

Hydrologic and Water-Quality Data from Mountain Island Lake, North Carolina, 1994–97

By Kathleen M. Sarver and Bruce C. Steiner

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CONVERSION FACTORS, WATER-QUALITY UNITS, TEMPERATURE, AND VERTICAL DATUM

CONVERSION FACTORS:

MULTIPLY	BY	TO OBTAIN
<i>Length</i>		
inch (in.)	2.54	centimeter
foot (ft)	0.3048	meter
mile (mi)	1.609	kilometer
<i>Area</i>		
acre	4,047	square meter
square mile (mi ²)	2.590	square kilometer
<i>Volume</i>		
cubic foot (ft ³)	0.02832	cubic meter
<i>Flow Rate</i>		
cubic foot per second (ft ³ /s)	0.02832	cubic meter per second

WATER-QUALITY UNITS: To follow limnological convention, measurements related to water-quality data and sampling depths are reported in metric units. All other data values are in standard English units.

MULTIPLY	BY	TO OBTAIN
<i>Length</i>		
micron/micrometer (μm)	3.3 x 10 ⁻⁶	foot
millimeter (mm)	0.03937	inch
centimeter (cm)	0.3937	inch
meter (m)	3.281	foot
kilometer (km)	0.6214	mile
<i>Volume</i>		
milliliter (mL)	0.0338	ounce, fluid
liter (L)	0.2642	gallon
<i>Mass</i>		
microgram per liter (μg/L)	1	part per billion
milligram per liter (mg/L)	1	part per million
microgram per kilogram (μg/kg)	1	part per billion

TEMPERATURE: Equations for temperature conversion between degrees Celsius (°C) and degrees Fahrenheit (°F):

$$^{\circ}\text{C} = 5/9 (^{\circ}\text{F} - 32)$$

$$^{\circ}\text{F} = (1.8 \times ^{\circ}\text{C}) + 32$$

SEA LEVEL: In this report, “sea level” refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

Hydrologic and Water-Quality Data from Mountain Island Lake, North Carolina, 1994–97

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ABSTRACT

Continuous-record water-level gages were established at three sites on Mountain Island Lake and one site downstream from Mountain Island Dam. The water level of Mountain Island Lake is controlled by Duke Power Company releases at Cowans Ford Dam (upstream) and Mountain Island Dam (downstream). Water levels on Mountain Island Lake measured just downstream from Cowans Ford Dam fluctuated 11.15 feet during the study. Water levels just upstream from the Mountain Island Lake forebay fluctuated 6.72 feet during the study. About 3 miles downstream from Mountain Island Dam, water levels fluctuated 5.31 feet.

Sampling locations included 14 sites in Mountain Island Lake, plus one downstream river site. At three sites, automated instruments recorded water temperature, dissolved-oxygen concentration, and specific conductance at 15-minute intervals throughout the study. Water temperatures recorded continuously during the study ranged from 4.2 to 35.2 degrees Celsius, and dissolved-oxygen concentrations ranged from 2.1 to 11.8 milligrams per liter. Dissolved-oxygen concentrations generally were inversely related to water temperature, with lowest dissolved-oxygen concentrations typically recorded in the summer. Specific conductance values recorded continuously during the study ranged from 33 to 89 microsiemens per centimeter; however, mean monthly values were fairly consistent throughout

the study at all sites (50 to 61 microsiemens per centimeter). In addition, vertical profiles of water temperature, dissolved-oxygen concentration, specific conductance, and pH were measured at all sampling locations during 24 site visits.

Water-quality constituent concentrations were determined for seven reservoir sites and the downstream river site during 17 sampling trips. Water-quality samples were routinely analyzed for biochemical oxygen demand, fecal coliform bacteria, hardness, alkalinity, total and volatile suspended solids, nutrients, total organic carbon, chlorophyll, iron, calcium, and magnesium; the samples were analyzed less frequently for trace metals, volatile organic compounds, semivolatile organic compounds, and pesticides. Maximum dissolved nitrite plus nitrate concentrations determined during the study were 0.348 milligram per liter in the mainstem sites and 2.77 milligrams per liter in the coves. Maximum total phosphorus concentrations were 0.143 milligram per liter in the mainstem sites and 0.600 milligram per liter in the coves. Fecal coliform and chlorophyll *a* concentrations were less than or equal to 160 colonies per 100 milliliters and 13 micrograms per liter, respectively, in all samples. Trace metals detected in at least one sample included arsenic, chromium, copper, lead, nickel, zinc, and antimony. Concentrations of all trace metals (except zinc) were 5.0 micrograms per liter or less; the maximum zinc concentration was 80 micrograms per liter.

One set of bottom material samples was collected from Gar Creek and McDowell Creek for chemical analysis and analyzed for nutrients, trace metals, organochlorine pesticides, and semivolatile organic compounds. The only organochlorine pesticide identified in either sample was *p,p'*-DDE at an estimated concentration of 0.8 microgram per kilogram. Twenty semivolatile organic compounds, mainly polyaromatic hydrocarbons and plasticizers, were identified.

INTRODUCTION

The Catawba River Basin in North Carolina extends from the mountains of the Blue Ridge Province in western North Carolina to Lake Wylie, which lies along the North Carolina–South Carolina State line in the low, rolling terrain of the Piedmont Province. The

Catawba River (fig. 1) continues into central South Carolina and becomes the Wateree River at Wateree Dam. The Catawba River is a highly regulated system—10 of the 11 mainstem reservoirs were impounded before 1930 (table 1), primarily to supply hydroelectric power for a growing textile industry. In addition to power generation, the reservoir has since been used for drinking and industrial water supply, irrigation, waste assimilation, recreation, and habitat for fish and wildlife.

Despite the importance of the Catawba River, and in particular Mountain Island Lake, to the Charlotte area, very little is known about stream (or nonpoint-source) inputs to the reservoir, hydraulic circulation and transport mechanisms in the reservoir, and water-quality transport and transformation processes. The U.S. Geological Survey (USGS), in cooperation with Charlotte-Mecklenburg Utility Department (CMUD), Mecklenburg County, and the City of Charlotte, has been conducting a number of

Table 1. Characteristics of Catawba River mainstem reservoirs in North and South Carolina

[mi², square mile; mi, mile; ft, foot; ft³, cubic foot; —, not available]

Mainstem reservoirs	Date completed	Drainage area (mi ²)	Surface area (mi ²)	Shore-line length (mi)	Mean depth (ft)	Maximum depth (ft)	Total capacity (million ft ³)	Volume/mean inflow (days)	Trophic state
North Carolina^a									
Lake James	1919	380	10.18	150	46	118	12,606	208	Oligotrophic
Rhodhiss Lake	1925	1,089	4.03	90	20	52	3,192	21	Mesotrophic
Lake Hickory	1928	1,309	5.41	105	33	85	5,544	33	Mesotrophic/ Eutrophic
Lookout Shoals Lake	1915	1,452	1.30	39	29	69	1,356	7	Mesotrophic/ Eutrophic
Lake Norman	1963	1,791	50.8	520	33	118	47,669	239	Mesotrophic
Mountain Island Lake	1923	1,861	4.36	61	16	52	2,496	12	Mesotrophic
Lake Wylie	1925	3,035	18.98	327	23	69	12,147	39	Eutrophic
South Carolina^b									
Fishing Creek Reservoir	1916	3,826	3.03	61	23	66	1,631	6	Eutrophic
Great Falls/Dearborn Reservoir	1907	4,120	.70	—	—	72	—	1	—
Rocky Creek/Cedar Creek Reservoir	1909	4,378	1.25	—	29	59	1,003	2	Eutrophic
Lake Wateree	1919	4,788	20.71	242	23	75	7,627	27	Eutrophic

^aData from Duke Power Company (written commun., 1993), North Carolina Department of Environment, Health, and Natural Resources (1992), Gunter and others (1993); some internal inconsistencies in these values may exist because of differences in published values.

^bData from Duke Power Company, South Carolina Department of Health and Environmental Control (1996), U.S. Army Corps of Engineers (1991); some internal inconsistencies in these values may exist because of differences in published values.

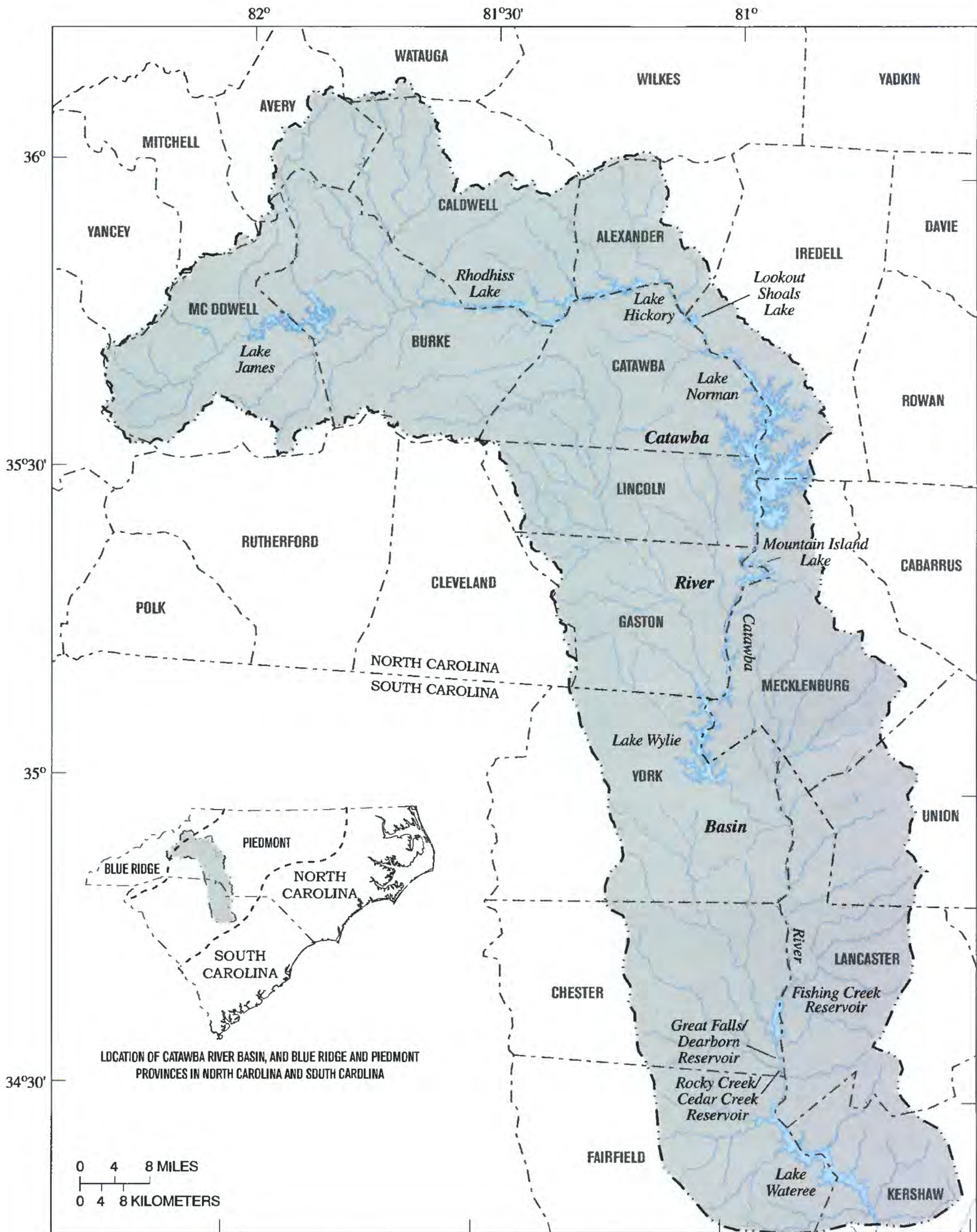


Figure 1. Catawba River Basin, North Carolina and South Carolina.

studies in the Catawba River Basin between Lookout Shoals Dam and Lake Wylie Dam. Study efforts for CMUD, which began in 1994 and are described in this report, focused on Mountain Island Lake and included inflow sampling from two basins, outflow sampling, and reservoir monitoring. Specific objectives of the Mountain Island Lake study were (1) to determine constituent export from selected small watersheds draining directly to Mountain Island Lake, as well as loads entering and exiting the reservoir by way of the Catawba River; and (2) to characterize reservoir circulation and material transport, including chemical transformation processes, for selected management scenarios using a physically realistic, spatially detailed, unsteady flow and transport computer model. Study efforts for the City of Charlotte and Mecklenburg County focused on characterizing stormwater quantity and quality from selected land uses, collecting information on nonpoint-source loadings to the Catawba River, and installing and maintaining a rainfall network.

More than three decades ago, the State of North Carolina noted the importance of Catawba River mainstem reservoirs to the character and economic prosperity of the region. Although a ready and ample supply of water historically has aided industrial development and municipal growth in the region, pollution from municipal and industrial point sources has degraded the water quality of several streams in the Catawba River Basin (North Carolina Department of Water Resources, 1961). Waters of the Catawba River Basin remain in high demand, and the ability to meet the demand depends, in part, on maintaining good water quality. Although government regulation and advances in wastewater-treatment technology have helped to improve water-quality conditions with time, point-source discharges are still a significant source of pollution in the basin (North Carolina Department of Environment, Health, and Natural Resources, 1994). Additionally, recent investigations indicate that nonpoint-source runoff from agriculture, construction, silviculture, and urban sources also adversely affects water quality in the basin (North Carolina Department of Environment, Health, and Natural Resources, 1994).

During 1992–94, the USGS, in cooperation with the Western Piedmont Council of Governments, conducted an investigation of water quality in the upper Catawba River Basin from the headwaters to Lookout Shoals Dam (Jaynes, 1994). The objectives of the study were to characterize hydrologic and water-quality

conditions in streams and reservoirs in the region, and to develop circulation and transport models for two reservoirs in the area—Rhodhiss Lake and Lake Hickory. These models provide resource managers and regulators with scientifically credible tools to more effectively manage the reservoirs and their watersheds; the models also provide tools to predict water-quality responses to changes in constituent loading or hydrologic regime (Giorgino and Bales, 1997; Bales and Giorgino, 1998).

In addition, the USGS is conducting an investigation of water quality in the Catawba River Basin downstream from Lake Wylie to evaluate the potential effects of increased point-source inputs on water quality in the river. The Catawba River Basin also is part of the USGS National Water-Quality Assessment (NAWQA) Program's Santee-Coastal Basin study unit (Hughes, 1994). Together, these studies are providing consistent methods of data collection, interpretation, and modeling techniques for a large portion of the Catawba River Basin.

Purpose and Scope

This report summarizes hydrologic and water-quality data collected by the USGS during the investigation of Mountain Island Lake in the Catawba River Basin. Hydrologic data were collected from August 1994 through September 1997; water-quality data were collected from April 1996 through September 1997. Descriptions of the study sites and data-collection procedures are provided, and tables and statistical summaries of the data are included.

Hydrologic data presented in this report include measurements of water levels at three sites on Mountain Island Lake and a river site about 3 miles (mi) downstream from Mountain Island Dam. Brief summaries of Duke Power Company outflow estimates from Cowans Ford Dam and Mountain Island Dam also are presented.

Water temperature, dissolved-oxygen concentration, and specific conductance were continuously monitored at two reservoir sites and the downstream river site. In addition, vertical profiles of physical water-quality characteristics, including temperature, dissolved-oxygen concentration, specific conductance, and pH, were measured during routine site visits at 14 sites on Mountain Island Lake, plus one downstream river site.

Water samples were collected about monthly from seven sites in the reservoir, as well as the downstream river site, and were analyzed routinely for biochemical oxygen demand, fecal coliform bacteria, hardness, alkalinity, total and volatile suspended solids, total dissolved solids, nutrients, total organic carbon, chlorophyll, iron, calcium, and magnesium. The water-quality samples from three sampling trips were analyzed for trace metals. Volatile organic compounds, semivolatile organic compounds, and pesticides were analyzed once. Bottom material samples were collected from two tributaries—Gar Creek and McDowell Creek—and were analyzed for nutrients, trace metals, and organic compounds.

Additional data, including hydrologic and water-quality data from Gar and McDowell Creeks and rainfall data (fig. 2), were collected during the study and will be used to develop the water-quality model for Mountain Island Lake. However, these data have been published in previous reports (Robinson and others, 1996, 1998) and are not included in this report.

Description of the Study Area

Mountain Island Lake is bounded upstream by Cowans Ford Dam and downstream by Mountain Island Dam (fig. 2). Mountain Island Lake was impounded in 1923 and has a surface area of about 4.4 square miles (mi²) and a capacity of about 2.5 billion cubic feet (ft³) (table 1). Mountain Island Lake is one of the shallowest of the North Carolina reservoirs on the Catawba River, with a mean depth of 16 feet (ft) and a maximum depth of about 52 ft. The lake forms part of the eastern borders of Gaston and Lincoln Counties, and part of the western border of Mecklenburg County. Duke Power Company regulates water release and generates hydroelectric power at both Cowans Ford and Mountain Island Dams. Because Mountain Island Lake is much smaller than upstream Lake Norman, water levels must be regulated precisely by Duke Power. For example, a 1-ft drop in Lake Norman lake level at Cowans Ford Dam will raise the level of Mountain Island Lake by 12 ft.

Mountain Island Lake supplies water to Mecklenburg and surrounding counties and is the primary drinking water source for nearly 600,000 people in Charlotte, Gastonia, Mount Holly, and several other communities. Charlotte is the largest city in North Carolina and is growing rapidly. The 1997 population in the metropolitan area of 513,000

represents an increase of approximately 55,000 persons since 1994. An additional 97,000 people live within Mecklenburg County outside the city limits of Charlotte (Steve Patterson, City of Charlotte Planning Office, oral commun., 1997).

The drainage area of Mountain Island Lake is about 1,860 mi² (table 1). The major tributaries to Mountain Island Lake (other than the Catawba River) are Gar Creek and McDowell Creek (fig. 2). Together these two streams drain about half of the basin between Cowans Ford Dam and Mountain Island Dam. Mountain Island Lake also receives waste from CMUD's McDowell Creek wastewater-treatment plant (fig. 2). Several studies indicate that water quality has been degraded in the McDowell Creek embayment of the reservoir in recent years. Discharge into McDowell Creek from the McDowell Creek wastewater-treatment plant has resulted in high nutrient concentrations in both the creek and the McDowell Creek embayment of the lake (North Carolina Division of Water Quality, 1996). Sediment from land development in the area also is contributing to a decline in water quality in the McDowell Creek embayment (Mecklenburg County Department of Environmental Protection, 1998).

Climate of the study area is characterized by hot, humid summers, moderate but short winters, and long growing seasons. The mean monthly temperature ranges from about 41 °F in January to about 79 °F in July, and precipitation averages about 43 inches per year (McCachren, 1980). Topography in the area is generally characterized by low rounded uplands and streams having relatively narrow (300–600 ft) flood plains. The soils in the study area are described as well drained sandy loams with a clayey subsoil (McCachren, 1980). The area surrounding Mountain Island Lake is predominantly underlain by granite with some diorite and gabbro-diorite (LeGrand and Mundorff, 1952).

The shoreline of the upper part of Mountain Island Lake is largely undeveloped, and the area is abundant with wildlife. Deer, osprey, herons, geese, beavers, muskrats, and turtles inhabit the forested lands and adjacent waters. In the spring of 1998, North Carolina's Clean Water Management Trust Fund approved a \$6.5 million grant to the Trust for Public Land for purchase of about 8 miles of shoreline along the western side of Mountain Island Lake. The land—1,100 acres in Gaston County and 200 acres in Lincoln County—extends from Riverbend Steam Station to just south of NC Highway 73 (fig. 2). The

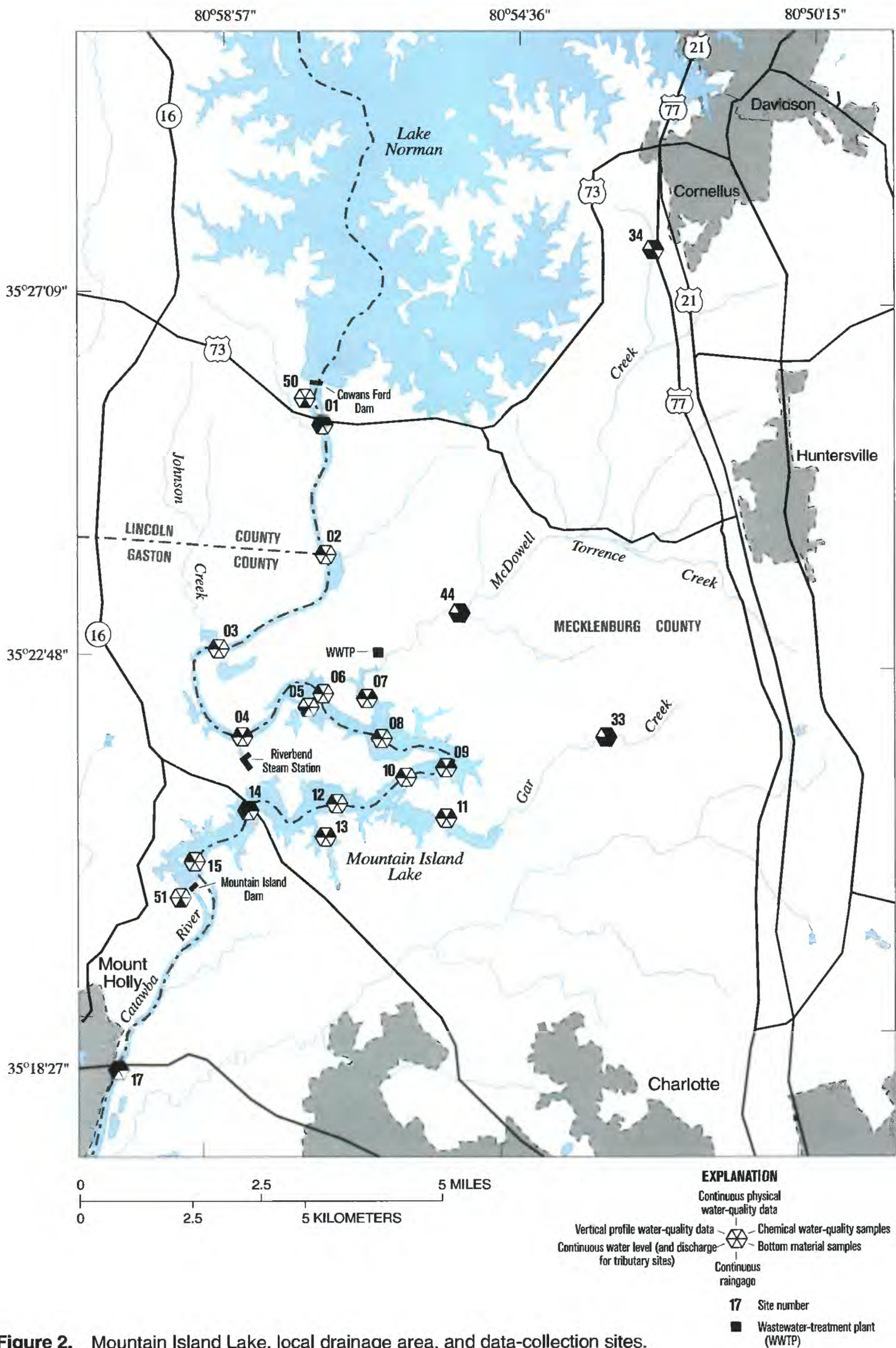


Figure 2. Mountain Island Lake, local drainage area, and data-collection sites.

land eventually will be transferred to the counties with the provision that it becomes a public park. On the Mecklenburg County side of the lake, Cowans Ford Wildlife Refuge and Latta Plantation Park provide nature-oriented recreation and protect more than 2,500 acres of land from development. With the recent land acquisition in Gaston and Lincoln Counties, development is prohibited on more than 50 percent of the shoreline of Mountain Island Lake. Shoreline development in the lower part of Mountain Island Lake consists largely of scattered residential structures. Recently, however, several planned residential communities have been constructed along Mountain Island Lake—from 1990 to 1996 about 4,200 homes were built in two census tracts that border the lake.

Acknowledgments

The assistance of Mr. Henry Forrest of Charlotte-Mecklenburg Utility Department throughout the investigation is appreciated. Mr. Helmuth Janssen of Charlotte-Mecklenburg Utility Department arranged for biochemical oxygen demand analyses by Charlotte-Mecklenburg Utility Department's System Protection Division Laboratory. Mr. Mike Bowens and Ms. Donna Davis arranged for fecal coliform analyses by the Franklin Water Treatment Laboratory. Duke Power Company provided data to the USGS, including hourly reservoir levels at forebay and tailrace sites, hourly dam release records, and daily totals of precipitation. Duke Power Company also permitted several raingages and a solar radiation monitor to be placed on their property.

DATA-COLLECTION METHODS

In this section, the instrumentation, equipment, and procedures used to collect hydrologic, water-quality, and bottom material data are described. Data were collected from a total of 21 sites located in the mainstem and several coves of Mountain Island Lake, two tributary streams, and a river site downstream from Mountain Island Dam (fig. 2; table 2). The sites on the tributary streams were located on Gar Creek and McDowell Creek.

Hydrologic data consisted of water-level measurements at three sites in Mountain Island Lake and at the downstream river site, and discharge data from Cowans Ford Dam and Mountain Island Dam.

Water-quality data included continuous measurements of water temperature, dissolved-oxygen concentration, and specific conductance at three reservoir sites; vertical profiles of water temperature, dissolved-oxygen concentration, specific conductance, and pH periodically measured throughout the reservoir; and water-quality constituent concentrations at eight sites. Profile measurements were taken and water samples were collected twice monthly from May 1996 through July 1996 and about monthly from August 1996 through September 1997. One set of bottom material samples was collected from Gar Creek and McDowell Creek.

Hydrologic Data

Continuous-record water-level gages were established in August 1994 at one headwater site (site 01), two sites within the reservoir (sites 05 and 14), and one downstream river site (site 17) (fig. 2; table 2). The gages measured water level every minute, and 15-minute average values were recorded. Levels were run to the gages to establish datums for converting the water-level data to elevations with respect to sea level. Hourly estimates of outflow from Cowans Ford and Mountain Island Dams and hourly water-level data from the forebay and tailrace to each dam were obtained from Duke Power Company.

Physical Water-Quality Data

Water temperature, dissolved-oxygen concentration, and specific conductance were monitored at 15-minute intervals at three continuous-record gaging sites (sites 01, 14, and 17). At the headwater site and downstream river site, a YSI 600XL multiparameter water-quality meter was installed about 2 meters (m) below the average river stage. At site 14, located just above the Mountain Island Dam forebay, two multiparameter water-quality meters were installed—one about 2.5 m above the reservoir bottom and one about 2 m below the average reservoir stage. All water-level gages and water-quality meters were linked to an electronic datalogger for programming and data collection. Water temperature, dissolved-oxygen concentration, and specific conductance were measured and recorded every 15 minutes.

In addition to data collected at three continuous-record sites, water temperature, dissolved-oxygen

Table 2. Data-collection network for the Mountain Island Lake study

[NC, North Carolina; x, data collected; —, data not collected; SR, secondary road. Physical water-quality characteristics and chemical constituents are listed in text]

Site no. (fig. 2)	Site location and USGS downstream order identification number	Type of hydrologic measurement		Type of water-quality data			Type of meteorologic data
		Water level	Dis- charge	Physi- cal	Chem- ical	Bottom material	
Mountain Island Lake sites							
01	Catawba River at NC 73 near Hicks Crossroads (MTN01), 0214264800	x	—	x	x	—	—
02	Catawba River near Allison Ferry (MTN02), 0214264813	—	—	x	—	—	—
03	Catawba River above Johnson Creek near Allison Ferry (MTN03), 0214264830	—	—	x	—	—	—
04	Catawba River at Power Plant near Shuffletown (MTN04), 0214264900	—	—	x	x	—	—
05	Catawba River at Riverbend Steam Station near Shuffletown (MTN05), 0214264950	x	—	—	—	—	—
06	Catawba River at Mountain Island Lake near Shuffletown (MTN06), 0214264960	—	—	x	—	—	—
07	McDowell Creek near Shuffletown (MTN07), 0214266024	—	—	x	x	—	—
08	Catawba River near mouth McDowell Creek near Shuffletown (MTN08), 0214266026	—	—	x	—	—	—
09	Catawba River below McDowell Creek near Shuffletown (MTN09), 0214266045	—	—	x	x	—	—
10	Catawba River above Gar Creek near Shuffletown (MTN10), 0214266055	—	—	x	—	—	—
11	Gar Creek near Shuffletown (MTN11), 0214266250	—	—	x	x	—	—
12	Catawba River below Gar Creek near Shuffletown (MTN12), 0214266900	—	—	x	—	—	—
13	Catawba River at Inlet near Shuffletown (MTN13), 0214267000	—	—	x	x	—	—
14	Catawba River at NC 16 near Shuffletown (MTN14), 0214267200	x	—	x	x	—	—
15	Catawba River above Dam near Shuffletown (MTN15), 0214267598	x ^{a, b}	—	x	—	—	—
17	Catawba River at Highway 27 at Mount Holly (MTN17), 02142808	x	—	x	x	—	—
Tributary sites							
33	Gar Creek at SR 2120 near Oakdale (CSW08), 0214266075	x ^c	x ^c	x ^c	x ^c	x	rainfall ^c
34	McDowell Creek at SR 2147 near Cornelius (CSW09), 021426651	x ^c	x ^c	x ^c	x ^c	—	rainfall ^c
44	McDowell Creek near Charlotte (CSW10), 0214266000	x ^c	x ^c	x ^c	x ^c	x	rainfall ^c
Additional sites							
50	Cowans Ford Dam (CRN34), 352555080574445	—	x ^a	—	—	—	rainfall ^c
51	Catawba River at Mountain Island Dam (MTN16), 0214267600	—	x ^a	—	—	—	rainfall ^c ; temperature ^b ; solar radiation ^b

^aMeasured by Duke Power Company.

^bData not presented in this report but available on request.

^cData presented in Robinson and others (1996, 1998).

concentration, specific conductance, and pH were measured with a Hydrolab H2O multiparameter water-quality meter during routine site visits at a total of 15 sites. The meter was connected to a laptop computer to display and record the data. Vertical profiles of water temperature, dissolved-oxygen concentration, specific conductance, and pH were measured to characterize patterns of stratification. At each site, readings generally were taken just above the reservoir bottom, at 1-m vertical intervals throughout the water column, and at a depth of 0.5 m below the water surface. At reservoir sites (fig. 2; table 2), profiles were measured only at mid-channel. Hydrologic conditions at sites 01 and 17 were riverine. At the two riverine sites, measurements were made at three equidistant points across a lateral transect of the channel. These “quarter points” were located 25, 50, and 75 percent of the distance from the left bank of the channel. Water transparency was measured at each site using a Secchi disk.

Water-Quality Samples

Water samples for chemical analysis were collected during site visits from eight sites at Mountain Island Lake (fig. 2)—the headwater site (site 01), three reservoir sites (sites 04, 09, 14), two tributary cove sites (sites 07, 11), one additional cove site (site 13), and the downstream river site (site 17). Samples routinely were analyzed for a broad range of constituents, including suspended sediment (river sites only), total and volatile suspended solids, total organic carbon (TOC), total dissolved solids, fecal coliform bacteria, chlorophyll *a* and *b*, nutrients (dissolved nitrite plus nitrate, dissolved ammonia, total ammonia plus organic nitrogen, dissolved ammonia plus organic nitrogen, total phosphorus, dissolved phosphorus, and dissolved orthophosphorus), 5-day biochemical oxygen demand (BOD), hardness, alkalinity, iron, calcium, and magnesium. Trace metals and selected organic constituents (volatile and semivolatile organic compounds, and pesticides) were analyzed less frequently.

Sample-collection methods varied depending on the type of site and the constituents to be analyzed. At each reservoir and cove site (sites 04, 07, 09, 11, 13, and 14), water was collected from two depths to characterize water-quality conditions near the water surface (0.5 m below the surface) and near the bottom (1.0 m above the bottom). Water was collected at the

deepest part of the channel using an Alpha-type water sampler, also known as a horizontal Van Dorn sampler. Water collected in the sampler from a specific depth was transferred to a polycarbonate churn splitter until enough total water volume was collected to fill the appropriate sample bottles. Water placed in the churn was composited, processed, and preserved as described by Horowitz and others (1994) (table 3). Samples for analysis of dissolved constituents were filtered through a 0.45-micron (μm) pore-size capsule filter using a peristaltic pump.

Chlorophyll *a* and chlorophyll *b* samples also were collected at water-chemistry sites. At mid-channel, the depth of the euphotic zone was estimated by doubling the Secchi disk depth. A depth-integrated composite sample of the euphotic zone was collected, then filtered through a 0.45- μm glass fiber filter. Filters were sealed in vials, which were wrapped in aluminum foil to block light penetration, chilled to 4 °C, and shipped to the laboratory.

At the riverine sites (sites 01 and 17), composite samples were collected for most constituents. To obtain a composite, water was collected from quarter points across the river using a depth-integrating sampler (Edwards and Glysson, 1988). A D-77 sampler equipped with a nylon nozzle and a 3-liter (L) polyethylene bottle was used to collect composite samples. Water collected in the 3-L bottle at each quarter point was transferred to the polycarbonate churn splitter, and composited, processed, and preserved (Horowitz and others, 1994). Samples for analysis of dissolved constituents were filtered through a 0.45- μm pore-size capsule filter using a peristaltic pump. A model DH-59 sampler was used to collect one sample at each quarter point; these samples were composited at the laboratory for determination of suspended sediment.

At riverine, reservoir, and cove sites, sample bottles for TOC and other organic analyses were filled directly from the Alpha-type water sampler (or D-77 bottle) prior to placement of sample water in the churn splitter. Surface grab samples for fecal coliform bacteria were collected at mid-channel using a weighted bottle holder. These collection procedures were used to avoid contact with compositing equipment that might have contaminated these samples.

Table 3. Preservation procedures and containers required for samples collected at Mountain Island Lake water-quality study sites, May 1996 through September 1997

[°C, degrees Celsius; mL, milliliter; L, liter; <, less than; >, greater than]

Compounds, elements, or properties analyzed	Container size	Container type	Sample and container treatment
Physical, chemical, and biological properties			
Dissolved solids, residue at 180 °C	250 mL	Polyethylene	Filter through a disposable capsule filter with 0.45-micron pore size; use filtered sample to rinse containers.
pH, specific conductance, alkalinity	250 mL	Polyethylene	Unfiltered; use unfiltered sample to rinse containers.
Volatile suspended solids, total suspended solids	500 mL	Polyethylene	Unfiltered; use unfiltered sample to rinse containers.
Biochemical oxygen demand	1 L	Polyethylene	Unfiltered; chill and maintain sample at 4 °C.
Fecal coliform bacteria	200 mL	Glass, sterilized	Unfiltered; chill and maintain sample at 4 °C.
Chlorophyll <i>a</i> , chlorophyll <i>b</i>	100 mL	Plastic vial	Filter through a 0.45-micron pore size glass fiber filter. Wrap in foil to prevent light penetration. Chill and maintain sample at 4 °C.
Major nutrients			
Dissolved nutrients	125 mL	Brown polyethylene	Filter through a disposable capsule filter with 0.45-micron pore size; use filtered sample to rinse containers. Chill and maintain sample at 4 °C.
Total nutrients	125 mL	Brown polyethylene	Unfiltered; use unfiltered sample to rinse containers. Chill and maintain sample at 4 °C.
Metals and minor constituents			
Iron	250 mL	Polyethylene, acid rinsed	Unfiltered, use unfiltered sample to rinse containers. Acidify collected sample with nitric acid to pH < 2.
Dissolved calcium, magnesium	250 mL	Polyethylene, acid rinsed	Filter through a disposable capsule filter with 0.45-micron pore size; use filtered sample to rinse containers. Acidify collected sample with nitric acid to pH < 2.
Antimony, beryllium, chromium, copper, cadmium, lead, nickel, silver, zinc	500 mL	Polyethylene, acid rinsed	Unfiltered; use unfiltered sample to rinse containers. Acidify collected sample with nitric acid to pH < 2.
Arsenic, selenium	250 mL	Polyethylene, acid rinsed	Unfiltered; use unfiltered sample to rinse containers. Acidify collected sample with nitric acid to pH < 2.
Mercury	250 mL	Glass, acid rinsed	Unfiltered; use unfiltered sample to rinse containers. Acidify collected sample with nitric acid/potassium dichromate to pH < 2.
Cyanide	250 mL	Polyethylene	Unfiltered; use unfiltered sample to rinse containers. Treat collected sample with 5 N sodium hydroxide to pH >12. Chill and maintain sample at 4 °C.
Organic compounds			
Pesticides	1 L	Amber glass	Bottle baked at 450 °C. Do not rinse container in field. Chill and maintain sample at 4 °C.
Total organic carbon	125 mL	Amber glass	Bottle baked at 450 °C. Do not rinse container in field. Chill and maintain sample at 4 °C.
Volatile organic compounds	40 mL	Amber glass septum vial	Do not rinse container in field. Exclude all air bubbles in sample by completely filling vial. Protect sample from sunlight. Chill and maintain sample at 4 °C.
Semivolatile organics	1 L	Amber glass	Bottle baked at 450 °C. Do not rinse container in field. Chill and maintain sample at 4 °C.
Sediment			
Suspended sediment	1 pint	Glass	None.

Tributary Bottom Material Samples

Bottom material, or bed sediment, was collected from Gar Creek (site 33) and McDowell Creek (site 44) once during the study to determine concentrations of nutrients, trace metals, organochlorine pesticides, and semivolatile organic compounds. Bed sediment samples were collected using procedures described by Shelton and Capel (1994).

At each tributary site, samples of fine-grained surficial sediments were collected from about 10 depositional zones during low-flow conditions. Each subsample was collected by wading to the depositional zone from the downstream direction. The surficial 2 to 3 centimeters (cm) of bed sediment was carefully collected using a Teflon scoop. The sediment sample was brought to the surface, taking care to avoid losing the fine particles, and placed in the compositing bowl. Each depositional zone was subsampled several times, and subsamples were composited with subsamples from other depositional zones at the particular tributary site. After subsample collection was completed, the composite sample was homogenized using a Teflon spatula.

Samples for trace metals and nutrients were sieved into a wide-mouth polyethylene receiving bottle through a 63- μm mesh nylon-sieve cloth held in a plastic frame. Native water was used to pressure sieve the fine sediments through the cloth. Material remaining on the sieve was discarded. After the appropriate sample volume was collected in the sample bottle, the sample was taken to the USGS field office in Charlotte, N.C., and refrigerated for several days to allow the sediments to settle. The liquid above the sediments was then decanted with a syringe to within about 1 cm of the sediment-water interface and discarded. The fine sediments remaining in the sample bottle were packed in ice and shipped to the laboratory.

For organic analyses, the composited bottom material was passed through a 2-millimeter (mm) stainless steel sieve into a wide-mouth glass jar that had been baked to remove all organic matter. A Teflon spatula was used to work the material through the sieve; material remaining on the sieve was discarded. After sample collection, the jars were packed in ice and shipped to the laboratory for analysis.

Quality-Assurance Procedures

Quality-assurance procedures for water-quality and bottom material data collection and processing are presented in the following sections. All procedures followed standard USGS guidelines as described in each section. Detailed quality-assurance procedures are documented in USGS project files in the Charlotte, N.C., office.

Water-Quality Data

All of the sensors on the YSI probes used for continuous measurements of water temperature, specific conductance, and dissolved-oxygen concentration were tested prior to being placed in the field. Subsequently, sensors were routinely calibrated every 4 to 6 weeks. This procedure began with an initial comparison of the probe readings in its ambient state to readings from another pre-calibrated probe. The probe was then removed from the water, and the sensors were checked against the appropriate standards. The sensors were thoroughly cleaned, recalibrated, and returned to the water. All readings were recorded on the calibration log. Adjustments to the sensor record were applied over time and range, when calibration records indicated sensor drift had occurred.

The water temperature sensor was calibrated using an electronic thermistor that had been previously checked against an American Bureau of Standards mercury thermometer. The thermistor was placed in the lake and allowed to equilibrate prior to disturbing the temperature sensor. All readings were recorded on the calibration sheet. The temperature sensor was then removed, cleaned, returned to the lake, and allowed to equilibrate. All readings were then recorded a second time. Adjustments to the record were applied, as needed, based on differences between the sensor reading prior to recalibration and the temperature from the thermistor.

The specific conductance sensor was calibrated using standards ranging from 20 to 200 microsiemens per centimeter ($\mu\text{S}/\text{cm}$) at 25 °C. After removing it from the reservoir, the sensor was rinsed with deionized water, immersed in a standard, and allowed to equilibrate. Readings were recorded on the calibration sheet along with the actual standard value. The sensor was then thoroughly cleaned to remove any accumulation of dirt and algae. The sensor was immersed in the standard closest to the observed specific conductance reading, allowed to equilibrate,

and adjusted to that standard. The sensor was then sequentially immersed in the other standards and the readings recorded. This allowed for adjustments to the data record with time and range in the event of probe degradation. The three standards that best bracketed the typically observed specific conductance readings were used to apply any needed adjustments to the data.

The air-saturation method was used to calibrate the dissolved-oxygen sensor. The sensor was placed into a calibration cup containing water, without immersing it in the water. After allowing the air inside the calibration cup to saturate, the dissolved-oxygen concentration reading was recorded. The dissolved-oxygen membrane and solution were replaced, and the procedure repeated. The sensor reading was adjusted based on barometric pressure and temperature in the calibration cup. In addition, the sensor was checked against a zero dissolved-oxygen solution before and after servicing.

The Hydrolab H2O multiparameter water-quality meter used for collection of vertical profile water-quality data was calibrated daily prior to use. Specific conductance was calibrated using standards ranging from 20 to 200 $\mu\text{S}/\text{cm}$ at 25 °C. The specific conductance sensor was adjusted to the standard closest to the typically observed specific conductance values, and the other standards were used as a check. The pH sensor was calibrated using standards of 4.0 and 7.0, and checked against a standard of 10.0. The dissolved-oxygen membrane and solution were replaced prior to each sampling trip. The sensor was calibrated using the air-saturation method, as described above. The depth sensor was calibrated by lowering the water-quality meter into the water until the sensor was just submerged; the depth was adjusted to zero at that point. The temperature sensor was checked against an American Bureau of Standards mercury thermometer. A post-calibration check on the meter was done prior to the next day's calibration in order to document instrument drift or to determine if the meter needed servicing.

Between sampling trips, the Alpha-type samplers, D-77 bottles, silicone filter tubing, and churn splitters used to collect and process water-quality samples were cleaned by washing with a non-phosphate detergent solution and soaking in a 5-percent hydrochloric acid solution as described by Horowitz and others (1994). Sample collection and processing equipment were assigned to specific sites or types of sites, where possible, to minimize the potential

for cross-contamination. Separate Alpha-type samplers were used to collect "near surface" and "near bottom" samples. A separate churn splitter was assigned to each sampling site.

The Alpha-type samplers were field-cleaned between sampling sites by rinsing with copious amounts of deionized water. Churns were cleaned similarly between "near surface" and "near bottom" samples at a particular site. Clean filter tubing and a new capsule filter were used for each sample for dissolved constituents. Field personnel wore powder-free vinyl gloves during equipment cleaning and the collection and processing of samples. Gloves were changed as necessary to minimize potential sample contamination from field activities. All samples were preserved using USGS protocols as described in Horowitz and others (1994).

Numerous quality-assurance samples were collected during the project, including equipment blanks, ambient blanks, split replicates, concurrent replicates, and blank water analyses, as outlined by Horowitz and others (1994). Approximately 10 percent of all samples collected were quality-assurance samples. Most blank samples were analyzed for nutrients and trace metals using inorganic blank water prepared by the USGS laboratory, or TOC using organic-free water obtained from an outside supplier. Low-level analytical methods were used for blank samples so that detection limits were up to an order of magnitude less than detection limits for environmental samples. More than 75 percent of all blank results were less than or equal to the detection limit, and results for half the compounds were less than the detection limit in all blank samples. This indicates that no significant sample contamination was introduced during sample collection and processing, and that environmental sample results are representative of in-stream conditions.

Tributary Bottom Material Data

Equipment used for the collection of bottom material samples was cleaned prior to use at each tributary site. All equipment was washed and soaked in a phosphate-free detergent solution as described by Shelton and Capel (1994). In addition, the equipment used to collect and process samples for trace metals and nutrients was rinsed with a 5-percent hydrochloric acid solution, followed by several rinses with deionized water, and allowed to air dry. A new nylon-sieve cloth was used at each site. Equipment used to collect and

process samples for organic analyses was rinsed with methanol and allowed to air dry. All equipment was rinsed with native water prior to use. Powder-free vinyl gloves were worn by field personnel during equipment cleaning, sample collection, and sample processing. Gloves were changed as necessary to minimize the potential for sample contamination from field activities.

ANALYTICAL PROCEDURES

Water-quality samples and tributary bottom material samples were chilled immediately following collection and shipped to the USGS National Water Quality Laboratory (NWQL) in Arvada, Colo. Analytical methods used by the NWQL are documented in Britton and Greeson (1987), Wershaw and others (1987), Fishman and Friedman (1989), Fishman (1993), Furlong and others (1996), Werner and others (1996), and Zaugg and others (1995). Analytical procedures and method detection limits for chemical constituents in water and bottom material samples are summarized in tables 4 and 5 (p. 28–42), respectively. All bottom-material results are reported in terms of sediment dry weight.

Suspended-sediment concentrations from the two riverine sites were determined by USGS sediment laboratories located in Baton Rouge, La., and Louisville, Ky., using gravimetric procedures documented by Guy (1969). Water samples were analyzed for fecal coliform bacteria at the CMUD Franklin Water Treatment Laboratory. Samples were chilled and delivered to the Franklin Water Treatment Laboratory within 4 hours following collection. Water samples were analyzed for 5-day BOD at the CMUD System Protection Division Laboratory; these samples were chilled in the field and delivered to the laboratory within 24 hours following collection.

HYDROLOGIC DATA

Hydrologic data collected by the USGS during this study included continuous records of water level at 15-minute intervals at three reservoir sites (sites 01, 05, and 14, fig. 2) and the river site about 3 mi downstream from Mountain Island Dam (site 17). These data are available from the USGS office in Charlotte, N.C. Monthly water-level summary statistics for the four sites are presented in tables 6, 7, 8, and 9 (p. 43–46),

respectively. From August 1994 through September 1997, water levels at site 01 fluctuated 11.15 ft (642.87 to 654.02 ft above sea level) and averaged 644.71 ft above sea level. Water levels at site 05, which may be affected by Riverbend Steam Station settling pond discharge near the gage, averaged 644.86 ft above sea level and varied 6.97 ft (643.45 to 650.42 ft above sea level). Water levels at site 14 during the study fluctuated between 642.77 and 649.49 ft above sea level (6.72 ft) and averaged 644.15 ft above sea level. At site 17, water levels averaged 566.82 ft above sea level during the study and fluctuated 5.31 ft (565.41 to 570.72 ft above sea level).

Water-level patterns at sites 01 and 14 are closely coupled as shown in figure 3 for June 1996 and January 1997—typical summer and winter months. Water-level records at site 01 generally exhibit a daily peak in response to power generation at Cowans Ford Dam. The water-level peaks recorded at site 14 lag a few hours behind and are of smaller magnitude than those at site 01.

Hourly flow estimates obtained from Duke Power Company were used to generate hydrographs of hourly flow at Cowans Ford Dam and Mountain Island Dam. The magnitude of hourly flow from Cowans Ford Dam is much greater than that from Mountain Island Dam (fig. 4). For example, in August 1996 the highest hourly flow estimate from Cowans Ford Dam was 33,800 cubic feet per second (ft³/s) compared to 10,200 ft³/s from Mountain Island Dam (fig. 4). In addition, releases from Cowans Ford Dam have more pronounced diurnal peaks, while Mountain Island Dam releases are more attenuated.

WATER-QUALITY DATA

In this section, results of water-quality data collected during the study are provided in the form of tables and statistical summaries. Results presented consist of physical water-quality data (continuously monitored and vertical profile data) and water-quality sample results.

Continuously Monitored Water-Quality Data

Water temperature, dissolved-oxygen concentration, and specific conductance values were monitored continuously at headwater site 01, reservoir

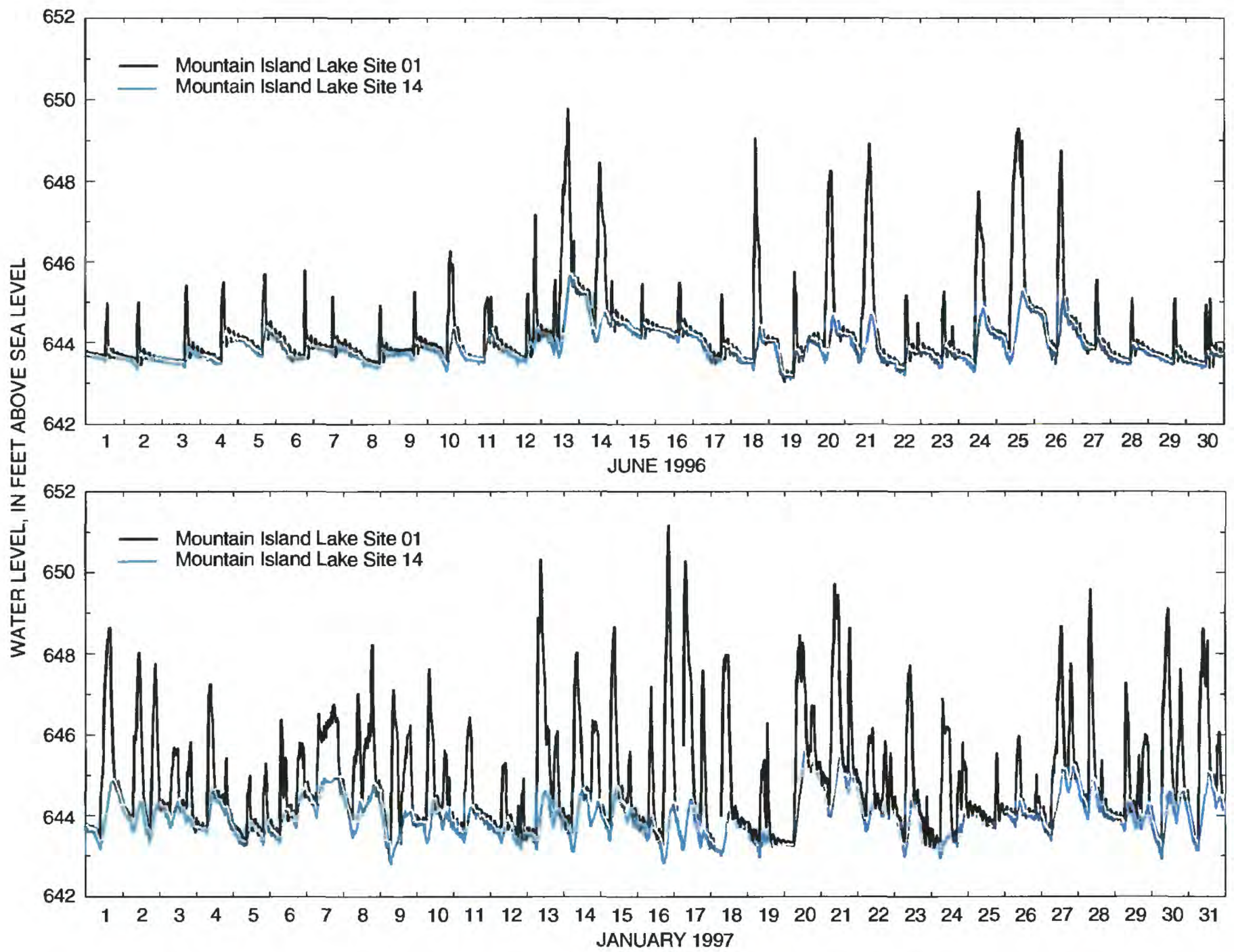


Figure 3. Water-level hydrographs for Mountain Island Lake sites 01 and 14 for June 1996 and January 1997.

