21.26	6.82	2.96	0.091														
Lay	1	A	90694	1.34	3.12	---	---	---	---	---	3.5	58	75.0	111.0	1.0	<0.015	0.039	<0.150	0.026	0.007	4.26	12.3	55	4*
						0.1	28.49	6.67	3.80	0.150														
						1	28.47	6.76	3.70	0.151														
						1.5	28.43	6.79	3.52	0.151														
						2	28.32	6.80	3.10	0.150														
						3	28.32	6.82	3.06	0.150														
						4	28.30	6.83	3.00	0.150														
						5	28.30	6.84	2.99	0.150														
						10	28.30	6.88	2.92	0.150														
						15	28.30	6.90	3.02	0.150														
						20	28.24	6.90	2.81	0.151														
						24	28.22	6.90	2.75	0.151														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Lay	1	A	82995	1.23	4.06	---	---	---	---	---	1.8	80	77.8	152.0	4.0	<0.015	0.040	0.279	0.068	0.008	5.40	18.7	59	<1
						0.2	30.87	8.14	7.53	0.206														
						1	30.79	8.19	7.43	0.206														
						1.5	30.77	8.19	7.20	0.206														
						2	30.73	8.19	7.14	0.206														
						3	30.66	8.13	6.73	0.208														
						4	30.46	7.78	4.21	0.206														
						5	30.36	7.67	3.90	0.204														
						10	30.22	7.49	3.07	0.204														
						15	30.12	7.38	2.03	0.209														
						16	30.12	7.36	2.02	0.216														
						17	30.10	7.35	1.81	0.211														
						18	30.08	7.33	1.66	0.195														
						19	30.08	7.32	1.17	0.196														
						20	29.92	7.25	0.07	0.217														
						23.4	29.56	7.22	0.05	0.201														
Lay	2	A	50394	0.76	2.20	---	---	---	---	---	9.7	45	59.0	86.0	8.0	0.033	0.190	0.396	0.045	0.025	3.19	4.5	45	2*
						0.1	24.12	6.89	6.05	0.117														
						1	23.32	6.94	5.98	0.124														
						1.5	23.16	6.93	5.97	0.126														
						2	23.16	6.97	5.91	0.124														
						3	23.14	6.99	5.88	0.127														
						4	23.12	7.02	5.84	0.127														
						4.9	23.11	7.02	5.82	0.120														
Lay	2	B	50394	0.74	2.38	---	---	---	---	---	7.8	44	60.0	88.0	10.0	<0.015	0.200	0.473	0.049	0.022	3.65	4.0	44	2*
						0.1	23.59	7.01	5.88	0.120														
						1	23.30	6.98	5.79	0.120														
						1.5	23.20	6.99	5.78	0.121														
						2	23.18	7.00	5.77	0.122														
						3	23.14	7.02	5.75	0.121														
						4	23.16	7.03	5.76	0.120														
						4.8	23.14	7.04	5.76	0.121														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Lay	2	A	90694	1.11	2.50	---	---	---	---	---	5.5	65	41.0	120.0	6.0	<0.015	0.120	0.343	0.074	0.011	4.16	15.0	57	<1
						0.1	29.84	7.02	5.69	0.170														
						0.5	29.84	7.03	5.51	0.171														
						1	29.20	7.04	5.31	0.173														
						1.5	28.79	7.05	5.25	0.174														
						2	28.71	7.05	5.23	0.171														
						3	28.65	7.06	5.15	0.179														
						4	28.38	7.05	4.90	0.172														
						5	28.26	7.04	4.76	0.178														
Lay	2	B	90694	1.12	2.47	---	---	---	---	---	5.7	64	87.0	119.0	5.0	<0.015	0.100	0.267	0.076	0.006	3.75	13.9	56	2*
						0.1	29.76	7.07	5.57	0.170														
						1	29.20	7.06	5.27	0.172														
						1.5	28.77	7.06	5.18	0.172														
						2	28.69	7.06	5.13	0.172														
						3	28.55	7.06	4.98	0.172														
						4	28.47	7.06	4.93	0.172														
						5	28.41	7.06	4.88	0.177														
						5.2	28.41	7.05	4.88	0.170														
Lay	2	A	82995	0.88	2.65	---	---	---	---	---	4.5	81	79.3	163.0	7.0	<0.015	0.160	0.956	0.076	0.024	5.53	15.5	58	1*
						0.2	33.51	7.73	6.87	0.211														
						1	33.10	7.80	6.81	0.211														
						1.5	32.82	7.80	6.52	0.210														
						2	32.48	7.75	6.10	0.214														
						3	31.87	7.71	5.71	0.219														
						4	31.40	7.65	5.19	0.219														
						4.8	31.40	7.62	4.89	0.218														
Lay	3	A	50394	0.99	2.70	---	---	---	---	---	5.4	42	58.0	84.0	7.0	<0.015	0.130	0.433	0.034	0.021	3.31	6.0	48	<1
						0.1	22.78	7.08	7.15	0.111														
						1	22.80	7.07	7.04	0.112														
						1.5	22.80	7.09	6.98	0.113														
						2	22.80	7.10	6.93	0.112														
						3	22.80	7.12	6.89	0.108														
						4	22.80	7.14	6.86	0.107														
						5	22.76	7.15	6.80	0.117														
						10	22.71	7.19	6.67	0.117														
						14.5	22.64	7.22	6.63	0.106														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Lay	3	A	90694	0.81	2.34	---	---	---	---	---	5.0	60	74.0	117.0	6.0	<0.015	0.060	0.437	0.064	0.006	4.10	26.7	63	1*
						0.1	28.94	7.54	7.87	0.162														
						1	28.47	7.33	6.03	0.162														
						1.5	28.20	7.22	5.53	0.162														
						2	28.14	7.16	5.10	0.164														
						3	28.12	7.11	4.71	0.161														
						4	28.10	7.09	4.85	0.163														
						5	28.08	7.08	4.77	0.160														
						10	28.05	7.08	4.95	0.166														
						13.5	27.97	7.11	5.02	0.163														
Lay	3	A	82995	0.69	2.41	---	---	---	---	---	4.4	80	79.6	159.0	9.0	<0.015	0.040	<0.150	0.076	0.008	4.76	34.7	65	1*
						0.2	31.76	8.24	9.34	0.213														
						1	31.37	8.36	9.42	0.212														
						1.5	31.13	8.37	8.54	0.213														
						2	30.60	8.04	6.75	0.214														
						3	30.39	7.83	5.89	0.213														
						4	30.34	7.79	5.79	0.216														
						5	30.26	7.64	4.77	0.212														
						6	29.92	7.56	3.88	0.211														
						7	29.79	7.52	3.69	0.212														
						8	29.77	7.50	3.68	0.209														
						9	29.76	7.49	3.58	0.208														
						10	29.76	7.47	3.49	0.210														
						11	29.73	7.46	3.45	0.209														
						12	29.74	7.46	3.42	0.212														
						13	29.74	7.45	3.32	0.209														
Lay	4	A	50394	1.21	3.33	---	---	---	---	---	3.7	41	55.0	77.0	4.0	<0.015	0.055	0.408	0.029	<0.004	4.00	6.4	49	<1
						0.1	22.75	6.98	8.28	0.105														
						1	22.87	7.06	8.07	0.105														
						1.5	22.89	7.16	7.91	0.106														
						2	22.89	7.17	7.83	0.106														
						3	22.85	7.20	7.62	0.107														
						4	22.85	7.21	7.43	0.107														
						5	22.26	7.10	5.65	0.109														
						6	22.03	7.04	4.83	0.112														
						6.9	21.66	6.93	2.42	0.111														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Lay	4	A	90694	0.88	2.74	---	---	---	---	---	4.5	60	76.0	143.0	5.0	<0.015	0.047	0.551	0.066	<0.004	4.00	40.6	67	<1
						0.1	28.57	7.91	8.74	0.163														
						1	28.26	7.86	8.14	0.164														
						1.5	28.16	7.81	7.87	0.164														
						2	28.08	7.74	7.56	0.165														
						3	27.97	7.60	6.97	0.160														
						4	27.81	7.42	5.67	0.158														
						5	27.60	7.26	4.17	0.152														
						6	27.27	7.06	1.59	0.156														
Lay	4	A	82995	0.68	2.79	---	---	---	---	---	3.8	80	80.5	157.0	6.0	<0.015	0.030	0.569	0.065	0.007	4.67	23.5	62	4*
						0.2	30.93	7.90	8.27	0.211														
						1	30.56	8.05	7.80	0.212														
						1.5	30.32	8.04	7.36	0.211														
						2	30.24	7.93	6.76	0.212														
						3	30.18	8.01	6.99	0.211														
						4	30.04	7.95	6.23	0.211														
						5	29.40	7.64	4.05	0.210														
						6	29.24	7.55	3.26	0.210														
						6.4	29.16	7.50	1.95	0.210														
Lay	5	A	50394	0.87	2.65	---	---	---	---	---	5.7	43	6.5	85.0	6.0	<0.015	0.070	0.480	0.034	<0.004	3.08	11.0	54	1*
						0.2	22.53	7.08	7.52	0.113														
						1	22.55	7.15	7.33	0.113														
						1.5	22.53	7.16	7.28	0.114														
						2	22.51	7.19	7.20	0.113														
						3	22.51	7.21	7.05	0.114														
						4.2	22.37	7.16	5.27	0.116														
Lay	5	A	90694	0.70	2.37	---	---	---	---	---	5.4	60	82.0	111.0	6.0	<0.015	0.043	0.458	0.053	0.004	4.15	35.8	66	1*
						0.1	28.87	8.26	9.85	0.160														
						1	28.24	8.17	8.87	0.161														
						1.5	28.16	8.06	8.59	0.161														
						2	28.06	7.90	7.87	0.161														
						3	27.91	7.75	6.83	0.163														
						4	27.37	7.30	2.32	0.160														
						5	27.31	7.14	1.72	0.160														
						6	27.26	7.05	1.21	0.167														
						6.1	27.26	7.02	1.14	0.171														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Lay	5	A	82995	0.72	2.96	---	---	---	---	---	4.6	81	82.0	160.0	6.0	<0.015	0.040	<0.150	0.060	0.007	5.32	20.8	60	1*
						0.2	30.80	7.97	8.48	0.210														
						1	30.19	8.11	8.17	0.211														
						1.5	30.07	8.11	7.83	0.212														
						2	30.02	8.11	7.66	0.212														
						3	29.59	7.69	4.51	0.213														
						4	29.20	7.44	1.94	0.211														
						5	29.01	7.33	1.47	0.211														
						5.9	28.94	7.29	0.64	0.213														
Mitchell	1		4/26/90	1.86	7.4	---	----	---	----	----	2.0	35.0		79.0	4.0	<0.10	0.17	---	0.03	<0.10	4.10	14.0	56	<1
						0.3	22.5	8.6	10.7	0.098														
						1.5	20.2	8.2	10.1	0.098														
						3.0	19.6	7.8	9.2	0.100														
						5.0	19.2	7.5	8.4	0.101														
						10.0	18.5	7.4	7.9	0.098														
						22.0	17.7	7.2	7.2	0.086														
Mitchell	1		5/2/91	0.85	3.4	---	----	---	---	-----	----	44.0		69.0	9.0	<0.01	0.14	0.39	0.03	0.014	6.60	5.5	47	--
						0.3	20.9	6.7	8.4	0.115														
						1.0	20.7	6.8	7.9	0.113														
						5.0	20.5	6.9	7.7	0.113														
						10.0	20.4	6.9	7.6	0.112														
						15.0	20.3	7.0	7.5	0.110														
						20.0	20.3	7.0	7.5	0.111														
						23.0	20.2	7.0	7.5	0.111														
Mitchell	1		8/16/90	1.57	6.3	---	----	---	---	-----	1.0	60.0		107.0	2.0	<0.10	<0.04	---	<0.02	<0.020	5.40	---	--	8*
						0.3	30.2	8.1	8.3	0.167														
						1.5	29.9	8.2	8.1	0.167														
						3.0	29.8	8.1	7.5	0.167														
						5.0	29.6	7.6	6.0	0.167														
						10.0	29.2	7.2	3.2	0.167														
						15.0	29.0	7.1	2.2	0.168														
						23.0	23.0	7.0	1.5	0.169														
Mitchell	1		8/14/91	1.86	7.4	---	----	---	---	-----	8.0	61.0		95.0	4.0	<0.01	0.09	0.92	0.05	<0.005	5.80	9.2	52	2*
						0.3	29.9	6.9	4.2	0.150														
						1.0	30.0	7.0	4.0	0.149														
						1.4	30.0	7.1	4.0	0.149														
						5.0	30.1	7.1	4.1	0.149														
						10.0	30.2	7.1	3.9	0.149														
						15.0	29.8	6.8	0.1	0.134														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Mitchell	2		4/26/90	1.34	5.4	---	----	---	----	-----	2.0	38.0		73.0	5.0	<0.10	0.15	---	0.03	<0.010	3.20	2.0	37	<1
						0.3	21.5	8.6	11.2	0.102														
						1.5	21.1	8.5	11.0	0.102														
						3.0	19.5	7.4	8.4	0.106														
						5.0	19.1	7.4	8.1	0.108														
						10.0	18.4	7.3	7.3	0.104														
						12.0	18.1	6.9	6.9	0.104														
Mitchell	2		5/2/91	0.81	3.2	---	----	---	---	-----	----	47.0		70.0	9.0	<0.01	0.14	0.45	0.04	0.018	6.30	4.0	44	--
						0.3	20.3	6.5	7.6	0.116														
						1.0	20.3	6.7	7.5	0.116														
						5.0	20.3	6.9	7.4	0.116														
						10.0	20.3	7.0	7.4	0.116														
						12.5	20.3	7.0	7.4	0.116														
Mitchell	2		8/16/90	1.66	6.6	---	----	---	---	-----	2.0	62.0		108.0	<1.0	<0.10	<0.04	---	<0.02	<0.020	3.60	---	--	2*
						0.3	29.0	7.0	4.8	0.172														
						1.5	29.1	7.1	4.6	0.171														
						3.0	29.1	7.1	4.4	0.172														
						10.0	28.9	7.1	3.1	0.171														
						13.0	28.9	7.0	2.9	0.171														
Mitchell	2		8/14/91	1.60	6.4	---	----	---	---	-----	10.0	63.0		95.0	4.0	<0.01	0.14	0.88	0.05	0.011	5.40	7.9	51	40
						0.3	30.0	7.0	4.0	0.158														
						1.0	30.1	7.1	3.9	0.159														
						1.4	30.1	7.1	3.9	0.158														
						5.0	30.2	7.1	3.5	0.158														
						10.0	30.2	7.1	3.6	0.158														
						12.5	30.2	7.1	3.6	0.158														
Mitchell	1	A	5/5/92	1.84	7.4	---	----	---	---	-----	2.0	47.0	---	70.0	4.0	<0.030	0.033	0.744	0.024	0.005	5.12	9.2	52	<2
						0.3	22.7	8.4	10.3	0.120														
						1.0	22.2	8.5	10.6	0.120														
						1.5	22.2	8.5	10.6	0.120														
						5.0	21.3	7.6	8.7	0.120														
						10.0	19.7	7.3	6.9	0.120														
						15.0	19.2	7.1	6.5	0.105														
						20.0	18.2	7.0	6.6	0.050														
						22.0	18.1	7.0	6.5	0.050														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Mitchell	1	B	5/5/92	1.83	7.3	---	----	---	---	-----	---	----	---	----	---	------	-----	-----	-----	-----	----	---	--	--
						0.3	22.6	8.5	10.5	0.121														
						1.0	22.2	8.5	10.6	0.121														
						1.5	22.2	8.5	10.6	0.121														
						5.0	21.2	7.6	8.7	0.120														
						10.0	19.7	7.3	6.9	0.120														
						15.0	19.3	7.1	6.5	0.109														
						20.0	18.2	7.0	6.6	0.050														
						22.0	18.2	6.9	6.6	0.050														
Mitchell	1	A	5/3/93	1.34	3.3	---	----	---	---	-----	4.8	45.0	69.0	95.0	5.0	<0.015	0.150	0.418	0.015	0.012	3.50	4.5	45	<1
						0.3	19.2	7.0	7.8	0.118														
						1.0	19.2	7.0	7.6	0.118														
						1.5	19.2	7.0	7.5	0.118														
						2.0	19.2	7.0	7.5	0.118														
						5.0	19.1	7.0	7.4	0.118														
						10.0	19.1	7.0	7.3	0.118														
						15.0	18.7	6.9	6.5	0.107														
						20.0	18.7	6.8	6.4	0.116														
						23.5	18.7	6.8	6.4	0.111														
Mitchell	1	A	8/11/92	1.56	6.2	---	----	---	---	-----	2.2	56.0	---	104.0	13.0	<0.015	<0.003	<0.150	0.035	<0.004	10.10	14.8	57	<2
						0.3	31.6	8.8	9.6	0.173														
						1.0	30.8	8.8	10.1	0.173														
						1.5	30.6	8.7	9.6	0.173														
						3.0	30.5	8.6	8.6	0.174														
						5.0	30.4	8.2	7.6	0.175														
						6.0	30.1	7.7	5.7	0.175														
						7.0	29.8	7.5	4.8	0.175														
						10.0	29.5	7.3	3.3	0.178														
						15.0	29.4	7.2	2.2	0.178														
						20.0	29.2	7.1	0.8	0.177														
						24.0	29.1	7.1	0.1	0.180														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Mitchell	1	A	8/16/93	1.84	5.9	---	----	---	---	-----	1.6	61.0	83.0	93.0	4.0	<0.015	0.007	0.215	0.027	0.007	4.86	12.0	55	<1
						0.3	31.6	8.3	8.2	0.164														
						1.0	30.9	8.3	8.7	0.163														
						1.5	30.8	8.3	8.4	0.164														
						2.0	30.6	8.2	7.7	0.164														
						4.0	30.1	7.9	6.4	0.165														
						6.0	29.9	7.5	5.1	0.164														
						8.0	29.9	7.4	4.8	0.164														
						10.0	29.7	7.3	3.9	0.162														
						14.0	29.4	7.1	2.5	0.147														
						20.0	29.1	6.9	0.6	0.128														
						25.0	28.9	6.9	0.5	0.127														
Mitchell	2	A	5/5/92	1.31	5.2	---	----	---	---	-----	3.5	50.0	---	71.0	8.0	0.040	0.130	0.575	0.029	0.007	3.54	8.0	51	<2
						0.3	20.3	7.3	8.4	0.123														
						1.0	20.1	7.3	8.4	0.123														
						1.5	19.9	7.2	8.0	0.123														
						2.0	19.9	7.2	7.8	0.123														
						5.0	19.7	7.2	7.3	0.122														
						10.0	19.3	7.1	6.5	0.120														
						13.0	19.2	7.0	5.7	0.120														
Mitchell	2	B	5/5/92	1.26	5.0	---	----	---	---	-----	---	50.0	---	61.0	6.0	<0.030	0.130	0.516	0.029	0.008	3.78	6.8	49	<2
Mitchell	2	A	5/3/93	1.16	3.1	---	----	---	---	-----	5.7	49.0	72.0	99.0	8.0	<0.015	0.170	0.477	0.060	0.015	3.57	5.3	47	6*
						0.3	19.5	7.1	7.4	0.128														
						0.5	19.5	7.1	7.3	0.128														
						1.0	19.5	7.0	7.3	0.128														
						1.5	19.5	7.0	7.3	0.127														
						2.0	19.5	7.0	7.1	0.128														
						5.0	19.5	7.0	7.1	0.127														
						10.0	19.5	7.0	7.1	0.126														
						13.0	19.5	7.0	7.1	0.127														
Mitchell	2	A	8/11/92	1.69	6.8	---	----	---	---	-----	2.8	69.0	---	112.0	12.0	<0.015	0.069	<0.150	0.042	0.009	9.93	7.5	50	2*
						0.3	31.0	7.4	5.3	0.177														
						1.0	29.9	7.3	4.5	0.177														
						1.5	29.8	7.3	4.2	0.177														
						2.0	29.8	7.3	4.1	0.177														
						5.0	29.7	7.3	3.8	0.178														
						10.0	29.5	7.2	2.6	0.180														
						12.8	29.3	7.1	0.9	0.180														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Mitchell	2	A	8/16/93	1.58	4.3	---	----	---	---	-----	1.9	65.0	84.0	102.0	7.0	<0.015	0.018	<0.150	0.032	<0.004	4.17	18.4	59	3*
						0.3	31.1	7.9	8.0	0.170														
						1.0	31.0	8.0	8.2	0.170														
						1.5	30.8	8.1	8.5	0.170														
						2.0	30.7	8.1	8.3	0.169														
						3.0	30.2	7.9	7.1	0.170														
						4.0	29.8	7.6	6.0	0.170														
						6.0	29.7	7.4	5.2	0.170														
						8.0	29.7	7.3	4.8	0.170														
						10.0	29.4	7.3	4.0	0.170														
						12.0	29.4	7.2	3.9	0.169														
Mitchell	2	B	8/16/93	1.60	4.2	---	----	---	---	-----	2.0	65.0	85.0	106.0	3.0	<0.015	0.009	0.486	0.032	0.008	2.88	14.4	57	1*
						0.3	31.2	8.0	8.0	0.170														
						1.0	31.0	8.2	8.6	0.170														
						1.5	30.6	8.1	8.1	0.170														
						2.0	30.2	8.0	7.5	0.171														
						3.0	30.1	7.8	7.1	0.170														
						4.0	29.8	7.5	5.8	0.170														
						6.0	29.7	7.4	5.3	0.170														
						8.0	29.6	7.3	4.7	0.170														
						10.0	29.4	7.2	4.0	0.170														
						12.0	29.4	7.2	3.9	0.169														
Mitchell	1	A	50294	1.87	3.95	---	---	---	---	---	16.0	33	54.0	68.0	3.0	<0.015	0.047	0.485	0.028	0.007	3.49	8.0	51	<1
						0.1	23.94	7.28	11.32	0.091														
						1	23.61	7.49	10.16	0.092														
						1.5	23.59	7.54	9.68	0.090														
						2	23.54	7.54	9.37	0.089														
						3	22.94	7.40	8.40	0.095														
						4	22.94	7.36	8.35	0.088														
						5	22.93	7.35	8.33	0.088														
						10	22.23	7.11	6.80	0.093														
						15	20.91	6.98	5.82	0.087														
						20	20.12	6.70	4.86	0.082														
						23	20.03	6.65	4.73	0.061														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Mitchell	1	A	90194	1.78	4.32	---	---	---	---	---	1.9	53	79.0	101.0	<1.0	<0.015	0.040	<0.150	0.039	<0.004	3.18	19.2	60	<1
						0.1	30.50	7.97	9.18	0.132														
						1	29.22	7.92	8.08	0.130														
						1.5	29.14	7.83	7.61	0.135														
						2	29.06	7.62	6.98	0.131														
						3	29.02	7.51	6.59	0.134														
						4	28.90	7.25	4.68	0.131														
						5	28.90	7.15	4.62	0.131														
						6	28.83	7.03	3.89	0.140														
						7	28.71	6.98	3.34	0.135														
						8	28.59	6.91	2.97	0.133														
						9	28.51	6.86	2.66	0.137														
						10	28.49	6.82	2.55	0.132														
						15	28.10	6.77	2.03	0.121														
						20	27.12	6.59	1.50	0.089														
						21	26.72	6.54	1.03	0.079														
						22	26.46	6.48	0.72	0.084														
						23	26.48	6.46	0.67	0.080														
						23.2	26.44	6.45	0.67	0.083														
Mitchell	1	A	82895	1.75	4.75	---	---	---	---	---	1.8	77	76.4	122.0	2.0	<0.015	0.030	0.208	0.060	0.006	4.06	21.4	61	<1
						0.2	31.38	8.37	9.06	0.200														
						1	30.58	8.49	8.83	0.201														
						1.5	30.46	8.41	8.29	0.197														
						2	30.42	8.37	7.95	0.197														
						3	30.34	8.25	7.24	0.201														
						4	30.30	8.19	6.97	0.200														
						5	30.26	8.14	6.82	0.200														
						6	30.16	8.03	6.08	0.201														
						7	30.04	7.86	4.83	0.200														
						8	30.00	7.79	4.64	0.200														
						9	29.96	7.76	4.81	0.200														
						10	29.94	7.75	4.76	0.200														
						15	29.74	7.69	4.63	0.200														
						16	29.68	7.63	3.87	0.199														
						17	29.62	7.46	1.77	0.195														
						18	29.18	7.35	0.10	0.189														
						19	28.87	7.30	0.07	0.193														
						20	28.59	7.27	0.05	0.199														
						25	27.99	7.26	0.04	0.212														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Mitchell	2	A	50294	1.28	3.32	---	---	---	---	---	18.0	38	52.0	76.0	4.0	<0.026	0.160	0.443	0.030	0.009	3.39	3.5	43	<1
						0.1	23.32	6.92	7.49	0.098														
						1	22.93	6.95	7.22	0.097														
						1.5	22.46	6.95	6.74	0.099														
						2	22.14	6.95	6.61	0.099														
						3	21.96	6.95	6.44	0.098														
						4	21.86	6.95	6.35	0.096														
						5	21.84	6.95	6.29	0.095														
						10	21.70	6.98	6.08	0.098														
						11	21.50	6.97	5.94	0.097														
						12	20.94	6.93	5.23	0.093														
						13	20.71	6.88	4.80	0.090														
Mitchell	2	A	90194	1.48	3.09	---	---	---	---	---	2.4	53	79.0	103.0	<1.0	<0.015	0.060	<0.150	0.048	<0.004	3.34	28.6	63	<1
						0.1	30.40	6.62	7.46	0.142														
						1	30.28	6.86	6.90	0.145														
						1.5	29.52	6.92	6.16	0.143														
						2	29.40	6.99	6.07	0.142														
						3	29.24	6.99	5.71	0.145														
						4	29.08	6.96	4.93	0.147														
						5	28.98	6.94	4.47	0.142														
						10	28.81	6.87	3.48	0.148														
						12.4	28.69	6.84	2.72	0.146														
Mitchell	2	A	82895	1.45	3.57	---	---	---	---	---	1.9	82	78.4	128.0	4.0	<0.015	0.06	0.268	0.069	0.018	4.02	25.1	62	<1
						0.3	30.87	7.98	8.94	0.209														
						1	30.68	8.10	8.50	0.209														
						1.5	30.30	7.90	6.80	0.210														
						2	30.04	7.74	5.70	0.207														
						3	29.78	7.59	4.44	0.210														
						4	29.72	7.56	4.32	0.208														
						5	29.72	7.54	4.33	0.209														
						6	29.70	7.49	3.58	0.210														
						7	29.70	7.51	4.25	0.208														
						8	29.70	7.52	4.38	0.207														
						9	29.68	7.56	4.82	0.207														
						10	29.68	7.57	4.84	0.204														
						11	29.62	7.52	4.01	0.217														
						12	29.56	7.43	2.21	0.219														
						13	29.46	7.30	0.72	0.210														
						13.5	29.40	7.29	0.30	0.212														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Mitchell	2	B	82895	1.46	3.67	---	---	---	---	---	1.9	81	78.8	127.0	1.0	<0.015	0.070	<0.150	0.071	0.015	4.13	13.9	56	<1
						0.3	30.89	8.31	8.89	0.207														
						1	30.71	8.24	8.30	0.208														
						1.5	30.24	7.96	6.49	0.211														
						2	29.98	7.81	5.49	0.210														
						3	29.74	7.63	4.36	0.205														
						4	29.72	7.61	4.26	0.206														
						5	29.70	7.57	4.14	0.213														
						6	29.70	7.52	3.69	0.212														
						7	29.68	7.54	4.16	0.207														
						8	29.68	7.55	4.34	0.205														
						9	29.68	7.58	4.76	0.206														
						10	29.68	7.59	4.76	0.207														
						11	29.62	7.52	3.68	0.202														
						12	29.51	7.35	1.32	0.208														
						13	29.48	7.30	0.66	0.218														
						13.5	29.44	7.29	0.35	0.202														
Jordan	1		4/26/90	1.14	4.6	---	----	---	----	----	2.0	32.0		75.0	5.0	<0.10	0.13	---	0.03	<0.010	3.90	27.0	63	<1
						0.3	21.7	8.8	12.1	0.091														
						1.5	20.3	8.6	11.3	0.090														
						3.0	19.6	8.3	10.8	0.091														
						4.0	19.2	7.5	8.7	0.091														
						10.0	18.0	7.4	8.0	0.091														
						20.0	17.3	7.2	7.5	0.085														
						25.0	16.9	7.1	7.3	0.087														
						29.0	16.6	7.0	5.4	0.090														
Jordan	1		5/2/91	1.16	4.6	---	----	---	---	-----	----	45.0		66.0	6.0	<0.01	0.14	0.63	0.04	0.015	6.90	8.3	51	--
						0.3	23.4	6.7	9.7	0.117														
						1.0	22.5	7.4	10.0	0.116														
						2.0	21.7	7.3	8.5	0.118														
						5.0	21.3	7.2	7.9	0.118														
						10.0	21.1	7.1	7.6	0.118														
						20.0	20.9	7.1	7.5	0.116														
						29.0	20.5	7.0	6.5	0.095														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Jordan	1		8/16/90	2.15	8.6	---	----	---	---	-----	1.0	57.0		100.0	1.0	<0.10	<0.04	---	<0.02	<0.020	5.80	12.0	55	<1
						0.3	31.7	8.6	9.5	0.153														
						1.5	31.3	8.6	9.6	0.153														
						3.0	30.1	7.7	7.3	0.155														
						5.0	29.9	7.5	5.5	0.154														
						7.0	29.7	7.2	4.6	0.155														
						10.0	29.5	7.2	3.2	0.154														
						17.0	29.2	6.9	1.3	0.153														
						20.0	29.1	6.8	0.4	0.149														
						29.0	27.0	6.9	0.1	0.161														
Jordan	1		8/14/91	2.50	10.0	---	----	---	---	-----	10.0	54.0		88.0	2.0	<0.01	0.08	0.93	0.03	<0.005	5.80	8.1	51	<1
						0.3	29.9	7.0	6.0	0.130														
						1.0	29.8	7.2	5.8	0.129														
						1.4	29.9	7.2	5.8	0.129														
						5.0	30.0	7.2	5.8	0.129														
						10.0	30.1	7.2	5.4	0.129														
						11.0	30.1	6.8	2.3	0.130														
						15.0	29.9	6.8	1.9	0.128														
Jordan	2		4/26/90	1.27	5.1	---	----	---	----	-----	2.0	33.0		71.0	4.0	<0.10	0.17	---	0.03	<0.010	3.60	8.0	51	5*
						0.3	21.5	8.1	10.8	0.093														
						1.5	21.0	8.1	10.6	0.093														
						5.0	20.1	7.6	9.3	0.094														
						10.0	18.7	7.4	8.1	0.094														
						15.0	18.4	7.2	7.6	0.093														
						24.0	17.7	7.1	7.0	0.093														
Jordan	2		5/2/91	1.17	4.7	---	----	---	---	-----	----	45.0		69.0	7.0	<0.01	0.16	0.25	0.04	0.018	4.90	3.5	43	--
						0.3	21.7	6.8	8.1	0.116														
						1.0	21.4	6.9	7.8	0.119														
						5.0	20.9	6.9	7.7	0.119														
						10.0	20.8	7.0	7.7	0.118														
						20.0	20.8	7.0	7.7	0.118														
						22.0	20.8	7.0	7.7	0.117														
Jordan	2		8/16/90	1.52	6.1	---	----	---	---	-----	2.0	58.0		102.0	1.0	<0.10	<0.04	---	<0.02	<0.020	19.2	---	--	<1
						0.3	31.1	7.7	8.9	0.162														
						1.5	29.7	7.4	6.2	0.162														
						3.0	29.4	7.2	4.9	0.162														
						10.0	29.3	7.1	4.5	0.161														
						15.0	29.3	7.1	4.1	0.161														
						18.0	29.2	7.0	2.8	0.161														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Jordan	2		8/14/91	1.78	7.1	---	----	---	---	-----	9.0	54.0		88.0	4.0	<0.01	0.16	0.83	0.03	<0.005	5.50	5.6	47	2*
						0.3	29.9	6.8	3.4	0.135														
						1.0	30.0	6.8	3.3	0.135														
						1.4	30.0	6.9	3.3	0.135														
						5.0	30.0	6.9	3.3	0.135														
						10.0	30.1	6.8	3.3	0.136														
						16.0	30.1	6.8	3.3	0.135														
Jordan	1	A	5/5/92	1.57	6.3	---	----	---	----	-----	1.8	45.0	---	62.0	4.0	<0.030	0.032	0.486	0.023	0.005	7.14	7.2	50	<2
						0.3	23.5	8.7	10.7	0.114														
						1.0	23.5	8.7	10.9	0.114														
						1.5	23.5	8.7	11.1	0.114														
						3.0	23.3	8.7	11.0	0.114														
						5.0	22.0	7.8	9.3	0.114														
						7.0	20.1	7.3	8.1	0.113														
						10.0	20.1	7.5	7.9	0.112														
						20.0	19.2	7.2	7.2	0.107														
						25.0	18.9	7.1	6.8	0.101														
						29.9	18.1	7.0	4.0	0.108														
Jordan	1	A	5/03/93	1.34	4.3	---	----	---	---	-----	4.5	42.0	64.0	87.0	4.0	<0.015	0.120	0.495	0.039	0.014	5.57	1.5	35	2*
						0.3	18.8	7.0	7.7	0.107														
						1.0	18.8	6.9	7.3	0.108														
						1.5	18.8	6.9	7.3	0.107														
						2.0	18.8	6.9	7.2	0.109														
						5.0	18.7	6.9	7.2	0.107														
						10.0	18.7	6.8	6.9	0.111														
						20.0	18.5	6.7	6.6	0.112														
						28.0	17.8	6.5	5.6	0.108														
Jordan	1	A	8/11/92	1.69	6.8	---	----	---	---	-----	2.3	63.0	---	95.0	13.0	<0.015	<0.003	0.288	0.027	<0.004	7.98	17.2	58	<2
						0.3	32.2	8.9	9.9	0.162														
						1.0	31.2	8.9	10.0	0.162														
						1.5	30.9	8.8	9.9	0.163														
						5.0	30.5	8.4	8.2	0.163														
						7.0	30.0	7.5	5.0	0.164														
						10.0	29.7	7.3	3.9	0.168														
						20.0	29.4	7.0	1.3	0.169														
						25.0	29.0	7.0	0.1	0.167														
						29.6	25.9	7.3	0.1	0.215														

