# WATER-QUALITY AND SEDIMENTATION DATA FROM LAKE TUSCALOOSA AND SELECTED TRIBUTARIES, NORTH RIVER BASIN, ALABAMA - WATER YEAR 1983

by Elizabeth F. Cole

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FACTORS FOR CONVERTING INCH-POUND UNITS

TO INTERNATIONAL SYSTEM OF METRIC UNITS (SI)

| Multiply inch-pound units | By | To obtain SI units |
|---|---|---|
| inch (in.) | 25.4 | millimeter (mm) |
| foot (ft) | 0.3048 | meter (m) |
| mile (mi) | 1.609 | kilometer (km) |
| square mile ($mi^2$) | 2.590 | square kilometer ($km^2$) |
| acre | 4,047 | square meter ($m^2$) |
| acre-foot (acre-ft) | 1,233 | cubic meter ($m^3$) |
| million gallons per day (Mgal/d) | 0.04381 | cubic meter per second ($m^3/s$) |
| cubic foot per second ($ft^3/s$) | 0.02832 | cubic meter per second ($m^3/s$) |
| micromhos per centimeter at 25° Celsius (umhos/cm at 25°C) | 1.000 | microsiemens per centimeter at 25° Celsius (uS/cm at 25°C) |

Temperature in degrees Celsius (°C) can be converted to degrees Fahrenheit (°F) as follows: $°F = (1.8)°C + 32$

## DEFINITION OF TERMS

Terms related to streamflow, water quality, and other hydrologic data are defined below. See also table for converting English units to International System of units (SI).

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons.

Bed material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water, and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Color of water used herein is that due only to substances in solution. The color of water is compared with that of colored glass discs which have been calibrated to correspond with colors on the platinum-cobalt scale.

Cubic foot per second ($ft^3/s$, cfs) is the rate of discharge representing a volume of one cubic foot passing a given point during one second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute.

Discharge is the volume of water (or more broadly, total fluids) that passes a given point within a given period of time.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved is that material in a representative water sample which passes through a 0.45 um membrane filter. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Micrograms per gram (ug/g) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (gram) of sediment.

Micrograms per liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in solution as the weight (micrograms) of solute per unit volume (liter) of solution. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of solution. Concentration of suspended sediment also is expressed in milligrams per liter, and is based on the mass of sediment per liter of water-sediment mixture.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, weight, or volume.

Pesticides are chemical compounds used to control undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of only readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and occurrence of sediment in streams are influenced by environmental factors such as degree of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Suspended-sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent flow or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the streambed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream. It is computed by multiplying discharge in cubic feet per second times concentration in milligrams per liter times 0.0027.

Sodium-adsorption-ratio (SAR) is an expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. High values for SAR indicate a high concentration of sodium relative to the concentration of calcium and magnesium. This may imply a hazard of sodium replacing adsorbed calcium and magnesium, which may be damaging to soil structure.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in micromhos per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for estimating the dissolved-solids content of water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream, and it even may vary in the same source with changes in the composition of the water.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Tons per day is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour day.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituents's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all of the constituent in the sample.)

Total in bottom material is the total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses.

Total organic carbon (TOC) is a measure of organic carbon in solution as well as that in suspended matter in water. It provides a gross measure of plant detritus, decay products, living cells, and organic chemicals.

Water year is the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends. Thus, the water year beginning October 1, 1982, and ending September 30, 1983, is called the "1983 water year."

# WATER-QUALITY AND SEDIMENTATION DATA FROM LAKE TUSCALOOSA AND SELECTED TRIBUTARIES, NORTH RIVER BASIN, ALABAMA - WATER YEAR 1983

By Elizabeth F. Cole

## ABSTRACT

Lake Tuscaloosa is a municipal water supply and recreation reservoir in Tuscaloosa County, Alabama. Changes in land use, such as timber clear-cutting, agriculture, and coal mining in basins draining into Lake Tuscaloosa, have caused concern about changes in the water quality and the rate of sedimentation in the lake. This study was designed to establish a comprehensive hydrologic data base that can be used to assess the quality of water in the study area and monitor impacts on the quality of water in the lake caused by land use changes within its drainage basin.

Streamflow and (or) selected water-quality data were collected during the 1983 water year at 15 sites in the North River basin. Sample analyses included major chemical constituents, selected nutrients, trace elements, and insecticides and herbicides in bottom material. Two sites in the study area were monitored continuously for stage, temperature, specific conductance, pH, and dissolved oxygen.

Channel cross sections were established at 17 locations in the lake in October and November 1982 to measure changes in sedimentation. Sedimentation occurring since impoundment of North River was determined by comparing the present channel cross sections recorded by fathometer with pre-impoundment channel cross sections. The maximum deposition measured was approximately 20 ft at a cross section on Brush Creek.

# INTRODUCTION

Lake Tuscaloosa, a municipal water supply and recreation reservoir in Tuscaloosa County in west-central Alabama (fig. 1), was created in 1969 by impoundment of North River. Changes in land use, such as timber clear-cutting, agriculture, and coal mining in basins draining into Lake Tuscaloosa, have caused concern about the effects of these changes on the quality of water and the rate of sedimentation in the lake.

## Purpose and Scope

The purpose of this study was to establish a comprehensive hydrologic data base that can be used by the city of Tuscaloosa and others to (1) assess the quality of water in Lake Tuscaloosa, and (2) monitor impacts on the quality of water in the lake caused by land use changes within its drainage basin.

The study during the 1983 water year (October 1982-September 1983) involved collection of streamflow and water-quality data at 15 sites in the North River basin and measurement of channel cross sections at 17 locations in Lake Tuscaloosa. The results of an interpretive study, based partially on this data, are included in a report by Cole (1984). The purpose of this report is to provide a compilation of the data collected during the first year of the study. Similar data have also been collected during the 1984 water year.

## DESCRIPTION OF THE STUDY AREA

Lake Tuscaloosa is located in north-central Tuscaloosa County, Alabama (fig. 1). The reservoir was created by the impounding of North River approximately 1.2 miles upstream from its confluence with the Black Warrior River. The drainage area from which it receives surface runoff is 417 $mi^2$. The normal pool elevation is 223.2 ft above sea level. The lake, approximately 25 mi long as measured along the old river channel, has a surface area at normal pool of 5,885 acres. The reservoir capacity is 123,100 acre-ft, and the present safe yield has been calculated to be approximately 200 Mgal/d (Keener and others, 1975).

The area of study has a subtropical climate characterized by warm, humid weather. Precipitation is usually in the form of rain, with snowfall very light and infrequent. March is usually the wettest month and October the driest. The average annual precipitation for the study area, based on National Oceanic and Atmospheric Administration (NOAA) precipitation records, is about 55 in. (U.S. Department of Commerce, 1950-80, 1982-83). Rainfall for the study year exceeded the long-term average annual precipitation by 21 in. at one nearby NOAA precipitation station.

Long-term evaporation data are not available for the general area, but Farnsworth and others (1982) reported a free water surface evaporation of approximately 40 in. per year in the North River basin. The free water surface evaporation for this area is computed by multiplying observed pan evaporation by a coefficient of 0.76. Due to changes in heat storage in reservoir water, however, actual evaporation from a lake may differ significantly from the free water surface evaporation.

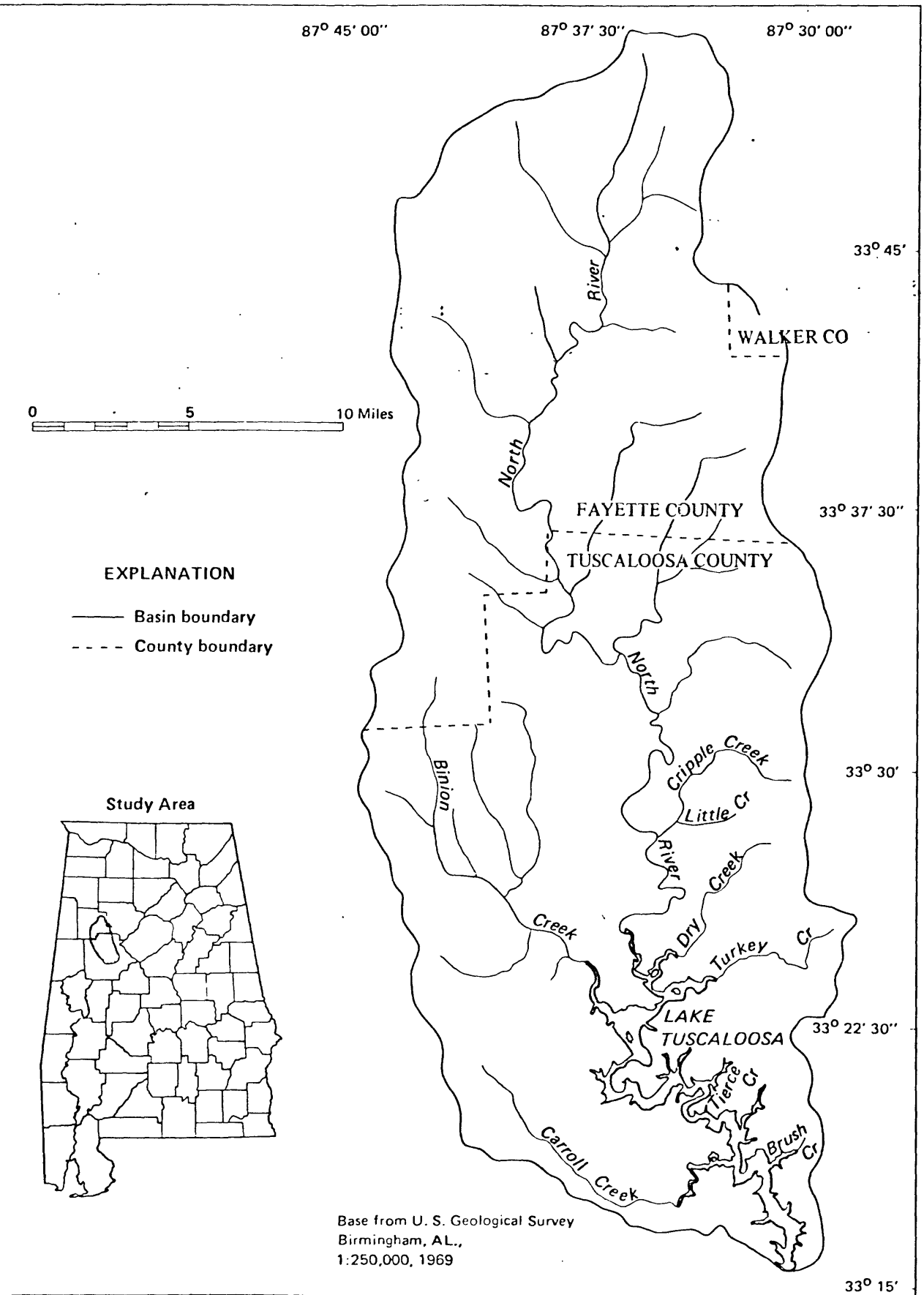



Figure 1.--Study area.

The study area is sparsely populated with only a few small communities located in the central part of the basin. Development of housing on and near the periphery of the lake has been continuous since the creation of Lake Tuscaloosa. Most of the land in the North River basin is forested; however, some areas are cleared and devoted to agricultural uses such as production of cotton, corn, soybeans, and other crops. A few areas in the basin have been disturbed by surface coal mining.

The Pottsville Formation underlies all of the North River drainage basin, but is exposed mainly in the northeastern part. The Coker Formation crops out in the southern and western parts of the basin. The Pottsville Formation is approximately 2,500 to 4,500 ft thick (Metzger, 1965) and consists mainly of sandstone, shale, and siltstone with shale being the dominant rock type. The Coker Formation is as much as 400 ft thick in the North River basin. The lower 100 ft consists chiefly of sand and gravel with some beds of cemented sandstone and conglomerate usually occurring near the base. The upper 300 ft consists chiefly of clay.

## DATA-COLLECTION METHODS

Streamflow and (or) selected water-quality data were collected at 15 sites in the North River basin (fig. 2, table 1). North River (site 1) and Lake Tuscaloosa (site 15) were monitored continuously for stage, temperature, specific conductance, pH, and dissolved oxygen.

Field measurements of streamflow, specific conductance, pH, alkalinity, water temperature, and dissolved oxygen were made at the time of sampling. Analyses of all samples were performed by the U.S. Geological Survey Central Laboratory in Atlanta, Georgia and included major chemical constituents, selected nutrients, trace elements, and insecticides and herbicides in bottom material.

Samples at the sites in the lake were collected to represent the entire water column and cross section at the sampling location. Water was collected from the surface to the lake bottom from multiple verticals along a cross section and composited for analysis. Field determinations of temperature and dissolved oxygen were made approximately 2 ft below the water surface.

Channel cross sections were established at 17 locations in October and November 1982 to measure changes in sedimentation. The cross sections were located near points of inflow because most settling and deposition of sediment occur where decreases in streamflow velocity occur. Cross sections were recorded using a fathometer which produces a pen trace of the lake bottom through reflection of a sonic signal. The fathometer pen trace for each cross section was replotted using a uniform scale and left to right bank convention (left and right bank are determined facing downstream). Distance between banks was determined by stadia and used to determine the horizontal stationing of each plotting point. It was assumed the boat moved through the traverse at a uniform rate. The accuracy of the fathometer is reported to be $\pm 1.0$ ft. Elevation of the lake surface was 223.1 ft above sea level during the survey.

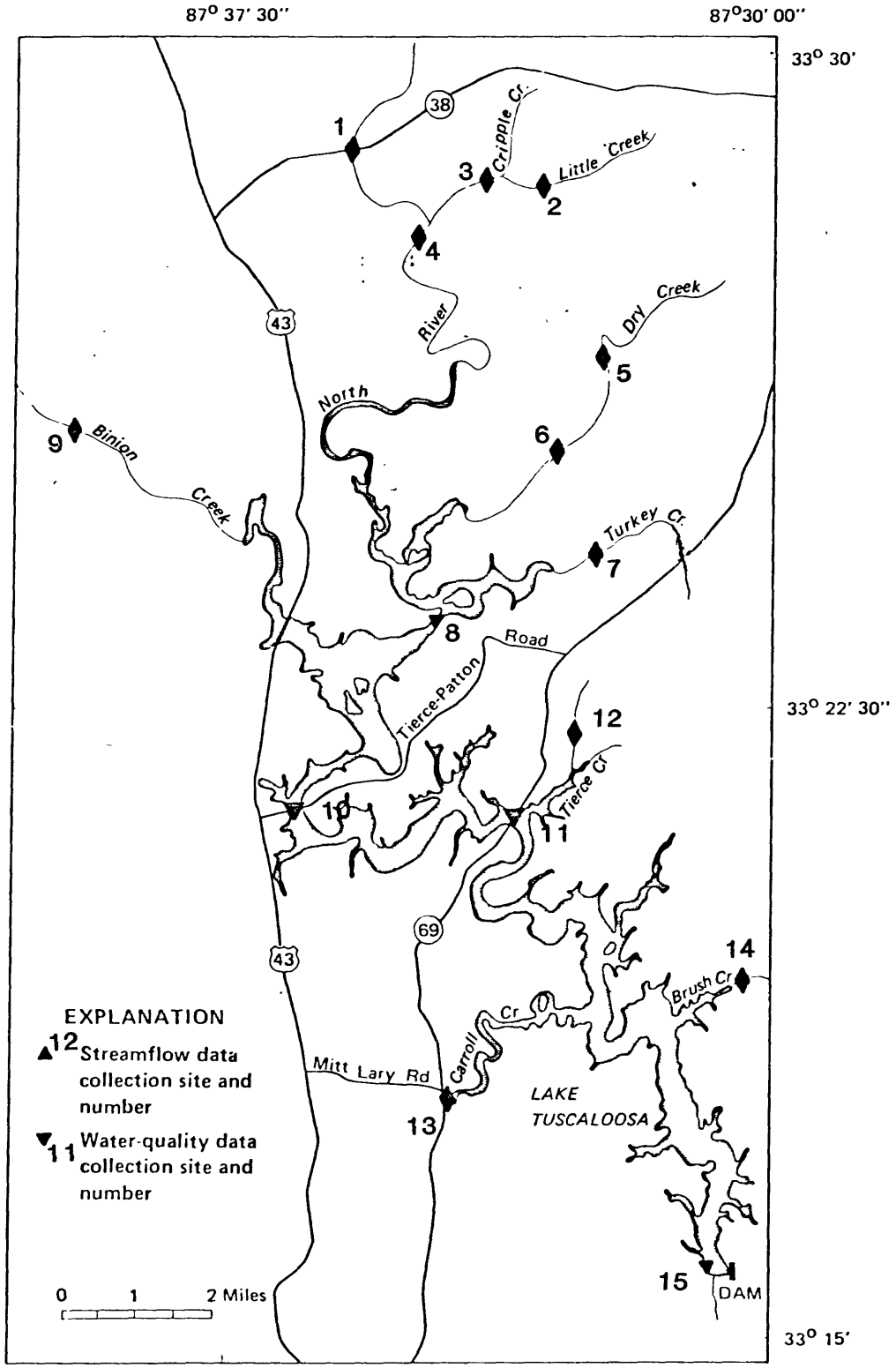



Figure 2.--Location of surface-water data collection sites.

Table 1. Summary of surface water data collection network

| Site number | USGS station number | Name | Drainage area ($mi^2$) | Period and type of record | | |
|---|---|---|---|---|---|---|
| | | | | Streamflow | Water quality | Suspended sediment |
| 1 | 02464000 | North River near Samantha | 219 | 1938-54, 1968-83 | 1966-68, 1971-83 | 1979-83 |
| 2 | 02464032 | Little Creek east of Samantha | 2.47 | 1980, 1982-83 | 1980, 1982-83 | -- |
| 3 | 02464035 | Cripple Creek east of Samantha | 16.4 | 1977-83 | 1977-83 | 1979-83 |
| 4 | 02464040 | North River 1500 ft below confluence of Cripple Creek | 241 | 1982-83 | 1982-83 | -- |
| 5 | 02464100 | Dry Creek near Samantha | 7.56 | 1981-83 | 1981-83 | 1982 |
| 6 | 02464110 | Dry Creek near Northport | 9.45 | 1982-83 | 1982-83 | 1982 |
| 7 | 02464149 | Turkey Creek near Patterson Chapel | 10.6 | 1982-83 | 1982-83 | 1982-83 |
| 8 | 02464155 | Lake Tuscaloosa at Hilltop Estates Landing near Northport | 282 | -- | 1975,1983 | 1975 |
| 9 | 02464360 | Binion Creek below Gin Creek near Samantha | 57.0 | 1982-83 | 1982-83 | 1982-83 |
| 10 | 02464400 | Lake Tuscaloosa at Tierce Patton Road near Northport | -- | -- | 1983 | -- |
| 11 | 02464499 | Lake Tuscaloosa at State Highway 69 near Tuscaloosa | -- | -- | 1983 | -- |
| 12 | 02464505 | Tierce Creek near Northport | 2.17 | 1983 | 1983 | 1983 |
| 13 | 02464660 | Carroll Creek at State Highway 69 near Northport | 20.9 | 1983 | 1983 | 1983 |
| 14 | 02464680 | Brush Creek near Northport | 0.92 | 1983 | 1983 | 1983 |
| 15 | 02464800 | Lake Tuscaloosa Reservoir near Tuscaloosa | 417 | -- | 1975,1983 | 1975 |

## SURFACE WATER QUALITY

Samples were collected during the 1983 water year at sites in the North River basin to examine the quality of water in Lake Tuscaloosa and in streams which drain into the lake. Results of the chemical analyses are compiled in the supplementary data section (at the end of report).

Several physical and chemical characteristics of water were selected from the analyses for North River (site 1) and Lake Tuscaloosa (site 15) and the range and median were determined as shown in table 2. Comparison of these data shows that the water at site 15 in the reservoir is less mineralized than the inflow from North River (site 1), which drains more than half the study area.

Chemical characteristics of water collected at sites in November 1982 during low-flow conditions are illustrated by vertical bar graphs in figure 3. The bar graphs are constructed by plotting concentrations, expressed in milliequivalents per liter, of the major ions from a single sample which are identified by distinctive patterns. Unit concentrations of all ions, when expressed in milliequivalents per liter, are chemically equivalent. The bar graph is divided by a vertical line with the left half representing cations and the right half anions. The total height of the bar graph is proportional to the total concentration of anions or cations and indicates the degree of mineralization. Specific conductance, often used as an indicator of the degree of mineralization of water, is also shown in figure 3. Instantaneous discharge measurements show that the majority of water supplied to the reservoir at the time of sampling was from Binion and Carroll Creek basins (sites 9 and 13). Low specific conductance values for samples at both sites indicate low concentrations of dissolved constituents.

Table 2.--Summary of selected physical and chemical characteristics of water at North River (site 1) and Lake Tuscaloosa (site 15), October 1982 to September 1983

(Chemical analyses in milligrams per liter except as indicated. Site numbers correspond to those in figure 2 and table 1.)

| Property or constituent | North River (site 1) Median | Range | Number of observations | Lake Tuscaloosa (site 15) Median | Range | Number of observations |
|---|---|---|---|---|---|---|
| Discharge at time of sampling ($ft^3/s$).... | 245 | 3.8-2390 | 12 | -- | --- | -- |
| Specific conductance (umhos/cm at 25°C).. | 77 | 45-268 | 12 | 50 | 39-59 | 12 |
| pH (units)..... | 6.4 | 5.4-6.9 | 12 | 6.1 | 5.4-6.5 | 12 |
| 1/ Temperature (°C)..... | 17.0 | 6.5-25.0 | 12 | 19.0 | 8.5-31.0 | 12 |
| 1/ Dissolved oxygen..... | 9.0 | 6.2-12.3 | 12 | 8.4 | 7.3-10.3 | 12 |
| Hardness (as $CaCO_3$)..... | 22 | 12-34 | 12 | 14 | 12-16 | 12 |
| Noncarbonate hardness (as $CaCO_3$)..... | 12 | 6-24 | 12 | 8 | 4-11 | 12 |
| Calcium (Ca), dissolved..... | 4.0 | 2.0-6.3 | 12 | 2.5 | 2.2-2.9 | 12 |
| Magnesium (Mg), dissolved..... | 2.8 | 1.8-4.6 | 12 | 1.8 | 1.5-2.3 | 12 |
| Sodium (Na), dissolved..... | 5.0 | 2.0-36 | 12 | 2.2 | 1.7-2.9 | 12 |
| Potassium (K), dissolved..... | 0.9 | 0.8-2.4 | 12 | 0.8 | 0.5-1.2 | 12 |
| Alkalinity (as $CaCO_3$)..... | 9 | 5-16 | 12 | 5 | 3-8 | 12 |
| Sulfate ($SO_4$), dissolved..... | 20 | 6.0-51 | 12 | 12 | 10-14 | 12 |
| Dissolved solids (sum of constituents)... | 50 | 27-140 | 12 | 32 | 28-35 | 12 |
| Iron (Fe), total recoverable (ug/L)..... | 810 | 520-1300 | 11 | 440 | 100-740 | 12 |
| Iron (Fe), dissolved (ug/L)..... | 210 | 70-610 | 12 | 140 | 24-250 | 12 |
| Manganese (Mn), total recoverable (ug/L). | 120 | 70-230 | 10 | 160 | 100-590 | 12 |
| Manganese (Mn), dissolved (ug/L)..... | 96 | 48-170 | 12 | 130 | 65-490 | 12 |

1/ Measurement made approximately 2 feet below water surface at site 15.