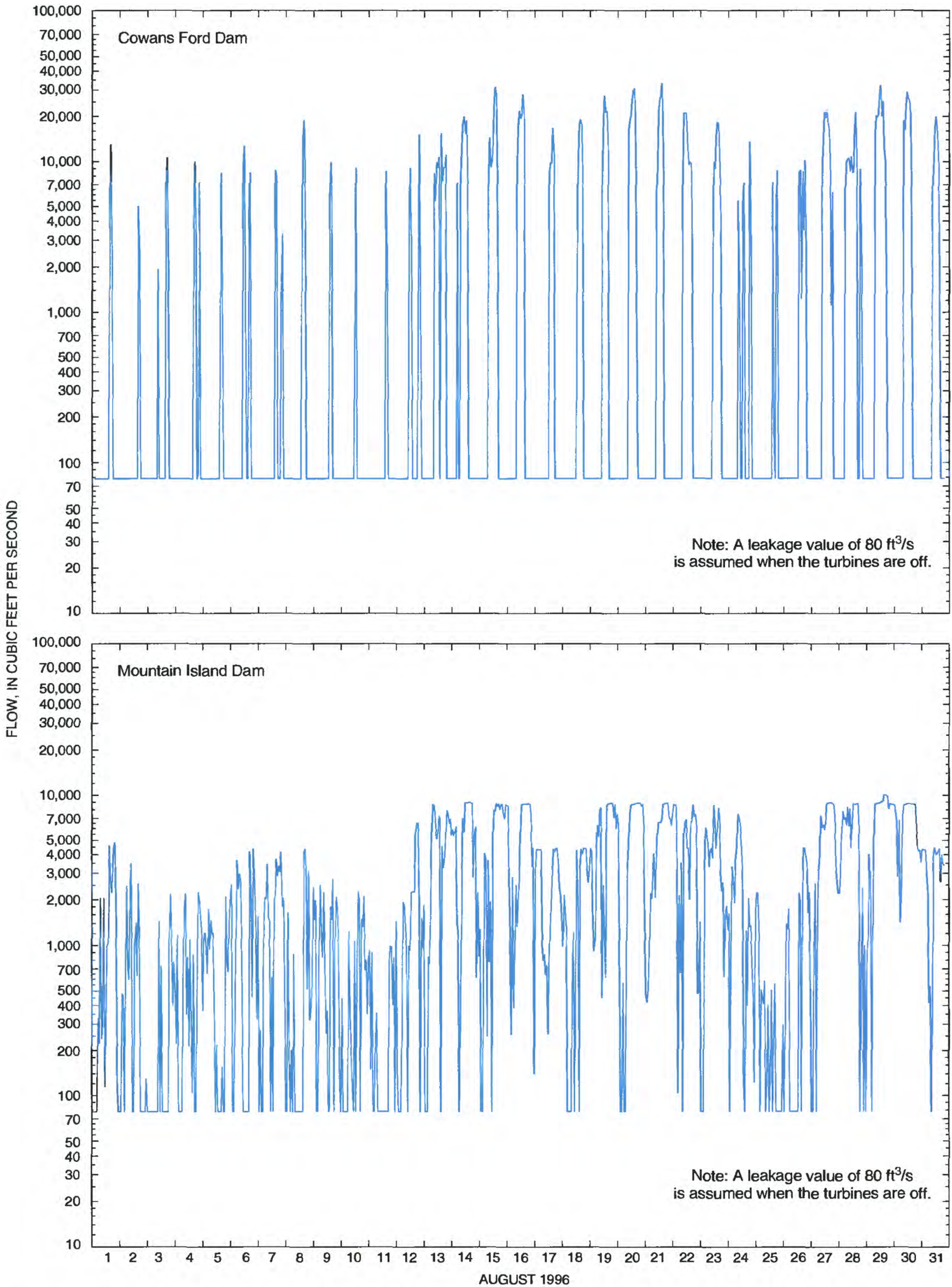


Figure 4. Hydrographs of hourly flow data from Cowans Ford Dam and Mountain Island Dam for August 1996.

site 14, and downstream river site 17 (fig. 2) from mid-April 1996 through September 1997. These physical water-quality characteristics were recorded every 15 minutes, and daily mean values were calculated. The data are available from the USGS office in Charlotte, N.C. Gaps in the data are the result of instrument failure (no data recorded) or sensor malfunction, which caused unacceptable data quality.

At site 01, water temperature recorded during the study ranged from 7.8 to 29.8 °C (table 10, p. 47).

Water temperature at site 01 generally was lowest in January and February and highest in August.

Dissolved-oxygen concentrations ranged from 3.2 to 11.3 milligrams per liter (mg/L) at site 01 during the period of record (table 11, p. 48). Highest dissolved-oxygen concentration values generally were recorded in February; values were lowest in August. At site 01, dissolved-oxygen concentrations generally were related inversely to temperature (fig. 5); however, smaller scale, short-term fluctuations in temperature

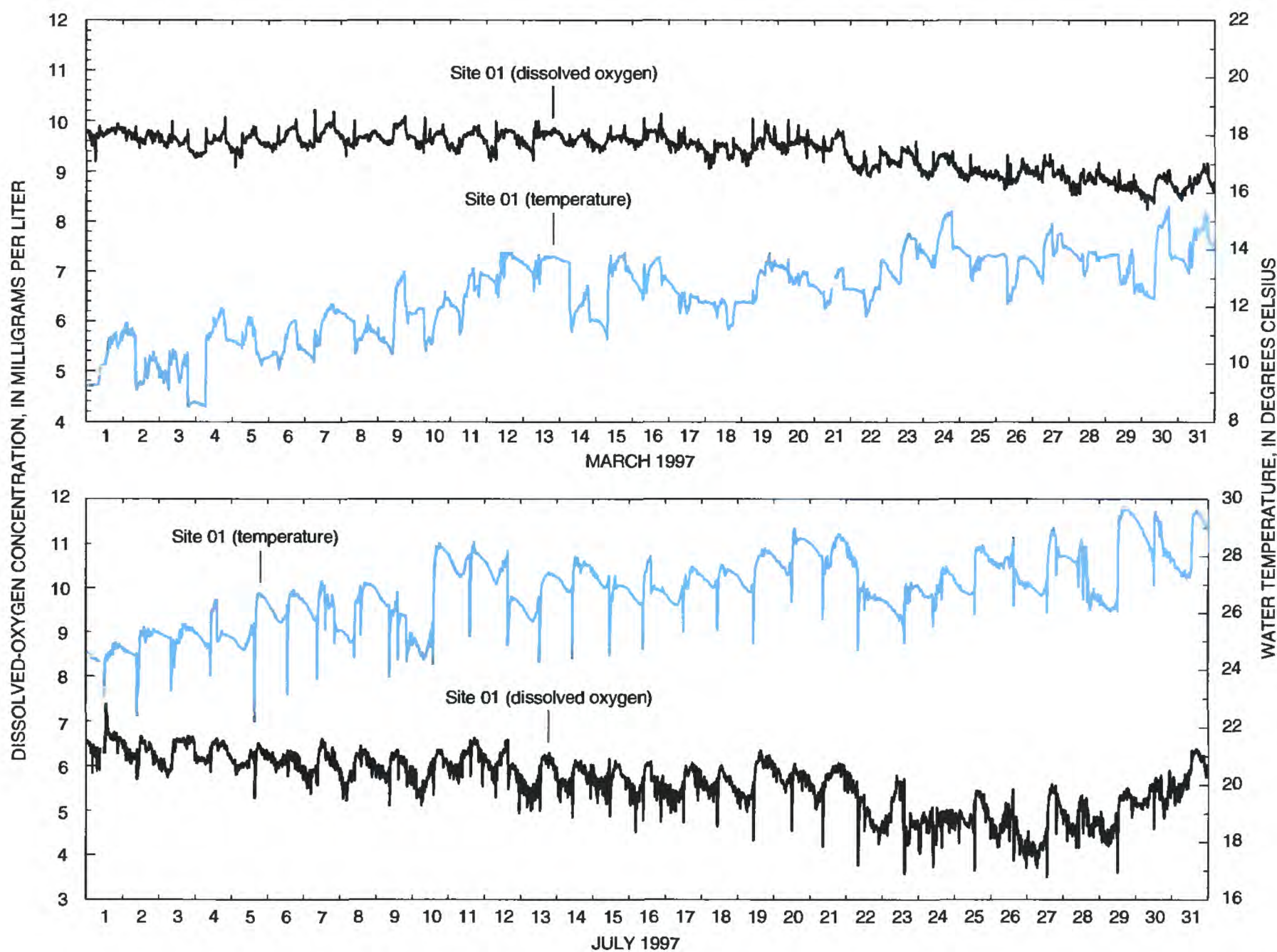


Figure 5. Continuous measurements of water temperature and dissolved-oxygen concentration at site 01 for March and July 1997.

and dissolved-oxygen concentrations may be affected by Duke Power Company releases upstream from the water-quality monitor (figs. 2, 6). Specific conductance at site 01 during the study ranged from 47 to 73 $\mu\text{S}/\text{cm}$ (table 12, p. 49). Specific conductance values were fairly constant throughout the year, with monthly mean values ranging from 53 to 60 $\mu\text{S}/\text{cm}$.

At reservoir site 14, two water-quality probes were deployed—one about 2 m below average water surface (near surface) and one about 2.5 m above the reservoir bottom (near bottom). Water temperatures recorded at site 14 ranged from 8.2 to 35.2 °C for near surface (table 13, p. 50) and 7.3 to 30.7 °C for near bottom (table 14, p. 51). Water temperatures recorded

by both probes at site 14 were generally highest in July and August and lowest in February. Differences between near-surface and near-bottom water temperatures were typically greater during warm weather months than during cooler weather months (fig. 7). Water temperature at site 14, however, may be affected by releases of warmer water from Duke Power Company's Riverbend Steam Station into Mountain Island Lake about 0.3 mi upstream from site 14. Near-surface dissolved-oxygen concentrations recorded at site 14 during the study ranged from 4.3 to 11.4 mg/L (table 15, p. 52); near-bottom dissolved-oxygen concentrations ranged from 2.1 to 10.3 mg/L (table 16, p. 53). Typically, near-bottom dissolved-oxygen

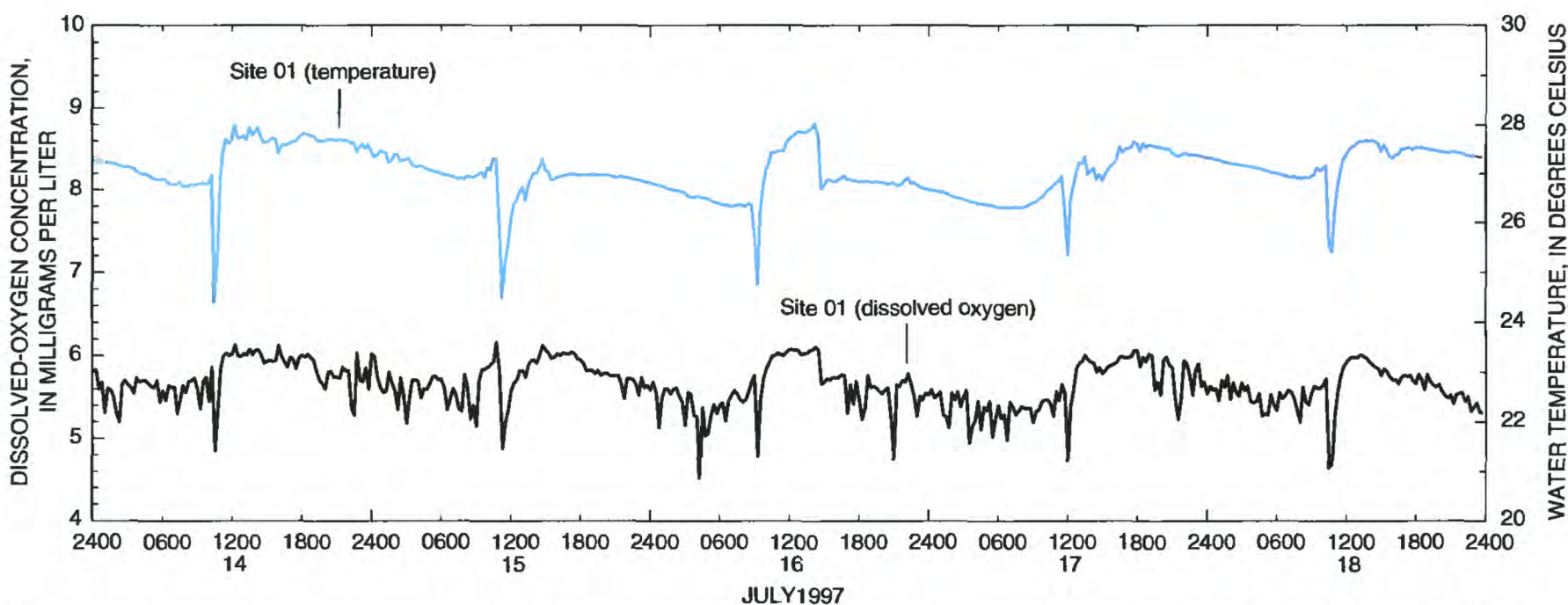


Figure 6. Continuous measurements of water temperature and dissolved-oxygen concentration at site 01 for July 14–18, 1997.

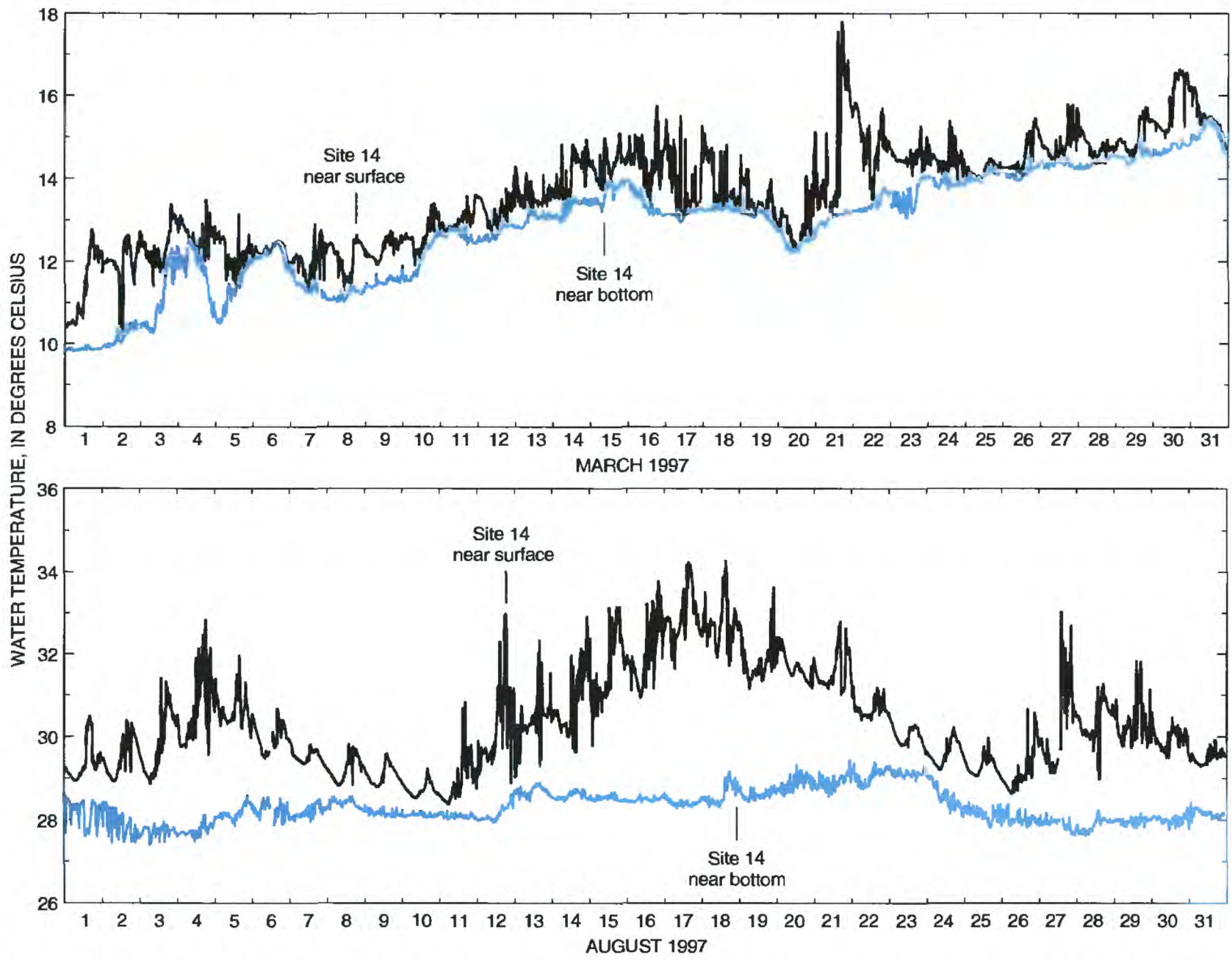


Figure 7. Continuous measurements of near-surface and near-bottom water temperature at site 14 for March and August 1997.

concentrations were less than near-surface dissolved-oxygen concentrations, with concentrations at both depths being highest in winter and early spring (fig. 8). Near-surface specific conductance at site 14 during the study ranged from 48 to 65 $\mu\text{S}/\text{cm}$ (table 17, p. 54); near-bottom specific conductance ranged from 51 to 76 $\mu\text{S}/\text{cm}$ (table 18, p. 55). Specific conductance values were fairly constant throughout the year, with monthly mean values ranging from 50 to 59 $\mu\text{S}/\text{cm}$ near the surface and 53 to 59 $\mu\text{S}/\text{cm}$ near the bottom.

Continuous measurements of water temperature at downstream river site 17 ranged from 4.2 to 30.3 $^{\circ}\text{C}$ during the study (table 19, p. 56); water temperatures typically were highest in August and lowest in February. Dissolved-oxygen concentrations recorded at site 17 ranged from 4.3 to 11.8 mg/L (table 20,

p. 57). Dissolved-oxygen concentrations generally displayed an inverse relation to water temperature (fig. 9). At site 17, specific conductance values exhibited a larger range (33 to 89 $\mu\text{S}/\text{cm}$; table 21, p. 58) than at the other two continuous water-quality monitor sites. Monthly mean values at site 17, however, were fairly consistent throughout the study, ranging from 54 to 61 $\mu\text{S}/\text{cm}$.

Vertical Profile Water-Quality Data

Vertical profiles of water temperature, dissolved-oxygen concentration, specific conductance, and pH were measured at 11 sites within the mainstem of Mountain Island Lake (sites 01, 02, 03, 04, 06, 08, 09, 10, 12, 14, 15), at three coves within the reservoir

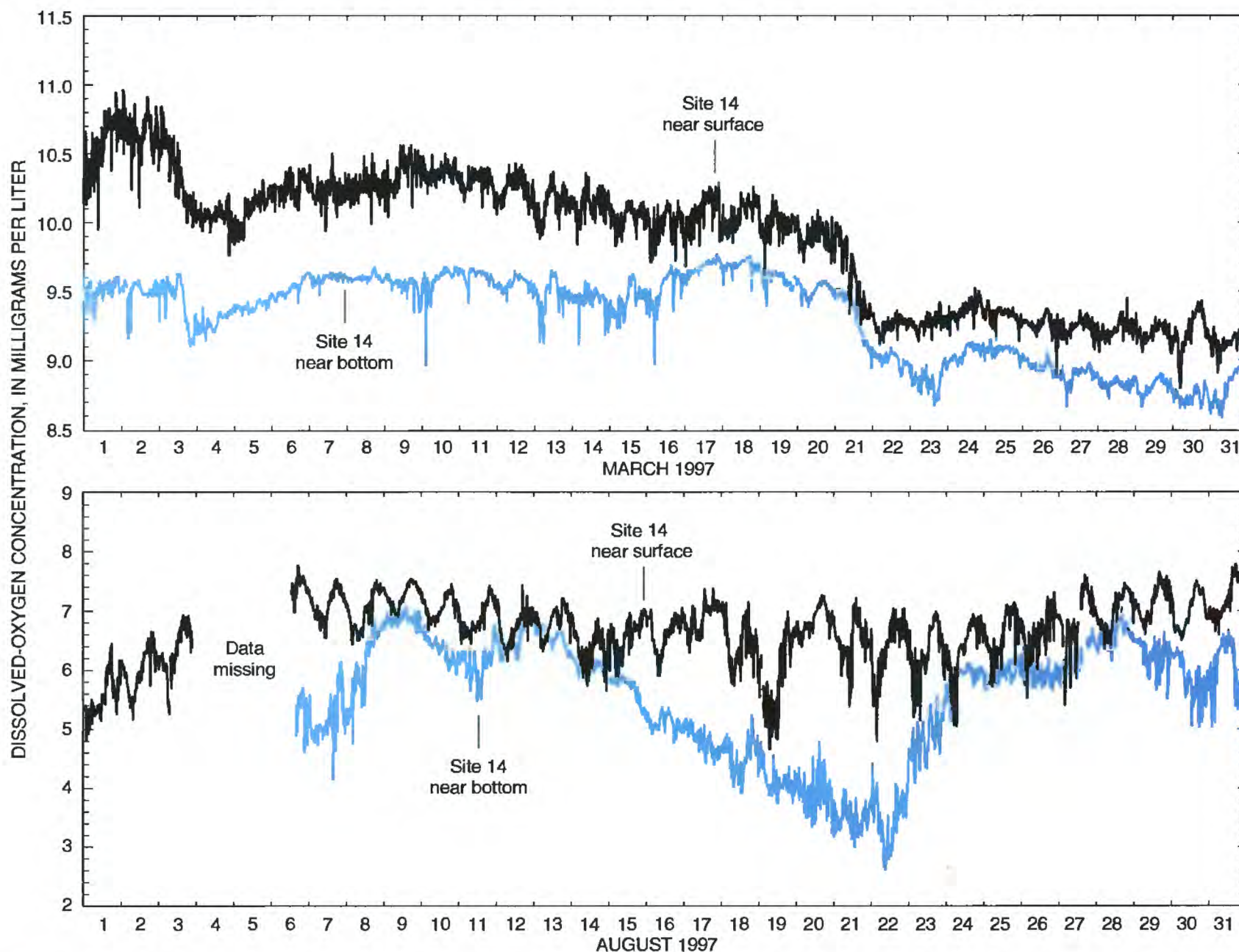


Figure 8. Continuous measurements of near-surface and near-bottom dissolved-oxygen concentration at site 14 for March and August 1997.

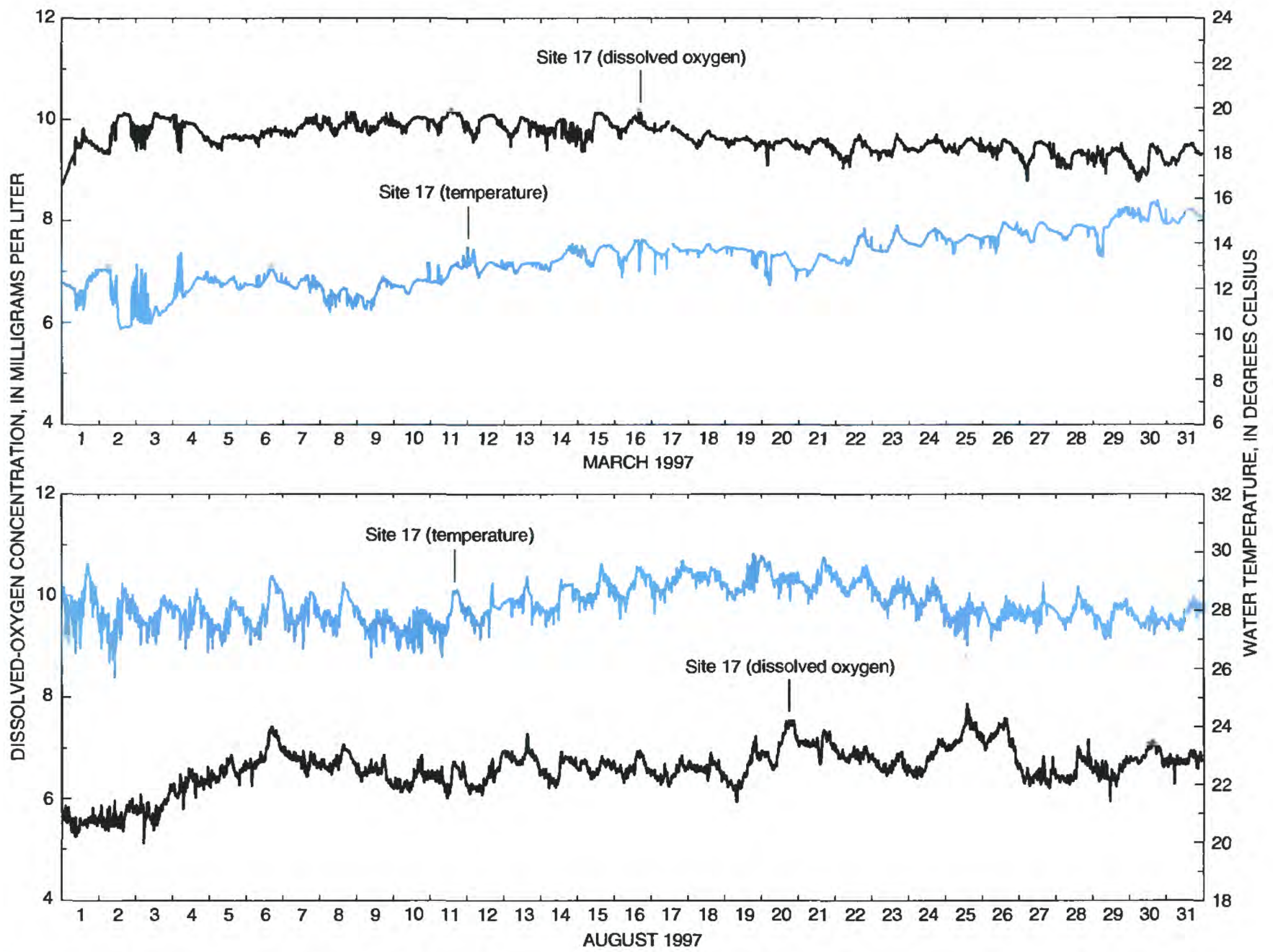


Figure 9. Continuous measurements of water temperature and dissolved-oxygen concentration at site 17 for March and August 1997.

(sites 07, 11, 13), and at the downstream river site (site 17) (fig. 2). Profiles were collected during 24 sampling trips from May 1996 through September 1997. The spatial distribution of vertical profile data-collection points at the 11 sites in the mainstem of Mountain Island Lake is shown in figure 10. Definition of the reservoir bottom shown in figure 10 was determined by bathymetric measurements collected on January 29, 1998, using global positioning technology at 42 cross sections along the reservoir mainstem. The reservoir bottom illustrated in figure 10 represents the deepest part of the channel at each cross section. The vertical profile data measured at each site are provided in tables 22–36 (p. 59–123).

Vertical profile water temperatures ranged from 9.0 to 34.0 °C at the 11 mainstem reservoir sites, with median water temperatures ranging from 21.0 (site 01) to 24.5 °C (sites 12 and 14). At cove site 07, water temperatures measured during the profiles ranged from 9.0 to 30.5 °C (median 23.5 °C). At cove sites 11 and 13, the range in water temperatures was 10.0 to 31.0 °C and 9.5 to 32.5 °C, respectively. The median water temperature was 24.5 °C at sites 11 and 13. At the downstream river site 17, water temperatures measured during the profiles ranged from 9.5 to 29.0 °C, with a median value of 23.0 °C.

Dissolved-oxygen concentrations measured during the profiles at the 11 mainstem reservoir sites

ranged from 0.0 to 10.4 mg/L, with median concentrations ranging from 7.0 (sites 01, 03, 06, and 14) to 7.6 mg/L (site 08). At cove site 07, dissolved-oxygen concentrations ranged from 3.8 to 10.5 mg/L (median 7.9 mg/L). Cove site 11 dissolved-oxygen concentrations ranged from 2.9 to 10.0 mg/L (median 7.1 mg/L), and cove site 13 values ranged from 2.3 to 10.0 mg/L (median 7.1 mg/L). At the downstream river site 17, the dissolved-oxygen concentrations ranged from 4.8 to 10.1 mg/L during measurement of vertical profiles, with a median concentration of 6.2 mg/L.

The pH values measured during vertical profiles ranged from 6.2 to 8.2 for the mainstem reservoir sites. Mainstem median pH values ranged from 6.7 to 6.9. In the coves, pH at site 07 ranged from 6.5 to 8.6 (median 7.1); pH at sites 11 and 13 ranged from 6.3 to 7.7, with medians of 6.7 and 6.8, respectively. The downstream river site 17 pH values ranged from 6.5 to 7.1, with a median value of 6.7.

Vertical profile specific conductance measurements at the 11 mainstem reservoir sites ranged from 49 to 126 µS/cm, with median values ranging from 55 to 58 µS/cm. Specific conductance ranged from 52 to 194 µS/cm at site 07 (median 81 µS/cm), 45 to 66 µS/cm at site 11 (median 55 µS/cm), and 49 to 62 µS/cm at site 13 (median 57 µS/cm). At the downstream river site 17, specific conductance ranged from 52 to 67 µS/cm, with a median value of 60 µS/cm.

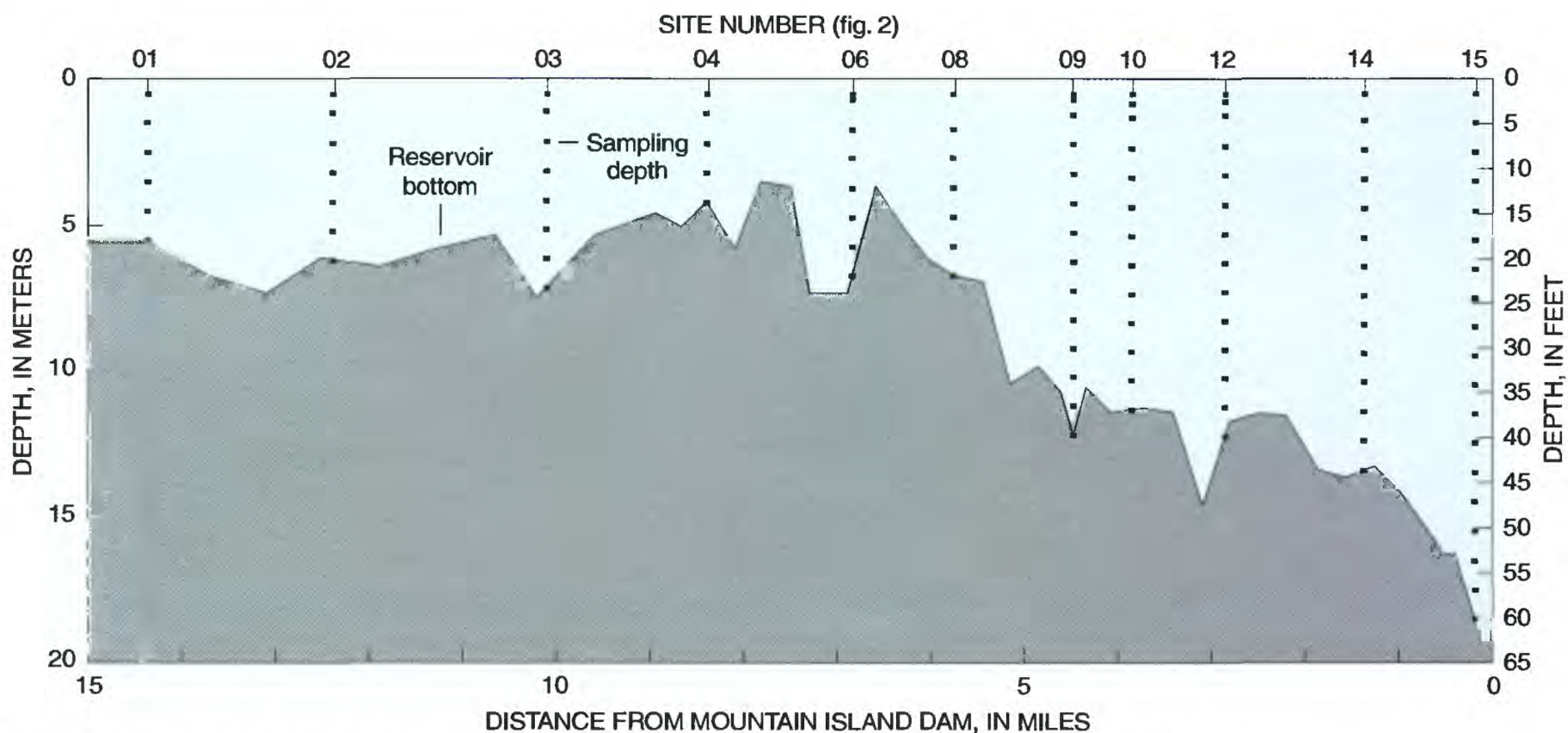


Figure 10. Diagram of mainstem data-collection points for vertical profile water-quality data.

Water-Quality Sample Data

Water was collected for chemical analysis at sites 01, 04, 07, 09, 11, 13, 14, and 17 (fig. 2; table 2). These samples were collected bimonthly from May 1996 through July 1996, and monthly from August 1996 through September 1997, for a total of 17 sampling trips. For each water-quality sampling site, the number of samples collected or measurements made, the properties and constituents measured, and statistical summaries of the results are presented (tables 37–44, p. 124–137). Maxima, minima, and arithmetic means are listed, along with the 5th, 25th, median, 75th, and 95th percentiles, for each variable. The statistical summaries were prepared using programs developed by the USGS (Maddy and others, 1992). Percentiles were not calculated if sample sizes were small or if a large proportion of the data was censored (less than the laboratory reporting level). As noted previously, water samples were collected from multiple depths at reservoir sites 04, 07, 09, 11, 13, and 14; results for each depth are presented separately in the statistical summary tables.

At the four mainstem reservoir sites (sites 01, 04, 09, 14; fig. 2), dissolved nitrite plus nitrate concentrations ranged from 0.006 to 0.348 mg/L. In samples collected at the three cove sites (sites 07, 11, 13; fig. 2), dissolved nitrite plus nitrate concentrations ranged from <0.005 to 2.77 mg/L. Dissolved nitrite plus nitrate in samples from the downstream river site (site 17; fig. 2) ranged from 0.057 to 0.273 mg/L. Median dissolved nitrite plus nitrate concentration ranges from the mainstem and cove sites ranged from 0.157 to 0.180 mg/L and 0.082 to 0.65 mg/L, respectively; at the downstream river site, the median concentration was 0.210 mg/L. Total phosphorus concentrations ranged from 0.003 to 0.143 mg/L (mainstem sites), 0.004 to 0.600 mg/L (cove sites), and 0.005 to 0.091 mg/L (downstream river site). Total phosphorus median concentration ranges were 0.006 to 0.017 mg/L at the mainstem sites and 0.009 to 0.109 mg/L at the cove sites; at the downstream river site, the median concentration was 0.014 mg/L.

Fecal coliform counts were 160 colonies/100 milliliters (mL) or less at all sites. Chlorophyll *a* concentrations ranged from <0.1 to 2.3 µg/L in the mainstem sites, <0.1 to 13 µg/L in the coves, and <0.1 to 1 µg/L at the downstream river site. Maximum concentrations of total suspended solids were 92 mg/L (mainstem sites), 108 mg/L (cove sites), and 46 mg/L (downstream river site). Trace metals detected in the

mainstem reservoir sites (and maximum concentrations) included arsenic (2.0 µg/L), copper (5.0 µg/L), nickel (1.0 µg/L), and zinc (80 µg/L). Six trace metals were detected in at least one sample from the cove sites—arsenic (3.0 µg/L), chromium (1.0 µg/L), copper (4.0 µg/L), lead (1.0 µg/L), nickel (2.0 µg/L), and antimony (2.0 µg/L). Trace metals detected at the downstream river site (and maximum concentrations) consisted of chromium (1.0 µg/L), copper (4.0 µg/L), and nickel (1.0 µg/L).

Water-chemistry data from sites 01, 04, 07, 09, 11, 13, 14, and 17 (fig 2; table 2) are listed in entirety in tables 45–52 (p. 138–165). Data reported for each site include 5-day BOD, fecal coliform bacteria, hardness, dissolved calcium, dissolved magnesium, alkalinity, total suspended solids, volatile suspended solids, total dissolved solids, dissolved nitrite plus nitrate, dissolved ammonia, total ammonia plus organic nitrogen, dissolved ammonia plus organic nitrogen, total nitrogen, total organic nitrogen, total phosphorus, dissolved phosphorus, dissolved orthophosphorus, total iron, TOC, chlorophyll *a* and *b*, and selected trace metals. Also listed for each site are field measurements of specific conductance, field pH, water temperature, dissolved-oxygen concentration, dissolved-oxygen percent saturation, and water transparency associated with each set of chemical samples. Water-level elevations and suspended-sediment concentrations also are reported for riverine sites 01 and 17 (tables 45 and 52, respectively).

Organic compounds, including volatile organics, semivolatile organics, and pesticides, were analyzed during one water-quality sampling event in June 1996. Compounds detected in at least one sample are presented (table 53); the complete list of compounds analyzed and reporting levels are provided in table 4. The analytical scan for 59 volatile organic compounds identified only seven compounds in the reservoir water—1,2,4-trimethylbenzene; 1,3,5-trimethylbenzene; benzene; ethylbenzene; methyl *tert*-butyl ether (MTBE); toluene; and xylene. Analysis of 84 pesticides identified 10 compounds in at least one sample—alachlor, atrazine, carbaryl, deethyl atrazine, diazinon, metolachlor, prometon, simazine, tebuthiuron, and diuron. Four pesticides were identified in all 14 samples collected—atrazine (0.009–0.21 µg/L), metolachlor (0.003–0.012 µg/L), simazine (0.015–0.030 µg/L), and tebuthiuron (0.013–0.027 µg/L). None of the 52 semivolatile organic compounds analyzed were detected.

Table 53. Results of organic analyses of water-quality samples, June 1996

[“Near-surface” samples collected 0.5 meter below water surface; “near-bottom” samples collected 1 meter above reservoir bottom; µg/L, micrograms per liter; --- not detected; * estimated value less than the laboratory reporting level]

Constituent (µg/L)	Site 01 (0214264800)		Site 04 (0214264900)		Site 07 (0214266024)		Site 09 (0214266045)		Site 11 (0214266250)		Site 13 (0214267000)		Site 14 (0214267200)		Site 17 (02142808)	
	near surface	near bottom	near surface	near bottom	near surface	near bottom	near surface	near bottom	near surface	near bottom	near surface	near bottom	near surface	near bottom	near bottom	
VOLATILE ORGANIC COMPOUNDS																
1,2,4-Trimethylbenzene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.400
1,3,5-Trimethylbenzene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	.500
Benzene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	.300
Ethylbenzene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	.200
Methyl <i>tert</i> -butyl ether (MTBE)	0.200	---	---	---	---	---	0.400	---	---	0.300	0.600	0.300	0.200	0.200	---	.700
Toluene	.400	0.300	0.300	---	---	.300	---	---	---	---	.400	---	---	---	---	.800
Xylene	.500	.400	.300	---	---	.400	---	---	---	---	.500	---	---	---	---	1.20
PESTICIDES																
Alachlor	0.001*	---	---	0.002*	---	---	0.002*	---	0.001*	0.003*	---	---	---	---	---	---
Atrazine	.009	0.012	0.010	.045	.073	0.021	.025	.013	.015	.013	0.011	0.034	0.012	0.021	0.019	.006*
Carbaryl	---	---	---	.007*	.023*	---	---	---	---	---	---	.008*	---	---	---	.006*
Deethyl atrazine	---	---	---	.005*	.005*	---	.003*	---	.003*	.002*	---	.002*	---	.003*	---	---
Diazinon	---	---	---	.005	.008	---	---	---	---	---	---	---	---	---	---	---
Metolachlor	.004*	.003*	.003*	.009	.012	.004	.005	.004	.005	.004	.003*	.005	.003*	.004	.005	.005
Prometon	.006*	.006*	.005*	---	.009*	.008*	.006*	.006*	.005*	.005*	.005*	.007*	.006*	.006*	.010*	.010*
Simazine	.018	.022	.022	.018	.017	.018	.021	.015	.016	.015	.019	.015	.019	.018	.030	.030
Tebuthiuron	.024	.015	.016	.014	.014	.013	.016	.016	.016	.014	.014	.013	.015	.013	.027	.027
Diuron	.020*	.010*	---	---	---	---	---	---	---	---	---	---	---	---	---	.010*

TRIBUTARY BOTTOM MATERIAL DATA

One composite sample of bottom material from each of the main tributaries to Mountain Island Lake (Gar Creek and McDowell Creek) was analyzed for nutrients, trace metals, organochlorine pesticides, and semivolatile organic compounds. Nutrients and trace metal concentrations for both sites are presented in table 54. No organochlorine pesticides were detected in Gar Creek bottom material; *p,p'*-DDE was detected in McDowell Creek bottom material at an estimated concentration of 0.8 µg/kg (table 55). Three semivolatile organic compounds were identified in Gar Creek bottom material—*p*-cresol; dibenzo[*a,h*]anthracene; and *bis*(2-ethylhexyl) phthalate (table 56). In McDowell Creek bottom material, 18 semivolatile organic compounds, largely polyaromatic hydrocarbons and plasticizers, were identified (table 56)—anthraquinone;

benzo[*a*]anthracene; benzo[*b*]fluoranthene; benzo[*k*]fluoranthene; benzo[*g,h,i*]perylene; benzo[*a*]pyrene; butylbenzyl phthalate; carbazole; chrysene; diethyl phthalate; 2,6-dimethylnaphthalene; di-*n*-butyl phthalate; di-*n*-octyl phthalate; *bis*(2-ethylhexyl) phthalate; fluoranthene; indeno(1,2,3-*cd*) pyrene; phenanthrene; and pyrene.

Table 54. Nutrient and trace metal concentrations in bottom material, Gar Creek (site 33) and McDowell Creek (site 44), July and August 1997

[Results for Gar Creek represent a composite of bottom material collected from site 33 on July 30, 1997. Results for McDowell Creek represent a composite of bottom material collected from site 44 on August 7, 1997. Concentrations of all chemical constituents are expressed in terms of sediment dry weight. mg/kg, milligrams per kilogram; < less than; µg/g, micrograms per gram]

Property or constituent	Concentration in bottom material	
	Gar Creek (site 33)	McDowell Creek (site 44)
Nitrogen, nitrite plus nitrate (mg/kg as N)	< 2.0	< 2.0
Nitrogen, ammonia total (mg/kg as N)	68	16
Nitrogen, ammonia plus organic total (mg/kg as N)	2,500	1,300
Phosphorus, total (mg/kg as P)	670	400
Arsenic, total (µg/g as As)	3	4
Cadmium, total (µg/g as Cd)	< 1	< 1
Chromium, total (µg/g as Cr)	44	30
Cobalt, total (µg/g as Co)	40	50
Copper, total (µg/g as Cu)	59	79
Iron, total (µg/g as Fe)	37,000	57,000
Lead, total (µg/g as Pb)	20	20
Manganese, total (µg/g as Mn)	360	1,200
Mercury, total (µg/g as Hg)	< 0.04	0.06
Selenium, total (µg/g as Se)	< 1	< 1
Zinc, total (µg/g as Zn)	60	80

Table 55. Organochlorine pesticide concentrations in bottom material, Gar Creek (site 33) and McDowell Creek (site 44), July and August 1997

[Results for Gar Creek represent a composite of bottom material collected from site 33 on July 30, 1997. Results for McDowell Creek represent a composite of bottom material collected from site 44 on August 7, 1997. Concentrations of all chemical constituents are expressed in micrograms per kilogram (µg/kg) sediment dry weight. < less than; * estimated value less than the laboratory reporting level]

Constituent	Concentration in bottom material (in µg/kg)	
	Gar Creek (site 33)	McDowell Creek (site 44)
Aldrin	< 1.0	< 1.0
<i>cis</i> -Chlordane	< 1.0	< 1.0
<i>trans</i> -Chlordane	< 1.0	< 1.0
Chloroneb	< 5.0	< 5.0
Dacthal	< 5.0	< 5.0
<i>o,p'</i> -DDD	< 1.0	< 1.0
<i>p,p'</i> -DDD	< 1.0	< 1.0
<i>o,p'</i> -DDE	< 1.0	< 1.0
<i>p,p'</i> -DDE	< 1.0	0.8*
<i>o,p'</i> -DDT	< 2.0	< 2.0
<i>p,p'</i> -DDT	< 2.0	< 2.0
Dieldrin	< 1.0	< 1.0
Endosulfan sulfate	< 1.0	< 1.0
Endrin	< 2.0	< 2.0
Heptachlor	< 1.0	< 1.0
Heptachlor epoxide	< 1.0	< 1.0
alpha-BHC	< 1.0	< 1.0
beta-BHC	< 1.0	< 1.0
Isodrin	< 1.0	< 1.0
Lindane	< 1.0	< 1.0
<i>o,p'</i> -Methoxychlor	< 5.0	< 5.0
<i>p,p'</i> -Methoxychlor	< 5.0	< 5.0
Mirex	< 1.0	< 1.0
<i>cis</i> -Nonachlor	< 1.0	< 1.0
<i>trans</i> -Nonachlor	< 1.0	< 1.0
Oxychlordane	< 1.0	< 1.0
Polychlorinated biphenyls, total	< 50	< 50
<i>cis</i> -Permethrin	< 5.0	< 5.0
<i>trans</i> -Permethrin	< 5.0	< 5.0
Pentachloroanisole	< 1.0	< 1.0
Toxaphene	< 200	< 200

Table 56. Semivolatile organic compound concentrations in bottom material, Gar Creek (site 33) and McDowell Creek (site 44), July and August 1997

[Results for Gar Creek represent a composite of bottom material collected from site 33 on July 30, 1997. Results for McDowell Creek represent a composite of bottom material collected from site 44 on August 7, 1997. Concentrations of all chemical constituents are expressed in micrograms per kilogram ($\mu\text{g}/\text{kg}$) sediment dry weight. <, less than; *, estimated value less than the laboratory reporting level]

Constituent	Concentration in bottom material ($\mu\text{g}/\text{kg}$)		Constituent	Concentration in bottom material ($\mu\text{g}/\text{kg}$)	
	Gar Creek (site 33)	McDowell Creek (site 44)		Gar Creek (site 33)	McDowell Creek (site 44)
Acenaphthene	< 50	< 50	1,6-Dimethylnaphthalene	< 50	< 50
Acenaphthylene	< 50	< 50	2,6-Dimethylnaphthalene	< 50	8*
Acridine	< 50	< 50	Dimethyl phthalate	< 50	< 50
C8-Alkylphenol	< 50	< 50	Di- <i>n</i> -butyl phthalate	< 50	34*
Anthracene	< 50	< 50	2,4-Dinitrotoluene	< 50	< 50
Anthraquinone	< 50	29*	2,6-Dinitrotoluene	< 50	< 50
Azobenzene	< 50	< 50	Di- <i>n</i> -octyl phthalate	< 50	27*
Benzo[<i>a</i>]anthracene	< 50	20*	<i>bis</i> (2-Ethylhexyl) phthalate	91	120
Benzo[<i>b</i>]fluoranthene	< 50	41*	Fluoranthene	< 50	54
Benzo[<i>k</i>]fluoranthene	< 50	27*	Fluorene	< 50	< 50
Benzo[<i>g,h,i</i>]perylene	< 50	19*	Hexachlorobenzene	< 1	< 1
Benzo[<i>a</i>]pyrene	< 50	28*	Indeno[1,2,3- <i>cd</i>] pyrene	< 50	30*
Benzo[<i>c</i>]cinnoline	< 50	< 50	Isophorone	< 50	< 50
2,2'-Biquinoline	< 50	< 50	Isoquinoline	< 50	< 50
4-Bromophenyl phenyl ether	< 50	< 50	2-Methylantracene	< 50	< 50
Butylbenzyl phthalate	< 50	21*	4,5-Methylenephenanthrene	< 50	< 50
Carbazole	< 50	10*	1-Methyl-9H-fluorene	< 50	< 50
<i>bis</i> (2-Chloroethoxy) methane	< 50	< 50	1-Methylphenanthrene	< 50	< 50
4-Chloro-3-methylphenol	< 50	< 50	1-Methylpyrene	< 50	< 50
2-Chlorophenol	< 50	< 50	Naphthalene	< 50	< 50
2-Chloronaphthalene	< 50	< 50	Nitrobenzene	< 50	< 50
4-Chlorophenyl phenyl ether	< 50	< 50	N-Nitroso-Diphenylamine	< 50	< 50
<i>p</i> -Cresol	410	< 50	N-Nitroso-Di- <i>n</i> -propylamine	< 50	< 50
Chrysene	< 50	39*	Phenanthrene	< 50	24*
Dibenzo[<i>a,h</i>]anthracene	12*	< 50	Pyrene	< 50	50*
Dibenzothiophene	< 50	< 50	Pentachloronitrobenzene	< 50	< 50
1,2-Dichlorobenzene	< 50	< 50	Phenanthridine	< 50	< 50
1,3-Dichlorobenzene	< 50	< 50	Phenol	< 50	< 50
1,4-Dichlorobenzene	< 50	< 50	Quinoline	< 50	< 50
Diethyl phthalate	< 50	12*	1,2,4-Trichlorobenzene	< 50	< 50
3,5-Dimethylphenol	< 50	< 50	2,3,6-Trimethylnaphthalene	< 50	< 50
1,2-Dimethylnaphthalene	< 50	< 50			

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Table 4. Analytical procedures and method detection limits for chemical constituents in water analyzed by the U.S. Geological Survey National Water-Quality Laboratory, May 1996 through September 1997

[$\mu\text{S}/\text{cm}$ at 25 °C, microsiemens per centimeter at 25 degrees Celsius; mg/L , milligrams per liter; USGS, U.S. Geological Survey; APHA, American Public Health Association; $\mu\text{g}/\text{L}$, micrograms per liter; HPLC, high pressure liquid chromatography; mL , milliliter; — not applicable; ICP, inductively coupled plasma; AA, atomic absorption spectrometry; ASF, automated segmented flow]

Parameter code	Chemical constituent	Reporting unit	Analytical method	Minimum reporting level
PHYSICAL, CHEMICAL, AND BIOLOGICAL PROPERTIES				
00095	Specific conductance, field	$\mu\text{S}/\text{cm}$ at 25 °C	Electrometric	1
00400	pH, field	standard units	Electrometric	0.1
00300	Dissolved oxygen, field	mg/L	Electrometric	0.1
00010	Water temperature, field	°C	Thermometer/thermistor	0.5
90410	Alkalinity, lab	mg/L	Electrometric titration (USGS I103085)	1
80154	Suspended sediment ^a	mg/L	Gravimetric	1
00530	Residue, total on evaporation at 105 °C, suspended	mg/L	Gravimetric (USGS I376585)	1
00535	Residue, volatile suspended	mg/L	Gravimetric (USGS I376785)	1
70300	Dissolved solids, residue at 180 °C	mg/L	Gravimetric (USGS I175085)	10
00900	Hardness, total as CaCO_3	mg/L	Calculated	1
00310	Biochemical oxygen demand, 5-day ^b	mg/L	Standard methods 5210 (APHA, 1992)	0.1
70953	Chlorophyll <i>a</i>	$\mu\text{g}/\text{L}$	HPLC (USGS B653079)	0.1
70954	Chlorophyll <i>b</i>	$\mu\text{g}/\text{L}$	HPLC (USGS B653079)	0.1
00680	Carbon, organic, total	mg/L	Wet oxidation (USGS O310083)	0.1
31616	Fecal coliform bacteria ^c	colonies/100 mL	Standard methods 9222D (APHA, 1992)	—
00915	Calcium, dissolved	mg/L	ICP (USGS I147287)	0.02
00925	Magnesium, dissolved	mg/L	ICP (USGS I147287)	0.02
01045	Iron, total	$\mu\text{g}/\text{L}$	AA, flame (USGS I338185)	10
NUTRIENTS, TOTAL AND DISSOLVED				
00608	Nitrogen, ammonia, dissolved	mg/L	Salicylate-hypochlorite, ASF, colorimetry (USGS I252589)	0.002
00625	Nitrogen, ammonia + organic nitrogen, total	mg/L	Microkjeldahl digestion (USGS I451591)	0.1
00623	Nitrogen, ammonia + organic nitrogen, dissolved	mg/L	Microkjeldahl digestion, ASF, colorimetry (USGS I261091)	0.1

^aAnalyzed by USGS sediment laboratories in Louisiana and Kentucky.

^bAnalyzed by Charlotte-Mecklenburg Utility Department System Protection Division Laboratory.