Reservoir Water Quality Monitoring Program 1990-1995
Coosa River Basin

Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Jordan	1	A	8/16/93	3.17	6.4	---	----	---	---	-----	2.2	60.0	76.0	97.0	4.0	<0.015	0.009	0.677	0.014	0.012	3.26	4.5	45	2*
						0.3	30.6	7.9	8.2	0.152														
						1.0	30.7	8.0	8.1	0.153														
						1.5	30.6	8.0	7.7	0.153														
						2.0	30.3	7.8	6.6	0.153														
						5.0	30.1	7.5	5.5	0.153														
						10.0	29.9	7.3	4.7	0.150														
						15.0	29.6	7.1	2.8	0.152														
						20.0	29.5	7.0	2.0	0.156														
						25.0	29.4	7.0	0.9	0.155														
						29.0	27.0	7.1	0.7	0.199														
Jordan	2	A	5/5/92	0.96	3.8	---	----	---	---	-----	3.3	47.0	---	69.0	7.0	<0.030	0.120	0.291	0.023	0.007	5.17	12.1	55	<2
						0.3	21.9	8.0	10.3	0.115														
						1.0	21.5	8.0	10.3	0.116														
						1.5	21.3	7.9	10.0	0.115														
						5.0	20.8	7.6	9.1	0.115														
						10.0	20.2	7.3	7.6	0.115														
						15.0	19.4	7.1	6.6	0.113														
						20.0	19.2	7.1	6.1	0.111														
Jordan	2	A	5/3/93	1.26	3.3	---	----	---	---	-----	5.5	41.0	66.0	89.0	6.0	<0.015	0.160	0.596	0.046	0.016	4.41	5.1	47	2*
						0.3	19.2	7.0	7.8	0.109														
						1.0	19.2	7.0	7.6	0.109														
						1.5	19.2	7.0	7.6	0.110														
						2.0	19.2	7.0	7.5	0.110														
						5.0	19.2	7.0	7.4	0.109														
						10.0	19.1	6.9	7.3	0.113														
						15.0	18.9	6.9	7.0	0.120														
						17.0	18.9	6.9	6.9	0.111														
Jordan	2	A	8/11/92	1.5	6.0	---	----	---	---	-----	2.4	65.0	---	102.0	13.0	<0.015	0.027	0.720	0.029	<0.004	8.50	15.6	58	<2
						0.3	31.5	8.5	9.0	0.168														
						1.0	31.0	8.5	9.4	0.169														
						1.5	30.4	7.9	7.6	0.169														
						5.0	29.8	7.6	5.4	0.172														
						10.0	29.6	7.2	3.5	0.170														
						17.0	29.5	7.1	2.3	0.172														

Reservoir Water Quality Monitoring Program 1990-1995
Coosa River Basin

				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Jordan	2	B	8/11/92	1.5	6.0	---	----	---	---	-----	2.7	65.0	---	113.0	14.0	<0.015	0.017	<0.150	0.029	0.004	7.36	12.4	55	1*
						0.3	31.2	8.2	8.2	0.166														
						1.0	30.4	7.6	6.6	0.166														
						1.5	30.1	7.6	6.3	0.166														
						5.0	29.7	7.4	5.0	0.167														
						10.0	29.5	7.2	3.3	0.170														
						15.0	29.5	7.2	2.8	0.169														
						19.0	29.5	7.1	2.5	0.166														
Jordan	2	A	8/16/93	1.5	3.9	---	----	---	---	-----	3.3	61.0	80.0	95.0	5.0	<0.015	0.015	0.986	0.022	<0.004	4.16	9.8	53	16*
						0.3	30.2	7.6	7.4	0.157														
						1.0	30.1	7.6	7.1	0.157														
						1.5	30.0	7.6	7.0	0.157														
						2.0	30.0	7.5	6.9	0.157														
						5.0	29.9	7.4	5.5	0.157														
						10.0	29.6	7.3	5.2	0.155														
						15.0	29.5	7.2	5.0	0.152														
						20.0	29.4	7.2	4.6	0.151														
						26.0	29.4	7.1	4.2	0.151														
Jordan	1	A	50294	1.67	3.58	---	---	---	---	---	18.0	32	46.0	61.0	2.0	<0.015	0.082	<0.150	0.030	0.013	3.93	3.0	41	<1
						0.1	23.30	6.98	9.26	0.085														
						1	23.27	7.11	8.79	0.085														
						1.5	23.29	7.16	8.56	0.085														
						2	23.25	7.21	8.39	0.085														
						3	23.25	7.24	8.28	0.085														
						4	23.25	7.27	8.21	0.085														
						5	23.25	7.28	8.15	0.085														
						10	22.07	7.01	6.98	0.087														
						15	21.12	6.93	6.35	0.087														
						20	20.75	6.85	5.77	0.086														
						25	20.23	6.85	5.98	0.089														
						29.7	19.69	6.82	3.92	0.091														

Reservoir Water Quality Monitoring Program 1990-1995
Coosa River Basin

				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Jordan	1	A	90194	1.52	4.35	---	---	---	---	---	1.6	47	75.0	88.0	<1.0	<0.015	0.003	<0.150	0.036	<0.004	3.15	24.3	62	<1
						0.1	28.92	6.63	7.21	0.124														
						1	28.96	6.91	7.18	0.125														
						1.5	28.96	7.13	7.27	0.126														
						2	28.98	7.24	7.29	0.125														
						3	28.94	7.31	7.33	0.122														
						4	28.85	7.08	4.21	0.124														
						5	28.65	6.91	3.52	0.130														
						10	28.43	6.74	2.88	0.122														
						15	28.32	6.71	2.63	0.129														
						20	28.16	6.65	1.87	0.127														
						25	28.06	6.61	0.74	0.121														
						29.4	27.43	6.70	0.04	0.144														
Jordan	1	A	82895	2.26	5.38	---	---	---	---	---	1.5	77	71.2	108.0	2.0	<0.015	0.040	<0.150	0.040	0.004	3.92	17.6	59	<1
						0.1	29.94	7.54	6.98	0.187														
						1	29.92	7.68	6.97	0.189														
						1.5	29.92	7.76	6.85	0.189														
						2	29.90	7.77	6.68	0.189														
						3	29.90	7.77	6.49	0.188														
						5	29.88	7.80	6.46	0.186														
						10	29.86	7.81	6.17	0.194														
						12	29.80	7.75	5.74	0.179														
						14	29.70	7.68	5.21	0.193														
						16	29.64	7.65	4.99	0.185														
						20	29.56	7.58	4.56	0.190														
						22	29.52	7.54	4.25	0.195														
						23	29.46	7.49	3.53	0.189														
						24	29.44	7.46	3.20	0.183														
						25	29.32	7.35	1.71	0.194														
						26	29.26	7.33	1.67	0.189														
						27	29.08	7.25	0.12	0.184														
						28	28.81	7.22	0.07	0.192														
						29	27.26	7.19	0.09	0.225														
						29.6	25.99	7.21	0.05	0.222														

Reservoir Water Quality Monitoring Program 1990-1995
Coosa River Basin

				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Jordan	2	A	50294	1.30	3.07	---	---	---	---	---	20.0	34	19.0	69.0	2.0	<0.015	0.160	0.353	0.031	0.012	3.41	5.4	47	<1
						0.1	21.61	6.72	7.70	0.088														
						1	21.57	6.82	7.43	0.088														
						1.5	21.50	6.86	7.29	0.088														
						2	21.49	6.90	7.06	0.088														
						3	21.42	6.90	6.96	0.089														
						4	21.38	6.92	6.88	0.088														
						5	21.40	6.93	6.85	0.088														
						10	21.03	6.90	6.27	0.088														
						15	20.66	6.86	5.64	0.089														
						20	20.59	6.85	5.27	0.091														
						24.7	20.59	6.84	5.17	0.091														
Jordan	2	A	90194	1.28	2.49	---	---	---	---	---	2.1	46	72.0	79.0	1.0	<0.015	<0.003	<0.150	0.038	<0.004	3.32	30.7	64	<1
						0.1	29.88	7.82	9.42	0.118														
						1	29.96	8.17	9.48	0.120														
						1.5	29.64	8.22	9.28	0.118														
						2	29.58	8.16	8.74	0.121														
						3	29.06	7.59	6.58	0.116														
						5	28.81	7.18	5.93	0.112														
						10	28.41	6.89	4.92	0.116														
						15	28.36	6.83	4.80	0.123														
						20	28.36	6.81	4.68	0.121														
						23	28.36	6.79	4.54	0.117														
Jordan	2	A	82895	2.07	3.95	---	---	---	---	---	2.0	77	75.7	116.0	<1.0	<0.015	0.080	<0.150	0.064	0.010	3.94	12.8	56	<1
						0.1	29.98	7.35	5.80	0.197														
						1	29.78	7.44	5.39	0.195														
						1.5	29.74	7.44	5.17	0.197														
						2	29.74	7.45	4.98	0.198														
						3	29.72	7.46	5.02	0.196														
						5	29.68	7.45	4.60	0.200														
						7	29.66	7.45	4.40	0.191														
						9	29.64	7.44	4.14	0.196														
						10	29.64	7.43	4.10	0.189														
						12	29.62	7.42	3.81	0.197														
						14	29.58	7.36	2.57	0.189														
						16	29.54	7.30	1.90	0.198														
						18	29.52	7.26	1.36	0.190														
						20	29.50	7.24	1.09	0.197														
						25	29.44	7.20	0.22	0.194														
						26	29.44	7.19	0.07	0.192														
						26.5	29.42	7.19	0.06	0.195														

Reservoir Water Quality Monitoring Program 1990-1995
Escatawpa River Basin

Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Big Creek	1	A	5/12/92	2.60	10.4	---	----	---	---	-----	1.4	8.0	---	42.0	1.0	<0.030	0.105	<0.150	0.004	<0.004	4.95	1.6	35	<2
						0.3	24.0	5.6	9.2	0.026														
						1.0	23.4	5.8	9.1	0.026														
						1.5	22.5	5.9	9.2	0.026														
						5.0	21.4	5.8	8.4	0.026														
						10.0	20.6	5.7	7.0	0.026														
						11.0	20.1	5.6	5.5	0.026														
						12.0	19.5	5.6	4.6	0.026														
Big Creek	1	B	5/12/92	2.62	10.5	---	----	---	---	-----	---	7.0	---	36.0	<1.0	<0.030	0.120	0.187	0.006	<0.004	4.13	2.3	39	<2
						0.3	24.0	5.9	9.0	0.026														
						1.0	23.5	5.9	9.1	0.026														
						1.5	22.3	6.0	9.1	0.026														
						5.0	21.3	6.0	8.5	0.026														
						10.0	20.6	5.8	7.0	0.025														
						11.0	20.2	5.7	5.8	0.026														
						12.0	19.7	5.6	4.9	0.027														
Big Creek	1	A	42595	2.86	5.28	---	---	---	---	---	2.0	5	17.0	48.0	1.0	<0.015	0.130	<0.150	0.020	0.006	5.81	3.7	43	8*
						0.1	23.26	6.01	7.43	0.025														
						1	23.12	6.03	7.47	0.025														
						1.5	23.06	6.07	7.49	0.025														
						2	22.99	6.09	7.51	0.025														
						3	22.83	6.09	7.49	0.026														
						4	22.78	6.10	7.52	0.025														
						5	22.74	6.11	7.48	0.025														
						8	22.63	6.13	7.43	0.026														
						9	20.28	5.72	5.63	0.027														
						10	19.45	5.70	5.50	0.028														
						11	18.75	5.66	5.22	0.027														
						12	18.63	5.65	5.14	0.027														
						13	18.34	5.63	4.94	0.027														
						13.6	18.27	5.63	4.88	0.027														
Big Creek	1	A	8/19/92	2.32	9.3	---	----	---	---	-----	3.6	10.0	---	41.0	5.0	<0.040	0.008	0.645	0.005	<0.004	4.73	6.9	50	<2
						0.3	----	---	---	-----														
						1.0	29.3	7.3	8.5	0.026														
						1.5	29.2	7.4	8.4	0.026														
						4.0	28.8	6.6	7.7	0.025														
						5.0	28.4	6.1	5.8	0.026														
						6.0	27.1	5.6	0.3	0.029														
						10.0	21.6	6.2	0.1	0.049														
						12.0	20.9	6.2	0.1	0.052														