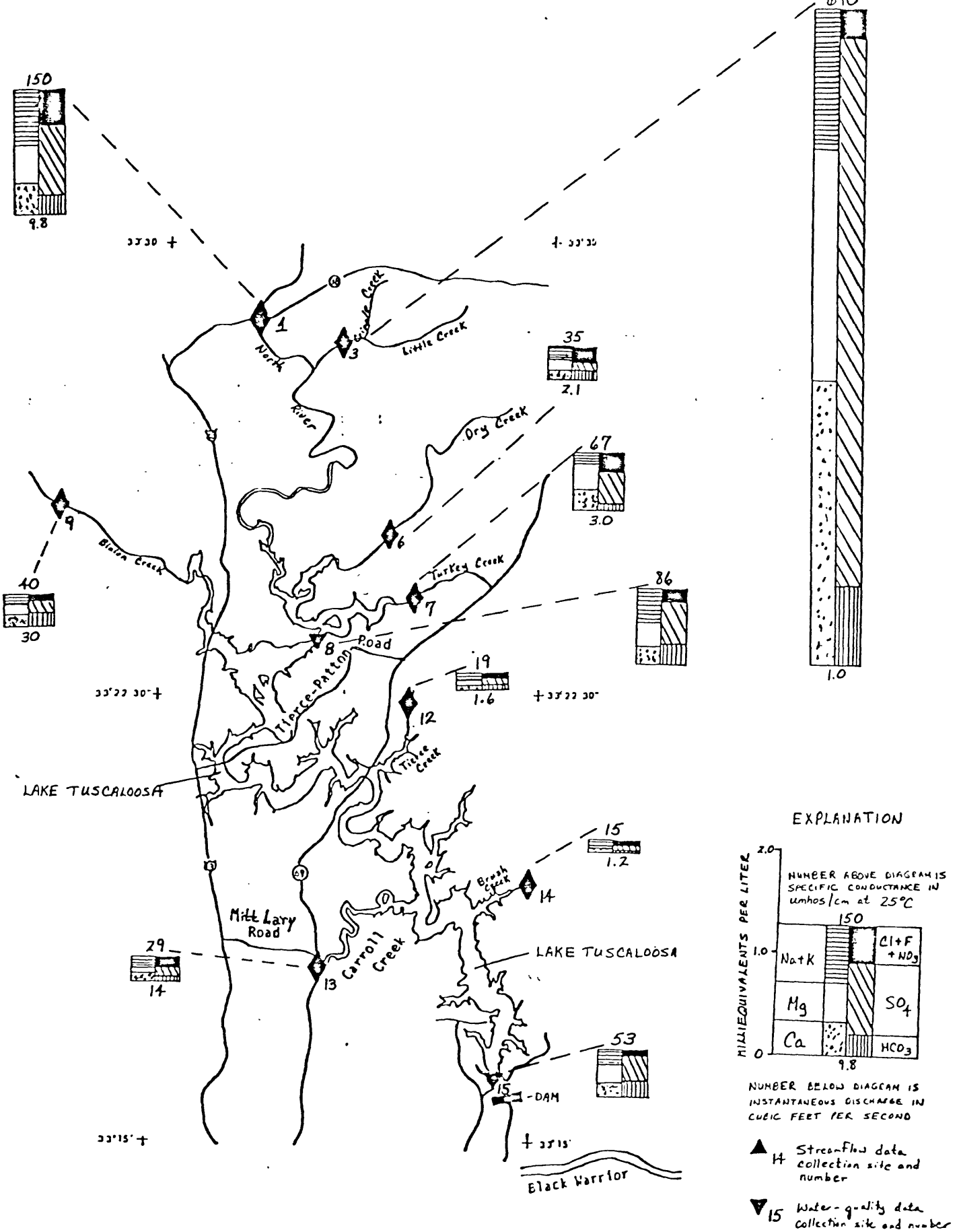



Figure 3. Chemical character of water during low-flow conditions at sites in North River basin. (Site numbers correspond to those in figure 2 and table 1.)

Daily and seasonal variations of temperature, specific conductance, dissolved oxygen, and pH at North River (site 1) and at Lake Tuscaloosa (site 15) during the 1983 water year are illustrated in figures 4 and 5, respectively. The daily discharge at North River and the daily water-surface elevation at the lake are included for comparison of flow conditions with water properties.

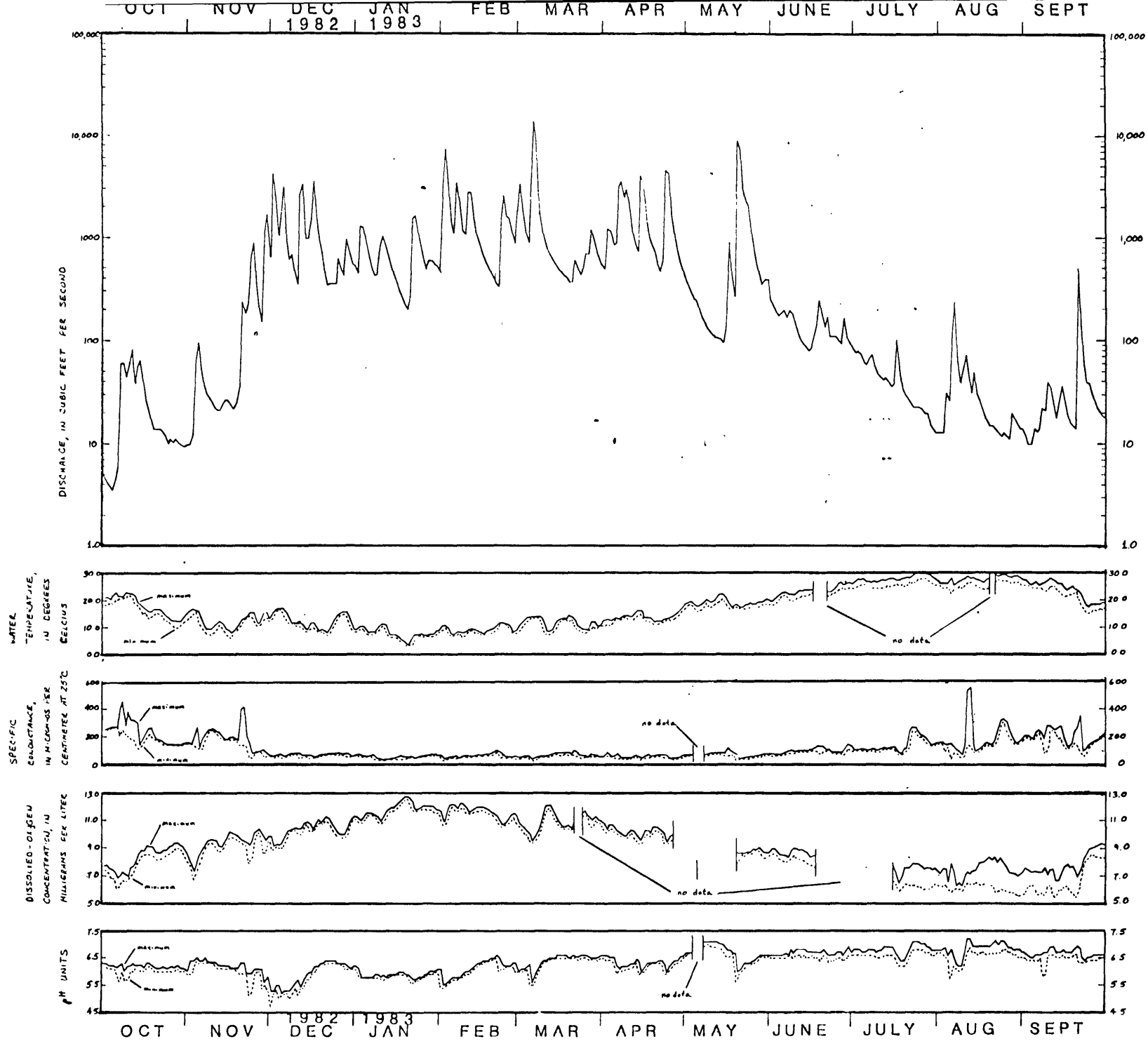



Figure 4. Daily discharge and minimum and maximum temperature, specific conductance, dissolved oxygen, and pH at North River (site 1). (Site number corresponds to those in figure 2 and table 1.)

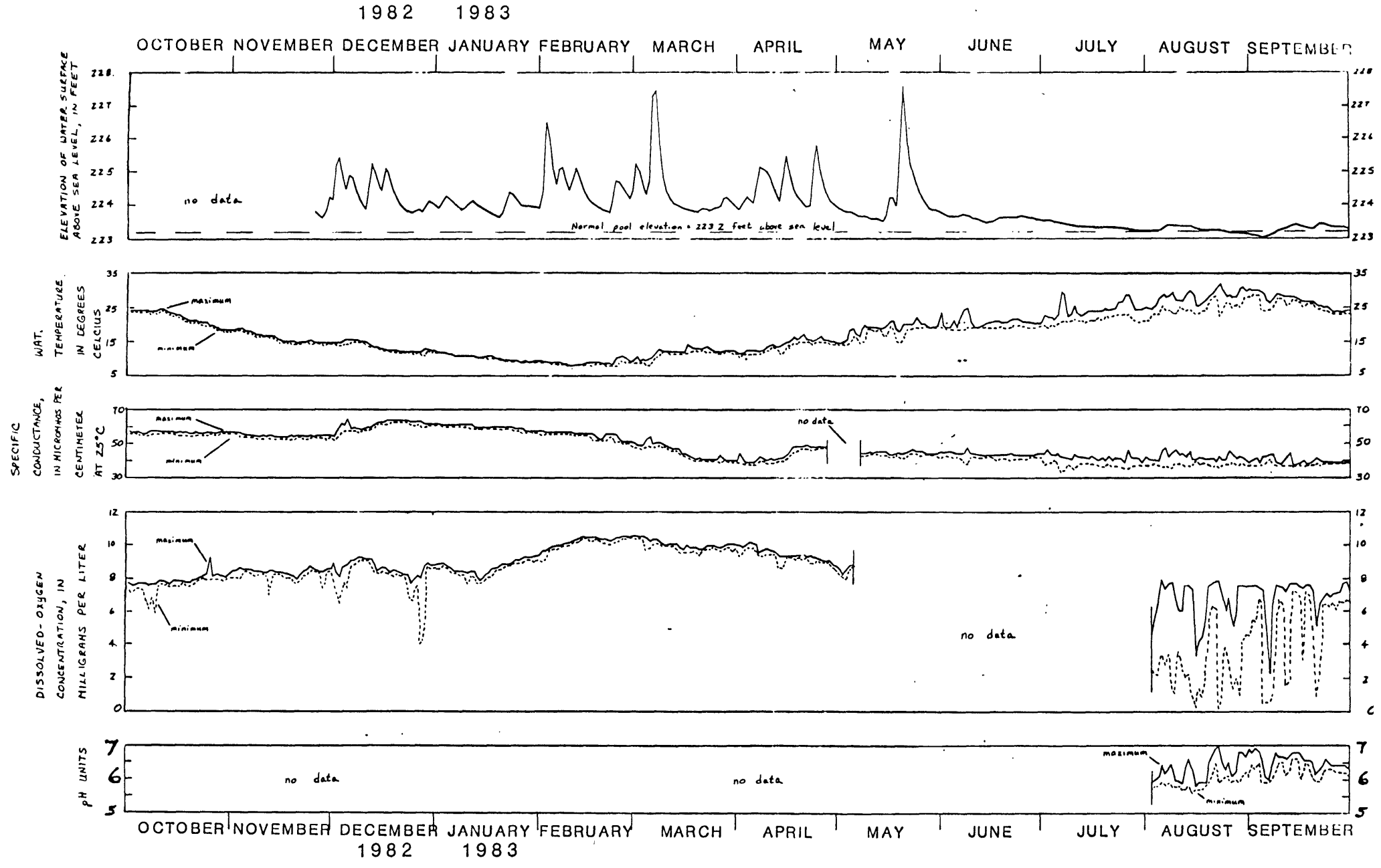



Figure 5. Daily water-surface elevation and maximum and minimum temperature, specific conductance, dissolved oxygen, and pH at Lake Tuscaloosa (site 15). (Site number corresponds to those in figure 2 and table 1.)

## SEDIMENTATION

Sedimentation occurring since impoundment of North River was determined by comparing the channel cross sections recorded by fathometer with pre-impoundment channel cross sections. Pre-impoundment cross sections were taken from topographic maps (5-ft contour interval) of the area, furnished by the city of Tuscaloosa. Keener and others (1975) recorded 39 cross sections in Lake Tuscaloosa in 1975. Data for these were not available for additional comparison because their locations could not be verified.

The cross sections established for this study (fig. 6) were recorded again in July 1983 to determine if changes had resulted from high flow conditions during the study year. Comparison of these cross sections with those recorded in October and November 1982, considering the accuracy of the measuring equipment, showed very little change.

Plots of cross sections showing the present and the pre-impoundment channels are illustrated in figures 7-23. They generally show some variation in width and bank configuration between the two channels at each cross section. The variations are probably due to the different methods used to determine elevations and distances.

Comparison of the present channel cross sections with pre-impoundment channel cross sections indicates considerable change has occurred at most measured points. Cross section 15 on Brush Creek (fig. 21) shows the most change with approximately 20 ft of deposition. Most of the other cross sections show varying amounts of sediment deposition in the channel. However, cross section 9 on Tierce Creek (fig. 15) shows that the channel has been scoured approximately 2 ft. This may indicate inaccuracy in the measuring equipment and comparison methods, or it may accurately represent scour which occurred between March 1960 and 1969 when the lake was created.

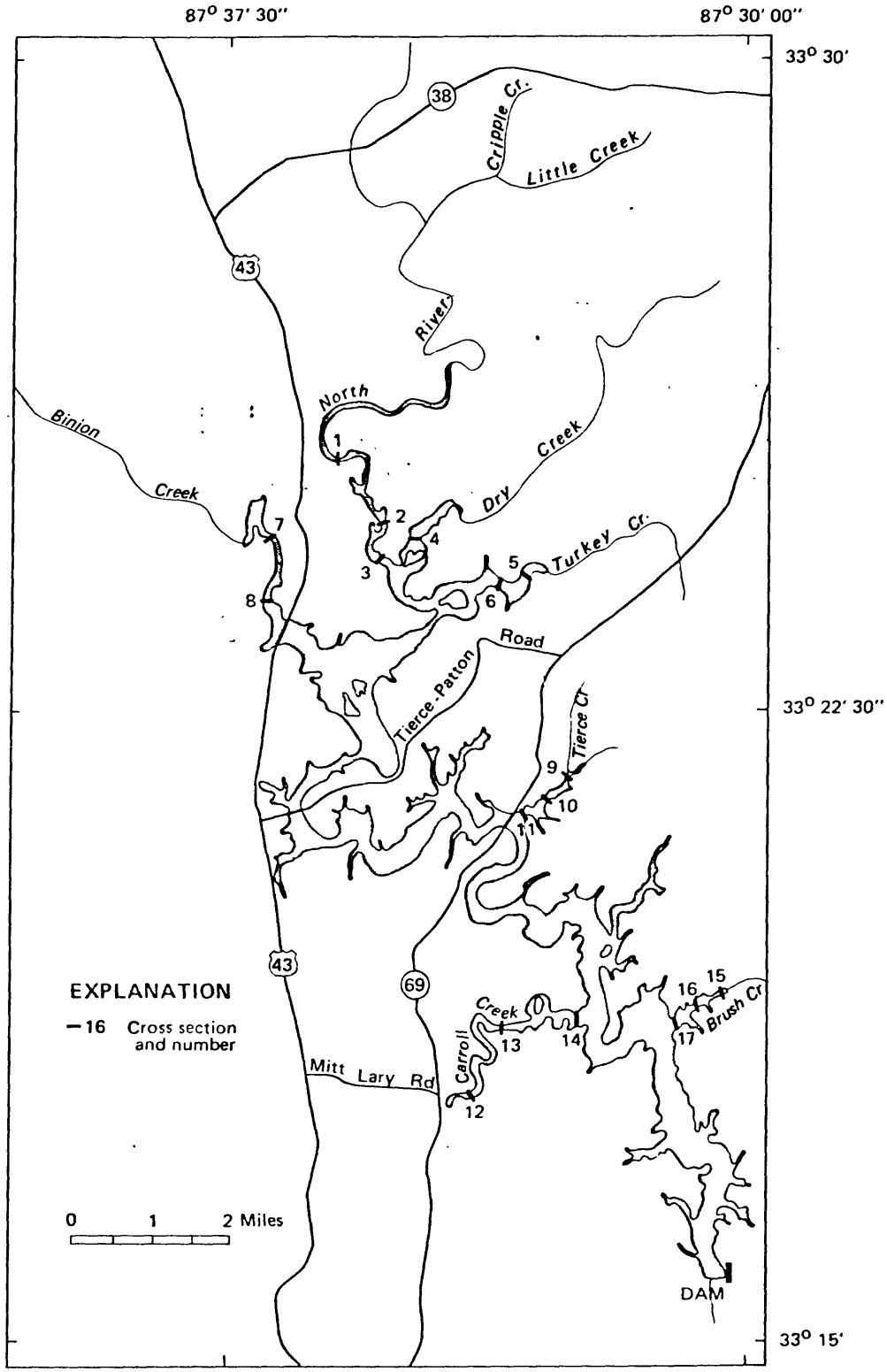



Figure 6.--Location of lake cross sections.

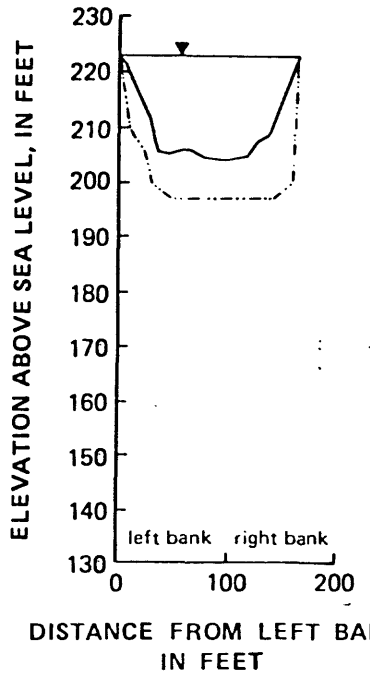



Figure 7.-- Lake cross section 1 in North River basin, March 1960 and November 1982.

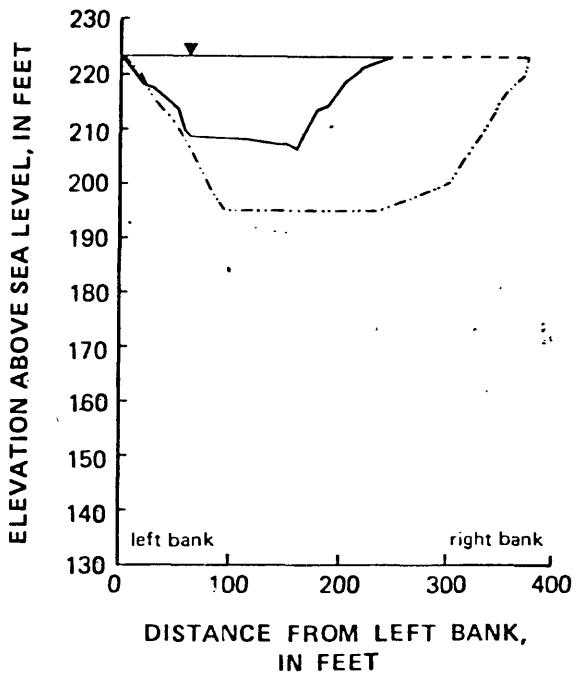
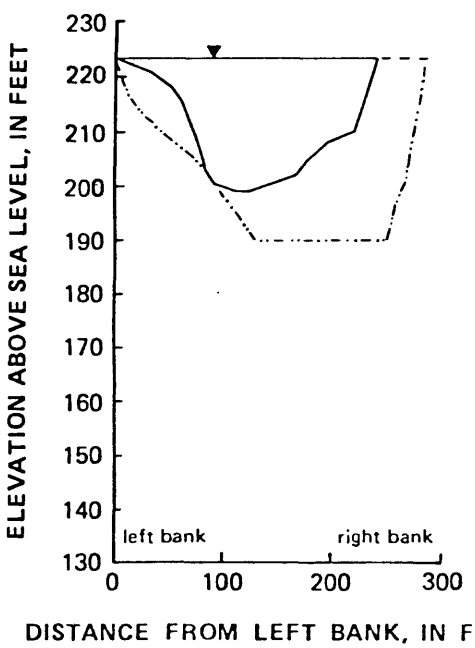



Figure 8.-- Lake cross section 2 in North Rive basin, March 1960 and November 1982.



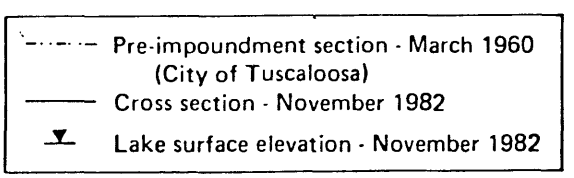




Figure 9.-- Lake cross section 3 in North River basin, March 1960 and November 1982.

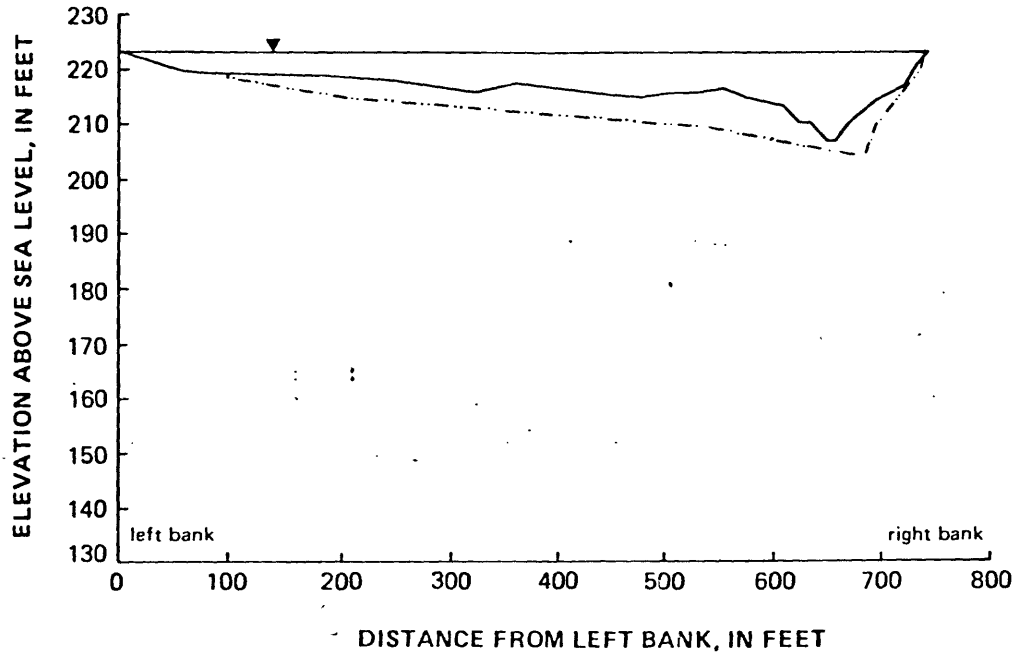



Figure 10.-- Lake cross section 4 in Dry Creek basin, March 1960 and November 1982.

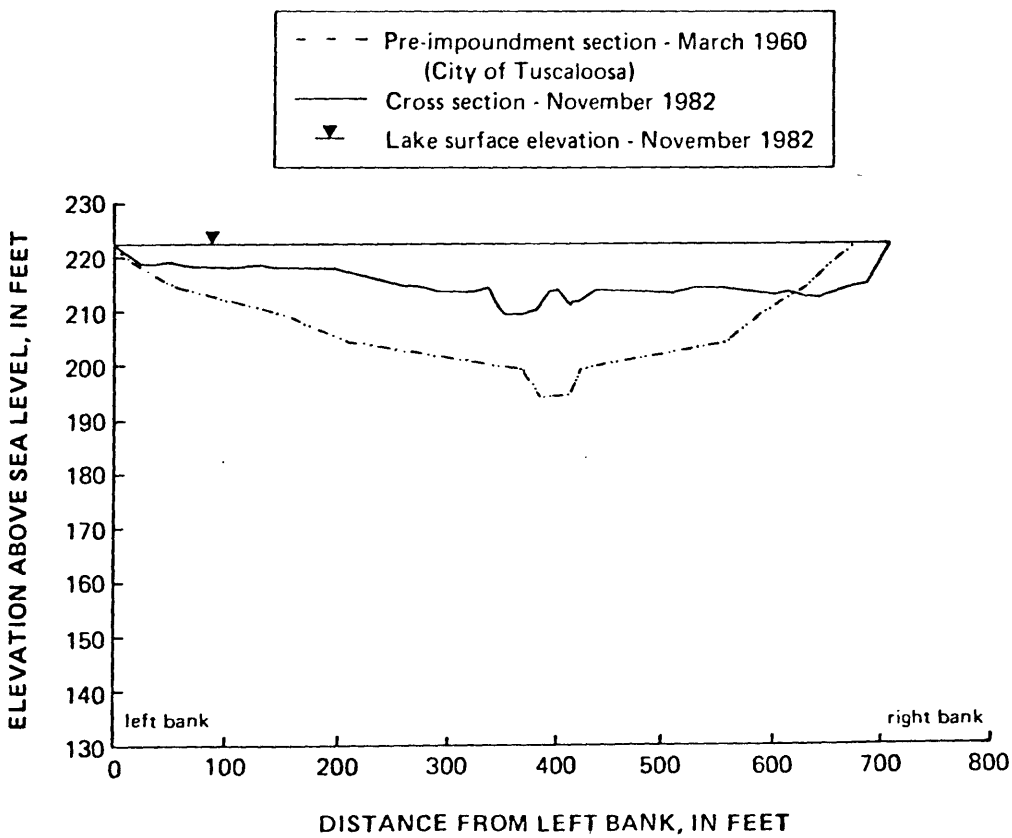



Figure 11.-- Lake cross section 5 in Turkey Creek basin, March 1960 and November 1982.