^cAnalyzed by Charlotte-Mecklenburg Utility Department Franklin Water Treatment Laboratory.

Table 4. Analytical procedures and method detection limits for chemical constituents in water analyzed by the U.S. Geological Survey National Water-Quality Laboratory, May 1996 through September 1997—Continued

[µS/cm at 25 °C, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; USGS, U.S. Geological Survey; APHA, American Public Health Association; µg/L, micrograms per liter; HPLC, high pressure liquid chromatography; mL, milliliter; — not applicable; ICP, inductively coupled plasma; AA, atomic absorption spectrometry; ASF, automated segmented flow]

Parameter code	Chemical constituent	Reporting unit	Analytical method	Minimum reporting level
NUTRIENTS, TOTAL AND DISSOLVED (Continued)				
00631	Nitrogen, nitrite + nitrate, dissolved	mg/L	ASF, cadmium reduction diazotization, low level (USGS I254691)	0.005
00605	Nitrogen organic, total	mg/L	Calculated from parameters 00625 and 00608	—
00600	Nitrogen, total	mg/L	Calculated from parameters 00625 and 00631	—
00665	Phosphorus, total	mg/L	ASF, acid persulfate digestion, low level (USGS I460790)	0.001
00666	Phosphorus, dissolved	mg/L	ASF, acid persulfate digestion, low level (USGS I260790)	0.001
00671	Phosphorus, ortho, dissolved	mg/L	ASF, colorimetry, low level (USGS I260689)	0.001
METALS AND TRACE ELEMENTS, TOTAL				
01097	Antimony, total	µg/L	Digestion, AA, hydride (USGS I305585)	1
01002	Arsenic, total	µg/L	Digestion, AA, hydride (USGS I406285)	1
01012	Beryllium, total	µg/L	Digestion, AA, direct (USGS I309585)	10
01027	Cadmium, total	µg/L	Digestion, AA, graphite furnace (USGS I413889)	1
01034	Chromium, total	µg/L	Digestion, AA, graphite furnace (USGS I323393)	1
01042	Copper, total	µg/L	Digestion, AA, graphite furnace (USGS I427489)	1
00720	Cyanide, total	mg/L	Colorimetric, barbituric acid, ASF (USGS I430285)	0.01
01051	Lead, total	µg/L	Digestion, AA, graphite furnace (USGS I440389)	1
71900	Mercury, total	µg/L	Digestion, AA, cold vapor (USGS I346285)	0.1
01067	Nickel, total	µg/L	Digestion, AA, graphite furnace (USGS I450389)	1
01147	Selenium, total	µg/L	Digestion, AA, hydride (USGS I466785)	1
01077	Silver, total	µg/L	Digestion, AA, graphite furnace (USGS I472489)	1
01092	Zinc, total	µg/L	Digestion, AA, direct aspiration (USGS I390085)	10
ORGANIC COMPOUNDS - VOLATILES, TOTAL (USGS 0312794)				
77562	1,1,1,2-Tetrachloroethane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34506	1,1,1,1-Trichloroethane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34516	1,1,2,2-Tetrachloroethane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34511	1,1,2-Trichloroethane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2

Table 4. Analytical procedures and method detection limits for chemical constituents in water analyzed by the U.S. Geological Survey National Water-Quality Laboratory, May 1996 through September 1997—Continued

[µS/cm at 25 °C, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; USGS, U.S. Geological Survey; APHA, American Public Health Association; µg/L, micrograms per liter; HPLC, high pressure liquid chromatography; mL, milliliter; — not applicable; ICP, inductively coupled plasma; AA, atomic absorption spectrometry; ASF, automated segmented flow]

Parameter code	Chemical constituent	Reporting unit	Analytical method	Minimum reporting level
ORGANIC COMPOUNDS - VOLATILES, TOTAL (USGS 0312794) (Continued)				
77652	Freon 113	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34496	1,1-Dichloroethane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34501	1,1-Dichloroethylene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
77168	1,1-Dichloropropene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
77613	1,2,3-Trichlorobenzene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
77443	1,2,3-Trichloropropane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34551	1,2,4-Trichlorobenzene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
77222	1,2,4-Trimethylbenzene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
82625	1,2-Dibromo-3-chloropropane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	1
77651	1,2-Dibromoethane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34536	1,2-Dichlorobenzene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
32103	1,2-Dichloroethane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34541	1,2-Dichloropropane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
77226	1,3,5-Trimethylbenzene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34566	1,3-Dichlorobenzene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
77173	1,3-Dichloropropane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34571	1,4-Dichlorobenzene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
77170	2,2-Dichloropropane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
77275	2-Chlorotoluene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
77277	4-Chlorotoluene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
77356	<i>p</i> -Isopropyltoluene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34030	Benzene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
81555	Bromobenzene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
77297	Bromochloromethane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
32101	Bromodichloromethane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
32104	Bromoform	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34413	Bromomethane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2

Table 4. Analytical procedures and method detection limits for chemical constituents in water analyzed by the U.S. Geological Survey National Water-Quality Laboratory, May 1996 through September 1997—Continued

[µS/cm at 25 °C, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; USGS, U.S. Geological Survey; APHA, American Public Health Association; µg/L, micrograms per liter; HPLC, high pressure liquid chromatography; mL, milliliter; — not applicable; ICP, inductively coupled plasma; AA, atomic absorption spectrometry; ASF, automated segmented flow]

Parameter code	Chemical constituent	Reporting unit	Analytical method	Minimum reporting level
ORGANIC COMPOUNDS - VOLATILES, TOTAL (USGS O312794) (Continued)				
77342	Butylbenzene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34301	Chlorobenzene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34311	Chloroethane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
32106	Chloroform	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34418	Chloromethane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
77093	<i>cis</i> -1,2-Dichloroethylene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34704	<i>cis</i> -1,3-Dichloropropene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
32105	Dibromochloromethane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
30217	Dibromomethane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34668	Dichlorodifluoromethane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34423	Dichloromethane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34371	Ethylbenzene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
39702	Hexachlorobutadiene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
77223	Isopropylbenzene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
77224	Propylbenzene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
77350	<i>sec</i> -Butylbenzene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
77128	Styrene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
78032	Methyl <i>tert</i> -butyl ether	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
77353	<i>tert</i> -Butylbenzene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34475	Tetrachloroethylene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
32102	Tetrachloromethane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34010	Toluene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34546	<i>trans</i> -1,2-Dichloroethylene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34699	<i>trans</i> -1,3-Dichloropropene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
39180	Trichloroethylene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
34488	Trichlorofluoromethane	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
39175	Vinyl chloride	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2

Table 4. Analytical procedures and method detection limits for chemical constituents in water analyzed by the U.S. Geological Survey National Water-Quality Laboratory, May 1996 through September 1997—Continued

[µS/cm at 25 °C, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; USGS, U.S. Geological Survey; APHA, American Public Health Association; µg/L, micrograms per liter; HPLC, high pressure liquid chromatography; mL, milliliter; — not applicable; ICP, inductively coupled plasma; AA, atomic absorption spectrometry; ASF, automated segmented flow]

Parameter code	Chemical constituent	Reporting unit	Analytical method	Minimum reporting level
ORGANIC COMPOUNDS - VOLATILES, TOTAL (USGS O312794) (Continued)				
81551	Xylene	µg/L	Purge and trap; gas chromatograph/mass spectrometry	0.2
ORGANIC COMPOUNDS - SEMIVOLATILES, TOTAL (USGS O311688)				
82626	1,2-Diphenylhydrazine	µg/L	Gas chromatograph/mass spectrometry	5
34621	2,4,6-Trichlorophenol	µg/L	Gas chromatograph/mass spectrometry	20
34601	2,4-Dichlorophenol	µg/L	Gas chromatograph/mass spectrometry	5
34606	2,4-Dimethylphenol or Dichlorprop	µg/L	Gas chromatograph/mass spectrometry	5
34616	2,4-Dinitrophenol	µg/L	Gas chromatograph/mass spectrometry	20
34611	2,4-Dinitrotoluene	µg/L	Gas chromatograph/mass spectrometry	5
34626	2,6-Dinitrotoluene	µg/L	Gas chromatograph/mass spectrometry	5
34581	2-Chloronaphthalene	µg/L	Gas chromatograph/mass spectrometry	5
34586	2-Chlorophenol	µg/L	Gas chromatograph/mass spectrometry	5
34591	2-Nitrophenol	µg/L	Gas chromatograph/mass spectrometry	5
34631	3,3'-Dichlorobenzidine	µg/L	Gas chromatograph/mass spectrometry	20
34657	4,6-Dinitro-2-methylphenol	µg/L	Gas chromatograph/mass spectrometry	30
34636	4-Bromophenyl phenyl ether	µg/L	Gas chromatograph/mass spectrometry	5
34452	4-Chloro-3-methylphenol	µg/L	Gas chromatograph/mass spectrometry	30
34641	4-Chlorophenyl phenyl ether	µg/L	Gas chromatograph/mass spectrometry	5
34646	4-Nitrophenol	µg/L	Gas chromatograph/mass spectrometry	30
34205	Acenaphthene	µg/L	Gas chromatograph/mass spectrometry	5
34200	Acenaphthylene	µg/L	Gas chromatograph/mass spectrometry	5
34220	Anthracene	µg/L	Gas chromatograph/mass spectrometry	5
34526	Benzo[<i>a</i>]anthracene	µg/L	Gas chromatograph/mass spectrometry	10
39120	Ben-zidine	µg/L	Gas chromatograph/mass spectrometry	40
34247	Benzo[<i>a</i>]pyrene	µg/L	Gas chromatograph/mass spectrometry	10
34230	Benzo[<i>b</i>]fluoranthene	µg/L	Gas chromatograph/mass spectrometry	10
34521	Benzo[<i>g,h,i</i>]perylene	µg/L	Gas chromatograph/mass spectrometry	10
34242	Benzo[<i>k</i>]fluoranthene	µg/L	Gas chromatograph/mass spectrometry	10

Table 4. Analytical procedures and method detection limits for chemical constituents in water analyzed by the U.S. Geological Survey National Water-Quality Laboratory, May 1996 through September 1997—Continued

[µS/cm at 25 °C, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; USGS, U.S. Geological Survey; APHA, American Public Health Association; µg/L, micrograms per liter; HPLC, high pressure liquid chromatography; mL, milliliter; — not applicable; ICP, inductively coupled plasma; AA, atomic absorption spectrometry; ASF, automated segmented flow]

Parameter code	Chemical constituent	Reporting unit	Analytical method	Minimum reporting level
ORGANIC COMPOUNDS - SEMIVOLATILES , TOTAL (USGS 0311688) (Continued)				
34283	bis(2-Chloroisopropyl) ether	µg/L	Gas chromatograph/mass spectrometry	5
34278	bis(2-Chloroethoxy)methane	µg/L	Gas chromatograph/mass spectrometry	5
34273	bis(2-Chloroethyl) ether	µg/L	Gas chromatograph/mass spectrometry	5
39100	bis(2-Ethylhexyl) phthalate	µg/L	Gas chromatograph/mass spectrometry	5
34292	Butylbenzyl phthalate	µg/L	Gas chromatograph/mass spectrometry	5
34320	Chrysene	µg/L	Gas chromatograph/mass spectrometry	10
34556	Dibenz(a,h)anthracene	µg/L	Gas chromatograph/mass spectrometry	10
34336	Diethyl phthalate	µg/L	Gas chromatograph/mass spectrometry	5
34341	Dimethyl phthalate	µg/L	Gas chromatograph/mass spectrometry	5
39110	Di-n-butyl phthalate	µg/L	Gas chromatograph/mass spectrometry	5
34596	Di-n-octyl phthalate	µg/L	Gas chromatograph/mass spectrometry	10
34376	Fluoranthene	µg/L	Gas chromatograph/mass spectrometry	5
34381	Fluorene	µg/L	Gas chromatograph/mass spectrometry	5
39700	Hexachlorobenzene	µg/L	Gas chromatograph/mass spectrometry	5
34386	Hexachlorocyclopentadiene	µg/L	Gas chromatograph/mass spectrometry	5
34396	Hexachloroethane	µg/L	Gas chromatograph/mass spectrometry	5
34403	Indeno[1,2,3-cd]pyrene	µg/L	Gas chromatograph/mass spectrometry	10
34408	Isophorone	µg/L	Gas chromatograph/mass spectrometry	5
34696	Naphthalene	µg/L	Gas chromatograph/mass spectrometry	5
34447	Nitrobenzene	µg/L	Gas chromatograph/mass spectrometry	5
34438	N-Nitrosodimethylamine	µg/L	Gas chromatograph/mass spectrometry	5
34428	N-Nitrosodi-n-propylamine	µg/L	Gas chromatograph/mass spectrometry	5
34433	N-Nitrosodiphenylamine	µg/L	Gas chromatograph/mass spectrometry	5
39032	Pentachlorophenol	µg/L	Gas chromatograph/mass spectrometry	30
34461	Phenanthrene	µg/L	Gas chromatograph/mass spectrometry	5
34694	Phenol	µg/L	Gas chromatograph/mass spectrometry	5
34469	Pyrene	µg/L	Gas chromatograph/mass spectrometry	5

Table 4. Analytical procedures and method detection limits for chemical constituents in water analyzed by the U.S. Geological Survey National Water-Quality Laboratory, May 1996 through September 1997—Continued

[µS/cm at 25 °C, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; USGS, U.S. Geological Survey; APHA, American Public Health Association; µg/L, micrograms per liter; HPLC, high pressure liquid chromatography; mL, milliliter; — not applicable; ICP, inductively coupled plasma; AA, atomic absorption spectrometry; ASF, automated segmented flow]

Parameter code	Chemical constituent	Reporting unit	Analytical method	Minimum reporting level
ORGANIC COMPOUNDS - PESTICIDES, DISSOLVED (USGS O112695, O113195)				
82660	2,6-Diethylamine	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.003
49260	Acetochlor	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.002
46342	Alachlor	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.002
34253	alpha-BHC	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.002
39632	Atrazine	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.001
82686	Azinphos-methyl	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.001
82673	Benfluralin	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.002
04028	Butylate	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.002
82680	Carbaryl	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.003
82674	Carbofuran	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.003
38933	Chlorpyrifos	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.004
82687	cis-Permethrin	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.005
04041	Cyanazine	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.004
82682	Dacthal	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.002
04040	Deethyl atrazine	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.002
39572	Diazinon	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.002
39381	Dieldrin	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.001
82677	Disulfoton	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.017
82668	EPTC	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.002
82663	Ethalfuralin	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.004
82672	Ethoprophos	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.003
04095	Fonofos	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.003
39341	Lindane	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.004
39532	Malathion	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.005
39415	Metolachlor	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.002
82630	Metribuzin	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.004
82671	Molinate	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.004

Table 4. Analytical procedures and method detection limits for chemical constituents in water analyzed by the U.S. Geological Survey National Water-Quality Laboratory, May 1996 through September 1997—Continued

[µS/cm at 25 °C, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; USGS, U.S. Geological Survey; APHA, American Public Health Association; µg/L, micrograms per liter; HPLC, high pressure liquid chromatography; mL, milliliter; — not applicable; ICP, inductively coupled plasma; AA, atomic absorption spectrometry; ASF, automated segmented flow]

Parameter code	Chemical constituent	Reporting unit	Analytical method	Minimum reporting level
ORGANIC COMPOUNDS - PESTICIDES, DISSOLVED (USGS 0112695, 0113195) (Continued)				
82684	Napropamide	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.003
39542	Parathion	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.004
82667	Parathion-methyl	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.006
82669	Pebulate	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.004
82683	Pendimethalin	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.004
82664	Phorate	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.002
34653	<i>p,p'</i> -DDE	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.006
04037	Prometon	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.018
04024	Propachlor	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.007
82679	Propanil	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.004
82685	Propargite	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.013
82676	Pronamide	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.003
04035	Simazine	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.005
82670	Tebuthiuron	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.01
82665	Terbacil	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.007
82675	Terbufos	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.013
82681	Thiobencarb	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.002
82678	Tri-allate	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.001
82661	Trifluralin	µg/L	Solid phase extraction, gas chromatograph/mass spectrometry	0.002
39762	Silvex	µg/L	Solid phase extraction, HPLC	0.021
39742	2,4,5-T	µg/L	Solid phase extraction, HPLC	0.035
39732	2,4-D	µg/L	Solid phase extraction, HPLC	0.035
38746	2,4-DB	µg/L	Solid phase extraction, HPLC	0.035
49308	3-Hydroxycarbofuran	µg/L	Solid phase extraction, HPLC	0.014
49299	4,6-Dinitro-2-methylphenol	µg/L	Solid phase extraction, HPLC	0.035
49315	Acifluorfen	µg/L	Solid phase extraction, HPLC	0.035
49312	Aldicarb	µg/L	Solid phase extraction, HPLC	0.016

Table 4. Analytical procedures and method detection limits for chemical constituents in water analyzed by the U.S. Geological Survey National Water-Quality Laboratory, May 1996 through September 1997—Continued

[µS/cm at 25 °C, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; USGS, U.S. Geological Survey; APHA, American Public Health Association; µg/L, micrograms per liter; HPLC, high pressure liquid chromatography; mL, milliliter; — not applicable; ICP, inductively coupled plasma; AA, atomic absorption spectrometry; ASF, automated segmented flow]

Parameter code	Chemical constituent	Reporting unit	Analytical method	Minimum reporting level
ORGANIC COMPOUNDS - PESTICIDES, DISSOLVED (USGS O112695, O113195) (Continued)				
49313	Aldicarb sulfone	µg/L	Solid phase extraction, HPLC	0.016
49314	Aldicarb sulfoxide	µg/L	Solid phase extraction, HPLC	0.021
38711	Bentazon	µg/L	Solid phase extraction, HPLC	0.014
04029	Bromacil	µg/L	Solid phase extraction, HPLC	0.035
49311	Bromoxynil	µg/L	Solid phase extraction, HPLC	0.035
49309	Carbofuran	µg/L	Solid phase extraction, HPLC	0.028
49307	Chloramben	µg/L	Solid phase extraction, HPLC	0.011
49306	Chlorothalonil	µg/L	Solid phase extraction, HPLC	0.035
49305	Clopyralid	µg/L	Solid phase extraction, HPLC	0.05
49304	Dacthal monoacid	µg/L	Solid phase extraction, HPLC	0.017
38442	Dicamba	µg/L	Solid phase extraction, HPLC	0.035
49303	Dichlobenil	µg/L	Solid phase extraction, HPLC	0.02
49302	Dichlorprop	µg/L	Solid phase extraction, HPLC	0.032
49301	Dinoseb	µg/L	Solid phase extraction, HPLC	0.035
49300	Diuron	µg/L	Solid phase extraction, HPLC	0.02
49297	Fenuron	µg/L	Solid phase extraction, HPLC	0.013
38811	Fluometuron	µg/L	Solid phase extraction, HPLC	0.035
38478	Linuron	µg/L	Solid phase extraction, HPLC	0.018
38482	MCPA	µg/L	Solid phase extraction, HPLC	0.05
38487	MCPB	µg/L	Solid phase extraction, HPLC	0.035
38501	Methiocarb	µg/L	Solid phase extraction, HPLC	0.026
49296	Methomyl	µg/L	Solid phase extraction, HPLC	0.017
49294	Neburon	µg/L	Solid phase extraction, HPLC	0.015
49293	Norflurazon	µg/L	Solid phase extraction, HPLC	0.024
49292	Oryzalin	µg/L	Solid phase extraction, HPLC	0.019
38866	Oxamyl	µg/L	Solid phase extraction, HPLC	0.018
49291	Picloram	µg/L	Solid phase extraction, HPLC	0.05

Table 4. Analytical procedures and method detection limits for chemical constituents in water analyzed by the U.S. Geological Survey National Water-Quality Laboratory, May 1996 through September 1997—Continued

[$\mu\text{S}/\text{cm}$ at 25 °C, microsiemens per centimeter at 25 degrees Celsius; mg/L , milligrams per liter; USGS, U.S. Geological Survey; APHA, American Public Health Association; $\mu\text{g}/\text{L}$, micrograms per liter; HPLC, high pressure liquid chromatography; mL , milliliter; — not applicable; ICP, inductively coupled plasma; AA, atomic absorption spectrometry; ASF, automated segmented flow]

Parameter code	Chemical constituent	Reporting unit	Analytical method	Minimum reporting level
ORGANIC COMPOUNDS - PESTICIDES, DISSOLVED (USGS O112695, O113195) (Continued)				
49236	Propham	$\mu\text{g}/\text{L}$	Solid phase extraction, HPLC	0.035
38538	Propoxur	$\mu\text{g}/\text{L}$	Solid phase extraction, HPLC	0.035
49235	Triclopyr	$\mu\text{g}/\text{L}$	Solid phase extraction, HPLC	0.05

Table 5. Analytical procedures and method detection limits for chemical constituents in bottom material analyzed by the U.S. Geological Survey National Water-Quality Laboratory, August 1997

[mg/kg, milligrams per kilogram; ASF, automated segmented flow; USGS, U.S. Geological Survey; µg/g, micrograms per gram; AA, atomic absorption spectrometry; µg/kg, micrograms per kilogram; g/kg, grams per kilogram]

Parameter code	Chemical constituent	Reporting unit	Analytical method	Minimum reporting level
NUTRIENTS				
00611	Nitrogen, ammonia	mg/kg	Colorimetry, ASF, salicylate hypochlorite (USGS I652290)	0.2
00633	Nitrogen, nitrite + nitrate	mg/kg	Colorimetry, ASF, cadmium reduction diazotization (USGS I654590)	2
00626	Nitrogen, ammonia + organic	mg/kg	Colorimetry, kjeldahl digestion(USGS I555391)	20
00668	Phosphorus	mg/kg	Colorimetry, ASF, phosphomolybdate (USGS I660088)	40
00495	Moisture content, fraction of dry weight	percent	Unspecified (USGS P059085)	0.1
METALS AND TRACE METALS				
01003	Arsenic	µg/g	AA, hydride generation (USGS I606285)	1
01028	Cadmium	µg/g	AA, flame (USGS I513585)	1
01029	Chromium	µg/g	AA, flame (USGS I523685)	1
01038	Cobalt	µg/g	AA, flame (USGS I523985)	5
01043	Copper	µg/g	AA, flame (USGS I527085)	1
01170	Iron	µg/g	AA, flame (USGS I538185)	1
01052	Lead	µg/g	AA, flame (USGS I539985)	10
01053	Manganese	µg/g	AA, flame (USGS I545485)	1
71921	Mercury	µg/g	AA, manual cold vapor (USGS I546285)	0.01
01148	Selenium	µg/g	AA, hydride generation, ASF (USGS I666785)	1
01093	Zinc	µg/g	AA, flame (USGS I590085)	1
ORGANIC COMPOUNDS (USGS OPEN-FILE REPORT 95-719)				
49438	1,2,4-Trichlorobenzene	µg/kg	Gas chromatograph/mass spectrometry	50
49439	1,2-Dichlorobenzene	µg/kg	Gas chromatograph/mass spectrometry	50
49403	1,2-Dimethylnaphthalene	µg/kg	Gas chromatograph/mass spectrometry	50
49441	1,3-Dichlorobenzene	µg/kg	Gas chromatograph/mass spectrometry	50
49442	1,4-Dichlorobenzene	µg/kg	Gas chromatograph/mass spectrometry	50
49404	1,6-Dimethylnaphthalene	µg/kg	Gas chromatograph/mass spectrometry	50

Table 5. Analytical procedures and method detection limits for chemical constituents in bottom material analyzed by the U.S. Geological Survey National Water-Quality Laboratory, August 1997—Continued

[mg/kg, milligrams per kilogram; ASF, automated segmented flow; USGS, U.S. Geological Survey; µg/g, micrograms per gram; AA, atomic absorption spectrometry; µg/kg, micrograms per kilogram; g/kg, grams per kilogram]

Parameter code	Chemical constituent	Reporting unit	Analytical method	Minimum reporting level
ORGANIC COMPOUNDS (USGS OPEN-FILE REPORT 95-719) (Continued)				
49398	1-Methyl-9H-fluorene	µg/kg	Gas chromatograph/mass spectrometry	50
49410	1-Methylphenanthrene	µg/kg	Gas chromatograph/mass spectrometry	50
49388	1-Methylpyrene	µg/kg	Gas chromatograph/mass spectrometry	50
49391	2,2'-Biquinoline	µg/kg	Gas chromatograph/mass spectrometry	50
49405	2,3,6-Trimethylnaphthalene	µg/kg	Gas chromatograph/mass spectrometry	50
49395	2,4-Dinitrotoluene	µg/kg	Gas chromatograph/mass spectrometry	50
49406	2,6-Dimethylnaphthalene	µg/kg	Gas chromatograph/mass spectrometry	50
49396	2,6-Dinitrotoluene	µg/kg	Gas chromatograph/mass spectrometry	50
49407	2-Chloronaphthalene	µg/kg	Gas chromatograph/mass spectrometry	50
49467	2-Chlorophenol	µg/kg	Gas chromatograph/mass spectrometry	50
49435	2-Methylantracene	µg/kg	Gas chromatograph/mass spectrometry	50
49421	3,5-Dimethylphenol	µg/kg	Gas chromatograph/mass spectrometry	50
49411	4,5-Methylenephenanthrene	µg/kg	Gas chromatograph/mass spectrometry	50
49454	4-Bromophenyl phenyl ether	µg/kg	Gas chromatograph/mass spectrometry	50
49422	4-Chloro-3-methylphenol	µg/kg	Gas chromatograph/mass spectrometry	50
49455	4-Chlorophenyl phenyl ether	µg/kg	Gas chromatograph/mass spectrometry	50
49429	Acenaphthene	µg/kg	Gas chromatograph/mass spectrometry	50
49428	Acenaphthylene	µg/kg	Gas chromatograph/mass spectrometry	50
49430	Acridine	µg/kg	Gas chromatograph/mass spectrometry	50
49319	Aldrin	µg/kg	Gas chromatograph/mass spectrometry	1
49332	Endosulfan sulfate	µg/kg	Gas chromatograph/mass spectrometry	1
49338	alpha-BHC	µg/kg	Gas chromatograph/mass spectrometry	1
49434	Anthracene	µg/kg	Gas chromatograph/mass spectrometry	50
49437	Anthraquinone	µg/kg	Gas chromatograph/mass spectrometry	50
49443	Azobenzene	µg/kg	Gas chromatograph/mass spectrometry	50
49436	Benzo[a]anthracene	µg/kg	Gas chromatograph/mass spectrometry	50
49389	Benzo[a]pyrene	µg/kg	Gas chromatograph/mass spectrometry	50

Table 5. Analytical procedures and method detection limits for chemical constituents in bottom material analyzed by the U.S. Geological Survey National Water-Quality Laboratory, August 1997—Continued

[mg/kg, milligrams per kilogram; ASF, automated segmented flow; USGS, U.S. Geological Survey; µg/g, micrograms per gram; AA, atomic absorption spectrometry; µg/kg, micrograms per kilogram; g/kg, grams per kilogram]

Parameter code	Chemical constituent	Reporting unit	Analytical method	Minimum reporting level
ORGANIC COMPOUNDS (USGS OPEN-FILE REPORT 95-719) (Continued)				
49458	Benzo[<i>b</i>]fluoranthene	µg/kg	Gas chromatograph/mass spectrometry	50
49468	Benzo[<i>c</i>]cinnoline	µg/kg	Gas chromatograph/mass spectrometry	50
49408	Benzo[<i>g,h,i</i>]perylene	µg/kg	Gas chromatograph/mass spectrometry	50
49397	Benzo[<i>k</i>]fluoranthene	µg/kg	Gas chromatograph/mass spectrometry	50
49339	beta-BHC	µg/kg	Gas chromatograph/mass spectrometry	1
49401	<i>bis</i> (2-Chloroethoxy)methane	µg/kg	Gas chromatograph/mass spectrometry	50
49426	<i>bis</i> (2-Ethylhexyl) phthalate	µg/kg	Gas chromatograph/mass spectrometry	50
49427	Butylbenzyl phthalate	µg/kg	Gas chromatograph/mass spectrometry	50
49424	C8-Alkylphenol	µg/kg	Gas chromatograph/mass spectrometry	50
49449	Carbazole	µg/kg	Gas chromatograph/mass spectrometry	50
49322	Chloroneb	µg/kg	Gas chromatograph/mass spectrometry	5
49450	Chrysene	µg/kg	Gas chromatograph/mass spectrometry	50
49320	<i>cis</i> -Chlordane	µg/kg	Gas chromatograph/mass spectrometry	1
49316	<i>cis</i> -Nonachlor	µg/kg	Gas chromatograph/mass spectrometry	1
49349	<i>cis</i> -Permethrin	µg/kg	Gas chromatograph/mass spectrometry	5
49324	Dacthal	µg/kg	Gas chromatograph/mass spectrometry	5
49461	Dibenzo[<i>a,h</i>]anthracene	µg/kg	Gas chromatograph/mass spectrometry	50
49452	Dibenzothiophene	µg/kg	Gas chromatograph/mass spectrometry	50
49331	Dieldrin	µg/kg	Gas chromatograph/mass spectrometry	1
49383	Diethyl phthalate	µg/kg	Gas chromatograph/mass spectrometry	50
49384	Dimethyl phthalate	µg/kg	Gas chromatograph/mass spectrometry	50
49381	Di- <i>n</i> -butyl phthalate	µg/kg	Gas chromatograph/mass spectrometry	50
49382	Di- <i>n</i> -octyl phthalate	µg/kg	Gas chromatograph/mass spectrometry	50
49335	Endrin	µg/kg	Gas chromatograph/mass spectrometry	2
49466	Fluoranthene	µg/kg	Gas chromatograph/mass spectrometry	50
49399	Fluorene	µg/kg	Gas chromatograph/mass spectrometry	50
49341	Heptachlor	µg/kg	Gas chromatograph/mass spectrometry	1

Table 5. Analytical procedures and method detection limits for chemical constituents in bottom material analyzed by the U.S. Geological Survey National Water-Quality Laboratory, August 1997—Continued

[mg/kg, milligrams per kilogram; ASF, automated segmented flow; USGS, U.S. Geological Survey; µg/g, micrograms per gram; AA, atomic absorption spectrometry; µg/kg, micrograms per kilogram; g/kg, grams per kilogram]

Parameter code	Chemical constituent	Reporting unit	Analytical method	Minimum reporting level
ORGANIC COMPOUNDS (USGS OPEN-FILE REPORT 95-719) (Continued)				
49342	Heptachlor epoxide	µg/kg	Gas chromatograph/mass spectrometry	1
49343	Hexachlorobenzene	µg/kg	Gas chromatograph/mass spectrometry	1
49390	Indeno[1,2,3- <i>cd</i>]pyrene	µg/kg	Gas chromatograph/mass spectrometry	50
49270	Inorganic carbon	g/kg	Gas chromatograph/mass spectrometry	0.1
49344	Isodrin	µg/kg	Gas chromatograph/mass spectrometry	1
49400	Isophorone	µg/kg	Gas chromatograph/mass spectrometry	50
49394	Isoquinoline	µg/kg	Gas chromatograph/mass spectrometry	50
49345	Lindane	µg/kg	Gas chromatograph/mass spectrometry	1
49348	Mirex	µg/kg	Gas chromatograph/mass spectrometry	1
49402	Naphthalene	µg/kg	Gas chromatograph/mass spectrometry	50
49444	Nitrobenzene	µg/kg	Gas chromatograph/mass spectrometry	50
49431	N-Nitroso-di- <i>n</i> -propylamine	µg/kg	Gas chromatograph/mass spectrometry	50
49433	N-Nitroso-diphenylamine	µg/kg	Gas chromatograph/mass spectrometry	50
49325	<i>o,p'</i> -DDD	µg/kg	Gas chromatograph/mass spectrometry	1
49327	<i>o,p'</i> -DDE	µg/kg	Gas chromatograph/mass spectrometry	1
49329	<i>o,p'</i> -DDT	µg/kg	Gas chromatograph/mass spectrometry	2
49347	<i>o,p'</i> -Methoxychlor	µg/kg	Gas chromatograph/mass spectrometry	5
49271	Organic carbon	g/kg	Gas chromatograph/mass spectrometry	0.1
49318	Oxychlorane	µg/kg	Gas chromatograph/mass spectrometry	1
49451	<i>p</i> -Cresol	µg/kg	Gas chromatograph/mass spectrometry	50
49460	Pentachloroanisole	µg/kg	Gas chromatograph/mass spectrometry	1
49446	Pentachloronitrobenzene	µg/kg	Gas chromatograph/mass spectrometry	50
49409	Phenanthrene	µg/kg	Gas chromatograph/mass spectrometry	50
49393	Phenanthridine	µg/kg	Gas chromatograph/mass spectrometry	50
49413	Phenol	µg/kg	Gas chromatograph/mass spectrometry	50
49459	Polychlorinated biphenyls	µg/kg	Gas chromatograph/mass spectrometry	50
49326	<i>p,p'</i> -DDD	µg/kg	Gas chromatograph/mass spectrometry	1

Table 5. Analytical procedures and method detection limits for chemical constituents in bottom material analyzed by the U.S. Geological Survey National Water-Quality Laboratory, August 1997—Continued

[mg/kg, milligrams per kilogram; ASF, automated segmented flow; USGS, U.S. Geological Survey; µg/g, micrograms per gram; AA, atomic absorption spectrometry; µg/kg, micrograms per kilogram; g/kg, grams per kilogram]

Parameter code	Chemical constituent	Reporting unit	Analytical method	Minimum reporting level
ORGANIC COMPOUNDS (USGS OPEN-FILE REPORT 95-719) (Continued)				
49328	<i>p,p'</i> -DDE	µg/kg	Gas chromatograph/mass spectrometry	1
49330	<i>p,p'</i> -DDT	µg/kg	Gas chromatograph/mass spectrometry	2
49346	<i>p,p'</i> -Methoxychlor	µg/kg	Gas chromatograph/mass spectrometry	5
49387	Pyrene	µg/kg	Gas chromatograph/mass spectrometry	50
49392	Quinoline	µg/kg	Gas chromatograph/mass spectrometry	50
49272	Total carbon	g/kg	Gas chromatograph/mass spectrometry	0.1
49351	Toxaphene	µg/kg	Gas chromatograph/mass spectrometry	200
49321	<i>trans</i> -Chlordane	µg/kg	Gas chromatograph/mass spectrometry	1
49317	<i>trans</i> -Nonachlor	µg/kg	Gas chromatograph/mass spectrometry	1
49350	<i>trans</i> -Permethrin	µg/kg	Gas chromatograph/mass spectrometry	5

Table 6. Monthly water-level summary statistics at Mountain Island Lake site 01, August 1994 through September 1997

[Water level, in feet above sea level. Site descriptions are listed in table 2. Site 01 is at latitude 35°25'39", longitude 80°57'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214264800. Mean, monthly mean; Maximum, highest instantaneous value recorded during month; Minimum, lowest instantaneous value recorded during month; Fluctuation, difference between maximum and minimum; ft, foot; —, missing or partial record (no statistics calculated)]

Period	Mean	Maximum	Minimum	Fluctuation (ft)
1994				
August	—	653.47	643.22	10.25
September	644.40	649.33	643.19	6.14
October	644.33	648.31	643.19	5.12
November	644.52	648.80	643.25	5.55
December	644.87	650.94	643.10	7.84
1995				
January	645.82	652.07	643.42	8.65
February	645.92	654.02	643.08	10.94
March	644.88	651.17	643.45	7.72
April	643.96	645.39	643.12	2.27
May	644.08	648.08	643.24	4.84
June	644.89	652.67	643.01	9.66
July	644.58	651.52	643.24	8.28
August	—	653.14	643.27	9.87
September	—	650.87	643.28	7.59
October	645.50	650.66	643.08	7.58
November	644.70	651.30	643.01	8.29
December	644.49	650.42	643.24	7.18
1996				
January	—	651.14	643.44	7.70
February	—	652.62	643.24	9.38
March	645.16	652.73	643.27	9.46
April	—	650.96	643.27	7.69
May	644.14	648.45	643.19	5.26
June	644.24	649.77	643.03	6.74
July	644.65	650.07	643.46	6.61
August	644.99	651.92	643.03	8.89
September	644.07	650.85	642.89	7.96
October	644.09	648.69	642.88	5.81
November	644.25	648.28	643.06	5.22
December	645.26	650.93	643.20	7.73
1997				
January	644.86	651.17	643.13	8.04
February	644.99	649.35	643.49	5.86
March	645.25	649.47	642.99	6.48
April	645.01	650.05	642.93	7.12
May	644.80	649.75	642.87	6.88
June	644.58	652.52	643.12	9.40
July	644.51	650.78	643.11	7.67
August	644.50	649.50	643.16	6.34
September	644.31	648.95	643.42	5.53
August 1994–September 1997	644.71	654.02	642.87	11.15

Table 7. Monthly water-level summary statistics at Mountain Island Lake site 05, August 1994 through September 1997

[Water level, in feet above sea level. Site descriptions are listed in table 2. Site 05 is at latitude 35°22'26", longitude 80°57'46"; Mecklenburg County, U.S. Geological Survey downstream order number 0214264950. Mean, monthly mean; Maximum, highest instantaneous value recorded during month; Minimum, lowest instantaneous value recorded during month; Fluctuation, difference between maximum and minimum; ft, foot; —, missing or partial record (no statistics calculated)]

Period	Mean	Maximum	Minimum	Fluctuation (ft)
1994				
August	645.56	650.42	643.78	6.64
September	644.62	646.43	643.72	2.71
October	644.67	645.86	643.85	2.01
November	644.76	645.91	643.87	2.04
December	644.82	646.53	643.68	2.85
1995				
January	645.25	648.01	643.77	4.24
February	645.37	647.89	643.55	4.34
March	644.87	646.25	644.07	2.18
April	644.47	645.21	643.87	1.34
May	644.57	646.24	644.01	2.23
June	644.85	646.93	643.68	3.25
July	644.77	646.78	643.68	3.10
August	645.13	647.00	643.89	3.11
September	—	646.27	643.79	2.48
October	645.10	647.33	643.54	3.79
November	644.71	646.51	643.68	2.83
December	644.70	646.57	643.79	2.78
1996				
January	—	646.64	643.96	2.68
February	—	647.15	643.64	3.51
March	644.95	647.02	643.91	3.11
April	644.80	646.20	643.77	2.43
May	644.65	645.92	643.89	2.03
June	644.64	646.41	643.81	2.60
July	645.11	646.33	644.12	2.21
August	645.04	647.50	643.87	3.63
September	644.47	646.41	643.56	2.85
October	644.48	645.87	643.68	2.19
November	644.57	645.77	643.78	1.99
December	645.06	646.45	643.87	2.58
1997				
January	644.76	646.45	643.64	2.81
February	645.20	646.61	644.14	2.47
March	645.14	646.62	643.59	3.03
April	644.94	647.19	643.62	3.57
May	644.86	646.83	643.45	3.38
June	644.79	646.57	643.58	2.99
July	644.78	646.90	643.72	3.18
August	644.92	646.51	643.81	2.70
September	644.83	646.27	644.18	2.09
August 1994–September 1997	644.86	650.42	643.45	6.97

Table 8. Monthly water-level summary statistics at Mountain Island Lake site 14, August 1994 through September 1997

[Water level, in feet above sea level. Site descriptions are listed in table 2. Site 14 is at latitude 35°21'01", longitude 80°58'21", Mecklenburg County, U.S. Geological Survey downstream order number 0214267200. Mean, monthly mean; Maximum, highest instantaneous value recorded during month; Minimum, lowest instantaneous value recorded during month; Fluctuation, difference between maximum and minimum; ft, foot; —, missing or partial record (no statistics calculated)]

Period	Mean	Maximum	Minimum	Fluctuation (ft)
1994				
August	644.81	649.49	643.09	6.40
September	643.90	645.65	643.16	2.49
October	643.95	645.09	643.19	1.90
November	644.04	645.19	643.23	1.96
December	644.07	645.86	643.08	2.78
1995				
January	644.45	647.21	642.99	4.22
February	644.56	647.10	642.85	4.25
March	644.12	645.45	643.40	2.05
April	643.78	644.50	643.20	1.30
May	643.87	645.52	643.32	2.20
June	644.11	646.15	643.01	3.14
July	644.04	646.03	643.08	2.95
August	644.43	646.29	643.25	3.04
September	644.30	645.92	643.11	2.81
October	644.37	646.65	642.77	3.88
November	644.03	645.80	643.03	2.77
December	644.03	645.96	643.10	2.86
1996				
January	644.26	645.98	643.17	2.81
February	644.39	646.56	642.94	3.62
March	644.25	646.28	643.17	3.11
April	644.10	645.49	643.21	2.28
May	643.93	645.08	643.22	1.86
June	643.91	645.70	643.13	2.57
July	644.39	645.67	643.43	2.24
August	644.28	646.66	643.08	3.58
September	643.74	645.55	642.83	2.72
October	643.76	645.05	643.01	2.04
November	643.85	645.09	643.06	2.03
December	644.29	645.73	643.07	2.66
1997				
January	643.99	645.78	642.84	2.94
February	644.46	645.85	643.26	2.59
March	644.37	645.93	642.82	3.11
April	644.19	646.39	642.98	3.41
May	644.11	646.22	642.80	3.42
June	644.06	645.80	642.88	2.92
July	644.06	646.23	643.12	3.11
August	644.20	645.74	643.17	2.57
September	644.11	645.56	643.45	2.11
August 1994–September 1997	644.15	649.49	642.77	6.72

Table 9. Monthly water-level summary statistics at Catawba River site 17, August 1994 through September 1997

[Water level, in feet above sea level. Site descriptions are listed in table 2. Site 17 is at latitude 35°17'46", longitude 81°00'28", Gaston County, U.S. Geological Survey downstream order number 02142808. Mean, monthly mean; Maximum, highest instantaneous value recorded during month; Minimum, lowest instantaneous value recorded during month; Fluctuation, difference between maximum and minimum; ft, foot; —, missing or partial record (no statistics calculated)]

Period	Mean	Maximum	Minimum	Fluctuation (ft)
1994				
August	567.67	570.72	565.90	4.82
September	566.66	568.03	565.98	2.05
October	566.40	567.34	565.65	1.69
November	566.50	567.64	565.50	2.14
December	566.73	567.53	565.92	1.61
1995				
January	—	568.83	565.90	2.93
February	—	—	—	—
March	—	—	—	—
April	—	566.71	565.57	1.14
May	566.57	567.40	565.88	1.52
June	566.65	567.74	565.62	2.12
July	566.64	567.71	565.85	1.86
August	566.94	569.02	565.55	3.47
September	566.64	567.55	565.76	1.79
October	567.00	568.41	565.95	2.46
November	—	—	—	—
December	—	567.72	565.90	1.82
1996				
January	567.11	569.06	565.78	3.28
February	567.57	569.97	565.83	4.14
March	567.18	568.92	565.82	3.10
April	566.65	568.06	565.69	2.37
May	566.67	567.51	566.04	1.47
June	566.88	567.91	565.85	2.06
July	566.55	567.43	565.88	1.55
August	566.71	567.60	565.92	1.68
September	566.56	567.49	565.91	1.58
October	566.45	567.48	565.53	1.95
November	566.58	567.81	565.83	1.98
December	567.00	568.59	565.41	3.18
1997				
January	566.79	568.60	565.61	2.99
February	567.11	569.56	566.06	3.50
March	567.39	569.36	565.97	3.39
April	567.00	569.52	565.89	3.63
May	—	569.52	566.19	3.33
June	566.90	568.21	566.05	2.16
July	566.98	569.15	565.60	3.55
August	566.64	567.63	565.91	1.72
September	566.46	567.15	565.94	1.21
August 1994–September 1997	566.82	570.72	565.41	5.31

Table 10. Daily mean values of water temperature at Mountain Island Lake site 01, April 1996 through September 1997

CATAWBA RIVER AT NC 73 NEAR HICKS CROSSROADS, NC (MTN01)

[Site 01 is at latitude 35°25'39", longitude 80°57'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214264800. ---, missing data or no day in month; MEAN, monthly mean; MAX, highest instantaneous value recorded during month; MIN, lowest instantaneous value recorded during month]

DAILY MEAN VALUES OF WATER TEMPERATURE (in degrees Celsius)

Day	1996												1997											
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.						
1	---	15.0	22.7	26.8	27.4	28.4	23.8	19.5	13.7	11.5	8.8	10.1	14.3	15.2	20.8	24.5	28.6	28.4						
2	---	15.6	21.8	27.7	27.5	28.0	23.9	19.1	13.8	10.5	9.9	10.2	14.6	16.2	20.0	24.9	28.1	28.2						
3	---	15.9	21.8	28.4	27.8	27.8	24.1	18.2	13.6	10.5	10.6	9.6	14.4	15.7	21.8	25.2	27.8	28.4						
4	---	15.1	22.1	27.3	28.2	27.9	24.1	18.6	13.5	10.9	11.9	10.5	14.6	16.3	21.7	25.3	27.6	27.9						
5	---	16.3	22.0	27.5	28.5	28.3	23.6	18.4	13.6	10.2	11.7	10.8	14.1	16.7	22.2	25.5	27.6	27.6						
6	---	16.6	22.5	27.6	28.3	27.7	23.3	18.4	13.2	10.4	11.4	10.7	13.9	16.2	22.0	26.2	28.1	27.1						
7	---	18.2	22.5	27.0	28.5	27.0	22.9	18.4	12.8	12.4	10.3	11.3	14.2	17.0	22.0	26.2	28.4	26.8						
8	---	18.3	22.9	26.6	28.5	27.1	22.5	18.3	12.6	12.7	11.8	11.3	15.3	16.9	21.7	26.1	28.2	26.8						
9	---	18.1	22.1	26.8	28.3	26.9	21.4	17.4	12.8	12.5	11.9	11.6	15.6	16.5	21.4	26.0	27.7	26.5						
10	---	18.1	22.6	27.8	28.3	26.9	21.1	17.1	12.5	10.4	9.7	11.7	16.1	17.6	21.4	26.2	27.5	26.4						
11	---	17.5	22.7	28.1	28.3	27.1	21.7	17.0	12.0	9.7	9.8	12.5	14.9	17.6	20.7	27.8	27.6	26.3						
12	---	16.7	22.8	28.0	28.0	27.5	21.3	16.5	11.9	10.5	10.4	13.4	14.5	16.5	20.4	27.1	27.8	26.5						
13	---	19.6	23.2	27.9	28.4	27.3	20.8	16.1	12.8	10.6	11.6	13.5	14.8	17.4	19.7	26.6	27.2	26.7						
14	---	19.8	23.7	27.0	28.7	26.6	20.5	16.0	13.9	10.6	11.5	12.4	15.6	17.2	20.0	27.3	27.6	26.8						
15	---	19.6	23.7	26.2	28.2	26.2	20.9	16.2	13.6	10.1	10.3	12.8	15.6	16.9	21.7	27.0	28.3	27.1						
16	---	19.2	24.0	---	27.9	25.8	20.5	16.1	13.0	9.7	9.9	13.1	15.3	18.1	21.5	26.9	28.3	27.3						
17	---	19.2	24.5	---	27.9	25.9	20.3	15.9	12.5	9.5	9.5	12.3	15.4	18.5	20.4	26.9	28.0	26.9						
18	13.7	19.5	24.0	---	28.2	25.8	20.0	15.1	11.7	9.0	9.5	12.0	15.6	18.3	19.7	27.3	28.3	26.6						
19	12.8	19.7	24.2	---	28.5	25.7	19.9	14.8	11.2	8.8	9.3	12.9	15.5	17.7	21.0	27.5	28.7	26.8						
20	12.2	19.8	24.6	---	28.7	25.6	19.8	15.2	11.1	8.6	9.3	13.1	15.7	18.6	22.5	28.1	28.4	26.7						
21	12.5	20.0	25.7	---	28.4	25.1	20.2	15.6	11.3	8.7	9.5	12.7	15.5	20.0	22.6	28.2	28.3	26.4						
22	12.8	21.6	25.9	---	28.4	24.9	20.0	16.2	10.9	8.8	9.1	12.7	16.6	20.2	22.4	27.0	28.5	26.2						
23	12.5	22.8	25.4	---	28.3	24.8	19.4	15.1	10.5	8.6	9.5	13.8	17.2	21.0	24.3	26.4	28.3	26.0						
24	13.1	21.2	25.6	---	28.3	24.5	19.1	14.3	10.3	10.3	9.5	14.3	16.3	21.1	24.5	26.9	28.2	25.3						
25	13.6	20.9	26.7	28.1	28.7	24.9	19.6	14.5	11.0	10.6	9.6	13.7	16.0	20.1	23.2	27.4	28.0	24.4						
26	12.7	21.4	27.5	27.4	28.6	25.2	19.8	14.4	11.4	9.3	9.4	13.4	16.3	19.3	22.7	27.6	27.9	24.8						
27	13.6	21.0	27.6	28.5	28.4	24.6	20.6	14.8	11.3	9.5	9.3	14.0	16.5	21.2	23.3	27.5	27.9	24.9						
28	15.7	20.4	26.8	28.4	28.4	24.1	20.3	14.2	10.7	9.6	9.2	13.8	16.6	22.2	24.6	27.5	27.9	25.0						
29	14.7	21.3	26.4	28.1	28.4	24.1	19.9	13.8	10.3	10.4	---	13.3	16.1	21.9	24.9	27.8	28.1	24.6						
30	13.9	22.6	26.2	27.9	28.3	24.1	19.8	13.8	10.8	10.5	---	13.7	16.2	21.6	24.6	28.7	27.8	23.7						
31	---	23.6	---	27.4	28.7	---	19.2	---	10.7	9.5	---	14.2	---	21.6	---	28.3	---	---						
MEAN	---	19.2	24.1	---	28.3	26.2	21.1	16.3	12.1	10.2	10.2	12.4	15.4	18.4	22.0	26.8	28.0	26.4						
MAX	17.2	24.5	28.8	29.5	29.6	29.8	25.0	19.7	14.5	13.9	14.1	15.5	17.8	23.0	25.9	29.8	29.6	29.5						
MIN	11.2	12.7	19.8	25.1	27.0	22.8	18.2	13.1	9.5	8.1	7.8	8.5	13.2	14.7	18.3	22.3	26.6	23.1						

Table 11. Daily mean values of dissolved-oxygen concentration at Mountain Island Lake site 01, April 1996 through September 1997

CATAWBA RIVER AT NC 73 NEAR HICKS CROSSROADS, NC (MTN01)

[Site 01 is at latitude 35°25'39", longitude 80°57'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214264800. ---, missing data or no day in month; MEAN, monthly mean; MAX, highest instantaneous value recorded during month; MIN, lowest instantaneous value recorded during month]

DAILY MEAN VALUES OF DISSOLVED-OXYGEN CONCENTRATION (in milligrams per liter)