Reservoir Water Quality Monitoring Program 1990-1995
Escatawpa River Basin

				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Big Creek	1	B	8/19/92	2.41	9.6	---	----	---	---	-----	2.1	6.0	---	23.0	7.0	<0.015	0.003	0.614	<0.004	<0.004	3.53	7.9	51	<2
						0.3	29.5	7.3	8.1	0.025														
						1.0	29.2	7.4	8.3	0.026														
						1.5	29.1	7.5	8.2	0.025														
						5.0	28.3	6.1	5.8	0.026														
						6.0	26.9	5.6	0.6	0.030														
						9.0	22.0	6.2	0.1	0.047														
						12.0	21.0	6.2	0.1	0.052														
Big Creek	1	A	81695	3.02	5.19	---	---	---	---	---	1.6	7	6.3	40.0	3.0	<0.015	0.008	0.248	0.007	0.010	5.47	23.4	62	1*
						0.1	33.28	6.21	7.81	0.024														
						1	32.70	6.35	7.85	0.024														
						1.5	32.10	6.47	7.94	0.025														
						2	31.72	6.54	7.92	0.024														
						3	31.21	6.54	7.87	0.024														
						4	29.22	6.28	6.49	0.025														
						5	27.45	5.78	2.86	0.026														
						6	26.69	5.56	1.67	0.026														
						7	25.92	5.51	0.62	0.026														
						8	25.51	5.49	0.11	0.028														
						9	25.14	5.63	0.09	0.033														
						10	24.49	5.78	0.10	0.041														
						11	23.75	5.92	0.08	0.048														
						11.5	23.59	6.00	0.08	0.050														

Reservoir Water Quality Monitoring Program 1990-1995
Tallapoosa River Basin

Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Harris	1		5/1/91	2.33	9.3	---	----	---	---	----	----	11.0		22.0	1.0	<0.01	0.12	0.27	0.01	0.016	3.90	2.9	41	--
						0.3	21.3	6.6	8.8	0.030														
						1.0	20.9	6.7	8.9	0.030														
						5.0	19.6	7.0	7.7	0.031														
						10.0	16.1	6.8	5.6	0.032														
						20.0	11.8	6.3	5.4	0.033														
						30.0	10.0	6.2	3.3	0.039														
Harris	2		5/1/91	1.50	6.0	---	----	---	---	----	----	10.0		820.0	4.0	<0.01	0.14	0.42	0.02	0.009	3.90	6.4	49	--
						0.3	22.0	6.6	9.1	0.032														
						1.0	21.8	6.8	9.2	0.032														
						2.0	21.2	6.9	9.3	0.032														
						5.0	18.7	6.8	6.5	0.033														
						10.0	17.3	6.5	5.9	0.034														
						20.0	12.3	6.2	2.5	0.039														
						30.0	10.7	6.1	0.1	0.051														
Harris	1		8/13/91	3.10	12.4	---	----	---	---	----	9.0	13.0		80.0	<1.0	<0.01	0.09	1.07	0.03	0.007	2.10	5.5	47	<1
						0.3	29.3	7.5	7.9	0.034														
						1.0	29.4	7.7	8.0	0.034														
						1.4	29.2	7.9	8.0	0.034														
						5.0	29.0	7.9	7.7	0.033														
						6.0	26.5	6.0	3.4	0.035														
						7.0	25.5	5.9	0.1	0.036														
						10.0	23.4	6.2	0.2	0.035														
						20.0	14.5	5.9	0.0	0.039														
						30.0	10.8	6.0	0.1	0.044														
Harris	2		8/13/91	2.45	9.8	---	----	---	---	----	10.0	14.0		147.0	<1.0	<0.01	0.08	1.07	0.03	0.007	2.30	5.4	47	<1
						0.3	29.7	7.5	8.2	0.035														
						1.0	29.7	7.9	8.2	0.035														
						1.4	29.7	8.1	8.2	0.035														
						2.0	29.4	8.2	8.3	0.035														
						5.0	27.1	6.4	2.5	0.040														
						10.0	23.5	5.8	0.0	0.040														
						20.0	15.5	6.2	0.0	0.051														
						30.0	11.8	6.9	0.0	0.101														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Harris	1	A	42894	1.93	4.14	---	---	---	---	---	4.8	10	33.0	34.0	3.0	<0.015	0.160	0.496	0.032	<0.004	2.55	5.1	47	<1
						0.1	24.60	7.15	8.88	0.035														
						1	23.80	7.45	9.00	0.035														
						1.5	23.67	7.72	8.98	0.035														
						2	23.51	7.76	8.81	0.035														
						3	20.51	7.41	8.82	0.036														
						4	19.00	6.90	7.48	0.036														
						5	18.26	6.70	7.17	0.036														
						6	17.75	6.51	6.90	0.036														
						8	17.16	6.35	6.91	0.036														
						9	16.83	6.29	6.93	0.037														
						10	16.50	6.29	6.99	0.036														
						15	14.31	6.31	7.13	0.038														
						20	11.23	6.23	6.73	0.039														
						25	9.36	6.17	6.30	0.041														
						35	7.88	6.18	5.60	0.044														
						39.3	7.93	6.23	5.31	0.045														
Harris	1	A	83194	2.97	6.02	---	---	---	---	---	1.4	11	48.0	44.0	<1.0	<0.015	0.350	<0.150	0.018	<0.004	3.13	9.9	53	<1
						0	29.26	6.94	7.45	0.036														
						1	29.06	7.28	7.53	0.034														
						1.5	28.75	7.45	7.79	0.035														
						3	27.45	7.58	8.00	0.035														
						4	26.55	6.78	4.59	0.037														
						5	25.20	6.10	2.59	0.032														
						6	24.32	5.90	0.81	0.031														
						8	23.83	5.65	0.69	0.042														
						10	23.23	5.51	0.77	0.031														
						12	22.75	5.42	0.26	0.032														
						14	21.52	5.39	0.06	0.029														
						15	20.10	5.51	0.06	0.044														
						16	17.92	5.47	0.05	0.048														
						17	16.27	5.45	0.07	0.044														
						18	14.68	5.35	0.06	0.033														
						20	12.65	5.30	0.23	0.052														
						21	11.49	5.32	0.80	0.048														
						22	10.88	5.74	1.58	0.027														
						23	10.29	5.54	1.48	0.036														
						24	9.90	5.55	1.72	0.044														
						25	9.55	5.56	1.78	0.040														
						30	8.77	5.54	0.89	0.039														
						37.8	8.51	5.56	0.10	0.046														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Harris	2	A	42894	1.60	3.62	---	---	---	---	---	5.1	11	25.0	32.0	1.0	<0.015	0.180	0.220	0.023	0.005	2.41	5.0	46	<1
						0.1	26.01	7.86	8.62	0.037														
						1	25.37	7.91	8.73	0.036														
						1.5	24.28	8.01	8.89	0.036														
						2	22.11	7.63	8.93	0.034														
						3	20.52	7.08	7.55	0.035														
						4	18.83	6.72	6.36	0.035														
						5	18.45	6.51	5.66	0.036														
						10	16.58	6.16	5.79	0.036														
						15	14.07	6.30	6.37	0.039														
						16	13.37	6.14	6.14	0.040														
						17	12.61	6.09	5.66	0.041														
						18	12.22	6.07	5.43	0.041														
						20	11.01	6.13	4.80	0.041														
						25	9.66	6.07	2.64	0.044														
						28	9.18	6.14	1.29	0.048														
Harris	2	A	83194	2.39	5.98	---	---	---	---	---	1.8	12	46.0	45.0	<1.0	<0.015	0.040	0.151	0.018	<0.004	2.94	12.0	55	<1
						0	29.56	7.34	8.19	0.035														
						1	29.54	7.61	8.21	0.037														
						1.5	29.42	7.74	8.22	0.037														
						2	29.20	7.90	8.27	0.039														
						3	27.70	8.03	8.77	0.034														
						4	26.68	7.37	6.96	0.035														
						5	25.76	6.86	3.34	0.046														
						6	24.76	6.56	2.25	0.036														
						9	23.56	6.11	2.21	0.036														
						10	23.39	6.00	1.85	0.039														
						11	23.16	5.86	1.44	0.036														
						12	22.87	5.72	1.00	0.036														
						13	22.48	5.63	0.11	0.037														
						14	21.96	5.56	0.07	0.044														
						15	20.29	5.70	0.06	0.055														
						16	18.16	5.72	0.06	0.045														
						17	16.34	5.76	0.07	0.048														
						18	15.05	5.84	0.06	0.054														
						19	14.02	5.87	0.08	0.052														
						20	13.03	5.88	0.04	0.044														
						25	10.16	6.22	0.06	0.099														
						28	9.78	6.42	0.04	0.113														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Harris	3	A	42894	1.32	3.10	---	---	---	---	---	6.0	13	31.0	30.0	4.0	<0.015	0.120	0.190	0.028	<0.004	2.21	10.2	53	1*
						0.1	25.80	8.06	9.38	0.037														
						1	25.65	8.28	9.57	0.037														
						1.5	22.64	7.69	8.47	0.037														
						2	22.30	7.36	8.08	0.038														
						3	21.25	7.02	7.41	0.039														
						4	20.78	6.84	7.05	0.040														
						5	20.53	6.72	6.83	0.040														
						6	20.30	6.62	6.62	0.040														
						7	19.77	6.54	6.28	0.040														
						8	19.14	6.43	5.16	0.042														
						8.7	18.93	6.40	4.51	0.044														
Harris	3	B	42894	1.30	3.10	---	---	---	---	---	6.5	14	34.0	29.0	8.0	<0.015	0.140	0.233	0.027	0.014	2.25	10.2	53	<1
						0.1	25.80	8.09	9.30	0.037														
						1	25.39	8.36	9.57	0.036														
						1.5	22.54	7.85	9.02	0.037														
						2	22.01	7.48	8.24	0.038														
						3	21.02	7.14	7.43	0.039														
						4	20.71	6.97	7.15	0.040														
						5	20.55	6.85	6.83	0.040														
						6	20.10	6.70	6.53	0.040														
						7	19.78	6.63	6.20	0.040														
						8	19.12	6.45	5.33	0.042														
						8.4	18.99	6.46	4.62	0.043														
Harris	3	A	83194	2.07	3.98	---	---	---	---	---	3.0	24	49.0	40..0	<1.0	<0.015	0.030	0.831	0.030	<0.004	2.70	9.4	53	<1
						0.1	29.92	6.65	8.17	0.038														
						1	29.50	7.31	8.29	0.039														
						1.5	28.92	7.70	8.51	0.038														
						2	28.14	8.00	8.63	0.037														
						3	26.78	7.43	7.70	0.040														
						4	26.02	7.17	6.28	0.043														
						5	25.35	6.94	5.95	0.043														
						6	24.76	6.75	5.21	0.042														
						7	24.52	6.60	4.74	0.044														
						8	24.41	6.45	4.33	0.051														
						8.8	24.03	6.25	0.99	0.057														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Harris	3	B	83194	2.09	3.95	---	---	---	---	---	3.0	10	48.0	41.0	<1.0	<0.015	0.030	0.237	0.023	<0.004	2.86	11.7	55	<1
						0	29.90	7.30	8.17	0.038														
						1	29.84	7.80	8.27	0.038														
						1.5	29.04	8.00	8.43	0.038														
						2	28.30	8.10	8.58	0.037														
						3	26.80	7.58	7.51	0.040														
						4	26.16	7.16	6.25	0.042														
						5	25.45	6.96	5.92	0.044														
						6	24.82	6.73	5.20	0.046														
						7	24.56	6.59	4.63	0.047														
						8	24.30	6.40	3.63	0.049														
						8.8	24.08	6.23	1.63	0.050														
Martin	1	A	4/30/92	4.16	16.6	---	----	---	---	-----	1.0	16.0	---	49.0	1.0	<0.030	0.210	0.161	0.009	<0.004	2.29	1.1	32	<2
						0.3	21.2	7.1	9.4	0.039														
						1.0	20.4	7.1	9.3	0.038														
						1.5	19.8	7.2	9.4	0.039														
						5.0	19.3	7.2	9.3	0.038														
						10.0	14.5	7.0	8.8	0.038														
						20.0	13.3	6.8	8.9	0.038														
						30.0	12.0	6.7	7.9	0.039														
						40.0	11.3	6.6	6.8	0.039														
						46.5	10.8	6.5	5.6	0.039														
Martin	1	A	8/12/92	4.49	18.0	---	----	---	---	----	1.7	13.0	---	42.0	1.0	<0.015	0.113	0.212	0.012	<0.004	3.92	1.5	35	<3
						0.3	30.8	7.6	7.6	0.039														
						1.0	30.6	7.6	7.7	0.039														
						1.5	30.4	7.7	7.7	0.039														
						5.0	29.8	7.5	7.5	0.038														
						7.0	28.5	6.6	5.1	0.039														
						8.0	27.0	6.4	2.1	0.041														
						10.0	23.7	6.2	1.0	0.040														
						12.0	20.6	6.1	2.0	0.039														
						15.0	17.6	6.2	3.3	0.040														
						20.0	15.4	6.2	4.1	0.039														
						30.0	13.9	6.2	3.8	0.040														
						40.0	13.3	6.2	2.2	0.040														
						44.0	12.9	6.2	1.1	0.041														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Martin	2	A	4/30/92	3.05	12.2	---	----	---	---	----	2.0	15.0	---	54.0	2.0	<0.030	0.200	<0.150	0.015	0.008	2.28	1.6	35	<2
						0.3	20.8	7.1	9.3	0.038														
						1.0	20.7	7.0	9.1	0.037														
						1.5	20.7	7.0	9.1	0.038														
						5.0	19.1	7.1	9.1	0.037														
						10.0	15.1	7.0	8.6	0.039														
						20.5	13.2	6.7	8.2	0.037														
Martin	2	A	8/12/92	3.95	15.8	---	----	---	---	----	1.9	10.0	---	39.0	2.0	<0.015	0.083	0.488	0.008	<0.004	3.73	2.1	38	<3
						0.3	31.1	7.8	7.7	0.039														
						1.0	31.1	8.0	7.8	0.040														
						1.5	30.8	8.0	7.8	0.040														
						5.0	30.1	7.7	7.7	0.039														
						6.0	29.7	7.5	6.4	0.039														
						7.0	28.8	7.0	3.0	0.041														
						8.0	27.0	6.4	0.9	0.043														
						10.0	23.2	6.2	0.6	0.041														
						12.0	20.6	6.1	1.2	0.040														
						15.0	17.6	6.2	2.5	0.040														
						16.0	17.1	6.2	2.7	0.040														
Martin	3	A	4/30/92	4.20	16.8	---	----	---	---	----	1.0	15.0	---	47.0	1.0	<0.030	0.160	0.323	0.004	<0.004	2.38	0.4	22	<2
						0.3	20.4	7.0	9.5	0.038														
						1.0	19.9	7.0	9.5	0.039														
						1.5	19.6	7.1	9.4	0.039														
						5.0	18.0	7.1	9.4	0.038														
						10.0	15.8	7.0	9.3	0.039														
						20.0	13.7	6.9	8.8	0.039														
						26.0	12.8	6.8	8.1	0.039														
Martin	3	A	8/12/92	5.01	20.0	---	----	---	---	----	2.0	12.0	---	43.0	2.0	<0.015	0.052	0.259	<0.004	<0.004	3.35	1.7	36	<3
						0.3	30.4	6.5	7.4	0.039														
						1.0	30.1	6.8	7.5	0.039														
						1.5	30.1	6.9	7.5	0.038														
						5.0	29.8	7.2	7.6	0.038														
						10.0	23.1	6.3	3.3	0.039														
						15.0	17.5	6.2	3.3	0.040														
						20.0	15.2	6.2	2.9	0.040														
						26.0	14.2	6.3	2.2	0.042														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Martin	4	A	4/30/92	1.96	7.8	---	----	---	---	----	1.0	16.0	---	56.0	3.0	<0.030	0.170	0.538	0.018	<0.004	2.56	4.0	44	<2
						0.3	20.0	7.6	10.1	0.037														
						1.0	20.0	7.7	10.0	0.037														
						1.5	19.8	7.7	9.9	0.038														
						2.0	18.5	7.7	9.9	0.038														
						5.0	17.3	7.3	8.9	0.039														
						10.0	15.6	7.0	8.2	0.038														
						20.0	13.8	6.8	7.4	0.049														
						21.0	13.8	6.7	7.2	0.050														
Martin	4	A	8/12/92	2.28	9.1	---	----	---	---	----	4.2	13.0	---	39.0	5.0	<0.015	0.031	0.170	0.019	<0.004	4.11	5.6	47	<3
						0.3	31.3	8.5	8.3	0.043														
						1.0	31.1	8.5	8.3	0.044														
						1.5	30.3	8.5	8.4	0.044														
						2.0	30.1	8.5	8.3	0.044														
						5.0	29.5	7.2	6.6	0.043														
						10.0	24.9	6.3	3.2	0.043														
						11.0	22.5	6.3	0.5	0.063														
						15.0	17.7	6.3	0.5	0.074														
						19.0	15.2	6.4	0.5	0.070														
Martin	1	A	42794	4.15	8.25	---	---	---	---	---	1.7	14	33.0	27.0	<1.0	<0.015	0.130	<0.150	0.010	<0.004	1.93	2.0	37	<1
						0.1	23.62	6.62	8.96	0.042														
						1	22.45	6.97	9.15	0.042														
						1.5	22.24	7.05	9.16	0.042														
						2	21.69	7.15	9.49	0.043														
						3	20.99	7.20	9.48	0.042														
						4	20.21	7.16	9.43	0.042														
						5	19.29	7.08	9.13	0.042														
						6	18.54	6.95	8.62	0.042														
						7	17.78	6.84	8.48	0.043														
						8	17.07	6.85	8.45	0.042														
						9	16.55	6.77	8.22	0.043														
						10	16.03	6.75	8.21	0.042														
						15	14.33	6.73	8.42	0.044														
						20	12.52	6.76	8.68	0.044														
						40	10.64	6.56	7.21	0.047														
						45.4	10.57	6.53	6.76	0.047														

Reservoir Water Quality Monitoring Program 1990-1995
Tallapoosa River Basin

Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Martin	1	A	83094	5.09	10.30	---	---	---	---	---	0.9	11	41.0	46.0	<1.0	<0.015	0.110	0.176	0.013	,0.004	1.96	4.8	46	<1
						0	29.86	6.14	7.48	0.041														
						1	29.58	6.64	7.62	0.041														
						1.5	29.52	6.90	7.65	0.041														
						2	29.46	7.00	7.67	0.040														
						3	29.42	7.12	7.71	0.041														
						4	29.18	7.22	7.78	0.040														
						5	28.59	7.39	7.91	0.044														
						6	28.28	7.35	7.68	0.044														
						7	28.18	7.29	7.51	0.035														
						8	27.95	7.12	6.62	0.042														
						9	27.51	6.75	4.65	0.042														
						10	26.57	6.45	2.42	0.043														
						15	24.58	5.88	1.37	0.043														
						20	22.57	5.79	0.27	0.039														
						21	21.71	5.77	0.06	0.045														
						22	20.89	5.77	0.05	0.051														
						23	19.39	5.82	0.08	0.036														
						24	18.54	5.79	0.24	0.042														
						25	17.58	5.79	0.30	0.037														
						30	15.22	5.79	0.46	0.038														
						45.6	13.03	6.01	0.04	0.064														
Martin	2	A	42794	3.63	6.50	---	---	---	---	---	2.2	12	28.0	30.0	<1.0	<0.015	0.130	0.156	0.016	<0.004	2.37	3.0	41	1*
						0.1	26.66	6.76	8.44	0.044														
						1	24.84	6.97	8.67	0.043														
						1.5	24.52	7.11	8.73	0.043														
						2	23.69	7.27	8.97	0.043														
						3	22.14	7.49	9.45	0.042														
						4	20.32	7.26	8.88	0.041														
						5	18.93	6.90	7.59	0.040														
						6	17.88	6.74	7.36	0.040														
						7	16.72	6.65	7.37	0.041														
						8	16.45	6.60	7.42	0.042														
						9	15.96	6.80	7.60	0.042														
						10	15.76	6.58	7.66	0.043														
						15	14.48	6.64	8.06	0.045														
						20	12.71	6.65	7.94	0.045														
						25.9	11.68	6.66	7.91	0.047														

Reservoir Water Quality Monitoring Program 1990-1995
Tallapoosa River Basin

Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Martin	2	A	83094	4.00	9.47	---	---	---	---	---	1.0	12	40.0	45.0	<1.0	<0.015	0.080	0.234	0.011	<0.004	1.99	5.1	47	<1
						0.1	30.16	6.72	7.71	0.041														
						1	29.54	6.93	7.81	0.041														
						1.5	29.48	7.21	7.83	0.041														
						3	29.24	7.48	7.92	0.041														
						5	28.32	7.48	7.65	0.040														
						6	28.06	7.35	7.17	0.040														
						7	27.85	7.12	6.22	0.040														
						8	27.49	6.84	4.47	0.041														
						9	26.89	6.55	2.54	0.041														
						10	26.25	6.25	1.77	0.042														
						15	24.52	5.86	1.65	0.041														
						16	24.28	5.83	1.56	0.041														
						17	24.01	5.78	0.97	0.043														
						18	23.72	5.76	0.66	0.037														
						19	23.07	5.73	0.22	0.047														
						20	22.60	5.73	0.05	0.042														
						21	21.98	5.73	0.05	0.045														
						22	20.77	5.74	0.04	0.036														
						23	19.22	5.71	0.05	0.034														
						24	18.21	5.69	0.25	0.061														
						25	17.40	5.68	0.40	0.064														
						30	15.23	5.64	0.64	0.066														
						35	14.25	5.65	0.08	0.067														
						38	13.96	5.70	0.05	0.040														
Martin	3	A	42794	4.15	9.29	---	---	---	---	---	1.6	13	30.0	30.0	<1.0	<0.015	0.100	<0.150	0.015	<0.004	2.46	2.0	37	<1
						0.1	24.29	6.68	8.71	0.042														
						1	24.24	6.88	8.61	0.042														
						1.5	23.95	6.96	8.65	0.042														
						2	23.86	6.96	8.72	0.042														
						3	22.23	7.05	9.04	0.042														
						4	21.71	7.10	9.18	0.043														
						5	20.50	7.10	9.24	0.042														
						6	18.57	6.96	9.01	0.041														
						7	17.55	6.98	9.24	0.041														
						8	16.75	6.97	9.27	0.042														
						9	16.24	6.94	9.17	0.042														
						10	15.80	6.91	8.98	0.044														
						15	14.09	6.86	8.92	0.043														
						20	12.58	6.78	8.36	0.043														
						26.2	11.83	6.69	7.88	0.044														