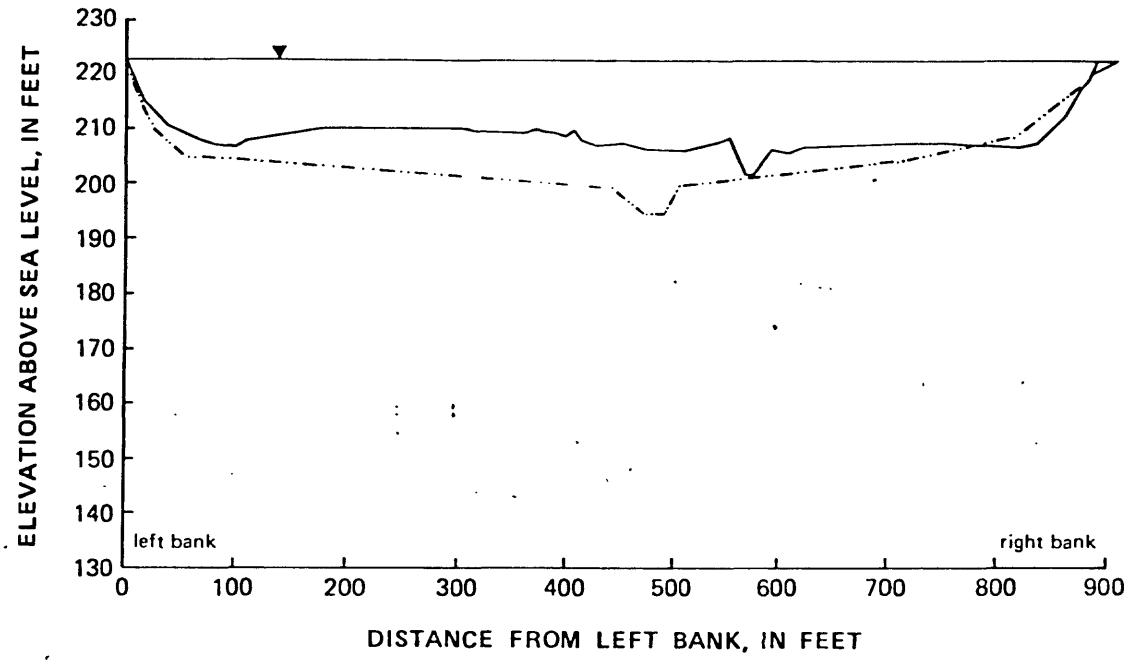



Figure 12.-- Lake cross section 6 in Turkey Creek basin, March 1960 and November 1982.

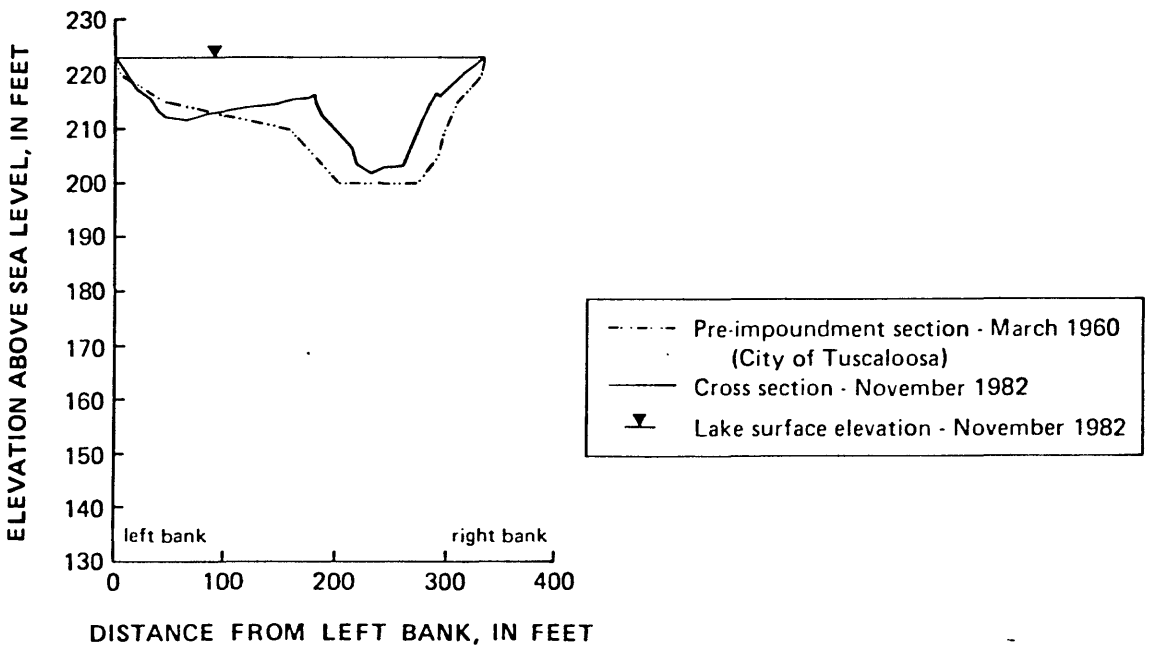



Figure 13.-- Lake cross section 7 in Binion Creek basin, March 1960 and November 1982.

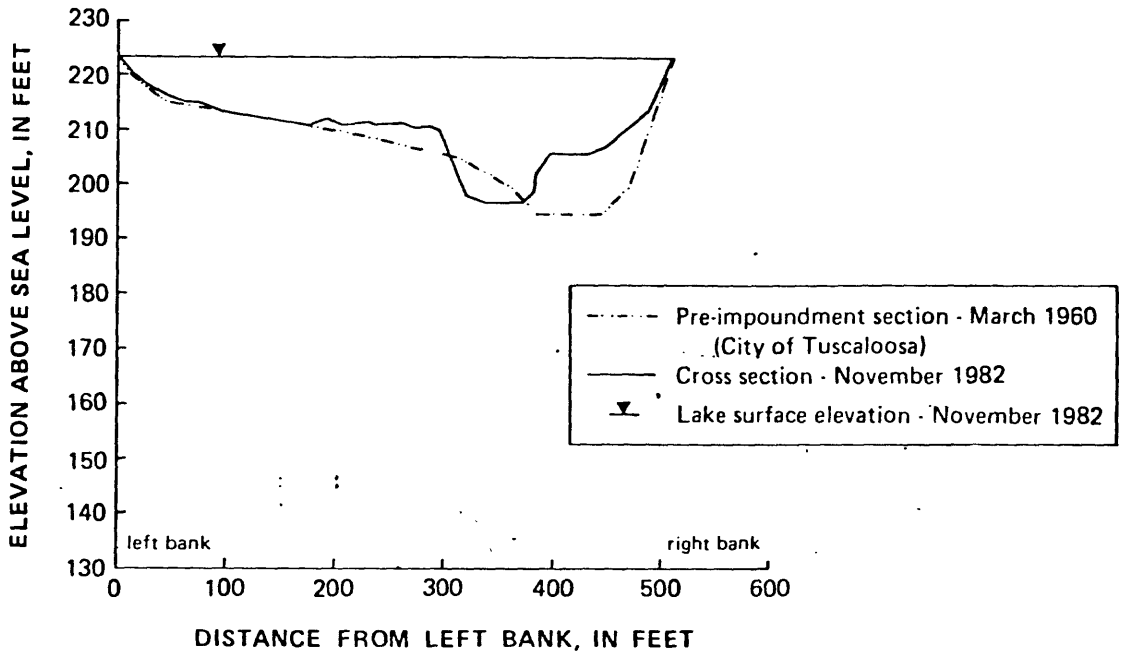



Figure 14.-- Lake cross section 8 in Binion Creek basin, March 1960 and November 1982.

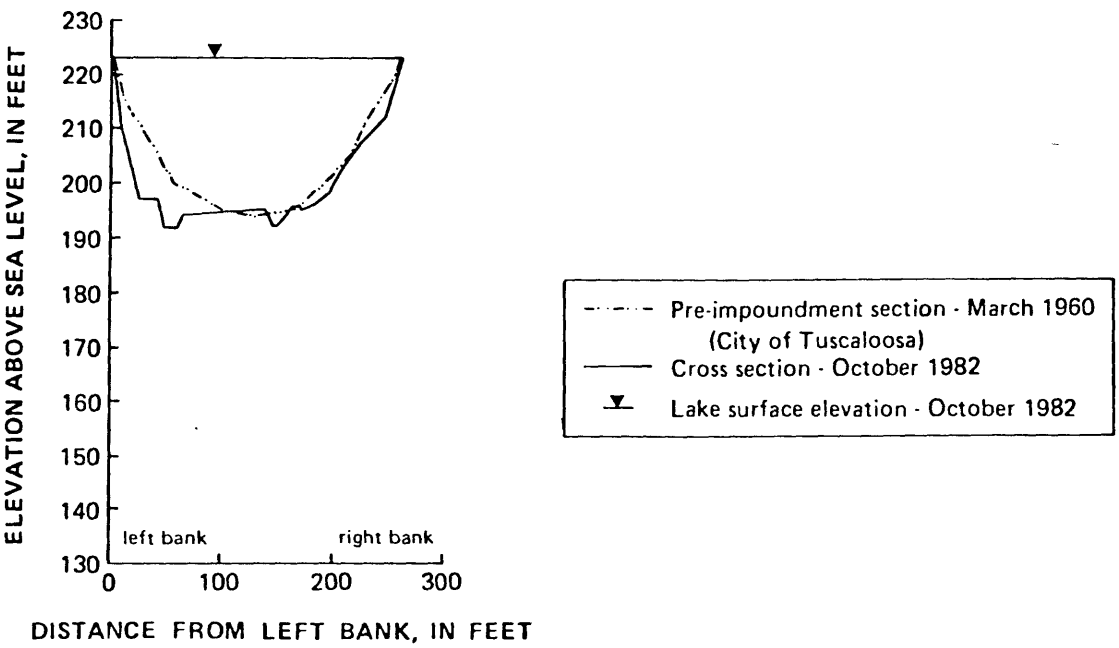



Figure 15.-- Lake cross section 9 in Tierce Creek basin, March 1960 and October 1982.

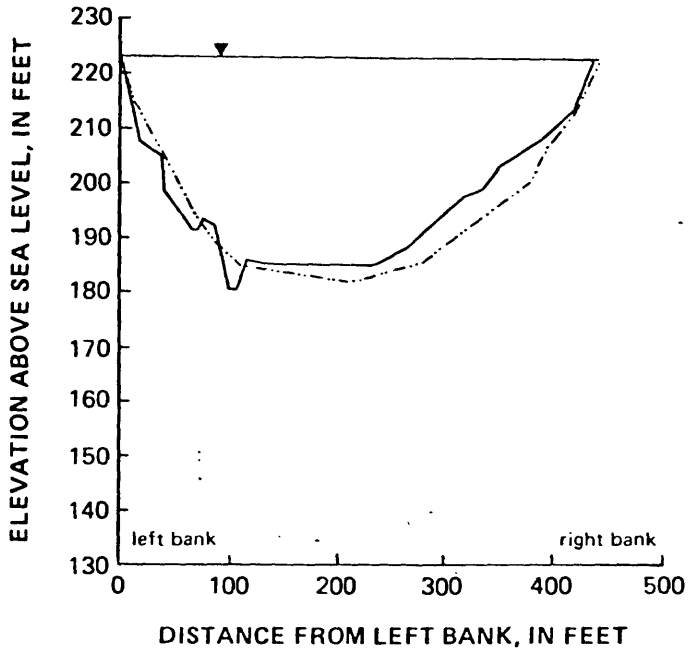
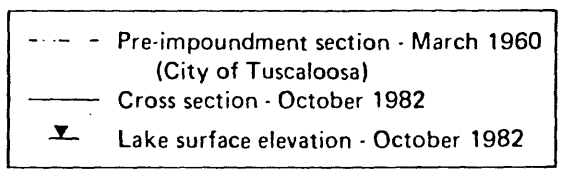



Figure 16.-- Lake cross section 10 in Tierce Creek basin, March 1960 and October 1982.



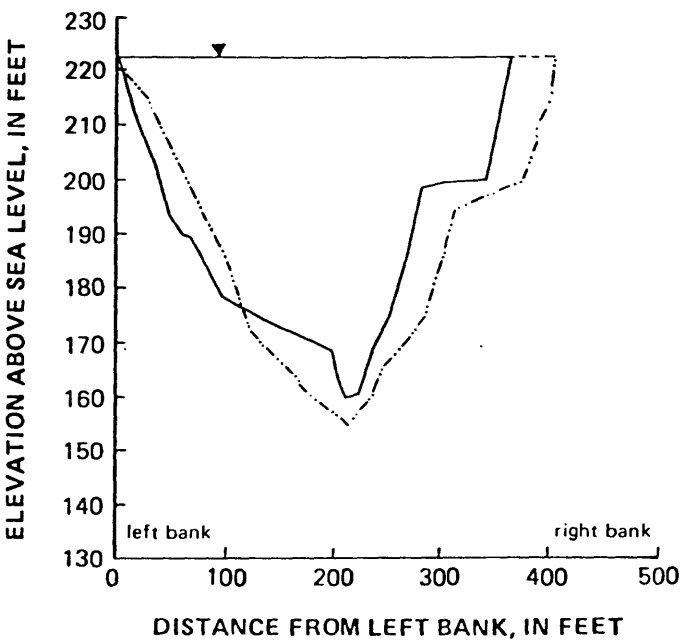




Figure 17 -- Lake cross section 11 in Tierce Creek basin, March 1960 and October 1982.

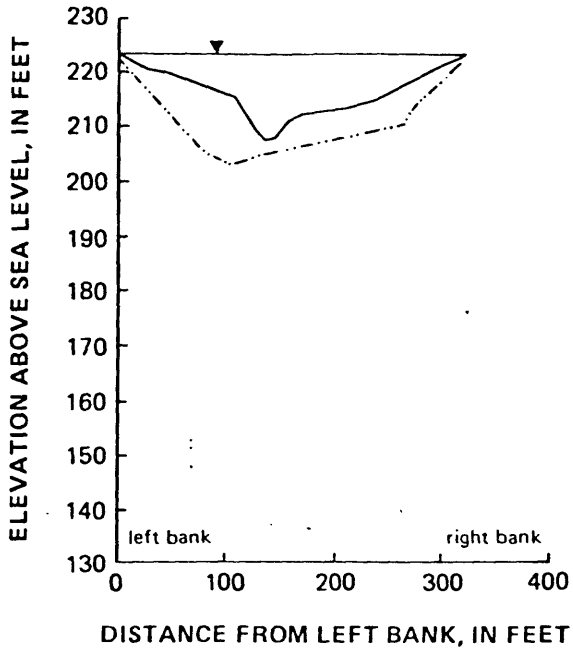



Figure 18.-- Lake cross section 12 in Carroll Creek basin, March 1960 and October 1982.

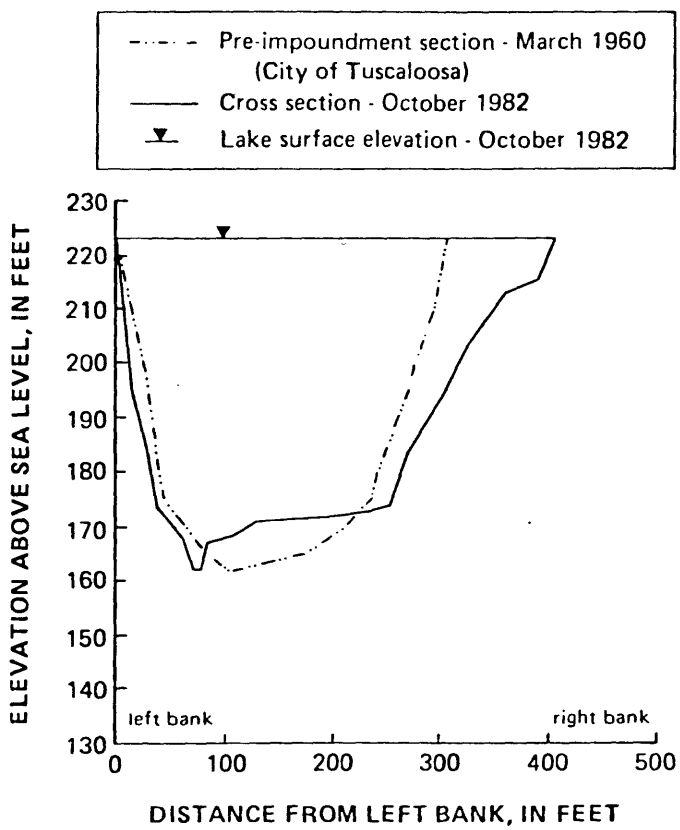



Figure 19.-- Lake cross section 13 in Carroll Creek basin, March 1960 and October 1982.

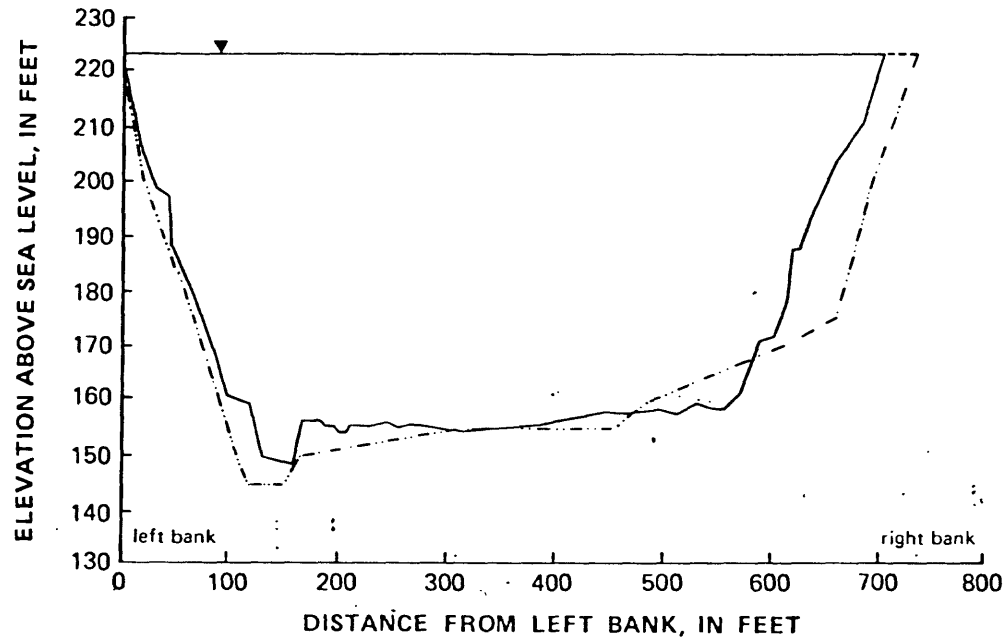



Figure 20.-- Lake cross section 14 in Carroll Creek basin, March 1960 and October 1982.

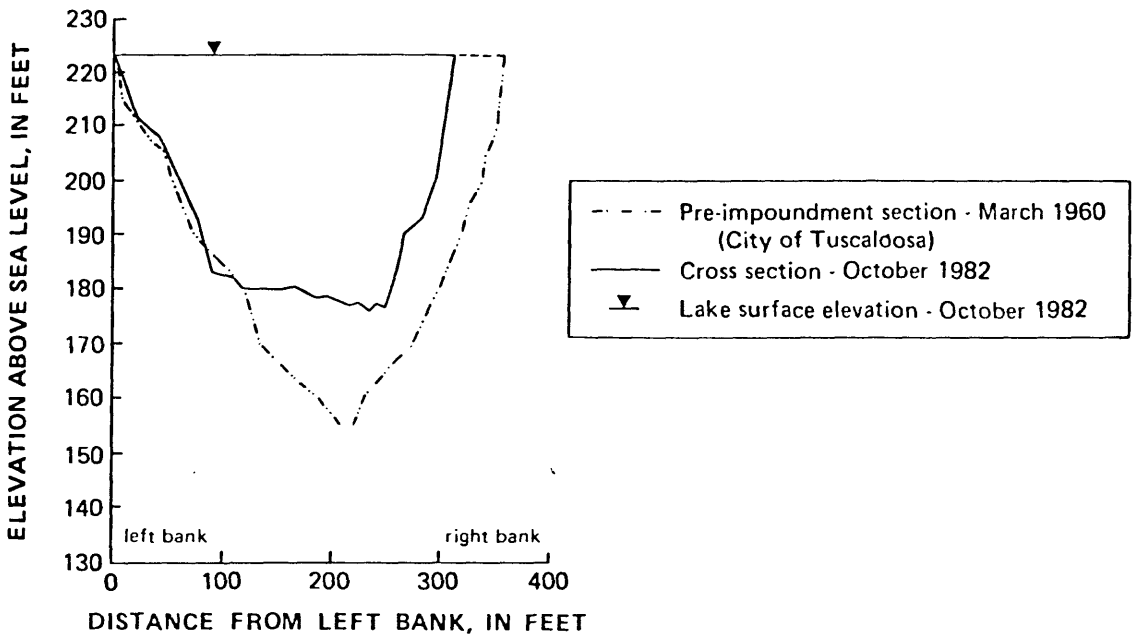



Figure 21.-- Lake cross section 15 in Brush Creek basin, March 1960 and October 1982.

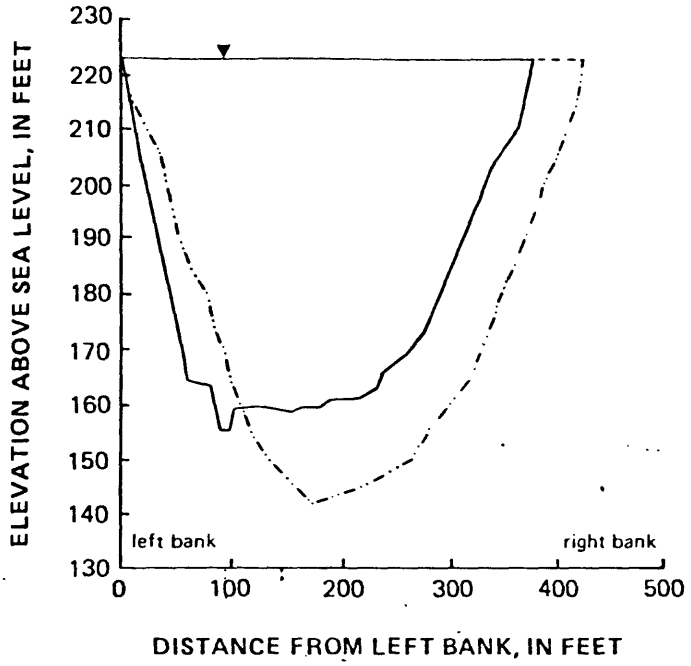



Figure 22.-- Lake cross section 16 in Brush Creek basin, March 1960 and October 1982.

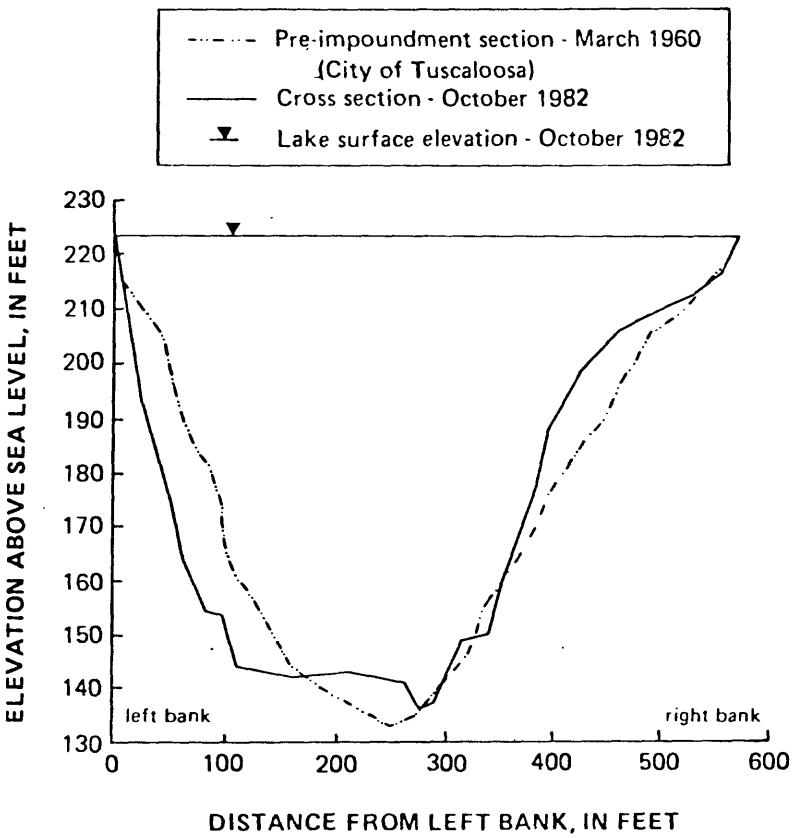



Figure 23.-- Lake cross section 17 in Brush Creek basin, March 1960 and October 1982.

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## SUPPLEMENTARY DATA

The following remark codes may appear with data in this section:

< Actual value is known to be less than the value shown

ND Material specifically analyzed for but not detected

L/ Constituent determined by laboratory.