Day	1996												1997					
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	---	8.3	7.3	---	4.9	5.5	6.6	7.4	9.0	---	10.2	9.8	8.9	7.8	7.2	6.5	5.9	5.5
2	---	8.2	7.0	---	4.7	5.1	6.3	7.8	9.0	---	10.2	9.7	8.9	8.1	6.8	6.3	5.6	4.8
3	---	8.2	6.7	---	4.5	4.8	6.2	8.1	9.0	---	10.2	9.6	8.8	7.8	7.3	6.3	5.5	5.3
4	---	7.8	6.8	---	5.3	4.9	6.7	7.7	9.2	---	10.1	9.5	8.8	8.2	7.6	6.3	5.5	6.2
5	---	8.1	6.8	---	5.4	5.4	7.1	7.6	9.1	---	10.0	9.6	8.7	8.3	7.8	6.1	5.6	6.0
6	---	8.1	6.7	---	5.2	6.0	7.3	7.7	9.1	---	10.0	9.7	8.6	8.0	7.6	6.1	5.8	5.4
7	---	8.3	6.7	---	5.0	5.1	7.1	8.5	9.0	---	10.1	9.7	8.6	8.1	7.7	6.1	5.6	5.1
8	---	8.3	6.6	---	4.8	4.6	7.1	8.7	9.3	---	10.0	9.6	8.8	8.2	7.6	6.0	5.6	5.2
9	---	8.0	6.3	---	5.1	4.6	7.0	8.1	9.3	---	9.9	9.7	8.9	7.8	7.5	6.0	5.2	5.7
10	---	8.0	6.1	---	4.8	4.7	7.2	8.1	9.2	---	10.1	9.6	8.9	8.4	7.4	5.8	4.8	5.6
11	---	7.9	5.9	---	4.6	5.0	7.3	8.1	9.4	---	10.0	9.6	8.6	8.3	7.2	6.2	4.7	5.4
12	---	7.8	5.8	---	4.7	5.5	7.2	8.4	9.4	---	10.0	9.6	8.4	7.7	7.2	6.0	5.0	5.4
13	---	8.3	5.9	---	5.1	5.8	7.1	8.5	9.6	---	10.0	9.7	8.4	7.6	7.0	5.8	4.6	5.4
14	---	8.3	6.3	---	5.2	5.7	7.3	8.6	9.6	---	9.9	9.6	8.7	7.5	7.0	5.7	4.5	5.3
15	---	8.2	6.5	---	5.2	5.4	7.4	9.0	9.6	---	10.1	9.6	8.6	7.4	7.4	5.7	5.0	5.7
16	---	8.0	6.7	---	5.0	4.8	7.2	9.2	9.5	---	10.2	9.7	8.4	7.9	7.2	5.6	5.0	5.7
17	---	7.7	6.9	---	5.0	5.2	7.2	9.2	---	---	10.0	9.5	8.5	8.0	6.8	5.6	4.8	5.8
18	8.7	7.7	6.9	---	5.1	5.9	7.3	9.1	---	---	10.0	9.4	8.7	8.0	6.5	5.6	4.7	5.7
19	8.5	7.7	6.8	---	5.0	5.3	7.8	9.1	---	---	10.0	9.5	8.6	7.6	6.7	5.7	5.2	5.5
20	8.3	7.8	7.0	---	4.9	5.2	7.7	9.4	---	---	10.0	9.6	8.5	7.8	6.9	5.7	5.0	5.7
21	8.3	7.7	7.1	---	5.1	5.0	7.7	9.0	---	---	10.2	9.5	8.5	8.1	7.0	5.7	4.7	6.0
22	8.3	7.7	6.9	---	5.2	5.0	7.6	8.8	---	---	10.2	9.1	8.6	8.0	6.9	5.1	5.3	6.0
23	8.2	7.5	6.6	---	4.9	5.2	7.4	8.7	---	---	10.1	9.2	8.6	8.0	7.0	4.9	5.8	5.6
24	8.3	7.3	6.5	---	5.0	5.2	7.5	8.7	---	---	10.2	9.1	8.5	8.0	6.8	4.7	5.7	6.0
25	8.3	7.3	6.7	6.0	5.2	4.9	7.6	8.7	---	---	10.1	9.0	8.5	7.7	6.5	4.9	5.7	6.2
26	8.1	7.2	7.1	5.8	5.2	5.1	7.5	8.9	---	---	10.0	8.9	8.4	7.2	6.5	4.6	5.7	5.5
27	8.2	7.1	7.2	6.0	5.1	5.2	7.5	9.0	---	---	9.7	9.0	8.5	7.6	6.6	4.6	6.1	5.8
28	8.4	7.2	---	5.7	4.9	5.4	7.4	9.0	---	---	9.7	8.8	8.4	7.7	6.8	4.8	6.5	6.2
29	8.3	7.2	---	5.6	4.8	5.9	7.1	9.0	---	---	---	8.7	8.1	7.7	6.8	4.9	5.3	6.1
30	8.0	7.3	---	5.3	4.9	6.2	7.1	8.9	---	10.2	---	8.7	8.3	7.6	6.6	5.3	5.5	6.0
31	---	7.5	---	5.0	5.1	---	7.2	---	---	10.2	---	8.8	---	7.4	---	5.9	5.6	---
MEAN	---	7.8	---	---	5.0	5.3	7.2	8.6	---	---	10.0	9.4	8.6	7.9	7.1	5.6	5.3	5.7
MAX	8.9	8.9	7.9	6.6	6.2	7.8	8.2	10.4	10.5	10.7	11.3	10.2	10.0	8.8	8.3	7.4	8.4	6.8
MIN	7.7	6.8	5.2	4.1	3.4	4.0	5.8	6.9	8.6	9.5	9.2	8.2	7.3	6.6	5.9	3.5	3.2	4.2

Table 12. Daily mean values of specific conductance at Mountain Island Lake site 01, April 1996 through September 1997

CATAWBA RIVER AT NC 73 NEAR HICKS CROSSROADS, NC (MTN01)

[Site 01 is at latitude 35°25'39", longitude 80°57'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214264800. ---, missing data or no day in month; MEAN, monthly mean; MAX, highest instantaneous value recorded during month; MIN, lowest instantaneous value recorded during month]

DAILY MEAN VALUES OF SPECIFIC CONDUCTANCE (in microsiemens per centimeter at 25 degrees Celsius)

Day	1996												1997					
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	---	53	55	55	58	58	59	59	56	58	57	55	56	55	57	55	53	51
2	---	53	55	55	58	59	59	59	56	58	57	55	56	55	56	55	53	53
3	---	53	54	56	59	59	59	59	56	58	57	55	56	55	56	55	52	53
4	---	53	54	55	58	59	59	59	57	58	57	55	56	55	55	55	50	53
5	---	53	54	55	58	59	59	59	57	58	57	56	56	55	55	54	51	51
6	---	53	55	56	59	58	59	59	57	58	57	55	56	55	55	54	51	51
7	---	54	55	56	59	59	59	59	58	58	57	55	56	55	55	54	52	52
8	---	54	56	56	59	59	58	59	57	57	57	55	56	55	55	54	52	52
9	---	54	55	57	59	59	58	59	57	57	57	55	56	55	55	54	52	53
10	---	54	55	57	59	59	58	58	57	57	56	57	56	55	55	54	52	53
11	---	54	56	57	60	60	58	58	57	57	57	56	56	55	55	55	52	52
12	---	54	57	58	60	60	58	58	57	57	57	56	56	55	55	54	53	53
13	---	54	54	55	61	60	58	58	58	57	57	56	56	55	54	54	53	53
14	---	54	55	57	61	60	58	58	58	58	57	56	56	55	55	54	53	54
15	---	54	54	57	61	60	58	58	58	58	57	56	56	55	55	54	53	54
16	---	54	54	54	61	60	60	60	58	57	57	56	56	56	55	54	53	54
17	---	54	54	54	61	60	57	58	58	57	57	56	56	56	55	54	54	54
18	54	54	54	---	62	60	57	58	58	57	57	56	56	56	54	54	55	54
19	54	54	54	---	62	60	57	58	58	57	56	56	56	56	55	54	55	54
20	54	54	52	---	63	60	57	58	58	57	57	56	56	56	55	54	55	54
21	54	54	53	---	61	60	57	56	58	58	56	57	56	56	55	54	56	54
22	54	54	54	---	58	60	57	56	58	57	56	56	56	56	55	54	57	54
23	54	54	54	---	58	60	57	56	58	57	56	56	56	56	55	53	56	54
24	53	54	54	---	58	60	57	57	58	57	56	56	56	57	55	54	56	54
25	53	54	54	57	58	60	56	57	58	57	56	56	56	56	55	54	56	55
26	53	54	54	57	58	60	56	57	58	57	56	56	56	56	56	53	56	55
27	53	54	54	57	58	60	57	57	58	57	55	56	56	56	54	53	56	54
28	54	55	54	58	58	60	57	57	58	57	55	56	56	56	55	52	51	55
29	54	55	55	58	58	60	57	57	58	57	---	56	53	57	55	52	51	55
30	54	55	55	58	59	59	57	57	58	57	---	56	55	57	55	52	51	55
31	---	55	---	58	59	---	58	---	58	57	---	56	---	57	---	52	51	---
MEAN	---	54	54	---	59	60	58	58	58	57	57	56	56	56	55	54	53	53
MAX	59	56	60	63	73	61	72	66	61	66	61	59	59	62	60	58	66	62
MIN	53	53	50	54	57	58	56	55	56	55	55	55	47	54	54	51	50	51

Table 13. Daily mean values of near-surface water temperature at Mountain Island Lake site 14, April 1996 through September 1997

CATAWBA RIVER AT NC 16 NEAR SHUFFLETOWN, NC (MTN14)

[Site 14 is at latitude 35°21'01", longitude 80°58'21", Mecklenburg County, U.S. Geological Survey downstream order number 0214267200. ---, missing data or no day in month; MEAN, monthly mean; MAX, highest instantaneous value recorded during month; MIN, lowest instantaneous value recorded during month]

DAILY MEAN VALUES OF WATER TEMPERATURE, NEAR SURFACE (in degrees Celsius)

Day	1996												1997											
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.						
1	---	18.8	26.0	32.1	30.6	28.4	24.5	22.9	16.0	12.1	11.3	11.4	14.9	20.2	23.1	28.8	29.4	29.4						
2	---	19.2	25.9	32.5	30.3	28.2	24.0	21.6	15.1	11.5	10.6	12.0	14.6	19.6	23.1	28.1	29.5	29.6						
3	---	19.9	25.8	31.8	30.5	27.7	24.4	20.8	14.6	11.6	10.3	12.4	15.4	19.8	22.5	29.5	29.8	30.3						
4	---	20.3	25.6	30.8	30.6	27.6	24.4	20.5	14.8	12.1	10.3	12.6	15.7	18.6	21.6	29.9	30.7	28.8						
5	---	21.6	25.4	30.0	30.6	28.2	23.7	20.0	13.6	12.3	10.1	12.2	16.3	18.8	21.6	29.9	30.6	28.6						
6	---	22.3	25.9	30.3	30.9	27.6	23.0	20.1	14.3	12.4	10.2	12.3	16.7	19.3	21.3	30.0	30.0	28.4						
7	---	21.7	27.1	30.9	31.6	27.9	22.6	21.2	14.1	12.4	10.8	12.0	16.3	19.1	20.7	30.2	29.5	28.2						
8	---	22.0	27.3	31.0	31.7	29.4	22.3	21.0	14.0	12.4	11.0	12.1	15.6	20.3	20.7	30.7	29.2	28.8						
9	---	23.3	26.8	31.0	31.3	30.3	22.6	20.5	13.3	12.3	10.6	12.3	16.0	19.8	20.6	30.9	29.1	29.0						
10	---	24.2	27.2	30.5	31.7	31.0	22.1	19.6	12.9	11.8	10.2	12.6	16.4	20.1	21.2	30.5	28.7	29.0						
11	14.1	24.2	27.5	30.1	31.3	30.0	21.9	19.0	13.6	11.8	10.2	13.0	18.2	20.6	22.2	30.3	28.9	28.8						
12	15.1	22.9	27.9	28.9	30.7	29.4	21.5	18.4	13.8	12.4	10.0	13.2	17.8	21.1	23.1	30.8	30.2	28.8						
13	14.7	22.5	28.1	28.8	30.1	28.9	21.4	17.8	13.6	10.8	9.6	13.6	17.1	20.7	23.3	31.4	30.3	28.6						
14	15.4	22.0	28.4	29.5	29.9	27.8	21.3	17.1	13.6	10.7	9.6	14.1	16.1	20.6	23.7	31.6	30.8	28.4						
15	16.4	21.5	29.3	29.6	29.3	27.5	21.5	16.3	13.4	11.9	9.8	14.4	16.1	20.7	23.7	32.5	31.6	28.7						
16	16.1	21.6	29.9	30.0	29.4	26.9	22.9	15.6	12.8	11.9	10.5	14.4	17.2	20.8	24.9	32.6	32.0	28.6						
17	16.0	23.2	30.9	31.2	30.0	26.9	22.7	15.2	12.6	10.2	10.5	13.8	17.4	21.1	25.8	31.8	32.9	29.2						
18	16.5	24.1	31.7	31.7	30.1	26.8	22.8	15.5	12.6	9.8	11.8	13.9	16.8	22.3	26.2	32.0	32.7	29.6						
19	16.7	26.1	31.2	31.5	30.0	26.6	21.7	14.8	12.8	11.4	11.5	13.4	16.7	22.7	25.6	32.5	31.8	29.4						
20	16.9	27.2	30.3	31.4	29.6	26.2	21.1	14.9	11.1	10.4	11.3	12.9	16.9	23.1	26.6	32.5	31.7	29.9						
21	17.2	27.5	31.1	31.0	29.8	25.8	21.4	15.3	10.2	9.8	12.1	14.7	17.2	22.9	28.0	33.1	31.6	28.4						
22	18.0	27.3	32.0	31.3	30.2	25.5	20.8	15.2	11.1	10.8	11.9	14.9	17.2	23.4	27.8	33.0	30.7	27.3						
23	18.6	27.9	32.3	31.8	30.9	25.9	20.7	14.8	11.6	12.7	11.8	14.5	17.2	23.8	28.4	31.7	30.0	27.0						
24	18.5	28.3	33.1	31.6	31.4	26.4	21.3	15.0	11.0	11.5	11.6	14.5	17.1	24.4	28.7	31.1	29.6	26.1						
25	18.6	27.8	32.2	31.7	30.8	26.8	21.3	15.4	10.4	11.1	11.0	14.2	17.5	24.3	30.1	30.7	29.3	25.1						
26	18.2	26.8	31.2	31.3	30.5	27.4	20.7	16.2	9.9	11.2	10.3	14.6	17.8	23.9	29.8	31.5	29.2	25.0						
27	18.4	26.9	30.8	31.0	30.0	28.2	21.0	15.2	10.1	10.6	9.9	14.8	17.6	23.5	28.9	32.0	30.2	24.3						
28	18.9	27.0	31.0	31.0	29.7	27.4	21.4	15.1	10.5	10.2	10.5	14.8	17.1	22.6	28.6	31.9	30.4	23.6						
29	19.2	27.0	31.5	30.7	29.4	26.4	22.4	14.7	11.0	10.5	---	15.0	17.4	22.2	28.3	32.1	30.3	23.5						
30	19.0	26.3	32.4	30.8	29.1	25.8	22.2	14.5	11.2	9.9	---	15.8	19.5	22.1	28.9	31.0	29.9	23.2						
31	---	25.9	---	30.8	28.8	---	22.7	---	11.6	9.9	---	15.5	---	22.7	---	29.6	29.5	---						
MEAN	---	24.1	29.2	30.9	30.3	27.6	22.2	17.5	12.6	11.3	10.7	13.6	16.8	21.5	25.0	31.1	30.3	27.8						
MAX	20.2	30.3	34.4	33.7	34.2	32.3	26.3	23.8	19.3	15.6	14.2	17.8	22.4	25.8	31.5	35.2	34.3	31.5						
MIN	12.7	17.9	25.0	28.3	28.3	25.1	20.0	13.3	9.6	8.2	8.7	10.3	14.1	16.7	20.3	26.1	28.4	23.0						

Table 14. Daily mean values of near-bottom water temperature at Mountain Island Lake site 14, April 1996 through September 1997

CATAWBA RIVER AT NC 16 NEAR SHUFFLETON, NC (MTN14)

[Site 14 is at latitude 35°21'01", longitude 80°58'21", Mecklenburg County, U.S. Geological Survey downstream order number 0214267200. ---, missing data or no day in month; MEAN, monthly mean; MAX, highest instantaneous value recorded during month; MIN, lowest instantaneous value recorded during month]

DAILY MEAN VALUES OF WATER TEMPERATURE, NEAR BOTTOM (in degrees Celsius)

Day	1996												1997					
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	---	16.4	23.1	27.7	28.9	28.1	24.0	19.7	12.7	11.6	9.5	9.9	14.4	16.8	21.3	24.1	28.2	28.0
2	---	16.7	23.2	27.7	28.7	28.0	22.9	19.8	12.9	11.3	9.4	10.2	14.2	17.1	21.4	25.2	28.0	28.0
3	---	16.6	23.2	27.8	28.6	27.6	22.1	19.9	13.2	11.4	9.6	11.0	14.6	16.6	21.4	25.9	27.8	28.1
4	---	16.8	23.3	27.9	28.6	27.4	22.2	19.3	13.3	11.1	9.7	11.9	15.0	17.2	21.5	25.8	27.8	28.1
5	---	16.9	23.4	28.0	28.5	27.6	22.1	18.1	12.8	11.2	9.9	11.3	15.3	16.9	21.8	25.7	28.2	---
6	---	17.4	23.7	28.1	28.4	27.3	21.7	17.5	12.6	11.7	10.1	12.2	15.5	17.5	21.5	25.7	28.3	---
7	---	18.1	23.6	28.0	28.6	27.1	21.2	17.3	12.7	11.8	10.5	11.4	15.4	17.6	21.2	25.9	28.2	---
8	---	18.2	23.7	28.5	28.8	26.9	20.4	17.4	12.7	11.0	10.5	11.2	14.9	18.1	20.8	26.3	28.4	---
9	---	18.3	23.7	28.4	28.8	27.0	20.3	17.6	12.3	11.3	10.5	11.5	15.3	18.5	20.5	26.7	28.2	---
10	---	18.3	23.9	27.9	28.8	27.3	20.9	17.6	11.6	11.1	10.0	12.0	15.5	18.2	20.3	26.8	28.1	---
11	12.6	18.5	24.0	27.7	28.8	27.6	20.7	16.5	11.9	10.6	10.0	12.7	15.4	17.6	20.5	27.0	28.1	---
12	12.8	18.5	24.3	27.7	28.8	27.6	20.3	15.6	12.1	10.0	9.6	12.7	15.7	18.3	20.7	27.1	28.2	---
13	13.4	18.5	24.7	27.9	27.6	27.4	20.1	15.2	12.4	9.2	9.4	13.1	16.0	18.5	21.5	27.2	28.7	---
14	13.6	18.8	24.7	27.8	27.7	27.4	20.1	15.2	12.4	9.2	8.8	13.3	15.8	18.2	21.7	27.5	28.6	---
15	14.1	18.9	24.7	27.8	28.2	27.1	20.1	14.9	12.2	9.5	8.6	13.7	15.4	19.0	21.3	28.2	28.6	---
16	15.0	19.1	24.8	27.8	28.5	26.8	20.3	14.2	12.2	9.8	8.7	13.5	15.9	18.6	21.9	28.3	28.5	---
17	15.0	19.1	24.8	27.7	28.5	26.4	20.5	13.7	12.5	9.4	8.7	13.2	16.3	18.0	22.7	28.2	28.4	---
18	13.9	19.2	24.9	27.7	28.3	26.2	21.0	13.5	12.2	8.5	8.6	13.3	16.0	18.3	22.5	28.3	28.6	---
19	14.1	19.3	25.1	28.0	28.5	25.8	20.8	13.5	11.8	7.9	8.9	13.1	15.2	19.6	21.7	28.2	28.6	---
20	14.4	19.7	25.7	27.8	28.9	25.5	20.4	13.7	10.6	7.6	9.1	12.5	15.1	20.3	22.1	28.1	28.9	---
21	14.5	19.8	26.2	27.9	29.0	25.4	19.3	13.9	10.1	7.9	9.3	13.1	15.5	20.1	22.4	28.2	28.9	---
22	14.8	20.1	26.8	27.9	29.0	25.3	18.7	14.1	10.2	8.3	10.2	13.4	15.8	20.1	22.4	28.5	29.1	---
23	15.4	20.5	26.7	28.0	29.0	25.1	18.8	13.9	10.3	8.5	10.1	13.6	16.0	20.5	22.7	28.6	29.2	---
24	15.3	20.7	26.8	28.1	29.1	24.9	19.0	13.7	10.5	9.0	10.7	13.9	16.0	20.8	24.0	28.3	28.6	---
25	16.0	21.0	27.4	28.2	29.1	24.8	19.0	13.5	10.5	8.7	10.1	14.1	15.9	20.9	25.6	27.3	28.2	---
26	16.0	21.2	27.8	28.3	29.1	24.9	19.1	14.0	10.0	8.8	9.8	14.2	16.3	20.9	25.6	27.6	28.0	---
27	15.9	21.4	27.8	28.5	28.9	24.9	19.0	14.2	10.1	9.0	9.6	14.4	16.4	21.1	25.2	28.8	27.9	---
28	15.7	21.6	27.7	28.5	28.5	24.9	19.1	13.3	10.5	9.2	9.8	14.4	16.2	21.4	24.1	29.2	27.9	---
29	16.2	22.0	27.7	28.6	28.4	24.9	19.1	13.2	10.8	9.2	---	14.6	16.1	21.7	23.7	29.4	28.0	---
30	16.5	22.6	27.7	28.8	28.7	24.9	19.4	12.9	11.0	9.1	---	14.7	15.9	21.5	23.8	29.2	28.0	---
31	---	22.9	---	28.8	28.5	---	19.4	---	11.4	9.3	---	15.1	---	21.2	---	28.8	28.2	---
MEAN	---	19.3	25.2	28.0	28.6	26.4	20.4	15.6	11.7	9.7	9.6	12.9	15.6	19.1	22.3	27.4	28.3	---
MAX	17.0	24.3	28.3	29.2	29.3	28.4	24.5	20.2	13.4	12.0	11.3	15.4	16.5	22.2	26.2	30.7	29.5	28.5
MIN	12.4	16.2	22.6	27.3	26.8	24.5	18.3	12.7	9.7	7.3	8.3	9.8	14.0	15.9	20.2	23.6	27.4	27.9

Table 15. Daily mean values of near-surface dissolved-oxygen concentration at Mountain Island Lake site 14, April 1996 through September 1997

CATAWBA RIVER AT NC 16 NEAR SHUFFLETOWN, NC (MTN14)

[Site 14 is at latitude 35°21'01", longitude 80°58'21", Mecklenburg County, U.S. Geological Survey downstream order number 0214267200. ---, missing data or no day in month; MEAN, monthly mean; MAX, highest instantaneous value recorded during month; MIN, lowest instantaneous value recorded during month]

DAILY MEAN VALUES OF DISSOLVED-OXYGEN CONCENTRATION, NEAR SURFACE (in milligrams per liter)

Day	1996												1997											
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.						
1	---	8.8	7.2	8.4	---	6.3	6.5	8.3	9.4	10.0	10.1	10.6	9.2	8.0	---	---	5.6	7.4						
2	---	8.7	7.2	8.2	---	6.3	6.7	8.1	9.4	9.9	10.1	10.6	9.2	8.1	---	6.9	6.0	6.9						
3	---	8.9	7.2	8.2	---	6.3	6.9	7.8	9.6	9.8	10.1	10.4	9.2	8.1	---	6.5	6.3	7.1						
4	---	8.6	7.2	8.1	---	6.2	7.1	7.7	9.5	9.9	10.1	10.0	9.2	8.0	7.4	6.4	---	6.5						
5	---	8.7	7.1	8.2	---	6.2	7.3	7.7	9.6	10.0	10.1	10.1	9.2	8.2	7.4	6.5	---	6.6						
6	---	8.6	7.4	8.5	---	6.4	7.4	7.7	9.5	10.0	10.0	10.3	9.1	8.2	7.3	6.6	---	6.7						
7	---	8.4	7.5	8.8	---	6.4	7.3	8.1	9.3	9.9	10.1	10.2	9.1	8.1	7.2	6.7	7.1	6.7						
8	---	8.5	7.3	8.2	---	6.9	7.5	8.3	9.2	9.9	10.0	10.3	9.1	8.1	7.4	6.6	7.0	6.6						
9	---	8.7	7.8	7.7	---	7.0	7.6	8.3	9.3	9.9	9.9	10.4	9.1	8.0	7.6	6.5	7.3	6.7						
10	---	8.8	8.4	7.4	---	6.9	7.6	8.2	9.6	10.0	10.1	10.4	9.1	8.0	7.8	6.0	7.1	6.7						
11	10.5	8.8	8.6	7.5	---	6.7	7.5	8.3	9.6	10.0	10.1	10.3	9.0	8.2	8.0	6.1	6.9	6.4						
12	10.5	8.6	8.2	6.8	---	6.7	7.5	8.6	9.4	10.0	10.1	10.2	8.9	8.1	8.0	6.6	6.7	6.5						
13	10.2	8.7	7.7	7.4	---	6.8	7.6	8.7	9.2	10.0	10.2	10.1	8.8	8.0	7.7	6.5	6.8	6.5						
14	10.1	8.6	7.6	8.0	---	6.5	7.9	8.7	9.3	10.1	10.3	10.1	8.9	8.0	7.3	---	6.4	6.5						
15	10.0	8.6	8.0	7.8	---	6.4	8.0	9.1	9.5	10.0	10.4	10.0	8.8	8.0	7.3	---	6.6	6.4						
16	9.6	8.6	7.8	7.4	---	6.6	7.8	9.2	9.7	10.1	10.5	10.0	8.8	7.8	7.3	---	6.6	6.6						
17	9.4	8.7	7.8	7.6	---	6.6	7.4	9.3	9.6	10.3	10.4	10.1	8.8	7.9	7.0	---	6.9	6.7						
18	9.6	8.6	8.0	7.7	---	6.4	7.7	9.4	9.4	10.3	10.6	10.1	8.7	7.7	7.0	---	6.4	6.3						
19	9.7	8.4	8.3	7.5	---	6.6	7.7	9.4	9.7	10.4	10.7	10.0	8.6	7.8	6.9	6.1	5.9	6.3						
20	9.6	8.4	8.2	7.4	---	6.9	7.9	9.5	9.9	10.5	10.7	9.9	8.5	7.6	6.6	6.1	6.9	6.6						
21	9.7	8.4	8.4	7.3	---	7.1	8.0	9.4	10.1	10.6	11.0	9.6	8.6	7.3	6.8	5.9	6.5	6.5						
22	9.6	8.4	8.7	7.6	6.4	7.1	8.2	9.3	10.1	10.5	10.8	9.3	8.7	7.8	6.8	6.0	6.4	6.1						
23	9.3	8.0	8.6	7.3	6.5	7.3	8.2	9.4	10.2	10.4	10.9	9.3	8.5	7.6	6.9	5.7	6.3	5.8						
24	9.3	7.9	8.3	7.3	6.5	7.2	8.1	9.5	10.2	10.5	10.6	9.4	8.2	7.7	7.0	5.9	6.4	6.1						
25	9.3	7.8	8.1	7.5	6.4	7.2	8.1	9.6	10.0	10.4	10.5	9.3	8.3	7.8	6.6	5.6	6.6	6.0						
26	9.1	7.5	8.0	7.2	6.4	7.0	8.5	9.6	10.1	10.5	10.5	9.3	8.2	7.5	6.4	5.9	6.6	5.9						
27	9.0	7.5	8.2	7.2	6.6	6.9	8.5	9.6	10.1	10.4	10.5	9.2	8.2	7.6	---	---	6.8	6.0						
28	9.1	7.0	8.6	7.4	6.4	7.1	8.7	9.8	10.1	10.1	10.5	9.2	8.1	---	---	5.9	7.0	6.0						
29	9.0	6.9	8.8	7.1	6.4	6.9	8.6	9.8	10.0	10.2	---	9.2	8.0	---	---	5.9	7.1	6.8						
30	8.8	6.6	8.7	7.4	6.1	6.7	8.7	9.4	10.0	10.1	---	9.2	8.1	---	---	5.2	7.0	7.0						
31	---	6.9	---	7.1	6.1	---	8.5	---	10.0	10.1	---	9.1	---	---	---	5.3	7.3	---						
MEAN	---	8.2	8.0	7.7	---	6.7	7.8	8.9	9.7	10.2	10.4	9.9	8.7	---	---	---	---	6.5						
MAX	10.8	9.5	9.4	9.2	7.3	7.7	9.0	10.1	10.4	10.8	11.4	11.0	9.4	8.6	8.3	7.5	7.8	7.9						
MIN	8.4	6.3	6.4	5.9	5.5	5.4	5.9	7.1	8.7	9.5	9.4	8.8	7.3	5.6	5.5	4.4	4.7	4.3						

Table 16. Daily mean values of near-bottom dissolved-oxygen concentration at Mountain Island Lake site 14, April 1996 through September 1997

CATAWBA RIVER AT NC 16 NEAR SHUFFLETOWN, NC (MTN14)

[Site 14 is at latitude 35°21'01", longitude 80°58'21", Mecklenburg County, U.S. Geological Survey downstream order number 0214267200. ---, missing data or no day in month; MEAN, monthly mean; MAX, highest instantaneous value recorded during month; MIN, lowest instantaneous value recorded during month]

DAILY MEAN VALUES OF DISSOLVED-OXYGEN CONCENTRATION, NEAR BOTTOM (in milligrams per liter)

Day	1996												1997					
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	---	8.0	3.9	4.9	4.4	5.7	6.9	6.8	---	---	9.9	9.5	8.9	7.4	6.6	5.5	---	5.4
2	---	7.8	5.7	4.7	5.4	5.9	6.8	6.2	---	---	10.0	9.5	8.9	7.8	6.2	6.1	---	5.7
3	---	8.2	5.5	4.5	5.2	6.2	7.0	---	---	---	10.0	9.4	8.9	7.8	5.9	6.5	---	5.6
4	---	8.0	5.3	4.1	4.8	6.1	7.0	---	---	---	10.0	9.3	8.9	7.8	5.8	6.0	---	5.9
5	---	7.7	5.0	4.0	4.3	5.8	7.4	---	---	---	10.0	9.4	8.9	8.0	6.7	5.5	---	---
6	---	7.5	5.8	4.8	5.0	6.2	7.5	---	---	---	10.1	9.5	8.8	8.1	6.0	5.2	---	---
7	---	7.4	5.9	5.6	5.2	6.2	7.6	---	---	---	10.0	9.6	8.8	8.0	6.9	5.0	5.2	---
8	---	7.4	5.4	5.8	5.0	5.9	7.7	---	---	---	9.9	9.6	8.8	8.0	6.9	4.9	6.1	---
9	---	7.4	5.1	6.0	4.4	5.7	7.8	---	---	---	9.9	9.5	8.8	8.1	6.9	5.2	6.8	---
10	---	7.0	5.1	6.0	3.8	5.6	7.3	---	---	---	10.0	9.6	8.8	7.9	7.0	5.1	6.3	---
11	9.6	6.8	4.6	5.2	3.5	5.4	7.2	---	---	---	9.9	9.6	8.8	7.9	7.2	5.0	6.1	---
12	9.4	6.4	4.6	5.1	4.6	5.5	7.4	---	---	---	10.0	9.5	8.6	8.0	6.9	5.2	6.5	---
13	9.3	6.1	4.9	---	6.1	6.0	7.4	---	---	---	9.8	9.5	8.5	8.0	6.9	5.5	6.5	---
14	9.0	5.9	6.4	---	6.0	6.1	7.4	---	---	---	10.1	9.4	8.6	7.7	6.9	5.5	6.0	---
15	8.9	5.4	6.2	5.6	5.8	6.2	7.3	---	---	---	10.1	9.4	8.6	7.9	6.6	5.9	5.7	---
16	8.7	6.7	5.6	5.8	5.8	6.3	7.6	---	---	---	10.1	9.5	8.6	7.6	6.8	5.7	5.1	---
17	8.8	6.5	5.1	5.8	5.4	6.5	7.5	---	---	---	9.9	9.7	8.5	7.5	7.0	5.4	4.8	---
18	9.1	6.5	5.0	5.6	5.2	6.6	7.5	---	---	---	10.0	9.7	8.5	7.4	6.9	5.7	4.5	---
19	9.1	6.4	4.9	5.5	5.4	6.5	7.3	---	---	---	10.2	9.6	8.5	7.4	6.6	5.7	4.1	---
20	8.8	6.2	4.8	5.3	5.7	6.5	7.3	---	---	---	9.9	9.5	8.5	7.6	6.5	5.4	3.9	---
21	8.6	5.7	5.4	4.8	5.7	6.7	7.5	---	---	---	9.9	9.3	8.6	7.3	6.1	5.0	3.5	---
22	8.5	5.7	6.0	4.6	6.0	6.6	7.7	---	---	---	10.0	9.0	8.3	7.0	6.0	5.0	3.5	---
23	8.4	5.4	5.6	4.2	5.8	6.7	7.8	---	---	---	9.8	8.9	8.2	6.9	5.7	4.7	4.9	---
24	8.2	5.1	5.1	3.9	5.6	6.6	7.6	---	---	---	9.8	9.1	8.4	6.7	5.9	5.1	5.9	---
25	8.1	4.9	5.3	3.7	5.4	6.5	7.4	---	---	---	9.9	9.1	8.3	6.5	6.6	4.8	5.9	---
26	8.1	4.6	6.1	3.4	5.3	6.6	7.6	---	---	---	9.8	8.9	8.2	6.4	6.5	4.5	5.9	---
27	8.4	3.8	6.2	3.2	5.9	6.6	7.7	---	---	---	9.7	8.9	8.1	6.1	6.3	5.0	6.2	---
28	8.4	4.2	6.1	3.2	6.1	6.6	7.7	---	---	10.0	9.6	8.8	8.2	6.0	6.4	5.2	6.6	---
29	8.3	4.0	5.9	3.2	5.9	6.0	7.5	---	---	10.0	---	8.8	8.0	5.9	6.1	---	6.2	---
30	8.4	4.0	5.4	4.2	5.8	6.0	7.5	---	---	10.1	---	8.7	7.7	6.5	5.9	---	5.8	---
31	---	3.8	---	3.9	5.7	---	7.0	---	---	10.0	---	8.8	---	6.7	---	---	6.0	---
MEAN	---	6.1	5.4	---	5.3	6.2	7.4	---	---	---	9.9	9.3	8.5	7.4	6.5	---	---	---
MAX	9.8	8.4	7.1	7.0	6.8	7.2	8.3	7.3	---	10.2	10.3	9.8	9.0	8.2	7.5	6.7	7.1	6.7
MIN	7.5	2.7	2.5	2.1	2.1	5.0	6.4	5.6	---	9.7	8.2	8.5	7.1	4.9	4.7	3.8	2.6	4.7

Table 17. Daily mean values of near-surface specific conductance at Mountain Island Lake site 14, April 1996 through September 1997

CATAWBA RIVER AT NC 16 NEAR SHUFFLETOWN, NC (MTN14)

[Site 14 is at latitude 35°21'01", longitude 80°58'21", Mecklenburg County, U.S. Geological Survey downstream order number 0214267200. ---, missing data or no day in month; MEAN, monthly mean; MAX, highest instantaneous value recorded during month; MIN, lowest instantaneous value recorded during month]

DAILY MEAN VALUES OF SPECIFIC CONDUCTANCE, NEAR SURFACE (in microsiemens per centimeter at 25 degrees Celsius)

Day	1996												1997					
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	---	57	57	58	58	59	56	59	58	59	56	57	57	56	57	55	52	50
2	---	57	56	58	56	59	56	58	58	60	56	57	56	56	57	55	52	50
3	---	57	56	58	56	59	56	58	59	59	56	57	56	56	56	55	52	50
4	---	57	56	58	57	59	57	58	58	59	56	57	56	56	55	55	52	51
5	---	56	57	59	56	60	57	57	58	59	56	57	56	56	56	55	52	51
6	---	55	58	59	56	59	57	58	58	59	57	57	57	57	55	55	52	51
7	---	56	57	59	56	59	57	58	58	60	58	57	57	57	55	54	52	51
8	---	56	56	60	57	59	57	57	58	60	58	57	57	57	56	54	51	51
9	---	56	56	61	57	59	57	58	58	59	57	57	57	57	55	55	51	51
10	---	56	56	61	57	60	58	59	58	59	57	57	58	57	55	54	51	51
11	55	56	56	61	57	60	58	59	58	60	58	58	58	56	56	55	51	52
12	55	58	57	61	57	60	58	59	58	60	57	57	58	56	56	55	50	52
13	55	58	57	58	57	59	58	59	58	60	57	57	58	57	55	56	50	52
14	56	58	57	59	57	59	58	59	58	60	58	57	58	56	55	55	50	52
15	56	58	57	59	58	59	59	59	58	60	58	57	58	56	54	55	50	53
16	57	58	57	57	59	59	59	59	59	60	57	57	58	56	55	55	50	52
17	57	57	58	55	59	59	59	58	58	60	58	57	58	56	55	55	50	53
18	57	57	57	55	60	59	59	58	58	61	57	57	58	56	55	55	50	54
19	57	57	56	54	60	59	59	58	58	61	58	57	58	57	55	55	50	54
20	57	57	55	55	60	59	59	58	58	61	58	57	58	57	55	54	49	54
21	57	57	55	56	59	59	59	58	58	61	59	57	58	57	55	54	49	54
22	57	58	56	55	58	59	59	59	58	61	60	57	58	57	55	54	49	54
23	56	58	56	56	58	59	59	59	58	61	60	57	58	57	55	52	49	54
24	56	58	56	55	59	60	60	58	59	61	61	57	58	57	55	51	49	54
25	56	58	56	55	59	60	60	58	59	61	59	57	59	57	56	51	48	53
26	56	57	56	55	59	58	60	58	59	61	58	57	59	57	55	51	48	54
27	56	57	56	56	58	57	60	59	59	58	57	57	59	57	55	52	49	54
28	56	57	57	57	59	57	60	58	59	56	57	57	58	57	55	52	50	54
29	57	57	58	58	59	57	60	58	60	56	---	57	57	55	52	50	54	54
30	56	57	58	57	59	57	60	58	60	55	---	57	56	55	52	50	54	54
31	---	57	---	58	59	---	61	---	59	56	---	57	---	---	52	50	---	---
MEAN	---	57	57	58	58	59	58	58	58	59	58	57	58	57	55	54	50	52
MAX	58	60	63	64	63	61	62	61	60	63	61	60	60	58	58	65	56	56
MIN	55	55	54	53	55	56	55	56	55	54	55	55	55	55	54	50	48	50

Table 18. Daily mean values of near-bottom specific conductance at Mountain Island Lake site 14, April 1996 through September 1997

CATAWBA RIVER AT NC 16 NEAR SHUFFLETOWN, NC (MTN14)

[Site 14 is at latitude 35°21'01", longitude 80°58'21", Mecklenburg County, U.S. Geological Survey downstream order number 0214267200. ---, missing data or no day in month; MEAN, monthly mean; MAX, highest instantaneous value recorded during month; MIN, lowest instantaneous value recorded during month]

DAILY MEAN VALUES OF SPECIFIC CONDUCTANCE, NEAR BOTTOM (in microsiemens per centimeter at 25 degrees Celsius)

Day	1996												1997					
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	---	57	59	56	59	56	56	58	58	58	57	57	56	56	59	58	53	52
2	---	58	59	56	57	56	57	58	59	58	57	57	56	56	59	57	54	53
3	---	57	63	57	57	59	57	58	61	58	58	58	56	58	58	56	54	54
4	---	56	61	57	57	56	57	58	59	58	59	58	56	56	58	56	56	54
5	---	57	59	57	59	56	57	60	58	58	58	57	56	57	57	56	54	---
6	---	57	58	61	60	56	56	60	58	58	59	57	57	56	58	56	53	---
7	---	57	58	60	58	56	56	60	59	58	59	57	56	56	57	56	53	---
8	---	57	58	60	58	56	57	61	59	57	57	57	56	56	57	55	54	---
9	---	57	59	58	57	56	57	62	59	57	59	58	56	56	57	55	53	---
10	---	58	59	57	57	56	58	61	59	57	58	56	56	56	57	56	56	---
11	55	58	59	57	57	58	58	58	59	58	58	58	56	57	58	56	58	---
12	55	57	59	57	57	56	57	58	59	58	58	57	56	56	57	55	52	---
13	56	57	59	57	59	56	57	58	59	58	58	57	56	56	57	55	53	---
14	56	57	56	57	60	57	57	59	59	58	58	57	56	56	56	56	53	---
15	57	58	56	57	60	57	57	58	59	57	58	57	56	56	56	55	53	---
16	58	58	56	58	60	57	58	58	60	57	58	58	56	56	56	55	54	---
17	58	58	57	58	58	57	58	58	59	57	58	57	57	57	56	55	53	---
18	57	58	57	58	58	57	58	58	59	57	58	57	56	56	56	55	53	---
19	57	58	57	58	58	57	58	58	58	57	63	58	57	57	56	54	53	---
20	56	59	57	58	59	57	57	59	57	57	63	58	57	57	57	54	54	---
21	56	59	57	58	58	57	58	59	58	58	63	57	58	57	57	54	54	---
22	56	59	56	58	55	57	58	59	57	57	62	57	59	57	56	54	53	---
23	56	60	56	58	55	57	59	59	58	57	62	57	59	58	57	54	53	---
24	56	60	56	59	56	56	60	58	58	57	61	57	57	58	56	55	53	---
25	57	59	56	59	56	56	59	59	58	57	58	56	60	57	56	55	53	---
26	58	59	55	59	56	57	59	60	58	57	57	56	60	57	56	56	53	---
27	58	59	55	59	55	57	59	59	58	58	57	57	59	58	56	53	52	---
28	57	59	56	62	56	57	60	58	58	57	57	57	57	58	56	54	52	---
29	57	59	56	61	56	57	60	58	58	58	---	56	56	58	57	54	53	---
30	57	59	56	60	56	57	60	59	58	57	---	56	58	57	54	53	---	
31	---	59	---	60	56	---	59	---	58	57	---	57	---	---	54	52	---	
MEAN	---	58	58	58	57	57	58	59	59	57	59	57	57	57	57	55	53	---
MAX	59	64	69	64	63	76	61	63	63	60	67	59	62	60	60	59	65	55
MIN	54	56	55	55	54	55	55	56	55	56	56	55	55	55	55	52	51	51

Table 19. Daily mean values of water temperature at Catawba River site 17, May 1996 through September 1997

CATAWBA RIVER AT HWY 27 AT MOUNT HOLLY, NC (MTN17)

[Site 17 is at latitude 35°17'46", longitude 81°00'28", Gaston County, U.S. Geological Survey downstream order number 02142808. ---, missing data or no day in month; MEAN, monthly mean; MAX, highest instantaneous value recorded during month; MIN, lowest instantaneous value recorded during month]

Day	1996												1997											
	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.							
1	---	23.4	28.3	28.7	28.3	22.9	19.8	12.8	11.4	9.5	12.1	15.0	16.7	21.3	25.7	28.3	28.0							
2	---	23.2	28.8	28.9	27.9	22.9	19.3	13.0	11.5	9.8	11.5	14.7	17.9	21.3	26.1	27.8	28.1							
3	---	22.7	28.8	29.1	27.6	23.4	18.2	13.5	11.5	10.1	11.1	14.8	17.5	20.8	26.6	27.8	28.1							
4	---	22.9	28.5	28.8	27.5	22.5	18.7	13.5	11.4	10.0	12.2	15.1	17.6	19.9	26.3	27.9	27.2							
5	---	23.3	28.1	28.7	26.5	22.0	18.6	13.6	11.7	9.9	12.2	15.3	17.6	20.5	26.5	27.7	27.1							
6	---	23.8	28.1	29.0	25.7	21.6	18.5	12.7	11.5	10.0	12.4	15.9	17.6	20.3	26.0	28.1	26.9							
7	---	24.0	28.6	29.1	26.6	21.0	18.2	12.2	11.7	10.1	12.2	16.0	18.0	19.5	26.4	27.9	26.8							
8	---	24.2	28.6	29.0	26.9	21.0	18.0	12.2	11.6	10.4	11.6	15.9	18.2	19.8	27.2	28.0	27.1							
9	---	22.7	28.7	29.0	27.3	20.7	16.6	12.3	10.7	9.8	11.8	15.5	18.7	20.2	27.3	27.5	27.2							
10	---	24.1	28.8	28.5	27.6	20.7	16.2	12.1	9.9	10.0	12.2	15.6	19.0	20.4	27.6	27.4	27.0							
11	---	24.2	28.0	28.7	27.6	20.9	17.1	12.0	10.2	10.0	12.7	15.6	18.5	20.7	28.0	27.8	26.7							
12	---	24.7	27.3	27.3	27.8	20.6	16.2	12.1	9.8	9.8	13.0	15.5	18.3	20.7	28.1	27.9	27.1							
13	---	25.3	27.8	27.8	27.5	20.3	15.6	12.6	9.9	9.2	13.0	16.0	19.2	21.0	27.9	28.3	27.1							
14	---	25.9	27.9	28.2	26.7	20.4	15.4	12.7	9.6	7.9	13.3	16.1	18.6	21.9	28.2	28.4	27.1							
15	---	26.0	27.3	28.2	26.3	20.6	15.3	12.5	9.8	6.6	13.6	15.8	19.0	22.2	28.9	28.7	27.0							
16	---	26.2	27.3	28.6	25.9	20.6	14.5	12.8	9.6	7.7	13.6	16.0	19.0	22.2	28.7	28.9	27.2							
17	---	26.1	28.1	28.9	26.2	20.5	14.0	12.9	9.8	7.7	13.6	16.2	18.7	23.1	28.5	29.0	27.4							
18	---	26.5	28.2	28.7	25.6	21.0	13.9	12.8	8.5	8.7	13.7	16.3	---	22.9	28.9	29.2	27.3							
19	---	26.6	28.5	28.9	25.6	19.9	13.7	12.0	8.0	8.9	13.6	15.4	---	23.3	29.1	29.0	27.3							
20	---	25.5	28.6	29.1	25.5	19.5	14.0	11.5	7.4	9.7	13.2	15.7	---	23.3	29.3	29.2	27.6							
21	---	27.1	28.8	29.2	25.2	20.2	14.1	10.7	8.4	10.5	13.1	15.9	---	23.8	29.2	29.1	26.8							
22	22.6	27.6	28.9	29.4	24.8	19.5	14.1	10.2	8.8	10.4	13.6	16.1	---	24.3	29.2	29.0	26.1							
23	23.3	27.9	29.1	29.3	24.5	19.3	13.4	9.5	8.9	10.5	14.0	15.5	---	24.6	27.6	28.6	26.4							
24	23.4	28.1	28.9	29.3	24.6	18.5	13.6	10.1	9.2	10.8	14.2	15.2	21.1	25.2	27.2	28.4	24.2							
25	23.4	28.5	28.6	28.7	25.1	18.7	13.9	10.2	8.9	11.0	14.1	16.0	20.7	26.0	27.4	27.8	21.6							
26	23.1	28.8	28.0	28.5	25.3	19.1	14.0	10.0	8.9	10.6	14.4	16.2	21.3	26.1	27.9	27.8	23.8							
27	22.6	28.7	28.7	29.0	25.1	19.2	14.3	9.9	9.3	10.2	14.5	16.1	21.4	26.2	28.4	28.0	23.3							
28	23.1	28.1	28.7	29.0	25.0	19.3	13.9	9.9	9.6	11.5	14.5	15.8	20.9	25.8	28.9	28.0	22.7							
29	23.0	27.9	28.3	28.7	24.3	19.5	13.1	10.3	9.6	---	14.8	14.8	20.9	25.3	28.8	27.8	22.5							
30	23.0	28.2	28.6	29.0	23.8	19.9	12.7	10.7	9.8	---	15.3	16.8	20.6	25.6	27.4	27.7	22.6							
31	23.4	---	28.7	28.9	---	19.5	---	11.3	9.5	---	15.1	---	20.9	---	26.2	27.8	---							
MEAN	---	25.7	28.4	28.8	26.1	20.5	15.6	11.8	9.9	9.7	13.2	15.7	---	22.6	27.7	28.2	26.2							
MAX	24.8	29.6	30.0	30.2	28.7	24.2	20.1	14.0	12.1	12.8	15.9	17.3	22.9	27.3	30.3	29.9	29.0							
MIN	21.5	21.2	26.3	23.9	23.0	17.5	10.8	6.9	4.2	5.0	10.2	13.1	15.3	18.3	23.3	25.7	18.3							

Table 20. Daily mean values of dissolved-oxygen concentration at Catawba River site 17, May 1996 through September 1997

CATAWBA RIVER AT HWY 27 AT MOUNT HOLLY, NC (MTN17)

[Site 17 is at latitude 35°17'46", longitude 81°00'28", Gaston County, U.S. Geological Survey downstream order number 02142808. ---, missing data or no day in month; MEAN, monthly mean; MAX, highest instantaneous value recorded during month; MIN, lowest instantaneous value recorded during month]

DAILY MEAN VALUES OF DISSOLVED-OXYGEN CONCENTRATION (in milligrams per liter)

Day	1996												1997				
	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	---	6.4	5.8	---	---	---	7.7	8.9	9.5	9.9	9.4	9.4	---	7.0	6.0	5.6	6.6
2	---	6.1	5.8	---	---	---	7.7	8.8	9.6	9.9	9.8	9.4	---	7.0	6.2	5.7	6.5
3	---	6.2	6.0	---	---	---	7.9	9.0	9.6	9.8	9.9	9.4	8.0	6.9	6.4	5.8	6.3
4	---	5.4	6.0	---	---	---	8.0	9.1	9.6	9.8	9.8	9.4	7.8	7.1	6.3	6.3	6.6
5	---	5.5	6.0	---	---	---	7.7	9.2	9.5	9.8	9.6	9.3	7.8	7.3	6.2	6.6	6.7
6	---	5.7	5.8	---	---	---	7.9	9.3	9.5	9.8	9.7	9.2	8.0	7.3	6.3	7.0	6.5
7	---	6.0	5.5	---	---	---	8.0	9.3	9.7	9.8	9.9	9.3	8.0	7.6	6.3	6.8	6.4
8	---	5.7	5.6	---	---	---	8.1	9.3	9.7	9.7	9.9	9.3	7.9	7.7	6.0	6.8	6.4
9	---	6.4	---	---	---	---	8.1	9.3	9.8	9.8	9.9	9.2	7.9	7.4	5.9	6.5	6.4
10	---	5.9	---	---	---	---	8.3	9.4	10.0	9.8	10.0	9.3	8.1	7.3	5.9	6.4	6.4
11	---	5.7	---	---	---	---	8.3	9.5	10.0	9.8	10.0	9.3	8.1	7.4	6.1	6.4	6.4
12	---	5.5	---	---	---	---	8.6	9.5	10.1	9.9	9.9	9.1	8.0	7.5	6.1	6.4	6.5
13	---	5.7	---	---	---	---	8.8	9.5	10.0	9.9	9.9	9.0	8.1	7.5	5.9	6.8	6.4
14	---	5.9	---	---	---	---	8.8	9.6	10.0	10.4	9.8	9.0	8.0	7.4	5.9	6.6	6.4
15	---	5.8	---	---	---	---	8.9	9.7	10.0	10.6	9.9	9.1	8.1	7.4	6.2	6.7	6.4
16	---	5.6	---	---	---	---	9.1	9.5	10.0	10.7	9.9	9.1	8.1	7.1	6.0	6.7	6.3
17	---	5.5	---	---	---	---	9.3	9.2	10.1	10.6	9.8	9.1	8.0	7.0	6.0	6.5	6.2
18	---	5.8	---	---	---	---	9.1	9.1	10.4	10.5	9.6	9.1	---	6.9	6.0	6.6	6.1
19	---	6.0	---	---	---	---	8.4	9.2	10.5	10.4	9.6	8.9	---	6.8	5.8	6.5	6.3
20	---	5.9	---	---	---	---	8.5	9.3	10.7	10.3	9.5	9.1	---	6.7	5.8	7.1	6.6
21	---	5.9	---	---	---	---	8.6	9.3	10.5	10.1	9.5	8.9	---	6.4	5.8	7.1	6.5
22	7.1	5.8	---	---	---	7.7	8.7	9.4	10.5	10.2	9.4	8.9	---	6.6	5.7	6.9	6.7
23	7.0	5.5	---	---	---	7.8	8.6	9.7	10.5	10.2	9.4	8.9	---	6.7	6.0	6.7	6.7
24	7.1	5.6	---	---	---	7.7	8.6	9.5	10.4	10.5	9.5	9.1	7.6	6.6	6.1	6.8	6.7
25	6.8	5.9	---	---	---	7.8	8.7	9.6	10.6	10.3	9.5	8.9	7.4	6.6	5.8	7.3	6.9
26	6.7	6.0	---	---	---	7.8	8.8	9.6	10.6	10.2	9.4	8.9	7.4	6.5	5.7	7.2	6.7
27	6.4	5.9	---	---	---	7.7	8.9	9.7	10.6	10.2	9.3	8.8	7.1	6.4	5.3	6.5	6.6
28	6.3	5.9	---	---	---	7.4	9.0	9.7	10.3	9.6	9.2	8.8	7.3	6.2	5.3	6.6	6.7
29	6.3	6.0	---	---	---	7.4	9.1	9.7	9.9	---	9.3	8.0	7.5	6.3	5.6	6.6	6.6
30	6.4	5.7	---	---	---	7.7	9.0	9.6	9.8	---	9.2	8.7	7.4	6.1	5.6	6.9	6.5
31	6.4	---	---	---	---	7.5	---	9.6	9.9	---	9.3	---	7.1	---	6.1	6.8	---
MEAN	---	5.8	---	---	---	---	8.5	9.4	10.1	10.1	9.6	9.1	---	7.0	6.0	6.6	6.5
MAX	7.4	7.2	6.6	---	---	8.1	9.9	11.1	11.8	11.3	10.2	9.9	8.5	8.1	6.6	7.9	7.4
MIN	5.8	4.9	4.9	---	---	7.2	7.4	7.9	9.2	8.7	8.7	7.6	6.8	5.8	4.3	5.1	5.9