Reservoir Water Quality Monitoring Program 1990-1995
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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Martin	3	A	83094	4.98	10.58	---	---	---	---	---	1.0	13	44.0	50.0	<1.0	<0.015	0.130	<0.150	0.013	<0.004	2.08	2.4	39	<1
						0.1	29.52	6.53	7.34	0.040														
						1	29.36	6.64	7.40	0.040														
						1.5	29.28	6.63	7.43	0.041														
						2	29.24	6.79	7.48	0.040														
						3	29.18	6.89	7.53	0.040														
						4	28.77	6.98	7.70	0.041														
						5	28.57	7.11	7.77	0.038														
						6	28.40	7.20	7.72	0.039														
						7	28.16	7.15	7.32	0.037														
						8	27.87	6.89	6.13	0.036														
						9	27.22	6.51	3.83	0.045														
						10	26.06	6.15	1.39	0.037														
						11	25.63	5.96	1.08	0.037														
						12	25.22	5.81	0.83	0.039														
						13	24.96	5.73	0.70	0.044														
						14	24.60	5.68	0.44	0.031														
						15	24.32	5.64	0.24	0.045														
						20	22.60	5.52	0.05	0.046														
						21	21.89	5.53	0.06	0.055														
						22	20.68	5.63	0.05	0.063														
						23	19.58	5.69	0.03	0.066														
						24	18.47	5.74	0.05	0.071														
						25	17.75	5.80	0.04	0.067														
						26.7	16.55	5.96	0.06	0.087														
Martin	4	A	42794	1.74	4.68	---	---	---	---	---	3.2	12	26.0	31.0	3.0	<0.015	0.054	0.283	0.020	<0.004	3.87	6.4	49	<1
						0.1	25.60	8.08	9.72	0.040														
						1	25.56	8.28	9.62	0.040														
						1.5	25.09	8.40	9.69	0.040														
						2	23.42	8.41	9.83	0.039														
						3	22.48	7.84	8.55	0.038														
						4	21.62	7.53	8.40	0.039														
						5	19.66	7.17	7.63	0.037														
						6	18.95	6.94	7.27	0.037														
						7	18.26	6.78	6.89	0.040														
						8	17.66	6.64	6.61	0.039														
						9	17.33	6.57	6.51	0.040														
						10	16.78	6.57	6.86	0.044														
						15	14.33	6.62	7.40	0.045														
						20	12.40	6.58	6.35	0.048														
						21	11.87	6.50	5.24	0.050														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Martin	4	A	83094	2.89	7.91	---	---	---	---	---	1.2	11	47.0	51.0	<1.0	<0.015	0.110	<0.150	0.027	<0.004	2.43	7.2	50	<1
						0.1	30.83	7.64	8.47	0.043														
						1	29.74	8.16	8.76	0.044														
						1.5	29.66	8.20	8.70	0.043														
						2	29.62	8.25	8.74	0.043														
						3	29.04	8.18	8.56	0.040														
						4	28.30	7.98	7.64	0.040														
						5	27.83	7.60	6.85	0.041														
						10	26.40	6.49	5.56	0.051														
						14	25.07	6.18	4.76	0.044														
						15	24.82	6.12	3.87	0.059														
						16	24.63	6.06	2.99	0.034														
						17	24.17	5.95	1.93	0.055														
						18	23.96	5.89	1.27	0.038														
						19	23.45	5.81	0.11	0.054														
						20	22.94	5.89	0.05	0.052														
						20.5	22.00	5.98	0.05	0.065														
Yates	1		4/20/90	0.89	3.6	---	----	---	---	----	14.0	10.0		65.0	2.0	<0.20	0.20	---	<0.02	<0.010	3.40	2.0	37	4*
						0.3	17.1	6.9	9.1	0.037														
						1.5	16.7	6.9	8.7	0.037														
						4.0	16.5	6.8	8.5	0.034														
						8.0	15.4	6.7	8.2	0.031														
						16.0	15.3	6.6	8.2	0.030														
Yates	1		8/21/90	1.55	6.2	---	----	---	---	----	4.0	10.0		45.0	2.0	<0.10	0.12	---	<0.02	<0.010	3.20	---	--	<1
						0.3	27.4	7.3	7.8	0.051														
						1.0	23.7	6.6	6.1	0.042														
						1.5	21.6	6.3	4.9	0.038														
						5.0	19.6	6.2	4.0	0.037														
						15.0	18.4	6.2	3.4	0.036														
Yates	2		8/21/90	0.45	1.8	---	----	---	---	----	17.0	53.0		133.0	18.0	0.20	<0.04	---	0.04	<0.010	4.10	---	--	1*
						0.3	28.5	6.8	4.3	0.174														
						1.0	28.2	6.9	3.4	0.174														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Yates	1	A	42694	1.93	7.90	---	---	---	---	---	3.1	15	32.0	32.0	<1.0	<0.015	0.170	0.179	0.014	0.005	1.89	3.0	41	3*
						0.1	19.62	6.58	9.45	0.049														
						1	18.18	6.77	9.15	0.048														
						1.5	17.15	6.79	9.02	0.048														
						3	15.49	6.79	8.67	0.045														
						5	14.32	6.72	8.63	0.044														
						10	13.52	6.64	8.45	0.045														
						15	13.31	6.65	8.27	0.045														
Yates	1	A	82994	1.77	5.40	---	---	---	---	---	4.0	33	52.0	100.0	11.0	<0.015	0.090	0.268	0.015	<0.004	2.21	5.9	48	1*
						0.1	27.66	6.65	7.98	0.050														
						1	26.19	6.75	8.34	0.052														
						1.5	23.70	6.55	5.82	0.047														
						2	23.07	6.33	5.26	0.044														
						3	22.23	6.13	3.95	0.042														
						4	22.00	6.08	3.81	0.041														
						5	21.87	6.07	3.63	0.042														
						10	21.29	5.88	3.36	0.046														
						15	21.08	5.78	3.06	0.036														
						15.8	21.05	5.75	3.03	0.039														
Yates	2	A	42694	0.49	1.97	---	---	---	---	---	21.0	29	47.0	62.0	10.0	<0.015	0.260	0.371	0.059	0.024	2.84	10.0	53	6*
						0.1	24.85	7.40	8.53	0.080														
						0.5	22.72	7.13	7.51	0.080														
						1	22.01	7.07	7.08	0.082														
						1.5	19.33	6.99	6.35	0.071														
						2	17.15	6.94	6.43	0.062														
						3	14.63	6.91	6.91	0.048														
						4	14.12	6.77	6.77	0.046														
						5	13.74	6.74	6.74	0.046														
						6	13.70	6.67	6.67	0.046														
Yates	2	A	82994	0.60	1.49	---	---	---	---	---	17.0	14	44.0	51.0	<1.0	<0.015	0.140	0.390	0.120	0.024	3.26	63.0	71	<1
						0	29.80	7.96	10.38	0.090														
						1	25.84	7.70	6.28	0.090														
						1.5	24.60	7.34	4.20	0.084														
						2	23.43	7.13	2.43	0.077														
						3	22.32	6.90	2.06	0.059														
						4	21.68	6.53	1.63	0.050														
						5	21.49	6.36	1.26	0.049														
						6	21.33	6.24	0.89	0.050														
						7	21.27	6.18	0.47	0.051														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Thurlow	1		4/25/90	1.00	4.0	---	----	---	---	----	14.0	10.0		62.0	3.0	<0.20	0.17	---	<0.02	<0.010	3.20	5.0	46	3*
						0.3	17.4	6.8	9.4	0.034														
						1.5	17.2	6.8	9.0	0.034														
						4.0	16.4	6.8	8.5	0.034														
						8.0	16.3	6.7	8.3	0.033														
						12.0	16.1	6.7	8.1	0.033														
Thurlow	1		8/21/90	1.57	6.3	---	----	---	---	----	4.0	13.0		60.0	<1.0	<0.10	0.14	---	<0.02	<0.010	2.30	---	--	1*
						0.3	26.2	6.7	7.3	0.039														
						1.0	22.7	6.4	5.6	0.039														
						1.5	21.3	6.3	4.7	0.039														
						5.0	20.5	6.2	4.5	0.038														
						13.0	20.1	6.2	4.3	0.038														
Thurlow	1	A	42694	3.49	10.7+	---	---	---	---	---	3.5	14	32.0	41.0	<1.0	<0.015	0.180	<0.150	0.008	<0.004	1.78	2.0	37	<1
						0.1	19.02	6.66	9.32	0.045														
						0.5	18.13	6.77	9.10	0.044														
						1	16.23	6.74	8.95	0.043														
						1.5	15.73	6.77	9.06	0.044														
						2	15.27	6.77	8.86	0.044														
						3	14.92	6.75	8.71	0.044														
						4	14.72	6.73	8.56	0.044														
						5	14.58	6.71	8.55	0.045														
						10	14.13	6.65	8.42	0.044														
						10.7	14.14	6.69	8.39	0.045														
Thurlow	1	A	82994	3.45	7.05	---	---	---	---	---	1.5	14	38.0	51.0	<1.0	<0.015	0.110	<0.150	0.018	<0.004	2.00	2.7	40	5*
						0	25.06	6.17	6.89	0.045														
						1	23.99	6.15	6.46	0.045														
						1.5	22.84	6.14	5.89	0.045														
						2	22.69	6.12	5.59	0.045														
						3	22.55	6.08	5.44	0.044														
						4	22.30	6.04	5.14	0.044														
						5	22.30	6.04	5.10	0.044														
						10	22.12	6.01	4.85	0.044														
						13	21.95	6.01	4.56	0.044														

Reservoir Water Quality Monitoring Program 1990-1995
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				00078			00010	00410	00300	95.000	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Aliceville	1	A	5/13/92	0.50	2.0	---	----	---	----	-----	23.0	38.0	---	116.0	17.0	<0.030	0.056	0.310	0.072	<0.004	6.76	17.6	59	4*
						0.3	24.7	6.8	10.2	0.140														
						1.0	24.4	6.7	9.5	0.142														
						1.5	24.1	6.5	9.3	0.142														
						2.0	23.7	6.4	8.9	0.147														
						5.0	22.9	6.2	8.0	0.142														
						10.0	21.2	6.0	5.9	0.137														
						12.0	20.7	6.0	5.1	0.138														
Aliceville	1	A	42695	0.24	---	---	---	---	---	---	61.0	22	41.0	81.0	52.0	<0.015	0.120	<0.150	0.110	0.021	7.10	3.3	42	240
						0.1	17.71	6.50	7.10	0.060														
						0.5	17.69	6.56	7.08	0.061														
						1	17.69	6.57	7.06	0.061														
						1.5	17.69	6.57	7.03	0.060														
						2	17.69	6.58	7.01	0.060														
						3	17.69	6.62	6.97	0.060														
						4	17.69	6.61	6.96	0.060														
						5	17.69	6.62	6.95	0.060														
						6	17.69	6.65	6.95	0.060														
						7	17.69	6.64	6.94	0.060														
						7.3	17.69	6.64	6.94	0.060														
Aliceville	1	B	42695	---	---	---	---	---	---	---	63.5	21	50.0	79.0	54.0	<0.015	0.130	0.171	0.140	0.020	7.11	2.7	40	150
						0.1	17.73	6.62	7.11	0.060														
						0.5	17.71	6.58	7.08	0.061														
						1	17.69	6.59	7.07	0.060														
						1.5	17.69	6.62	7.06	0.060														
						2	17.71	6.58	7.05	0.060														
						3	17.69	6.59	7.04	0.061														
						4	17.71	6.62	7.02	0.060														
						5	17.71	6.61	7.02	0.060														
						6	17.71	6.64	7.00	0.060														
						6.9	17.71	6.63	6.98	0.060														
Aliceville	1	A	8/18/92	0.57	2.3	---	----	---	---	-----	13.0	38.0	---	118.0	10.0	<0.015	0.006	0.602	0.055	<0.004	6.07	16.4	58	<2
						0.3	30.2	8.3	9.3	0.148														
						1.0	28.6	7.6	7.7	0.150														
						1.5	28.4	7.4	6.8	0.150														
						3.0	28.2	7.3	6.5	0.151														
						5.0	28.1	7.3	6.3	0.150														
						7.0	27.8	7.3	6.3	0.153														

Reservoir Water Quality Monitoring Program 1990-1995
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				00078			00010	00410	00300	95.000	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Aliceville	1	A	81795	0.76	1.91	---	---	---	---	---	14.0	46	49.6	107.0	10.0	<0.015	0.020	0.611	0.056	0.011	6.58	29.4	64	1*
						0.1	32.39	6.80	6.83	0.142														
						1	32.77	7.40	7.85	0.144														
						1.5	32.03	7.05	6.10	0.144														
						2	31.74	6.99	5.49	0.143														
						3	31.64	6.97	5.46	0.144														
						4	31.58	6.95	5.30	0.144														
						5	31.66	6.94	5.41	0.144														
						6	31.45	6.91	4.76	0.144														
						7	31.04	6.86	4.38	0.144														
						8	29.91	6.73	2.40	0.144														
						8.8	29.79	6.69	1.97	0.145														
Aliceville	1	B	81795	0.78	1.88	---	---	---	---	---	14.0	41	49.8	113.0	11.0	<0.015	0.023	0.254	0.024	0.009	6.00	28.3	63	4*
						0.2	33.66	8.13	8.71	0.143														
						1	32.62	7.69	7.31	0.143														
						1.5	32.64	7.56	7.45	0.143														
						2	32.70	7.55	7.54	0.144														
						3	32.03	7.28	6.21	0.144														
						4	31.60	7.14	5.60	0.144														
						5	31.23	7.01	4.70	0.145														
						6	31.10	6.95	4.49	0.144														
						7	30.88	6.90	4.00	0.144														
						8	30.49	6.84	3.37	0.144														
						8.8	29.71	6.74	1.75	0.146														
Gainesville	1	A	5/13/92	0.54	2.2	---	----	---	---	-----	20.0	38.0	---	108.0	15.0	<0.030	0.180	3.020	0.090	<0.004	7.79	9.2	52	3*
						0.3	23.5	5.7	8.3	0.129														
						1.0	23.3	5.9	8.2	0.128														
						1.5	23.3	6.0	8.2	0.129														
						4.0	23.0	6.0	7.8	0.129														
						8.0	22.7	6.0	7.5	0.129														
Gainesville	1	A	8/18/92	0.60	2.4	---	----	---	---		15.0	41.0	---	128.0	9.0	<0.015	0.046	0.692	0.045	<0.004	6.84	13.5	56	<2
						0.3	29.5	7.6	8.3	0.153														
						1.0	29.1	7.4	7.3	0.153														
						1.5	29.0	7.3	6.8	0.153														
						5.0	29.0	7.3	6.5	0.154														
						10.0	28.9	7.3	6.5	0.150														
						12.0	28.9	7.3	6.3	0.152														

Reservoir Water Quality Monitoring Program 1990-1995
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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	95.000 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Gainesville	1	A	42695	0.8	0.22	---	---	---	---	---	62.0	28	43.0	86.0	59.0	<0.015	0.160	0.166	0.060	0.011	6.29	10.7	54	120
						0.1	19.16	6.51	7.24	0.081														
						0.5	18.90	6.68	7.12	0.077														
						1	18.83	6.72	7.06	0.076														
						1.5	18.95	6.74	6.99	0.078														
						2	18.94	6.76	6.99	0.078														
						3	18.78	6.77	6.98	0.075														
						4	18.44	6.78	6.88	0.071														
						5	18.44	6.77	6.76	0.069														
Gainesville	1	A	81795	0.77	2.13	---	---	---	---	---	14.0	45	53.1	108.0	10.0	<0.015	0.140	0.316	0.030	0.014	5.36	25.1	62	25
						0.1	32.08	6.84	7.13	0.139														
						1	31.29	6.90	6.51	0.139														
						1.5	31.23	6.92	6.43	0.139														
						2	31.25	6.94	6.44	0.139														
						3	31.17	6.99	6.25	0.140														
						4	31.13	6.98	6.05	0.140														
						5	31.10	6.97	5.98	0.140														
						6	31.08	6.96	5.91	0.140														
						7	31.06	6.96	5.81	0.140														
						8	31.04	6.95	5.73	0.140														
						9	30.96	6.93	5.35	0.141														
						10	30.74	6.89	4.92	0.141														
						12	30.49	6.82	4.13	0.144														
						14	30.29	6.77	3.42	0.145														
						14.4	30.25	6.77	3.29	0.146														
Demopolis	1	A	5/20/92	0.96	3.8	---	----	---	---	-----	13.0	42.0	---	112.0	7.0	0.080	0.280	0.722	0.029	<0.004	5.68	5.2	47	1*
						0.3	27.3	7.8	9.3	0.197														
						1.0	26.3	7.5	8.1	0.193														
						1.5	26.2	7.4	7.9	0.191														
						5.0	25.5	7.3	7.2	0.179														
						10.0	25.0	7.2	6.9	0.168														
						15.0	24.3	7.1	5.4	0.166														
Demopolis	1	A	8/17/92	0.54	2.2	---	----	---	---		8.3	57.0	---	222.0	9.0	<0.015	0.158	0.658	0.035	0.004	3.61	14.6	57	<2
						0.3	32.2	8.7	10.0	0.271														
						1.0	30.7	8.2	8.2	0.287														
						1.5	30.3	7.8	6.9	0.289														
						5.0	30.0	7.5	6.0	0.293														
						10.0	30.0	7.5	5.9	0.290														
						15.0	29.9	7.5	5.6	0.270														

Reservoir Water Quality Monitoring Program 1990-1995
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				00078			00010	00410	00300	95.000	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Demopolis	1	A	42595	0.18	0.59	---	---	---	---	---	100+	33	58.0	119.0	155.0	<0.015	0.330	0.325	0.220	0.015	6.08	4.0	44	270
						0.1	19.79	6.84	6.54	0.123														
						1	19.81	6.99	6.55	0.124														
						1.4	19.81	7.01	6.52	0.125														
						2	19.81	7.00	6.48	0.125														
						3	19.81	7.03	6.45	0.125														
						4	19.81	7.04	6.43	0.124														
						5	19.81	7.06	6.41	0.124														
						6	19.81	7.05	6.40	0.124														
						7	19.79	7.06	6.36	0.124														
						7.6	19.79	7.06	6.35	0.124														
Demopolis	1	A	81795	0.97	2.82	---	---	---	---	---	10.1	44	80.9	199.0	10.0	<0.015	0.220	0.371	0.018	0.011	3.92	6.4	49	6*
						0.1	32.52	6.42	6.15	0.282														
						1	32.49	6.63	6.13	0.282														
						1.5	32.49	6.76	6.09	0.281														
						2	32.49	6.87	6.13	0.282														
						3	32.33	6.93	6.03	0.267														
						4	32.03	6.98	5.76	0.244														
						5	32.03	7.01	5.67	0.245														
						10	31.25	6.96	4.93	0.219														
						11	31.17	6.94	4.76	0.216														
						12	31.13	6.93	4.63	0.216														
						13	31.06	6.91	4.37	0.216														
						14	30.94	6.86	3.52	0.219														
Coffeeville	1	A	5/11/92	0.92	3.7	---	----	---	---	----	12.0	46.0	---	142.0	11.0	<0.030	0.360	0.581	0.044	0.009	10.70	6.7	49	1*
						0.3	25.0	7.1	8.9	0.193														
						1.0	23.7	7.2	8.9	0.194														
						1.5	23.1	7.2	8.9	0.193														
						2.0	22.9	7.3	8.5	0.194														
						4.0	22.8	7.3	8.3	0.194														
						6.0	22.7	7.3	8.3	0.194														
						8.0	22.7	7.3	8.3	0.194														
						10.0	22.6	7.3	8.2	0.194														

Reservoir Water Quality Monitoring Program 1990-1995
Tombigbee River Basin

Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	95.000 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Coffeeville	1	A	42595	0.15	0.47	---	---	---	---	---	100+	35	59.0	116.0	130.0	<0.015	0.460	0.212	0.200	0.018	5.92	7.5	50	177
						0.1	21.54	6.48	6.80	0.133														
						1	21.54	6.63	6.67	0.133														
						1.5	21.54	6.69	6.64	0.133														
						2	21.52	6.75	6.62	0.133														
						3	21.50	6.78	6.61	0.133														
						4	21.50	6.82	6.60	0.133														
						5	21.45	6.87	6.60	0.133														
						6	21.47	6.89	6.60	0.133														
						6.6	21.47	6.91	6.60	0.133														
Coffeeville	1	A	8/19/92	0.78	3.1	---	----	---	---	-----	13.0	39.0	---	162.0	9.0	<0.015	0.159	0.793	0.030	0.009	7.33	7.6	50	<2
						0.3	31.0	7.7	7.4	0.243														
						1.0	30.4	7.6	7.0	0.244														
						1.5	30.2	7.5	6.8	0.244														
						2.0	30.2	7.5	6.6	0.245														
						4.0	30.0	7.5	6.4	0.243														
						6.0	30.0	7.5	6.4	0.244														
						8.0	30.0	7.5	6.4	0.242														
						10.0	30.0	7.5	6.4	0.245														
Coffeeville	1	A	81695	0.59	1.93	---	---	---	---	---	17.0	43	62.1	155.0	14.0	<0.015	0.120	0.263	0.027	0.017	4.94	23.0	61	3*
						0.2	33.75	8.32	9.55	0.190														
						1	33.06	8.09	8.77	0.191														
						1.5	32.41	7.70	7.55	0.192														
						2	31.97	7.42	7.02	0.192														
						3	31.83	7.37	6.79	0.194														
						4	31.72	7.30	6.55	0.193														
						5	31.68	7.27	6.44	0.194														
						6	31.64	7.25	6.37	0.194														
						7	31.62	7.24	6.34	0.194														
						8	31.58	7.22	6.27	0.194														
						9	31.56	7.22	6.27	0.194														
						10	31.56	7.21	6.26	0.195														
						15	31.52	7.19	6.18	0.196														
						16	31.52	7.18	6.12	0.196														
						16.5	31.49	7.18	6.10	0.196														

Reservoir Water Quality Monitoring Program 1990-1995
Warrior River Basin

				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Bankhead	1	A	5/27/92	1.99	8.0	---	----	---	---	-----	1.7	49.0	---	140.0	<1.0	<0.020	<0.003	<0.150	<0.004	<0.004	<1.00	10.8	54	<2
						0.3	24.8	8.2	9.3	0.227														
						1.0	24.7	8.3	9.5	0.227														
						1.5	24.1	8.4	9.7	0.226														
						5.0	23.6	8.3	9.3	0.226														
						10.0	22.8	7.5	7.2	0.226														
						11.0	21.3	7.0	5.0	0.221														
						15.0	19.4	7.0	3.0	0.209														
						18.0	18.1	6.8	0.7	0.202														
Bankhead	1	B	5/27/92	2.01	8.0	---	----	---	---	-----	1.7	48.0	---	123.0	3.0	0.050	0.470	0.502	0.021	<0.004	2.59	8.9	52	<2
						0.3	25.0	8.3	9.4	0.227														
						1.0	24.5	8.4	9.6	0.227														
						1.5	24.3	8.4	9.7	0.227														
						5.0	23.6	8.4	9.4	0.227														
						10.0	22.0	7.3	5.7	0.224														
						15.0	19.5	7.0	3.2	0.210														
						18.0	18.1	6.9	0.9	0.202														
Bankhead	1	A	50494	3.04	6.40	---	---	---	---	---	2.3	35	78.0	124.0	1.0	<0.015	0.580	0.228	0.022	0.025	2.22	4.3	45	<1
						0.1	21.35	6.70	7.77	0.186														
						1	21.42	6.82	7.72	0.187														
						1.5	21.45	6.87	7.72	0.187														
						2	21.45	6.91	7.72	0.187														
						3	21.45	6.93	7.71	0.188														
						4	21.45	6.95	7.67	0.188														
						5	21.46	6.97	7.65	0.189														
						10	20.40	6.81	6.77	0.172														
						11	19.95	6.75	6.45	0.165														
						12	19.40	6.71	6.10	0.158														
						13	18.61	6.68	5.76	0.151														
						14	18.35	6.68	5.69	0.149														
						15	18.18	6.79	5.64	0.147														
						16	17.91	6.67	5.27	0.145														
						17	17.67	6.67	4.75	0.144														
						18	17.59	6.68	4.49	0.143														
						18.7	17.50	6.70	2.80	0.147														