NORTH RIVER NEAR SAMANTHA (SITE 1)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (STAND-ARD UNITS) | TEMPER-ATURE WATER (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | ACIDITY TOTAL HEATED (MG/L AS H) | ACIDITY (MG/L AS CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 05... | 1130 | 3.8 | 268 | 6.4 | 20.5 | 7.4 | -- | 31 | 15 | -- | -- | 5.3 |
| NOV | | | | | | | | | | | | |
| 02... | 1100 | 9.8 | 150 | 5.8 | 16.0 | 8.1 | -- | 34 | 24 | -- | -- | 6.3 |
| DEC | | | | | | | | | | | | |
| 10... | 1230 | 338 | 78 | 5.4 | 11.0 | 10.8 | -- | 24 | 19 | -- | -- | 4.3 |
| JAN | | | | | | | | | | | | |
| 07... | 1110 | 401 | 68 | 5.8 | 8.0 | 12.0 | -- | 19 | 13 | -- | -- | 3.4 |
| FEB | | | | | | | | | | | | |
| 08... | 1020 | 1290 | 54 | 5.8 | 7.0 | 12.3 | -- | 16 | 11 | -- | -- | 2.7 |
| MAR | | | | | | | | | | | | |
| 11... | 0900 | 800 | 66 | 6.4 | 6.5 | 12.0 | -- | 19 | 12 | -- | -- | 3.4 |
| APR | | | | | | | | | | | | |
| 08... | 1300 | 2390 | 45 | 6.0 | 15.0 | 9.9 | -- | 12 | 6 | -- | -- | 2.0 |
| MAY | | | | | | | | | | | | |
| 04... | 1330 | 243 | 74 | 6.8 | 17.5 | 9.2 | -- | 22 | 12 | -- | -- | 3.9 |
| 31... | 1130 | 247 | 76 | 6.6 | 19.5 | 8.7 | -- | 21 | 13 | .1 | 5.0 | 3.9 |
| JUL | | | | | | | | | | | | |
| 08... | 1120 | 56 | 106 | 6.9 | 25.0 | 7.4 | -- | 22 | 8 | -- | -- | 4.1 |
| AUG | | | | | | | | | | | | |
| 04... | 1045 | 23 | 132 | 6.6 | 24.5 | 6.2 | 27 | 23 | 7 | -- | -- | 4.5 |
| SEP | | | | | | | | | | | | |
| 09... | 1045 | 41 | 208 | 6.6 | 24.5 | 6.2 | -- | 25 | 10 | -- | -- | 4.4 |

NORTH RIVER NEAR SAMANTHA (SITE 1)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 05... | 4.6 | 36 | 69 | 2.8 | 2.0 | 16 | 12 | 51 | 28 | <.1 | 3.8 |
| NOV | | | | | | | | | | | |
| 02... | 4.5 | 12 | 42 | .9 | 1.6 | 10 | 31 | 33 | 8.0 | <.1 | 6.2 |
| DEC | | | | | | | | | | | |
| 10... | 3.3 | 3.1 | 21 | .3 | .9 | 5 | 39 | 18 | 3.0 | <.1 | 8.7 |
| JAN | | | | | | | | | | | |
| 07... | 2.5 | 2.9 | 24 | .3 | .8 | 6 | 18 | 16 | 2.7 | <.1 | 8.0 |
| FEB | | | | | | | | | | | |
| 08... | 2.2 | 2.0 | 21 | .2 | .8 | 5 | 15 | 6.0 | 1.9 | <.1 | 7.9 |
| MAR | | | | | | | | | | | |
| 11... | 2.6 | 2.9 | 24 | .3 | .8 | 7 | 5.4 | 19 | 2.4 | <.1 | 7.7 |
| APR | | | | | | | | | | | |
| 08... | 1.8 | 2.1 | 25 | .3 | .8 | 6 | 12 | 10 | 1.7 | .0 | 6.8 |
| MAY | | | | | | | | | | | |
| 04... | 2.9 | 5.8 | 36 | .6 | .8 | 10 | 3.1 | 18 | 3.6 | <.1 | 7.8 |
| 31... | 2.8 | 4.2 | 29 | .4 | .9 | 8 | 3.9 | 20 | 2.9 | <.1 | 8.5 |
| JUL | | | | | | | | | | | |
| 08... | 2.8 | 11 | 51 | 1.1 | 1.0 | 14 | 3.4 | 20 | 8.2 | <.1 | 6.3 |
| AUG | | | | | | | | | | | |
| 04... | 2.8 | 15 | 56 | 1.4 | 2.4 | 16 | 7.8 | 24 | 11 | <.1 | 4.4 |
| SEP | | | | | | | | | | | |
| 09... | 3.4 | 28 | 69 | 2.5 | 1.6 | 15 | 7.4 | 42 | 22 | .1 | 4.3 |

NORTH RIVER NEAR SAMANTHA (SITE 1)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRATE TOTAL (MG/L AS N) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) | NITRO-GEN, NITRITE TOTAL (MG/L AS N) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 05... | 155 | 140 | .21 | 1.6 | -- | .01 | .04 | <.010 | ND | .01 | .040 | .16 |
| NOV | | | | | | | | | | | | |
| 02... | 87 | 78 | .12 | 2.3 | -- | -- | -- | <.010 | -- | <.10 | <.010 | -- |
| DEC | | | | | | | | | | | | |
| 10... | 58 | 44 | .08 | 52.9 | .18 | -- | -- | .020 | -- | .20 | .020 | .08 |
| JAN | | | | | | | | | | | | |
| 07... | 48 | 40 | .06 | 52.0 | -- | -- | -- | <.010 | -- | .20 | .060 | .24 |
| FEB | | | | | | | | | | | | |
| 08... | 40 | 27 | .05 | 139 | .19 | -- | -- | .010 | -- | .20 | .020 | .18 |
| MAR | | | | | | | | | | | | |
| 11... | 45 | 43 | .06 | 97.2 | -- | -- | -- | <.010 | -- | .20 | .020 | .08 |
| APR | | | | | | | | | | | | |
| 08... | -- | 29 | .04 | 187 | -- | .10 | .44 | -- | .000 | .10 | -- | -- |
| MAY | | | | | | | | | | | | |
| 04... | 46 | 49 | .06 | 30.2 | -- | -- | -- | <.010 | -- | <.10 | <.010 | -- |
| 31... | -- | 50 | .07 | 33.3 | -- | -- | -- | <.010 | -- | .10 | .020 | .38 |
| JUL | | | | | | | | | | | | |
| 08... | 76 | 62 | .10 | 11.5 | -- | -- | -- | <.010 | -- | <.10 | <.010 | -- |
| AUG | | | | | | | | | | | | |
| 04... | 74 | 74 | .10 | 4.6 | .27 | -- | -- | .030 | -- | .30 | .050 | .45 |
| SEP | | | | | | | | | | | | |
| 09... | 117 | 115 | .16 | 13.0 | -- | -- | -- | .010 | -- | <.10 | .040 | -- |

NORTH RIVER NEAR SAMANTHA (SITE 1)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS NO3) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, DISSOLVED (MG/L AS P) | PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) | ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) | ALUMINUM, DISSOLVED (UG/L AS AL) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | CADMIUM TOTAL RECOVERABLE (UG/L AS CD) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 05... | .20 | .21 | .90 | .020 | .06 | <.010 | .010 | -- | -- | -- | ND | -- |
| NOV | | | | | | | | | | | | |
| 02... | .50 | -- | -- | .020 | .06 | <.010 | <.010 | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 10... | .10 | .30 | 1.3 | .040 | .12 | .040 | .020 | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 07... | .30 | .50 | 2.2 | .560 | 1.7 | <.010 | .010 | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 08... | .20 | .40 | 1.8 | .020 | .06 | .020 | .010 | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 11... | .10 | .30 | 1.3 | .010 | .03 | <.010 | <.010 | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3 | -- |
| MAY | | | | | | | | | | | | |
| 04... | <.10 | -- | -- | .020 | .06 | <.010 | <.010 | -- | -- | -- | -- | -- |
| 31... | .40 | .50 | 2.2 | .020 | .06 | <.010 | <.010 | 250 | <10 | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 08... | .20 | -- | -- | .030 | .09 | .020 | <.010 | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 04... | .50 | .80 | 3.5 | .050 | .15 | .050 | .040 | -- | -- | 1 | <1 | 1 |
| SEP | | | | | | | | | | | | |
| 09... | <.10 | -- | -- | .010 | .03 | -- | <.010 | -- | -- | -- | -- | -- |

NORTH RIVER NEAR SAMANTHA (SITE 1)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) | CHROMIUM, DISSOLVED (UG/L AS CR) | COBALT, DISSOLVED (UG/L AS CO) | IRON, TOTAL RECOVERABLE (UG/L AS FE) | IRON, SUSPENDED RECOVERABLE (UG/L AS FE) | IRON, DISSOLVED (UG/L AS FE) | LEAD, TOTAL RECOVERABLE (UG/L AS PB) | LEAD, SUSPENDED RECOVERABLE (UG/L AS PB) | LEAD, DISSOLVED (UG/L AS PB) | MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 05... | -- | 1 | -- | <1 | ND | 810 | 430 | 380 | -- | -- | 5 | 210 |
| NOV | | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | 930 | 320 | 610 | -- | -- | -- | 90 |
| DEC | | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | 600 | 400 | 200 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | 520 | 400 | 120 | -- | -- | -- | 100 |
| FEB | | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | 860 | 780 | 77 | -- | -- | -- | 110 |
| MAR | | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | 550 | 460 | 91 | -- | -- | -- | 140 |
| APR | | | | | | | | | | | | |
| 08... | -- | 3 | -- | 2 | ND | -- | -- | 70 | -- | -- | ND | -- |
| MAY | | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | 570 | 460 | 110 | -- | -- | -- | 100 |
| 31... | -- | -- | -- | -- | -- | 770 | 550 | 220 | -- | -- | -- | 120 |
| JUL | | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | 910 | 440 | 470 | -- | -- | -- | 70 |
| AUG | | | | | | | | | | | | |
| 04... | 0 | 1 | <10 | 5 | -- | 1100 | 860 | 240 | 3 | 2 | 1 | 140 |
| SEP | | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | 1300 | 1000 | 300 | -- | -- | -- | 230 |

NORTH RIVER NEAR SAMANTHA (SITE 1)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | MANGANESE, SUSPENDED RECOV. (UG/L AS MN) | MANGANESE, DISSOLVED (UG/L AS MN) | MERCURY TOTAL RECOVERABLE (UG/L AS HG) | MERCURY DISSOLVED (UG/L AS HG) | SELENIUM, TOTAL (UG/L AS SE) | SELENIUM, DISSOLVED (UG/L AS SE) | SILVER, DISSOLVED (UG/L AS AG) | STRONTIUM, DISSOLVED (UG/L AS SR) | ZINC, DISSOLVED (UG/L AS ZN) |
|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | |
| 05... | 90 | 120 | -- | .1 | -- | -- | -- | 70 | 10 |
| NOV | | | | | | | | | |
| 02... | 0 | 90 | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | |
| 10... | 0 | 130 | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | |
| 07... | 0 | 110 | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | |
| 08... | 40 | 69 | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | |
| 11... | 30 | 110 | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | |
| 08... | -- | 93 | -- | .7 | -- | -- | -- | 60 | 10 |
| MAY | | | | | | | | | |
| 04... | 5 | 95 | -- | -- | -- | -- | -- | -- | -- |
| 31... | 20 | 98 | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | |
| 08... | 20 | 48 | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | |
| 04... | 60 | 78 | <.1 | <.1 | <1 | <1 | <1 | -- | -- |
| SEP | | | | | | | | | |
| 09... | 60 | 170 | -- | -- | -- | -- | -- | -- | -- |

NORTH RIVER NEAR SAMANTHA (SITE 1)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | CARBON, ORGANIC TOTAL (MG/L AS C) | CYANIDE TOTAL (MG/L AS CN) | CYANIDE, DIS-SOLVED (MG/L AS CN) | PCB, TOTAL IN BOTTOM MATERIAL (UG/KG) | PCN, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|
| AUG 04... | 4.4 | <.01 | <.01 | <1 | <1 |

INSECTICIDES

| DATE | ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDD, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDE, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDT, TOTAL IN BOTTOM MATERIAL (UG/KG) | DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|---|---|
| AUG 04... | <.1 | <1 | .2 | .1 | .6 | <.1 | <.1 | <.1 | <.1 |

| DATE | HEPTACHLOR EPOXIDE, TOTAL IN BOTTOM MATERIAL (UG/KG) | LINDANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG) | METHOXY-CHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG) | PERTHANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|
| AUG 04... | <.1 | <.1 | <.1 | <.1 | <1 | <10 |

NORTH RIVER NEAR SAMANTHA (SITE 1)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

HERBICIDES

| DATE | 2,4-D, TOTAL IN BOTTOM MATERIAL (UG/KG) | 2,4-DP, TOTAL IN BOTTOM MATERIAL (UG/KG) | 2,4,5-T, TOTAL IN BOTTOM MATERIAL (UG/KG) | SILVEX, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|
| AUG | | | | |
| 04... | <.1 | <.1 | <.1 | <.1 |

| DATE | SEDIMENT, SUSPENDED (MG/L) | SEDIMENT DISCHARGE, SUSPENDED (T/DAY) |
|---|---|---|
| OCT | | |
| 05... | 13 | .13 |
| NOV | | |
| 02... | 3 | .08 |
| FEB | | |
| 08... | 41 | 143 |
| MAR | | |
| 11... | 35 | 76 |
| APR | | |
| 08... | 265 | 1710 |
| MAY | | |
| 04... | 7 | 4.6 |
| 31... | 9 | 6.0 |
| JUL | | |
| 08... | 6 | .91 |
| AUG | | |
| 04... | 58 | 3.6 |
| SEP | | |
| 09... | 43 | 4.8 |

LITTLE CREEK EAST OF SAMANTHA (SITE 2)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (STAND-ARD UNITS) | TEMPER-ATURE WATER (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | OXYGEN, DIS-SOLVED (MG/L) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | ACIDITY TOTAL HEATED (MG/L AS H) | ACIDITY (MG/L AS CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 13... | 1040 | 3.8 | 317 | 6.0 | 18.0 | -- | 9.8 | 140 | 130 | .2 | 10 | 25 |
| NOV | | | | | | | | | | | | |
| 16... | 0945 | .24 | 500 | 6.6 | 7.0 | 6 | 11.8 | 220 | 200 | <.1 | -- | 40 |
| DEC | | | | | | | | | | | | |
| 14... | 0930 | 10 | 365 | 6.0 | 10.0 | -- | 11.3 | 150 | 140 | <.1 | -- | 27 |
| JAN | | | | | | | | | | | | |
| 17... | 1030 | 2.8 | 405 | 6.9 | 5.0 | -- | 12.5 | 170 | 160 | <.1 | -- | 31 |
| FEB | | | | | | | | | | | | |
| 14... | 1400 | 11 | 790 | 6.6 | 12.0 | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 15... | 1045 | 5.9 | 595 | 7.0 | 13.0 | -- | 10.6 | 250 | 240 | -- | -- | 47 |
| APR | | | | | | | | | | | | |
| 15... | 0930 | 19 | 335 | 6.4 | 13.5 | -- | 10.2 | -- | -- | -- | -- | -- |
| 25... | 1305 | 14 | 515 | 6.6 | 16.0 | -- | 9.5 | 230 | 220 | .1 | 5.0 | 41 |
| MAY | | | | | | | | | | | | |
| 17... | 0910 | 96 | 330 | 6.1 | 14.5 | -- | 9.6 | 150 | 140 | .1 | 5.0 | 27 |
| JUN | | | | | | | | | | | | |
| 14... | 0845 | 2.4 | 895 | 6.9 | 21.0 | -- | 8.5 | 450 | 420 | -- | -- | 88 |
| JUL | | | | | | | | | | | | |
| 13... | 1410 | .70 | 1100 | 7.1 | 27.0 | -- | 8.4 | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 16... | 1000 | .63 | 1280 | 7.1 | 24.5 | -- | 8.2 | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 13... | 1130 | 1.6 | 1080 | 6.9 | 24.0 | -- | 7.9 | 580 | 540 | -- | -- | 120 |

LITTLE CREEK EAST OF SAMANTHA (SITE 2)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DISSOLVED (MG/L AS CO2) | SULFIDE TOTAL (MG/L AS S) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) | SILICA, DISSOLVED (MG/L AS SIO2) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 13... | 19 | 3.2 | -- | .1 | -- | 8 | 16 | -- | 120 | 1.8 | -- | -- |
| NOV | | | | | | | | | | | | |
| 16... | 29 | 9.9 | 9 | .3 | 2.5 | 23 | 11 | <.5 | 200 | 2.6 | <.1 | 8.7 |
| DEC | | | | | | | | | | | | |
| 14... | 20 | 4.0 | -- | .1 | -- | 5 | 9.8 | -- | 150 | 1.4 | -- | -- |
| JAN | | | | | | | | | | | | |
| 17... | 22 | 6.4 | -- | .2 | -- | 12 | 3.0 | -- | 160 | 2.1 | -- | -- |
| FEB | | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | 13 | 6.4 | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 15... | 34 | 6.5 | -- | .2 | -- | 14 | 2.7 | -- | 290 | 1.7 | -- | -- |
| APR | | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | 10 | 7.8 | -- | -- | -- | -- | -- |
| 25... | 30 | 5.6 | 5 | .2 | 2.1 | 11 | 5.4 | -- | 230 | 1.6 | <.1 | 7.9 |
| MAY | | | | | | | | | | | | |
| 17... | 19 | 3.6 | -- | .1 | -- | 10 | 16 | -- | 140 | 1.4 | -- | -- |
| JUN | | | | | | | | | | | | |
| 14... | 57 | 9.1 | -- | .2 | -- | 33[L/] | 8.1 | -- | 440 | 1.8 | -- | -- |
| JUL | | | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | 43 | 6.7 | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 16... | -- | -- | -- | -- | -- | 56 | 8.7 | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 13... | 69 | 11 | -- | .2 | -- | 39 | 9.6 | -- | 550 | 2.2 | -- | -- |

LITTLE CREEK EAST OF SAMANTHA (SITE 2)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRITE TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 13... | 217 | -- | .30 | 2.23 | -- | -- | .50 | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 16... | 340 | 308 | .46 | .22 | <.010 | <.10 | -- | .40 | .050 | .15 | .010 |
| DEC | | | | | | | | | | | |
| 14... | 236 | -- | .32 | 6.37 | -- | -- | .68 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 17... | 234 | -- | .32 | 1.77 | -- | -- | .42 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 15... | 433 | -- | .59 | 6.90 | -- | -- | 1.3 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 25... | -- | 328 | .45 | 12.4 | -- | -- | 1.2 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 17... | 221 | -- | .30 | 57.3 | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 14... | 688 | -- | .94 | 4.46 | -- | -- | .99 | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 13... | 904 | -- | 1.23 | 3.90 | -- | -- | .12 | -- | -- | -- | -- |

LITTLE CREEK EAST OF SAMANTHA (SITE 2)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) | ALUMINUM, SUSPENDED RECOV. (UG/L AS AL) | ALUMINUM, DISSOLVED (UG/L AS AL) | ALUMINUM, RECOV. FM BOTTOM MATERIAL (UG/G) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS) | BORON, TOTAL RECOVERABLE (UG/L AS B) |
|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | |
| 16... | 130 | -- | <10 | 650 | 1 | 0 | 1 | 1 | 20 |
| APR | | | | | | | | | |
| 25... | 300 | 270 | 30 | -- | -- | -- | -- | -- | -- |

| DATE | IRON, TOTAL RECOVERABLE (UG/L AS FE) | IRON, SUSPENDED RECOVERABLE (UG/L AS FE) | IRON, DISSOLVED (UG/L AS FE) | IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE) | LEAD, TOTAL RECOVERABLE (UG/L AS PB) | LEAD, SUSPENDED RECOVERABLE (UG/L AS PB) | LEAD, DISSOLVED (UG/L AS PB) | LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB) | LITHIUM TOTAL RECOVERABLE (UG/L AS LI) | LITHIUM DISSOLVED (UG/L AS LI) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 13... | 1300 | 1200 | 140 | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | |
| 16... | 490 | 330 | 160 | 1700 | 6 | 4 | 2 | 10 | <10 | 4 |
| DEC | | | | | | | | | | |
| 14... | 370 | 170 | 200 | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 17... | 710 | 450 | 260 | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 15... | 440 | 260 | 180 | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 25... | 510 | 320 | 190 | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 17... | 530 | 310 | 220 | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 14... | 240 | 150 | 86 | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | |
| 13... | 610 | 370 | 240 | -- | -- | -- | -- | -- | -- | -- |

LITTLE CREEK EAST OF SAMANTHA (SITE 2)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) | MANGANESE, SUSPENDED RECOV. (UG/L AS MN) | MANGANESE, DISSOLVED (UG/L AS MN) | MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G) | MERCURY TOTAL RECOVERABLE (UG/L AS HG) | STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR) | STRONTIUM, SUSPENDED RECOV. (UG/L AS SR) | STRONTIUM, DISSOLVED (UG/L AS SR) | STRONTIUM, RECOV. FM BOTTOM MATERIAL (UG/G) | ZINC, DISSOLVED (UG/L AS ZN) | SEDIMENT, SUSPENDED (MG/L) | SEDIMENT, DISCHARGE SUSPENDED (T/DAY) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 13... | 390 | 40 | 350 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 16... | 620 | 0 | 620 | 890 | <.1 | 280 | 60 | 220 | 4 | 7 | -- | -- |
| DEC | | | | | | | | | | | | |
| 14... | -- | 0 | 2400 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 17... | 2300 | 0 | 2500 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 15... | 3300 | 0 | 3400 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 25... | 2700 | 0 | 2800 | -- | -- | -- | -- | -- | -- | -- | 4 | .15 |
| MAY | | | | | | | | | | | | |
| 17... | 1800 | 0 | 1800 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | | |
| 14... | 6600 | 2500 | 4100 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 13... | 3700 | 0 | 3800 | -- | -- | -- | -- | -- | -- | -- | -- | -- |

CRIPPLE CREEK EAST OF SAMANTHA (SITE 3)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (STAND-ARD UNITS) | TEMPER-ATURE WATER (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | OXYGEN, DIS-SOLVED (MG/L) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | ACIDITY TOTAL HEATED (MG/L AS H) | ACIDITY (MG/L AS CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 12... | 1345 | 19 | 90 | 7.0 | 17.5 | -- | 10.0 | 34 | 23 | -- | -- | 5.6 |
| NOV | | | | | | | | | | | | |
| 15... | 1400 | 1.0 | 610 | 6.4 | 8.0 | 6 | 9.8 | 260 | 220 | .1 | 5.0 | 56 |
| DEC | | | | | | | | | | | | |
| 13... | 1430 | 98 | 114 | 5.6 | 9.5 | -- | 11.4 | 40 | 36 | <.1 | -- | 7.4 |
| JAN | | | | | | | | | | | | |
| 14... | 1400 | 27 | 160 | 6.8 | 8.0 | -- | 12.0 | 53 | 45 | <.1 | -- | 10 |
| FEB | | | | | | | | | | | | |
| 14... | 1240 | 54 | 240 | 6.7 | 9.0 | -- | 11.7 | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 14... | 1250 | 25 | 222 | 7.0 | 10.5 | -- | 11.3 | 81 | 72 | -- | -- | 14 |
| APR | | | | | | | | | | | | |
| 13... | 1130 | 41 | 195 | 6.9 | 16.0 | -- | 9.8 | -- | -- | -- | -- | -- |
| 22... | 1315 | 63 | 400 | 6.8 | 12.5 | -- | 10.6 | 170 | 160 | .1 | 5.0 | 31 |
| MAY | | | | | | | | | | | | |
| 16... | 1240 | 124 | 76 | 5.8 | 16.5 | -- | 9.9 | 27 | 22 | <.1 | -- | 5.0 |
| JUN | | | | | | | | | | | | |
| 13... | 1320 | 5.9 | 588 | 6.6 | 22.0 | -- | 8.6 | 280 | 260 | .1 | 5.0 | 56 |
| JUL | | | | | | | | | | | | |
| 13... | 1300 | 1.5 | 810 | 7.2 | 25.0 | -- | 8.7 | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 15... | 1400 | .91 | 1120 | 7.4 | 24.0 | -- | 8.1 | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 12... | 1040 | .59 | 1360 | 7.2 | 23.5 | -- | 6.9 | 740 | 670 | -- | -- | 160 |