Table 21. Daily mean values of specific conductance at Catawba River site 17, May 1996 through September 1997

CATAWBA RIVER AT HWY 27 AT MOUNT HOLLY, NC (MTN17)

[Site 17 is at latitude 35°17'46", longitude 81°00'28", Gaston County, U.S. Geological Survey downstream order number 02142808. ---, missing data or no day in month; MEAN, monthly mean; MAX, highest instantaneous value recorded during month; MIN, lowest instantaneous value recorded during month]

Day	1996												1997											
	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.							
1	---	60	59	58	56	59	61	62	59	59	49	57	56	61	57	53	56							
2	---	61	59	57	58	59	62	60	57	60	56	57	55	62	56	55	55							
3	---	62	59	57	57	59	63	60	58	58	56	57	56	60	55	54	54							
4	---	62	59	58	56	60	61	60	59	61	57	57	56	61	57	55	55							
5	---	63	59	58	55	59	61	60	59	62	58	58	56	61	57	54	55							
6	---	60	58	55	59	60	62	61	59	58	58	59	56	61	57	53	55							
7	---	63	59	54	58	60	63	62	58	59	58	57	56	61	55	55	55							
8	---	62	59	56	60	59	65	62	59	59	60	57	55	61	55	53	54							
9	---	60	59	54	58	59	63	60	59	62	59	57	56	60	56	54	54							
10	---	57	58	56	57	59	62	60	58	60	59	57	55	61	56	54	54							
11	---	59	59	55	57	60	61	60	59	59	59	57	56	60	56	53	55							
12	---	60	59	57	57	60	61	61	59	60	60	60	56	58	56	53	54							
13	---	59	59	52	58	60	60	61	59	61	60	58	56	59	56	53	55							
14	---	58	59	54	59	60	60	60	59	62	62	56	57	58	56	53	55							
15	---	60	58	54	58	60	60	60	58	54	60	57	56	58	54	53	55							
16	---	62	58	54	58	61	60	59	59	54	59	56	55	58	55	54	56							
17	---	59	57	54	57	61	60	59	58	59	58	57	58	57	56	54	56							
18	---	59	57	55	58	61	60	59	59	60	57	57	57	57	56	54	55							
19	---	59	59	54	57	62	62	61	59	62	58	60	58	58	56	55	56							
20	---	55	58	54	57	62	61	59	60	63	57	59	58	58	55	55	56							
21	---	56	58	54	57	61	60	59	58	65	57	57	58	58	54	55	56							
22	60	61	57	55	58	62	61	59	58	62	58	58	57	59	54	55	56							
23	61	64	58	55	57	61	62	61	57	62	57	57	57	57	53	55	56							
24	63	58	60	55	57	61	61	60	58	62	57	57	58	57	55	55	57							
25	65	56	62	56	56	61	61	60	62	59	57	58	60	58	57	56	55							
26	61	58	59	57	56	61	61	60	59	57	58	59	62	58	57	55	56							
27	63	57	58	55	57	62	61	58	57	56	58	60	59	57	57	55	57							
28	63	60	59	55	58	62	61	59	58	57	58	58	59	57	54	57	57							
29	63	62	60	56	59	62	61	60	60	---	60	40	60	60	57	55	59							
30	62	60	59	55	59	62	62	59	58	---	59	56	61	57	57	55	58							
31	59	---	59	55	---	64	---	59	58	---	57	---	60	---	54	54	---							
MEAN	---	60	59	55	57	61	61	60	59	60	58	57	57	59	56	54	56							
MAX	85	80	89	70	66	69	73	78	71	73	72	71	67	71	77	65	64							
MIN	57	44	55	47	53	56	59	58	55	41	41	33	48	55	43	50	51							

Table 22. Vertical profile water-quality data at Mountain Island Lake site 01, May 1996 through September 1997

CATAWBA RIVER AT NC 73 NEAR HICKS CROSSROADS, NC (MTN01)

[Site 01 is at latitude 35°25'39", longitude 80°57'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214264800. EST, eastern standard time; m, meter; μ S/cm, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance (μ S/cm) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1996							
May 28	1037	0.50	55	6.8	19.5	7.0	79
28	1036	1.0	55	6.8	19.5	7.0	79
28	1034	2.4	55	6.7	19.0	6.9	77
28	1033	3.4	55	6.8	19.0	6.9	77
June 11	1007	.50	59	6.8	23.5	6.6	79
11	1004	1.2	58	6.8	22.5	6.6	79
11	1003	2.2	56	6.8	22.5	6.5	77
11	0959	3.2	56	6.8	22.5	6.4	76
25	1010	.50	55	6.8	26.5	6.5	83
25	1008	1.5	55	6.8	26.5	6.5	82
25	1003	2.5	55	6.8	26.5	6.5	82
25	1001	3.5	55	6.8	26.5	6.4	82
July 10	1011	.50	57	6.8	26.5	6.0	77
10	1009	1.3	57	6.8	26.5	6.0	77
10	1008	2.3	57	6.8	26.5	6.0	77
10	1006	3.3	57	6.8	26.5	6.0	77
24	1005	.50	58	6.7	28.0	5.8	76
24	1003	1.4	58	6.7	28.0	5.8	76
24	1001	2.4	58	6.7	28.0	5.8	76
24	0959	3.4	58	6.7	28.0	5.8	76
Aug. 07	0937	.50	58	6.7	28.0	5.3	69
07	0934	1.3	58	6.7	28.0	5.3	69
07	0930	2.3	58	6.7	28.0	5.3	69
07	0922	3.3	58	6.7	28.0	5.2	68
Sept. 30	1104	.50	62	6.8	23.5	7.2	86
30	1102	1.1	62	6.8	24.0	7.2	87
30	1059	2.1	62	6.8	24.0	7.2	87
30	1057	3.1	62	6.8	23.5	7.1	86
Oct. 22	0940	.50	61	7.0	19.5	7.4	83
22	0937	1.2	61	7.0	19.5	7.4	83
22	0935	2.2	61	7.0	19.5	7.4	83
22	0932	3.2	61	7.0	19.5	7.4	83
Nov. 19	1054	.50	58	7.2	14.5	8.8	88
19	1050	1.4	58	7.1	14.5	8.7	88
19	1047	2.4	60	7.1	14.5	8.6	87
19	1044	3.4	60	7.1	14.5	8.7	87
Dec. 17	1344	.50	56	7.1	12.5	9.2	89
17	1342	.90	56	7.1	12.5	9.2	89
17	1340	1.9	56	7.1	12.5	9.2	89
17	1337	2.9	56	7.0	12.5	9.2	88
17	1334	3.9	56	7.1	12.5	9.2	88

Table 22. Vertical profile water-quality data at Mountain Island Lake site 01, May 1996 through September 1997—Continued

CATAWBA RIVER AT NC 73 NEAR HICKS CROSSROADS, NC (MTN01)

[Site 01 is at latitude 35°25'39", longitude 80°57'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214264800. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1997							
Jan. 29	1306	0.50	58	7.2	11.5	10.1	94
	29	1304	1.4	58	7.2	11.5	94
	29	1302	2.4	57	7.2	11.5	94
	29	1259	3.4	57	7.2	11.5	94
Feb. 26	1115	.50	55	6.9	9.0	9.9	87
	26	1113	1.6	55	9.0	9.9	87
	26	1111	2.6	55	9.0	9.8	87
	26	1108	3.6	55	9.0	9.8	87
	26	1106	4.6	55	9.0	9.8	87
Mar. 19	1103	.50	56	6.9	13.0	9.3	91
	19	1102	1.2	56	13.0	9.3	91
	19	1100	2.2	56	13.0	9.3	91
	19	1058	3.2	56	13.0	9.3	91
	19	1055	4.2	56	13.0	9.3	91
Apr. 03	0940	.50	55	6.9	14.0	8.7	86
	03	0939	1.5	55	14.0	8.7	86
	03	0937	2.5	55	14.0	8.7	86
	03	0936	3.5	55	14.0	8.7	86
	03	0934	4.5	56	14.0	8.7	86
	30	0858	.50	55	16.0	8.5	89
	30	0857	1.3	55	16.0	8.6	90
	30	0855	2.3	55	16.0	8.6	89
	30	0853	3.3	55	16.0	8.6	90
	30	0852	4.3	55	16.0	8.6	90
May 20	0902	.50	51	6.8	18.5	8.0	88
	20	0900	1.5	51	18.5	8.1	88
	20	0857	2.5	51	18.5	8.1	88
	20	0854	3.5	51	18.5	8.1	89
June 04	0854	.50	58	6.9	21.0	7.5	87
	04	0852	1.3	58	21.0	7.5	87
	04	0850	2.3	58	21.0	7.5	87
	04	0847	3.3	58	21.0	7.5	87
	17	0858	.50	57	20.0	6.8	77
	17	0856	1.5	57	20.0	6.9	78
	17	0854	2.5	58	20.0	6.8	77
	17	0852	3.5	58	20.0	6.8	77
	30	0856	.50	54	25.0	6.5	81
	30	0854	1.2	54	24.5	6.5	80
	30	0852	2.2	54	24.5	6.6	80
	30	0850	3.2	54	24.5	6.5	80

Table 22. Vertical profile water-quality data at Mountain Island Lake site 01, May 1996 through September 1997—Continued

CATAWBA RIVER AT NC 73 NEAR HICKS CROSSROADS, NC (MTN01)

[Site 01 is at latitude 35°25'39", longitude 80°57'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214264800. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1997 (Continued)							
July 17	0817	0.50	53	6.6	26.5	5.5	70
17	0815	1.1	53	6.6	26.5	5.5	70
17	0812	2.1	53	6.5	26.5	5.5	70
17	0809	3.1	53	6.5	26.5	5.5	70
30	1018	.50	53	6.6	28.5	5.5	73
30	1016	1.6	53	6.6	28.5	5.5	73
30	1015	2.6	53	6.6	28.5	5.6	73
30	1013	3.6	53	6.6	28.5	5.6	73
Aug. 21	0808	.50	49	6.5	27.5	4.8	62
21	0806	1.4	49	6.5	27.5	4.8	63
21	0805	2.4	49	6.5	27.5	4.6	59
21	0804	3.4	49	6.5	27.5	4.5	58
Sept. 09	0932	.50	54	6.7	26.5	6.0	76
09	0931	1.5	54	6.7	26.0	6.3	81
09	0930	2.5	54	6.7	26.0	6.8	86
09	0929	3.5	54	6.7	26.0	6.9	88
26	0847	.50	55	6.7	24.5	5.6	69
26	0846	1.6	55	6.7	24.5	5.6	69
26	0845	2.6	55	6.7	24.0	5.6	68
26	0844	3.6	57	6.7	24.0	5.4	67

Table 23. Vertical profile water-quality data at Mountain Island Lake site 02, May 1996 through September 1997

CATAWBA RIVER NEAR ALLISON FERRY, NC (MTN02)

[Site 02 is at latitude 35°24'00", longitude 80°57'18", Mecklenburg County, U.S. Geological Survey downstream order number 0214264813. EST, eastern standard time; m, meter; $\mu\text{S/cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S/cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1996							
May 28	1150	0.50	56	6.9	22.0	7.4	88
28	1148	1.0	56	6.9	21.5	7.3	85
28	1147	2.0	56	6.8	21.5	7.2	84
28	1146	3.0	56	6.8	21.5	7.1	83
28	1144	4.0	56	6.8	21.5	7.1	83
28	1142	4.7	55	6.8	21.0	7.1	83
28	1141	5.4	55	6.8	21.0	7.1	83
June 11	1117	.50	56	6.8	24.0	6.9	85
11	1116	1.0	56	6.8	24.0	6.9	84
11	1114	2.0	56	6.8	22.5	6.9	82
11	1112	3.0	56	6.8	22.5	6.9	82
11	1111	4.0	56	6.8	22.5	6.7	80
11	1110	5.0	56	6.8	22.5	6.7	79
25	1114	.50	55	6.8	26.5	6.5	83
25	1112	1.2	55	6.8	26.5	6.5	83
25	1110	2.2	55	6.8	26.5	6.5	83
25	1108	3.2	55	6.7	26.5	6.5	83
25	1106	4.2	55	6.8	26.5	6.5	82
25	1104	5.2	55	6.7	26.5	6.5	82
25	1102	6.2	55	6.8	26.5	6.5	82
July 10	1108	.50	57	6.8	27.5	6.1	79
10	1104	1.4	57	6.8	27.5	6.1	79
10	1101	2.4	57	6.8	27.5	6.1	80
10	1057	3.4	57	6.8	27.0	6.1	78
10	1055	4.4	57	6.8	27.0	6.0	78
24	1100	.50	58	6.9	28.5	6.5	85
24	1058	.80	58	6.9	28.5	6.5	85
24	1056	1.8	58	6.9	28.0	6.4	84
24	1054	2.8	58	6.8	28.0	6.3	83
24	1052	3.8	58	6.8	28.0	6.3	82
24	1048	4.8	58	6.8	28.0	6.2	82
24	1045	5.8	58	6.8	28.0	6.2	81
Aug. 07	1053	.50	58	6.7	28.0	5.8	76
07	1050	.70	58	6.7	28.0	5.8	75
07	1047	1.7	58	6.7	28.0	5.8	75
07	1044	2.7	58	6.7	28.0	5.8	75
07	1041	3.7	58	6.7	28.0	5.7	75
07	1037	4.7	59	6.7	28.0	5.7	74
Sept. 30	1147	.50	62	6.9	23.0	7.4	88
30	1144	.90	62	6.9	23.0	7.4	88
30	1142	1.9	62	6.9	23.0	7.4	88
30	1139	2.9	62	6.9	23.0	7.4	87
30	1138	3.9	62	6.8	23.0	7.4	87
30	1135	4.9	62	6.8	23.0	7.4	87

Table 23. Vertical profile water-quality data at Mountain Island Lake site 02, May 1996 through September 1997—Continued

CATAWBA RIVER NEAR ALLISON FERRY, NC (MTN02)

[Site 02 is at latitude 35°24'00", longitude 80°57'18", Mecklenburg County, U.S. Geological Survey downstream order number 0214264813. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1996 (Continued)							
Oct. 22	1040	0.50	61	6.9	19.5	7.6	86
	22 1035	.90	61	6.9	19.5	7.6	85
	22 1028	1.9	61	6.9	19.5	7.6	85
	22 1027	2.9	61	6.9	19.5	7.6	85
	22 1024	3.9	61	6.9	19.5	7.6	85
	22 1023	4.9	61	6.9	19.5	7.6	85
Nov. 19	1201	.50	58	7.2	15.0	8.9	90
	19 1158	1.5	58	7.2	14.5	8.9	90
	19 1156	2.5	58	7.2	14.5	8.9	90
	19 1150	3.5	59	7.2	14.5	8.8	89
	19 1148	4.5	59	7.2	14.5	8.8	89
	19 1144	5.5	59	7.2	14.5	8.8	89
Dec. 17	1433	.50	56	7.0	12.0	9.1	87
	17 1431	1.2	56	7.0	12.0	9.1	87
	17 1429	2.2	56	7.0	12.0	9.1	87
	17 1426	3.2	56	7.0	12.0	9.1	88
	17 1424	4.2	56	7.0	12.0	9.1	87
	17 1421	5.2	56	7.0	12.0	9.1	87
1997							
Jan. 29	1434	0.50	58	7.1	11.0	10.1	93
	29 1432	1.1	58	7.1	11.0	10.1	93
	29 1430	2.1	58	7.1	11.0	10.1	93
	29 1428	3.1	57	7.1	11.0	10.1	93
	29 1426	4.1	57	7.1	11.0	10.2	93
	29 1422	5.1	57	7.0	11.0	10.2	93
Feb. 26	1455	.50	55	6.9	9.0	9.9	87
	26 1453	1.4	55	6.9	9.0	9.9	87
	26 1451	2.4	55	6.9	9.0	9.9	87
	26 1450	3.4	55	6.9	9.0	9.9	87
	26 1448	4.4	55	6.9	9.0	9.9	87
	26 1447	5.4	55	6.9	9.0	9.9	87
Mar. 19	1201	.50	56	6.9	12.5	9.2	88
	19 1157	1.5	55	6.9	12.5	9.2	88
	19 1155	2.5	55	6.9	12.5	9.2	88
	19 1153	3.5	55	6.9	12.5	9.2	88
	19 1148	4.5	56	6.8	12.5	9.2	88
	19 1145	5.5	56	6.9	12.5	9.2	88

Table 23. Vertical profile water-quality data at Mountain Island Lake site 02, May 1996 through September 1997—Continued

CATAWBA RIVER NEAR ALLISON FERRY, NC (MTN02)

[Site 02 is at latitude 35°24'00", longitude 80°57'18", Mecklenburg County, U.S. Geological Survey downstream order number 0214264813. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1997 (Continued)							
Apr. 03	1030	0.50	55	6.9	14.0	8.6	85
	03	.80	55	6.9	14.0	8.7	85
	03	1.8	55	6.9	14.0	8.6	85
	03	1025	2.8	6.9	14.0	8.6	85
	03	1024	3.8	6.9	14.0	8.7	85
	03	1022	4.8	6.9	14.0	8.6	85
	03	1021	5.8	6.9	14.0	8.7	85
	03	1019	6.8	6.9	14.0	8.7	85
	30	0958	.50	6.9	16.0	8.5	88
	30	0956	1.0	6.9	16.0	8.4	88
	30	0954	2.0	6.9	16.0	8.4	88
	30	0952	3.0	6.9	16.0	8.4	88
	30	0950	4.0	6.9	16.0	8.4	88
	30	0948	5.0	6.9	16.0	8.4	88
	30	0945	6.0	6.9	16.0	8.4	88
	30	0943	7.0	6.9	16.0	8.4	88
May 20	1000	.50	51	6.7	18.5	8.0	88
	20	0957	1.3	6.4	18.5	8.0	88
	20	0955	2.3	6.4	18.5	8.0	88
	20	0952	3.3	6.3	18.5	8.0	87
	20	0950	4.3	6.4	18.0	8.0	88
	20	0947	5.3	6.4	18.0	8.0	87
June 04	0937	.50	57	6.8	20.5	7.5	86
	04	0935	1.0	6.8	20.5	7.5	86
	04	0933	2.0	6.8	20.5	7.5	86
	04	0931	3.0	6.8	20.5	7.6	86
	04	0929	4.0	6.8	20.5	7.5	86
	04	0926	5.0	6.8	20.5	7.5	86
	17	1003	.50	58	21.0	7.0	80
	17	1000	1.5	58	21.0	6.9	80
	17	0957	2.5	58	21.0	6.8	79
	17	0954	3.5	58	21.0	6.8	79
	17	0945	4.5	58	21.0	6.8	79
	30	0921	.50	54	24.5	6.9	85
	30	0920	1.0	54	24.5	6.9	85
	30	0917	2.0	54	24.0	6.8	82
	30	0915	3.0	54	24.0	6.5	79
	30	0913	4.0	54	23.5	6.4	77
	30	0910	5.0	54	23.5	6.2	75

Table 23. Vertical profile water-quality data at Mountain Island Lake site 02, May 1996 through September 1997—Continued

CATAWBA RIVER NEAR ALLISON FERRY, NC (MTN02)

[Site 02 is at latitude 35°24'00", longitude 80°57'18", Mecklenburg County, U.S. Geological Survey downstream order number 0214264813. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1997 (Continued)							
July 17	0849	0.50	53	6.8	27.5	6.3	82
17	0847	1.2	53	6.7	27.5	6.3	82
17	0844	2.2	53	6.7	27.5	6.3	81
17	0841	3.2	53	6.7	27.5	6.3	81
17	0838	4.2	53	6.7	27.5	6.3	81
17	0835	5.2	53	6.7	27.5	6.3	81
30	1102	.50	53	6.7	28.5	5.7	75
30	1101	1.1	53	6.6	28.5	5.7	75
30	1059	2.1	53	6.6	28.5	5.6	74
30	1057	3.1	53	6.6	28.5	5.6	74
30	1054	4.1	53	6.6	28.5	5.6	74
30	1053	5.1	53	6.6	28.5	5.6	74
Aug. 21	0827	.50	49	6.6	28.0	5.2	68
21	0826	1.1	49	6.6	28.0	5.2	68
21	0825	2.1	49	6.6	28.0	5.2	68
21	0824	3.1	49	6.6	28.0	5.1	67
21	0823	4.1	49	6.6	28.0	5.1	67
21	0822	5.1	49	6.6	28.0	5.1	67
Sept. 09	1029	.50	54	6.7	26.5	5.7	73
09	1028	1.2	54	6.7	26.5	5.6	72
09	1027	2.2	54	6.7	26.5	5.6	72
09	1026	3.2	54	6.7	26.5	5.6	71
09	1025	4.2	54	6.7	26.5	5.6	71
09	1024	5.2	54	6.7	26.5	5.6	71
26	0918	.50	55	6.8	23.5	6.6	80
26	0917	1.2	55	6.8	23.5	6.6	80
26	0916	2.2	55	6.8	23.5	6.6	80
26	0915	3.2	55	6.8	23.5	6.6	80
26	0914	4.2	55	6.8	23.5	6.6	80
26	0913	5.2	55	6.8	23.5	6.6	80

Table 24. Vertical profile water-quality data at Mountain Island Lake site 03, May 1996 through September 1997

CATAWBA RIVER ABOVE JOHNSON CREEK NEAR ALLISON FERRY, NC (MTN03)

[Site 03 is at latitude 35°22'54", longitude 80°58'54", Mecklenburg County, U.S. Geological Survey downstream order number 0214264830. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1996							
May 28	1220	0.50	56	6.9	22.5	7.4	89
28	1219	1.0	56	6.9	22.5	7.4	88
28	1217	2.0	56	6.9	22.0	7.4	88
28	1216	3.0	56	6.9	22.0	7.5	88
28	1215	4.0	56	6.9	22.0	7.5	88
28	1213	4.5	56	6.9	22.0	7.4	88
28	1212	5.5	56	6.9	22.0	7.4	87
June 11	1157	.50	57	6.7	24.0	6.8	82
11	1155	1.4	56	6.7	22.5	6.6	79
11	1153	2.4	56	6.7	22.5	6.5	77
11	1151	3.4	56	6.7	22.5	6.5	77
11	1150	4.4	56	6.7	22.5	6.5	77
11	1148	5.4	56	6.7	22.5	6.5	77
25	1208	.50	55	6.8	26.5	6.5	83
25	1206	.80	55	6.8	26.5	6.5	83
25	1204	1.8	55	6.8	26.5	6.5	83
25	1203	2.8	55	6.8	26.5	6.5	83
25	1201	3.8	55	6.8	26.5	6.4	82
25	1159	4.8	55	6.8	26.5	6.4	82
25	1157	5.8	55	6.8	26.5	6.4	82
July 10	1201	.50	57	6.8	27.5	6.3	82
10	1155	1.5	57	6.8	27.5	6.1	80
10	1151	2.5	57	6.7	27.5	6.1	79
10	1146	3.5	57	6.7	27.5	6.0	78
10	1144	4.5	57	6.7	27.5	6.0	77
10	1142	5.5	59	6.7	27.0	5.7	74
24	1138	.50	57	6.7	28.0	6.2	82
24	1134	.80	57	6.7	28.0	6.2	82
24	1131	1.8	57	6.7	28.0	6.3	82
24	1129	2.8	57	6.7	27.5	6.2	81
24	1126	3.8	57	6.7	27.5	6.2	80
24	1123	4.8	58	6.7	27.5	6.2	81
24	1119	5.8	58	6.7	27.5	6.2	81
Aug. 07	1133	.50	58	6.7	28.5	5.9	78
07	1130	1.0	58	6.7	28.5	5.9	77
07	1127	2.0	58	6.7	28.5	5.7	75
07	1125	3.0	58	6.7	28.5	5.7	74
07	1123	4.0	59	6.7	28.0	5.6	73
07	1118	5.0	61	6.6	28.0	5.4	70
Sept. 30	1215	.50	61	6.8	23.0	7.5	89
30	1212	1.5	61	6.9	23.0	7.5	89
30	1209	2.5	61	6.8	23.0	7.5	89
30	1204	3.5	61	6.9	23.0	7.5	88
30	1202	4.5	63	6.8	22.5	7.4	87
30	1200	5.5	66	6.8	22.0	7.4	87

Table 24. Vertical profile water-quality data at Mountain Island Lake site 03, May 1996 through September 1997—Continued

CATAWBA RIVER ABOVE JOHNSON CREEK NEAR ALLISON FERRY, NC (MTN03)

[Site 03 is at latitude 35°22'54", longitude 80°58'54", Mecklenburg County, U.S. Geological Survey downstream order number 0214264830. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1996 (Continued)							
Oct. 22	1116	0.50	61	7.0	19.5	7.8	88
	22	1.0	60	7.0	19.5	7.8	87
	22	1112	2.0	61	7.0	7.8	87
	22	1109	3.0	60	7.0	7.8	87
	22	1107	4.0	61	6.9	7.8	87
	22	1103	5.0	61	6.9	7.8	87
	22	1100	6.0	61	7.0	7.8	87
Nov. 19	1245	.50	58	7.2	15.0	9.1	92
	19	1242	1.4	58	7.2	9.1	92
	19	1239	2.4	58	7.2	9.0	92
	19	1234	3.4	58	7.1	8.9	90
	19	1229	4.4	59	7.1	8.8	89
	19	1227	5.4	60	7.0	8.8	88
	19	1222	6.4	61	7.0	8.8	88
Dec. 17	1504	.50	56	7.0	12.0	9.2	88
	17	1501	1.4	56	7.0	9.2	88
	17	1459	2.4	56	7.0	9.1	88
	17	1457	3.4	56	7.0	9.1	88
	17	1455	4.4	56	7.0	9.1	87
	17	1454	5.4	56	7.0	9.1	88
	17	1452	6.4	56	7.0	9.1	88
1997							
Jan. 29	1508	0.50	58	7.0	11.0	10.3	93
	29	1505	1.5	58	7.0	10.5	93
	29	1503	2.5	57	7.0	10.5	93
	29	1501	3.5	57	7.0	10.5	93
	29	1459	4.5	57	7.0	10.5	93
Feb. 26	1532	.50	55	6.9	9.0	9.9	88
	26	1530	1.5	55	6.8	9.9	88
	26	1529	2.5	55	6.8	9.9	88
	26	1527	3.5	55	6.8	9.9	88
	26	1525	4.5	55	6.9	9.9	87
	26	1523	5.5	55	6.9	9.9	87
	26	1521	6.5	55	6.9	9.9	87
Mar. 19	1233	.50	55	6.9	12.5	9.2	88
	19	1230	1.3	55	6.8	9.2	88
	19	1227	2.3	55	6.8	9.2	88
	19	1224	3.3	55	6.8	9.2	88
	19	1222	4.3	55	6.8	9.2	88
	19	1218	5.3	55	6.9	9.2	88

Table 24. Vertical profile water-quality data at Mountain Island Lake site 03, May 1996 through September 1997—Continued

CATAWBA RIVER ABOVE JOHNSON CREEK NEAR ALLISON FERRY, NC (MTN03)

[Site 03 is at latitude 35°22'54", longitude 80°58'54", Mecklenburg County, U.S. Geological Survey downstream order number 0214264830. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1997 (Continued)							
Apr. 03	1113	0.50	55	6.9	14.0	8.7	86
	1111	.80	55	6.9	14.0	8.7	86
	1109	1.8	55	6.9	14.0	8.7	86
	1106	2.8	55	6.9	14.0	8.7	86
	1042	.50	53	6.7	17.0	8.2	87
	1037	.80	54	6.9	16.5	8.4	89
	1035	1.8	54	6.9	16.5	8.5	89
	1032	2.8	54	6.9	16.5	8.4	89
	1030	3.8	54	6.9	16.5	8.4	89
	1027	4.8	54	6.8	16.5	8.4	89
	1023	5.8	54	6.9	16.5	8.4	88
	May 20	1033	.50	51	6.4	18.0	7.7
1031		1.5	51	6.4	18.0	7.7	84
1028		2.5	51	6.4	18.0	7.7	83
1026		3.5	51	6.3	18.0	7.6	83
1023		4.5	51	6.3	18.0	7.6	83
1021		5.5	51	6.7	18.0	7.6	82
1019		6.5	52	6.6	18.0	7.5	82
June 04	1010	.50	57	6.7	19.5	7.5	84
	1007	.80	56	6.7	19.5	7.4	84
	1005	1.8	56	6.7	19.5	7.4	83
	1002	2.8	56	6.7	19.5	7.4	83
	1000	3.8	58	6.7	19.0	7.2	81
	0958	4.8	58	6.7	19.0	7.2	80
	0954	5.8	61	6.7	18.5	7.0	77
	17 1033	.50	58	6.7	21.0	7.0	81
	17 1031	1.5	58	6.7	21.0	7.0	81
	17 1028	2.5	58	6.7	21.0	7.0	81
	17 1025	3.5	59	6.7	21.0	7.0	81
	17 1024	4.5	59	6.7	21.0	7.0	81
	17 1022	5.5	59	6.7	21.0	7.0	81
	30 0949	.50	54	6.7	25.5	7.0	87
	30 0947	1.6	54	6.7	25.5	7.0	87
	30 0944	2.6	54	6.8	25.5	7.1	88
	30 0940	3.6	54	6.7	25.5	6.9	86
30 0937	4.6	56	6.7	25.0	6.7	83	
30 0934	5.6	58	6.7	25.0	6.5	81	
July 17	0917	.50	53	6.7	27.5	6.3	82
	0916	1.0	53	6.7	27.5	6.3	81
	0912	2.0	53	6.7	27.5	6.2	80
	0910	3.0	53	6.7	27.5	6.2	80
	0908	4.0	54	6.7	27.5	6.1	78
	0905	5.0	58	6.6	27.0	5.6	72
	0903	6.0	59	6.6	27.0	5.7	72

Table 24. Vertical profile water-quality data at Mountain Island Lake site 03, May 1996 through September 1997—Continued

CATAWBA RIVER ABOVE JOHNSON CREEK NEAR ALLISON FERRY, NC (MTN03)

[Site 03 is at latitude 35°22'54", longitude 80°58'54", Mecklenburg County, U.S. Geological Survey downstream order number 0214264830. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1997 (Continued)								
(Continued)								
July	30	1134	0.50	53	6.6	28.5	5.6	74
	30	1132	1.0	53	6.6	28.5	5.6	74
	30	1129	2.0	53	6.6	28.5	5.6	74
	30	1127	3.0	53	6.6	28.5	5.6	73
	30	1125	4.0	55	6.5	27.5	5.5	70
	30	1122	5.0	58	6.6	26.5	5.7	72
Aug.	21	0852	.50	49	6.7	28.5	5.8	77
	21	0851	1.0	49	6.6	28.5	5.7	75
	21	0850	2.0	49	6.6	28.5	5.7	75
	21	0849	3.0	49	6.7	28.0	5.8	76
	21	0848	4.0	49	6.7	28.0	5.7	75
	21	0847	5.0	49	6.6	28.0	5.6	73
	21	0846	6.0	51	6.6	28.0	5.4	71
Sept.	09	1054	.50	54	6.7	26.5	5.6	72
	09	1053	1.0	54	6.6	26.5	5.6	72
	09	1052	2.0	54	6.6	26.5	5.6	71
	09	1051	3.0	54	6.6	26.5	5.6	71
	09	1050	4.0	54	6.6	26.5	5.5	70
	09	1049	5.0	54	6.6	26.5	5.5	70
	09	1048	6.0	54	6.6	26.0	5.5	70
	26	0945	.50	53	6.8	23.0	6.7	81
	26	0944	1.0	53	6.8	23.0	6.7	80
	26	0943	2.0	53	6.7	23.0	6.6	79
	26	0942	3.0	52	6.7	22.5	6.6	79
	26	0941	4.0	51	6.6	22.0	6.4	76
	26	0940	5.0	52	6.6	22.0	6.3	73
	26	0939	6.0	52	6.6	21.5	6.2	73

Table 25. Vertical profile water-quality data at Mountain Island Lake site 04, May 1996 through September 1997

CATAWBA RIVER AT POWER PLANT NEAR SHUFFLETOWN, NC (MTN04)

[Site 04 is at latitude 35°21'50", longitude 80°58'29", Mecklenburg County, U.S. Geological Survey downstream order number 0214264900. EST, eastern standard time; m, meter; μ S/cm, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance (μ S/cm) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1996							
May 28	1249	0.50	58	7.0	24.0	7.5	92
	28	1.0	58	6.9	23.5	7.6	92
	28	1.5	57	6.9	23.0	7.5	90
	28	2.5	56	6.9	22.0	7.6	90
June 11	1225	.50	57	6.7	24.0	6.7	82
	11	.80	57	6.7	24.0	6.8	83
	11	1.8	57	6.8	23.5	6.9	83
	25	1.238	55	6.8	26.5	6.4	82
	25	1.235	55	6.7	26.0	6.4	81
	25	1.233	55	6.8	26.0	6.3	81
	25	1.229	55	6.8	26.0	6.3	80
July 10	1237	.50	57	6.8	28.0	6.3	82
	10	1.3	56	6.8	27.5	6.2	81
	10	2.3	57	6.8	27.0	6.3	81
	24	1.223	58	6.9	28.5	6.7	88
	24	1.221	58	6.9	28.5	6.6	87
	24	1.217	58	6.8	28.0	6.5	85
Aug. 07	1215	.50	58	6.8	28.5	6.0	79
	07	1.5	58	6.7	28.5	6.0	78
	07	2.5	58	6.8	28.5	6.1	80
Sept. 30	1234	.50	61	6.9	23.0	7.5	89
	30	1.6	61	6.8	23.0	7.6	90
	30	2.6	61	6.9	23.0	7.8	93
Oct. 22	1251	.50	61	7.0	20.0	7.8	88
	22	1.2	61	7.0	19.5	7.8	87
	22	2.2	61	7.0	19.5	7.8	87
Nov. 19	1313	.50	58	7.2	15.5	9.0	92
	19	1.3	58	7.2	15.5	9.0	92
	19	2.3	58	7.2	15.0	9.0	92
Dec. 17	1529	.50	56	7.1	12.5	9.2	88
	17	1.1	56	7.0	12.5	9.2	88
	17	2.1	56	7.0	12.5	9.2	88
	17	3.1	56	7.0	12.5	9.2	88
1997							
Jan. 29	1539	0.50	57	7.0	9.0	10.3	90
	29	1.3	57	7.0	9.0	10.3	90
	29	2.3	57	7.0	9.0	10.4	91
Feb. 26	1552	.50	55	6.9	9.0	10.0	88
	26	1.6	55	6.9	9.0	10.0	88
	26	2.6	55	6.9	9.0	9.9	88

Table 25. Vertical profile water-quality data at Mountain Island Lake site 04, May 1996 through September 1997—Continued

CATAWBA RIVER AT POWER PLANT NEAR SHUFFLETOWN, NC (MTN04)

[Site 04 is at latitude 35°21'50", longitude 80°58'29", Mecklenburg County, U.S. Geological Survey downstream order number 0214264900. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1997 (Continued)							
Mar. 19	1306	0.50	55	6.9	12.5	9.3	89
19	1304	1.5	56	6.9	12.5	9.3	89
19	1302	2.5	56	6.9	12.5	9.3	89
Apr. 03	1141	.50	55	6.8	14.0	8.6	86
03	1137	.80	55	6.8	14.0	8.6	85
03	1134	1.8	55	6.9	14.0	8.6	85
03	1132	2.8	55	6.9	14.0	8.6	85
30	1113	.50	53	6.7	16.5	8.2	87
30	1110	1.6	53	6.7	16.5	8.2	86
30	1102	2.6	53	6.7	16.5	8.2	87
May 20	1059	.50	51	6.7	18.0	7.6	82
20	1054	1.5	51	6.6	18.0	7.6	83
20	1051	2.5	51	6.6	18.0	7.6	83
June 04	1029	.50	57	6.8	19.5	7.6	86
04	1027	1.0	57	6.8	19.5	7.6	85
04	1025	2.0	57	6.8	19.5	7.6	86
17	1054	.50	58	6.8	21.0	7.0	81
17	1051	.80	58	6.7	21.0	7.0	81
17	1048	1.8	58	6.7	21.0	6.9	81
30	1007	.50	54	6.7	25.0	7.1	88
30	1005	.90	54	6.7	25.0	7.1	87
30	1002	1.9	54	6.7	25.0	7.1	87
July 17	0943	.50	53	6.7	27.5	6.2	80
17	0938	1.0	53	6.7	27.0	6.2	80
17	0934	2.0	52	6.6	27.0	6.2	79
30	1153	.50	53	6.6	28.0	5.7	75
30	1150	.90	53	6.6	28.0	5.7	75
30	1148	1.9	52	6.6	28.0	5.6	73
Aug. 21	0913	.50	49	6.7	28.5	5.9	78
21	0912	1.4	49	6.7	28.5	5.9	78
21	0911	2.4	49	6.7	28.5	5.9	78
Sept. 09	1118	.50	54	6.7	27.0	6.2	79
09	1117	.70	54	6.7	27.0	6.2	79
09	1116	1.7	54	6.7	27.0	6.1	78
09	1115	2.7	54	6.7	26.5	6.1	78
26	1012	.50	52	6.7	22.5	6.6	79
26	1009	1.5	52	6.7	22.5	6.6	79
26	1007	2.5	52	6.7	22.5	6.6	78

Table 26. Vertical profile water-quality data at Mountain Island Lake site 06, May 1996 through September 1997

CATAWBA RIVER AT MOUNTAIN ISLAND LAKE NEAR SHUFFLETOWN, NC (MTN06)

[Site 06 is at latitude 35°22'23", longitude 80°57'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214264960. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1996							
May 28	1404	0.50	64	7.2	26.5	7.9	101
	28	1402	1.0	64	7.2	26.0	100
	28	1401	2.0	61	6.9	25.5	91
	28	1400	3.0	61	6.9	25.5	92
	28	1358	4.0	64	7.0	25.5	90
	28	1357	5.1	63	6.9	25.5	90
	28	1355	6.1	65	6.9	25.5	85
June 11	1350	.50	56	6.7	24.0	6.9	84
	11	1348	1.1	56	6.7	24.0	84
	11	1347	2.1	56	6.7	24.0	84
	11	1346	3.1	56	6.7	24.0	84
	25	1427	.50	55	6.8	27.0	86
	25	1426	.80	55	6.8	27.0	86
	25	1424	1.8	55	6.8	27.0	86
	25	1422	2.8	55	6.8	27.0	86
	25	1419	3.8	55	6.8	27.0	86
July 10	1331	.50	58	6.7	27.0	5.9	76
	10	1328	1.6	60	6.7	27.0	75
	10	1326	2.6	62	6.7	27.0	75
	10	1324	3.6	62	6.7	26.5	74
	10	1322	4.6	68	6.7	26.5	73
	10	1320	5.6	63	6.7	26.5	71
	24	1321	.50	55	6.7	30.0	95
	24	1317	1.6	53	6.5	28.5	82
	24	1316	2.6	56	6.6	28.0	81
	24	1313	3.6	56	6.5	28.0	79
	24	1310	4.6	56	6.5	28.0	79
	24	1305	5.6	56	6.5	28.0	77
Aug. 07	1347	.50	55	6.6	29.0	6.2	82
	07	1344	1.3	57	6.5	29.0	81
	07	1342	2.3	60	6.6	28.5	78
	07	1340	3.3	62	6.5	28.5	76
	07	1337	4.3	63	6.6	28.5	76
	07	1335	5.3	62	6.5	28.5	76
	07	1333	6.3	65	6.5	28.5	75
Sept. 30	1255	.50	64	6.8	22.5	8.4	99
	30	1253	1.1	64	6.8	22.5	94
	30	1251	2.1	64	6.8	22.5	94
	30	1249	3.1	65	6.8	22.5	93
	30	1246	4.1	66	6.8	22.5	94

Table 26. Vertical profile water-quality data at Mountain Island Lake site 06, May 1996 through September 1997—Continued

CATAWBA RIVER AT MOUNTAIN ISLAND LAKE NEAR SHUFFLETOWN, NC (MTN06)

[Site 06 is at latitude 35°22'23", longitude 80°57'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214264960. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1996 (Continued)							
Oct. 22	1333	0.50	60	7.0	20.0	7.9	89
	22	1330	1.6	60	6.9	19.5	89
	22	1328	2.6	60	6.9	19.5	88
	22	1326	3.6	60	6.9	19.5	89
	22	1325	4.6	60	6.9	19.5	88
	22	1322	5.6	60	6.9	19.5	89
Nov. 19	1400	.50	57	7.0	16.0	8.8	92
	19	1358	1.3	58	7.1	15.5	91
	19	1356	2.3	59	7.0	15.0	89
	19	1353	3.3	60	7.0	15.0	88
	19	1350	4.3	60	7.0	15.0	88
	19	1348	5.3	60	7.0	15.0	88
Dec. 17	1625	.50	56	7.0	12.0	9.2	89
	17	1623	1.6	56	7.0	9.2	88
	17	1618	2.6	56	7.0	9.2	88
	17	1615	3.6	55	7.0	9.2	88
	17	1613	4.6	55	7.0	9.2	88
	17	1610	5.6	55	7.0	9.2	88
1997							
Jan. 29	1629	0.50	57	7.0	9.5	10.3	91
	29	1623	1.5	57	7.0	9.5	91
	29	1620	2.5	56	7.0	9.5	91
	29	1618	3.5	56	7.0	9.5	91
	29	1615	4.5	57	7.0	9.5	91
Feb. 26	1711	.50	55	6.9	9.0	9.9	88
	26	1710	.80	55	6.9	9.0	88
	26	1709	1.8	55	6.9	9.0	88
	26	1707	2.8	55	6.9	9.0	88
	26	1705	3.8	55	6.9	9.0	88
	26	1702	4.8	55	6.8	9.0	88
Mar. 19	1417	.50	56	6.9	12.5	9.3	89
	19	1410	1.5	56	6.9	12.5	89
	19	1408	2.5	56	6.9	12.5	89
	19	1405	3.5	56	6.9	12.5	89
	19	1402	4.5	56	6.9	12.5	89
Apr. 03	1222	.50	55	6.9	14.5	8.7	86
	03	1218	1.5	55	6.9	14.0	86
	03	1214	2.5	55	6.9	14.0	86
	03	1211	3.5	55	6.9	14.0	86
	03	1206	4.5	55	6.9	14.0	86
	03	1202	5.5	55	6.9	14.0	86

Table 26. Vertical profile water-quality data at Mountain Island Lake site 06, May 1996 through September 1997—Continued

CATAWBA RIVER AT MOUNTAIN ISLAND LAKE NEAR SHUFFLETOWN, NC (MTN06)

[Site 06 is at latitude 35°22'23", longitude 80°57'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214264960. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1997 (Continued)								
(Continued)								
April	30	1200	0.50	53	6.6	17.5	8.1	87
	30	1158	1.5	53	6.7	17.5	8.1	87
	30	1156	2.5	53	6.7	17.0	8.2	87
	30	1154	3.5	53	6.7	17.0	8.2	87
	30	1152	4.5	53	6.7	17.0	8.2	87
	30	1148	5.5	53	6.7	17.0	8.2	87
May	20	1204	.50	51	6.2	18.5	7.7	84
	20	1201	1.0	51	6.2	18.5	7.7	84
	20	1158	2.0	51	6.2	18.5	7.7	84
	20	1156	3.0	51	6.2	18.5	7.7	85
	20	1154	4.0	51	6.3	18.5	7.7	85
	20	1151	5.0	51	6.3	18.5	7.7	85
	20	1149	6.0	51	7.0	18.5	7.7	86
June	04	1057	.50	55	6.7	20.0	7.4	84
	04	1055	1.0	55	6.7	19.5	7.4	84
	04	1053	2.0	55	6.7	19.5	7.4	84
	04	1051	3.0	55	6.7	19.5	7.4	84
	04	1048	4.0	55	6.7	19.5	7.4	84
	04	1045	5.0	55	6.7	19.5	7.4	84
	04	1043	6.0	55	6.7	19.5	7.4	84
	17	1233	.50	57	6.7	21.5	6.9	81
	17	1231	1.3	57	6.7	21.5	6.9	81
	17	1224	2.3	57	6.7	21.5	6.9	81
	17	1220	3.3	57	6.7	21.5	7.0	81
	17	1217	4.3	58	6.7	21.5	7.0	81
	30	1030	.50	55	6.7	26.0	6.8	85
	30	1028	1.2	55	6.6	25.5	6.8	85
	30	1026	2.2	55	6.6	26.0	6.8	85
	30	1024	3.2	55	6.6	26.0	6.8	85
	30	1021	4.2	55	6.6	26.0	6.8	85
	30	1019	5.2	55	6.6	26.0	6.8	86
July	17	1017	.50	54	6.7	28.5	6.6	87
	17	1013	1.5	57	6.6	27.5	6.0	78
	17	1009	2.5	55	6.6	27.5	6.1	79
	17	1005	3.5	53	6.6	27.0	6.0	77
	17	1002	4.5	53	6.5	27.0	5.9	76
	17	0958	5.5	54	6.6	27.0	5.9	76
	17	0956	6.5	53	6.6	27.0	5.9	76
	30	1248	.50	52	6.4	27.0	5.3	67
	30	1246	.80	52	6.4	27.0	5.3	68
	30	1243	1.8	52	6.5	27.0	5.4	69
	30	1241	2.8	52	6.4	27.0	5.4	70
	30	1239	3.8	52	6.5	27.0	5.5	71
	30	1236	4.8	52	6.4	27.0	5.3	68
	30	1234	5.8	52	6.4	27.0	5.2	67

Table 26. Vertical profile water-quality data at Mountain Island Lake site 06, May 1996 through September 1997—Continued

CATAWBA RIVER AT MOUNTAIN ISLAND LAKE NEAR SHUFFLETOWN, NC (MTN06)

[Site 06 is at latitude 35°22'23", longitude 80°57'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214264960. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1997 (Continued)							
Aug. 21	0936	0.50	50	6.6	28.5	6.0	80
	21 0935	.80	50	6.7	28.5	6.3	83
	21 0934	1.8	50	6.6	28.5	6.0	80
	21 0933	2.8	50	6.6	28.5	5.9	79
	21 0932	3.8	50	6.6	28.5	6.1	81
	21 0931	4.8	51	6.5	28.5	5.7	75
	21 0930	5.8	52	6.5	28.5	5.5	72
Sept. 09	1218	.50	54	6.6	27.0	5.8	75
	09 1214	1.4	54	6.6	27.0	5.7	74
	09 1211	2.4	54	6.6	26.5	5.7	73
	09 1209	3.4	54	6.6	26.5	5.7	73
	09 1204	4.4	54	6.6	26.5	5.7	73
	09 1200	5.4	54	6.6	26.5	5.7	72
	26 1029	.50	49	6.6	22.0	6.4	76
	26 1028	1.6	49	6.6	22.0	6.5	76
	26 1027	2.6	49	6.6	22.0	6.5	77
	26 1026	3.6	49	6.6	22.0	6.5	77
	26 1025	4.6	49	6.6	22.0	6.5	77
	26 1024	5.6	49	6.6	22.0	6.5	76

Table 27. Vertical profile water-quality data at Mountain Island Lake site 07, May 1996 through September 1997

MCDOWELL CREEK NEAR SHUFFLETOWN, NC (MTN07)

[Site 07 is at latitude 35°22'22", longitude 80°56'43", Mecklenburg County, U.S. Geological Survey downstream order number 0214266024. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1996							
May 29	0829	0.50	74	7.7	26.0	8.3	105
	29 0827	1.0	76	7.6	26.0	8.0	101
	29 0826	2.0	84	7.3	25.5	7.4	93
	29 0824	2.2	88	7.2	25.5	7.2	90
	29 0820	3.2	149	7.0	23.5	5.0	60
June 11	1420	.50	60	8.0	27.5	8.8	113
	11 1417	1.8	86	6.8	25.5	5.8	72
	11 1415	.80	66	7.3	27.0	7.7	99
	25 1537	.50	72	7.9	30.5	7.6	104
	25 1535	.80	83	7.0	29.5	6.7	91
	25 1533	1.8	72	6.8	28.5	5.5	72
	25 1531	2.8	74	6.7	28.0	5.1	67
	25 1529	3.8	88	6.7	28.0	3.8	49
July 10	1406	.50	89	7.7	28.5	8.3	110
	10 1401	1.4	62	7.1	28.0	7.2	94
	10 1357	2.4	63	6.7	27.0	5.3	69
	10 1353	3.4	194	7.0	26.5	5.2	67
	24 1355	.50	66	8.3	30.5	9.0	122
	24 1351	1.0	63	6.9	30.0	6.9	93
	24 1346	2.0	61	6.7	29.5	6.6	88
	24 1343	3.0	118	6.9	29.0	5.5	73
Aug. 07	1513	.50	59	8.2	30.5	9.1	122
	07 1510	1.2	59	7.6	29.5	8.3	111
	07 1507	2.2	75	6.9	29.0	7.4	98
	07 1505	3.2	120	6.8	28.0	6.1	79
Sept. 30	1348	.50	73	7.1	23.0	8.2	97
	30 1346	1.2	73	7.0	23.0	8.3	98
	30 1344	2.2	82	7.1	22.5	8.3	98
	30 1341	3.2	134	7.0	21.0	7.6	86
Oct. 22	1401	.50	70	7.8	19.5	9.6	108
	22 1358	1.2	73	7.8	19.0	9.6	107
	22 1356	2.2	84	7.4	18.5	9.3	101
	22 1352	3.2	115	7.3	17.5	9.1	98
Nov. 19	1503	.50	61	7.3	14.5	9.6	96
	19 1501	1.5	64	7.3	14.0	9.3	93
	19 1457	2.5	73	7.2	13.0	8.9	87
	19 1453	3.5	166	7.2	12.0	8.4	80
Dec. 18	0931	.50	73	7.0	11.0	9.3	87
	18 0928	1.0	97	7.0	10.5	9.1	84
	18 0924	2.0	134	7.1	9.5	9.0	81
	18 0918	3.0	153	7.1	9.0	8.9	79
1997							
Feb. 26	1747	0.50	93	7.1	10.0	9.8	89
	26 1744	1.5	95	7.1	10.0	9.7	88
	26 1741	2.5	122	7.0	10.0	9.7	87
	26 1738	3.5	129	7.0	10.0	9.0	81

Table 27. Vertical profile water-quality data at Mountain Island Lake site 07, May 1996 through September 1997—Continued

MCDOWELL CREEK NEAR SHUFFLETOWN, NC (MTN07)