Reservoir Water Quality Monitoring Program 1990-1995
Warrior River Basin

Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Bankhead	1	A	8/18/92	2.15	8.6	---	----	---	---	-----	2.1	46.0	---	158.0	3.0	<0.015	0.430	0.457	0.014	<0.004	5.78	10.0	53	<2
						0.3	28.6	6.9	6.4	0.221														
						1.0	28.5	7.0	5.9	0.221														
						1.5	28.4	7.1	5.6	0.222														
						5.0	28.3	7.1	5.3	0.222														
						10.0	28.2	7.0	4.4	0.225														
						13.0	27.8	6.9	2.0	0.238														
						14.0	27.0	6.9	0.5	0.252														
						15.0	27.2	6.9	0.6	0.249														
						20.0	24.3	7.1	0.5	0.273														
Bankhead	1	A	90794	3.23	5.86	---	---	---	---	---	1.5	44	92.0	161.0	1.0	<0.015	0.390	<0.150	0.014	<0.004	3.35	10.4	54	1*
						0.1	26.49	6.64	6.00	0.202														
						1	26.58	6.78	6.02	0.202														
						1.5	26.60	6.82	5.97	0.203														
						2	26.61	6.85	5.97	0.202														
						3	26.61	6.88	5.92	0.203														
						4	26.62	6.90	5.94	0.203														
						5	26.64	6.92	5.87	0.202														
						6	26.64	6.93	5.82	0.202														
						7	26.48	6.88	4.53	0.201														
						8	26.03	6.79	3.04	0.197														
						9	25.75	6.68	1.96	0.198														
						10	25.39	6.63	1.33	0.196														
						11	25.00	6.58	0.65	0.193														
						12	24.54	6.54	0.36	0.191														
						13	24.13	6.53	0.36	0.187														
						14	23.78	6.52	0.34	0.183														
						15	23.60	6.52	0.34	0.180														
						18.5	23.02	6.59	0.34	0.181														
Holt	1	A	5/28/92	2.86	11.4	---	----	---	---	-----	2.2	46.0	---	171.0	<1.0	0.060	0.520	0.308	0.017	<0.004	1.34	4.7	46	2*
						0.3	23.8	7.1	9.6	0.243														
						1.0	23.9	7.4	9.6	0.244														
						1.5	23.9	7.6	9.6	0.244														
						5.0	23.8	7.6	9.0	0.241														
						10.0	23.3	7.3	7.6	0.238														
						15.0	21.5	6.9	5.4	0.238														
						20.0	19.9	6.9	4.5	0.234														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Holt	1	A	8/18/92	2.48	9.9	---	----	---	---	-----	1.8	55.0	---	195.0	2.0	0.960	0.230	0.499	0.006	<0.004	6.18	5.7	48	<2
						0.3	29.0	6.9	5.7	0.276														
						1.0	28.9	7.1	5.6	0.276														
						1.5	28.7	7.1	5.4	0.277														
						5.0	28.7	7.2	5.4	0.277														
						10.0	28.6	7.2	4.7	0.276														
						15.0	28.5	7.1	4.0	0.276														
						20.0	28.5	7.0	3.0	0.279														
Holt	1	A	50394	2.04	4.55	---	---	---	---	---	3.2	31	75.0	119.0	2.0	<0.015	0.590	0.273	0.037	<0.004	2.25	9.0	52	<1
						0.1	21.44	6.75	8.61	0.169														
						1	21.40	6.98	8.50	0.170														
						1.5	21.38	7.02	8.46	0.171														
						2	21.16	7.01	8.04	0.170														
						3	20.99	6.98	7.73	0.170														
						4	20.91	6.96	7.58	0.170														
						5	20.87	6.96	7.60	0.170														
						10	20.70	6.93	7.28	0.170														
						15	20.00	6.85	6.66	0.170														
						20	18.54	6.80	5.98	0.170														
						22.2	18.38	6.77	5.71	0.170														
Holt	1	A	90694	1.82	4.70	---	---	---	---	---	2.0	45	103.0	188.0	1.0	<0.015	0.032	0.299	0.008	<0.004	3.87	14.2	57	<1
						0.1	28.30	6.88	7.12	0.230														
						1	27.96	7.10	7.08	0.230														
						1.5	27.85	7.10	6.73	0.231														
						2	27.80	7.13	6.27	0.231														
						3	27.59	7.05	5.15	0.231														
						4	27.54	7.00	4.65	0.231														
						5	27.50	6.97	4.45	0.231														
						10	27.44	6.92	3.46	0.231														
						14	27.23	6.80	2.11	0.229														
						15	27.14	6.77	1.59	0.227														
						19.8	27.01	6.73	0.88	0.228														
Warrior	1	A	5/20/92	1.03	4.1	---	----	---	---	-----	11.0	38.0	---	151.0	7.0	0.100	0.460	0.380	0.023	<0.004	5.27	3.9	44	3*
						0.3	25.5	6.8	8.2	0.256														
						1.0	24.8	6.9	8.1	0.256														
						1.5	24.7	7.0	8.1	0.255														
						2.0	24.6	7.0	8.0	0.255														
						5.0	24.6	7.0	8.0	0.255														
						9.5	24.6	7.0	7.9	0.255														

Reservoir Water Quality Monitoring Program 1990-1995
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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Warrior	1	A	8/17/92	1.22	4.9	---	----	---	---	-----	6.5	50.0	---	225.0	6.0	<0.015	0.330	0.460	0.017	<0.004	8.66	10.3	53	<2
						0.3	30.0	7.7	8.2	0.312														
						1.0	29.4	7.7	8.2	0.313														
						1.5	29.1	7.5	7.7	0.313														
						2.0	29.0	7.4	7.3	0.315														
						3.0	28.9	7.4	7.0	0.314														
						4.0	28.9	7.3	7.0	0.313														
						5.0	28.9	7.3	6.7	0.310														
						6.0	28.9	7.3	6.6	0.311														
						7.0	28.7	7.2	6.4	0.313														
Warrior	2	A	5/20/92	0.81	3.2	---	----	---	---	-----	13.0	36.0	---	199.0	11.0	0.110	0.490	0.458	0.027	<0.004	4.20	8.8	52	10*
						0.3	27.8	7.4	9.4	0.329														
						1.0	25.9	7.3	9.1	0.327														
						1.5	25.7	7.3	9.1	0.328														
						2.0	25.7	7.3	9.1	0.328														
						5.0	25.6	7.3	9.0	0.330														
						10.0	25.6	7.2	8.8	0.332														
Warrior	2	A	8/17/92	0.74	3.0	---	----	---	---	-----	7.9	48.0	---	215.0	9.0	<0.015	0.300	0.618	0.027	<0.004	2.68	10.4	54	<2
						0.3	30.8	7.8	8.6	0.296														
						1.0	28.9	7.6	8.0	0.295														
						1.5	28.8	7.5	7.8	0.296														
						2.0	28.7	7.5	7.6	0.297														
						5.0	28.5	7.3	7.1	0.296														
						10.0	28.4	7.3	6.8	0.300														
						14.0	28.2	7.2	6.3	0.305														
Warrior	1	A	50394	1.02	3.18	---	---	---	---	---	6.5	29	76.0	153.0	8.0	<0.015	0.570	0.154	0.019	0.033	2.02	10.0	53	10*
						0.1	22.29	6.42	8.42	0.206														
						1	22.25	6.66	8.32	0.207														
						1.5	22.23	6.76	8.24	0.207														
						2	22.23	6.80	8.18	0.206														
						3	22.23	6.83	8.12	0.207														
						4	22.22	6.86	8.08	0.207														
						5	22.20	6.87	8.06	0.206														
						7.4	22.11	6.89	7.93	0.206														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Warrior	1	A	90694	1.40	3.51	---	---	---	---	---	4.5	41	98.0	229.0	9.0	<0.015	0.360	0.370	0.009	<0.004	3.19	11.2	54	1*
						0.1	28.46	6.62	7.10	0.292														
						1	28.41	6.80	6.79	0.292														
						1.5	28.37	6.88	6.66	0.292														
						2	28.37	6.93	6.59	0.293														
						3	28.37	6.96	6.55	0.293														
						4	28.36	6.98	6.48	0.292														
						5	28.37	7.00	6.45	0.292														
						7.3	28.38	7.03	6.36	0.293														
Warrior	2	A	50394	0.97	2.78	---	---	---	---	---	7.9	30	74.0	155.0	10.0	<0.015	0.560	0.258	0.021	0.010	1.83	13.1	56	2*
						0.1	21.39	6.65	8.93	0.198														
						1	21.30	6.79	8.75	0.199														
						1.5	21.31	6.85	8.72	0.199														
						2	21.29	6.90	8.69	0.199														
						3	21.26	6.93	8.63	0.199														
						4	21.26	6.96	8.64	0.199														
						5	21.23	6.97	8.59	0.199														
						9.3	21.14	7.01	8.44	0.199														
Warrior	2	A	90694	0.83	2.21	---	---	---	---	---	8.4	39	92.0	218.0	9.0	<0.015	0.370	0.307	0.021	0.005	3.42	10.2	53	4*
						0.1	27.71	6.41	6.97	0.279														
						1	27.56	6.71	6.78	0.279														
						1.5	27.56	6.81	6.74	0.279														
						2	27.55	6.87	6.68	0.280														
						3	27.55	6.91	6.66	0.280														
						4	27.55	6.93	6.64	0.280														
						5	27.55	6.96	6.60	0.280														
						9.9	27.55	7.02	6.45	0.281														
Inland	1	A	5/19/92	4.54	18.2	---	----	---	---	-----	1.2	14.0	---	62.0	<1.0	0.070	0.590	0.632	0.006	<0.004	3.68	1.1	32	<2
						0.3	25.5	6.3	8.7	0.092														
						1.0	24.7	6.6	8.8	0.091														
						1.5	24.4	6.7	8.8	0.091														
						5.0	20.0	7.1	9.9	0.091														
						7.0	16.2	7.0	10.5	0.090														
						10.0	14.3	7.1	9.3	0.086														
						20.0	9.5	6.6	7.6	0.089														
						30.0	9.1	6.5	7.4	0.090														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Inland	1	A	8/19/92	4.20	16.8	---	----	---	---	-----	1.6	12.0	---	88.0	<1.0	<0.015	0.530	0.470	<0.004	<0.004	2.59	0.0	--	<2
						0.3	27.2	6.5	7.9	0.092														
						1.0	27.3	6.7	7.9	0.092														
						1.5	27.3	6.8	7.9	0.092														
						5.0	27.3	7.0	7.9	0.093														
						7.0	23.6	6.7	9.3	0.091														
						8.0	20.7	6.5	8.2	0.088														
						10.0	15.8	6.8	7.6	0.086														
						20.0	9.4	6.3	4.6	0.088														
						30.0	8.6	6.3	4.6	0.089														
						42.5	8.5	6.3	4.3	0.088														
Inland	1	A	50494	4.03	11.16	---	---	---	---	---	1.2	9	40.0	67.0	<1.0	<0.015	0.600	<0.150	0.006	<0.004	2.20	2.0	37	<1
						0.1	21.28	6.70	8.72	0.076														
						1	21.10	6.81	8.66	0.076														
						1.5	21.04	6.83	8.64	0.076														
						2	21.03	6.85	8.66	0.076														
						3	21.01	6.87	8.63	0.076														
						4	20.89	6.87	8.56	0.076														
						5	16.11	6.58	8.36	0.078														
						6	14.60	6.52	8.06	0.080														
						7	13.35	6.46	7.85	0.082														
						8	12.30	6.43	7.85	0.084														
						9	11.11	6.42	8.18	0.086														
						10	10.41	6.41	8.39	0.086														
						15	8.21	6.44	8.65	0.088														
						20	7.37	6.42	8.75	0.089														
						25	7.01	6.39	8.71	0.090														
						30	6.80	6.39	8.73	0.089														
						35	6.68	6.37	8.70	0.089														
						37	6.64	6.39	8.67	0.089														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Inland	1	A	90794	3.81	10.13	---	---	---	---	---	1.5	10	51.0	78.0	<1.0	<0.015	0.320	<0.150	<0.004	<0.004	2.91	2.7	40	<1
						0.1	27.58	6.60	7.78	0.086														
						1	27.18	6.75	7.79	0.086														
						1.5	27.02	6.80	7.78	0.086														
						2	26.93	6.86	7.75	0.086														
						3	26.87	6.90	7.70	0.086														
						4	26.83	6.93	7.73	0.086														
						5	26.82	6.95	7.71	0.086														
						6	26.77	6.98	7.68	0.085														
						7	26.67	6.94	6.89	0.086														
						8	22.83	6.55	4.65	0.082														
						9	19.77	6.14	3.64	0.081														
						10	16.05	6.13	4.34	0.082														
						11	14.38	6.10	4.42	0.083														
						12	12.74	6.09	4.81	0.085														
						13	11.33	6.09	5.36	0.086														
						14	10.56	6.11	5.52	0.087														
						15	9.74	6.11	5.81	0.087														
						20	8.06	6.11	5.36	0.090														
						25	7.57	6.14	6.05	0.090														
						30	7.38	6.12	5.39	0.090														
						35	7.13	6.12	5.50	0.090														
						40	7.01	6.13	5.89	0.091														
						45	7.01	6.14	5.79	0.090														
						50	6.99	6.13	5.00	0.091														
						52	6.99	6.12	3.43	0.091														
Smith	1		4/25/90	2.71	10.8	---	----	---	----	----	2.0	10.0		48.0	1.0	<0.10	0.30	---	<0.02	<0.010	3.00	3.0	41	<1
						0.3	20.0	8.7	10.7	0.043														
						1.5	18.2	8.9	11.2	0.042														
						4.0	16.9	8.7	11.0	0.041														
						10.0	13.7	7.5	7.2	0.042														
						15.0	11.4	7.1	7.3	0.045														
						20.0	10.3	6.8	7.4	0.044														
						25.0	8.5	6.6	5.0	0.049														
						30.0	7.9	6.6	1.3	0.049														
						35.0	7.5	6.4	0.2	0.058														
						60.0	6.7	6.6	0.1	0.061														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Smith	1		5/13/91	2.95	11.8	---	----	---	---	-----	----	12.0		35.0	<1.0	<0.01	0.17	0.29	0.02	<0.005	3.40	5.5	47	--
						0.3	21.0	6.9	9.7	0.040														
						1.0	20.9	7.5	9.6	0.040														
						5.0	19.8	7.2	8.0	0.039														
						10.0	16.9	6.9	6.2	0.033														
						15.0	15.4	6.7	6.6	0.031														
						20.0	11.8	6.6	7.2	0.036														
						30.0	9.5	6.5	3.1	0.046														
						40.0	8.1	6.4	0.1	0.051														
						68.0	7.3	6.7	0.1	0.079														
Smith	1		8/28/90	3.53	14.1	---	----	---	---	-----	<1.0	13.0		37.0	1.0	<0.10	0.12	---	<0.02	<0.010	3.40	2.9	41	<1
						0.3	31.7	7.8	7.5	0.040														
						1.5	31.3	7.9	7.6	0.040														
						3.0	30.8	8.2	7.6	0.040														
						5.0	30.2	8.2	7.7	0.042														
						7.0	27.1	7.2	8.6	0.048														
						9.0	21.4	6.4	2.0	0.044														
						15.0	12.9	6.5	2.3	0.037														
						25.0	8.4	6.4	2.3	0.046														
						30.0	7.7	6.4	0.4	0.049														
Smith	1		8/19/91	3.28	13.1	---	----	---	---	-----	8.0	16.0		29.0	1.0	<0.01	0.14	0.64	0.01	<0.005	3.10	6.5	49	<1
						0.3	30.6	6.8	7.6	0.042														
						1.0	30.2	7.3	7.9	0.044														
						1.4	30.0	7.5	7.9	0.044														
						5.0	29.4	7.8	7.9	0.042														
						8.0	23.5	6.1	3.4	0.036														
						9.0	21.1	6.0	0.1	0.037														
						10.0	19.9	6.3	0.4	0.039														
						15.0	16.2	6.2	2.6	0.040														
						20.0	11.9	6.2	4.5	0.040														
						25.0	10.2	6.2	3.5	0.046														
						30.0	9.0	6.1	0.5	0.044														
						60.0	7.4	6.7	0.0	0.077														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Smith	2		4/25/90	2.47	9.9	---	----	---	----	-----	2.0	10.0		49.0	1.0	<0.10	0.20	---	0.02	<0.010	2.30	3.0	41	<1
						0.3	21.5	8.4	10.4	0.037														
						1.5	18.4	9.0	11.3	0.036														
						5.0	16.2	7.7	9.5	0.033														
						10.0	13.3	6.8	7.8	0.034														
						15.0	11.6	6.6	7.8	0.033														
						20.0	9.6	6.7	7.7	0.036														
						22.0	8.7	6.6	7.3	0.037														
						24.0	8.4	6.5	7.1	0.038														
						26.0	7.9	6.5	6.7	0.039														
						35.0	7.1	6.6	5.0	0.040														
Smith	2		5/13/91	2.27	9.1	---	----	---	---	-----	----	11.0		28.0	1.0	<0.01	0.06	0.34	0.02	<0.005	2.90	4.7	46	--
						0.3	21.2	6.6	9.5	0.030														
						1.0	20.8	6.8	9.3	0.031														
						5.0	18.9	6.7	7.8	0.033														
						10.0	16.9	6.6	7.1	0.031														
						30.0	9.3	6.4	7.1	0.032														
						35.0	8.6	6.3	3.2	0.036														
						40.0	7.8	6.2	0.3	0.045														
						65.0	7.1	6.6	0.1	0.077														
Smith	2		8/28/90	2.81	11.2	---	----	---	---	-----	<1.0	13.0		56.0	<1.0	<0.10	<0.04	---	<0.02	<0.010	2.90	2.5	40	<1
						0.3	31.3	7.6	7.9	0.038														
						1.5	30.7	8.1	7.9	0.039														
						3.0	30.3	8.1	7.9	0.038														
						5.0	29.3	7.9	8.0	0.038														
						7.0	25.8	6.3	1.4	0.046														
						10.0	18.8	6.3	0.1	0.040														
						15.0	12.8	6.3	2.9	0.034														
						20.0	10.9	6.4	4.5	0.033														
						40.0	7.2	6.6	2.5	0.038														
						50.0	6.8	6.8	0.2	0.044														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Smith	2		8/19/91	2.57	10.3	---	----	---	---	-----	8.0	14.0		28.0	<1.0	<0.01	0.01	0.68	0.02	<0.005	3.40	4.3	45	2*
						0.3	30.2	6.6	7.7	0.039														
						1.0	29.8	6.9	7.8	0.039														
						1.4	29.7	7.0	7.8	0.039														
						5.0	28.8	6.9	7.0	0.039														
						6.0	26.9	6.2	3.4	0.042														
						7.0	23.6	6.0	0.3	0.038														
						10.0	18.6	6.0	0.8	0.035														
						15.0	15.7	6.1	3.1	0.035														
						20.0	11.9	6.2	5.4	0.035														
						30.0	8.9	6.2	2.7	0.039														
						40.0	7.7	6.4	0.1	0.057														
						60.0	7.3	6.7	0.1	0.078														
Smith	3		4/25/90	2.45	9.8	---	----	---	---	-----	2.0	10.0		44.0	<1.0	<0.10	0.15	---	<0.02	<0.010	2.40	4.0	44	<1
						0.3	21.5	7.6	9.9	0.032														
						1.5	18.6	8.1	10.5	0.032														
						5.0	16.5	7.6	9.9	0.030														
						10.0	13.8	7.2	7.9	0.029														
						20.0	10.2	6.8	7.5	0.036														
						30.0	7.8	6.6	6.3	0.038														
						40.0	7.1	6.4	4.5	0.039														
						45.0	7.0	6.4	4.2	0.041														
Smith	3		5/13/91	3.17	12.7	---	----	---	---	-----	----	13.0		25.0	<1.0	<0.01	0.03	0.38	0.03	<0.005	1.90	4.9	46	--
						0.3	21.7	6.7	9.4	0.026														
						1.0	21.5	6.9	9.5	0.026														
						5.0	19.7	6.8	8.3	0.024														
						10.0	16.7	6.7	7.4	0.036														
						20.0	12.2	6.6	7.0	0.032														
						30.0	9.5	6.5	6.3	0.033														
						35.0	8.7	6.3	3.3	0.036														
						40.0	8.3	6.3	0.2	0.045														
						50.0	7.7	6.5	0.1	0.066														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Smith	3		8/28/90	2.07	8.3	---	----	---	---	-----	<1.0	12.0		40.0	3.0	<0.10	<0.04	---	<0.02	<0.010	2.90	2.5	40	<1
						0.3	31.4	8.1	8.3	0.036														
						1.5	30.3	8.6	8.4	0.036														
						3.0	30.0	8.6	8.3	0.036														
						5.0	28.9	7.9	8.1	0.036														
						7.0	26.3	6.9	3.0	0.041														
						9.0	20.8	6.4	0.2	0.040														
						15.0	13.3	6.4	1.9	0.025														
						20.0	10.7	6.4	2.7	0.034														
						30.0	7.8	6.3	0.5	0.038														
						39.0	7.4	6.3	0.1	0.045														
Smith	3		8/19/91	3.13	12.5	---	----	---	---	-----	8.0	15.0		15.0	2.0	<0.01	0.06	0.70	0.02	<0.005	3.50	3.7	44	<1
						0.3	30.0	6.5	7.7	0.036														
						1.0	30.1	6.8	7.7	0.036														
						1.4	29.8	6.9	7.7	0.035														
						5.0	28.8	7.0	7.5	0.036														
						6.0	27.0	6.2	4.1	0.038														
						7.0	24.4	6.1	0.6	0.041														
						10.0	19.0	6.1	1.2	0.034														
						15.0	15.8	6.1	2.5	0.034														
						20.0	12.3	6.2	3.8	0.033														
						30.0	9.3	6.2	0.5	0.042														
						40.0	8.2	6.6	0.1	0.074														
Smith	1	A	5/12/93	7.52	12.4	---	----	---	---	-----	1.4	14.0	29.0	54.0	<1.0	<0.015	0.051	<0.150	2.360	<0.004	2.91	1.4	34	<1
						0.3	21.4	6.9	8.2	0.045														
						1.0	20.8	6.8	8.3	0.045														
						1.5	20.7	6.8	8.3	0.045														
						2.0	20.6	6.7	8.3	0.046														
						5.0	19.1	6.7	8.3	0.043														
						10.0	14.7	6.3	7.3	0.043														
						15.0	10.3	6.0	6.9	0.047														
						20.0	9.0	6.0	5.8	0.053														
						25.0	8.6	5.7	5.1	0.049														
						30.0	8.4	5.5	3.8	0.045														
						35.0	8.2	5.4	0.6	0.052														
						40.0	8.0	6.1	0.1	0.072														
						50.0	7.7	6.3	0.1	0.092														
						60.0	7.6	6.4	0.0	0.094														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Smith	1	B	5/12/93	7.74	12.4	---	----	---	---	-----	1.3	15.0	30.0	46.0	<1.0	<0.015	0.043	<0.150	0.016	0.004	2.82	1.3	33	<1
						0.3	22.0	6.9	8.1	0.045														
						1.0	21.0	6.9	8.2	0.045														
						1.5	20.8	6.9	8.2	0.046														
						2.0	20.8	6.9	8.2	0.046														
						5.0	19.3	6.8	8.3	0.043														
						10.0	14.8	6.4	7.3	0.043														
						15.0	10.7	6.2	6.9	0.048														
						20.0	9.0	6.0	5.7	0.053														
						25.0	8.7	5.9	5.0	0.047														
						30.0	8.4	5.7	4.0	0.038														
						35.0	8.2	5.7	1.3	0.040														
						40.0	8.0	5.9	0.1	0.074														
						50.0	7.7	6.0	0.1	0.077														
						58.0	7.7	6.0	0.1	0.088														
Smith	1	A	8/24/93	4.46	11.3	---	----	---	---	-----	1.5	12.0	38.0	38.0	<1.0	<0.015	0.190	<0.150	<0.004	0.006	2.36	1.7	36	<1
						0.3	31.8	7.0	7.3	0.045														
						1.0	31.3	7.1	7.4	0.045														
						1.5	31.1	7.2	7.4	0.045														
						2.0	31.0	7.2	7.4	0.045														
						5.0	29.3	7.2	8.0	0.046														
						7.0	24.9	7.0	8.4	0.043														
						9.0	19.4	6.7	4.2	0.044														
						10.0	17.6	6.7	2.3	0.044														
						15.0	11.9	6.6	4.8	0.050														
						20.0	9.5	6.5	5.4	0.050														
						25.0	8.9	6.4	4.0	0.049														
						30.0	8.7	6.4	1.5	0.049														
						35.0	8.4	6.4	0.6	0.050														
						44.0	8.0	6.6	0.5	0.079														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Smith	2	A	5/12/93	3.85	6.8	---	----	---	---	-----	1.8	12.0	28.0	45.0	1.0	<0.015	0.039	<0.150	0.027	0.008	2.31	4.1	44	1*
						0.3	22.4	7.1	7.9	0.040														
						1.0	22.1	7.1	8.7	0.040														
						1.5	22.0	7.1	8.6	0.040														
						2.0	21.9	7.1	8.7	0.040														
						5.0	17.1	6.4	7.6	0.038														
						10.0	14.5	6.1	6.7	0.036														
						15.0	10.1	6.1	7.6	0.042														
						20.0	8.9	6.2	7.5	0.044														
						30.0	8.5	6.1	6.9	0.041														
						35.0	8.2	6.0	5.4	0.038														
						40.0	8.0	5.9	2.7	0.044														
						50.0	7.7	6.2	0.1	0.082														
						60.0	7.7	6.4	0.1	0.083														
						69.0	7.7	6.4	0.1	0.104														
Smith	2	A	8/24/93	4.15	8.7	---	----	---	---	-----	1.2	13.0	35.0	43.0	3.0	<0.015	0.025	0.232	<0.004	0.004	3.10	2.3	39	<1
						0.3	31.0	7.3	7.5	0.042														
						1.0	30.7	7.4	7.6	0.042														
						1.5	30.5	7.4	7.6	0.042														
						2.0	30.5	7.4	7.6	0.042														
						3.0	30.4	7.4	7.5	0.042														
						5.0	28.9	7.4	8.0	0.043														
						6.0	27.3	6.8	6.3	0.045														
						7.0	24.1	6.4	1.8	0.045														
						8.0	22.7	6.3	0.7	0.045														
						10.0	17.9	6.2	0.6	0.040														
						15.0	11.6	6.4	4.7	0.039														
						20.0	9.5	6.5	6.9	0.040														
						30.0	8.6	6.5	6.2	0.040														
						35.0	8.4	6.4	3.3	0.041														
						40.0	8.2	6.4	0.7	0.050														
						50.0	7.9	6.7	0.5	0.084														
						55.0	7.9	6.7	0.5	0.086														