CRIPPLE CREEK EAST OF SAMANTHA (SITE 3)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DISSOLVED (MG/L AS CO2) | SULFIDE TOTAL (MG/L AS S) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 12... | 4.9 | 2.1 | -- | .2 | -- | 11L/ | 2.2 | -- | 32 | 1.7 | -- |
| NOV | | | | | | | | | | | |
| 15... | 28 | 23 | 16 | .6 | 3.1 | 39 | 30 | <.5 | 260 | 10 | <.1 |
| DEC | | | | | | | | | | | |
| 13... | 5.2 | 2.2 | -- | .2 | -- | 4 | 20 | -- | 32 | 1.6 | -- |
| JAN | | | | | | | | | | | |
| 14... | 6.8 | 3.8 | -- | .2 | -- | 8 | 2.5 | -- | 53 | 2.4 | -- |
| FEB | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | 8 | 3.1 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 14... | 11 | 3.6 | -- | .2 | -- | 9 | 1.8 | -- | 82 | 1.9 | -- |
| APR | | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | 10 | 2.5 | -- | -- | -- | -- |
| 22... | 22 | 4.2 | 5 | .2 | 1.5 | 12 | 3.7 | -- | 170 | 1.6 | <.1 |
| MAY | | | | | | | | | | | |
| 16... | 3.4 | 1.8 | -- | .2 | -- | 5 | 15 | -- | 26 | 1.4 | -- |
| JUN | | | | | | | | | | | |
| 13... | 34 | 9.1 | -- | .2 | -- | 19L/ | 9.3 | -- | 260 | 2.9 | -- |
| JUL | | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | 41 | 5.0 | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | 54 | 4.2 | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 12... | 82 | 37 | -- | .6 | -- | 69 | 8.5 | -- | 700 | 11 | -- |

CRIPPLE CREEK EAST OF SAMANTHA (SITE 3)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRITE TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 12... | -- | 69 | -- | .09 | 3.5 | -- | -- | <.10 | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 15... | 9.5 | 398 | 414 | .54 | 1.1 | <.010 | <.10 | -- | .40 | <.010 | .020 |
| DEC | | | | | | | | | | | |
| 13... | -- | 72 | -- | .10 | 19.0 | -- | -- | .36 | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 14... | -- | 82 | -- | .11 | 6.0 | -- | -- | .30 | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 14... | -- | 143 | -- | .19 | 9.7 | -- | -- | .41 | -- | -- | -- |
| APR | | | | | | | | | | | |
| 22... | 6.6 | -- | 246 | .34 | 41.8 | -- | -- | .55 | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 16... | -- | 57 | -- | .08 | 19.1 | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 13... | -- | 431 | -- | .59 | 6.9 | -- | -- | .53 | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 12... | -- | 1140 | -- | 1.6 | 1.8 | -- | -- | <.10 | -- | -- | -- |

CRIPPLE CREEK EAST OF SAMANTHA (SITE 3)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) | ALUMINUM, SUSPENDED RECOV. (UG/L AS AL) | ALUMINUM, DISSOLVED (UG/L AS AL) | ALUMINUM, RECOV. FM BOTTOM MATERIAL (UG/G) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS) | BORON, TOTAL RECOVERABLE (UG/L AS B) | IRON, TOTAL RECOVERABLE (UG/L AS FE) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 790 |
| NOV | | | | | | | | | | |
| 15... | 130 | -- | <10 | 360 | 1 | 0 | 1 | <1 | 20 | 560 |
| DEC | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 460 |
| JAN | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 440 |
| MAR | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 310 |
| APR | | | | | | | | | | |
| 22... | 1400 | 1400 | 40 | -- | -- | -- | -- | -- | -- | 1900 |
| MAY | | | | | | | | | | |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 720 |
| JUN | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 280 |
| SEP | | | | | | | | | | |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 160 |

CRIPPLE CREEK EAST OF SAMANTHA (SITE 3)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | IRON, SUSPENDED RECOVERABLE (UG/L AS FE) | IRON, DISSOLVED (UG/L AS FE) | IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE) | LEAD, TOTAL RECOVERABLE (UG/L AS PB) | LEAD, SUSPENDED RECOVERABLE (UG/L AS PB) | LEAD, DISSOLVED (UG/L AS PB) | LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB) | LITHIUM TOTAL RECOVERABLE (UG/L AS LI) | LITHIUM SUSPENDED RECOVERABLE (UG/L AS LI) | LITHIUM DISSOLVED (UG/L AS LI) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 12... | 540 | 250 | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | |
| 15... | 340 | 220 | 1100 | 5 | 1 | 4 | <10 | 10 | 1 | 9 |
| DEC | | | | | | | | | | |
| 13... | 400 | 61 | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 14... | 350 | 91 | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 14... | 220 | 91 | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 22... | 1800 | 80 | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 16... | 600 | 120 | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 13... | 270 | 11 | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | |
| 12... | 150 | 8 | -- | -- | -- | -- | -- | -- | -- | -- |

CRIPPLE CREEK EAST OF SAMANTHA (SITE 3)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) | MANGANESE, SUSPENDED RECOV. (UG/L AS MN) | MANGANESE, DISSOLVED (UG/L AS MN) | MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G) | MERCURY TOTAL RECOVERABLE (UG/L AS HG) | STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR) | STRONTIUM, SUSPENDED RECOV. (UG/L AS SR) | STRONTIUM, DISSOLVED (UG/L AS SR) | STRONTIUM, RECOV. FM BOTTOM MATERIAL (UG/G) | ZINC, DISSOLVED (UG/L AS ZN) | SEDIMENT, SUSPENDED (MG/L) | SEDIMENT DISCHARGE, SUSPENDED (T/DAY) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 12... | 190 | 10 | 180 | -- | -- | -- | -- | -- | -- | -- | 95 | 4.9 |
| NOV | | | | | | | | | | | | |
| 15... | -- | 0 | 560 | 400 | <.1 | 480 | 40 | 440 | 3 | 13 | -- | -- |
| DEC | | | | | | | | | | | | |
| 13... | 380 | 20 | 360 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 14... | 600 | 30 | 570 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 14... | 1000 | 30 | 970 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 22... | 1900 | 100 | 1800 | -- | -- | -- | -- | -- | -- | -- | 49 | 8.3 |
| MAY | | | | | | | | | | | | |
| 16... | 280 | 20 | 260 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | | |
| 13... | 2600 | 200 | 2400 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 12... | 1600 | 0 | 1700 | -- | -- | -- | -- | -- | -- | -- | -- | -- |

NORTH RIVER 1500 FT BELOW CONFLUENCE OF CRIPPLE CREEK (SITE 4)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (STAND-ARD UNITS) | TEMPER-ATURE WATER (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | HARD-NESS (MG/L AS CACO3) | HARD-NESS NONCAR-BONATE (MG/L CACO3) | ACIDITY TOTAL HEATED (MG/L AS H) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 01... | 1335 | 282 | 134 | 6.7 | 19.5 | 9.4 | 45 | 35 | <.1 | 8.6 | 5.8 | 4.3 |

| DATE | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 01... | 17 | .3 | 1.0 | 10 | 3.9 | 42 | 2.9 | <.1 | 8.8 | 80 | .11 | 60.8 |

| DATE | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) |
|---|---|---|---|---|---|---|---|---|---|
| JUN 01... | .18 | 160 | <10 | 690 | 650 | 44 | 360 | 0 | 360 |

DRY CREEK NEAR SAMANTHA (SITE 5)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (STAND-ARD UNITS) | TEMPER-ATURE WATER (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | OXYGEN, DIS-SOLVED (MG/L) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | ACIDITY TOTAL HEATED (MG/L AS H) | ACIDITY (MG/L AS CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 13... | 1215 | 5.0 | 36 | 5.6 | 17.5 | -- | 8.0 | 23 | 15 | .2 | 10 | -- |
| NOV | | | | | | | | | | | | |
| 16... | 1120 | .29 | 41 | 5.3 | 7.0 | 27 | 8.8 | 12 | 4 | .2 | 10 | 2.3 |
| DEC | | | | | | | | | | | | |
| 14... | 1110 | 26 | 25 | 5.2 | 9.0 | -- | 11.2 | 4 | 2 | <.1 | -- | .6 |
| JAN | | | | | | | | | | | | |
| 17... | 1230 | 7.9 | 28 | 6.0 | 4.5 | -- | 13.3 | 7 | 1 | <.1 | -- | 1.8 |
| FEB | | | | | | | | | | | | |
| 15... | 0920 | 19 | 24 | 6.6 | 6.0 | -- | 11.8 | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 15... | 1200 | 12 | 23 | 6.5 | 12.5 | -- | 11.8 | 6 | 1 | <.1 | -- | 1.0 |
| APR | | | | | | | | | | | | |
| 15... | 1030 | 60 | 22 | 6.6 | 12.5 | -- | 10.3 | -- | -- | -- | -- | -- |
| 21... | 0930 | 14 | 22 | 6.4 | 10.5 | -- | 10.8 | 6 | 0 | <.1 | -- | 1.0 |
| MAY | | | | | | | | | | | | |
| 17... | 1010 | 28 | 25 | 5.9 | 14.0 | -- | 10.2 | 8 | 2 | <.1 | -- | 1.4 |
| JUN | | | | | | | | | | | | |
| 14... | 0945 | 2.3 | 29 | 5.9 | 20.0 | -- | 8.1 | 7 | 0 | <.1 | -- | 1.3 |
| JUL | | | | | | | | | | | | |
| 14... | 0915 | .56 | 27 | 6.0 | 23.5 | -- | 5.5 | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 16... | 1145 | .09 | 32 | 6.8 | 23.5 | -- | 4.5 | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 13... | 1245 | 1.8 | 26 | 6.2 | 23.0 | -- | 5.8 | 10 | 3 | <.1 | -- | 2.1 |

DRY CREEK NEAR SAMANTHA (SITE 5)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DISSOLVED (MG/L AS CO2) | SULFIDE TOTAL (MG/L AS S) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) | SILICA, DISSOLVED (MG/L AS SIO2) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 13... | -- | 1.7 | -- | .2 | -- | 8 | 39 | -- | 10 | 1.6 | -- | -- |
| NOV | | | | | | | | | | | | |
| 16... | 1.6 | 1.5 | 19 | .2 | 1.4 | 8 | 78 | <.5 | 6.0 | 1.8 | <.1 | 7.6 |
| DEC | | | | | | | | | | | | |
| 14... | .6 | .8 | -- | .2 | -- | 2 | 25 | -- | 3.0 | 1.2 | -- | -- |
| JAN | | | | | | | | | | | | |
| 17... | 1.1 | 1.4 | -- | .2 | -- | 6 | 12 | -- | 5.0 | 1.5 | -- | -- |
| FEB | | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | 8 | 3.9 | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 15... | .9 | 1.2 | -- | .2 | -- | 5 | 3.1 | -- | 4.4 | 1.3 | -- | -- |
| APR | | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | 5 | 2.4 | -- | -- | -- | -- | -- |
| 21... | .9 | 1.2 | 27 | .2 | .5 | 7 | 5.4 | -- | 4.3 | 1.2 | <.1 | 7.7 |
| MAY | | | | | | | | | | | | |
| 17... | 1.0 | 1.3 | -- | .2 | -- | 6 | 15 | -- | 4.0 | 1.2 | -- | -- |
| JUN | | | | | | | | | | | | |
| 14... | .9 | 1.5 | -- | .3 | -- | 8[L/] | 20 | -- | 4.7 | 1.3 | -- | -- |
| JUL | | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | 8 | 16 | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 16... | -- | -- | -- | -- | -- | 13 | 4.0 | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 13... | 1.1 | 1.1 | -- | .2 | -- | 7 | 8.6 | -- | 4.6 | .9 | -- | -- |

DRY CREEK NEAR SAMANTHA (SITE 5)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRITE TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 13... | 52 | -- | .07 | .70 | -- | -- | <.10 | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 16... | 34 | 28 | .05 | .03 | <.010 | <.10 | -- | .40 | .030 | .09 | .020 |
| DEC | | | | | | | | | | | |
| 14... | 26 | -- | .04 | 1.8 | -- | -- | <.10 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 17... | 16 | -- | .02 | .34 | -- | -- | <.10 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 15... | 28 | -- | .04 | .91 | -- | -- | <.10 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 21... | -- | 21 | .03 | .79 | -- | -- | <.10 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 17... | 27 | -- | .04 | 2.0 | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 14... | 24 | -- | .03 | .15 | -- | -- | <.10 | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 13... | 16 | -- | .02 | .08 | -- | -- | <.10 | -- | -- | -- | -- |

DRY CREEK NEAR SAMANTHA (SITE 5)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) | ALUMINUM, SUSPENDED RECOV. (UG/L AS AL) | ALUMINUM, DISSOLVED (UG/L AS AL) | ALUMINUM, RECOV. FM BOTTOM MATERIAL (UG/G) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS) | BORON, TOTAL RECOVERABLE (UG/L AS B) | IRON, TOTAL RECOVERABLE (UG/L AS FE) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5600 |
| NOV 16... | 150 | -- | <10 | 200 | 1 | 0 | 1 | <1 | 40 | 1100 |
| DEC 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 390 |
| JAN 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 420 |
| MAR 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 270 |
| APR 21... | 240 | 190 | 50 | -- | -- | -- | -- | -- | -- | 440 |
| MAY 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 310 |
| JUN 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 470 |
| SEP 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 990 |

DRY CREEK NEAR SAMANTHA (SITE 5)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | IRON, SUSPENDED RECOVERABLE (UG/L AS FE) | IRON, DISSOLVED (UG/L AS FE) | IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE) | LEAD, TOTAL RECOVERABLE (UG/L AS PB) | LEAD, SUSPENDED RECOVERABLE (UG/L AS PB) | LEAD, DISSOLVED (UG/L AS PB) | LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB) | LITHIUM TOTAL RECOVERABLE (UG/L AS LI) | LITHIUM DISSOLVED (UG/L AS LI) | MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 13... | 5200 | 400 | -- | -- | -- | -- | -- | -- | -- | 260 |
| NOV | | | | | | | | | | |
| 16... | 380 | 720 | 1200 | 7 | 4 | 3 | <10 | <10 | <4 | 80 |
| DEC | | | | | | | | | | |
| 14... | 350 | 42 | -- | -- | -- | -- | -- | -- | -- | 30 |
| JAN | | | | | | | | | | |
| 17... | 270 | 150 | -- | -- | -- | -- | -- | -- | -- | 40 |
| MAR | | | | | | | | | | |
| 15... | 200 | 70 | -- | -- | -- | -- | -- | -- | -- | 40 |
| APR | | | | | | | | | | |
| 21... | 370 | 71 | -- | -- | -- | -- | -- | -- | -- | 30 |
| MAY | | | | | | | | | | |
| 17... | 220 | 86 | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 14... | 340 | 130 | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | |
| 13... | -- | <3 | -- | -- | -- | -- | -- | -- | -- | 90 |

DRY CREEK NEAR SAMANTHA (SITE 5)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | MANGANESE, SUSPENDED RECOV. (UG/L AS MN) | MANGANESE, DISSOLVED (UG/L AS MN) | MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G) | MERCURY TOTAL RECOVERABLE (UG/L AS HG) | STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR) | STRONTIUM, SUSPENDED RECOV. (UG/L AS SR) | STRONTIUM, DISSOLVED (UG/L AS SR) | STRONTIUM, RECOV. FM BOTTOM MATERIAL (UG/G) | ZINC, DISSOLVED (UG/L AS ZN) | SEDIMENT, SUSPENDED (MG/L) | SEDIMENT DISCHARGE, SUSPENDED (T/DAY) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 13... | 120 | 140 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 16... | 10 | 70 | 110 | <.1 | 60 | 50 | 15 | 1 | <4 | -- | -- |
| DEC | | | | | | | | | | | |
| 14... | 10 | 17 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 17... | 0 | 41 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 15... | 10 | 26 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 21... | 3 | 27 | -- | -- | -- | -- | -- | -- | -- | 5 | .19 |
| MAY | | | | | | | | | | | |
| 17... | 0 | 29 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 14... | 0 | 31 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 13... | 0 | 91 | -- | -- | -- | -- | -- | -- | -- | -- | -- |

DRY CREEK NEAR NORTHPORT (SITE 6)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (STAND-ARD UNITS) | TEMPER-ATURE WATER (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | ACIDITY TOTAL HEATED (MG/L AS H) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 23... | 1015 | 2.1 | 35 | 5.2 | 15.5 | 8.2 | 11 | 6 | <.1 | 1.9 | 1.4 |
| APR | | | | | | | | | | | |
| 21... | 1210 | 18 | 22 | 6.4 | 12.0 | 10.5 | 6 | 1 | <.1 | 1.0 | 1.0 |

| DATE | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 23... | 1.6 | 22 | .2 | 1.4 | 5 | 62 | 3.0 | 2.0 | <.1 | 8.0 | 23 |
| APR | | | | | | | | | | | |
| 21... | 1.3 | 29 | .2 | .5 | 5 | 3.9 | 4.4 | 1.2 | <.1 | 7.8 | 20 |

| DATE | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) | ALUM-INUM, SUS-PENDED RECOV. (UG/L AS AL) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | |
| 23... | .03 | .13 | <.10 | 120 | -- | <10 | 600 | 240 | 360 | 10 | 0 | 15 |
| APR | | | | | | | | | | | | |
| 21... | .03 | .99 | <.10 | 400 | 350 | 50 | 430 | 220 | 210 | 30 | 0 | 32 |

TURKEY CREEK NEAR PATTERSON CHAPEL (SITE 7)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (STAND-ARD UNITS) | TEMPER-ATURE WATER (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | OXYGEN, DIS-SOLVED (MG/L) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | ACIDITY TOTAL HEATED (MG/L AS H) | ACIDITY (MG/L AS CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 14... | 1345 | 5.6 | 110 | 5.6 | 16.0 | -- | 10.0 | 38 | 35 | .1 | 5.0 | 5.8 |
| NOV | | | | | | | | | | | | |
| 17... | 0815 | 3.0 | 67 | 5.6 | 8.5 | 14 | 11.4 | 23 | 20 | .2 | 10 | 4.0 |
| DEC | | | | | | | | | | | | |
| 20... | 0900 | 19 | 48 | 5.4 | 6.5 | -- | 12.0 | 12 | 8 | <.1 | -- | 2.4 |
| JAN | | | | | | | | | | | | |
| 18... | 1415 | 9.9 | 56 | 6.0 | 5.0 | -- | 12.8 | 17 | 9 | <.1 | -- | 2.8 |
| FEB | | | | | | | | | | | | |
| 15... | 1235 | 25 | 47 | 6.2 | 9.0 | -- | 11.9 | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 16... | 0830 | 18 | 43 | 5.6 | 12.0 | -- | 10.0 | 12 | 8 | .1 | 5.0 | 2.1 |
| APR | | | | | | | | | | | | |
| 19... | 1245 | 24 | 37 | 6.3 | 11.5 | -- | -- | -- | -- | -- | -- | -- |
| 20... | 1320 | 21 | 36 | 6.4 | 14.0 | -- | 10.3 | 12 | 8 | <.1 | -- | 1.8 |
| MAY | | | | | | | | | | | | |
| 18... | 1415 | 21 | 43 | 6.2 | 16.5 | -- | 9.6 | 15 | 8 | .1 | 5.0 | 2.4 |
| JUN | | | | | | | | | | | | |
| 15... | 0915 | 13 | 50 | 6.3 | 20.0 | -- | 9.2 | 17 | 10 | <.1 | -- | 3.2 |
| JUL | | | | | | | | | | | | |
| 14... | 1300 | 4.7 | 41 | 6.6 | 24.5 | -- | 8.1 | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 17... | 0900 | 2.6 | 42 | 6.5 | 21.0 | -- | 8.7 | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 14... | 1310 | 5.7 | 62 | 6.6 | 21.5 | -- | 8.5 | 22 | 17 | <.1 | -- | 3.8 |

TURKEY CREEK NEAR PATTERSON CHAPEL (SITE 7)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DISSOLVED (MG/L AS CO2) | SULFIDE TOTAL (MG/L AS S) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) | SILICA, DISSOLVED (MG/L AS SIO2) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 14... | 5.6 | 1.9 | 10 | .1 | -- | 3 | 15 | -- | 29 | 1.8 | -- | -- |
| NOV | | | | | | | | | | | | |
| 17... | 3.1 | 1.9 | 15 | .2 | 1.0 | 3 | 15 | <.5 | 15 | 1.5 | <.1 | 8.1 |
| DEC | | | | | | | | | | | | |
| 20... | 1.5 | 1.5 | 21 | .2 | -- | 4 | 31 | -- | 12 | 1.7 | -- | -- |
| JAN | | | | | | | | | | | | |
| 18... | 2.4 | 1.5 | 16 | .2 | -- | 8 | 16 | -- | 13 | 1.4 | -- | -- |
| FEB | | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | 5 | 6.2 | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 16... | 1.7 | 1.1 | 16 | .1 | -- | 4 | 20 | -- | 12 | 1.4 | -- | -- |
| APR | | | | | | | | | | | | |
| 19... | -- | -- | -- | -- | -- | 3 | 2.9 | -- | -- | -- | -- | -- |
| 20... | 1.7 | 1.2 | 18 | .2 | .5 | 4 | 3.1 | -- | 12 | 1.2 | <.1 | 6.8 |
| MAY | | | | | | | | | | | | |
| 18... | 2.1 | 1.3 | 16 | .2 | -- | 7 | 8.6 | -- | 12 | 1.2 | -- | -- |
| JUN | | | | | | | | | | | | |
| 15... | 2.3 | 1.6 | 17 | .2 | -- | 7L/ | 6.8 | -- | 16 | 1.6 | -- | -- |
| JUL | | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | 7 | 3.4 | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | 7 | 4.3 | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 14... | 3.1 | 1.6 | 14 | .2 | -- | 5 | 2.4 | -- | 19 | 1.6 | -- | -- |

TURKEY CREEK NEAR PATTERSON CHAPEL (SITE 7)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRITE TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 14... | 70 | -- | .10 | 1.1 | -- | -- | .15 | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 17... | 44 | 37 | .06 | .36 | <.010 | <.10 | -- | .20 | .010 | .03 | .010 |
| DEC | | | | | | | | | | | |
| 20... | 40 | -- | .05 | 2.1 | -- | -- | <.10 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 18... | 39 | -- | .05 | 1.0 | -- | -- | <.10 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 16... | 46 | -- | .06 | 2.2 | -- | -- | <.10 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 20... | -- | 28 | .04 | 1.6 | -- | -- | <.10 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 18... | 33 | -- | .04 | 1.9 | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 15... | 48 | -- | .06 | 1.7 | -- | -- | <.10 | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 14... | 63 | -- | .09 | .97 | -- | -- | <.10 | -- | -- | -- | -- |

TURKEY CREEK NEAR PATTERSON CHAPEL (SITE 7)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) | ALUMINUM, SUSPENDED RECOV. (UG/L AS AL) | ALUMINUM, DISSOLVED (UG/L AS AL) | ALUMINUM, RECOV. FM BOTTOM MATERIAL (UG/G) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS) | BORON, TOTAL RECOVERABLE (UG/L AS B) | IRON, TOTAL RECOVERABLE (UG/L AS FE) | IRON, SUSPENDED RECOVERABLE (UG/L AS FE) | IRON, DISSOLVED (UG/L AS FE) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 660 | 530 | 130 |
| NOV | | | | | | | | | | | | |
| 17... | 140 | -- | <10 | 330 | 2 | 1 | 1 | <1 | 10 | 410 | 240 | 170 |
| DEC | | | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 410 | 340 | 71 |
| JAN | | | | | | | | | | | | |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 270 | 180 | 93 |
| MAR | | | | | | | | | | | | |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 270 | 230 | 45 |
| APR | | | | | | | | | | | | |
| 20... | 300 | 270 | 30 | -- | -- | -- | -- | -- | -- | 310 | 200 | 110 |
| MAY | | | | | | | | | | | | |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 310 | 270 | 43 |
| JUN | | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 280 | 170 | 110 |
| SEP | | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 400 | 290 | 110 |

TURKEY CREEK NEAR PATTERSON CHAPEL (SITE 7)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE) | LEAD, TOTAL RECOVERABLE (UG/L AS PB) | LEAD, DISSOLVED (UG/L AS PB) | LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB) | LITHIUM TOTAL RECOVERABLE (UG/L AS LI) | LITHIUM DISSOLVED (UG/L AS LI) | MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) | MANGANESE, SUSPENDED RECOV. (UG/L AS MN) | MANGANESE, DISSOLVED (UG/L AS MN) | MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT 14... | -- | -- | -- | -- | -- | -- | 940 | 0 | 900 | -- |
| NOV 17... | 1200 | 7 | <1 | <10 | <10 | <4 | 130 | 10 | 120 | 480 |
| DEC 20... | -- | -- | -- | -- | -- | -- | 300 | 80 | 220 | -- |
| JAN 18... | -- | -- | -- | -- | -- | -- | 350 | 20 | 330 | -- |
| MAR 16... | -- | -- | -- | -- | -- | -- | 290 | 50 | 240 | -- |
| APR 20... | -- | -- | -- | -- | -- | -- | 190 | 0 | 190 | -- |
| MAY 18... | -- | -- | -- | -- | -- | -- | 160 | 0 | 160 | -- |
| JUN 15... | -- | -- | -- | -- | -- | -- | 70 | 3 | 67 | -- |
| SEP 14... | -- | -- | -- | -- | -- | -- | 250 | 0 | 270 | -- |