[Site 07 is at latitude 35°22'22", longitude 80°56'43", Mecklenburg County, U.S. Geological Survey downstream order number 0214266024. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1997 (Continued)							
Mar. 19	1514	0.50	153	7.2	13.5	8.3	82
19	1512	1.0	153	7.2	13.5	8.2	81
19	1509	2.0	153	7.1	13.5	8.3	81
19	1507	3.0	152	7.1	13.5	8.3	82
Apr. 03	1251	.50	69	7.4	16.5	9.9	103
03	1248	1.0	77	7.6	15.0	10.0	102
03	1242	2.0	89	7.3	15.0	9.4	95
03	1236	3.0	113	7.3	15.0	9.6	97
30	1256	.50	57	6.6	18.0	8.0	87
30	1254	1.5	64	6.5	16.5	7.1	75
30	1251	2.5	67	6.5	16.0	6.9	72
30	1249	3.5	72	6.5	15.5	6.3	64
May 20	1258	.50	116	7.1	22.5	7.3	87
20	1255	1.4	53	6.8	19.5	7.9	88
20	1251	2.4	52	6.8	19.5	7.7	86
20	1248	3.4	53	6.7	19.0	7.2	80
June 04	1121	.50	81	7.0	21.5	7.8	92
04	1118	1.2	81	7.0	21.5	7.8	92
04	1115	2.2	90	7.1	21.0	8.1	94
04	1112	3.2	130	7.0	19.5	6.5	73
17	1308	.50	101	8.6	25.5	10.5	133
17	1305	1.0	99	8.3	24.0	9.6	118
17	1303	2.0	60	6.7	21.5	6.5	76
17	1301	3.0	63	6.6	21.5	5.7	66
30	1058	.50	59	8.3	27.0	9.4	120
30	1055	1.1	59	8.5	27.0	9.5	122
30	1052	2.1	73	7.0	26.5	7.5	96
30	1047	3.1	98	7.0	26.0	7.1	89
July 17	1057	.50	67	7.3	29.5	8.0	108
17	1053	.80	77	7.5	29.0	7.9	105
17	1050	1.8	114	7.1	28.0	6.7	88
17	1047	2.8	140	7.0	28.0	5.5	72
30	1320	.50	87	6.7	28.0	5.4	71
30	1318	1.1	89	6.7	28.0	5.4	71
30	1316	2.1	98	6.8	28.0	5.4	71
30	1313	3.1	168	6.9	26.5	5.5	70
Aug. 21	1009	.50	66	8.0	29.5	8.1	110
21	1006	1.4	79	7.4	29.0	7.3	98
21	1004	2.4	91	7.4	29.0	7.4	99
21	1002	3.4	192	7.3	26.5	6.3	81
Sept. 09	1234	.50	67	8.6	27.5	9.5	124
09	1233	1.1	71	8.2	27.0	8.8	114
09	1232	2.1	87	8.0	27.0	8.8	113
09	1231	3.1	161	7.5	26.0	7.7	97
26	1049	.50	56	7.0	22.5	7.6	91
26	1048	1.1	56	7.0	22.0	7.4	88
26	1047	2.1	61	6.8	21.5	7.0	82
26	1046	3.1	105	6.8	19.0	6.4	72

Table 28. Vertical profile water-quality data at Mountain Island Lake site 08, May 1996 through September 1997

CATAWBA RIVER NEAR MOUTH MCDOWELL CREEK NEAR SHUFFLETOWN, NC (MTN08)

[Site 08 is at latitude 35°21'53", longitude 80°56'29", Mecklenburg County, U.S. Geological Survey downstream order number 0214266026. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1996								
May	29	0930	0.50	62	7.4	26.0	7.8	99
	29	0929	1.0	62	7.3	26.0	7.8	99
	29	0928	2.0	62	7.3	26.0	7.7	97
	29	0927	3.0	62	7.2	26.0	7.5	95
	29	0925	3.9	78	6.9	25.5	5.8	73
	29	0923	4.9	65	6.6	24.0	3.8	46
June	11	1551	.50	58	6.9	25.5	7.4	92
	11	1549	.70	58	6.9	25.5	7.4	92
	11	1547	1.7	59	6.9	25.5	7.3	92
	11	1546	2.7	59	6.9	25.5	7.3	91
	11	1544	3.7	60	6.8	25.5	7.0	88
	11	1543	4.7	64	6.8	24.5	6.2	76
	25	1630	.50	56	6.9	28.0	6.8	89
	25	1628	1.4	56	6.9	27.5	6.8	89
	25	1626	2.4	55	6.9	27.5	6.8	89
	25	1624	3.4	55	6.9	27.5	6.8	89
	25	1621	4.4	55	6.9	27.5	6.8	88
	July	10	1456	.50	57	7.3	29.5	7.6
10		1454	1.0	57	7.4	29.5	7.7	104
10		1452	2.0	57	7.3	28.5	7.7	103
10		1450	3.0	58	7.3	28.5	7.7	102
10		1447	4.0	60	7.1	27.5	7.2	93
10		1444	5.0	58	6.8	27.0	6.3	82
24		1446	.50	59	8.2	31.5	8.9	123
24		1444	1.0	56	7.2	31.0	7.9	109
24		1442	2.0	56	7.2	30.5	7.9	108
24		1439	3.0	56	7.0	30.0	7.4	100
24		1437	4.0	56	6.6	29.0	6.3	84
24		1431	5.0	57	6.6	29.0	6.1	81
Aug.		07	1644	.50	56	6.8	30.0	7.2
	07	1640	1.2	59	6.7	29.5	6.7	89
	07	1638	2.2	59	6.6	29.5	6.5	86
	07	1637	3.2	58	6.6	29.5	6.4	85
	07	1634	4.2	58	6.6	29.5	6.4	85
	07	1632	5.2	58	6.6	29.5	6.4	85
Sept.	30	1415	.50	64	6.9	23.0	8.1	97
	30	1412	1.5	66	6.9	23.0	8.1	95
	30	1410	2.5	66	6.9	23.0	8.0	94
	30	1405	3.5	65	6.9	23.0	8.0	95
	30	1401	4.5	64	6.9	23.0	8.1	96
	30	1357	5.5	68	6.8	23.0	7.8	93

Table 28. Vertical profile water-quality data at Mountain Island Lake site 08, May 1996 through September 1997—Continued

CATAWBA RIVER NEAR MOUTH MCDOWELL CREEK NEAR SHUFFLETOWN, NC (MTN08)

[Site 08 is at latitude 35°21'53", longitude 80°56'29", Mecklenburg County, U.S. Geological Survey downstream order number 0214266026. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissoived oxygen (mg/L) (00300)	Dissoived oxygen (percent saturation) (00301)
1996 (Continued)							
Oct. 22	1445	0.50	63	7.0	19.5	8.4	94
	22	1443	.80	63	7.0	19.5	94
	22	1439	1.8	63	7.0	19.0	93
	22	1437	2.8	63	6.9	18.5	87
	22	1434	3.8	66	6.9	18.0	87
	22	1432	4.8	67	6.9	18.0	85
Nov. 19	1559	.50	59	7.1	15.0	9.0	92
	19	1557	.70	59	15.0	9.1	93
	19	1554	1.7	60	14.5	9.2	93
	19	1550	2.7	62	13.5	9.0	89
	19	1548	3.7	62	13.5	9.0	88
	19	1545	4.7	62	13.5	8.8	87
	19	1542	5.7	63	13.5	8.8	86
Dec. 18	1030	.50	58	6.9	12.0	9.3	88
	18	1027	1.0	58	11.5	9.3	88
	18	1025	2.0	58	11.5	9.3	88
	18	1020	3.0	59	11.5	9.3	88
	18	1018	4.0	59	11.5	9.3	88
	18	1014	5.0	59	11.5	9.3	88
1997							
Feb. 27	0903	0.50	56	6.9	9.5	10.3	92
	27	0900	.90	56	6.9	9.5	92
	27	0858	1.9	57	6.9	9.5	92
	27	0856	2.9	57	6.9	9.5	92
	27	0853	3.9	57	6.9	9.5	92
	27	0850	4.9	57	7.0	9.5	92
Mar. 19	1633	.50	58	6.9	12.5	9.4	90
	19	1630	1.6	59	12.5	9.4	90
	19	1627	2.6	59	12.5	9.4	90
	19	1625	3.6	59	12.5	9.3	89
	19	1623	4.6	59	12.5	9.3	89
	19	1620	5.6	58	12.0	9.3	89
Apr. 03	1315	.50	56	7.0	15.0	8.7	88
	03	1312	1.6	55	15.0	8.8	88
	03	1309	2.6	55	15.0	8.8	88
	03	1307	3.6	56	15.0	8.7	88
	03	1305	4.6	56	15.0	8.7	88
	03	1303	5.6	56	15.0	8.7	87
	30	1341	.50	54	17.5	8.0	86
	30	1339	1.2	54	17.5	7.9	85
	30	1336	2.2	55	17.0	7.8	83
	30	1334	3.2	55	16.5	7.7	81
	30	1332	4.2	56	16.5	7.4	78
	30	1329	5.2	57	16.5	7.3	76

Table 28. Vertical profile water-quality data at Mountain Island Lake site 08, May 1996 through September 1997—Continued

CATAWBA RIVER NEAR MOUTH MCDOWELL CREEK NEAR SHUFFLETOWN, NC (MTN08)

[Site 08 is at latitude 35°21'53", longitude 80°56'29", Mecklenburg County, U.S. Geological Survey downstream order number 0214266026. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1997 (Continued)							
May 20	1348	0.50	52	6.7	19.5	7.7	87
	20	1346	1.0	52	6.7	19.5	87
	20	1340	2.0	51	6.7	19.0	86
	20	1338	3.0	51	6.7	19.0	86
	20	1333	4.0	51	6.7	19.0	86
	20	1330	5.0	52	6.7	19.0	86
June 04	1151	.50	60	6.8	21.0	7.7	89
	04	1148	1.5	59	6.8	7.7	89
	04	1144	2.5	59	6.8	7.7	89
	04	1140	3.5	60	6.8	7.7	89
	04	1137	4.5	59	6.8	7.7	89
	04	1133	5.5	58	6.7	7.6	87
	17	1359	.50	58	6.7	7.0	82
	17	1357	.80	58	6.7	7.0	82
	17	1355	1.8	58	6.7	7.0	82
	17	1353	2.8	58	6.7	7.0	82
	17	1350	3.8	58	6.7	6.9	81
	17	1346	4.8	58	6.7	7.0	82
	30	1120	.50	55	7.0	7.6	98
	30	1116	1.6	55	6.9	7.5	95
	30	1113	2.6	55	6.7	7.0	89
	30	1110	3.6	56	6.7	6.9	87
	30	1108	4.6	73	6.7	6.1	76
July 17	1125	.50	53	6.9	30.5	6.9	95
	17	1123	.80	53	6.8	6.9	93
	17	1119	1.8	53	6.8	6.7	90
	17	1117	2.8	55	6.8	6.8	90
	17	1112	3.8	58	6.7	6.4	84
	17	1108	4.8	62	6.6	5.6	74
	30	1406	.50	54	6.6	5.8	76
	30	1403	1.5	54	6.6	5.8	76
	30	1401	2.5	54	6.6	5.9	76
	30	1359	3.5	54	6.6	5.9	76
	30	1357	4.5	54	6.6	5.9	76
	30	1354	5.5	54	6.6	5.8	76
Aug. 21	1025	.50	50	7.3	30.5	7.4	101
	21	1024	1.0	50	30.0	7.4	101
	21	1023	2.0	49	30.0	7.3	100
	21	1022	3.0	50	29.5	7.1	95
	21	1021	4.0	52	29.5	7.0	94
	21	1020	5.0	58	29.0	5.6	75

Table 28. Vertical profile water-quality data at Mountain Island Lake site 08, May 1996 through September 1997—Continued

CATAWBA RIVER NEAR MOUTH MCDOWELL CREEK NEAR SHUFFLETOWN, NC (MTN08)

[Site 08 is at latitude 35°21'53", longitude 80°56'29", Mecklenburg County, U.S. Geological Survey downstream order number 0214266026. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1997 (Continued)							
Sept. 09	1331	0.50	56	7.1	28.0	7.6	99
09	1330	.80	56	7.1	28.0	7.5	98
09	1329	1.8	56	7.1	27.5	7.5	97
09	1328	2.8	57	6.9	27.0	7.1	92
09	1327	3.8	58	6.8	27.0	6.8	88
09	1326	4.8	65	6.8	27.0	6.3	81
26	1121	.50	55	6.9	23.0	7.4	89
26	1117	1.0	55	7.0	23.0	7.4	89
26	1114	2.0	54	6.9	22.5	7.3	87
26	1111	3.0	53	6.8	22.0	6.9	81
26	1108	4.0	54	6.8	22.0	6.8	81
26	1104	5.0	69	6.6	20.5	6.2	71

Table 29. Vertical profile water-quality data at Mountain Island Lake site 09, May 1996 through September 1997

CATAWBA RIVER BELOW MCDOWELL CREEK NEAR SHUFFLETOWN, NC (MTN09)

[Site 09 is at latitude 35°21'34", longitude 80°55'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214266045. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1996								
May	29	1008	0.50	58	7.3	26.0	7.7	98
	29	1007	1.0	58	7.2	26.0	7.7	98
	29	1006	2.0	59	7.1	26.0	7.4	93
	29	1005	3.0	60	6.9	25.5	7.0	88
	29	1004	4.0	61	6.8	25.5	6.4	80
	29	1003	5.0	61	6.7	25.0	5.8	72
	29	1001	6.0	60	6.6	24.5	5.0	61
	29	0959	7.0	60	6.5	23.5	3.9	48
	29	0958	7.4	60	6.4	23.0	3.6	43
	29	0956	8.4	61	6.4	22.5	2.6	31
June	12	0841	.50	57	7.7	27.5	8.3	107
	12	0840	1.1	56	7.4	27.0	7.9	102
	12	0837	2.1	56	7.3	27.0	7.7	99
	12	0836	3.1	57	7.0	26.5	6.8	87
	12	0834	4.1	58	6.9	26.0	6.8	86
	12	0831	5.1	58	6.9	25.5	6.7	84
	12	0829	6.1	59	6.8	25.5	6.5	81
	12	0827	7.1	59	6.8	25.0	6.4	80
	12	0825	8.1	59	6.8	25.0	6.4	79
	12	0822	9.1	59	6.8	25.0	6.3	78
	12	0820	10.1	59	6.8	25.0	6.2	77
	12	0818	11.1	59	6.7	25.0	5.8	72
	12	0817	12.1	59	6.7	25.0	5.7	71
	26	0828	.50	55	6.8	27.5	6.9	90
	26	0825	1.2	55	6.8	28.0	6.9	90
	26	0823	2.2	55	6.8	27.5	6.7	87
	26	0821	3.2	55	6.8	27.5	6.7	87
	26	0819	4.2	55	6.7	27.5	6.6	86
	26	0816	5.2	55	6.7	27.5	6.6	86
	26	0814	6.2	56	6.7	27.5	6.6	85
	26	0812	7.2	56	6.7	27.5	6.6	85
	26	0807	8.2	56	6.7	27.5	6.6	85
	26	0805	9.2	56	6.7	27.5	6.5	84
	26	0802	10.2	56	6.7	27.5	6.4	83
July	11	0908	.50	57	7.3	29.0	7.5	100
	11	0905	.70	57	7.3	29.0	7.5	100
	11	0902	1.7	57	7.2	29.0	7.4	99
	11	0901	2.7	57	6.8	28.5	6.8	90
	11	0859	3.7	57	6.8	28.0	6.6	87
	11	0856	4.7	58	6.7	28.0	6.4	84
	11	0854	5.7	58	6.6	27.5	6.1	79
	11	0852	6.7	58	6.6	27.5	5.9	77
	11	0849	7.7	58	6.6	27.5	5.7	75
	11	0847	8.7	58	6.6	27.5	5.6	73
	11	0843	9.7	59	6.6	27.5	5.5	72

Table 29. Vertical profile water-quality data at Mountain Island Lake site 09, May 1996 through September 1997—Continued

CATAWBA RIVER BELOW MCDOWELL CREEK NEAR SHUFFLETOWN, NC (MTN09)

[Site 09 is at latitude 35°21'34", longitude 80°55'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214266045. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1996 (Continued)								
(Continued)								
July	24	1534	0.50	56	7.4	31.5	7.9	110
24	1532	1.0	55	55	7.3	30.5	8.1	111
24	1529	2.0	56	56	6.8	30.0	6.9	94
24	1526	3.0	56	56	6.7	30.0	6.7	91
24	1523	4.0	56	56	6.7	30.0	6.6	90
24	1521	5.0	56	56	6.7	30.0	6.7	90
24	1519	6.0	58	58	6.5	29.0	5.3	71
24	1515	7.0	58	58	6.4	29.0	5.2	69
24	1512	8.0	58	58	6.4	29.0	5.2	69
24	1509	9.0	58	58	6.5	29.0	5.3	71
24	1506	10.0	59	59	6.4	29.0	4.1	54
Aug.	08	0845	.50	55	6.9	29.5	7.2	96
08	0837	1.0	55	55	6.9	29.5	7.2	96
08	0832	2.0	55	55	6.8	29.5	6.9	93
08	0829	3.0	54	54	6.7	29.5	6.8	91
08	0827	4.0	56	56	6.7	29.5	6.7	89
08	0822	5.0	57	57	6.6	29.5	6.4	85
08	0819	6.0	56	56	6.6	29.0	6.0	79
08	0814	7.0	57	57	6.5	29.0	5.9	78
08	0809	8.0	57	57	6.5	29.0	5.6	74
08	0804	9.0	57	57	6.4	29.0	5.3	71
08	0801	10.0	57	57	6.4	29.0	4.9	65
Sept.	30	1456	.50	61	6.8	24.0	7.5	90
30	1453	.90	61	61	6.8	24.0	7.5	90
30	1451	1.9	61	61	6.8	24.0	7.5	90
30	1448	2.9	61	61	6.8	24.0	7.5	90
30	1447	3.9	61	61	6.8	24.0	7.4	90
30	1445	4.9	61	61	6.8	24.0	7.5	90
30	1442	5.9	61	61	6.8	24.0	7.6	91
30	1439	6.9	61	61	6.8	24.0	7.5	91
30	1437	7.9	61	61	6.8	24.0	7.5	90
30	1435	8.9	61	61	6.8	24.0	7.5	91
30	1433	9.9	65	65	6.7	23.5	7.2	87
Oct.	22	1533	.50	60	7.2	21.0	8.4	97
22	1530	1.5	60	60	7.1	20.5	8.3	95
22	1527	2.5	60	60	7.1	19.5	8.4	94
22	1524	3.5	62	62	7.0	18.5	8.1	90
22	1520	4.5	63	63	7.0	18.5	8.1	89
22	1517	5.5	65	65	6.9	18.5	8.0	88
22	1514	6.5	67	67	6.9	18.0	7.9	86
22	1510	7.5	67	67	6.9	18.0	7.9	86
22	1508	8.5	67	67	6.9	18.0	7.8	85
22	1505	9.5	67	67	6.9	18.0	7.8	85
22	1502	10.5	67	67	6.9	18.0	7.8	85

Table 29. Vertical profile water-quality data at Mountain Island Lake site 09, May 1996 through September 1997—Continued

CATAWBA RIVER BELOW MCDOWELL CREEK NEAR SHUFFLETOWN, NC (MTN09)

[Site 09 is at latitude 35°21'34", longitude 80°55'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214266045. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1996 (Continued)							
Nov. 19	1651	0.50	58	7.3	15.5	9.4	97
	19	1649	1.0	58	7.3	15.5	97
	19	1647	2.0	58	7.3	15.5	96
	19	1644	3.0	60	7.2	14.5	94
	19	1642	4.0	60	7.2	14.5	93
	19	1639	5.0	60	7.0	13.5	88
	19	1637	6.0	60	7.0	13.5	88
	19	1635	7.0	60	7.0	13.5	88
	19	1631	8.0	60	7.0	13.5	89
	19	1628	9.0	60	7.0	13.5	89
	19	1625	10.0	61	7.0	13.5	88
	19	1623	11.0	61	7.0	13.5	87
	19	1620	12.0	61	7.0	13.5	87
Dec. 18	1128	.50	59	6.9	12.0	9.3	88
	18	1126	1.0	59	7.0	9.3	88
	18	1124	2.0	59	6.9	9.3	88
	18	1121	3.0	58	6.9	9.3	88
	18	1119	4.0	59	6.9	9.3	88
	18	1116	5.0	58	6.9	9.3	88
	18	1114	6.0	58	6.9	9.3	88
	18	1112	7.0	59	6.9	9.3	88
	18	1110	8.0	59	6.9	9.3	88
	18	1108	9.0	59	6.9	11.5	88
	18	1105	10.0	59	6.9	11.5	88
1997							
Feb. 27	0958	0.50	57	6.9	9.5	10.2	91
	27	0956	.70	57	6.9	10.1	91
	27	0954	1.7	56	6.9	10.1	91
	27	0952	2.7	57	6.9	10.1	90
	27	0950	3.7	57	6.9	10.1	90
	27	0948	4.7	57	6.9	10.0	89
	27	0946	5.7	57	6.9	10.0	90
	27	0944	6.7	57	6.9	10.0	89
	27	0941	7.7	57	6.9	10.0	89
	27	0937	8.7	58	6.9	10.0	89
	27	0934	9.7	57	6.9	10.0	89
	27	0930	10.7	57	6.9	10.0	89
	27	0927	11.7	57	6.9	10.0	89
Mar. 20	0920	.50	57	6.9	12.5	9.5	91
	20	0917	1.2	57	6.9	12.5	91
	20	0913	2.2	57	6.9	12.5	91
	20	0907	3.2	57	6.9	12.5	91
	20	0902	4.2	57	6.9	12.5	91
	20	0900	5.2	57	6.9	12.5	91
	20	0856	6.2	57	6.9	12.5	91

Table 29. Vertical profile water-quality data at Mountain Island Lake site 09, May 1996 through September 1997—Continued

CATAWBA RIVER BELOW MCDOWELL CREEK NEAR SHUFFLETOWN, NC (MTN09)

[Site 09 is at latitude 35°21'34", longitude 80°55'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214266045. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1997 (Continued)								
(Continued)								
Mar.	20	0851	7.2	57	6.9	12.5	9.4	91
	20	0849	8.2	57	6.9	12.5	9.4	91
	20	0845	9.2	57	6.9	12.5	9.4	91
	20	0842	10.2	57	6.9	12.5	9.4	90
	20	0838	11.2	57	6.9	12.0	9.4	90
	20	0834	12.2	57	6.9	12.0	9.4	90
Apr.	03	1408	.50	56	7.0	15.5	8.7	89
	03	1406	1.4	56	7.0	15.0	8.8	88
	03	1404	2.4	56	7.0	15.0	8.8	88
	03	1402	3.4	56	7.0	15.0	8.8	89
	03	1400	4.4	56	7.0	15.0	8.8	88
	03	1358	5.4	56	7.0	15.0	8.8	88
	03	1357	6.4	56	6.9	14.5	8.7	88
	03	1355	7.4	56	6.9	15.0	8.7	88
	03	1353	8.4	56	6.9	14.5	8.7	87
	03	1350	9.4	56	6.9	14.5	8.7	87
	03	1349	10.4	56	6.9	14.5	8.7	87
	03	1347	11.4	56	7.0	14.5	8.7	87
	30	1448	.50	54	6.6	17.5	8.1	87
	30	1445	1.3	54	6.6	17.5	8.0	86
	30	1441	2.3	54	6.6	16.5	7.9	83
	30	1437	3.3	54	6.6	16.5	7.9	83
	30	1434	4.3	55	6.6	16.5	7.9	83
	30	1431	5.3	55	6.6	16.5	7.8	83
	30	1429	6.3	57	6.5	16.0	7.6	80
	30	1424	7.3	56	6.5	16.0	7.4	78
	30	1420	8.3	56	6.4	16.0	7.2	76
	30	1418	9.3	56	6.5	16.0	7.1	73
	30	1416	10.3	55	6.4	15.5	6.7	69
May	20	1440	.50	55	6.9	21.5	8.1	94
	20	1438	1.0	53	6.8	20.5	7.9	91
	20	1436	2.0	53	6.8	20.5	8.0	91
	20	1434	3.0	53	6.8	20.5	7.9	91
	20	1433	4.0	52	6.7	19.5	7.8	88
	20	1430	5.0	52	6.7	19.5	7.8	88
	20	1429	6.0	52	6.7	19.5	7.8	88
	20	1427	7.0	52	6.7	19.5	7.8	88
	20	1425	8.0	52	6.7	19.5	7.8	88
	20	1423	9.0	52	6.7	19.5	7.8	88
	20	1421	10.0	52	6.7	19.5	7.8	88
	20	1419	11.0	52	6.7	19.5	7.8	87
	20	1417	12.0	52	6.7	19.5	7.8	87
June	04	1243	.50	59	6.6	21.5	7.2	84
	04	1241	1.0	59	6.6	21.5	7.2	84
	04	1239	2.0	59	6.6	21.5	7.2	84

Table 29. Vertical profile water-quality data at Mountain Island Lake site 09, May 1996 through September 1997—Continued

CATAWBA RIVER BELOW MCDOWELL CREEK NEAR SHUFFLETOWN, NC (MTN09)

[Site 09 is at latitude 35°21'34", longitude 80°55'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214266045. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1997 (Continued)								
(Continued)								
June	04	1237	3.0	59	6.6	21.5	7.2	84
	04	1235	4.0	59	6.6	21.5	7.2	84
	04	1233	5.0	59	6.6	21.0	7.0	82
	04	1231	6.0	59	6.5	21.0	6.9	80
	04	1228	7.0	60	6.4	21.0	5.8	67
	04	1226	8.0	60	6.3	20.5	5.7	65
	04	1222	9.0	60	6.3	20.5	5.5	64
	04	1219	10.0	60	6.3	20.5	5.6	64
	04	1216	11.0	60	6.3	20.5	5.6	64
	17	1458	.50	58	6.7	22.0	7.1	84
	17	1456	1.5	58	6.7	22.5	7.1	84
	17	1454	2.5	58	6.7	22.0	7.1	84
	17	1451	3.5	58	6.7	22.0	7.0	83
	17	1449	4.5	58	6.6	22.0	7.0	83
	17	1446	5.5	58	6.6	22.0	7.0	82
	17	1444	6.5	58	6.6	22.0	7.0	82
	17	1442	7.5	58	6.6	21.5	7.0	82
	17	1440	8.5	58	6.6	22.0	7.0	82
	17	1439	9.5	58	6.6	22.0	7.0	82
	17	1435	10.5	58	6.6	22.0	7.0	83
	17	1429	11.5	59	6.6	22.0	7.0	83
	30	1203	.50	54	6.8	28.0	7.3	94
	30	1200	1.0	54	6.9	27.5	7.4	96
	30	1158	2.0	54	6.8	27.0	7.3	93
	30	1155	3.0	55	6.7	26.5	7.0	88
	30	1153	4.0	55	6.7	26.5	6.9	87
	30	1149	5.0	56	6.6	26.0	6.8	85
	30	1146	6.0	58	6.6	25.5	6.6	82
	30	1142	7.0	61	6.6	25.0	6.2	76
	30	1139	8.0	61	6.5	24.5	5.9	73
	30	1134	9.0	60	6.5	25.0	6.0	73
	30	1131	10.0	60	6.5	24.5	5.7	70
July	17	1210	.50	53	6.9	31.0	7.1	98
	17	1205	1.5	53	6.9	31.0	7.0	96
	17	1202	2.5	53	6.8	30.5	6.8	92
	17	1158	3.5	53	6.7	29.0	6.3	84
	17	1156	4.5	53	6.6	29.0	6.3	84
	17	1150	5.5	53	6.6	28.5	6.2	82
	17	1148	6.5	54	6.6	28.5	6.0	79
	17	1146	7.5	54	6.6	28.5	6.1	80
	17	1144	8.5	56	6.6	28.5	5.9	77
	17	1141	9.5	57	6.6	28.0	5.8	76
	17	1138	10.5	55	6.6	28.5	5.8	77
	30	1452	.50	52	6.6	29.0	6.1	81
	30	1450	.80	52	6.6	29.0	6.1	80
	30	1448	1.8	52	6.6	28.5	6.0	79
	30	1446	2.8	52	6.6	28.5	6.0	79

Table 29. Vertical profile water-quality data at Mountain Island Lake site 09, May 1996 through September 1997—Continued

CATAWBA RIVER BELOW MCDOWELL CREEK NEAR SHUFFLETOWN, NC (MTN09)

[Site 09 is at latitude 35°21'34", longitude 80°55'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214266045. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1997 (Continued)								
(Continued)								
July	30	1444	3.8	52	6.6	28.5	5.9	78
	30	1442	4.8	52	6.6	28.5	5.9	78
	30	1440	5.8	52	6.6	28.5	5.9	78
	30	1436	6.8	52	6.5	28.5	5.7	75
	30	1434	7.8	53	6.5	28.5	5.3	70
	30	1432	8.8	53	6.4	28.5	5.1	67
	30	1430	9.8	53	6.4	28.5	4.9	64
	30	1428	10.8	53	6.4	28.5	4.8	63
	30	1426	11.8	53	6.4	28.5	4.9	64
Aug.	21	1054	.50	49	7.1	31.0	7.2	99
	21	1053	1.6	49	7.1	30.5	7.1	98
	21	1052	2.6	49	7.0	30.5	6.9	94
	21	1051	3.6	49	7.0	30.0	6.9	94
	21	1050	4.6	49	7.1	30.0	7.1	96
	21	1049	5.6	50	6.9	30.0	6.8	92
	21	1048	6.6	50	6.9	30.0	6.8	92
	21	1047	7.6	50	6.8	29.5	6.6	89
	21	1046	8.6	50	6.8	29.5	6.4	87
	21	1045	9.6	50	6.8	29.5	6.4	87
	21	1044	10.6	50	6.8	29.5	6.4	86
Sept.	09	1429	.50	53	7.4	28.0	8.0	106
	09	1425	1.4	53	7.8	28.0	8.3	109
	09	1423	2.4	53	7.3	27.5	7.8	102
	09	1421	3.4	55	7.1	27.5	7.6	99
	09	1419	4.4	55	6.9	27.0	7.2	94
	09	1417	5.4	55	6.8	27.0	7.1	92
	09	1416	6.4	56	6.9	27.0	7.2	93
	09	1413	7.4	55	6.8	27.0	7.1	91
	09	1410	8.4	56	6.7	27.0	6.5	84
	09	1408	9.4	56	6.7	27.0	6.6	84
	09	1404	10.4	56	6.6	26.5	6.0	78
	26	1149	.50	55	6.9	23.5	7.2	87
	26	1148	.80	55	6.9	23.5	7.2	87
	26	1147	1.8	55	6.8	23.5	7.0	85
	26	1146	2.8	55	6.8	23.0	6.9	83
	26	1145	3.8	55	6.8	23.0	6.9	83
	26	1144	4.8	55	6.8	22.5	6.9	82
	26	1143	5.8	55	6.8	22.5	6.8	81
	26	1142	6.8	55	6.7	22.0	6.7	79
	26	1141	7.8	59	6.6	21.5	6.3	74
	26	1140	8.8	60	6.5	21.0	6.1	70
	26	1139	9.8	61	6.5	20.5	6.0	69
	26	1138	10.8	61	6.5	20.5	5.8	67
	26	1137	11.8	62	6.4	20.5	5.6	64

Table 30. Vertical profile water-quality data at Mountain Island Lake site 10, May 1996 through September 1997

CATAWBA RIVER ABOVE GAR CREEK NEAR SHUFFLETOWN, NC (MTN10)

[Site 10 is at latitude 35°21'22", longitude 80°56'08", Mecklenburg County, U.S. Geological Survey downstream order number 0214266055. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1996								
May	29	1102	0.50	58	7.3	26.0	7.8	99
	29	1101	1.0	57	7.3	26.0	7.8	99
	29	1059	2.0	57	7.2	26.0	7.7	98
	29	1058	3.0	57	7.1	26.0	7.3	93
	29	1057	4.0	57	6.9	25.5	6.9	87
	29	1056	5.0	59	6.7	25.0	5.7	71
	29	1055	6.0	60	6.6	24.5	5.3	66
	29	1053	7.0	60	6.5	24.0	4.9	60
	29	1052	7.8	60	6.5	23.5	4.0	49
	29	1051	8.8	60	6.4	22.0	2.1	25
June	12	0937	.50	56	7.4	27.5	7.9	102
	12	0935	.70	56	7.4	27.5	7.9	102
	12	0933	1.7	56	7.3	27.0	7.8	101
	12	0931	2.7	56	7.3	27.0	7.5	97
	12	0929	3.7	58	6.9	26.0	6.9	87
	12	0928	4.7	59	6.8	25.5	6.6	83
	12	0926	5.7	59	6.8	25.0	6.4	80
	12	0924	6.7	59	6.8	25.0	6.1	76
	12	0921	7.7	59	6.8	25.0	6.0	74
	12	0919	8.7	59	6.6	24.5	5.2	65
	26	0928	.50	55	7.0	29.0	7.3	96
	26	0926	.70	55	7.0	29.0	7.3	96
	26	0924	1.7	55	6.9	29.0	7.2	95
	26	0922	2.7	55	6.8	28.5	6.8	89
	26	0919	3.7	55	6.8	28.0	6.7	87
	26	0917	4.7	55	6.7	27.5	6.6	86
	26	0915	5.7	55	6.7	27.5	6.6	85
	26	0913	6.7	55	6.7	27.5	6.5	84
	26	0911	7.7	56	6.7	27.5	6.5	84
	26	0909	8.7	56	6.7	27.5	6.5	84
July	11	1043	.50	58	7.3	29.0	7.4	100
	11	1040	.70	58	7.3	29.0	7.5	100
	11	1037	1.7	58	7.2	29.0	7.4	99
	11	1034	2.7	58	7.2	29.0	7.3	98
	11	1028	3.7	58	7.1	29.0	7.3	97
	11	1025	4.7	58	6.8	28.5	6.6	86
	11	1023	5.7	58	6.7	28.0	6.3	83
	11	1020	6.7	58	6.6	27.5	6.0	78
	11	1018	7.7	58	6.6	27.5	5.7	75
	11	1015	8.7	58	6.5	27.5	5.3	69
	24	1616	.50	55	7.4	32.0	8.0	112
	24	1614	1.0	55	7.5	31.5	8.2	114
	24	1612	2.0	55	7.1	30.5	7.7	105
	24	1609	3.0	55	6.9	30.5	7.3	99
	24	1606	4.0	55	6.7	30.0	7.0	94

Table 30. Vertical profile water-quality data at Mountain Island Lake site 10, May 1996 through September 1997—Continued

CATAWBA RIVER ABOVE GAR CREEK NEAR SHUFFLETOWN, NC (MTN10)

[Site 10 is at latitude 35°21'22", longitude 80°56'08", Mecklenburg County, U.S. Geological Survey downstream order number 0214266055. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1996 (Continued)								
(Continued)								
July	24	1603	5.0	57	6.6	30.0	6.3	86
	24	1601	6.0	58	6.4	29.0	4.6	61
	24	1559	7.0	58	6.3	29.0	4.2	56
	24	1557	8.0	58	6.3	28.5	3.3	44
	24	1555	9.0	58	6.3	28.0	3.1	40
Aug.	08	0936	.50	55	7.0	30.0	7.4	99
	08	0933	1.0	55	7.0	30.0	7.4	99
	08	0929	2.0	55	6.9	29.5	7.3	97
	08	0925	3.0	55	6.8	29.5	7.0	94
	08	0922	4.0	55	6.8	29.5	6.8	91
	08	0917	5.0	55	6.7	29.5	6.5	87
	08	0914	6.0	57	6.6	29.0	5.9	79
	08	0911	7.0	57	6.5	29.0	5.8	77
	08	0907	8.0	57	6.5	29.0	5.6	74
	08	0903	9.0	57	6.4	29.0	5.0	66
Sept.	30	1523	.50	60	6.8	24.0	7.4	89
	30	1521	.70	60	6.8	24.0	7.3	88
	30	1519	1.7	60	6.8	24.0	7.5	90
	30	1517	2.7	60	6.8	24.0	7.5	90
	30	1515	3.7	60	6.8	24.0	7.5	90
	30	1513	4.7	60	6.8	24.0	7.4	90
	30	1511	5.6	60	6.8	24.0	7.4	89
	30	1509	6.7	60	6.7	24.0	7.3	88
	30	1507	7.7	61	6.7	24.0	7.1	86
	30	1506	8.7	61	6.7	24.0	7.0	84
Oct.	22	1626	.50	60	7.1	21.5	8.4	97
	22	1624	.80	60	7.1	21.0	8.3	96
	22	1621	1.8	60	7.1	21.0	8.3	95
	22	1617	2.8	60	7.1	20.5	8.2	94
	22	1614	3.8	60	7.0	20.0	8.2	92
	22	1612	4.8	60	7.0	19.5	8.2	92
	22	1608	5.8	62	6.9	18.5	7.9	86
	22	1605	6.8	65	6.9	18.5	7.8	85
	22	1603	7.8	65	6.8	18.0	7.7	84
	22	1600	8.8	65	6.8	18.0	7.7	84
Nov.	19	1729	.50	58	7.3	15.5	9.3	96
	19	1727	.80	58	7.3	15.5	9.3	96
	19	1724	1.8	58	7.2	15.5	9.4	96
	19	1723	2.8	58	7.2	15.0	9.4	96
	19	1721	3.8	59	7.1	14.5	9.1	91
	19	1719	4.8	60	7.0	13.5	8.9	88
	19	1717	5.8	62	7.0	13.5	8.9	87
	19	1716	6.8	62	7.0	13.5	8.9	87
	19	1714	7.8	62	7.0	13.5	8.8	87
	19	1712	8.8	62	7.0	13.5	8.8	87

Table 30. Vertical profile water-quality data at Mountain Island Lake site 10, May 1996 through September 1997—Continued

CATAWBA RIVER ABOVE GAR CREEK NEAR SHUFFLETOWN, NC (MTN10)

[Site 10 is at latitude 35°21'22", longitude 80°56'08", Mecklenburg County, U.S. Geological Survey downstream order number 0214266055. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1996 (Continued)							
Dec. 18	1214	0.50	58	7.0	12.0	9.3	88
18	1211	.80	59	6.9	12.0	9.3	88
18	1209	1.8	59	6.9	12.0	9.3	88
18	1207	2.8	59	6.9	12.0	9.3	88
18	1204	3.8	58	6.9	12.0	9.3	88
18	1202	4.8	58	6.9	12.0	9.3	88
18	1159	5.8	59	6.9	12.0	9.3	88
18	1156	6.8	58	6.9	12.0	9.3	88
18	1154	7.8	58	6.9	12.0	9.3	88
18	1150	8.8	58	6.9	12.0	9.3	88
1997							
Feb. 27	1047	0.50	57	6.9	9.5	10.1	91
27	1045	.90	57	6.9	9.5	10.1	90
27	1044	1.9	57	6.9	9.5	10.1	90
27	1042	2.9	57	6.9	9.5	10.1	90
27	1040	3.9	57	6.9	9.5	10.1	90
27	1038	4.9	57	6.9	9.5	10.0	90
27	1032	5.9	57	6.9	9.5	10.0	89
27	1030	6.9	57	6.9	9.5	10.0	89
27	1029	7.9	57	6.9	9.5	10.0	89
27	1027	8.9	57	6.9	9.5	10.0	89
Mar. 20	1000	.50	57	6.9	12.5	9.4	91
20	0953	1.0	57	6.9	12.5	9.5	91
20	0950	2.0	57	6.9	12.5	9.4	91
20	0948	3.0	57	6.9	12.5	9.4	91
20	0945	4.0	57	6.9	12.5	9.4	91
20	0944	5.0	57	6.9	12.5	9.4	91
20	0942	6.0	57	6.9	12.5	9.4	91
20	0940	7.0	57	6.9	12.5	9.4	91
20	0938	8.0	57	6.9	12.5	9.4	91
20	0934	9.0	57	6.9	12.5	9.4	90
Apr. 03	1435	.50	55	7.0	15.0	8.8	89
03	1433	1.0	55	6.9	15.0	8.8	88
03	1432	2.0	55	6.9	15.0	8.8	88
03	1430	3.0	55	6.9	15.0	8.8	88
03	1429	4.0	56	6.9	15.0	8.7	88
03	1427	5.0	56	6.9	15.0	8.7	88
03	1425	6.0	56	6.9	15.0	8.7	88
03	1424	7.0	56	6.9	15.0	8.7	88
03	1422	8.0	56	6.9	15.0	8.7	88
03	1420	9.0	56	6.9	15.0	8.7	87
30	1534	.50	57	6.7	18.0	8.3	91
30	1532	1.0	57	6.7	17.5	8.1	88
30	1530	2.0	57	6.7	17.5	8.1	87
30	1528	3.0	56	6.6	16.5	7.8	83
30	1526	4.0	56	6.6	16.5	7.7	80
30	1524	5.0	56	6.5	16.5	7.4	78

Table 30. Vertical profile water-quality data at Mountain Island Lake site 10, May 1996 through September 1997—Continued

CATAWBA RIVER ABOVE GAR CREEK NEAR SHUFFLETOWN, NC (MTN10)

[Site 10 is at latitude 35°21'22", longitude 80°56'08", Mecklenburg County, U.S. Geological Survey downstream order number 0214266055. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1997 (Continued)								
(Continued)								
April	30	1523	6.0	56	6.5	16.0	7.4	77
	30	1521	7.0	56	6.5	16.0	7.3	77
	30	1519	8.0	55	6.4	16.0	7.1	74
	30	1517	9.0	56	6.5	15.5	6.9	72
May	20	1522	.50	54	6.9	22.5	8.1	96
	20	1520	1.0	54	6.9	22.5	8.1	96
	20	1518	2.0	53	6.8	21.0	8.0	93
	20	1516	3.0	52	6.7	19.5	7.8	87
	20	1513	4.0	52	6.7	19.5	7.7	86
	20	1510	5.0	52	6.7	19.0	7.7	86
	20	1509	6.0	52	6.7	19.0	7.7	86
	20	1506	7.0	52	6.7	19.0	7.7	86
	20	1504	8.0	52	6.7	19.0	7.7	86
	20	1501	9.0	52	6.7	19.0	7.7	86
June	04	1316	.50	59	6.7	21.5	7.3	85
	04	1314	1.0	59	6.7	21.5	7.3	85
	04	1311	2.0	59	6.6	21.5	7.3	85
	04	1309	3.0	59	6.6	21.0	7.2	84
	04	1306	4.0	59	6.6	21.0	7.2	84
	04	1304	5.0	59	6.6	21.0	7.2	84
	04	1302	6.0	59	6.6	21.0	7.0	81
	04	1300	7.0	59	6.6	21.0	7.0	81
	04	1258	8.0	59	6.3	20.5	5.7	66
	04	1255	9.0	59	6.3	20.5	5.4	62
	17	1547	.50	58	6.7	22.0	7.0	83
	17	1545	.80	58	6.7	22.0	7.0	83
	17	1543	1.8	58	6.7	22.0	7.0	83
	17	1541	2.8	58	6.7	22.0	7.0	82
	17	1539	3.8	58	6.7	22.0	7.0	82
	17	1536	4.8	58	6.7	22.0	7.0	83
	17	1534	5.8	58	6.6	22.0	7.0	82
	17	1532	6.8	58	6.6	22.0	7.0	82
	17	1529	7.8	58	6.7	22.0	7.0	82
	17	1527	8.8	58	6.7	22.0	7.0	82
	30	1238	.50	55	6.8	28.5	7.1	93
	30	1236	.80	54	6.8	28.0	7.1	92
	30	1234	1.8	54	6.7	27.0	6.9	88
	30	1231	2.8	54	6.7	27.0	6.9	88
	30	1229	3.8	54	6.7	26.5	7.0	89
	30	1226	4.8	55	6.7	26.5	6.8	86
	30	1224	5.8	57	6.6	25.5	6.4	80
	30	1221	6.8	59	6.5	24.5	5.9	73
	30	1218	7.8	60	6.5	24.5	5.5	67
	30	1216	8.8	60	6.4	24.0	5.2	64

Table 30. Vertical profile water-quality data at Mountain Island Lake site 10, May 1996 through September 1997—Continued

CATAWBA RIVER ABOVE GAR CREEK NEAR SHUFFLETOWN, NC (MTN10)

[Site 10 is at latitude 35°21'22", longitude 80°56'08", Mecklenburg County, U.S. Geological Survey downstream order number 0214266055. EST, eastern standard time; m, meter; $\mu\text{S/cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S/cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1997 (Continued)							
July 17	1245	0.50	53	6.9	31.5	7.0	98
17	1243	1.6	53	6.9	31.0	7.1	97
17	1240	2.6	53	6.8	30.0	6.7	91
17	1238	3.6	53	6.6	29.5	6.3	85
17	1235	4.6	53	6.6	29.0	6.3	84
17	1232	5.6	54	6.6	28.5	6.1	81
17	1229	6.6	54	6.5	28.5	5.9	78
17	1226	7.6	53	6.5	28.5	5.8	77
17	1223	8.6	53	6.5	28.5	5.4	71
30	1536	.50	52	6.7	29.5	6.4	86
30	1532	1.0	52	6.7	29.5	6.4	86
30	1530	2.0	52	6.7	29.5	6.4	86
30	1527	3.0	52	6.7	29.5	6.4	86
30	1525	4.0	52	6.7	29.5	6.4	86
30	1523	5.0	52	6.6	29.0	5.9	79
30	1521	6.0	52	6.5	29.0	5.8	77
30	1519	7.0	52	6.5	28.5	5.6	74
30	1517	8.0	53	6.4	28.5	5.1	66
30	1513	9.0	52	6.3	28.5	4.5	59
Aug. 21	1130	.50	50	7.1	31.0	7.1	99
21	1129	.80	49	7.1	31.0	7.2	100
21	1128	1.8	49	7.0	30.5	6.8	94
21	1127	2.8	49	6.8	30.5	6.6	90
21	1126	3.8	49	6.9	30.0	6.7	91
21	1125	4.8	50	6.8	30.0	6.6	89
21	1124	5.8	50	6.7	29.5	6.2	84
21	1123	6.8	50	6.6	29.5	6.1	82
21	1122	7.8	50	6.6	29.5	5.9	80
21	1121	8.8	50	6.5	29.5	5.5	75
Sept. 09	1515	.50	53	7.4	28.5	7.9	105
09	1511	.70	53	7.4	28.5	7.9	105
09	1510	1.7	53	7.3	28.0	7.8	102
09	1508	2.7	53	7.0	28.0	7.3	95
09	1506	3.7	54	7.0	27.5	7.5	97
09	1505	4.7	55	6.9	27.0	7.2	93
09	1502	5.7	57	6.9	27.0	7.3	94
09	1501	6.7	57	6.8	27.0	7.2	92
09	1458	7.7	55	6.6	26.5	6.4	82
09	1457	8.7	55	6.6	26.5	6.1	78
26	1229	.50	55	6.8	24.0	7.0	85
26	1228	.90	55	6.8	24.0	7.0	85
26	1227	1.9	55	6.8	24.0	6.9	85
26	1226	2.9	55	6.7	23.5	6.7	82
26	1225	3.9	55	6.8	23.5	6.7	81
26	1224	4.9	55	6.8	23.5	6.8	82
26	1223	5.9	55	6.7	23.0	6.8	81
26	1222	6.9	55	6.7	22.5	6.7	80
26	1221	7.9	56	6.6	22.0	6.4	76
26	1220	8.9	60	6.5	21.0	6.0	70

Table 31. Vertical profile water-quality data at Mountain Island Lake site 11, May 1996 through September 1997

GAR CREEK NEAR SHUFFLETOWN, NC (MTN11)

[Site 11 is at latitude 35°20'55", longitude 80°55'30", Mecklenburg County, U.S. Geological Survey downstream order number 0214266250. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1996								
May	29	1138	0.50	60	7.1	27.0	7.4	96
	29	1137	1.0	60	7.1	26.5	7.5	96
	29	1135	2.0	60	7.0	26.5	7.1	91
	29	1134	2.5	59	6.9	26.0	6.7	85
	29	1132	3.5	66	6.6	26.0	3.4	43
June	12	1004	.50	54	7.0	27.5	7.5	97
	12	1001	1.5	54	7.0	27.0	7.4	95
	12	0959	2.5	53	6.9	27.0	6.9	89
	12	0957	3.5	62	6.5	25.5	2.9	36
	26	0959	.50	51	6.7	31.0	7.0	96
	26	0957	.60	51	6.7	31.0	7.0	96
	26	0954	1.6	51	6.7	30.5	6.7	92
	26	0951	2.6	53	6.3	29.5	4.1	55
	26	0949	3.6	55	6.3	29.0	3.4	46
July	11	1121	.50	53	6.9	29.5	7.1	97
	11	1118	1.5	53	6.8	29.5	6.9	94
	11	1116	2.5	52	6.7	29.5	6.6	89
	11	1112	3.5	52	6.6	29.0	6.4	86
	25	0834	.50	50	6.7	30.5	6.6	90
	25	0830	1.6	51	6.7	30.5	6.6	90
	25	0828	2.6	51	6.7	30.5	6.6	90
	25	0823	3.6	55	6.4	30.0	3.4	47
Aug.	08	1018	.50	51	6.9	30.0	7.2	97
	08	1016	1.4	50	6.7	29.5	6.6	88
	08	1010	2.4	50	6.7	29.5	6.4	86
	08	1007	3.4	50	6.5	29.0	5.7	75
Sept.	30	1543	.50	53	6.6	23.5	7.5	90
	30	1541	1.5	53	6.6	23.0	7.5	90
	30	1539	2.5	53	6.6	23.0	7.5	89
	30	1537	3.5	54	6.6	23.0	7.1	84
Oct.	23	0804	.50	57	7.0	19.0	8.0	89
	23	0800	1.3	58	7.0	19.0	8.0	89
	23	0756	2.3	56	7.0	18.5	8.1	89
	23	0753	3.3	57	6.8	18.0	7.2	78
Nov.	20	0904	.50	60	7.1	13.5	9.0	89
	20	0900	.80	59	7.1	13.0	9.0	89
	20	0857	1.8	59	7.1	13.0	9.2	89
	20	0855	2.8	60	7.1	12.5	9.2	89
	20	0852	3.8	62	6.9	11.5	8.5	81
Dec.	18	1250	.50	60	7.0	10.5	9.9	91
	18	1248	1.5	60	7.0	10.5	9.9	90
	18	1246	2.5	60	7.0	10.0	10.0	91
	18	1241	3.5	63	7.0	10.0	9.8	89

Table 31. Vertical profile water-quality data at Mountain Island Lake site 11, May 1996 through September 1997—Continued

GAR CREEK NEAR SHUFFLETOWN, NC (MTN11)

[Site 11 is at latitude 35°20'55", longitude 80°55'30", Mecklenburg County, U.S. Geological Survey downstream order number 0214266250. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1997							
Feb. 27	1140	0.50	61	6.9	11.0	9.9	92
	27	1.5	62	6.9	11.0	9.9	92
	27	1.135	62	6.9	11.0	9.9	92
	27	1.129	62	6.9	11.0	9.8	92
Mar. 20	1047	.50	60	6.8	14.0	8.9	89
	20	1.045	60	6.8	14.0	9.0	90
	20	1.043	60	6.8	14.0	8.7	87
	20	1.040	58	6.8	13.5	9.0	89
	20	1.034	57	6.8	13.5	9.0	89
Apr. 03	1455	.50	57	6.9	17.0	8.5	90
	03	1.452	57	6.9	16.5	8.6	89
	03	1.450	58	6.9	15.5	8.4	86
	03	1.449	57	6.9	15.0	8.5	86
	03	1.447	56	7.0	15.0	8.6	87
May 01	0741	.50	60	6.8	18.0	8.4	92
	01	0.738	61	6.8	18.0	8.4	91
	01	0.735	60	6.6	17.0	7.5	80
	01	0.733	60	6.4	15.5	5.9	61
	21	0.739	.50	55	6.8	23.0	7.5
	21	0.736	1.5	55	6.7	22.5	7.3
	21	0.735	2.5	55	6.7	22.5	7.2
	21	0.732	3.5	55	6.6	22.0	6.8
June 04	1333	.50	55	6.5	21.5	6.9	82
	04	1.331	1.5	55	21.5	6.8	80
	04	1.329	2.5	55	21.5	6.8	80
	04	1.327	3.5	57	21.5	6.8	80
	18	0.747	.50	58	7.0	25.5	8.1
	18	0.744	1.4	58	7.0	25.5	8.1
	18	0.737	2.4	57	6.7	24.5	7.1
	18	0.733	3.4	57	6.6	23.5	6.4
	30	1.300	.50	54	6.8	28.5	7.3
	30	1.258	1.5	53	6.7	27.5	6.7
	30	1.254	2.5	53	6.5	27.0	6.0
	30	1.251	3.5	54	6.4	27.0	4.9
July 17	1308	.50	52	7.2	31.0	7.6	105
	17	1.305	1.4	52	31.0	7.7	106
	17	1.302	2.4	52	30.5	7.3	99
	17	1.259	3.4	53	30.0	5.4	73
	31	0.747	.50	50	6.5	28.5	5.7
	31	0.743	1.6	50	6.5	28.5	5.7
	31	0.739	2.6	50	6.5	28.5	5.6
	31	0.736	3.6	56	6.4	28.0	4.1

Table 31. Vertical profile water-quality data at Mountain Island Lake site 11, May 1996 through September 1997—Continued

GAR CREEK NEAR SHUFFLETOWN, NC (MTN11)