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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Smith	3	A	5/12/93	3.18	7.1	---	----	---	---	-----	2.3	12.0	27.0	40.0	2.0	<0.015	0.016	<0.150	0.039	<0.004	2.11	5.0	46	<1
						0.3	23.6	7.7	8.2	0.036														
						1.0	22.5	7.6	8.1	0.035														
						1.5	22.1	7.7	8.1	0.036														
						2.0	22.0	7.7	8.3	0.035														
						5.0	17.4	6.6	7.2	0.031														
						10.0	15.0	6.4	6.9	0.048														
						20.0	8.9	6.4	8.1	0.042														
						30.0	8.4	6.3	7.5	0.042														
						40.0	8.1	6.1	5.4	0.042														
						45.0	8.0	6.0	2.0	0.048														
Smith	3	A	8/24/93	3.52	8.3	---	----	---	---	-----	1.4	13.0	35.0	31.0	1.0	<0.015	0.008	<0.150	0.010	0.005	2.49	2.3	39	<1
						0.3	31.2	7.2	7.3	0.039														
						1.0	30.7	7.3	7.5	0.039														
						1.5	30.3	7.3	7.6	0.039														
						2.0	30.2	7.3	7.5	0.039														
						5.0	29.1	7.1	7.6	0.039														
						6.0	27.8	6.7	4.0	0.041														
						7.0	25.4	6.5	0.9	0.043														
						8.0	22.4	6.4	1.0	0.038														
						10.0	18.4	6.3	0.7	0.036														
						15.0	12.7	6.4	3.1	0.040														
						20.0	9.9	6.5	6.0	0.041														
						25.0	9.1	6.5	6.2	0.038														
						30.0	8.7	6.5	5.2	0.040														
						35.0	8.5	6.4	2.6	0.041														
						40.0	8.4	6.4	0.6	0.047														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Lewis Smith	1	A	81595	2.35	8.75	---	---	---	---	---	1.7	16	16.6	---	1.6	0.005	0.024	0.225	0.007	0.002	4.46	3.3	42	---
						0	30.74	7.14	7.52	0.051														
						1	30.74	7.19	7.53	0.051														
						2	30.76	7.23	7.48	0.051														
						3	30.74	7.26	7.48	0.052														
						4	29.73	7.53	7.94	0.052														
						5	29.19	7.64	7.83	0.052														
						6	28.68	7.55	7.63	0.053														
						7	27.00	7.38	7.01	0.052														
						8	23.12	6.57	2.95	0.047														
						9	20.04	6.26	1.46	0.045														
						10	18.23	6.23	1.52	0.045														
						11	16.70	6.23	1.89	0.045														
						12	15.18	6.28	2.58	0.049														
						13	13.93	6.30	2.84	0.051														
						14	12.31	6.34	3.66	0.053														
						15	11.47	6.38	4.28	0.056														
						16	10.94	6.40	4.72	0.055														
						17	10.41	6.43	5.17	0.056														
						18	10.09	6.43	5.36	0.056														
						19	9.85	6.44	5.42	0.055														
						20	9.51	6.45	5.51	0.056														
						25	8.55	6.42	4.49	0.055														
						30	7.89	6.35	3.16	0.054														
						35	7.54	6.29	2.28	0.054														
						40	7.31	6.24	1.52	0.053														
						45	7.02	6.23	1.54	0.057														
						50	6.87	6.28	1.55	0.063														
						55	6.85	6.28	1.50	0.066														
						60	6.79	6.34	1.51	0.071														
						70	6.84	6.48	1.55	0.101														

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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Lewis Smith	2	A	81595	3.37	8.82	---	---	---	---	---	1.4	13	15.4	---	1.0	0.009	0.118	0.145	0.005	0.000	3.18	2.5	40	---
						0	30.74	7.45	7.40	0.045														
						1	30.69	7.25	7.41	0.045														
						2	30.57	7.26	7.46	0.045														
						3	30.42	7.29	7.52	0.046														
						4	29.93	7.41	7.65	0.046														
						5	29.31	7.52	7.38	0.047														
						6	28.40	7.21	6.68	0.047														
						7	27.16	6.97	5.73	0.048														
						8	24.58	6.59	2.89	0.047														
						9	21.18	6.34	0.74	0.045														
						10	18.68	6.20	0.15	0.044														
						11	16.73	6.30	0.20	0.042														
						12	14.96	6.31	0.70	0.041														
						13	13.39	6.15	1.71	0.039														
						14	12.10	6.10	2.67	0.038														
						15	11.24	6.12	3.46	0.037														
						20	9.21	6.18	5.36	0.038														
						25	8.18	6.22	5.50	0.040														
						30	7.54	6.23	4.73	0.042														
						35	7.15	6.22	3.27	0.043														
						40	6.84	6.17	0.93	0.046														
						45	6.68	6.31	0.18	0.051														
						50	6.60	6.35	0.09	0.054														
						55	6.56	6.18	0.08	0.057														
						60	6.57	6.37	0.18	0.066														
						65	6.58	6.40	0.08	0.088														

Reservoir Water Quality Monitoring Program 1990-1995
Warrior River Basin

Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Lewis Smith	3	A	81595	3.28	8.66	---	---	---	---	---	2.1	15	16.1	---	1.2	0.023	0.056	0.181	0.006	0.001	3.52	1.7	36	---
						0	30.66	7.11	7.30	0.041														
						1	30.70	7.12	7.14	0.041														
						2	30.72	7.22	7.12	0.041														
						3	30.69	7.11	7.14	0.041														
						4	29.68	7.13	7.17	0.042														
						5	28.92	7.02	6.56	0.044														
						6	28.38	6.85	5.36	0.047														
						7	27.01	6.56	3.64	0.047														
						8	23.94	6.32	0.52	0.047														
						9	20.54	6.23	0.10	0.048														
						10	17.70	6.18	0.07	0.046														
						11	15.99	6.16	0.29	0.043														
						12	14.37	6.17	0.85	0.041														
						13	13.07	6.13	1.42	0.039														
						14	11.83	6.11	2.12	0.038														
						15	11.00	6.12	2.92	0.037														
						20	9.11	6.24	4.82	0.036														
						25	8.18	6.25	4.21	0.039														
						30	7.55	6.18	2.73	0.042														
						35	7.20	6.12	0.32	0.049														
						40	7.06	6.22	0.12	0.052														
						44	7.02	6.35	0.07	0.054														
Tuscaloosa	1		4/25/90	1.87	7.5	---	----	---	---	----	2.0	8.0		61.0	1.0	<0.10	0.13	---	<0.02	<0.010	3.00	1.0	31	1*
						0.3	20.4	7.0	9.9	0.054														
						1.5	18.0	6.9	9.2	0.054														
						5.0	16.3	6.7	8.1	0.055														
						10.0	14.3	6.4	6.9	0.055														
						15.0	12.9	6.3	6.8	0.058														
						20.0	11.5	6.3	6.0	0.063														
						25.0	10.5	6.3	4.9	0.068														
						30.0	9.9	6.3	4.0	0.075														
Tuscaloosa	1		5/14/91	1.54	6.2	---	----	---	---	-----	----	11.0		51.0	1.0	<0.01	0.08	0.56	0.03	<0.005	3.70	1.9	37	--
						0.3	23.2	6.4	8.1	0.047														
						1.0	22.1	6.5	8.1	0.047														
						5.0	19.0	6.4	6.4	0.051														
						10.0	17.6	6.3	5.9	0.052														
						15.0	13.7	6.3	6.6	0.057														
						20.0	12.2	6.3	6.7	0.063														
						30.0	11.8	6.3	5.3	0.067														

Reservoir Water Quality Monitoring Program 1990-1995
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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	·00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Tuscaloosa	1		8/28/90	4.27	17.1	---	----	---	---	-----	<1.0	10.0		59.0	1.0	<0.10	<0.04	---	<0.02	<0.010	2.10	1.9	37	4*
						0.3	30.5	6.9	7.4	0.060														
						1.5	30.5	7.0	7.4	0.060														
						3.0	30.6	7.0	7.2	0.060														
						5.0	27.8	7.0	9.6	0.061														
						7.0	21.4	6.3	4.6	0.057														
						9.0	17.6	6.1	2.0	0.052														
						15.0	13.6	6.1	3.1	0.053														
						20.0	12.2	6.2	1.8	0.060														
						25.0	11.8	6.3	0.2	0.065														
						29.0	11.5	6.5	0.1	0.083														
Tuscaloosa	1		8/20/91	3.14	12.6	---	----	---	---	-----	10.0	13.0		38.0	1.0	<0.01	0.10	0.64	0.02	0.013	4.10	2.7	40	5*
						0.3	29.3	6.5	7.6	0.056														
						1.0	29.4	6.8	7.6	0.055														
						1.4	29.3	6.8	7.5	0.056														
						2.0	29.3	6.9	7.5	0.056														
						5.0	26.3	6.1	2.8	0.059														
						7.0	20.0	5.7	0.2	0.051														
						10.0	18.4	5.8	1.7	0.052														
						15.0	14.3	6.0	3.4	0.059														
						20.0	12.6	6.1	3.1	0.063														
						30.0	12.0	6.3	0.1	0.076														
Tuscaloosa	2		5/14/91	0.24	1.0	---	----	---	---	-----	----	10.0		51.0	21.0	<0.01	0.06	0.51	0.04	<0.005	4.00	1.5	34	--
						0.3	19.4	6.2	8.4	0.044														
						1.0	18.4	6.3	8.2	0.045														
						5.0	18.3	6.4	8.2	0.040														
						10.0	17.9	6.4	7.9	0.040														
						11.5	17.9	6.3	7.9	0.041														
Tuscaloosa	2		8/20/91	2.25	9.0	---	----	---	---	-----	15.0	20.0		70.0	3.0	<0.01	0.04	0.99	0.03	0.008	5.90	4.4	45	6*
						0.3	28.5	6.4	7.2	0.090														
						1.0	28.8	6.8	7.2	0.090														
						1.4	28.8	6.8	7.2	0.090														
						2.0	28.9	6.8	7.2	0.090														
						5.0	24.3	6.2	0.1	0.085														
						7.0	20.2	6.5	0.1	0.094														
						10.0	18.5	6.6	0.0	0.086														
						12.0	17.1	6.7	0.0	0.072														

Reservoir Water Quality Monitoring Program 1990-1995
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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Tuscaloosa	1	A	5/12/93	4.52	9.3	---	----	---	---	-----	1.2	12.0	34.0	68.0	<1.0	<0.015	0.007	<0.150	0.023	0.005	2.26	1.3	33	<1
						0.3	21.9	6.3	7.9	0.067														
						1.0	21.9	6.4	7.8	0.067														
						1.5	21.9	6.4	7.8	0.067														
						2.0	21.9	6.4	7.8	0.067														
						4.0	20.8	6.4	7.7	0.070														
						5.0	19.2	6.4	7.9	0.071														
						6.0	17.3	6.4	7.9	0.066														
						7.0	15.6	6.3	7.8	0.067														
						8.0	14.3	6.2	7.6	0.067														
						9.0	13.3	6.2	7.5	0.065														
						10.0	11.3	6.1	7.6	0.066														
						20.0	9.8	6.0	7.4	0.067														
						30.0	9.7	6.0	7.1	0.061														
Tuscaloosa	1	A	8/25/93	5.04	9.7	---	----	---	---	-----	1.0	<1.0	41.0	52.0	<1.0	<0.015	0.038	<0.150	0.004	<0.004	2.17	1.7	36	1*
						0.3	31.4	6.9	7.3	0.064														
						1.0	31.3	6.9	7.3	0.064														
						1.5	31.2	6.9	7.4	0.063														
						2.0	31.1	6.9	7.3	0.063														
						5.0	29.2	6.8	8.2	0.061														
						6.0	26.7	6.7	7.6	0.061														
						7.0	22.9	6.5	5.3	0.063														
						8.0	19.6	6.3	4.6	0.064														
						9.0	17.9	6.3	4.6	0.063														
						10.0	16.4	6.3	4.6	0.064														
						11.0	15.1	6.3	4.9	0.065														
						12.0	13.8	6.3	5.3	0.067														
						13.0	12.9	6.4	5.4	0.068														
						14.0	12.1	6.3	5.6	0.069														
						15.0	11.7	6.3	5.8	0.068														
						20.0	10.6	6.3	5.6	0.065														
						25.0	10.3	6.3	5.2	0.065														
						30.0	10.2	6.3	3.3	0.069														
						31.0	10.2	6.3	3.0	0.070														

Reservoir Water Quality Monitoring Program 1990-1995
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				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Tuscaloosa	2	A	5/13/93	1.66	3.5	---	----	---	---	-----	4.2	15.0	37.0	81.0	4.0	<0.015	<0.003	<0.150	0.026	<0.004	2.75	3.4	43	3*
						0.3	23.9	6.7	7.8	0.075														
						1.0	23.8	6.7	7.6	0.075														
						1.5	23.8	6.7	7.5	0.075														
						2.0	23.8	6.7	7.4	0.075														
						3.0	21.1	6.2	6.0	0.081														
						4.0	20.1	6.1	5.5	0.079														
						5.0	18.2	5.9	4.9	0.073														
						6.0	17.7	5.9	4.4	0.068														
						7.0	16.6	5.8	3.8	0.067														
						8.0	14.6	5.9	4.2	0.074														
						9.0	11.6	5.9	5.1	0.083														
						10.0	11.0	6.0	5.3	0.083														
						12.0	10.8	6.0	5.4	0.084														
Tuscaloosa	2	A	8/25/93	2.89	5.4	---	----	---	---	-----	2.0	22.0	45.0	81.0	1.0	<0.015	0.008	<0.150	0.008	0.007	2.39	1.5	35	1*
						0.3	30.9	6.9	7.5	0.100														
						1.0	30.9	6.9	7.5	0.100														
						1.5	30.9	7.0	7.5	0.100														
						2.0	30.9	7.0	7.4	0.100														
						3.0	30.9	7.0	7.4	0.100														
						4.0	29.5	6.5	3.9	0.105														
						5.0	28.2	6.3	1.1	0.105														
						6.0	26.5	6.2	0.7	0.072														
						10.0	16.2	6.9	0.4	0.124														
						12.5	13.5	6.9	0.4	0.112														
Tuscaloosa	2	B	8/25/93	2.89	5.2	---	----	---	---	-----	2.4	19.0	45.0	86.0	1.0	<0.015	0.019	<0.150	0.009	0.009	2.10	3.9	44	<1
						0.3	31.1	7.3	7.5	0.100														
						1.0	31.0	7.3	7.5	0.100														
						1.5	30.9	7.2	7.5	0.100														
						2.0	30.8	7.1	7.5	0.100														
						3.0	30.6	7.0	7.4	0.100														
						4.0	30.5	6.8	7.3	0.100														
						5.0	28.7	6.3	2.5	0.107														
						6.0	27.3	6.3	0.4	0.106														
						10.0	16.0	6.9	0.4	0.126														
						12.5	13.5	6.9	0.4	0.112														

Reservoir Water Quality Monitoring Program 1990-1995
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Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Tuscaloosa	1	A	50394	3.13	5.30	---	---	---	---	---	2.9	10	28.0	48.0	<1.0	<0.015	0.067	<0.150	0.013	0.021	2.52	2.0	37	<1
						0.1	21.99	6.22	8.04	0.056														
						1	21.99	6.30	8.02	0.056														
						1.5	21.88	6.42	7.96	0.055														
						2	21.79	6.42	7.95	0.056														
						3	21.76	6.45	7.94	0.056														
						4	21.72	6.47	7.89	0.056														
						5	18.04	6.21	6.05	0.059														
						6	15.46	6.20	6.17	0.058														
						7	14.83	6.16	6.23	0.058														
						8	14.32	6.17	6.50	0.059														
						9	13.87	6.23	6.67	0.061														
						10	13.43	6.25	6.80	0.062														
						11	12.68	6.27	6.98	0.062														
						12	11.25	6.33	7.40	0.065														
						13	10.38	6.35	7.70	0.066														
						14	9.75	6.37	7.69	0.069														
						15	9.72	6.37	7.71	0.071														
						30	8.81	6.37	6.84	0.076														
						30.9	8.82	6.40	6.82	0.076														

Reservoir Water Quality Monitoring Program 1990-1995
Warrior River Basin

				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Tuscaloosa	1	A	90694	4.32	7.37	---	---	---	---	---	1.2	10	45.0	57.0	<1.0	<0.015	0.043	<0.150	<0.004	<0.004	2.86	4.8	46	<1
						0.1	28.66	6.44	7.36	0.068														
						1	28.52	6.54	7.35	0.068														
						1.5	28.24	6.65	7.38	0.067														
						2	28.11	6.67	7.38	0.067														
						3	28.08	6.70	7.37	0.067														
						4	27.96	6.72	7.28	0.067														
						5	27.82	6.73	7.02	0.067														
						6	24.55	5.86	0.93	0.060														
						7	21.29	5.89	0.49	0.059														
						8	18.95	5.88	0.44	0.059														
						9	17.03	5.88	0.47	0.059														
						10	15.77	5.92	0.89	0.059														
						11	14.89	5.93	1.35	0.059														
						12	14.04	5.96	2.06	0.059														
						13	13.16	5.99	2.78	0.061														
						14	12.76	5.99	3.24	0.063														
						15	12.02	6.02	3.66	0.065														
						20	10.28	6.16	4.08	0.073														
						25	9.83	6.20	3.13	0.075														
						26	9.77	6.20	2.65	0.075														
						27	9.77	6.21	2.38	0.076														
						28	9.71	6.21	1.64	0.077														
						29	9.71	6.22	0.93	0.081														
						30	9.62	6.27	0.60	0.082														
						31.5	9.60	6.33	0.45	0.084														
Tuscaloosa	2	A	50394	1.85	3.85	---	---	---	---	---	3.7	12	38.0	46.0	1.0	<0.015	0.018	0.241	0.009	0.007	2.11	5.0	46	1*
						0.1	22.81	6.27	7.89	0.068														
						1	22.45	6.44	7.86	0.069														
						1.5	22.40	6.53	7.82	0.069														
						2	22.38	6.56	7.76	0.070														
						3	22.19	6.60	7.41	0.070														
						4	17.74	6.27	4.96	0.068														
						5	16.45	6.16	4.53	0.064														
						6	15.13	6.14	4.82	0.061														
						7	14.89	6.13	5.10	0.060														
						8	14.35	6.14	5.29	0.059														
						9	13.50	6.12	4.72	0.060														
						10	12.92	6.12	4.39	0.062														
						12.9	12.02	6.17	3.39	0.066														