TURKEY CREEK NEAR PATTERSON CHAPEL (SITE 7)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | MERCURY TOTAL RECOVERABLE (UG/L AS HG) | STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR) | STRONTIUM, SUSPENDED RECOV. (UG/L AS SR) | STRONTIUM, DISSOLVED (UG/L AS SR) | STRONTIUM, RECOV. FM BOTTOM MATERIAL (UG/G) | ZINC, DISSOLVED (UG/L AS ZN) |
|---|---|---|---|---|---|---|
| OCT | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | |
| 17... | <.1 | 60 | 40 | 22 | 1 | <4 |
| DEC | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | |
| 18... | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | |
| 16... | -- | -- | -- | -- | -- | -- |
| APR | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | |
| 18... | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- |

TURKEY CREEK NEAR PATTERSON CHAPEL (SITE 7)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | SEDIMENT, SUSPENDED (MG/L) | SEDIMENT DISCHARGE SUSPENDED (T/DAY) |
|---|---|---|
| OCT | | |
| 14... | 13 | .20 |
| APR | | |
| 20... | 5 | .28 |

LAKE TUSCALOOSA AT HILLTOP ESTATES LANDING NR NORTHPORT (SITE 8)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | TIME | RESERVOIR ELEVATION (FT ABOVE SEA LEVEL) | SPECIFIC CONDUCTANCE (UMHOS) | PH (STANDARD UNITS) | TEMPERATURE WATER (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 06... | 1200 | 222.51 | 89 | 5.9 | 25.0 | 7.9 | -- | 22 | 10 | 3.6 | 3.2 | 4.9 |
| NOV | | | | | | | | | | | | |
| 05... | 0900 | 223.28 | 86 | 5.9 | 17.5 | 8.2 | -- | 20 | 9 | 3.4 | 2.9 | 5.8 |
| DEC | | | | | | | | | | | | |
| 13... | 0900 | 225.02 | 52 | 6.2 | 10.5 | 9.8 | -- | 16 | 11 | 2.9 | 2.1 | 2.0 |
| JAN | | | | | | | | | | | | |
| 05... | 0900 | 224.11 | 60 | 6.3 | 10.0 | 10.2 | -- | 17 | 10 | 3.2 | 2.2 | 2.4 |
| FEB | | | | | | | | | | | | |
| 09... | 0835 | 224.48 | 56 | 6.2 | 8.0 | 10.9 | -- | 17 | 12 | 3.1 | 2.2 | 1.9 |
| MAR | | | | | | | | | | | | |
| 07... | 0930 | 227.81 | 33 | 5.7 | 14.0 | 8.6 | -- | 9 | 7 | 1.7 | 1.1 | 1.0 |
| APR | | | | | | | | | | | | |
| 15... | 0850 | 225.54 | 43 | 6.2 | 16.0 | 8.7 | -- | 13 | 7 | 2.3 | 1.7 | 2.1 |
| MAY | | | | | | | | | | | | |
| 05... | 1000 | 223.80 | 54 | 5.8 | 21.5 | 8.4 | -- | 18 | 10 | 3.4 | 2.4 | 3.6 |
| JUN | | | | | | | | | | | | |
| 07... | 0850 | 223.73 | 74 | 6.6 | 26.5 | 8.1 | -- | 22 | 14 | 4.1 | 2.9 | 2.4 |
| JUL | | | | | | | | | | | | |
| 11... | 0940 | 223.39 | 78 | 6.6 | 29.0 | 7.4 | -- | 24 | 11 | 4.6 | 3.0 | 3.4 |
| AUG | | | | | | | | | | | | |
| 11... | 0945 | 223.39 | 102 | 6.8 | 30.5 | 7.5 | 35 | 28 | 13 | 5.3 | 3.5 | 5.7 |
| SEP | | | | | | | | | | | | |
| 08... | 1020 | 223.10 | 80 | 6.6 | 29.0 | -- | -- | 23 | 7 | 4.4 | 3.0 | 4.1 |

LAKE TUSCALOOSA AT HILLTOP ESTATES LANDING NR NORTHPORT (SITE 8)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DISSOLVED (MG/L AS CO2) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) | SILICA, DISSOLVED (MG/L AS SIO2) | SOLIDS RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS SUM OF CONSTITUENTS, DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) | NITROGEN, NITRATE TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | | |
| 06... | 32 | .5 | .7 | 12 | 29 | 17 | 4.0 | <.1 | 6.2 | 57 | 48 | .08 | -- |
| NOV | | | | | | | | | | | | | |
| 05... | 37 | .6 | 1.1 | 11 | 27 | 19 | 4.4 | <.1 | 5.7 | 50 | 49 | .07 | -- |
| DEC | | | | | | | | | | | | | |
| 13... | 20 | .2 | 1.0 | 5 | 6.2 | 13 | 1.8 | <.1 | 7.4 | 42 | 33 | .06 | .19 |
| JAN | | | | | | | | | | | | | |
| 05... | 22 | .3 | .9 | 7 | 6.8 | 13 | 2.3 | <.1 | 7.5 | 46 | 36 | .06 | -- |
| FEB | | | | | | | | | | | | | |
| 09... | 19 | .2 | .9 | 5 | 6.2 | 15 | 1.7 | <.1 | 7.3 | 37 | 35 | .05 | -- |
| MAR | | | | | | | | | | | | | |
| 07... | 18 | .2 | 1.0 | 2 | 7.8 | 9.0 | 1.2 | <.1 | 4.8 | 29 | 21 | .04 | .14 |
| APR | | | | | | | | | | | | | |
| 15... | 25 | .3 | .8 | 6 | 7.4 | 13 | 1.5 | <.1 | 6.4 | 41 | 32 | .06 | .07 |
| MAY | | | | | | | | | | | | | |
| 05... | 29 | .4 | .8 | 8 | 25 | 16 | 1.8 | <.1 | 6.9 | 38 | 40 | .05 | -- |
| JUN | | | | | | | | | | | | | |
| 07... | 18 | .2 | .9 | 8 | 3.9 | 19 | 2.0 | <.1 | 7.4 | 64 | 44 | .09 | -- |
| JUL | | | | | | | | | | | | | |
| 11... | 23 | .3 | 1.0 | 13 | 6.4 | 18 | 2.9 | <.1 | 6.8 | 61 | 49 | .08 | -- |
| AUG | | | | | | | | | | | | | |
| 11... | 30 | .5 | 1.2 | 15 | 4.6 | 22 | 4.3 | <.1 | 6.4 | 68 | 59 | .09 | -- |
| SEP | | | | | | | | | | | | | |
| 08... | 27 | .4 | .9 | 16 | 7.8 | 19 | 1.7 | <.1 | 6.8 | 58 | 53 | .08 | -- |

LAKE TUSCALOOSA AT HILLTOP ESTATES LANDING NR NORTHPORT (SITE 8)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | NITROGEN, NITRITE TOTAL (MG/L AS N) | NITROGEN, NO2+NO3 TOTAL (MG/L AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS N) | NITROGEN, ORGANIC TOTAL (MG/L AS N) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS NO3) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, DISSOLVED (MG/L AS P) | PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 06... | <.010 | <.10 | .160 | .04 | .20 | -- | -- | .010 | .03 | <.010 | <.010 |
| NOV | | | | | | | | | | | |
| 05... | .150 | <.10 | .100 | .30 | .40 | -- | -- | .020 | .06 | <.010 | .010 |
| DEC | | | | | | | | | | | |
| 13... | .010 | .20 | .040 | .06 | .10 | .30 | 1.3 | .030 | .09 | .010 | .030 |
| JAN | | | | | | | | | | | |
| 05... | <.010 | .20 | .040 | .16 | .20 | .40 | 1.8 | .190 | .58 | .080 | <.010 |
| FEB | | | | | | | | | | | |
| 09... | <.010 | .20 | .030 | .17 | .20 | .40 | 1.8 | .020 | .06 | <.010 | .020 |
| MAR | | | | | | | | | | | |
| 07... | .060 | .20 | .120 | .28 | .40 | .60 | 2.7 | .140 | .43 | <.010 | .100 |
| APR | | | | | | | | | | | |
| 15... | .030 | .10 | .070 | .23 | .30 | .40 | 1.8 | .060 | .18 | <.010 | .050 |
| MAY | | | | | | | | | | | |
| 05... | .010 | <.10 | .100 | .10 | .20 | -- | -- | .020 | .06 | <.010 | <.010 |
| JUN | | | | | | | | | | | |
| 07... | <.010 | <.10 | .080 | .32 | .40 | -- | -- | .020 | .06 | <.010 | .010 |
| JUL | | | | | | | | | | | |
| 11... | <.010 | <.10 | .140 | .26 | .40 | -- | -- | .040 | .12 | .030 | <.010 |
| AUG | | | | | | | | | | | |
| 11... | .010 | <.10 | .170 | .43 | .60 | -- | -- | .030 | .09 | <.010 | <.010 |
| SEP | | | | | | | | | | | |
| 08... | .010 | <.10 | .210 | 1.6 | 1.80 | -- | -- | <.010 | -- | .020 | .010 |

LAKE TUSCALOOSA AT HILLTOP ESTATES LANDING NR NORTHPORT (SITE 8)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUS-PENDED TOTAL (UG/L AS AS) | ARSENIC DIS-SOLVED (UG/L AS AS) | CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | 1300 | 350 | 950 | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | 340 | 270 | 72 | -- |
| DEC | | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | -- | -- | 960 | 840 | 120 | -- |
| JAN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | 510 | 390 | 120 | -- |
| FEB | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | 670 | 590 | 84 | -- |
| MAR | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | 5100 | 4900 | 210 | -- |
| APR | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | 2300 | 2200 | 150 | -- |
| MAY | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | 640 | 520 | 120 | -- |
| JUN | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | 700 | 530 | 170 | -- |
| JUL | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | 1400 | 1100 | 300 | -- |
| AUG | | | | | | | | | | | |
| 11... | 2 | 0 | 2 | <1 | <1 | <1 | <1 | -- | 0 | 830 | 6 |
| SEP | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | 3200 | 1100 | 2100 | -- |

LAKE TUSCALOOSA AT HILLTOP ESTATES LANDING NR NORTHPORT (SITE 8)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | LEAD, SUSPENDED RECOVERABLE (UG/L AS PB) | LEAD, DISSOLVED (UG/L AS PB) | MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) | MANGANESE, SUSPENDED RECOV. (UG/L AS MN) | MANGANESE, DISSOLVED (UG/L AS MN) | MERCURY TOTAL RECOVERABLE (UG/L AS HG) | MERCURY DISSOLVED (UG/L AS HG) | SELENIUM, TOTAL (UG/L AS SE) | SELENIUM, DISSOLVED (UG/L AS SE) | SILVER, TOTAL RECOVERABLE (UG/L AS AG) | SILVER, DISSOLVED (UG/L AS AG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 06... | -- | -- | 650 | 80 | 570 | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | 150 | 50 | 100 | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 13... | -- | -- | 120 | 0 | 120 | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 05... | -- | -- | -- | 0 | 120 | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 09... | -- | -- | 140 | 30 | 110 | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 07... | -- | -- | 280 | 130 | 150 | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 15... | -- | -- | 160 | 50 | 110 | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 05... | -- | -- | 200 | 20 | 180 | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 07... | -- | -- | 380 | 100 | 280 | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 11... | -- | -- | 1100 | 0 | 1100 | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 11... | 4 | 2 | -- | 0 | 1000 | <.1 | <.1 | <1 | <1 | <1 | <1 |
| SEP | | | | | | | | | | | |
| 08... | -- | -- | 1100 | 0 | 1100 | -- | -- | -- | -- | -- | -- |

LAKE TUSCALOOSA AT HILLTOP ESTATES LANDING NR NORTHPORT (SITE 8)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | CARBON, ORGANIC TOTAL (MG/L AS C) | CYANIDE TOTAL (MG/L AS CN) | CYANIDE, DIS-SOLVED (MG/L AS CN) | PCB, TOTAL IN BOTTOM MATERIAL (UG/KG) | PCN, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|
| AUG 11... | 3.1 | <.01 | <.01 | <1 | <1 |

INSECTICIDES

| DATE | ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDD, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDE, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDT, TOTAL IN BOTTOM MATERIAL (UG/KG) | DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|---|
| AUG 11... | <.1 | 4 | 13 | 22 | 2.7 | .3 | <.1 | <.1 |

| DATE | HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG) | HEPTACHLOR EPOXIDE, TOTAL IN BOTTOM MATERIAL (UG/KG) | LINDANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG) | METHOXY-CHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG) | PERTHANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|
| AUG 11... | <.1 | <.1 | <.1 | <.1 | <.1 | <1 | <10 |

HERBICIDES

| DATE | 2,4-D, TOTAL IN BOTTOM MATERIAL (UG/KG) | 2,4-DP, TOTAL IN BOTTOM MATERIAL (UG/KG) | 2,4,5-T, TOTAL IN BOTTOM MATERIAL (UG/KG) | SILVEX, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|
| AUG 11... | <.1 | <.1 | <.1 | <.1 |

BINION CREEK BELOW GIN CREEK NEAR SAMANTHA (SITE 9)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (STAND-ARD UNITS) | TEMPER-ATURE WATER (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN DEMAND, CHEMICAL (HIGH LEVEL (MG/L) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | ACIDITY TOTAL HEATED (MG/L AS H) | ACIDITY (MG/L AS CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | | |
| 05... | 0830 | 16 | 34 | 5.8 | 19.0 | 8.0 | -- | 10 | 4 | -- | -- | 2.2 | 1.2 |
| NOV | | | | | | | | | | | | | |
| 06... | 1315 | 30 | 40 | 5.4 | 9.0 | 11.2 | -- | 11 | 5 | -- | -- | 2.3 | 1.2 |
| DEC | | | | | | | | | | | | | |
| 03... | 1340 | 132 | 69 | 5.2 | 18.0 | 8.0 | -- | 20 | 15 | -- | -- | 3.9 | 2.4 |
| JAN | | | | | | | | | | | | | |
| 04... | 1300 | 106 | 52 | 5.6 | 7.0 | 11.8 | -- | 16 | 11 | -- | -- | 3.3 | 1.9 |
| FEB | | | | | | | | | | | | | |
| 07... | 0910 | 370 | 35 | 5.6 | 6.5 | 11.6 | -- | 11 | 8 | -- | -- | 2.1 | 1.3 |
| MAR | | | | | | | | | | | | | |
| 04... | 1120 | 152 | 39 | 6.4 | 15.0 | 10.0 | -- | 12 | 6 | -- | -- | 2.4 | 1.4 |
| APR | | | | | | | | | | | | | |
| 05... | 1315 | 98 | 37 | 6.2 | 15.5 | 9.5 | -- | 12 | 5 | -- | -- | 2.5 | 1.4 |
| MAY | | | | | | | | | | | | | |
| 03... | 1115 | 84 | 32 | 6.0 | 19.0 | 7.5 | -- | 11 | 4 | -- | -- | 2.4 | 1.3 |
| JUN | | | | | | | | | | | | | |
| 06... | 0945 | 79 | 35 | 6.2 | 21.0 | 7.6 | -- | 11 | 4 | .1 | 5.0 | 2.4 | 1.3 |
| JUL | | | | | | | | | | | | | |
| 06... | 1335 | 52 | 35 | 6.4 | 23.0 | 7.6 | -- | 12 | 4 | -- | -- | 2.5 | 1.3 |
| AUG | | | | | | | | | | | | | |
| 03... | 1015 | 34 | 36 | 6.4 | 23.0 | 7.5 | 35 | 12 | 4 | -- | -- | 2.7 | 1.2 |
| SEP | | | | | | | | | | | | | |
| 06... | 1000 | 34 | 36 | 5.8 | 23.0 | 7.3 | -- | 11 | 3 | -- | -- | 2.5 | 1.2 |

BINION CREEK BELOW GIN CREEK NEAR SAMANTHA (SITE 9)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | | |
| 05... | 1.4 | 21 | .2 | 1.0 | 6 | 18 | 3.0 | 2.0 | <.1 | 9.7 | 36 | 25 | .05 |
| NOV | | | | | | | | | | | | | |
| 06... | 1.4 | 20 | .2 | 1.1 | 6 | 47 | 5.0 | 2.6 | <.1 | 9.6 | 36 | 28 | .05 |
| DEC | | | | | | | | | | | | | |
| 03... | 1.6 | 14 | .2 | 1.0 | 5 | 62 | 13 | 3.0 | <.1 | 7.7 | 38 | 36 | .05 |
| JAN | | | | | | | | | | | | | |
| 04... | 1.3 | 14 | .1 | .7 | 5 | 24 | 10 | 2.2 | <.1 | 7.4 | 42 | 30 | .06 |
| FEB | | | | | | | | | | | | | |
| 07... | 1.0 | 16 | .1 | .7 | 3 | 15 | 9.0 | 1.3 | <.1 | 5.9 | 24 | 23 | .03 |
| MAR | | | | | | | | | | | | | |
| 04... | 1.4 | 19 | .2 | .7 | 6 | 4.7 | 9.1 | 2.1 | .2 | 6.1 | 33 | 27 | .04 |
| APR | | | | | | | | | | | | | |
| 05... | 1.6 | 21 | .2 | .7 | 7 | 8.6 | 9.3 | 1.9 | <.1 | 6.2 | 36 | 28 | .05 |
| MAY | | | | | | | | | | | | | |
| 03... | 2.2 | 28 | .3 | .8 | 7 | 14 | 6.7 | 1.7 | <.1 | 6.8 | 27 | 27 | .04 |
| JUN | | | | | | | | | | | | | |
| 06... | 1.2 | 17 | .2 | .9 | 7 | 8.6 | 6.2 | 1.7 | <.1 | 8.5 | -- | 27 | .04 |
| JUL | | | | | | | | | | | | | |
| 06... | 1.5 | 20 | .2 | .9 | 8 | 6.2 | 5.3 | 3.3 | <.1 | 8.5 | 50 | 28 | .07 |
| AUG | | | | | | | | | | | | | |
| 03... | 1.7 | 22 | .2 | .9 | 8 | 6.2 | 5.7 | 2.0 | <.1 | 8.9 | 31 | 28 | .04 |
| SEP | | | | | | | | | | | | | |
| 06... | 1.3 | 18 | .2 | 1.1 | 8 | 25 | 5.7 | 2.1 | <.1 | 9.0 | 28 | 28 | .04 |

BINION CREEK BELOW GIN CREEK NEAR SAMANTHA (SITE 9)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRATE TOTAL (MG/L AS N) | NITRO-GEN, NITRITE TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS NO3) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 05... | 1.6 | -- | <.010 | <.10 | .030 | .27 | .30 | -- | -- | .030 | .09 | <.010 |
| NOV | | | | | | | | | | | | |
| 06... | 2.9 | -- | <.010 | <.10 | .020 | .48 | .50 | -- | -- | .020 | .06 | <.010 |
| DEC | | | | | | | | | | | | |
| 03... | 13.5 | .18 | .020 | .20 | .060 | .34 | .40 | .60 | 2.7 | .040 | .12 | <.010 |
| JAN | | | | | | | | | | | | |
| 04... | 12.0 | -- | <.010 | .10 | .060 | .14 | .20 | .30 | 1.3 | .310 | .95 | <.010 |
| FEB | | | | | | | | | | | | |
| 07... | 24.0 | .09 | .010 | .10 | .030 | .47 | .50 | .60 | 2.7 | .030 | .09 | <.010 |
| MAR | | | | | | | | | | | | |
| 04... | 13.5 | -- | <.010 | <.10 | .030 | .17 | .20 | -- | -- | .030 | .09 | <.010 |
| APR | | | | | | | | | | | | |
| 05... | 9.5 | -- | <.010 | <.10 | .010 | .19 | .20 | -- | -- | .020 | .06 | <.010 |
| MAY | | | | | | | | | | | | |
| 03... | 6.1 | -- | <.010 | <.10 | <.010 | -- | .20 | -- | -- | .030 | .09 | <.010 |
| JUN | | | | | | | | | | | | |
| 06... | 5.8 | -- | <.010 | .10 | .040 | .26 | .30 | .40 | 1.8 | .020 | .06 | <.010 |
| JUL | | | | | | | | | | | | |
| 06... | 7.0 | -- | <.010 | .10 | .030 | .27 | .30 | .40 | 1.8 | .050 | .15 | .010 |
| AUG | | | | | | | | | | | | |
| 03... | 2.8 | -- | <.010 | .10 | .030 | .27 | .30 | .40 | 1.8 | .030 | .09 | .010 |
| SEP | | | | | | | | | | | | |
| 06... | 2.6 | -- | <.010 | <.10 | .020 | .48 | .50 | -- | -- | .020 | .06 | <.010 |

BINION CREEK BELOW GIN CREEK NEAR SAMANTHA (SITE 9)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) | ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC DIS-SOLVED (UG/L AS AS) | CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) | CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 05... | .020 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1800 | 1400 |
| NOV | | | | | | | | | | | | |
| 06... | <.010 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1900 | 1400 |
| DEC | | | | | | | | | | | | |
| 03... | .020 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1600 | 1300 |
| JAN | | | | | | | | | | | | |
| 04... | .010 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 950 | 610 |
| FEB | | | | | | | | | | | | |
| 07... | .020 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 | 790 |
| MAR | | | | | | | | | | | | |
| 04... | .010 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1600 | 1300 |
| APR | | | | | | | | | | | | |
| 05... | <.010 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1100 | 810 |
| MAY | | | | | | | | | | | | |
| 03... | <.010 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1900 | 1500 |
| JUN | | | | | | | | | | | | |
| 06... | <.010 | 240 | <10 | -- | -- | -- | -- | -- | -- | -- | 2400 | 2200 |
| JUL | | | | | | | | | | | | |
| 06... | <.010 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2100 | 2000 |
| AUG | | | | | | | | | | | | |
| 03... | <.010 | -- | -- | 1 | <1 | 1 | 0 | 1 | 10 | <1 | 1800 | 1700 |
| SEP | | | | | | | | | | | | |
| 06... | <.010 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1700 | 1500 |

BINION CREEK BELOW GIN CREEK NEAR SAMANTHA (SITE 9)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | SILVER, DIS-SOLVED (UG/L AS AG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 05... | 380 | -- | -- | 170 | 60 | 110 | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 06... | 470 | -- | -- | 260 | 10 | 250 | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 03... | 340 | -- | -- | 400 | 80 | 320 | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 04... | 340 | -- | -- | -- | 0 | 210 | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 07... | 210 | -- | -- | 250 | 130 | 120 | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 04... | 270 | -- | -- | 370 | 240 | 130 | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 05... | 290 | -- | -- | 210 | 40 | 170 | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 03... | 390 | -- | -- | 290 | 60 | 230 | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 06... | 250 | -- | -- | 250 | 40 | 210 | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 06... | 110 | -- | -- | 240 | 50 | 190 | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 03... | 120 | 1 | <1 | 180 | 30 | 150 | <.1 | <.1 | <1 | <1 | <1 |
| SEP | | | | | | | | | | | |
| 06... | 200 | -- | -- | 160 | 40 | 120 | -- | -- | -- | -- | -- |

BINION CREEK BELOW GIN CREEK NEAR SAMANTHA (SITE 9)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | CARBON, ORGANIC TOTAL (MG/L AS C) | CYANIDE TOTAL (MG/L AS CN) | CYANIDE, DIS-SOLVED (MG/L AS CN) | PCB, TOTAL IN BOTTOM MATERIAL (UG/KG) | PCN, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|
| AUG 03... | 3.8 | <.01 | <.01 | <1 | <1 |

INSECTICIDES

| DATE | ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDD, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDE, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDT, TOTAL IN BOTTOM MATERIAL (UG/KG) | DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|---|
| AUG 03... | <.1 | <1 | .2 | <.1 | .1 | <.1 | <.1 | <.1 |

| DATE | HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG) | HEPTACHLOR EPOXIDE, TOTAL IN BOTTOM MATERIAL (UG/KG) | LINDANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG) | METHOXY-CHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG) | PERTHANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|
| AUG 03... | <.1 | <.1 | <.1 | <.1 | <.1 | <1 | <10 |

BINION CREEK BELOW GIN CREEK NEAR SAMANTHA (SITE 9)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| | HERBICIDES | | | |
|---|---|---|---|---|
| DATE | 2,4-D, TOTAL IN BOTTOM MATERIAL (UG/KG) | 2,4-DP, TOTAL IN BOTTOM MATERIAL (UG/KG) | 2,4,5-T, TOTAL IN BOTTOM MATERIAL (UG/KG) | SILVEX, TOTAL IN BOTTOM MATERIAL (UG/KG) |
| AUG 03... | <.1 | <.1 | <.1 | <.1 |

| DATE | SEDIMENT, SUSPENDED (MG/L) | SEDIMENT DISCHARGE, SUSPENDED (T/DAY) |
|---|---|---|
| OCT 05... | 10 | .43 |
| NOV 06... | 7 | .57 |
| DEC 03... | 27 | 9.6 |
| JAN 04... | 18 | 5.2 |
| FEB 07... | 94 | 94 |
| MAR 04... | 491 | 202 |
| APR 05... | 23 | 6.1 |
| MAY 03... | 111 | 25 |
| JUN 06... | 17 | 3.6 |
| JUL 06... | 20 | 2.8 |
| AUG 03... | 23 | 2.1 |
| SEP 06... | 12 | 1.1 |