[Site 11 is at latitude 35°20'55", longitude 80°55'30", Mecklenburg County, U.S. Geological Survey downstream order number 0214266250. EST, eastern standard time; m, meter; $\mu\text{S/cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S/cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1997 (Continued)							
Aug. 21	1212	0.50	45	7.0	31.0	7.2	99
21	1209	1.5	46	6.8	30.5	6.9	94
21	1206	2.5	45	6.7	30.0	6.5	89
21	1202	3.5	45	6.6	30.0	5.8	79
Sept. 10	0808	.50	49	6.7	27.0	6.7	86
10	0805	1.5	49	6.7	27.0	6.7	86
10	0803	2.5	49	6.7	27.0	6.7	86
10	0800	3.5	49	6.7	26.5	6.7	86
26	1259	.50	50	6.7	23.5	6.9	84
26	1258	1.6	49	6.7	22.5	7.0	84
26	1257	2.6	49	6.6	22.5	6.8	81
26	1256	3.6	51	6.4	21.5	4.7	56

Table 32. Vertical profile water-quality data at Mountain Island Lake site 12, May 1996 through September 1997

CATAWBA RIVER BELOW GAR CREEK NEAR SHUFFLETOWN, NC (MTN12)

[Site 12 is at latitude 35°21'03", longitude 80°57'06", Mecklenburg County, U.S. Geological Survey downstream order number 0214266900. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1996								
May	29	1224	0.50	58	7.3	27.0	7.9	102
	29	1223	1.0	58	7.3	26.5	7.9	102
	29	1222	2.0	57	7.3	26.0	7.9	101
	29	1220	3.0	57	7.2	26.0	7.7	98
	29	1219	4.0	57	7.1	26.0	7.5	95
	29	1218	5.0	58	6.8	25.5	6.8	86
	29	1217	6.0	59	6.6	24.5	5.8	71
	29	1216	7.0	59	6.6	24.0	4.9	60
	29	1215	8.0	60	6.4	23.0	4.1	49
	29	1214	9.0	60	6.4	22.0	2.8	33
	29	1213	9.6	60	6.4	22.0	2.6	31
	29	1211	10.6	61	6.4	21.0	1.9	21
June	12	1119	.50	57	7.8	28.0	8.2	108
	12	1117	1.5	57	7.8	28.0	8.2	107
	12	1116	2.5	56	7.2	27.5	7.6	98
	12	1114	3.5	57	6.9	26.0	6.7	84
	12	1112	4.5	58	6.8	25.5	6.5	82
	12	1110	5.5	59	6.8	25.0	6.3	78
	12	1109	6.5	58	6.7	25.0	6.1	76
	12	1107	7.5	58	6.7	24.5	5.4	67
	12	1104	8.5	60	6.6	24.5	4.7	58
	12	1102	9.5	61	6.5	24.0	3.4	42
	26	1135	.50	54	7.0	30.0	7.3	98
	26	1133	.90	55	6.9	30.0	7.3	98
	26	1131	1.9	55	6.9	29.5	7.2	96
	26	1129	2.9	56	6.8	29.0	6.9	92
	26	1127	3.9	56	6.7	29.0	6.4	85
	26	1125	4.9	56	6.7	28.5	6.5	86
	26	1123	5.9	56	6.7	28.0	6.4	83
	26	1121	6.9	56	6.6	28.0	6.3	82
	26	1118	7.9	55	6.6	27.5	6.3	81
	26	1115	8.9	55	6.6	27.5	6.2	80
	26	1113	9.9	56	6.6	27.5	6.1	79
	26	1111	10.9	56	6.6	27.5	5.7	74
July	11	1227	.50	58	7.1	29.5	7.2	96
	11	1225	1.5	58	7.1	29.5	7.2	96
	11	1223	2.5	58	7.1	29.5	7.1	95
	11	1220	3.5	58	6.9	29.0	6.6	88
	11	1218	4.5	58	6.7	28.5	5.9	78
	11	1216	5.5	58	6.7	28.5	6.0	79
	11	1213	6.5	58	6.7	28.0	6.3	82
	11	1207	7.5	58	6.6	27.5	5.8	76
	11	1206	8.5	58	6.5	27.5	5.3	69
	11	1202	9.5	58	6.5	27.5	5.1	66
	11	1200	10.5	58	6.4	27.5	4.7	61
	25	1008	.50	58	7.1	32.0	7.2	101
	25	1005	.70	58	7.1	32.0	7.2	101

Table 32. Vertical profile water-quality data at Mountain Island Lake site 12, May 1996 through September 1997—Continued

CATAWBA RIVER BELOW GAR CREEK NEAR SHUFFLETOWN, NC (MTN12)

[Site 12 is at latitude 35°21'03", longitude 80°57'06", Mecklenburg County, U.S. Geological Survey downstream order number 0214266900. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1996 (Continued)								
(Continued)								
July	25	1002	1.7	58	7.1	32.0	7.3	101
	25	0959	2.7	57	7.0	31.0	6.9	96
	25	0955	3.7	56	6.7	30.5	6.6	90
	25	0952	4.7	56	6.6	30.0	6.4	87
	25	0948	5.7	57	6.5	29.5	5.7	77
	25	0945	6.7	58	6.4	29.0	5.1	68
	25	0942	7.7	58	6.4	29.0	4.6	61
	25	0939	8.7	58	6.3	28.5	3.6	47
Aug.	08	1127	.50	57	7.3	31.0	7.6	104
	08	1125	1.0	56	7.3	31.0	7.7	105
	08	1121	2.0	56	7.3	30.5	7.7	104
	08	1119	3.0	56	7.0	30.0	7.1	96
	08	1116	4.0	54	6.7	30.0	6.4	86
	08	1113	5.0	56	6.6	29.5	6.1	81
	08	1108	6.0	56	6.5	29.0	5.8	77
	08	1105	7.0	56	6.5	29.0	5.5	73
	08	1100	8.0	57	6.4	29.0	5.2	68
	08	1057	9.0	57	6.4	29.0	5.0	65
Sept.	30	1615	.50	60	6.7	24.5	7.2	88
	30	1613	1.5	60	6.7	24.5	7.2	88
	30	1611	2.5	60	6.7	24.5	7.2	88
	30	1609	3.5	60	6.7	24.5	7.2	88
	30	1607	4.5	60	6.7	24.5	7.2	88
	30	1605	5.5	60	6.7	24.5	7.2	88
	30	1603	6.5	60	6.7	24.5	7.2	88
	30	1600	7.5	60	6.7	24.5	7.2	88
	30	1558	8.5	59	6.7	24.5	7.2	88
	30	1555	9.5	59	6.7	24.0	7.3	88
	30	1553	10.5	59	6.7	24.0	7.2	87
Oct.	23	0919	.50	60	7.0	20.5	7.8	89
	23	0915	1.5	60	7.0	20.5	7.8	89
	23	0913	2.5	60	7.0	20.5	7.8	89
	23	0910	3.5	60	7.0	20.5	7.7	89
	23	0908	4.5	60	7.0	20.5	7.7	88
	23	0905	5.5	60	7.0	19.5	7.8	88
	23	0902	6.5	61	6.9	19.0	7.7	85
	23	0859	7.5	65	6.9	18.5	7.6	83
	23	0856	8.5	65	6.9	18.5	7.6	83
	23	0853	9.5	66	6.9	18.5	7.5	83
	23	0851	10.5	66	6.9	18.5	7.5	82
Nov.	20	1024	.50	60	7.3	15.0	9.1	92
	20	1021	1.5	60	7.3	15.0	9.0	92
	20	1018	2.5	61	7.2	14.5	9.0	92
	20	1016	3.5	61	7.1	14.5	8.8	89
	20	1013	4.5	61	7.1	14.5	8.8	89

Table 32. Vertical profile water-quality data at Mountain Island Lake site 12, May 1996 through September 1997—Continued

CATAWBA RIVER BELOW GAR CREEK NEAR SHUFFLETOWN, NC (MTN12)

[Site 12 is at latitude 35°21'03", longitude 80°57'06", Mecklenburg County, U.S. Geological Survey downstream order number 0214266900. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1996 (Continued)							
(Continued)							
Nov. 20	1010	5.5	61	7.1	14.0	8.8	88
20	1008	6.5	62	7.0	14.0	8.7	86
20	1006	7.5	61	7.0	13.5	8.6	85
20	1002	8.5	61	7.0	13.5	8.6	85
20	0959	9.5	61	6.9	13.5	8.5	84
20	0956	10.5	61	7.0	13.0	8.5	83
Dec. 18	1346	.50	58	7.0	12.0	9.3	88
18	1343	1.3	58	6.9	12.0	9.3	88
18	1341	2.3	58	6.9	12.0	9.3	88
18	1338	3.3	58	6.9	12.0	9.3	88
18	1336	4.3	58	6.9	12.0	9.3	88
18	1334	5.3	58	6.9	12.0	9.3	88
18	1332	6.3	58	6.9	12.0	9.3	88
18	1329	7.3	58	6.9	12.0	9.3	88
18	1327	8.3	58	6.9	12.0	9.3	88
18	1324	9.3	58	6.9	12.0	9.3	88
18	1322	10.3	58	6.9	12.0	9.3	88
18	1319	11.3	58	6.9	12.0	9.3	88
1997							
Feb. 27	1248	0.50	57	6.9	9.5	10.1	90
27	1245	1.5	57	6.9	9.5	10.1	90
27	1241	2.5	56	6.9	9.5	10.1	91
27	1238	3.5	57	6.9	9.5	10.1	90
27	1235	4.5	57	6.9	9.5	10.0	90
27	1233	5.5	57	6.9	9.5	10.1	90
27	1230	6.5	57	6.9	9.5	10.0	89
27	1227	7.5	57	6.9	9.5	10.0	89
27	1226	8.5	57	6.8	9.5	10.0	90
27	1222	9.5	57	6.8	9.5	10.0	90
27	1220	10.5	57	6.8	9.5	10.0	90
27	1218	11.5	57	6.8	9.5	10.0	90
Mar. 20	1211	.50	57	6.9	12.5	9.4	91
20	1208	1.2	57	6.9	12.5	9.4	91
20	1207	2.2	57	6.9	12.5	9.4	91
20	1205	3.2	57	6.9	12.5	9.4	91
20	1203	4.2	57	6.9	12.5	9.4	91
20	1159	5.2	56	6.9	12.5	9.4	91
20	1155	6.2	56	6.9	12.5	9.4	91
20	1152	7.2	56	6.8	12.5	9.4	91
20	1149	8.2	56	6.8	12.5	9.4	91
20	1146	9.2	56	6.8	12.5	9.4	91
20	1143	10.2	56	6.8	12.5	9.4	90
20	1141	11.2	56	6.8	12.5	9.4	90
Apr. 03	1538	.50	56	7.0	15.5	8.7	89
03	1535	1.0	56	7.0	15.0	8.8	89
03	1533	2.0	56	7.0	15.0	8.7	88

Table 32. Vertical profile water-quality data at Mountain Island Lake site 12, May 1996 through September 1997—Continued

CATAWBA RIVER BELOW GAR CREEK NEAR SHUFFLETOWN, NC (MTN12)

[Site 12 is at latitude 35°21'03", longitude 80°57'06", Mecklenburg County, U.S. Geological Survey downstream order number 0214266900. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1997 (Continued)							
(Continued)							
Apr. 03	1531	3.0	56	7.0	15.0	8.7	88
03	1529	4.0	56	6.9	15.0	8.7	88
03	1527	5.0	56	6.9	15.0	8.7	88
03	1524	6.0	56	6.9	15.0	8.7	88
03	1522	7.0	56	6.9	15.0	8.7	88
03	1520	8.0	56	6.9	15.0	8.7	88
03	1517	9.0	56	6.9	15.0	8.7	88
03	1515	10.0	56	6.9	15.0	8.7	88
03	1513	11.0	56	6.9	15.0	8.7	87
May 01	0900	.50	56	6.9	19.5	8.6	97
01	0857	1.0	56	6.9	19.0	8.6	96
01	0853	2.0	56	6.9	19.0	8.5	96
01	0850	3.0	56	6.8	18.5	8.4	94
01	0848	4.0	56	6.7	18.0	8.2	90
01	0845	5.0	56	6.7	17.5	8.0	87
01	0843	6.0	57	6.6	17.0	7.8	83
01	0840	7.0	57	6.6	17.0	7.6	81
01	0837	8.0	57	6.5	16.5	7.3	77
21	0853	.50	54	7.0	22.5	8.0	95
21	0851	1.5	54	6.9	22.0	8.0	93
21	0850	2.5	54	6.9	21.5	8.0	92
21	0848	3.5	54	6.8	21.0	7.7	88
21	0846	4.5	54	6.8	20.0	7.6	86
21	0843	5.5	54	6.8	20.0	7.6	85
21	0839	6.5	54	6.7	19.5	7.5	84
21	0837	7.5	54	6.7	19.5	7.5	84
21	0835	8.5	54	6.7	19.5	7.5	83
21	0831	9.5	54	6.7	19.5	7.4	83
21	0829	10.5	54	6.7	19.5	7.3	82
June 04	1420	.50	59	6.7	21.5	7.4	87
04	1418	1.0	59	6.7	21.5	7.4	86
04	1416	2.0	59	6.7	21.5	7.3	86
04	1414	3.0	59	6.6	21.5	7.3	86
04	1412	4.0	59	6.6	21.5	7.3	85
04	1409	5.0	58	6.6	21.5	7.1	82
04	1406	6.0	59	6.6	21.5	7.1	82
04	1404	7.0	59	6.5	21.5	7.0	81
04	1402	8.0	58	6.4	21.0	6.2	72
04	1359	9.0	59	6.3	20.5	5.6	64
04	1356	10.0	59	6.3	20.5	5.0	58
18	0924	.50	58	6.9	25.5	7.3	92
18	0921	1.6	58	6.8	25.0	7.3	91
18	0919	2.6	57	6.8	25.0	7.2	90
18	0917	3.6	57	6.8	25.0	7.2	89
18	0915	4.6	57	6.7	23.0	6.9	83
18	0912	5.6	57	6.7	22.5	6.8	81

Table 32. Vertical profile water-quality data at Mountain Island Lake site 12, May 1996 through September 1997—Continued

CATAWBA RIVER BELOW GAR CREEK NEAR SHUFFLETOWN, NC (MTN12)

[Site 12 is at latitude 35°21'03", longitude 80°57'06", Mecklenburg County, U.S. Geological Survey downstream order number 0214266900. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1997 (Continued)								
(Continued)								
June	18	0910	6.6	57	6.6	22.0	6.7	78
	18	0907	7.6	57	6.6	21.5	6.6	78
	18	0903	8.6	57	6.6	21.5	6.6	77
	18	0900	9.6	57	6.6	21.5	6.6	77
	30	1343	.50	55	6.9	29.0	7.3	96
	30	1341	1.4	55	6.9	28.5	7.4	97
	30	1338	2.4	55	6.8	28.0	7.2	93
	30	1335	3.4	55	6.6	27.0	6.5	83
	30	1333	4.4	55	6.6	26.5	6.3	80
	30	1331	5.4	55	6.6	26.0	6.5	81
	30	1327	6.4	56	6.6	25.5	6.5	81
	30	1324	7.4	57	6.5	24.5	5.5	68
	30	1322	8.4	57	6.4	24.0	5.4	66
	30	1320	9.4	57	6.4	23.5	5.2	63
	30	1317	10.4	56	6.4	23.5	5.2	63
	30	1314	11.4	56	6.4	23.5	5.2	62
July	17	1356	.50	54	6.9	32.0	7.0	98
	17	1354	.80	53	6.9	31.5	7.1	98
	17	1350	1.8	53	6.9	31.0	7.1	98
	17	1347	2.8	53	6.9	31.0	7.0	97
	17	1345	3.8	53	6.6	29.5	6.1	83
	17	1340	4.8	53	6.6	29.0	6.2	83
	17	1338	5.8	53	6.6	29.0	6.2	82
	17	1334	6.8	53	6.6	28.5	6.1	80
	17	1331	7.8	53	6.5	28.5	5.7	75
	17	1328	8.8	53	6.4	28.5	5.5	72
	17	1325	9.8	53	6.4	28.0	5.2	69
	17	1323	10.8	53	6.4	28.0	5.0	66
	31	0926	.50	53	6.6	29.0	6.0	79
	31	0924	1.0	53	6.6	29.0	6.1	80
	31	0922	2.0	53	6.6	29.0	6.1	80
	31	0919	3.0	53	6.6	29.0	6.0	79
	31	0917	4.0	53	6.6	29.0	6.0	79
	31	0912	5.0	53	6.6	29.0	6.0	79
	31	0909	6.0	53	6.6	29.0	6.0	79
	31	0907	7.0	52	6.5	28.5	5.7	75
	31	0905	8.0	52	6.5	28.5	5.3	70
	31	0901	9.0	52	6.4	28.5	5.2	68
	31	0858	10.0	53	6.4	28.5	4.9	64
	31	0855	11.0	53	6.3	28.5	4.5	59

Table 32. Vertical profile water-quality data at Mountain Island Lake site 12, May 1996 through September 1997—Continued

CATAWBA RIVER BELOW GAR CREEK NEAR SHUFFLETOWN, NC (MTN12)

[Site 12 is at latitude 35°21'03", longitude 80°57'06", Mecklenburg County, U.S. Geological Survey downstream order number 0214266900. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1997 (Continued)							
Aug. 21	1237	0.50	50	7.2	32.0	7.1	100
21	1236	.70	50	7.2	32.0	7.1	100
21	1235	1.7	49	7.1	31.0	7.0	98
21	1234	2.7	49	6.9	31.0	6.7	92
21	1233	3.7	49	6.7	30.5	6.3	86
21	1232	4.7	50	6.6	30.0	5.7	78
21	1231	5.7	50	6.4	29.5	5.0	67
21	1230	6.7	50	6.4	29.5	4.4	59
21	1229	7.7	50	6.3	29.0	4.0	53
21	1228	8.7	50	6.3	29.0	3.3	44
21	1227	9.7	50	6.3	29.0	3.3	45
21	1226	10.7	50	6.3	29.0	2.9	39
Sept. 10	0930	.50	54	7.0	28.5	7.1	94
10	0929	1.5	54	7.0	28.5	7.0	92
10	0928	2.5	54	6.9	28.0	6.8	90
10	0927	3.5	54	6.9	28.0	6.8	90
10	0926	4.5	53	6.8	27.5	6.8	89
10	0925	5.5	54	6.8	27.5	6.7	87
10	0924	6.5	54	6.7	27.0	6.5	85
10	0923	7.5	55	6.7	27.0	6.4	83
10	0922	8.5	56	6.6	26.5	6.1	79
10	0921	9.5	55	6.5	26.5	5.9	75
10	0920	10.5	55	6.4	26.5	5.0	64
26	1333	.50	54	6.9	24.5	7.1	87
26	1332	1.0	54	6.9	24.5	7.0	87
26	1331	2.0	54	6.8	24.5	6.9	85
26	1330	3.0	54	6.8	24.0	6.7	83
26	1329	4.0	54	6.8	24.0	6.7	83
26	1328	5.0	54	6.7	24.0	6.7	82
26	1327	6.0	54	6.7	23.5	6.6	81
26	1326	7.0	55	6.7	23.5	6.7	80
26	1325	8.0	56	6.6	22.5	6.5	77
26	1324	9.0	59	6.5	21.0	6.2	72
26	1323	10.0	59	6.5	21.0	6.1	70
26	1322	11.0	60	6.5	21.0	6.1	70

Table 33. Vertical profile water-quality data at Mountain Island Lake site 13, May 1996 through September 1997

CATAWBA RIVER AT INLET NEAR SHUFFLETOWN, NC (MTN13)

[Site 13 is at latitude 35°20'35", longitude 80°57'13", Mecklenburg County, U.S. Geological Survey downstream order number 0214267000. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1996							
May 29	1322	0.50	58	7.1	27.5	7.3	96
29	1321	1.0	58	7.1	27.5	7.3	96
29	1319	2.0	58	7.0	26.5	7.3	93
29	1318	3.0	58	6.9	26.5	7.0	90
29	1317	4.0	58	6.8	26.0	6.6	83
29	1316	5.0	59	6.7	25.5	5.4	68
29	1314	6.0	60	6.6	25.0	4.4	55
June 12	1235	.50	57	7.2	29.0	7.2	96
12	1233	1.0	57	7.2	28.5	7.3	96
12	1230	2.0	56	7.1	28.0	7.2	93
12	1228	3.0	57	6.9	26.5	6.6	85
12	1226	4.0	58	6.7	26.0	5.7	72
12	1225	5.0	59	6.6	25.0	5.0	62
12	1223	6.0	59	6.6	25.0	4.4	54
26	1218	.50	56	6.9	31.0	6.9	95
26	1215	1.0	56	6.9	31.0	6.8	93
26	1213	2.0	56	6.6	30.0	6.2	84
26	1210	3.0	56	6.6	29.0	6.1	82
26	1207	4.0	56	6.5	29.0	5.3	70
26	1205	5.0	56	6.4	28.5	4.3	57
26	1201	6.0	57	6.3	28.0	3.2	42
July 11	1302	.50	59	7.7	29.5	7.8	105
11	1259	1.2	59	7.7	29.5	7.7	104
11	1257	2.2	59	7.1	29.5	6.9	93
11	1254	3.2	59	6.7	29.0	5.6	76
11	1251	4.2	59	6.6	29.0	5.2	69
11	1247	5.2	61	6.4	28.5	3.6	48
11	1244	6.2	60	6.4	28.5	3.3	44
25	1053	.50	57	7.1	31.5	7.1	98
25	1050	1.4	57	7.1	31.5	7.1	98
25	1047	2.4	57	7.0	31.5	6.9	96
25	1043	3.4	57	6.7	31.0	6.0	83
25	1039	4.4	57	6.4	30.0	4.7	64
25	1036	5.4	58	6.4	30.0	4.2	56
25	1033	6.4	62	6.3	29.5	2.7	36
Aug. 08	1252	.50	57	7.2	31.5	6.5	90
08	1248	1.0	56	7.0	31.0	6.4	88
08	1237	2.0	56	6.9	30.5	6.1	83
08	1234	3.0	56	6.8	30.5	5.1	69
08	1230	4.0	56	6.5	30.0	4.6	62
08	1227	5.0	56	6.4	29.5	3.7	50
08	1225	6.0	58	6.3	29.0	2.3	30

Table 33. Vertical profile water-quality data at Mountain Island Lake site 13, May 1996 through September 1997—Continued

CATAWBA RIVER AT INLET NEAR SHUFFLETOWN, NC (MTN13)

[Site 13 is at latitude 35°20'35", longitude 80°57'13", Mecklenburg County, U.S. Geological Survey downstream order number 0214267000. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1996 (Continued)							
Sept. 30	1639	0.50	60	6.8	24.5	7.2	88
30	1637	1.0	60	6.8	24.5	7.2	88
30	1634	2.0	60	6.8	24.5	7.2	88
30	1632	3.0	60	6.8	24.5	7.2	88
30	1630	4.0	60	6.8	24.5	7.2	88
30	1628	5.0	60	6.8	24.5	7.3	88
30	1625	6.0	60	6.8	24.0	7.4	89
Oct. 23	0958	.50	60	7.0	20.0	7.6	86
23	0954	1.0	60	7.0	20.0	7.6	87
23	0950	2.0	60	7.0	20.0	7.6	87
23	0947	3.0	60	6.9	20.0	7.6	86
23	0945	4.0	60	6.9	20.0	7.5	85
23	0942	5.0	60	6.9	20.0	7.5	85
23	0939	6.0	60	6.8	20.0	7.1	81
Nov. 20	1113	.50	60	7.2	15.5	8.9	92
20	1111	1.3	60	7.1	15.5	8.8	90
20	1107	2.3	60	7.1	15.0	8.8	89
20	1104	3.3	60	6.9	14.5	8.4	85
20	1102	4.3	60	6.9	14.0	8.3	83
20	1059	5.3	60	6.9	14.0	8.2	82
20	1055	6.3	60	6.8	14.0	8.1	81
Dec. 18	1414	.50	58	7.0	12.0	9.4	89
18	1412	1.2	58	7.0	12.0	9.4	89
18	1410	2.2	58	7.0	12.0	9.4	89
18	1407	3.2	58	6.9	12.0	9.3	88
18	1405	4.2	58	6.9	12.0	9.3	88
18	1403	5.2	58	6.9	12.0	9.3	88
18	1400	6.2	58	6.9	11.5	9.3	88
1997							
Feb. 27	1327	0.50	59	6.9	11.0	9.9	92
27	1325	1.5	59	6.9	11.0	9.8	91
27	1322	2.5	58	6.9	10.5	9.8	90
27	1321	3.5	57	6.9	10.0	10.0	91
27	1318	4.5	57	6.9	9.5	9.9	90
27	1314	5.5	56	6.9	9.5	10.0	90
27	1310	6.5	57	6.9	9.5	9.9	90
Mar. 20	1310	.50	58	7.0	14.0	9.6	96
20	1307	1.5	58	6.9	13.5	9.3	91
20	1305	2.5	57	6.9	13.0	9.2	90
20	1303	3.5	57	6.9	13.0	9.3	91
20	1257	4.5	57	6.8	12.5	9.3	90
20	1253	5.5	57	6.8	12.5	9.2	89
20	1245	6.5	57	6.8	12.5	9.2	89

Table 33. Vertical profile water-quality data at Mountain Island Lake site 13, May 1996 through September 1997—Continued

CATAWBA RIVER AT INLET NEAR SHUFFLETOWN, NC (MTN13)

[Site 13 is at latitude 35°20'35", longitude 80°57'13", Mecklenburg County, U.S. Geological Survey downstream order number 0214267000. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1997 (Continued)							
Apr. 03	1558	0.50	57	7.0	17.0	8.8	93
03	1557	1.5	56	7.0	15.5	8.8	89
03	1555	2.5	56	7.0	15.0	8.9	89
03	1553	3.5	56	7.0	14.5	8.7	87
03	1551	4.5	56	6.9	14.5	8.6	86
03	1550	5.5	56	6.9	14.5	8.6	85
03	1547	6.5	57	6.9	14.5	8.2	81
May 01	0945	.50	56	6.8	19.5	8.4	94
01	0942	1.0	56	6.8	19.0	8.5	95
01	0938	2.0	57	6.9	18.5	8.4	93
01	0936	3.0	57	6.8	18.5	8.3	92
01	0929	4.0	57	6.7	17.0	7.9	85
01	0927	5.0	57	6.6	16.5	7.5	80
01	0923	6.0	57	6.6	16.5	7.1	75
21	0925	.50	54	6.9	23.0	7.8	93
21	0923	1.0	54	6.9	23.0	7.8	93
21	0921	2.0	54	6.9	22.5	7.7	92
21	0918	3.0	54	6.8	22.0	7.6	89
21	0916	4.0	54	6.7	21.0	7.4	85
21	0913	5.0	55	6.7	20.5	7.1	81
21	0910	6.0	55	6.6	20.0	6.4	73
June 04	1446	.50	58	6.7	22.0	7.2	85
04	1444	1.0	59	6.7	22.0	7.1	83
04	1441	2.0	59	6.7	21.5	7.2	84
04	1439	3.0	59	6.6	21.5	6.9	81
04	1437	4.0	59	6.7	21.5	7.1	83
04	1435	5.0	59	6.7	21.0	7.2	84
04	1432	6.0	60	6.7	21.0	7.3	84
18	1000	.50	59	6.9	25.5	7.6	95
18	0957	.80	59	6.9	25.5	7.4	92
18	0954	1.8	59	6.9	25.0	7.3	91
18	0952	2.8	59	6.7	24.5	6.8	84
18	0949	3.8	58	6.7	23.5	6.8	82
18	0945	4.8	59	6.6	23.0	5.9	71
18	0943	5.8	60	6.4	22.0	4.8	57
30	1411	.50	55	6.8	29.0	7.2	95
30	1409	1.0	55	6.8	28.5	7.2	94
30	1406	2.0	55	6.8	28.0	7.0	91
30	1403	3.0	56	6.7	28.0	6.6	85
30	1400	4.0	57	6.5	27.0	5.4	69
30	1357	5.0	56	6.4	26.0	5.1	64
30	1354	6.0	56	6.3	25.0	3.2	40

Table 33. Vertical profile water-quality data at Mountain Island Lake site 13, May 1996 through September 1997—Continued

CATAWBA RIVER AT INLET NEAR SHUFFLETOWN, NC (MTN13)

[Site 13 is at latitude 35°20'35", longitude 80°57'13", Mecklenburg County, U.S. Geological Survey downstream order number 0214267000. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1997 (Continued)								
July	17	1424	0.50	54	7.0	32.5	7.0	99
	17	1422	1.0	54	7.0	32.5	7.2	101
	17	1420	2.0	53	6.9	31.0	6.9	95
	17	1418	3.0	54	6.6	30.0	6.1	83
	17	1415	4.0	53	6.5	29.5	5.6	75
	17	1411	5.0	53	6.4	29.0	5.2	70
	17	1408	6.0	54	6.3	29.0	4.0	53
	31	0958	.50	53	6.5	29.5	5.4	72
	31	0956	1.4	53	6.5	29.0	5.4	72
	31	0954	2.4	53	6.6	29.0	5.6	74
	31	0952	3.4	53	6.5	29.0	5.6	74
	31	0949	4.4	53	6.5	29.0	5.5	73
	31	0947	5.4	53	6.5	28.5	5.6	73
	31	0942	6.4	53	6.5	28.0	5.5	71
Aug.	21	1324	.50	50	7.2	31.5	7.2	100
	21	1322	1.0	50	7.2	31.5	7.2	100
	21	1319	2.0	49	7.0	31.0	6.7	93
	21	1316	3.0	49	6.8	30.5	6.4	88
	21	1313	4.0	49	6.8	30.5	6.4	88
	21	1310	5.0	49	6.8	30.0	6.3	85
	21	1305	6.0	49	6.8	30.0	6.2	84
Sept.	10	1023	.50	54	6.9	28.5	6.7	89
	10	1020	.80	54	6.9	28.5	6.7	88
	10	1019	1.8	54	6.9	28.0	6.7	88
	10	1017	2.8	53	6.9	28.0	6.7	88
	10	1014	3.8	53	6.8	28.0	6.5	85
	10	1011	4.8	53	6.7	27.5	6.0	78
	10	1009	5.8	53	6.5	27.0	5.4	70
	26	1408	.50	54	6.8	24.5	6.8	85
	26	1406	1.0	54	6.8	24.5	6.8	84
	26	1404	2.0	53	6.8	24.0	6.7	82
	26	1402	3.0	53	6.7	24.0	6.6	80
	26	1400	4.0	53	6.7	24.0	6.5	79
	26	1357	5.0	53	6.6	23.5	6.3	77
	26	1355	6.0	53	6.6	23.5	6.2	74

Table 34. Vertical profile water-quality data at Mountain Island Lake site 14, May 1996 through September 1997

CATAWBA RIVER AT NC 16 NEAR SHUFFLETOWN, NC (MTN14)

[Site 14 is at latitude 35°21'01", longitude 80°58'21", Mecklenburg County, U.S. Geological Survey downstream order number 0214267200. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1996								
May	30	1224	0.50	58	7.0	26.0	7.5	95
	30	1222	1.0	58	7.0	26.0	7.5	94
	30	1221	2.0	58	7.0	26.0	7.5	95
	30	1219	3.0	58	7.0	26.0	7.5	95
	30	1218	4.0	58	6.9	25.5	7.3	91
	30	1217	5.0	58	6.8	25.5	6.9	86
	30	1216	6.0	59	6.7	25.5	6.4	80
	30	1214	7.0	59	6.6	24.5	5.9	73
	30	1213	8.0	60	6.5	24.0	5.3	64
	30	1211	9.0	60	6.4	23.0	4.5	54
	30	1210	9.9	60	6.4	22.5	4.2	49
	30	1208	10.9	62	6.3	20.5	2.4	27
June	12	1358	.50	57	7.2	28.0	7.6	99
	12	1356	.80	57	7.2	28.0	7.6	100
	12	1355	1.8	57	7.2	28.0	7.6	99
	12	1353	2.8	57	7.2	28.0	7.6	99
	12	1351	3.8	57	7.0	27.0	7.1	91
	12	1348	4.8	58	6.8	26.0	6.3	79
	12	1345	5.8	59	6.7	25.5	5.8	73
	12	1343	6.8	59	6.6	25.0	5.0	62
	12	1341	7.8	60	6.6	24.5	4.9	60
	12	1339	8.8	60	6.6	24.5	4.7	58
	12	1337	9.8	60	6.5	24.0	4.4	54
	12	1335	10.8	61	6.5	23.5	3.2	38
	12	1333	11.8	62	6.5	23.5	2.6	32
	26	1440	.50	56	7.1	32.5	7.5	106
	26	1439	1.2	56	7.1	32.0	7.5	105
	26	1436	2.2	56	7.1	30.5	7.5	103
	26	1434	3.2	56	6.7	29.5	6.5	87
	26	1431	4.2	56	6.6	29.0	6.1	81
	26	1428	5.2	56	6.5	28.5	5.8	77
	26	1426	6.2	56	6.6	28.5	6.3	82
	26	1424	7.2	56	6.6	28.0	6.2	82
	26	1422	8.2	56	6.6	28.0	6.1	79
	26	1419	9.2	56	6.6	27.5	6.0	78
	26	1410	10.2	56	6.6	27.5	5.9	77
	26	1407	11.2	56	6.5	27.5	5.1	66
July	11	1505	.50	58	7.1	31.5	7.2	101
	11	1503	1.4	58	6.9	30.0	6.7	91
	11	1500	2.4	58	6.9	29.5	6.7	90
	11	1458	3.4	58	6.8	29.5	6.5	88
	11	1455	4.4	59	6.6	29.0	5.4	72
	11	1453	5.4	59	6.5	28.5	5.2	68
	11	1449	6.4	58	6.5	28.0	5.1	67
	11	1447	7.4	58	6.5	28.0	5.1	68
	11	1445	8.4	58	6.5	28.0	5.1	67
	11	1442	9.4	58	6.5	27.5	5.1	66

Table 34. Vertical profile water-quality data at Mountain Island Lake site 14, May 1996 through September 1997—Continued

CATAWBA RIVER AT NC 16 NEAR SHUFFLETOWN, NC (MTN14)

[Site 14 is at latitude 35°21'01", longitude 80°58'21", Mecklenburg County, U.S. Geological Survey downstream order number 0214267200. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1996 (Continued)								
(Continued)								
July	11	1439	10.4	58	6.4	27.5	4.8	63
	11	1435	11.4	58	6.4	27.5	4.4	57
	25	1245	.50	58	7.3	32.0	7.4	104
	25	1243	1.2	58	7.3	32.0	7.4	104
	25	1240	2.2	58	7.3	32.0	7.4	104
	25	1238	3.2	58	7.3	31.5	7.4	103
	25	1230	4.2	57	6.7	30.5	6.6	90
	25	1226	5.2	57	6.5	29.5	5.3	71
	25	1221	6.2	58	6.4	29.5	5.1	69
	25	1217	7.2	58	6.4	29.0	4.6	61
	25	1212	8.2	58	6.4	29.0	4.2	55
	25	1209	9.2	58	6.3	28.5	4.0	53
	25	1206	10.2	58	6.3	28.0	3.7	49
	25	1201	11.2	60	6.3	28.0	2.5	33
	25	1158	12.2	64	6.3	27.5	1.7	23
Aug.	08	1432	.50	58	7.0	33.5	7.0	100
	08	1430	1.0	58	7.0	33.0	7.2	102
	08	1427	2.0	57	7.3	31.5	7.8	107
	08	1423	3.0	56	7.1	30.5	7.5	102
	08	1420	4.0	55	6.7	30.0	6.4	87
	08	1416	5.0	55	6.5	29.5	5.5	73
	08	1412	6.0	55	6.5	29.5	5.9	79
	08	1407	7.0	55	6.5	29.0	5.7	75
	08	1404	8.0	56	6.5	29.0	5.6	74
	08	1402	9.0	56	6.5	29.0	5.6	74
	08	1357	10.0	57	6.4	28.5	4.6	61
	08	1352	11.0	59	6.3	28.5	3.3	43
Sept.	30	1719	.50	61	6.8	26.5	7.3	92
	30	1717	.90	61	6.8	26.0	7.3	91
	30	1715	1.9	61	6.7	25.5	7.0	87
	30	1713	2.9	61	6.7	25.0	6.8	84
	30	1711	3.9	61	6.7	25.0	6.9	85
	30	1709	4.9	61	6.6	25.0	6.6	82
	30	1707	5.9	61	6.7	25.0	6.9	85
	30	1704	6.9	60	6.7	25.0	7.1	87
	30	1702	7.9	60	6.7	25.0	7.1	87
	30	1700	8.9	60	6.7	25.0	7.0	86
	30	1658	9.9	61	6.7	25.0	6.8	83
	30	1656	10.9	61	6.6	25.0	6.4	79
	30	1653	11.9	61	6.6	25.0	6.2	76
Oct.	23	1119	.50	61	7.0	20.5	7.8	90
	23	1115	1.5	61	7.0	20.5	7.8	89
	23	1113	2.5	61	7.0	20.5	7.8	89
	23	1109	3.5	60	6.9	20.5	7.6	86
	23	1105	4.5	60	6.9	20.0	7.4	85
	23	1102	5.5	60	6.9	20.0	7.3	83

Table 34. Vertical profile water-quality data at Mountain Island Lake site 14, May 1996 through September 1997—Continued

CATAWBA RIVER AT NC 16 NEAR SHUFFLETOWN, NC (MTN14)

[Site 14 is at latitude 35°21'01", longitude 80°58'21", Mecklenburg County, U.S. Geological Survey downstream order number 0214267200. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1996 (Continued)							
(Continued)							
Oct. 23	1058	6.5	60	6.8	19.5	7.4	83
23	1055	7.5	61	6.9	19.0	7.5	84
23	1053	8.5	61	6.8	19.0	7.5	84
23	1050	9.5	62	6.8	18.5	7.3	80
23	1047	10.5	62	6.8	18.5	7.3	80
23	1042	11.5	62	6.8	18.5	7.2	79
Nov. 20	1254	.50	60	7.2	15.5	9.0	92
20	1249	1.2	60	7.3	15.0	9.0	92
20	1245	2.2	60	7.2	15.0	8.8	90
20	1238	3.2	60	7.1	14.5	8.7	87
20	1235	4.2	60	7.0	14.0	8.6	86
20	1231	5.2	60	7.0	14.0	8.6	86
20	1223	6.2	61	7.0	14.0	8.6	85
20	1219	7.2	61	7.0	13.5	8.6	85
20	1215	8.2	61	7.0	13.5	8.5	84
20	1211	9.2	61	6.9	13.5	8.5	84
20	1206	10.2	61	6.9	13.5	8.5	84
20	1202	11.2	61	6.9	13.5	8.4	83
Dec. 18	1519	.50	59	7.0	17.0	9.4	100
18	1517	.80	59	7.0	15.0	9.0	92
18	1513	1.8	58	7.0	13.0	9.3	91
18	1511	2.8	58	7.0	12.5	9.3	90
18	1508	3.8	58	6.9	12.5	9.3	90
18	1506	4.8	58	7.0	12.5	9.3	90
18	1503	5.8	58	6.9	12.5	9.3	89
18	1501	6.8	58	6.9	12.5	9.3	89
18	1458	7.8	58	6.9	12.0	9.3	89
18	1456	8.8	58	6.9	12.0	9.3	89
18	1454	9.8	58	6.9	12.0	9.3	89
18	1451	10.8	57	6.9	12.0	9.3	89
18	1449	11.8	58	6.9	12.0	9.3	88
1997							
Feb. 27	1458	0.50	57	6.9	9.5	10.0	90
27	1457	.70	57	6.9	9.5	10.0	90
27	1455	1.7	56	6.9	9.5	10.0	90
27	1452	2.7	56	6.9	9.5	10.0	90
27	1450	3.7	56	6.9	9.5	10.0	90
27	1447	4.7	56	6.9	9.5	10.0	90
27	1445	5.7	56	6.9	9.5	10.0	90
27	1443	6.7	56	6.9	9.5	10.0	90
27	1440	7.7	56	6.9	9.5	10.0	90
27	1438	8.7	57	6.9	9.5	10.0	90
27	1435	9.7	57	6.9	9.5	9.9	89
27	1433	10.7	57	6.9	9.5	9.9	90
27	1431	11.7	57	6.9	9.5	9.9	89

Table 34. Vertical profile water-quality data at Mountain Island Lake site 14, May 1996 through September 1997—Continued

CATAWBA RIVER AT NC 16 NEAR SHUFFLETOWN, NC (MTN14)

[Site 14 is at latitude 35°21'01", longitude 80°58'21", Mecklenburg County, U.S. Geological Survey downstream order number 0214267200. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1997 (Continued)							
Mar. 20	1519	0.50	57	6.9	14.5	9.2	94
	20	1517	1.0	57	6.9	14.5	95
	20	1513	2.0	57	6.9	13.5	93
	20	1510	3.0	57	6.9	13.0	92
	20	1505	4.0	56	6.9	13.0	92
	20	1500	5.0	57	6.8	13.0	92
	20	1456	6.0	56	6.8	13.0	91
	20	1450	7.0	56	6.8	12.5	91
	20	1446	8.0	56	6.8	12.5	90
	20	1443	9.0	56	6.8	12.5	90
	20	1439	10.0	56	6.8	12.5	90
	20	1433	11.0	56	6.8	12.5	90
	20	1421	12.0	56	6.8	12.5	90
Apr. 03	1632	.50	56	7.0	17.5	8.7	93
	03	1630	1.4	56	7.0	16.5	91
	03	1629	2.4	56	7.0	15.5	90
	03	1627	3.4	56	7.0	15.0	89
	03	1625	4.4	55	7.0	15.0	88
	03	1624	5.4	56	7.0	15.0	88
	03	1621	6.4	56	6.9	15.0	88
	03	1620	7.4	56	6.9	15.0	88
	03	1618	8.4	56	6.9	15.0	88
	03	1616	9.4	56	6.9	15.0	88
	03	1614	10.4	56	6.9	15.0	88
	03	1612	11.4	56	6.9	15.0	88
	03	1610	12.4	56	7.0	15.0	88
May 01	1105	.50	56	6.9	20.5	8.5	97
	01	1102	1.0	56	6.9	20.0	97
	01	1059	2.0	56	6.8	20.0	96
	01	1057	3.0	56	6.8	20.0	96
	01	1055	4.0	56	6.8	19.5	95
	01	1053	5.0	56	6.7	18.5	91
	01	1051	6.0	56	6.6	17.5	86
	01	1048	7.0	56	6.6	16.5	82
	01	1039	8.0	57	6.6	16.5	80
	01	1034	9.0	56	6.5	16.5	78
	01	1031	10.0	57	6.5	16.5	78
	01	1029	11.0	57	6.5	16.0	76
	21	1042	.50	54	6.9	24.0	98
	21	1040	1.0	54	6.9	23.5	98
	21	1038	2.0	53	6.9	21.5	93
	21	1034	3.0	53	6.8	21.0	90
	21	1032	4.0	53	6.7	20.0	86
	21	1029	5.0	53	6.8	20.0	86
	21	1028	6.0	53	6.7	20.0	86
	21	1026	7.0	53	6.7	20.0	85

Table 34. Vertical profile water-quality data at Mountain Island Lake site 14, May 1996 through September 1997—Continued

CATAWBA RIVER AT NC 16 NEAR SHUFFLETOWN, NC (MTN14)

[Site 14 is at latitude 35°21'01", longitude 80°58'21", Mecklenburg County, U.S. Geological Survey downstream order number 0214267200. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1997 (Continued)								
(Continued)								
May	21	1024	8.0	53	6.7	20.0	7.5	85
	21	1022	9.0	53	6.7	19.5	7.4	84
	21	1020	10.0	53	6.7	19.5	7.4	83
	21	1018	11.0	54	6.7	19.5	7.3	82
June	04	1520	.50	58	6.8	21.5	7.5	88
	04	1518	1.4	58	6.8	21.5	7.5	88
	04	1517	2.4	58	6.7	21.5	7.5	88
	04	1515	3.4	58	6.7	21.5	7.5	88
	04	1513	4.4	58	6.7	21.5	7.5	88
	04	1511	5.4	58	6.7	21.5	7.5	88
	04	1509	6.4	58	6.7	21.5	7.5	88
	04	1507	7.4	58	6.7	21.5	7.5	88
	04	1505	8.4	58	6.5	21.5	6.9	81
	04	1502	9.4	58	6.3	21.0	5.8	67
	04	1500	10.4	58	6.3	20.5	5.5	63
	04	1458	11.4	59	6.3	20.5	4.6	53
	18	1151	.50	58	6.8	28.0	7.1	94
	18	1149	1.5	58	6.8	27.5	7.1	93
	18	1147	2.5	58	6.8	26.0	7.3	92
	18	1142	3.5	57	6.8	24.5	7.2	89
	18	1138	4.5	57	6.7	24.0	7.0	85
	18	1134	5.5	56	6.6	22.5	6.7	79
	18	1130	6.5	56	6.6	22.0	6.7	78
	18	1126	7.5	56	6.6	22.0	6.7	78
	18	1123	8.5	56	6.6	22.0	6.7	78
	18	1118	9.5	56	6.6	22.0	6.7	78
	18	1115	10.5	56	6.6	22.0	6.7	78
	18	1111	11.5	56	6.6	22.0	6.7	78
	30	1451	.50	56	6.8	31.0	7.1	97
	30	1450	1.0	55	6.8	30.0	7.2	96
	30	1447	2.0	55	6.8	29.5	7.2	96
	30	1444	3.0	55	6.6	27.0	6.4	82
	30	1442	4.0	55	6.5	26.0	5.9	74
	30	1439	5.0	55	6.5	25.5	5.9	73
	30	1437	6.0	55	6.5	25.0	5.9	73
	30	1435	7.0	55	6.5	24.5	5.9	72
	30	1432	8.0	55	6.5	24.5	5.9	72
	30	1430	9.0	55	6.4	24.0	5.8	70
	30	1428	10.0	55	6.4	23.5	5.6	67
	30	1423	11.0	55	6.4	23.5	5.3	64
Jul	17	1512	.50	54	6.8	34.0	6.8	99
	17	1509	1.4	54	6.8	32.5	7.0	98
	17	1506	2.4	53	6.8	31.0	6.7	92
	17	1502	3.4	53	6.6	30.0	6.3	84
	17	1459	4.4	53	6.5	29.0	5.8	78
	17	1456	5.4	53	6.5	29.0	5.8	77

Table 34. Vertical profile water-quality data at Mountain Island Lake site 14, May 1996 through September 1997—Continued

CATAWBA RIVER AT NC 16 NEAR SHUFFLETOWN, NC (MTN14)

[Site 14 is at latitude 35°21'01", longitude 80°58'21", Mecklenburg County, U.S. Geological Survey downstream order number 0214267200. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1997 (Continued)								
(Continued)								
July	17	1453	6.4	53	6.5	29.0	5.7	75
	17	1449	7.4	53	6.5	29.0	5.7	75
	17	1446	8.4	53	6.5	28.5	5.6	74
	17	1443	9.4	53	6.4	28.5	5.3	69
	17	1439	10.4	53	6.4	28.5	5.1	67
	17	1437	11.4	54	6.4	28.5	5.2	68
	31	1216	.50	54	6.6	30.0	6.0	80
	31	1214	1.5	54	6.6	29.5	5.9	79
	31	1206	2.5	54	6.6	29.5	5.7	76
	31	1202	3.5	54	6.6	29.5	5.8	77
	31	1159	4.5	53	6.5	29.5	5.7	76
	31	1156	5.5	54	6.5	29.5	5.7	76
	31	1154	6.5	53	6.5	29.5	5.7	76
	31	1152	7.5	53	6.5	29.5	5.6	75
	31	1149	8.5	54	6.5	29.5	5.4	72
	31	1147	9.5	53	6.4	29.0	5.0	66
	31	1144	10.5	53	6.3	29.0	4.4	58
	31	1134	11.5	53	6.3	29.0	4.0	53
Aug.	21	1346	.50	50	6.8	33.5	6.8	98
	21	1345	1.0	50	7.0	32.5	6.9	98
	21	1344	2.0	50	7.1	31.5	7.0	98
	21	1343	3.0	50	6.8	31.0	6.6	91
	21	1342	4.0	49	6.6	30.5	5.9	81
	21	1341	5.0	49	6.5	30.0	5.3	71
	21	1340	6.0	50	6.5	29.5	5.0	68
	21	1339	7.0	50	6.4	29.5	4.8	64
	21	1338	8.0	50	6.4	29.5	4.4	59
	21	1337	9.0	50	6.3	29.5	4.3	57
	21	1336	10.0	50	6.3	29.0	3.5	47
	21	1335	11.0	50	6.2	28.5	2.5	34
Sept.	10	1134	.50	55	6.8	31.0	6.4	89
	10	1133	1.5	54	7.0	29.0	6.9	93
	10	1132	2.5	54	6.9	29.0	6.9	92
	10	1131	3.5	54	6.9	28.0	6.9	91
	10	1130	4.5	54	6.7	27.5	6.2	80
	10	1129	5.5	54	6.7	27.5	6.0	78
	10	1128	6.5	54	6.7	27.0	6.4	83
	10	1127	7.5	54	6.7	27.0	6.3	82
	10	1126	8.5	54	6.7	27.0	6.3	82
	10	1125	9.5	55	6.6	27.0	6.3	81
	10	1124	10.5	55	6.6	26.5	6.0	77
	10	1123	11.5	55	6.4	26.5	5.1	65
	26	1438	.50	54	6.8	25.0	6.5	81
	26	1437	1.6	54	6.7	25.0	6.5	81
	26	1436	2.6	54	6.7	25.0	6.5	81
	26	1435	3.6	54	6.7	25.0	6.4	80

Table 34. Vertical profile water-quality data at Mountain Island Lake site 14, May 1996 through September 1997—Continued

CATAWBA RIVER AT NC 16 NEAR SHUFFLETOWN, NC (MTN14)

[Site 14 is at latitude 35°21'01", longitude 80°58'21", Mecklenburg County, U.S. Geological Survey downstream order number 0214267200. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1997 (Continued)							
(Continued)							
Sept. 26	1434	4.6	54	6.7	25.0	6.4	79
26	1433	5.6	54	6.7	25.0	6.4	79
26	1432	6.6	54	6.7	24.5	6.4	79
26	1431	7.6	55	6.7	24.0	6.5	79
26	1430	8.6	56	6.7	23.5	6.5	79
26	1429	9.6	57	6.6	22.5	6.4	76
26	1428	10.6	58	6.5	21.5	6.2	72
26	1427	11.6	60	6.5	21.0	5.9	68

Table 35. Vertical profile water-quality data at Mountain Island Lake site 15, May 1996 through September 1997

CATAWBA RIVER ABOVE DAM NEAR SHUFFLETOWN, NC (MTN15)

[Site 15 is at latitude 35°20'14", longitude 80°59'08", Mecklenburg County, U.S. Geological Survey downstream order number 0214267598. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1996								
May	30	1328	0.50	58	7.1	26.0	7.7	97
	30	1327	1.0	58	7.1	26.0	7.7	97
	30	1326	2.0	58	7.1	26.0	7.7	97
	30	1324	3.0	58	7.1	26.0	7.7	97
	30	1323	4.0	57	7.1	26.0	7.6	96
	30	1321	5.0	57	7.1	26.0	7.6	95
	30	1320	6.0	57	7.0	26.0	7.6	95
	30	1319	7.0	58	7.0	26.0	7.5	94
	30	1318	8.0	58	6.8	25.0	6.8	85
	30	1317	9.0	59	6.6	23.5	5.8	71
	30	1315	10.0	60	6.5	22.5	4.9	58
	30	1314	11.0	60	6.4	21.5	4.1	47
	30	1313	12.0	60	6.4	20.0	3.8	43
	30	1312	13.0	61	6.4	19.0	2.9	32
	30	1311	14.0	61	6.3	18.5	2.5	27
	30	1309	15.0	61	6.4	17.5	2.1	22
	30	1308	15.6	63	6.4	17.0	1.9	20
	30	1306	16.6	75	6.6	16.0	.1	1
June	12	1537	.50	56	7.8	27.5	8.1	106
	12	1535	1.3	56	7.8	27.5	8.2	106
	12	1533	2.3	56	7.6	27.0	7.8	100
	12	1531	3.3	57	7.2	26.5	7.5	96
	12	1529	4.3	58	6.8	25.5	6.5	82
	12	1527	5.3	58	6.7	25.5	6.0	75
	12	1525	6.3	59	6.7	25.0	5.5	68
	12	1524	7.3	59	6.7	25.0	5.4	67
	12	1522	8.3	59	6.6	24.5	4.9	61
	12	1520	9.3	59	6.6	24.0	4.8	59
	12	1518	10.3	59	6.6	24.0	4.5	55
	12	1516	11.3	60	6.5	23.5	3.9	47
	12	1515	12.3	62	6.5	22.5	2.3	27
	12	1511	13.3	64	6.5	21.0	.8	9
	12	1510	14.3	65	6.5	19.0	.3	3
	12	1509	15.3	64	6.5	17.5	.5	5
	12	1507	16.3	77	6.8	16.5	.1	1
	12	1506	17.3	85	6.9	16.0	.1	1
	12	1505	18.3	87	6.9	16.0	.1	1
	26	1548	.50	56	7.4	31.5	7.8	108
	26	1546	1.0	56	7.4	31.5	7.8	108
	26	1544	2.0	56	7.4	31.0	7.9	108
	26	1542	3.0	56	7.2	30.5	7.8	106
	26	1540	4.0	56	7.0	30.5	7.2	97
	26	1537	5.0	56	6.8	30.0	6.9	94
	26	1535	6.0	56	6.5	28.5	5.5	73
	26	1533	7.0	56	6.5	28.0	5.4	70
	26	1531	8.0	56	6.5	28.0	5.2	68
	26	1528	9.0	57	6.4	28.0	5.2	67
	26	1526	10.0	57	6.4	28.0	5.1	66