Reservoir Water Quality Monitoring Program 1990-1995
Warrior River Basin

Reservoirs	Sta	Rep	Date MMDDY	00078 Secchi m	Photic-zone m	Depth m	00010 Temp degC	00410 pH units	00300 DO mg/l	00095 SpCon mS/cm	82078 Turb NTU	00410 Alk mg/l	00900 Hard mg/l	00515 TDS mg/l	00530 TSS mg/l	00610 NH3-N mg/l	00620 NO3+NO2 mg/l	00625 TKN mg/l	00650 TP mg/l	00660 PO4-P mg/l	00680 TOC mg/l	32211 Chl.a ug/l	85329 TSI	31613 Colif. per 100ml
Tuscaloosa	2	A	90694	2.31	5.53	---	---	---	---	---	2.4	19	58.0	97.0	2.0	<0.015	0.433	<0.150	0.010	<0.004	2.80	5.6	47	<1
						0.1	28.84	6.62	7.69	0.108														
						1	28.87	6.79	7.62	0.107														
						1.5	28.79	6.86	7.54	0.107														
						2	28.57	6.96	7.53	0.107														
						3	28.23	6.93	7.06	0.106														
						4	27.99	6.85	5.77	0.104														
						5	26.66	6.43	0.45	0.177														
						6	24.10	6.50	0.39	0.171														
						7	21.19	6.59	0.41	0.121														
						8	18.35	6.76	0.39	0.113														
						9	16.66	6.81	0.40	0.113														
						10	15.30	6.85	0.40	0.111														
						12.9	14.31	6.88	0.40	0.110														

Reservoir Water Quality Monitoring Program 1990-1995
Yellow River Basin

				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Jackson	1		4/19/90	2.93	11.7	---	----	---	---	----	2.0	4.0		49.0	3.0	<0.10	<0.04	---	<0.04	<0.010	4.90	---	--	<1
						0.3	21.2	7.2	9.0	0.017														
						1.5	21.2	7.1	8.9	0.017														
						3.5	21.1	7.0	9.0	0.017														
Jackson	1		8/27/90	3.50+	3.5	---	----	---	---	----	1.0	5.0		15.0	3.0	<0.10	<0.04	---	<0.02	<0.010	4.30	2.2	38	<1
						0.3	32.2	6.9	7.7	0.020														
						1.5	30.8	7.9	7.9	0.021														
						3.0	30.8	8.4	8.2	0.021														
Jackson	1	A	4/28/93	3.75+	3.8+	---	----	---	---	-----	0.8	6.0	41.0	17.0	<1.0	<0.015	0.016	0.510	0.009	<0.004	3.74	0.7	27	<1
						0.1	22.8	6.4	9.3	0.022														
						0.5	22.8	6.5	9.0	0.022														
						1.0	22.7	6.4	9.0	0.022														
						1.5	22.5	6.5	9.0	0.022														
						2.0	22.2	6.6	9.1	0.021														
						2.5	22.0	6.6	9.4	0.021														
						3.0	22.0	6.8	9.4	0.021														
						3.5	22.0	7.4	9.5	0.021														
Jackson	1	A	8/10/93	3.87	4.0+	---	----	---	---	----	2.6	9.0	30.0	27.0	5.0	<0.015	0.130	<0.150	0.015	<0.004	4.34	3.5	43	1*
						0.1	30.8	6.4	7.0	0.023														
						1.0	29.8	6.3	6.6	0.024														
						1.5	29.7	6.3	7.0	0.025														
						2.0	29.6	6.3	6.8	0.023														
						3.0	29.5	6.3	7.0	0.022														
						3.8	29.6	6.3	5.3	0.022														
Lake Jackson	1	A	50995	3.83+	4+	---	---	---	---	---	1.3	5	5.0	26.0	<1.0	<0.015	0.030	0.297	0.060	<0.004	3.70	2.1	38	3*
						0	25.64	6.63	7.92	0.020														
						0.5	25.64	6.56	7.93	0.020														
						1	25.64	6.58	7.95	0.020														
						1.5	25.64	6.58	7.96	0.020														
						2	25.64	6.62	7.99	0.020														
						2.5	25.64	6.63	8.00	0.020														
						3	25.64	6.65	8.01	0.020														
						3.5	25.64	6.70	8.00	0.020														
						3.7	25.16	6.35	5.83	0.021														

Reservoir Water Quality Monitoring Program 1990-1995
Yellow River Basin

				00078			00010	00410	00300	00095	82078	00410	00900	00515	00530	00610	00620	00625	00650	00660	00680	32211	85329	31613
Reservoirs	Sta	Rep	Date MMDDY	Secchi m	Photic-zone m	Depth m	Temp degC	pH units	DO mg/l	SpCon mS/cm	Turb NTU	Alk mg/l	Hard mg/l	TDS mg/l	TSS mg/l	NH3-N mg/l	NO3+NO2 mg/l	TKN mg/l	TP mg/l	PO4-P mg/l	TOC mg/l	Chl.a ug/l	TSI	Colif. per 100ml
Jackson	1	A	82995	4.1 +	4.1+	---	---	---	---	---	1.1	8	5.4	33.0	<1.0	<0.015	0.030	<0.150	0.055	0.004	4.06	2.7	40	<1
						0.1	30.72	6.45	7.53	0.020														
						1	30.74	6.55	7.54	0.020														
						1.5	30.68	6.66	7.53	0.020														
						2	30.66	6.76	7.55	0.021														
						3	30.45	7.23	7.79	0.021														
						3.4	30.33	8.31	8.65	0.023														

Appendix B

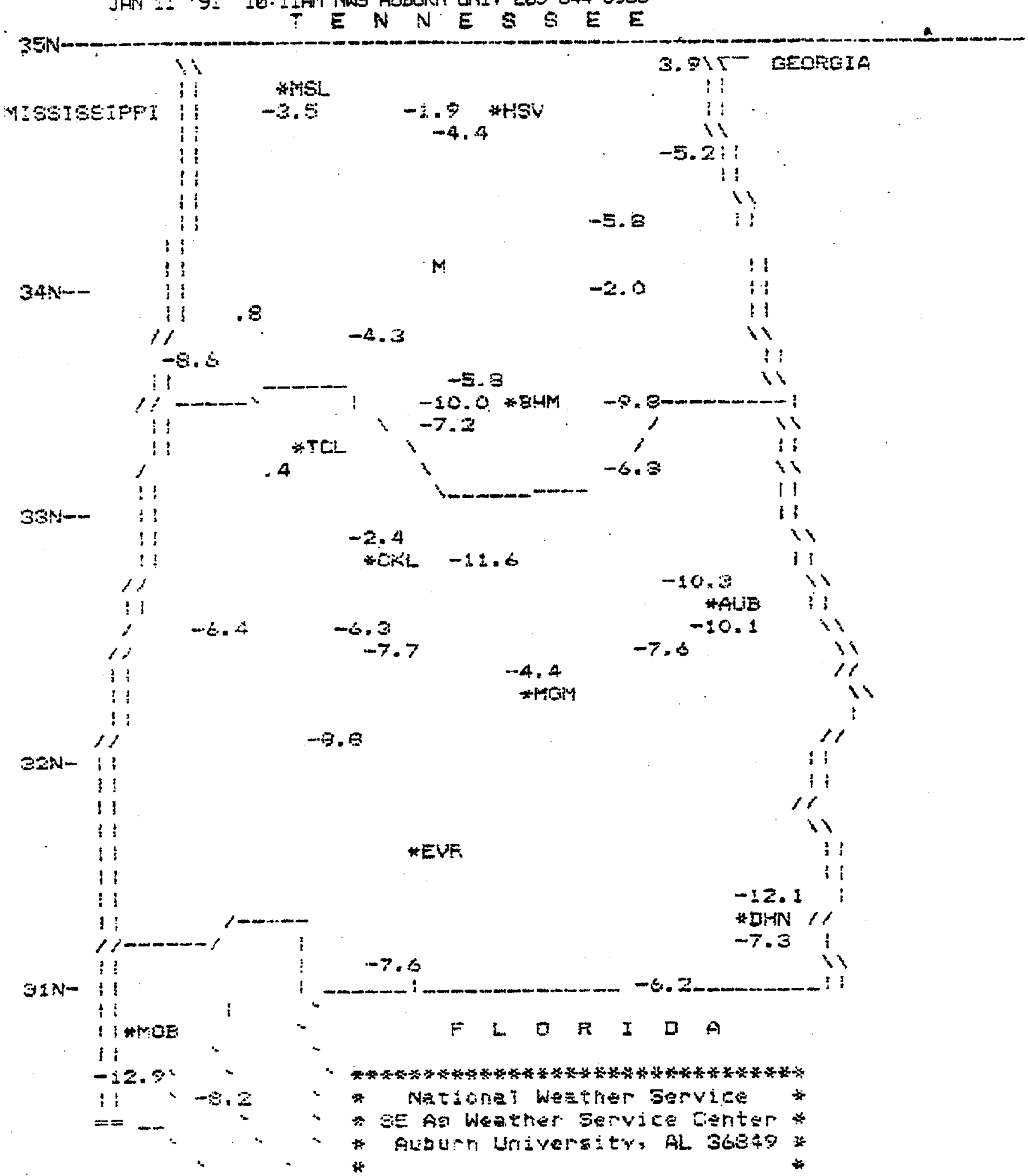
National Weather Service Data
1990-1995

NATIONAL WEATHER SERVICE
SE AG WEATHER SERVICE CENTER
AUBURN, AL

ALABAMA PRECIPITATION SUMMARY

FOR THE PERIOD: SUNDAY APRIL 1, 1990
THRU: FRIDAY AUGUST 31, 1990

STATION	ACTUAL TOTAL	NORMAL TOTAL	DIFF	PERCENT NORMAL
Birmingham Airport	12.35	22.38	-10.03	55
Muscle Shoals	16.68	20.21	-3.53	83
Anniston	11.42	21.26	-9.84	54
Gadsden	19.38	21.37	-1.99	91
Birmingham City	13.17	20.34	-7.17	65
Pinson	16.17	22.01	-5.84	73
Centreville	19.82	22.25	-2.43	89
Tuscaloosa	21.91	21.50	+.41	102
Montgomery	15.37	19.78	-4.41	78
Selma	13.60	21.34	-7.74	64
Mobile	17.47	30.37	-12.90	58
Dothan	17.13	24.46	-7.33	70
Winfield	22.76	21.92	+.84	104
Brewton	20.70	28.25	-7.55	73
Thorsby	11.53	23.16	-11.63	50
Geneva	20.17	26.37	-6.20	76
Sand Mountain	14.98	20.82	-5.84	72
Fairhope	21.47	29.65	-8.18	72
Auburn (AG)	12.63	22.72	-10.09	56
Belle Mina	18.42	20.33	-1.91	91
Headland	12.36	24.46	-12.10	51
Marion Junction	15.38	21.68	-6.30	71
Milstead	13.56	21.21	-7.65	64
Camden	15.15	23.99	-8.84	63
Demopolis	15.61	21.98	-6.37	71
Huntsville (AG)	17.06	21.42	-4.36	80
Camp Hill	12.37	22.68	-10.31	55
Ashland	14.60	21.45	-6.85	68
Bridgeport	25.05	21.15	+3.90	118
Vernon	13.87	22.45	-8.58	62
Valley Head	17.47	22.64	-5.17	77
Jasper	17.76	22.01	-4.25	81



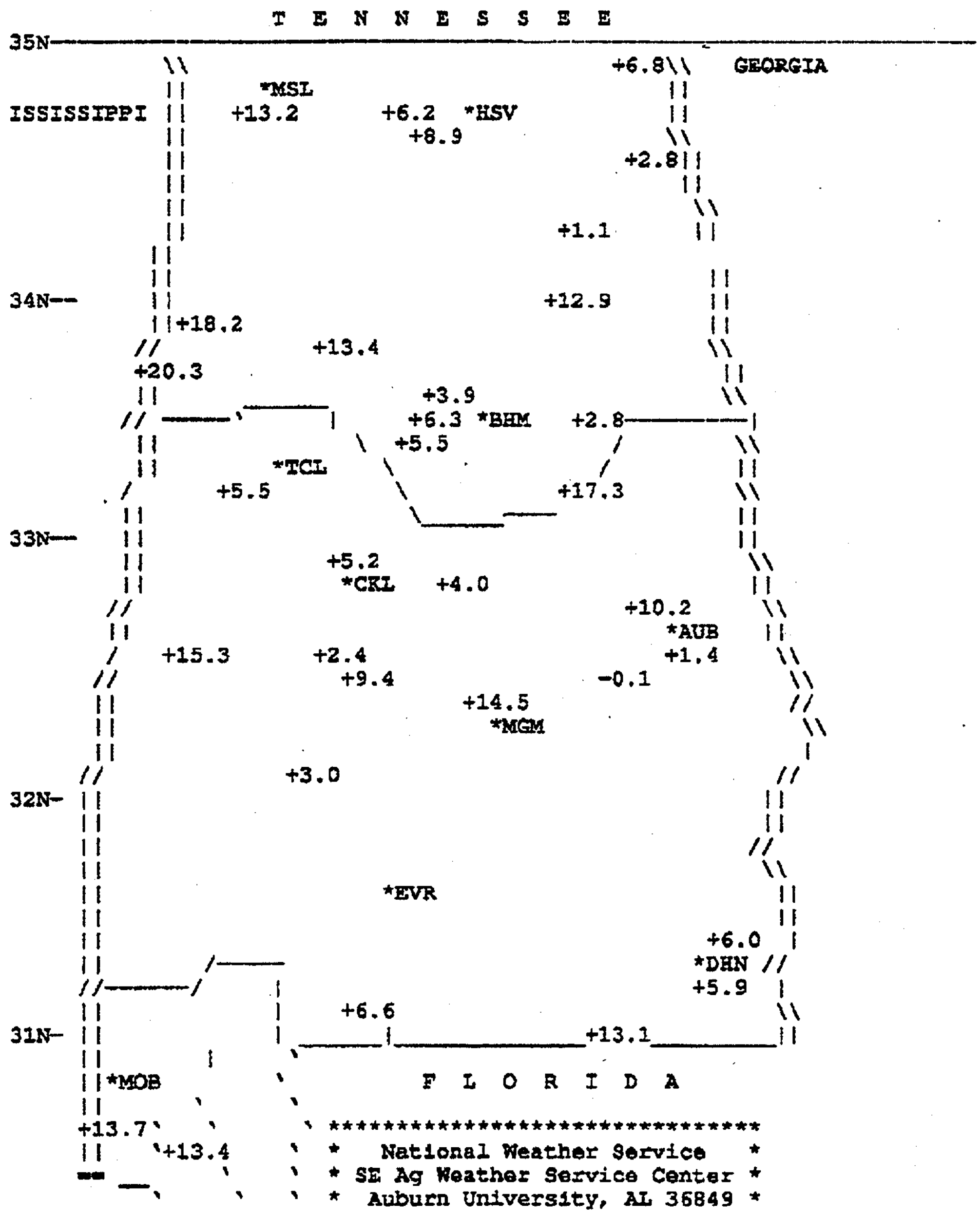
National Weather Service
SE Ag Weather Service Center
Auburn University, AL 36849
Departure From Normal Precip
SUNDAY APRIL 1, 1990
To
FRIDAY AUGUST 31, 1990

NATIONAL WEATHER SERVICE
SE AGRICULTURAL WEATHER CENTER
AUBURN UNIVERSITY, AL

WEATHER SUMMARY FOR ALABAMA
FOR THE PERIOD Friday March 1, 1991 to Saturday August 31, 1991

STATION	AIR TEMPERATURE HI	LO	AVG	DFN	PRECIPITATION PERIOD TOTAL	DAYS	MSG DAYS	AVG 4 IN SOIL TEMP	AVG DAILY PAN EVAP	MSG SOIL TEMP DAYS	MSG EVAP DAYS
Anniston	96	30	72	+2	30.90	79	0		.		
Ashland	94	25	70	-1	45.83	83	0	0	.00	184	184
Auburn (AG)	93	30	72	+1	30.99	81	0	76	.19	3	17
Belle Mina	100	30	71	+2	32.98	70	0	76	.00	0	184
Birmingham Airp	98	29	73	+3	35.28	83	0		.		
Birmingham City	95	32	73	+2	32.41	82	0		.		
Brewton	99	27	74	+1	41.04	82	0	80	.00	1	184
Bridgeport	96	26	69	+1	35.25	76	0	0	.00	184	184
Camden	96	30	73	+1	34.23	76	0	77	.00	0	184
Camp Hill	96	25	71	+1	40.01	80	0	79	.17	3	26
Centreville	96	31	73	+0	34.57	74	0		.		
Demopolis	98	32	74	+3	43.83	72	0	0	.19	184	23
Dothan	97	35	76	+3	35.80	89	0		.		
Fairhope	97	36	75	+1	48.97	85	0	79	.19	0	13
Gadsden	97	30	72	+2	41.19	72	0		.		
Geneva	95	27	72	-1	45.62	85	0	73	.00	1	184
Headland	96	32	74	+1	35.95	87	0	75	.19	3	18
Huntsville (AG)	100	29	72	+2	37.06	62	0	0	.22	184	29
Jasper	99	27	70	+2	42.19	88	0	0	.00	184	184
Marion Junction	96	29	73	+1	30.93	76	0	77	.00	3	184
Milstead	96	27	73	+2	27.54	69	0	76	.22	2	54
Mobile	96	38	76	+1	50.56	93	0		.		
Montgomery	99	27	74	+2	40.21	66	0		.		
Muscle Shoals	100	30	72	+3	39.61	72	0		.		
Pinson	99	26	71	+3	32.62	77	0		.		
Sand Mountain	93	29	69	+1	28.59	73	0	72	.16	0	15
Selma	97	33	75	+1	37.63	60	0		.		
Thorsby	98	30	71	+1	34.56	66	0	77	.19	0	17
Tuscaloosa	100	30	74	+3	33.46	59	0		.		
Valley Head	94	24	67	+2	32.35	75	0	0	.00	184	184
Vernon	97	22	71	+1	49.84	67	0	0	.00	184	184
Winfield	100	24	70	-1	46.85	73	0	75	.21	1	25

1

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*********************************
*   National Weather Service    *
* SE Ag Weather Service Center  *
*  Auburn University, AL 36849  *
*                               *
*                               *
* Departure from Normal Precip  *
* Inches                        *
*    Friday     March  1, 1991  *
*                  To           *
*  Saturday    August 31, 1991  *
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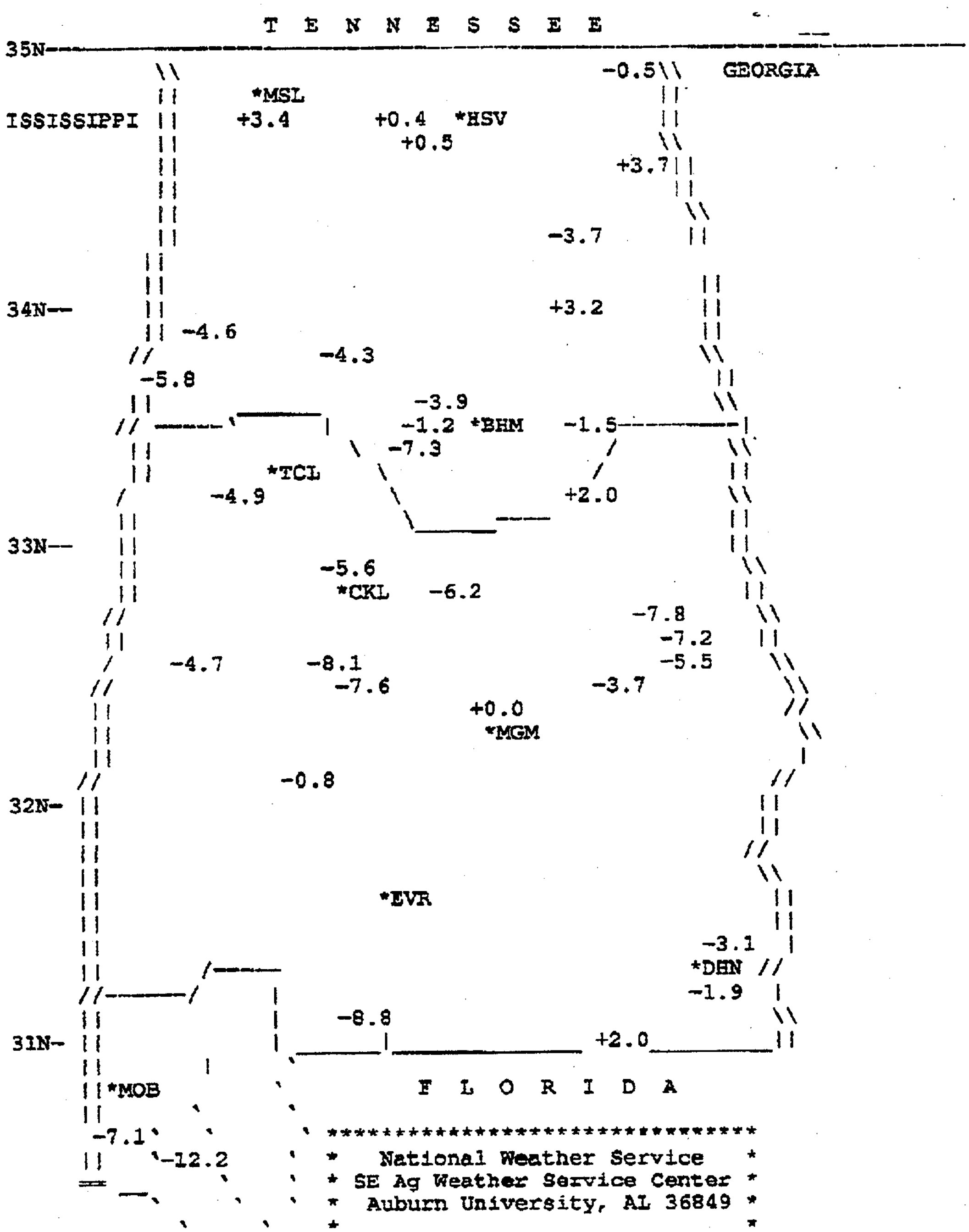
NATIONAL WEATHER SERVICE
SE AGRICULTURAL WEATHER CENTER
AUBURN UNIVERSITY, AL
WEATHER SUMMARY FOR ALABAMA
FOR THE PERIOD Sunday March 1, 1992 TO Monday August 31, 1992

STATION	AIR TEMPERATURE HI	LO	AVG	DFN	NUM DAYS AT OR ABOVE 90	100	PRECIPITATION TOTAL	DFN	DAYS	AVG 4 IN SOIL TEMP	AVG DAILY PAN EVAP
Anniston	96	25	69	-1	22	0	26.39	-1.50	62		
Ashland	94	23	66	-2	12	0	32.22	+2.02	72		
Auburn	98	25	71	-1	41	0	22.20	-7.17	63		
Auburn_AG	98	25	71	-1	41	0	23.84	-5.53	67		
Belle_Mina	95	23	67	-2	16	0	28.36	+0.38	63		.21
Birmingham_AP	95	25	69	-1	32	0	27.33	-1.24	67	75	
Birmingham_City	97	25	70	-1	24	0	21.24	-7.33	55		
Brewton	101	27	71	-1	64	2	26.51	-8.83	62		
Bridgeport	95	22	66	-2	12	0	29.56	-0.50	64	79	
Camden	96	28	70	-2	42	0	28.26	-0.82	62		
Camp_Hill	98	23	68	-3	31	0	22.23	-7.85	58	75	
Centreville	98	27	70	+0	32	0	25.05	-5.59	63		.19
Demopolis	98	27	70	-2	50	0	23.39	-4.68	53		
Dothan	97	32	73	+0	52	0	27.68	-1.93	59		.20
Fairhope	96	34	73	-1	44	0	23.87	-12.21	65		
Gadsden	96	25	68	-2	14	0	32.23	+3.24	57	79	.21
Geneva	95	29	71	-3	31	0	33.13	+2.04	68		
Headland	98	30	72	-1	54	0	26.71	-3.06	60	69	
Huntsville_AG	95	22	68	-1	20	0	29.62	+0.54	63	73	.21
Jasper	93	23	67	-2	15	0	25.06	-4.26	69		.20
Marion_Junction	95	28	69	-2	30	0	20.04	-8.12	57		
Milstead	98	29	69	-1	35	0	24.81	-3.74	59	76	
Mobile	99	34	74	-1	52	0	28.36	-7.12	64		.22
Montgomery	98	30	72	-2	52	0	27.46	+0.01	57		
Muscle_Shoals	95	24	69	-1	27	0	30.71	+3.36	59		
Pinson	95	23	68	-1	31	0	25.36	-3.91	65		
Sand_Mountain	91	21	66	-1	5	0	24.15	-3.73	70		
Selma	97	29	71	-2	41	0	19.75	-7.57	43	69	.16
Thorsby	99	25	69	-1	32	0	22.96	-6.22	46		
Tuscaloosa	97	27	71	-1	47	0	24.09	-4.90	57	74	.21
Valley_Head	93	19	65	-1	10	0	33.38	+3.72	84		
Vernon	95	21	68	-2	24	0	23.67	-5.85	46		
Winfield	95	21	67	-1	30	0	24.52	-4.64	53	73	.22