LAKE TUSCALOOSA AT TIERCE PATTON ROAD NR NORTHPORT (SITE 10)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | TIME | RESERVOIR ELEVATION (FT ABOVE SEA LEVEL) | SPECIFIC CONDUCTANCE (UMHOS) | PH (STANDARD UNITS) | TEMPERATURE WATER (DEG C) | OXYGEN, DISSOLVED (MG/L) | ALKALINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DISSOLVED (MG/L AS CO2) | NITROGEN, NITRATE TOTAL (MG/L AS N) | NITROGEN, NITRITE TOTAL (MG/L AS N) | NITROGEN, NO2+NO3 TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY | | | | | | | | | | | |
| 05... | 1205 | 223.75 | 50 | 6.5 | 22.0 | 8.6 | 7 | 4.3 | .09 | .010 | .10 |
| AUG | | | | | | | | | | | |
| 11... | 1300 | 223.37 | 61 | 6.5 | 32.0 | 7.4 | 8 | 4.9 | -- | <.010 | <.10 |

| DATE | NITROGEN, AMMONIA TOTAL (MG/L AS N) | NITROGEN, ORGANIC TOTAL (MG/L AS N) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS NO3) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, DISSOLVED (MG/L AS P) | PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) |
|---|---|---|---|---|---|---|---|---|---|
| MAY | | | | | | | | | |
| 05... | .010 | .09 | .10 | .20 | .89 | .020 | .06 | <.010 | .010 |
| AUG | | | | | | | | | |
| 11... | .090 | .51 | .60 | -- | -- | .010 | .03 | <.010 | <.010 |

LAKE TUSCALOOSA AT STATE HIGHWAY 69 NEAR TUSCALOOSA (SITE 11)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | TIME | RESERVOIR ELEVATION (FT ABOVE SEA LEVEL) | SPECIFIC CONDUCTANCE (UMHOS) | PH (STANDARD UNITS) | TEMPERATURE WATER (DEG C) | OXYGEN, DISSOLVED (MG/L) | ALKALINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DISSOLVED (MG/L AS CO2) | NITROGEN, NITRITE TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|
| MAY | | | | | | | | | |
| 09... | 0915 | 223.65 | 44 | 6.6 | 21.0 | 8.5 | 5 | 2.4 | .010 |
| AUG | | | | | | | | | |
| 11... | 1230 | 223.37 | 48 | 6.4 | 32.0 | 7.5 | 4 | 3.1 | <.010 |

| DATE | NITROGEN, NO2+NO3 TOTAL (MG/L AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS N) | NITROGEN, ORGANIC TOTAL (MG/L AS N) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, DISSOLVED (MG/L AS P) | PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) |
|---|---|---|---|---|---|---|---|---|
| MAY | | | | | | | | |
| 09... | <.10 | <.010 | -- | .10 | .020 | .06 | <.010 | <.010 |
| AUG | | | | | | | | |
| 11... | <.10 | .030 | .37 | .40 | .020 | .06 | .010 | <.010 |

TIERCE CREEK NEAR NORTHPORT (SITE 12)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (STAND-ARD UNITS) | TEMPER-ATURE WATER (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 04... | 1000 | .98 | 22 | 5.2 | 17.0 | 9.5 | -- | 3 | 1 | .5 | .4 | 1.0 |
| NOV | | | | | | | | | | | | |
| 04... | 1130 | 1.6 | 19 | 4.9 | 12.5 | 10.4 | -- | 4 | 2 | .8 | .6 | 1.1 |
| DEC | | | | | | | | | | | | |
| 02... | 1520 | 9.2 | 16 | 5.0 | 17.5 | 9.5 | -- | 5 | 3 | .9 | .7 | 1.0 |
| JAN | | | | | | | | | | | | |
| 03... | 1330 | 4.8 | 19 | 5.2 | 10.5 | 11.2 | -- | 5 | 3 | .8 | .6 | 1.0 |
| FEB | | | | | | | | | | | | |
| 03... | 0930 | 11 | 17 | 5.4 | 9.0 | 11.4 | -- | 4 | 2 | .8 | .6 | .9 |
| MAR | | | | | | | | | | | | |
| 02... | 0900 | 7.9 | 17 | 6.0 | 10.5 | 11.2 | -- | 5 | 2 | .8 | .6 | 1.0 |
| APR | | | | | | | | | | | | |
| 05... | 0845 | 4.6 | 15 | 5.4 | 13.0 | 10.6 | -- | 4 | 2 | .6 | .5 | 1.4 |
| MAY | | | | | | | | | | | | |
| 04... | 0910 | 4.9 | 14 | 5.8 | 13.5 | 10.2 | -- | 4 | 2 | .8 | .5 | 2.0 |
| JUN | | | | | | | | | | | | |
| 03... | 0915 | 4.2 | 15 | 5.8 | 17.0 | 9.3 | -- | 3 | 0 | .6 | .4 | .9 |
| JUL | | | | | | | | | | | | |
| 06... | 0930 | 3.2 | 14 | 5.6 | 20.0 | 8.9 | -- | 3 | 1 | .6 | .4 | 1.3 |
| AUG | | | | | | | | | | | | |
| 02... | 0930 | 2.6 | 14 | 5.7 | 20.5 | 8.7 | 20 | 3 | 1 | .6 | .4 | 1.4 |
| SEP | | | | | | | | | | | | |
| 02... | 0905 | 2.1 | 13 | 5.6 | 21.0 | 8.6 | -- | 3 | 0 | .5 | .4 | 1.1 |

TIERCE CREEK NEAR NORTHPORT (SITE 12)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DISSOLVED (MG/L AS CO2) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) | SILICA, DISSOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 04... | -- | .3 | <.1 | 2 | 25 | 2.0 | 1.7 | <.1 | 7.6 | 21 | 15 | .03 |
| NOV | | | | | | | | | | | | |
| 04... | 32 | .2 | .6 | 2 | 49 | 3.0 | 2.0 | <.1 | 7.7 | 24 | 17 | .03 |
| DEC | | | | | | | | | | | | |
| 02... | 29 | .2 | .3 | 2 | 39 | 3.3 | 1.6 | <.1 | 6.4 | 16 | 16 | .02 |
| JAN | | | | | | | | | | | | |
| 03... | 30 | .2 | .4 | 2 | 25 | 2.0 | 1.5 | <.1 | 6.9 | 22 | 15 | .03 |
| FEB | | | | | | | | | | | | |
| 03... | 27 | .2 | .7 | 2 | 16 | <5.0 | 1.4 | <.1 | 6.0 | 12 | -- | .02 |
| MAR | | | | | | | | | | | | |
| 02... | 30 | .2 | .5 | 3 | 5.8 | 3.6 | 1.4 | <.1 | 6.6 | 20 | 16 | .03 |
| APR | | | | | | | | | | | | |
| 05... | 42 | .4 | .4 | 2 | 16 | 3.0 | 1.6 | <.1 | 6.3 | 22 | 15 | .03 |
| MAY | | | | | | | | | | | | |
| 04... | 48 | .4 | .4 | 2 | 6.2 | 2.8 | 1.6 | <.1 | 6.6 | 15 | 16 | .02 |
| JUN | | | | | | | | | | | | |
| 03... | 36 | .2 | .4 | 3 | 9.3 | 2.2 | 1.6 | <.1 | 6.9 | 29 | 15 | .04 |
| JUL | | | | | | | | | | | | |
| 06... | 42 | .3 | .4 | 2 | 9.8 | 1.1 | 1.7 | <.1 | 6.8 | 21 | 14 | .03 |
| AUG | | | | | | | | | | | | |
| 02... | 46 | .4 | .3 | 2 | 7.8 | 2.2 | 1.8 | <.1 | 7.2 | 15 | 15 | .02 |
| SEP | | | | | | | | | | | | |
| 02... | 43 | .3 | .3 | 3 | 15 | 2.0 | 1.7 | <.1 | 7.2 | 18 | 15 | .02 |

TIERCE CREEK NEAR NORTHPORT (SITE 12)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRITE TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS NO3) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) | PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 04... | .06 | <.010 | <.10 | .030 | .07 | .10 | -- | -- | .020 | .06 | <.010 | .020 |
| NOV | | | | | | | | | | | | |
| 04... | .10 | .020 | <.10 | <.010 | -- | .20 | -- | -- | <.010 | -- | <.010 | <.010 |
| DEC | | | | | | | | | | | | |
| 02... | .40 | .020 | <.10 | .100 | .10 | .20 | -- | -- | .020 | .06 | <.010 | .040 |
| JAN | | | | | | | | | | | | |
| 03... | .28 | <.010 | <.10 | .020 | .28 | .30 | -- | -- | .470 | 1.4 | <.010 | <.010 |
| FEB | | | | | | | | | | | | |
| 03... | .36 | <.010 | .20 | .090 | .91 | 1.00 | 1.2 | 5.3 | <.010 | -- | .010 | <.010 |
| MAR | | | | | | | | | | | | |
| 02... | .43 | <.010 | <.10 | .060 | .14 | .20 | -- | -- | <.010 | -- | <.010 | <.010 |
| APR | | | | | | | | | | | | |
| 05... | .27 | <.010 | <.10 | <.010 | -- | .10 | -- | -- | <.010 | -- | <.010 | <.010 |
| MAY | | | | | | | | | | | | |
| 04... | .20 | <.010 | <.10 | <.010 | -- | <.10 | -- | -- | <.010 | -- | <.010 | <.010 |
| JUN | | | | | | | | | | | | |
| 03... | .33 | <.010 | <.10 | <.010 | -- | .20 | -- | -- | .060 | .18 | .020 | <.010 |
| JUL | | | | | | | | | | | | |
| 06... | .18 | <.010 | <.10 | <.010 | -- | .20 | -- | -- | .040 | .12 | .010 | <.010 |
| AUG | | | | | | | | | | | | |
| 02... | .10 | <.010 | <.10 | .010 | .19 | .20 | -- | -- | .020 | .06 | .040 | <.010 |
| SEP | | | | | | | | | | | | |
| 02... | .10 | <.010 | <.10 | <.010 | -- | .30 | -- | -- | .010 | .03 | <.010 | <.010 |

TIERCE CREEK NEAR NORTHPORT (SITE 12)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | ARSENIC TOTAL (UG/L AS AS) | ARSENIC DIS-SOLVED (UG/L AS AS) | CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) | CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) | CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | 410 | 340 | 66 |
| NOV | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | 690 | 480 | 210 |
| DEC | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | 480 | 350 | 130 |
| JAN | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | 270 | 170 | 100 |
| FEB | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | 450 | 350 | 100 |
| MAR | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | 230 | 130 | 98 |
| APR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | 280 | 190 | 88 |
| MAY | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | 300 | 250 | 46 |
| JUN | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | 330 | 240 | 91 |
| JUL | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | 540 | 470 | 71 |
| AUG | | | | | | | | | | | |
| 02... | 1 | <1 | 1 | 0 | 1 | 10 | 0 | 12 | 500 | 350 | 150 |
| SEP | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | 460 | 380 | 80 |

TIERCE CREEK NEAR NORTHPORT (SITE 12)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | SILVER, DIS-SOLVED (UG/L AS AG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 04... | -- | -- | 20 | 9 | 11 | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 04... | -- | -- | 50 | 20 | 35 | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 02... | -- | -- | 90 | 4 | 86 | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 03... | -- | -- | 50 | 0 | 55 | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 03... | -- | -- | 70 | 20 | 49 | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 02... | -- | -- | 50 | 10 | 40 | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 05... | -- | -- | -- | 0 | 29 | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 04... | -- | -- | 30 | 7 | 23 | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 03... | -- | -- | 30 | 9 | 21 | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 06... | -- | -- | 30 | 10 | 16 | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 02... | 1 | <1 | 30 | 10 | 17 | <.1 | <.1 | 4.8 | <1 | <1 | <1 |
| SEP | | | | | | | | | | | |
| 02... | -- | -- | 30 | 20 | 15 | -- | -- | -- | -- | -- | -- |

TIERCE CREEK NEAR NORTHPORT (SITE 12)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | CARBON, ORGANIC TOTAL (MG/L AS C) | CYANIDE TOTAL (MG/L AS CN) | CYANIDE, DIS-SOLVED (MG/L AS CN) | PCB, TOTAL IN BOTTOM MATERIAL (UG/KG) | PCN, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|
| AUG 02... | 2.0 | <.01 | <.01 | <1 | <1 |

INSECTICIDES

| DATE | ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDD, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDE, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDT, TOTAL IN BOTTOM MATERIAL (UG/KG) | DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|---|
| AUG 02... | <.1 | <1 | <.1 | <.1 | <.1 | <.1 | <.1 | <.1 |

| DATE | HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG) | HEPTACHLOR EPOXIDE, TOTAL IN BOTTOM MATERIAL (UG/KG) | LINDANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG) | METHOXY-CHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG) | PERTHANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|
| AUG 02... | <.1 | <.1 | <.1 | <.1 | <.1 | <1 | <10 |

TIERCE CREEK NEAR NORTHPORT (SITE 12)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| | HERBICIDES | | | |
|---|---|---|---|---|
| DATE | 2,4-D, TOTAL IN BOTTOM MATERIAL (UG/KG) | 2,4-DP, TOTAL IN BOTTOM MATERIAL (UG/KG) | 2,4,5-T, TOTAL IN BOTTOM MATERIAL (UG/KG) | SILVEX, TOTAL IN BOTTOM MATERIAL (UG/KG) |
| AUG 02... | <.1 | <.1 | <.1 | <.1 |

| DATE | SEDIMENT, SUSPENDED (MG/L) | SEDIMENT DISCHARGE, SUSPENDED (T/DAY) |
|---|---|---|
| OCT 04... | 3 | .01 |
| NOV 04... | 5 | .02 |
| DEC 02... | 16 | .40 |
| JAN 03... | 7 | .09 |
| FEB 03... | 5 | .15 |
| MAR 02... | 4 | .08 |
| APR 05... | 3 | .04 |
| MAY 04... | 9 | .12 |
| JUN 03... | 3 | .03 |
| JUL 06... | 8 | .07 |
| AUG 02... | 10 | .07 |
| SEP 02... | 5 | .03 |

CARROLL CREEK AT STATE HIGHWAY 69 NR NORTHPORT (SITE 13)

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (STAND-ARD UNITS) | TEMPER-ATURE WATER (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 04... | 0800 | 1.8 | 33 | 5.2 | 17.0 | 8.8 | -- | 5 | 1 | .8 | .6 | 1.9 |
| NOV | | | | | | | | | | | | |
| 04... | 0835 | 14 | 29 | 4.8 | 14.0 | 9.0 | -- | 6 | 4 | 1.4 | .7 | 1.7 |
| DEC | | | | | | | | | | | | |
| 03... | 0905 | 74 | 29 | 4.6 | 18.0 | 8.1 | -- | 6 | 5 | 1.3 | .7 | 1.3 |
| JAN | | | | | | | | | | | | |
| 03... | 1040 | 57 | 24 | 5.0 | 8.5 | 10.6 | -- | 5 | 3 | 1.1 | .6 | 1.2 |
| FEB | | | | | | | | | | | | |
| 04... | 0930 | 94 | 21 | 5.2 | 5.0 | 11.8 | -- | 5 | 3 | 1.0 | .5 | 1.0 |
| MAR | | | | | | | | | | | | |
| 02... | 1515 | 111 | 20 | 5.8 | 13.0 | 10.2 | -- | 5 | 2 | 1.0 | .5 | 1.1 |
| APR | | | | | | | | | | | | |
| 04... | 1305 | 38 | 20 | 6.0 | 14.0 | 10.5 | -- | 5 | 2 | 1.0 | .6 | 1.7 |
| MAY | | | | | | | | | | | | |
| 02... | 1355 | 23 | 22 | 6.2 | 19.5 | 8.6 | -- | 7 | 2 | 1.4 | .8 | 2.4 |
| JUN | | | | | | | | | | | | |
| 02... | 1300 | 22 | 24 | 6.2 | 19.0 | 8.6 | -- | 6 | 0 | 1.3 | .7 | 1.2 |
| JUL | | | | | | | | | | | | |
| 05... | 1300 | 13 | 26 | 6.0 | 23.5 | 7.7 | -- | 8 | 1 | 1.6 | .9 | 1.7 |
| AUG | | | | | | | | | | | | |
| 01... | 0915 | 9.8 | 28 | 6.1 | 23.0 | 7.6 | 24 | 8 | 1 | 1.6 | .9 | 2.1 |
| SEP | | | | | | | | | | | | |
| 01... | 0905 | 4.9 | 24 | 6.0 | 23.0 | 7.8 | -- | 6 | 0 | 1.3 | .8 | 1.6 |

CARROLL CREEK AT STATE HIGHWAY 69 NR NORTHPORT (SITE 13)--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DISSOLVED (MG/L AS CO2) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) | SILICA, DISSOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 04... | 45 | .4 | .2 | 4 | 49 | 1.0 | 2.8 | <.1 | 8.2 | 26 | 18 | .04 |
| NOV | | | | | | | | | | | | |
| 04... | 31 | .3 | 1.3 | 2 | 62 | 4.0 | 3.0 | <.1 | 8.1 | 30 | 22 | .04 |
| DEC | | | | | | | | | | | | |
| 03... | 27 | .2 | 1.0 | 1 | 49 | 4.0 | 1.7 | <.1 | 7.7 | 22 | 20 | .03 |
| JAN | | | | | | | | | | | | |
| 03... | 31 | .2 | .6 | 2 | 39 | 2.0 | 2.1 | <.1 | 6.8 | 28 | 16 | .04 |
| FEB | | | | | | | | | | | | |
| 04... | 28 | .2 | .8 | 2 | 25 | <5.0 | 1.5 | <.1 | 6.0 | 20 | -- | .03 |
| MAR | | | | | | | | | | | | |
| 02... | 30 | .2 | .7 | 3 | 9.3 | 6.1 | 1.5 | <.1 | 6.0 | 23 | 19 | .03 |
| APR | | | | | | | | | | | | |
| 04... | 39 | .4 | .6 | 3 | 5.8 | 5.2 | 2.1 | <.1 | 5.7 | 28 | 19 | .04 |
| MAY | | | | | | | | | | | | |
| 02... | 40 | .4 | .7 | 5 | 6.2 | 3.6 | 1.8 | <.1 | 6.0 | 22 | 20 | .03 |
| JUN | | | | | | | | | | | | |
| 02... | 27 | .2 | .7 | 6 | 7.4 | 3.4 | 2.1 | <.1 | 7.4 | 34 | 21 | .05 |
| JUL | | | | | | | | | | | | |
| 05... | 30 | .3 | .8 | 7 | 14 | 7.7 | 2.2 | <.1 | 7.7 | 32 | 27 | .04 |
| AUG | | | | | | | | | | | | |
| 01... | 35 | .3 | .8 | 7 | 11 | 2.8 | 2.6 | <.1 | 7.8 | 25 | 23 | .03 |
| SEP | | | | | | | | | | | | |
| 01... | 32 | .3 | .9 | 6 | 12 | 2.0 | 2.4 | <.1 | 8.0 | 17 | 21 | .02 |

CARROLL CREEK AT STATE HIGHWAY 69 NR NORTHPORT (SITE 13)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRATE TOTAL (MG/L AS N) | NITRO-GEN, NITRITE TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS NO3) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 04... | .13 | -- | <.010 | .10 | .020 | .28 | .30 | .40 | 1.8 | .020 | .06 | <.010 |
| NOV 04... | 1.1 | -- | .010 | <.10 | .010 | .79 | .80 | -- | -- | .030 | .09 | <.010 |
| DEC 03... | 4.4 | .08 | .020 | .10 | .060 | .24 | .30 | .40 | 1.8 | .040 | .12 | <.010 |
| JAN 03... | 4.3 | -- | <.010 | .10 | .040 | -- | <.10 | -- | -- | .110 | .34 | <.010 |
| FEB 04... | 5.1 | .08 | .020 | .10 | .020 | .48 | .50 | .60 | 2.7 | .020 | .06 | <.010 |
| MAR 02... | 6.9 | -- | .010 | <.10 | .030 | .17 | .20 | -- | -- | .020 | .06 | <.010 |
| APR 04... | 2.9 | -- | .010 | <.10 | <.010 | -- | .30 | -- | -- | .060 | .18 | <.010 |
| MAY 02... | 1.4 | -- | <.010 | .10 | <.010 | -- | .30 | .40 | 1.8 | .030 | .09 | <.010 |
| JUN 02... | 2.0 | -- | <.010 | .20 | .060 | .34 | .40 | .60 | 2.7 | .030 | .09 | <.010 |
| JUL 05... | 1.1 | -- | <.010 | .20 | .050 | .35 | .40 | .60 | 2.7 | .060 | .18 | <.010 |
| AUG 01... | .66 | -- | <.010 | .30 | .010 | .29 | .30 | .60 | 2.7 | .040 | .12 | .030 |
| SEP 01... | .22 | -- | <.010 | .20 | <.010 | -- | .80 | 1.0 | 4.4 | .030 | .09 | .010 |

CARROLL CREEK AT STATE HIGHWAY 69 NR NORTHPORT (SITE 13)--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC DIS-SOLVED (UG/L AS AS) | CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) | CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 04... | .010 | -- | -- | -- | -- | -- | -- | -- | 980 | 730 | 250 |
| NOV | | | | | | | | | | | |
| 04... | .020 | -- | -- | -- | -- | -- | -- | -- | 1800 | 1200 | 560 |
| DEC | | | | | | | | | | | |
| 03... | .040 | -- | -- | -- | -- | -- | -- | -- | 1300 | 920 | 380 |
| JAN | | | | | | | | | | | |
| 03... | .010 | -- | -- | -- | -- | -- | -- | -- | 1200 | 890 | 310 |
| FEB | | | | | | | | | | | |
| 04... | .020 | -- | -- | -- | -- | -- | -- | -- | 640 | 420 | 220 |
| MAR | | | | | | | | | | | |
| 02... | .020 | -- | -- | -- | -- | -- | -- | -- | 700 | 380 | 320 |
| APR | | | | | | | | | | | |
| 04... | .010 | -- | -- | -- | -- | -- | -- | -- | 980 | 840 | 140 |
| MAY | | | | | | | | | | | |
| 02... | .010 | -- | -- | -- | -- | -- | -- | -- | 1700 | 1300 | 430 |
| JUN | | | | | | | | | | | |
| 02... | .010 | -- | -- | -- | -- | -- | -- | -- | 2200 | 1900 | 280 |
| JUL | | | | | | | | | | | |
| 05... | <.010 | -- | -- | -- | -- | -- | -- | -- | 2500 | 2300 | 200 |
| AUG | | | | | | | | | | | |
| 01... | <.010 | 1 | <1 | 1 | 0 | 2 | <10 | 4 | 1500 | 1300 | 230 |
| SEP | | | | | | | | | | | |
| 01... | <.010 | -- | -- | -- | -- | -- | -- | -- | 1500 | 1300 | 160 |

CARROLL CREEK AT STATE HIGHWAY 69 NR NORTHPORT (SITE 13)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | SILVER, DIS-SOLVED (UG/L AS AG) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 04... | -- | -- | 50 | 30 | 25 | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | |
| 04... | -- | -- | 150 | 20 | 130 | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | |
| 03... | -- | -- | 330 | 70 | 260 | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 03... | -- | -- | 190 | 60 | 130 | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 04... | -- | -- | 130 | 40 | 92 | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 02... | -- | -- | 100 | 10 | 90 | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 04... | -- | -- | 110 | 10 | 100 | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 02... | -- | -- | 120 | 20 | 100 | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 02... | -- | -- | 150 | 30 | 120 | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | |
| 05... | -- | -- | 140 | 30 | 110 | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | |
| 01... | 2 | <1 | 80 | 40 | 37 | <.1 | <.1 | <1 | <1 | <1 |
| SEP | | | | | | | | | | |
| 01... | -- | -- | 60 | 40 | 23 | -- | -- | -- | -- | -- |

CARROLL CREEK AT STATE HIGHWAY 69 NR NORTHPORT (SITE 13)--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | CARBON, ORGANIC TOTAL (MG/L AS C) | CYANIDE TOTAL (MG/L AS CN) | CYANIDE, DIS-SOLVED (MG/L AS CN) | PCB, TOTAL IN BOTTOM MATERIAL (UG/KG) | PCN, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|
| AUG 01... | 1.9 | <.01 | <.01 | <1 | <1 |

INSECTICIDES

| DATE | ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDD, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDE, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDT, TOTAL IN BOTTOM MATERIAL (UG/KG) | DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|---|
| AUG 01... | <.1 | <1 | 1.1 | .2 | 1.6 | <.1 | <.1 | <.1 |

| DATE | HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG) | HEPTACHLOR EPOXIDE, TOTAL IN BOTTOM MATERIAL (UG/KG) | LINDANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG) | METHOXY-CHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG) | PERTHANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|
| AUG 01... | <.1 | <.1 | <.1 | <.1 | <.1 | <1 | <10 |

CARROLL CREEK AT STATE HIGHWAY 69 NR NORTHPORT (SITE 13)--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| | HERBICIDES | | | |
|---|---|---|---|---|
| DATE | 2,4-D, TOTAL IN BOTTOM MATERIAL (UG/KG) | 2,4-DP, TOTAL IN BOTTOM MATERIAL (UG/KG) | 2,4,5-T, TOTAL IN BOTTOM MATERIAL (UG/KG) | SILVEX, TOTAL IN BOTTOM MATERIAL (UG/KG) |
| AUG 01... | <.1 | <.1 | <.1 | <.1 |

| DATE | SEDIMENT, SUSPENDED (MG/L) | SEDIMENT DISCHARGE, SUSPENDED (T/DAY) |
|---|---|---|
| OCT 04... | 34 | .16 |
| NOV 04... | 12 | .45 |
| DEC 03... | 39 | 7.8 |
| JAN 03... | 35 | 5.4 |
| FEB 04... | 19 | 4.8 |
| MAR 02... | 31 | 9.3 |
| APR 04... | 9 | .92 |
| MAY 02... | 14 | .87 |
| JUN 02... | 13 | .77 |
| JUL 05... | 14 | .49 |
| AUG 01... | 17 | .45 |
| SEP 01... | 9 | .12 |

BRUSH CREEK NEAR NORTHPORT (SITE 14)

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (STAND-ARD UNITS) | TEMPER-ATURE WATER (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 04... | 1240 | .88 | 14 | 5.6 | 18.0 | 9.2 | -- | 3 | 1 | .4 | .4 | 1.1 |
| NOV | | | | | | | | | | | | |
| 04... | 1350 | 1.2 | 15 | 4.9 | 13.0 | 10.2 | -- | 3 | 2 | .6 | .4 | 1.1 |
| DEC | | | | | | | | | | | | |
| 06... | 0900 | 2.8 | 17 | 4.6 | 12.5 | 10.5 | -- | 4 | 3 | .6 | .5 | 1.1 |
| JAN | | | | | | | | | | | | |
| 04... | 0850 | 2.0 | 14 | 5.3 | 7.5 | 12.3 | -- | 3 | 1 | .5 | .4 | .9 |
| FEB | | | | | | | | | | | | |
| 03... | 1245 | 3.7 | 16 | 5.2 | 9.0 | 11.4 | -- | 3 | 1 | .6 | .5 | .9 |
| MAR | | | | | | | | | | | | |
| 02... | 1210 | 3.4 | 15 | 5.8 | 13.0 | 10.5 | -- | 3 | 0 | .6 | .4 | 1.0 |
| APR | | | | | | | | | | | | |
| 04... | 0930 | 2.6 | 11 | 6.2 | 11.5 | 11.0 | -- | 3 | 0 | .5 | .4 | 1.4 |
| MAY | | | | | | | | | | | | |
| 02... | 0945 | 2.6 | 13 | 5.8 | 17.0 | 9.3 | -- | 3 | 1 | .6 | .4 | 2.1 |
| JUN | | | | | | | | | | | | |
| 02... | 0925 | 2.7 | 12 | 6.0 | 16.0 | 9.5 | -- | 3 | 0 | .5 | .4 | 1.0 |
| JUL | | | | | | | | | | | | |
| 05... | 0945 | 2.5 | 13 | 5.9 | 20.0 | 8.9 | -- | 3 | 0 | .6 | .4 | 1.3 |
| AUG | | | | | | | | | | | | |
| 02... | 1330 | 1.9 | 12 | 5.8 | 20.5 | 8.7 | 29 | 3 | 1 | .6 | .3 | 1.4 |
| SEP | | | | | | | | | | | | |
| 02... | 1205 | 1.6 | 12 | 5.7 | 21.0 | 8.6 | -- | 3 | 1 | .5 | .3 | 1.1 |

BRUSH CREEK NEAR NORTHPORT (SITE 14)--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DISSOLVED (MG/L AS CO2) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) | SILICA, DISSOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 04... | 47 | .3 | .1 | 2 | 9.8 | <1.0 | 1.4 | <.1 | 7.0 | 20 | -- |
| NOV | | | | | | | | | | | |
| 04... | 42 | .3 | .2 | 1 | 25 | 2.0 | 1.6 | <.1 | 6.8 | 19 | 13 |
| DEC | | | | | | | | | | | |
| 06... | -- | .3 | <.1 | 1 | 49 | 2.1 | 1.3 | <.1 | 7.1 | 16 | 13 |
| JAN | | | | | | | | | | | |
| 04... | 35 | .2 | .4 | 2 | 20 | 2.0 | 1.2 | <.1 | 6.7 | 19 | 13 |
| FEB | | | | | | | | | | | |
| 03... | 33 | .2 | .5 | 2 | 25 | <5.0 | 1.0 | <.1 | 6.5 | 8 | -- |
| MAR | | | | | | | | | | | |
| 02... | 37 | .3 | .5 | 3 | 9.3 | 3.7 | 1.2 | <.1 | 6.7 | 21 | 16 |
| APR | | | | | | | | | | | |
| 04... | 49 | .4 | .3 | 3 | 3.7 | 2.9 | 1.3 | <.1 | 6.4 | 23 | 15 |
| MAY | | | | | | | | | | | |
| 02... | 54 | .5 | .4 | 2 | 6.2 | 3.1 | -- | <.1 | 6.7 | 15 | -- |
| JUN | | | | | | | | | | | |
| 02... | 41 | .3 | .4 | 3 | 5.8 | -- | 1.4 | <.1 | 7.0 | 27 | -- |
| JUL | | | | | | | | | | | |
| 05... | 44 | .3 | .3 | 3 | 7.4 | 1.7 | 1.6 | <.1 | 6.6 | 21 | 15 |
| AUG | | | | | | | | | | | |
| 02... | 48 | .4 | .4 | 2 | 6.2 | 2.1 | 1.5 | <.1 | 6.9 | 13 | 14 |
| SEP | | | | | | | | | | | |
| 02... | 45 | .3 | .3 | 2 | 7.8 | 2.5 | 1.6 | <.1 | 6.8 | 24 | 15 |

BRUSH CREEK NEAR NORTHPORT (SITE 14)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRITE TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) | PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 04... | .03 | .05 | <.010 | <.10 | .020 | .28 | .30 | .040 | .12 | <.010 | <.010 |
| NOV | | | | | | | | | | | |
| 04... | .03 | .06 | .010 | <.10 | <.010 | -- | .50 | <.010 | -- | .010 | <.010 |
| DEC | | | | | | | | | | | |
| 06... | .02 | .12 | .010 | <.10 | .080 | -- | <.10 | <.010 | -- | <.010 | .010 |
| JAN | | | | | | | | | | | |
| 04... | .03 | .10 | <.010 | <.10 | .020 | -- | <.10 | .150 | .46 | <.010 | <.010 |
| FEB | | | | | | | | | | | |
| 03... | .01 | .08 | <.010 | <.10 | <.010 | -- | .30 | <.010 | -- | <.010 | <.010 |
| MAR | | | | | | | | | | | |
| 02... | .03 | .19 | <.010 | <.10 | .010 | .19 | .20 | <.010 | -- | .010 | <.010 |
| APR | | | | | | | | | | | |
| 04... | .03 | .16 | <.010 | <.10 | <.010 | -- | <.10 | .030 | .09 | <.010 | <.010 |
| MAY | | | | | | | | | | | |
| 02... | .02 | .10 | <.010 | <.10 | <.010 | -- | <.10 | <.010 | -- | <.010 | <.010 |
| JUN | | | | | | | | | | | |
| 02... | .04 | .20 | <.010 | <.10 | <.010 | -- | .10 | <.010 | -- | <.010 | <.010 |
| JUL | | | | | | | | | | | |
| 05... | .03 | .14 | <.010 | <.10 | <.010 | -- | .20 | .030 | .09 | .020 | <.010 |
| AUG | | | | | | | | | | | |
| 02... | .02 | .07 | <.010 | <.10 | <.010 | -- | .20 | .010 | .03 | .030 | <.010 |
| SEP | | | | | | | | | | | |
| 02... | .03 | .10 | <.010 | <.10 | <.010 | -- | .30 | .010 | .03 | <.010 | <.010 |

BRUSH CREEK NEAR NORTHPORT (SITE 14)--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | ARSENIC TOTAL (UG/L AS AS) | ARSENIC DIS-SOLVED (UG/L AS AS) | CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) | CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) | CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | 350 | 240 |
| NOV | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | 280 | 130 |
| DEC | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | 240 | 120 |
| JAN | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | 210 | 120 |
| FEB | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | 260 | 190 |
| MAR | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | 190 | 100 |
| APR | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | 190 | 110 |
| MAY | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | 180 | 80 |
| JUN | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | 320 | 200 |
| JUL | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | 600 | 410 |
| AUG | | | | | | | | | | |
| 02... | 1 | <1 | 1 | 0 | 1 | 10 | 4 | 6 | 640 | 580 |
| SEP | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | 540 | 360 |

BRUSH CREEK NEAR NORTHPORT (SITE 14)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | SILVER, DIS-SOLVED (UG/L AS AG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 04... | 110 | -- | -- | 20 | 9 | 11 | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 04... | 150 | -- | -- | 30 | 2 | 28 | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 06... | 120 | -- | -- | 40 | 4 | 36 | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 04... | 91 | -- | -- | 30 | 3 | 27 | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 03... | 67 | -- | -- | 30 | 6 | 24 | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 02... | 91 | -- | -- | 30 | 7 | 23 | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 04... | 78 | -- | -- | -- | 0 | 17 | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 02... | 96 | -- | -- | 20 | 1 | 19 | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 02... | 120 | -- | -- | 30 | 2 | 28 | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 05... | 190 | -- | -- | 70 | 30 | 43 | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 02... | 65 | 1 | <1 | 50 | 20 | 33 | <.1 | <.1 | <1 | <1 | <1 |
| SEP | | | | | | | | | | | |
| 02... | 180 | -- | -- | 50 | 20 | 32 | -- | -- | -- | -- | -- |

BRUSH CREEK NEAR NORTHPORT (SITE 14)--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | CARBON, ORGANIC TOTAL (MG/L AS C) | CYANIDE TOTAL (MG/L AS CN) | CYANIDE, DIS-SOLVED (MG/L AS CN) | PCB, TOTAL IN BOTTOM MATERIAL (UG/KG) | PCN, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|
| AUG 02... | 4.1 | <.01 | <.01 | <1 | <1 |

INSECTICIDES

| DATE | ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDD, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDE, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDT, TOTAL IN BOTTOM MATERIAL (UG/KG) | DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|---|
| AUG 02... | <.1 | <1 | <.1 | <.1 | <.1 | <.1 | <.1 | <.1 |

| DATE | HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG) | HEPTACHLOR EPOXIDE, TOTAL IN BOTTOM MATERIAL (UG/KG) | LINDANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG) | METHOXY-CHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG) | PERTHANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|
| AUG 02... | <.1 | <.1 | <.1 | <.1 | <.1 | <1 | <10 |

BRUSH CREEK NEAR NORTHPORT (SITE 14)--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

HERBICIDES

| DATE | 2,4-D, TOTAL IN BOTTOM MATERIAL (UG/KG) | 2,4-DP, TOTAL IN BOTTOM MATERIAL (UG/KG) | 2,4,5-T, TOTAL IN BOTTOM MATERIAL (UG/KG) | SILVEX, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|
| AUG 02... | <.1 | <.1 | <.1 | <.1 |

| DATE | SEDIMENT, SUSPENDED (MG/L) | SEDIMENT DISCHARGE, SUSPENDED (T/DAY) |
|---|---|---|
| OCT 04... | 11 | .03 |
| NOV 04... | 0 | .00 |
| DEC 06... | 5 | .04 |
| JAN 04... | 10 | .05 |
| FEB 03... | 4 | .04 |
| MAR 02... | 3 | .03 |
| APR 04... | 1 | .01 |
| MAY 02... | 7 | .05 |
| JUN 02... | 11 | .08 |
| JUL 05... | 20 | .14 |
| AUG 02... | 10 | .05 |
| SEP 02... | 8 | .04 |

LAKE TUSCALOOSA RESERVOIR NEAR TUSCALOOSA (SITE 15)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | TIME | RESERVOIR ELEVATION (FT ABOVE SEA LEVEL) | SPECIFIC CONDUCTANCE (UMHOS) | PH (STANDARD UNITS) | TEMPERATURE WATER (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 07... | 1030 | 222.63 | 51 | 5.4 | 24.0 | 7.7 | -- | 15 | 11 | 2.5 | 2.1 | 2.4 |
| NOV | | | | | | | | | | | | |
| 05... | 1215 | 223.31 | 53 | 5.9 | 18.0 | 8.3 | -- | 14 | 7 | 2.5 | 2.0 | 2.6 |
| DEC | | | | | | | | | | | | |
| 13... | 1125 | 224.95 | 56 | 5.7 | 14.0 | 8.5 | -- | 16 | 11 | 2.6 | 2.3 | 2.9 |
| JAN | | | | | | | | | | | | |
| 05... | 1145 | 224.10 | 59 | 5.9 | 12.0 | 8.4 | -- | 15 | 8 | 2.8 | 1.9 | 2.3 |
| FEB | | | | | | | | | | | | |
| 09... | 1230 | 224.43 | 56 | 6.5 | 8.5 | 10.2 | -- | 16 | 11 | 2.9 | 2.2 | 2.3 |
| MAR | | | | | | | | | | | | |
| 07... | 1135 | 227.62 | 52 | 5.5 | 12.0 | 10.3 | -- | 14 | 10 | 2.6 | 1.9 | 2.0 |
| APR | | | | | | | | | | | | |
| 15... | 1100 | 225.52 | 41 | 6.0 | 14.5 | 9.4 | -- | 12 | 9 | 2.2 | 1.5 | 2.0 |
| MAY | | | | | | | | | | | | |
| 09... | 1045 | 223.64 | 45 | 6.5 | 20.0 | 9.1 | -- | 14 | 8 | 2.6 | 1.8 | 2.9 |
| JUN | | | | | | | | | | | | |
| 07... | 1110 | 223.74 | 44 | 6.4 | 25.0 | 8.4 | -- | 13 | 7 | 2.4 | 1.7 | 1.8 |
| JUL | | | | | | | | | | | | |
| 11... | 1140 | 223.37 | 48 | 6.2 | 31.0 | 8.0 | -- | 13 | 8 | 2.4 | 1.7 | 2.1 |
| AUG | | | | | | | | | | | | |
| 12... | 0745 | 223.35 | 39 | 6.2 | 30.0 | 7.5 | 61 | 12 | 7 | 2.3 | 1.6 | 2.1 |
| SEP | | | | | | | | | | | | |
| 08... | 1255 | 223.11 | 40 | 6.4 | 30.0 | 7.3 | -- | 12 | 4 | 2.5 | 1.5 | 1.7 |

LAKE TUSCALOOSA RESERVOIR NEAR TUSCALOOSA (SITE 15)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DISSOLVED (MG/L AS CO2) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) | SILICA, DISSOLVED (MG/L AS SIO2) | SOLIDS RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS SUM OF CONSTITUENTS, DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 07... | 25 | .3 | .5 | 4 | 31 | 11 | 2.3 | <.1 | 6.1 | 38 | 29 | .05 |
| NOV | | | | | | | | | | | | |
| 05... | 27 | .3 | .7 | 7 | 17 | 11 | 2.2 | <.1 | 6.1 | 38 | 31 | .05 |
| DEC | | | | | | | | | | | | |
| 13... | 27 | .3 | 1.0 | 5 | 19 | 12 | 2.6 | <.1 | 6.2 | 44 | 33 | .06 |
| JAN | | | | | | | | | | | | |
| 05... | 24 | .3 | 1.0 | 7 | 17 | 11 | 2.4 | <.1 | 5.9 | 42 | 32 | .06 |
| FEB | | | | | | | | | | | | |
| 09... | 22 | .3 | 1.2 | 5 | 3.1 | 14 | 2.3 | <.1 | 7.1 | 36 | 35 | .05 |
| MAR | | | | | | | | | | | | |
| 07... | 22 | .2 | .8 | 4 | 25 | 14 | 1.9 | <.1 | 6.7 | 41 | 33 | .06 |
| APR | | | | | | | | | | | | |
| 15... | 26 | .3 | .8 | 3 | 5.8 | 14 | 2.1 | <.1 | 5.5 | 45 | 30 | .06 |
| MAY | | | | | | | | | | | | |
| 09... | 30 | .3 | .8 | 6 | 3.7 | 13 | 1.7 | <.1 | 6.2 | 34 | 33 | .05 |
| JUN | | | | | | | | | | | | |
| 07... | 22 | .2 | .9 | 6 | 4.7 | 13 | 1.6 | <.1 | 6.4 | 49 | 32 | .07 |
| JUL | | | | | | | | | | | | |
| 11... | 24 | .3 | .9 | 5 | 6.2 | 12 | 1.8 | <.1 | 5.6 | 40 | 30 | .05 |
| AUG | | | | | | | | | | | | |
| 12... | 26 | .3 | .8 | 5 | 6.2 | 10 | 1.8 | <.1 | 5.7 | 39 | 28 | .05 |
| SEP | | | | | | | | | | | | |
| 08... | 22 | .2 | .6 | 8 | 6.2 | 11 | 1.5 | <.1 | 5.8 | 35 | 30 | .05 |

LAKE TUSCALOOSA RESERVOIR NEAR TUSCALOOSA (SITE 15)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | NITROGEN, NITRATE TOTAL (MG/L AS N) | NITROGEN, NITRITE TOTAL (MG/L AS N) | NITROGEN, NO2+NO3 TOTAL (MG/L AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS N) | NITROGEN, ORGANIC TOTAL (MG/L AS N) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS NO3) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, DISSOLVED (MG/L AS P) | PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 07... | -- | <.010 | <.10 | .020 | .38 | .40 | -- | -- | .030 | .09 | <.010 | .020 |
| NOV | | | | | | | | | | | | |
| 05... | -- | .040 | <.10 | <.010 | -- | .30 | -- | -- | .050 | .15 | .050 | .020 |
| DEC | | | | | | | | | | | | |
| 13... | -- | <.010 | <.10 | .050 | .05 | .10 | -- | -- | <.010 | -- | <.010 | <.010 |
| JAN | | | | | | | | | | | | |
| 05... | -- | <.010 | .10 | .090 | .11 | .20 | .30 | 1.3 | .270 | .83 | <.010 | <.010 |
| FEB | | | | | | | | | | | | |
| 09... | .18 | .020 | .20 | .020 | .08 | .10 | .30 | 1.3 | .020 | .06 | .010 | .030 |
| MAR | | | | | | | | | | | | |
| 07... | -- | <.010 | .10 | .030 | .17 | .20 | .30 | 1.3 | .020 | .06 | <.010 | <.010 |
| APR | | | | | | | | | | | | |
| 15... | -- | <.010 | .10 | .030 | .27 | .30 | .40 | 1.8 | <.010 | -- | .020 | <.010 |
| MAY | | | | | | | | | | | | |
| 09... | .09 | .010 | .10 | <.010 | -- | <.10 | -- | -- | .020 | .06 | <.010 | <.010 |
| JUN | | | | | | | | | | | | |
| 07... | -- | <.010 | .10 | .040 | .06 | .10 | .20 | .89 | .020 | .06 | <.010 | <.010 |
| JUL | | | | | | | | | | | | |
| 11... | -- | <.010 | .10 | <.010 | -- | .20 | .30 | 1.3 | .040 | .12 | .020 | <.010 |
| AUG | | | | | | | | | | | | |
| 12... | -- | <.010 | <.10 | <.010 | -- | .10 | -- | -- | .010 | .03 | <.010 | <.010 |
| SEP | | | | | | | | | | | | |
| 08... | .09 | .010 | .10 | .060 | .44 | .50 | .60 | 2.7 | .010 | .03 | .010 | <.010 |

LAKE TUSCALOOSA RESERVOIR NEAR TUSCALOOSA (SITE 15)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUS-PENDED TOTAL (UG/L AS AS) | ARSENIC DIS-SOLVED (UG/L AS AS) | CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | 100 | 80 | 25 | -- |
| NOV | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | 180 | 160 | 24 | -- |
| DEC | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | -- | 370 | 280 | 91 | -- |
| JAN | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | 460 | 300 | 160 | -- |
| FEB | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | 380 | 210 | 170 | -- |
| MAR | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | 510 | 390 | 120 | -- |
| APR | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | 610 | 470 | 140 | -- |
| MAY | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | 420 | 280 | 140 | -- |
| JUN | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | 420 | 170 | 250 | -- |
| JUL | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | 740 | 560 | 180 | -- |
| AUG | | | | | | | | | | |
| 12... | 2 | 0 | 2 | <1 | <1 | <1 | 680 | 560 | 120 | 8 |
| SEP | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | 500 | 340 | 160 | -- |

LAKE TUSCALOOSA RESERVOIR NEAR TUSCALOOSA (SITE 15)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | LEAD, SUSPENDED RECOVERABLE (UG/L AS PB) | LEAD, DISSOLVED (UG/L AS PB) | MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) | MANGANESE, SUSPENDED RECOV. (UG/L AS MN) | MANGANESE, DISSOLVED (UG/L AS MN) | MERCURY TOTAL RECOVERABLE (UG/L AS HG) | MERCURY DISSOLVED (UG/L AS HG) | SELENIUM, TOTAL (UG/L AS SE) | SELENIUM, DISSOLVED (UG/L AS SE) | SILVER, TOTAL RECOVERABLE (UG/L AS AG) | SILVER, DISSOLVED (UG/L AS AG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 07... | -- | -- | 100 | 40 | 65 | -- | -- | -- | -- | -- | -- |
| NOV 05... | -- | -- | 110 | 40 | 73 | -- | -- | -- | -- | -- | -- |
| DEC 13... | -- | -- | 280 | 20 | 260 | -- | -- | -- | -- | -- | -- |
| JAN 05... | -- | -- | 590 | 100 | 490 | -- | -- | -- | -- | -- | -- |
| FEB 09... | -- | -- | 170 | 30 | 140 | -- | -- | -- | -- | -- | -- |
| MAR 07... | -- | -- | 130 | 20 | 110 | -- | -- | -- | -- | -- | -- |
| APR 15... | -- | -- | 160 | 40 | 120 | -- | -- | -- | -- | -- | -- |
| MAY 09... | -- | -- | 110 | 0 | 110 | -- | -- | -- | -- | -- | -- |
| JUN 07... | -- | -- | 160 | 40 | 120 | -- | -- | -- | -- | -- | -- |
| JUL 11... | -- | -- | 170 | 20 | 150 | -- | -- | -- | -- | -- | -- |
| AUG 12... | 5 | 3 | 210 | 20 | 190 | <.1 | <.1 | <1 | <1 | <1 | <1 |
| SEP 08... | -- | -- | 290 | 10 | 280 | -- | -- | -- | -- | -- | -- |

LAKE TUSCALOOSA RESERVOIR NEAR TUSCALOOSA (SITE 15)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DATE | CARBON, ORGANIC TOTAL (MG/L AS C) | CYANIDE TOTAL (MG/L AS CN) | CYANIDE, DIS-SOLVED (MG/L AS CN) | PCB, TOTAL IN BOTTOM MATERIAL (UG/KG) | PCN, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|
| AUG 12... | 3.5 | <.01 | <.01 | 2 | <1 |

INSECTICIDES

| DATE | ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDD, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDE, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDT, TOTAL IN BOTTOM MATERIAL (UG/KG) | DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|---|
| AUG 12... | <.1 | 6 | 40 | 35 | 2.7 | .7 | <.1 | <.1 |

| DATE | HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG) | HEPTACHLOR EPOXIDE, TOTAL IN BOTTOM MATERIAL (UG/KG) | LINDANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG) | METHOXY-CHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG) | PERTHANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|
| AUG 12... | <.1 | <.1 | <.1 | <.1 | <.1 | <1 | <10 |

HERBICIDES

| DATE | 2,4-D, TOTAL IN BOTTOM MATERIAL (UG/KG) | 2,4-DP, TOTAL IN BOTTOM MATERIAL (UG/KG) | 2,4,5-T, TOTAL IN BOTTOM MATERIAL (UG/KG) | SILVEX, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|
| AUG 12... | <.1 | <.1 | <.1 | <.1 |