National Weather Service
SE Ag Weather Service Center
Auburn University, AL 36849

Departure from Normal Precip

Sunday March 1, 1992
To
Monday August 31, 1992

NATIONAL WEATHER SERVICE
SE AGRICULTURAL WEATHER CENTER
AUBURN UNIVERSITY, AL
WEATHER SUMMARY FOR ALABAMA
FOR THE PERIOD Monday March 1, 1993 TO Tuesday August 31, 1993

STATION	AIR TEMPERATURE HI	LO	AVG	DFN	NUM DAYS AT OR ABOVE 90	100	PRECIPITATION TOTAL	DFN	DAYS	AVG 4 IN SOIL TEMP	AVG DAILY PAN EVAP
Anniston	100	12	71	+0	65	2	23.53	-4.55	55		
Ashland	99	8	67	-3	48	0	23.75	-4.81	57		
Auburn (AG)	101	15	72	+1	77	1	22.38	-7.19	52	75	.22
Belle Mina	100	12	68	-1	60	1	25.43	-1.40	64	74	
Birmingham Airp	102	2	71	+0	75	8	16.70	-12.30	55		
Brewton	99	17	71	-2	82	0	33.57	-0.88	59		
Bridgeport	98	10	67	-1	57	0	26.75	-1.68	57		
Camden	97	15	71	-2	77	0	28.99	-2.25	54	74	
Camp Hill	100	12	68	-3	70	1	24.70	-5.08	56	77	.20
Centreville	98	15	71	-2	63	0	23.80	-5.59	58		
Demopolis	101	17	71	-1	77	1	23.97	-4.51	50		.20
Dothan	100	22	74	+1	84	1	16.29	-13.61	45		
Fairhope	96	27	73	-2	62	0	34.70	-0.89	66	78	.21
Gadsden	97	11	69	-1	44	0	15.56	-12.68	57		
Geneva	95	20	71	-2	59	0	23.55	-9.00	57	75	
Headland	99	20	71	-2	85	0	19.91	-9.99	46	74	.23
Huntsville (AG)	104	12	70	+1	70	3	28.55	+0.35	60		.21
Jasper	100	9	68	-1	58	2	22.22	-6.54	57		
Marion Junction	98	15	70	-2	66	0	21.77	-6.73	65	76	
Milstead	99	20	70	+0	73	0	22.32	-5.31	56		.26
Mobile	97	21	73	-2	65	0	32.42	-4.43	65		
Montgomery	101	17	73	+0	87	7	25.77	+0.07	58		
Muscle Shoals	102	17	70	+1	67	5	23.66	-2.77	65		
Pinson	102	2	70	+2	76	9	17.15	-11.61	56		
Sand Mountain	97	11	67	-1	40	0	20.64	-6.86	57		.16
Selma	97	19	72	-2	73	0	23.48	-4.76	44		
Thorsby	99	12	70	-1	68	0	24.54	-5.97	52	74	.22
Tuscaloosa	102	13	72	+0	71	4	24.32	-3.67	49		
Valley Head	97	3	65	-1	44	0	22.56	-7.01	65		
Vernon	100	7	68	-3	53	1	24.53	-5.05	45		
Winfield	100	6	67	-3	65	2	27.17	-1.48	56	74	.22

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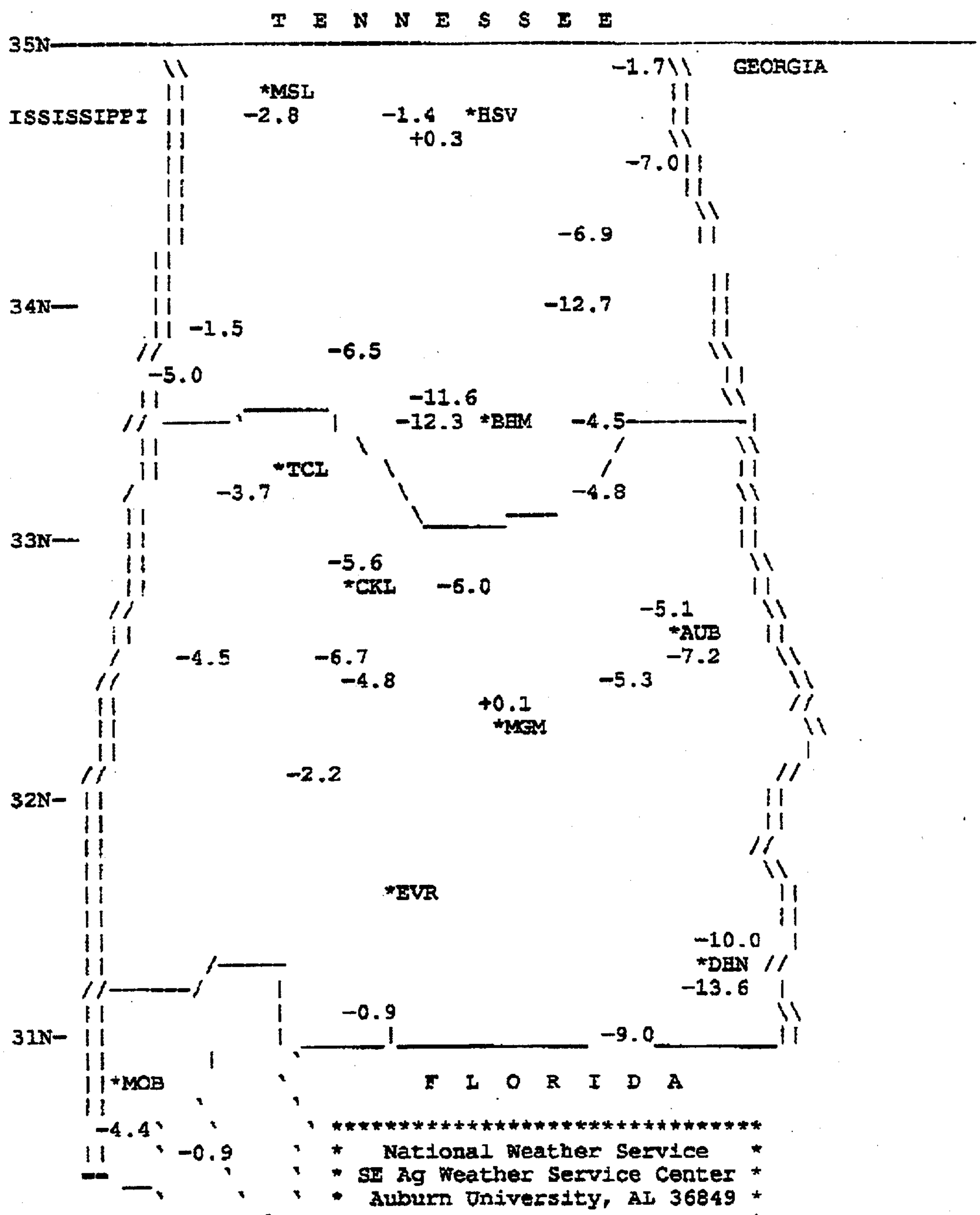


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**********************************
*   National Weather Service     *
*  SE Ag Weather Service Center  *
*  Auburn University, AL 36849   *
*                                *
*                                *
* Departure from Normal Precip   *
*                                *
*   Monday      March  1, 1993   *
*                  To            *
*   Tuesday     August 31, 1993  *
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NATIONAL WEATHER SERVICE
SE AG WEATHER SERVICE CENTER
AUBURN, AL

PRECIPITATION SUMMARY FOR ALABAMA

FOR THE PERIOD: Wednesday June 1, 1994
THRU: Thursday June 30, 1994

STATION	ACTUAL TOTAL	NORMAL TOTAL	DFN	PERCENT NORMAL	RAIN DAYS
Alabaster	3.89	3.81	+0.08	102	13
Anniston	6.60	3.71	+2.89	178	14
Ashland	6.84	4.23	+2.61	162	18
Auburn_AG	8.57	4.05	+4.52	212	16
Auburn_NWS	8.24	4.05	+4.19	203	15
Belle_Mina	7.42	3.96	+3.46	187	16
Birmingham_AP	5.41	3.73	+1.68	145	17
Brewton	16.58	6.09	+10.49	272	22
Bridgeport	7.99	4.04	+3.95	198	10
Camden	4.55	3.98	+0.57	114	13
Camp_Hill	6.77	4.13	+2.64	164	15
Centreville	5.32	3.76	+1.56	141	13
Cullman	8.05	4.12	+3.93	195	9
Demopolis	4.59	3.43	+1.16	134	15
Dothan	5.84	4.97	+0.87	118	17
Fairhope	7.32	6.56	+0.76	112	18
Gadsden	11.20	3.77	+7.43	297	12
Geneva	11.29	5.59	+5.70	202	23
Headland	9.44	5.14	+4.30	184	17
Huntsville_AG	9.98	4.13	+5.85	242	15
Jasper	4.43	4.07	+0.36	109	12
Lafayette	3.71	4.13	-0.42	90	15
Marion_Junction	5.84	4.20	+1.64	139	17
Milstead	7.64	4.10	+3.54	186	21
Mobile	5.47	5.04	+0.43	109	17
Montgomery	6.61	3.90	+2.71	169	17
Muscle_Shoals	8.41	4.07	+4.34	207	12
Pinson	8.29	4.03	+4.26	206	13
Sand_Mountain	7.10	3.78	+3.32	188	14
Selma	5.10	3.96	+1.14	129	13
Thorsby	5.61	4.24	+1.37	132	11
Tuscaloosa	5.61	3.83	+1.78	146	17
Valley_Head	5.13	4.15	+0.98	124	17
Vernon	9.58	3.83	+5.75	250	16
Winfield	9.65	3.97	+5.68	243	14

DFN = Departure From 1961-90 Normals
Missing data estimated where possible.

4)

NATIONAL WEATHER SERVICE
SE AG WEATHER SERVICE CENTER
AUBURN, AL

PRECIPITATION SUMMARY FOR ALABAMA

FOR THE PERIOD: Friday July 1, 1994
THRU: Sunday July 31, 1994

STATION	ACTUAL TOTAL	NORMAL TOTAL	DFN	PERCENT NORMAL	RAIN DAYS
Alabaster	4.69	5.31	-0.62	88	15
Anniston	4.08	4.46	-0.38	91	20
Ashland	8.90	5.30	+3.60	168	15
Auburn_AG	13.48	5.85	+7.63	230	19
Auburn_NWS	12.61	5.85	+6.76	216	17
Belle_Mina	3.97	4.62	-0.65	86	17
Birmingham_AP	7.72	5.25	+2.47	147	16
Brewton	15.18	7.18	+8.00	211	20
Bridgeport	8.95	5.17	+3.78	173	18
Camden	7.30	5.48	+1.82	133	18
Camp_Hill	10.68	5.69	+4.99	188	18
Cullman	6.59	4.84	+1.75	136	11
Demopolis	3.19	4.77	-1.58	67	18
Dothan	22.18	5.95	+16.23	373	20
Fairhope	10.94	7.29	+3.65	150	16
Gadsden	6.78	5.06	+1.72	134	14
Geneva	16.09	6.92	+9.17	233	20
Headland	19.42	5.89	+13.53	330	20
Huntsville_AG	3.98	4.85	-0.87	82	14
Jasper	6.46	5.17	+1.29	125	16
Lafayette	8.05	5.69	+2.36	141	13
Marion_Junction	7.63	4.88	+2.75	156	17
Milstead	12.29	4.71	+7.58	261	15
Mobile	10.39	6.85	+3.54	152	18
Montgomery	8.50	5.19	+3.31	164	19
Muscle_Shoals	8.26	4.58	+3.68	180	15
Pinson	5.80	4.98	+0.82	116	17
Sand_Mountain	5.86	4.67	+1.19	125	15
Selma	9.15	4.44	+4.71	206	16
Thorsby	9.10	5.11	+3.99	178	18
Tuscaloosa	2.60	5.41	-2.81	48	12
Valley_Head	8.20	5.44	+2.76	151	19
Vernon	11.00	5.23	+5.77	210	18
Winfield	7.75	4.80	+2.95	161	16

DFN = Departure From 1961-90 Normals
Missing data estimated where possible.

5)

NATIONAL WEATHER SERVICE
SE AG WEATHER SERVICE CENTER
AUBURN, AL

PRECIPITATION SUMMARY FOR ALABAMA

FOR THE PERIOD: Monday August 1, 1994
THRU: Wednesday August 31, 1994

STATION	ACTUAL TOTAL	NORMAL TOTAL	DFN	PERCENT NORMAL	RAIN DAYS
Alabaster	3.11	3.73	-0.62	83	11
Anniston	3.25	3.90	-0.65	83	14
Ashland	2.52	3.71	-1.19	68	12
Auburn_AG	1.64	3.62	-1.98	45	9
Auburn_NWS	1.55	3.62	-2.07	43	8
Belle_Mina	1.59	3.49	-1.90	46	8
Birmingham_AP	3.06	3.59	-0.53	85	9
Brewton	3.15	6.10	-2.95	52	8
Bridgeport	5.48	3.91	+1.57	140	8
Camden	1.93	4.08	-2.15	47	10
Camp_Hill	3.59	3.67	-0.08	98	11
Cullman	3.44	3.43	+0.01	100	10
Demopolis	1.57	4.09	-2.52	38	12
Dothan	1.93	4.06	-2.13	48	8
Fairhope	6.49	6.66	-0.17	97	15
Gadsden	3.49	3.37	+0.12	104	9
Geneva	4.65	5.57	-0.92	83	11
Headland	3.58	4.61	-1.03	78	8
Huntsville_AG	2.85	3.47	-0.62	82	9
Jasper	1.91	3.45	-1.54	55	7
Lafayette	4.76	3.67	+1.09	130	10
Marion_Junction	1.85	3.69	-1.84	50	6
Milstead	2.26	4.18	-1.92	54	10
Mobile	2.02	6.96	-4.94	29	7
Montgomery	4.46	3.69	+0.77	121	9
Muscle_Shoals	1.06	3.29	-2.23	32	5
Pinson	1.98	3.55	-1.57	56	8
Sand_Mountain	1.60	3.31	-1.71	48	8
Selma	3.19	3.90	-0.71	82	9
Thorsby	2.80	4.17	-1.37	67	9
Tuscaloosa	4.01	3.86	+0.15	104	6
Valley_Head	2.14	3.68	-1.54	58	10
Vernon	1.77	3.50	-1.73	51	4
Winfield	3.03	3.37	-0.34	90	8

DFN = Departure From 1961-90 Normals
Missing data estimated where possible.

6)

NATIONAL WEATHER SERVICE
SE AG WEATHER SERVICE CENTER
AUBURN, AL

PRECIPITATION SUMMARY FOR ALABAMA

FOR THE PERIOD: Thursday June 1, 1995
THRU: Friday June 30, 1995

STATION	ACTUAL TOTAL	NORMAL TOTAL	DFN	PERCENT NORMAL	RAIN DAYS
Alabaster	3.70	4.37	-0.67	85	10
Anniston	2.19	3.71	-1.52	59	7
Ashland	5.33	4.23	+1.10	126	10
Auburn_AG	3.43	4.05	-0.62	85	13
Auburn_NWS	3.14	4.05	-0.91	78	12
Belle_Mina	2.72	3.96	-1.24	69	9
Birmingham_AP	3.84	3.73	+0.11	103	8
Brewton	2.86	6.09	-3.23	47	5
Bridgeport	3.96	4.04	-0.08	98	9
Camden	1.19	3.98	-2.79	30	8
Camp_Hill	2.11	4.13	-2.02	51	9
Centreville	1.92	4.43	-2.51	43	7
Cullman	4.56	4.12	+0.44	111	9
Demopolis	2.13	3.43	-1.30	62	7
Dothan	2.25	4.97	-2.72	45	8
Fairhope	4.53	6.56	-2.03	69	6
Gadsden	4.45	3.77	+0.68	118	7
Geneva	4.33	5.59	-1.26	77	7
Headland	3.80	5.14	-1.34	74	9
Huntsville_AG	4.99	4.13	+0.86	121	9
Jasper	5.12	4.07	+1.05	126	11
Lafayette	2.03	4.13	-2.10	49	9
Marion_Junction	2.73	4.20	-1.47	65	8
Milstead	1.41	4.10	-2.69	34	8
Mobile	3.32	5.04	-1.72	66	6
Montgomery	1.29	3.90	-2.61	33	5
Muscle_Shoals	2.89	4.07	-1.18	71	8
Opelika	2.09	4.19	-2.10	50	12
Pinson	3.61	4.03	-0.42	90	8
Sand_Mountain	3.43	3.78	-0.35	91	9
Selma	2.36	3.96	-1.60	60	5
Thorsby	2.00	4.24	-2.24	47	8
Tuscaloosa	3.18	3.83	-0.65	83	6
Valley_Head	4.34	4.15	+0.19	105	10
Vernon	4.72	3.83	+0.89	123	10
Winfield	1.76	3.97	-2.21	44	6

DFN = Departure From 1961-90 Normals
Missing data estimated where possible.

NATIONAL WEATHER SERVICE
SE AG WEATHER SERVICE CENTER
AUBURN, AL

PRECIPITATION SUMMARY FOR ALABAMA

FOR THE PERIOD: Saturday July 1, 1995
THRU: Monday July 31, 1995

STATION	ACTUAL TOTAL	NORMAL TOTAL	DFN	PERCENT NORMAL	RAIN DAYS
Alabaster	1.17	5.31	-4.14	22	7
Anniston	2.44	4.46	-2.02	55	8
Ashland	2.17	5.30	-3.13	41	9
Auburn_AG	3.09	5.85	-2.76	53	12
Auburn_NWS	3.38	5.85	-2.47	58	11
Belle_Mina	2.98	4.62	-1.64	65	10
Birmingham_AP	1.89	5.25	-3.36	36	12
Brewton	7.85	7.18	+0.67	109	13
Bridgeport	5.50	5.17	+0.33	106	12
Camden	3.65	5.48	-1.83	67	11
Camp_Hill	2.94	5.69	-2.75	52	9
Centreville	1.45	5.45	-4.00	27	9
Cullman	4.55	4.84	-0.29	94	10
Demopolis	2.42	4.77	-2.35	51	8
Dothan	2.96	5.95	-2.99	50	11
Fairhope	8.65	7.29	+1.36	119	11
Gadsden	2.04	5.06	-3.02	40	5
Geneva	2.83	6.92	-4.09	41	12
Headland	5.29	5.89	-0.60	90	17
Huntsville_AG	4.38	4.85	-0.47	90	12
Jasper	2.49	5.17	-2.68	48	10
Lafayette	2.35	5.69	-3.34	41	9
Marion_Junction	1.37	4.88	-3.51	28	6
Milstead	2.49	4.71	-2.22	53	9
Mobile	4.69	6.85	-2.16	68	15
Montgomery	3.40	5.19	-1.79	66	7
Muscle_Shoals	5.80	4.58	+1.22	127	11
Opelika	2.05	5.93	-3.88	35	12
Pinson	2.57	4.98	-2.41	52	8
Sand_Mountain	2.62	4.67	-2.05	56	10
Selma	3.53	4.44	-0.91	80	12
Thorsby	2.32	5.11	-2.79	45	8
Tuscaloosa	4.88	5.41	-0.53	90	9
Valley_Head	3.72	5.44	-1.72	68	10
Vernon	8.02	5.23	+2.79	153	11
Winfield	7.79	4.80	+2.99	162	10

DFN = Departure From 1961-90 Normals
Missing data estimated where possible.

2)

NATIONAL WEATHER SERVICE
SE AG WEATHER SERVICE CENTER
AUBURN, AL

PRECIPITATION SUMMARY FOR ALABAMA

FOR THE PERIOD: Tuesday August 1, 1995
THRU: Thursday August 31, 1995

STATION	ACTUAL TOTAL	NORMAL TOTAL	DFN	PERCENT NORMAL	RAIN DAYS
Alabaster	2.20	3.73	-1.53	59	8
Anniston	2.92	3.90	-0.98	75	10
Ashland	4.67	3.71	+0.96	126	12
Auburn_AG	4.85	3.62	+1.23	134	14
Auburn_NWS	4.54	3.62	+0.92	125	14
Belle_Mina	3.71	3.49	+0.22	106	8
Birmingham_AP	1.51	3.59	-2.08	42	11
Brewton	10.14	6.10	+4.04	166	9
Bridgeport	3.65	3.91	-0.26	93	12
Camden	5.62	4.08	+1.54	138	10
Camp_Hill	5.91	3.67	+2.24	161	12
Centreville	4.95	3.87	+1.08	128	8
Cullman	3.66	3.43	+0.23	107	8
Demopolis	3.43	4.09	-0.66	84	4
Dothan	2.96	4.06	-1.10	73	11
Fairhope	9.61	6.66	+2.95	144	11
Gadsden	7.96	3.37	+4.59	236	9
Geneva	4.59	5.57	-0.98	82	12
Headland	5.16	4.61	+0.55	112	10
Huntsville_AG	1.09	3.47	-2.38	31	8
Jasper	1.30	3.45	-2.15	38	13
Lafayette	6.98	3.67	+3.31	190	11
Marion_Junction	5.30	3.69	+1.61	144	6
Milstead	2.50	4.18	-1.68	60	8
Mobile	7.66	6.96	+0.70	110	11
Montgomery	1.56	3.69	-2.13	42	7
Muscle_Shoals	4.91	3.29	+1.62	149	8
Opelika	4.23	4.04	+0.19	105	13
Pinson	2.18	3.55	-1.37	61	4
Sand_Mountain	7.79	3.31	+4.48	235	11
Selma	5.02	3.90	+1.12	129	7
Thorsby	1.99	4.17	-2.18	48	8
Tuscaloosa	3.60	3.86	-0.26	93	5
Valley_Head	3.69	3.68	+0.01	100	13
Vernon	3.86	3.50	+0.36	110	7
Winfield	4.80	3.37	+1.43	142	6

DFN = Departure From 1961-90 Normals
Missing data estimated where possible.