Table 35. Vertical profile water-quality data at Mountain Island Lake site 15, May 1996 through September 1997—Continued

CATAWBA RIVER ABOVE DAM NEAR SHUFFLETOWN, NC (MTN15)

[Site 15 is at latitude 35°20'14", longitude 80°59'08", Mecklenburg County, U.S. Geological Survey downstream order number 0214267598. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1996 (Continued)								
(Continued)								
June	26	1524	11.0	57	6.4	27.5	4.7	60
	26	1521	12.0	56	6.4	27.0	4.4	57
	26	1519	13.0	57	6.3	26.5	3.9	50
	26	1518	14.0	58	6.3	26.0	3.3	41
	26	1514	15.0	66	6.4	23.0	.9	11
	26	1511	16.0	78	6.6	18.0	.1	1
	26	1508	17.0	85	6.7	17.5	.1	1
July	11	1626	.50	58	7.3	29.5	7.5	101
	11	1624	1.5	58	7.3	29.5	7.5	101
	11	1622	2.5	58	7.3	29.5	7.5	101
	11	1620	3.5	58	7.3	29.5	7.5	101
	11	1618	4.5	58	7.3	29.5	7.5	101
	11	1616	5.5	58	7.3	29.5	7.5	101
	11	1614	6.5	58	7.3	29.5	7.5	101
	11	1612	7.5	59	6.7	29.0	5.9	78
	11	1610	8.5	59	6.5	28.5	5.2	69
	11	1607	9.5	59	6.5	28.0	4.8	63
	11	1605	10.5	59	6.4	27.5	4.4	58
	11	1603	11.5	59	6.4	27.5	4.4	58
	11	1600	12.5	59	6.4	27.5	4.2	55
	11	1558	13.5	59	6.4	27.5	4.2	54
	11	1555	14.5	65	6.3	27.0	1.4	19
	11	1553	15.5	77	6.5	22.5	.0	1
	11	1551	16.5	100	6.9	19.0	.0	1
	25	1404	.50	58	7.7	31.5	7.8	108
	25	1402	.90	58	7.7	31.5	7.8	108
	25	1358	1.9	58	7.7	31.5	7.8	109
	25	1356	2.9	56	7.1	30.5	7.4	101
	25	1353	3.9	57	6.7	30.0	6.3	86
	25	1349	4.9	57	6.6	30.0	5.9	80
	25	1347	5.9	57	6.5	29.0	5.1	69
	25	1343	6.9	58	6.5	29.0	4.9	65
	25	1340	7.9	58	6.4	28.5	4.5	60
	25	1334	8.9	58	6.4	28.5	4.1	54
	25	1329	9.9	58	6.4	28.0	4.1	54
	25	1325	10.9	58	6.3	28.0	3.7	48
	25	1321	11.9	59	6.3	28.0	3.3	44
	25	1318	12.9	59	6.3	27.5	3.0	39
	25	1315	13.9	60	6.3	27.5	2.3	30
	25	1312	14.9	64	6.3	26.5	.5	6
	25	1310	15.9	88	6.8	23.5	.0	1
	25	1307	16.9	123	7.3	20.0	.0	0
Aug.	08	1538	.50	57	7.7	31.5	7.9	109
	08	1536	1.5	57	8.2	31.0	8.4	116
	08	1534	2.5	56	7.7	31.0	8.0	110
	08	1531	3.5	56	7.3	30.5	7.5	102

Table 35. Vertical profile water-quality data at Mountain Island Lake site 15, May 1996 through September 1997—Continued

CATAWBA RIVER ABOVE DAM NEAR SHUFFLETOWN, NC (MTN15)

[Site 15 is at latitude 35°20'14", longitude 80°59'08", Mecklenburg County, U.S. Geological Survey downstream order number 0214267598. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1996 (Continued)							
(Continued)							
Aug. 08	1529	4.5	56	6.5	29.5	5.2	70
08	1525	5.5	56	6.4	29.0	4.6	61
08	1522	6.5	56	6.4	29.0	4.8	64
08	1519	7.5	56	6.4	29.0	4.5	60
08	1517	8.5	57	6.3	29.0	4.1	54
08	1514	9.5	57	6.3	28.5	4.0	52
08	1512	10.5	58	6.3	28.5	3.9	51
08	1507	11.5	59	6.3	28.5	3.2	41
08	1503	12.5	61	6.3	28.0	3.1	41
08	1500	13.5	62	6.3	28.0	3.0	39
08	1456	14.5	72	6.4	26.5	.0	0
08	1451	15.5	100	7.0	23.5	.0	0
08	1449	16.5	126	7.3	22.0	.1	1
Sept. 30	1800	.50	60	6.8	25.0	7.3	90
30	1758	1.4	60	6.8	25.0	7.3	90
30	1757	2.4	60	6.8	25.0	7.3	90
30	1755	3.4	60	6.8	25.0	7.3	90
30	1753	4.4	60	6.8	25.0	7.3	90
30	1752	5.4	60	6.8	25.0	7.3	90
30	1750	6.4	60	6.8	25.0	7.3	90
30	1748	7.4	60	6.8	25.0	7.3	90
30	1747	8.4	60	6.8	25.0	7.3	90
30	1745	9.4	60	6.8	25.0	7.3	90
30	1744	10.4	60	6.7	25.0	7.3	89
30	1742	11.3	60	6.7	25.0	7.3	89
30	1741	12.4	60	6.7	25.0	7.2	88
30	1739	13.4	61	6.7	25.0	7.0	86
30	1737	14.4	61	6.6	25.0	6.8	83
30	1736	15.5	61	6.5	24.5	5.9	72
30	1733	16.4	64	6.4	24.5	4.3	52
Oct. 23	1228	.50	61	6.9	20.0	7.6	86
23	1225	1.2	61	6.9	20.0	7.6	86
23	1223	2.2	61	6.9	20.0	7.5	85
23	1222	3.2	61	6.9	20.0	7.6	86
23	1220	4.2	61	6.9	20.0	7.5	85
23	1217	5.2	61	6.9	20.0	7.5	85
23	1215	6.2	61	6.9	20.0	7.4	84
23	1212	7.2	61	6.8	19.5	7.3	83
23	1209	8.2	61	6.8	19.0	7.1	79
23	1207	9.2	61	6.8	19.0	7.2	80
23	1205	10.2	61	6.8	19.0	7.2	79
23	1203	11.2	61	6.8	18.5	7.2	79
23	1159	12.2	62	6.8	18.5	7.2	80
23	1156	13.2	62	6.8	18.5	7.2	79
23	1153	14.2	62	6.8	18.5	7.2	79
23	1151	15.2	62	6.8	18.5	7.1	78
23	1149	16.2	62	6.7	18.5	7.0	77

Table 35. Vertical profile water-quality data at Mountain Island Lake site 15, May 1996 through September 1997—Continued

CATAWBA RIVER ABOVE DAM NEAR SHUFFLETOWN, NC (MTN15)

[Site 15 is at latitude 35°20'14", longitude 80°59'08", Mecklenburg County, U.S. Geological Survey downstream order number 0214267598. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1996 (Continued)							
Nov. 20	1405	0.50	60	7.2	15.0	8.8	90
	20	1.0	60	7.2	15.0	8.8	90
	20	1359	60	7.2	14.5	8.8	90
	20	1356	60	7.1	14.5	8.8	89
	20	1353	60	7.1	14.5	8.6	86
	20	1349	60	7.0	14.0	8.4	84
	20	1347	60	7.0	14.0	8.4	84
	20	1344	60	7.0	14.0	8.4	83
	20	1341	60	6.9	13.5	8.3	83
	20	1339	60	6.9	13.5	8.4	83
	20	1337	60	6.9	13.5	8.4	83
	20	1335	60	6.9	13.5	8.4	83
	20	1333	60	6.9	13.5	8.3	82
	20	1329	60	6.9	13.5	8.3	82
	20	1327	60	6.9	13.5	8.4	82
	20	1324	60	6.9	13.5	8.4	82
	20	1322	60	6.9	13.5	8.4	82
	20	1319	60	6.8	13.5	8.2	81
Dec. 18	1632	.50	58	7.0	13.0	9.4	91
	18	1631	58	7.0	13.0	9.4	91
	18	1630	58	7.0	13.0	9.4	91
	18	1628	58	7.0	13.0	9.4	91
	18	1627	58	7.0	12.5	9.4	91
	18	1626	58	7.0	12.5	9.4	91
	18	1624	58	6.9	12.5	9.4	91
	18	1623	58	6.9	12.5	9.4	91
	18	1622	58	6.9	12.5	9.4	91
	18	1620	58	6.9	12.5	9.4	90
	18	1619	58	6.9	12.5	9.3	90
	18	1617	58	6.9	12.5	9.3	90
	18	1616	58	6.9	12.5	9.3	90
	18	1614	58	6.9	12.5	9.3	89
	18	1613	58	6.9	12.5	9.3	89
	18	1611	58	6.9	12.5	9.2	89
	18	1609	58	6.9	12.5	9.2	89
1997							
Feb. 27	1621	0.50	57	7.0	10.0	10.1	92
	27	1619	57	6.9	10.0	10.1	92
	27	1616	57	6.9	10.0	10.1	92
	27	1614	57	6.9	10.0	10.1	92
	27	1612	57	6.9	10.0	10.1	92
	27	1610	57	6.9	10.0	10.1	92
	27	1608	57	6.9	10.0	10.1	92
	27	1605	56	6.9	10.0	10.1	92
	27	1603	56	6.9	10.0	10.1	92
	27	1600	56	6.9	10.0	10.1	92
	27	1557	56	6.9	10.0	10.1	92

Table 35. Vertical profile water-quality data at Mountain Island Lake site 15, May 1996 through September 1997—Continued

CATAWBA RIVER ABOVE DAM NEAR SHUFFLETOWN, NC (MTN15)

[Site 15 is at latitude 35°20'14", longitude 80°59'08", Mecklenburg County, U.S. Geological Survey downstream order number 0214267598. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1997 (Continued)								
(Continued)								
Feb.	27	1555	11.0	56	6.9	10.0	10.1	92
	27	1553	12.0	56	6.9	10.0	10.1	92
	27	1551	13.0	56	6.9	10.0	10.1	92
	27	1549	14.0	56	6.9	10.0	10.1	92
	27	1547	15.0	56	6.9	10.0	10.0	91
	27	1544	16.0	56	6.9	10.0	10.0	91
	27	1542	17.0	56	6.9	10.0	10.0	91
Mar.	20	1618	.50	57	7.0	14.0	9.6	96
	20	1616	1.5	57	7.0	13.5	9.5	94
	20	1615	2.5	56	6.9	13.5	9.5	94
	20	1613	3.5	56	6.9	13.5	9.5	93
	20	1612	4.5	56	6.9	13.5	9.5	93
	20	1611	5.5	56	6.9	13.5	9.5	93
	20	1609	6.5	56	6.9	13.5	9.5	93
	20	1607	7.5	56	6.9	13.5	9.5	93
	20	1606	8.5	56	6.9	13.5	9.4	93
	20	1603	9.5	56	6.9	13.5	9.4	93
	20	1557	10.5	56	6.9	13.5	9.4	93
	20	1554	11.5	56	6.9	13.0	9.4	93
	20	1550	12.5	56	6.9	13.0	9.4	92
	20	1547	13.5	56	6.8	13.0	9.4	91
	20	1545	14.5	56	6.8	13.0	9.4	91
	20	1543	15.5	56	6.8	12.5	9.3	90
	20	1542	16.5	56	6.8	12.5	9.3	90
Apr.	03	1715	.50	56	7.1	17.5	9.0	96
	03	1713	1.4	56	7.1	16.5	8.9	93
	03	1712	2.4	56	7.1	16.0	9.0	92
	03	1710	3.4	55	7.0	15.0	8.9	90
	03	1708	4.4	55	7.0	15.0	8.8	89
	03	1706	5.4	56	6.9	14.5	8.7	88
	03	1704	6.4	56	6.9	14.5	8.7	87
	03	1702	7.4	56	6.9	14.5	8.6	86
	03	1701	8.4	55	6.9	14.5	8.6	86
	03	1658	9.4	56	6.9	14.5	8.6	86
	03	1657	10.4	56	6.9	14.5	8.6	86
	03	1656	11.4	56	6.9	14.5	8.6	86
	03	1654	12.4	56	6.9	14.5	8.6	85
	03	1652	13.4	56	6.9	14.5	8.6	85
	03	1650	14.4	56	6.9	14.5	8.5	85
	03	1648	15.4	56	6.9	14.5	8.5	85
	03	1646	16.4	56	6.9	14.5	8.5	84
	03	1644	17.4	56	6.9	14.5	8.4	84
May	01	1237	.50	57	7.0	19.0	8.6	96
	01	1235	1.5	58	7.0	19.0	8.6	96
	01	1232	2.5	58	7.0	19.0	8.6	96
	01	1229	3.5	57	6.9	18.0	8.3	91

Table 35. Vertical profile water-quality data at Mountain Island Lake site 15, May 1996 through September 1997—Continued

CATAWBA RIVER ABOVE DAM NEAR SHUFFLETOWN, NC (MTN15)

[Site 15 is at latitude 35°20'14", longitude 80°59'08", Mecklenburg County, U.S. Geological Survey downstream order number 0214267598. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1997 (Continued)								
(Continued)								
May	01	1227	4.5	56	6.7	16.5	8.1	86
	01	1223	5.5	57	6.7	16.5	8.0	84
	01	1220	6.5	57	6.7	16.0	7.9	83
	01	1218	7.5	56	6.7	16.0	7.9	83
	01	1215	8.5	57	6.7	16.0	7.9	83
	01	1213	9.5	57	6.7	16.0	7.9	83
	01	1211	10.5	57	6.7	16.0	7.8	83
	01	1208	11.5	56	6.6	16.0	7.8	82
	01	1206	12.5	57	6.6	16.0	7.7	81
	01	1203	13.5	57	6.6	16.0	7.5	79
	01	1201	14.5	57	6.6	16.0	7.5	79
	01	1159	15.5	57	6.5	16.0	7.3	77
	01	1156	16.5	57	6.5	16.0	7.2	76
	01	1154	17.5	57	6.5	16.0	7.2	75
	21	1311	.50	54	7.0	23.0	8.2	98
	21	1307	.80	54	7.0	23.0	8.2	98
	21	1305	1.8	53	7.0	23.0	8.2	98
	21	1301	2.8	53	7.1	23.0	8.3	99
	21	1259	3.8	53	7.0	22.5	8.2	97
	21	1256	4.8	53	6.9	22.0	8.2	96
	21	1254	5.8	53	6.8	20.5	7.8	89
	21	1252	6.8	53	6.7	20.0	7.6	86
	21	1249	7.8	53	6.7	20.0	7.6	85
	21	1247	8.8	53	6.7	20.0	7.6	85
	21	1244	9.8	53	6.7	20.0	7.5	85
	21	1241	10.8	53	6.7	19.5	7.4	83
	21	1239	11.8	53	6.7	19.5	7.4	83
	21	1235	12.8	53	6.6	19.5	7.4	82
	21	1232	13.8	53	6.6	19.0	7.2	80
	21	1230	14.8	53	6.6	18.5	7.1	78
	21	1227	15.8	53	6.5	18.0	6.6	72
	21	1224	16.8	54	6.5	18.0	5.5	59
June	04	1612	.50	57	6.8	22.0	7.7	91
	04	1610	1.5	57	6.8	22.0	7.7	91
	04	1608	2.5	57	6.8	22.0	7.7	91
	04	1606	3.5	57	6.8	22.0	7.7	91
	04	1604	4.5	57	6.8	22.0	7.7	91
	04	1601	5.5	57	6.8	22.0	7.7	91
	04	1559	6.5	57	6.8	22.0	7.7	91
	04	1557	7.5	57	6.8	22.0	7.7	91
	04	1555	8.5	57	6.7	22.0	7.5	88
	04	1553	9.5	57	6.6	21.5	7.1	84
	04	1551	10.5	58	6.5	21.5	6.8	80
	04	1548	11.5	58	6.3	20.5	6.0	69
	04	1546	12.5	59	6.2	20.0	4.3	49
	04	1544	13.5	58	6.2	19.5	4.4	50
	04	1542	14.5	58	6.2	19.0	4.5	50

Table 35. Vertical profile water-quality data at Mountain Island Lake site 15, May 1996 through September 1997—Continued

CATAWBA RIVER ABOVE DAM NEAR SHUFFLETOWN, NC (MTN15)

[Site 15 is at latitude 35°20'14", longitude 80°59'08", Mecklenburg County, U.S. Geological Survey downstream order number 0214267598. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1997 (Continued)							
(Continued)							
June 04	1540	15.5	59	6.2	18.5	4.2	46
04	1537	16.5	61	6.3	18.5	3.5	38
18	1302	.50	58	6.9	24.5	7.4	91
18	1300	1.3	58	6.9	24.5	7.4	91
18	1258	2.3	57	6.8	24.5	7.4	91
18	1256	3.3	57	6.8	24.5	7.3	89
18	1254	4.3	56	6.7	24.0	7.1	87
18	1252	5.3	56	6.6	22.5	6.8	81
18	1249	6.3	56	6.6	22.5	6.8	80
18	1246	7.3	56	6.6	22.5	6.7	79
18	1244	8.3	56	6.6	22.5	6.7	79
18	1242	9.3	56	6.6	22.5	6.7	79
18	1238	10.3	56	6.6	22.0	6.7	79
18	1235	11.3	56	6.6	22.0	6.7	79
18	1231	12.3	56	6.6	22.0	6.6	78
18	1229	13.3	56	6.6	22.0	6.6	77
18	1227	14.3	56	6.6	22.0	6.4	76
18	1223	15.3	57	6.5	21.5	6.3	73
18	1218	16.3	59	6.5	20.5	4.9	56
30	1548	.50	55	7.1	29.5	7.7	102
30	1545	1.5	55	7.1	28.5	7.9	104
30	1543	2.5	55	6.9	28.5	7.3	96
30	1540	3.5	55	6.8	28.0	6.8	88
30	1538	4.5	55	6.5	25.5	5.7	72
30	1535	5.5	55	6.5	25.0	5.7	71
30	1532	6.5	55	6.4	25.0	5.7	70
30	1529	7.5	55	6.4	24.5	5.6	68
30	1527	8.5	55	6.4	24.0	5.6	68
30	1525	9.5	55	6.4	24.0	5.6	67
30	1523	10.5	55	6.4	24.0	5.5	66
30	1520	11.5	55	6.4	23.5	5.5	66
30	1518	12.5	55	6.4	23.5	5.4	65
30	1515	13.5	55	6.4	23.5	5.4	65
30	1512	14.5	55	6.4	23.5	5.3	64
30	1510	15.5	55	6.4	23.5	5.0	60
30	1507	16.5	60	6.4	22.0	2.8	32
July 17	1620	.50	54	7.3	32.0	7.5	104
17	1618	1.6	54	7.4	31.0	7.6	105
17	1615	2.6	53	7.2	30.5	7.2	98
17	1613	3.6	53	6.6	29.5	6.4	87
17	1611	4.6	53	6.5	29.0	6.0	80
17	1610	5.6	53	6.5	29.0	5.9	78
17	1607	6.6	53	6.5	29.0	5.7	75
17	1605	7.6	53	6.4	29.0	5.6	74
17	1604	8.6	53	6.4	28.5	5.5	73
17	1602	9.6	53	6.4	28.5	5.5	73
17	1600	10.6	53	6.4	28.5	5.3	70

Table 35. Vertical profile water-quality data at Mountain Island Lake site 15, May 1996 through September 1997—Continued

CATAWBA RIVER ABOVE DAM NEAR SHUFFLETOWN, NC (MTN15)

[Site 15 is at latitude 35°20'14", longitude 80°59'08", Mecklenburg County, U.S. Geological Survey downstream order number 0214267598. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1997 (Continued)								
(Continued)								
July	17	1558	11.6	53	6.4	28.5	5.1	67
	17	1556	12.6	53	6.3	28.0	4.9	65
	17	1554	13.6	54	6.3	28.0	4.6	59
	17	1552	14.6	55	6.2	27.0	3.3	42
	17	1549	15.6	63	6.3	24.5	.4	5
	17	1547	16.6	72	6.5	22.5	.0	1
	31	1327	.50	54	6.8	30.0	6.6	88
	31	1325	.80	53	6.8	30.0	6.6	88
	31	1323	1.8	54	6.8	30.0	6.5	88
	31	1320	2.8	54	6.7	30.0	6.4	86
	31	1318	3.8	53	6.7	30.0	6.4	86
	31	1316	4.8	53	6.6	29.5	6.1	81
	31	1314	5.8	53	6.6	29.5	6.0	80
	31	1312	6.8	53	6.6	29.5	5.9	79
	31	1310	7.8	54	6.4	29.5	4.8	63
	31	1308	8.8	54	6.3	29.5	4.3	58
	31	1305	9.8	54	6.3	29.0	4.3	57
	31	1301	10.8	53	6.3	29.0	4.4	58
	31	1259	11.8	55	6.3	29.0	3.7	49
	31	1256	12.8	55	6.2	28.5	3.4	44
	31	1252	13.8	56	6.2	28.0	2.7	35
	31	1250	14.8	58	6.2	27.5	1.6	20
	31	1247	15.8	66	6.3	26.0	.1	1
	31	1244	16.8	88	6.7	23.5	.0	0
Aug.	21	1432	.50	50	7.1	31.5	7.1	98
	21	1431	1.0	50	7.0	31.5	7.1	98
	21	1430	2.0	50	7.1	31.0	7.2	99
	21	1429	3.0	50	7.2	30.5	7.2	99
	21	1428	4.0	49	6.9	30.5	6.8	93
	21	1427	5.0	49	6.8	30.5	6.6	90
	21	1426	6.0	49	6.7	30.0	6.2	84
	21	1425	7.0	50	6.5	30.0	5.2	70
	21	1424	8.0	49	6.4	29.5	4.8	64
	21	1423	9.0	49	6.4	29.5	4.5	61
	21	1422	10.0	49	6.3	29.0	4.3	58
	21	1421	11.0	49	6.3	28.5	4.3	57
	21	1420	12.0	49	6.3	28.5	3.5	46
	21	1419	13.0	50	6.2	28.5	3.2	42
	21	1418	14.0	51	6.2	28.5	2.9	39
	21	1417	15.0	53	6.3	27.5	1.7	23
	21	1416	16.0	58	6.3	27.0	.0	0
	21	1415	17.0	89	6.8	25.0	.0	1

Table 35. Vertical profile water-quality data at Mountain Island Lake site 15, May 1996 through September 1997—Continued

CATAWBA RIVER ABOVE DAM NEAR SHUFFLETOWN, NC (MTN15)

[Site 15 is at latitude 35°20'14", longitude 80°59'08", Mecklenburg County, U.S. Geological Survey downstream order number 0214267598. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)
1997 (Continued)							
Sept. 10	1231	0.50	54	7.2	28.5	7.4	98
	10	1.5	54	7.2	28.5	7.4	98
	10	2.5	54	7.0	28.0	6.9	90
	10	3.5	54	6.7	27.5	6.1	80
	10	4.5	54	6.6	27.5	5.7	74
	10	5.5	54	6.6	27.0	6.0	77
	10	6.5	54	6.6	27.0	5.9	77
	10	7.5	54	6.6	27.0	5.6	72
	10	8.5	54	6.5	27.0	5.3	69
	10	9.5	55	6.5	27.0	5.1	65
	10	10.5	55	6.5	26.5	5.3	68
	10	12.0	55	6.5	26.5	5.5	71
	10	12.5	55	6.5	26.5	5.2	67
	10	13.5	55	6.5	26.5	5.3	68
	10	14.5	55	6.4	26.5	5.0	64
	10	15.5	57	6.4	26.5	3.9	50
	10	16.5	66	6.4	26.0	.3	4
26	1533	.50	54	6.8	25.0	6.5	82
26	1532	.80	54	6.8	25.0	6.5	82
26	1531	1.8	54	6.7	25.0	6.4	80
26	1530	2.8	54	6.7	25.0	6.4	80
26	1529	3.8	54	6.7	25.0	6.3	79
26	1528	4.8	54	6.7	25.0	6.3	78
26	1527	5.8	54	6.7	25.0	6.3	78
26	1526	6.8	54	6.7	25.0	6.3	78
26	1525	7.8	54	6.6	24.5	6.2	77
26	1524	8.8	55	6.6	24.5	6.2	77
26	1523	9.8	56	6.6	24.0	6.2	76
26	1522	10.8	58	6.6	23.5	6.2	75
26	1521	11.8	59	6.6	23.0	6.1	73
26	1520	12.8	59	6.5	22.5	6.1	72
26	1519	13.8	59	6.5	22.5	6.0	72
26	1518	14.8	59	6.5	22.0	6.0	71
26	1517	15.8	59	6.5	22.0	6.0	71
26	1516	16.8	59	6.5	22.0	5.9	70

Table 36. Vertical profile water-quality data at Catawba River site 17, May 1996 through September 1997

CATAWBA RIVER AT HWY 27 AT MOUNT HOLLY, NC (MTN17)

[Site 17 is at latitude 35°17'46", longitude 81°00'28", Gaston County, U.S. Geological Survey downstream order number 02142808. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1996								
May	30	0841	0.50	62	6.7	23.0	6.2	74
	30	0839	1.0	62	6.8	23.0	6.2	74
	30	0838	2.0	63	6.8	23.0	6.1	73
	30	0836	2.8	64	6.8	22.5	6.1	73
	30	0835	3.8	64	6.8	22.5	6.1	73
June	10	1111	.50	60	6.7	24.5	5.5	68
	10	1110	.90	60	6.6	24.5	5.5	67
	10	1107	1.9	60	6.6	24.5	5.6	68
	10	1106	2.9	60	6.6	24.5	5.6	68
	10	1104	3.9	60	6.6	24.5	5.5	67
	24	1115	.50	57	6.6	28.0	5.4	71
	24	1113	1.1	57	6.6	28.0	5.4	71
	24	1111	2.1	57	6.6	28.0	5.4	71
	24	1109	3.1	57	6.6	28.0	5.4	71
July	09	1006	.50	60	6.7	28.5	5.6	75
	09	1004	1.2	60	6.7	28.5	5.6	74
	09	1001	2.2	59	6.7	28.5	5.6	74
	09	0959	3.2	62	6.7	28.0	5.7	75
	23	1036	.50	60	6.6	28.5	5.3	70
	23	1033	1.2	59	6.6	29.0	5.3	70
	23	1028	2.2	59	6.6	28.5	5.3	70
	23	1024	3.2	60	6.6	28.5	5.3	70
Aug.	06	1043	.50	57	6.5	29.0	4.9	64
	06	1040	1.5	58	6.5	28.5	4.9	64
	06	1034	2.5	58	6.5	28.5	4.9	64
	06	1027	3.5	57	6.5	28.5	4.8	63
Sept.	27	0856	.50	61	6.7	25.0	6.2	76
	27	0855	.90	61	6.7	25.0	6.2	76
	27	0854	1.8	63	6.7	24.5	6.3	76
	27	0853	2.9	65	6.7	24.5	6.3	76
	27	0852	3.9	67	6.8	24.0	6.4	77
Oct.	21	1005	.50	63	6.9	20.0	7.3	82
	21	1003	.70	63	6.9	20.0	7.3	82
	21	1000	1.7	63	6.9	20.0	7.3	82
	21	0959	2.7	63	6.9	20.0	7.3	82
	21	0955	3.7	63	6.9	20.0	7.3	82
Nov.	18	1111	.50	59	7.1	14.0	8.9	87
	18	1107	1.5	59	7.0	14.0	8.9	88
	18	1105	2.5	64	7.1	12.5	9.3	89
	18	1100	3.5	64	7.1	12.5	9.3	89

Table 36. Vertical profile water-quality data at Catawba River site 17, May 1996 through September 1997—Continued

CATAWBA RIVER AT HWY 27 AT MOUNT HOLLY, NC (MTN17)

[Site 17 is at latitude 35°17'46", longitude 81°00'28", Gaston County, U.S. Geological Survey downstream order number 02142808. EST, eastern standard time; m, meter; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter]

Date	Time (EST)	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	
1997								
Jan. 28	1049	0.50	58	6.9	9.5	10.1	90	
	28	.90	58	7.0	9.5	10.1	90	
	28	1.9	58	7.0	9.5	10.1	90	
	28	2.9	57	7.0	10.0	10.1	90	
Feb. 25	1032	1.1	60	6.8	11.0	10.1	93	
Mar. 17	1100	.50	59	7.0	13.5	9.3	90	
	17	1.3	59	7.0	13.5	9.3	90	
	17	2.3	59	7.0	13.5	9.3	90	
	17	3.3	60	7.0	13.5	9.3	90	
May 02	0815	.50	59	6.7	17.0	8.2	87	
	02	1.0	59	6.7	17.0	8.2	87	
	02	2.0	60	6.7	17.0	8.2	87	
	02	3.0	61	6.6	16.5	8.3	87	
	19	1008	.50	53	6.7	19.5	7.8	87
	19	1005	1.5	53	6.7	19.5	7.8	87
	19	1003	2.5	53	6.7	19.5	7.8	87
	19	1001	3.5	53	6.8	19.5	7.8	87
June 16	0951	.50	58	6.8	22.0	7.0	82	
	16	0949	.90	61	6.8	7.0	82	
	16	0947	1.9	61	6.8	7.0	82	
	16	0945	2.9	62	6.9	7.0	82	
	16	0942	3.9	63	6.9	7.1	82	
July 29	0946	.50	55	6.5	29.0	5.2	69	
	29	0944	.80	56	28.5	5.2	69	
	29	0943	1.8	61	26.5	5.6	71	
	29	0941	2.8	61	26.0	5.7	71	
	29	0937	3.8	61	25.5	5.7	71	
Sept. 08	0918	.50	52	6.7	26.5	5.8	74	
	08	0916	1.6	52	26.5	5.8	73	
	08	0914	2.6	52	26.5	5.8	73	

Table 37. Statistical summary of water-quality sample data at Mountain Island Lake site 01, May 1996 through September 1997

[ft, foot; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; $^{\circ}\text{C}$, degrees Celsius; mg/L , milligrams per liter; <, less than; --, insufficient data to calculate statistic; mL, milliliter; $\mu\text{g}/\text{L}$, micrograms per liter]

Parameter code	Property or constituent	Descriptive statistics				Percent of samples in which values were less than or equal to those shown				
		Sample size	Maximum	Minimum	Mean	95%	75%	50% (median)	25%	5%
00065	Gage height (ft)	23	9.000	3.270	4.848	8.966	5.680	3.910	3.590	3.286
00095	Specific Conductance ($\mu\text{S}/\text{cm}$ at 25 $^{\circ}\text{C}$)	23	66.000	51.000	56.696	66.000	58.000	56.000	54.000	51.200
00400	pH, field (standard pH units)	23	7.600	6.600	7.061	7.560	7.200	7.100	6.900	6.620
00010	Water temperature ($^{\circ}\text{C}$)	23	28.500	9.000	19.326	28.500	26.500	19.000	12.500	9.000
00078	Transparency, secchi disk (meters)	16	3.400	1.500	2.250	3.400	2.650	2.200	1.800	1.500
00300	Oxygen, dissolved (mg/L)	23	10.100	5.300	7.643	10.100	9.200	7.400	6.300	5.320
00301	Oxygen, dissolved (percent of saturation)	23	93.000	69.000	82.739	93.000	88.000	83.000	77.000	69.400
00310	Biochemical oxygen demand, 5-day (mg/L)	17	<2.000	<2.000	--	<2.000	<2.000	<2.000	<2.000	<2.000
31616	Fecal coliform bacteria (colonies/100 mL)	16	39.000	<1.000	5.765*	39.000	6.000	2.000	<10.000	<1.000
00900	Hardness, total (mg/L as CaCO_3)	14	13.000	11.000	12.000	13.000	12.000	12.000	12.000	11.000
00915	Calcium, dissolved (mg/L as Ca)	14	2.900	2.500	2.714	2.900	2.800	2.750	2.575	2.500
00925	Magnesium, dissolved (mg/L as Mg)	14	1.300	1.200	1.257	1.300	1.300	1.300	1.200	1.200
90410	Alkalinity, lab (mg/L as CaCO_3)	17	16.000	14.000	14.588	16.000	15.000	15.000	14.000	14.000
00530	Solids, total suspended (mg/L)	15	8.000	<1.000	2.995*	8.000	4.000	3.000	<1.000	<1.000
00535	Solids, volatile suspended (mg/L)	15	6.000	<1.000	1.951*	6.000	3.000	2.000	<1.000	<1.000
70300	Dissolved solids, residue at 180 $^{\circ}\text{C}$ (mg/L)	17	60.000	20.000	38.353	60.000	43.000	38.000	34.500	20.000
00631	Nitrogen, NO_2 + NO_3 dissolved (mg/L as N)	17	0.290	0.038	0.165	0.290	0.225	0.160	0.105	0.038
00608	Nitrogen, ammonia dissolved (mg/L as N)	17	0.068	0.008	0.030	0.068	0.034	0.030	0.022	0.008
00625	Nitrogen, ammonia + organic total (mg/L as N)	17	0.300	<0.200	0.149*	0.300	0.200	<0.200	<0.200	<0.200
00623	Nitrogen, ammonia + organic dissolved (mg/L as N)	17	0.200	<0.200	--	0.200	<0.200	<0.200	<0.200	<0.200
00600	Nitrogen, total (mg/L as N)	5	0.530	0.310	--	--	--	--	--	--
00605	Nitrogen, organic total (mg/L as N)	5	0.260	0.130	--	--	--	--	--	--
00665	Phosphorous total (mg/L as P)	17	0.031	0.003	0.007	0.031	0.008	0.006	0.004	0.003
00666	Phosphorous dissolved (mg/L as P)	17	0.029	<0.001	0.004*	0.029	0.003	0.002	0.001	<0.001
00671	Phosphorous, orthophosphate dissolved (mg/L as P)	17	0.004	<0.001	0.001*	0.004	0.001	<0.001	<0.001	<0.001
01045	Iron, total ($\mu\text{g}/\text{L}$ as Fe)	13	80.000	30.000	58.462	80.000	70.000	60.000	50.000	30.000
00680	Carbon, total organic (mg/L as C)	14	2.100	1.600	1.821	2.100	1.925	1.800	1.700	1.600
70953	Chlorophyll a ($\mu\text{g}/\text{L}$)	9	0.900	<0.100	0.358*	0.900	0.500	0.300	<0.100	<0.100
70954	Chlorophyll b ($\mu\text{g}/\text{L}$)	9	0.200	<0.100	--	0.200	<0.100	<0.100	<0.100	<0.100
80154	Suspended sediment (mg/L)	16	15.000	2.000	5.688	15.000	7.750	5.000	3.250	2.000
00720	Cyanide, total (mg/L as Cn)	3	<0.010	<0.010	--	--	--	--	--	--
01002	Arsenic, total ($\mu\text{g}/\text{L}$ as As)	3	<1.000	<1.000	--	--	--	--	--	--
01012	Beryllium, total ($\mu\text{g}/\text{L}$ as Be)	3	<10.000	<10.000	--	--	--	--	--	--
01027	Cadmium, total ($\mu\text{g}/\text{L}$ as Cd)	3	<1.000	<1.000	--	--	--	--	--	--
01034	Chromium, total ($\mu\text{g}/\text{L}$ as Cr)	3	<1.000	<1.000	--	--	--	--	--	--
01042	Copper, total ($\mu\text{g}/\text{L}$ as Cu)	3	3.000	2.000	--	--	--	--	--	--
01051	Lead, total ($\mu\text{g}/\text{L}$ as Pb)	3	<1.000	<1.000	--	--	--	--	--	--
01067	Nickel, total ($\mu\text{g}/\text{L}$ as Ni)	3	<1.000	<1.000	--	--	--	--	--	--
01077	Silver, total ($\mu\text{g}/\text{L}$ as Ag)	3	<1.000	<1.000	--	--	--	--	--	--
01092	Zinc, total ($\mu\text{g}/\text{L}$ as Zn)	3	<10.000	<10.000	--	--	--	--	--	--
01097	Antimony, total ($\mu\text{g}/\text{L}$ as Sb)	3	<1.000	<1.000	--	--	--	--	--	--
01147	Selenium, total ($\mu\text{g}/\text{L}$ as Se)	3	<1.000	<1.000	--	--	--	--	--	--
71900	Mercury, total ($\mu\text{g}/\text{L}$ as Hg)	3	<0.100	<0.100	--	--	--	--	--	--

NOTE: Multiple detection limits during the period of record may result in different values flagged with a "<".

* Value is estimated by using a log-probability regression to predict the values of data below the detection limit.

Table 38. Statistical summary of water-quality sample data at Mountain Island Lake site 04, May 1996 through September 1997

[ft, foot; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; $^{\circ}\text{C}$, degrees Celsius; mg/L , milligrams per liter; <, less than; --, insufficient data to calculate statistic; mL , milliliter; $\mu\text{g}/\text{L}$, micrograms per liter]

Parameter code	Property or constituent	Descriptive statistics			Percent of samples in which values were less than or equal to those shown					
		Sample size	Maximum	Minimum	Mean	95%	75%	50% (median)	25%	5%
NEAR-SURFACE SAMPLES										
00098	Sampling depth (meters)	17	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500
00095	Specific conductance ($\mu\text{S}/\text{cm}$ at 25 $^{\circ}\text{C}$)	32	61.000	51.000	56.031	61.000	58.000	56.000	54.250	51.000
00400	pH, field (standard pH units)	32	7.200	6.600	6.869	7.200	7.000	6.850	6.700	6.600
00010	Water temperature ($^{\circ}\text{C}$)	32	28.500	9.000	20.250	28.500	27.375	20.500	13.125	9.000
00078	Transparency, secchi disk (meters)	17	2.400	0.400	1.618	2.400	1.950	1.700	1.350	0.400
00300	Oxygen, dissolved (mg/L)	32	10.300	5.600	7.631	10.235	9.150	7.550	6.325	5.665
00301	Oxygen, dissolved (percent of saturation)	32	92.000	73.000	84.219	92.000	89.000	86.000	80.250	73.650
00310	Biochemical oxygen demand, 5-day (mg/L)	17	<2.000	<2.000	--	<2.000	<2.000	<2.000	<2.000	<2.000
31616	Fecal coliform bacteria (colonies/100 mL)	16	160.000	<1.000	20.508*	160.000	18.000	5.000	1.000	<1.000
00900	Hardness, total (mg/L as CaCO_3)	14	13.000	12.000	12.143	13.000	12.000	12.000	12.000	12.000
00915	Calcium, dissolved (mg/L as Ca)	14	2.900	2.500	2.714	2.900	2.825	2.700	2.600	2.500
00925	Magnesium, dissolved (mg/L as Mg)	14	1.400	1.200	1.286	1.400	1.300	1.300	1.275	1.200
90410	Alkalinity, lab (mg/L as CaCO_3)	17	16.000	13.000	14.588	16.000	15.000	15.000	14.000	13.000
00530	Solids, total suspended (mg/L)	14	10.000	<1.000	3.588*	10.000	5.000	2.000	1.000	<1.000
00535	Solids, volatile suspended (mg/L)	14	7.000	<1.000	2.249*	7.000	3.000	2.000	<1.000	<1.000
70300	Dissolved solids, residue at 180 $^{\circ}\text{C}$ (mg/L)	17	52.000	18.000	36.529	52.000	40.000	38.000	33.000	18.000
00631	Nitrogen, NO_2 + NO_3 dissolved (mg/L as N)	17	0.270	0.046	0.157	0.270	0.216	0.170	0.089	0.046
00608	Nitrogen, ammonia dissolved (mg/L as N)	17	0.043	<0.002	0.024*	0.043	0.032	0.019	0.017	0.014
00625	Nitrogen, ammonia + organic total (mg/L as N)	17	0.320	<0.200	0.166*	0.320	0.200	<0.200	<0.200	<0.200
00623	Nitrogen, ammonia + organic dissolved (mg/L as N)	17	0.200	<0.200	--	0.200	<0.200	<0.200	<0.200	<0.200
00600	Nitrogen, total (mg/L as N)	6	0.550	0.370	0.463	0.550	0.535	0.460	0.400	0.370
00605	Nitrogen, organic total (mg/L as N)	6	0.300	0.160	0.225	0.300	0.270	0.225	0.175	0.160
00665	Phosphorous, total (mg/L as P)	17	0.028	0.004	0.008	0.028	0.009	0.006	0.005	0.004
00666	Phosphorous, dissolved (mg/L as P)	17	0.008	<0.001	0.003*	0.008	0.003	0.002	0.001	<0.001
00671	Phosphorous, orthophosphate dissolved (mg/L as P)	17	0.003	<0.001	0.001*	0.003	0.001	<0.001	<0.001	<0.001
01045	Iron, total ($\mu\text{g}/\text{L}$ as Fe)	14	510.000	60.000	150.714	510.000	162.500	110.000	90.000	60.000
00680	Carbon, total organic (mg/L as C)	14	2.800	1.600	2.021	2.800	2.175	2.000	1.775	1.600
70953	Chlorophyll a ($\mu\text{g}/\text{L}$)	17	1.900	<0.100	0.592*	1.900	0.890	0.500	0.200	<0.100
70954	Chlorophyll b ($\mu\text{g}/\text{L}$)	17	0.300	<0.100	--	0.300	<0.100	<0.100	<0.100	<0.100
00720	Cyanide, total (mg/L as Cn)	3	<0.010	<0.010	--	--	--	--	--	--
01002	Arsenic, total ($\mu\text{g}/\text{L}$ as As)	3	2.000	<1.000	--	--	--	--	--	--
01012	Beryllium, total ($\mu\text{g}/\text{L}$ as Be)	3	<10.000	<10.000	--	--	--	--	--	--
01027	Cadmium, total ($\mu\text{g}/\text{L}$ as Cd)	3	<1.000	<1.000	--	--	--	--	--	--
01034	Chromium, total ($\mu\text{g}/\text{L}$ as Cr)	3	<1.000	<1.000	--	--	--	--	--	--
01042	Copper, total ($\mu\text{g}/\text{L}$ as Cu)	3	3.000	2.000	--	--	--	--	--	--
01051	Lead, total ($\mu\text{g}/\text{L}$ as Pb)	3	<1.000	<1.000	--	--	--	--	--	--
01067	Nickel, total ($\mu\text{g}/\text{L}$ as Ni)	3	1.000	<1.000	--	--	--	--	--	--
01077	Silver, total ($\mu\text{g}/\text{L}$ as Ag)	3	<1.000	<1.000	--	--	--	--	--	--
01092	Zinc, total ($\mu\text{g}/\text{L}$ as Zn)	3	<10.000	<10.000	--	--	--	--	--	--
01097	Antimony, total ($\mu\text{g}/\text{L}$ as Sb)	3	<1.000	<1.000	--	--	--	--	--	--
01147	Selenium, total ($\mu\text{g}/\text{L}$ as Se)	3	<1.000	<1.000	--	--	--	--	--	--
71900	Mercury, total ($\mu\text{g}/\text{L}$ as Hg)	3	<0.100	<0.100	--	--	--	--	--	--
NEAR-BOTTOM SAMPLES										
00098	Sampling depth (meters)	17	2.100	0.800	1.388	2.100	1.600	1.500	1.200	0.800
00095	Specific conductance ($\mu\text{S}/\text{cm}$ at 25 $^{\circ}\text{C}$)	17	61.000	51.000	56.000	61.000	58.000	56.000	54.500	51.000
00400	pH, field (standard pH units)	17	7.200	6.600	6.829	7.200	6.950	6.800	6.700	6.600
00010	Water temperature ($^{\circ}\text{C}$)	17	28.500	9.000	20.324	28.500	27.250	21.000	14.000	9.000
00300	Oxygen, dissolved (mg/L)	17	10.300	5.700	7.624	10.300	9.100	7.500	6.250	5.700
00301	Oxygen, dissolved (percent of saturation)	17	92.000	74.000	84.294	92.000	88.500	86.000	80.000	74.000
00310	Biochemical oxygen demand, 5-day (mg/L)	17	<2.000	<2.000	--	<2.000	<2.000	<2.000	<2.000	<2.000
00900	Hardness, total (mg/L as CaCO_3)	14	13.000	11.000	12.000	13.000	12.000	12.000	12.000	11.000
00915	Calcium, dissolved (mg/L as Ca)	14	2.900	2.500	2.736	2.900	2.800	2.750	2.675	2.500
00925	Magnesium, dissolved (mg/L as Mg)	14	1.400	1.200	1.279	1.400	1.300	1.300	1.200	1.200
90410	Alkalinity, lab (mg/L as CaCO_3)	17	16.000	13.000	14.588	16.000	15.000	15.000	14.000	13.000
00530	Solids, total suspended (mg/L)	15	26.000	<1.000	6.177*	26.000	8.000	4.000	2.000	<1.000
00535	Solids, volatile suspended (mg/L)	15	15.000	<1.000	3.401*	15.000	4.000	2.000	1.000	<1.000
70300	Dissolved solids, residue at 180 $^{\circ}\text{C}$ (mg/L)	17	47.000	22.000	36.353	47.000	40.000	36.000	35.000	22.000
00631	Nitrogen, NO_2 + NO_3 dissolved (mg/L as N)	17	0.280	0.045	0.164	0.280	0.229	0.170	0.089	0.045
00608	Nitrogen, ammonia dissolved (mg/L as N)	17	0.050	0.004	0.026	0.050	0.035	0.025	0.016	0.004
00625	Nitrogen, ammonia + organic total (mg/L as N)	17	0.300	<0.200	0.186*	0.300	0.220	<0.200	<0.200	<0.200

NOTE: Multiple detection limits during the period of record may result in different values flagged with a "<".

* Value is estimated by using a log-probability regression to predict the values of data below the detection limit.

Table 38. Statistical summary of water-quality sample data at Mountain Island Lake site 04, May 1996 through September 1997—Continued

[ft, foot; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; $^{\circ}\text{C}$, degrees Celsius; mg/L , milligrams per liter; <, less than; --, insufficient data to calculate statistic; mL, milliliter; $\mu\text{g}/\text{L}$, micrograms per liter]

Parameter code	Property or constituent	Descriptive statistics				Percent of samples in which values were less than or equal to those shown				
		Sample size	Maximum	Minimum	Mean	95%	75%	50% (median)	25%	5%
NEAR-BOTTOM SAMPLES (Continued)										
00623	Nitrogen, ammonia + organic dissolved (mg/L as N)	17	0.210	<0.200	--	0.210	<0.200	<0.200	<0.200	<0.200
00600	Nitrogen, total (mg/L as N)	5	0.530	0.360	--	--	--	--	--	--
00605	Nitrogen, organic total (mg/L as N)	5	0.270	0.200	--	--	--	--	--	--
00665	Phosphorous, total (mg/L as P)	17	0.028	0.005	0.009	0.028	0.010	0.007	0.005	0.005
00666	Phosphorous, dissolved (mg/L as P)	17	0.010	<0.001	0.003*	0.010	0.004	0.002	0.002	0.001
00671	Phosphorous, orthophosphate dissolved (mg/L as P)	17	0.003	<0.001	0.001*	0.003	0.001	<0.001	<0.001	<0.001
01045	Iron, total ($\mu\text{g}/\text{L}$ as Fe)	14	560.000	60.000	164.286	560.000	212.500	105.000	90.000	60.000
00680	Carbon, total organic (mg/L as C)	14	2.800	1.500	2.050	2.800	2.325	2.100	1.600	1.500
00720	Cyanide, total (mg/L as Cn)	3	<0.010	<0.010	--	--	--	--	--	--
01002	Arsenic, total ($\mu\text{g}/\text{L}$ as As)	3	2.000	<1.000	--	--	--	--	--	--
01012	Beryllium, total ($\mu\text{g}/\text{L}$ as Be)	3	<10.000	<10.000	--	--	--	--	--	--
01027	Cadmium, total ($\mu\text{g}/\text{L}$ as Cd)	3	<1.000	<1.000	--	--	--	--	--	--
01034	Chromium, total ($\mu\text{g}/\text{L}$ as Cr)	3	<1.000	<1.000	--	--	--	--	--	--
01042	Copper, total ($\mu\text{g}/\text{L}$ as Cu)	3	2.000	1.000	--	--	--	--	--	--
01051	Lead, total ($\mu\text{g}/\text{L}$ as Pb)	3	<1.000	<1.000	--	--	--	--	--	--
01067	Nickel, total ($\mu\text{g}/\text{L}$ as Ni)	3	<1.000	<1.000	--	--	--	--	--	--
01077	Silver, total ($\mu\text{g}/\text{L}$ as Ag)	3	<1.000	<1.000	--	--	--	--	--	--
01092	Zinc, total ($\mu\text{g}/\text{L}$ as Zn)	3	<10.000	<10.000	--	--	--	--	--	--
01097	Antimony, total ($\mu\text{g}/\text{L}$ as Sb)	3	<1.000	<1.000	--	--	--	--	--	--
01147	Selenium, total ($\mu\text{g}/\text{L}$ as Se)	3	<1.000	<1.000	--	--	--	--	--	--
71900	Mercury, total ($\mu\text{g}/\text{L}$ as Hg)	3	<0.100	<0.100	--	--	--	--	--	--

NOTE: Multiple detection limits during the period of record may result in different values flagged with a "<".

* Value is estimated by using a log-probability regression to predict the values of data below the detection limit.

Table 39. Statistical summary of water-quality sample data at Mountain Island Lake site 07, May 1996 through September 1997

[ft, foot; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; $^{\circ}\text{C}$, degrees Celsius; mg/L , milligrams per liter; <, less than; --, insufficient data to calculate statistic; mL, milliliter; $\mu\text{g}/\text{L}$, micrograms per liter]

Parameter code	Property or constituent	Descriptive statistics				Percent of samples in which values were less than or equal to those shown				
		Sample size	Maximum	Minimum	Mean	95%	75%	50% (median)	25%	5%
NEAR-SURFACE SAMPLES										
00098	Sampling depth (meters)	17	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500
00095	Specific conductance ($\mu\text{S}/\text{cm}$ at 25 $^{\circ}\text{C}$)	32	166.000	57.000	84.219	157.550	98.750	74.500	65.250	57.650
00400	pH, field (standard pH units)	32	8.600	6.600	7.378	8.600	7.800	7.100	7.000	6.600
00010	Water temperature ($^{\circ}\text{C}$)	32	30.500	8.000	21.328	30.500	28.375	24.000	13.500	8.325
00078	Transparency, secchi disk (meters)	17	1.600	0.200	0.624	1.600	0.750	0.600	0.400	0.200
00300	Oxygen, dissolved (mg/L)	31	10.500	2.300	7.955	10.260	9.200	8.300	7.000	4.040
00301	Oxygen, dissolved (percent of saturation)	30	132.000	22.000	92.567	127.600	107.500	89.500	83.500	46.750
00310	Biochemical oxygen demand, 5-day (mg/L)	17	5.800	<2.000	2.646*	5.800	3.200	2.600	<2.000	<2.000
31616	Fecal coliform bacteria (colonies/100 mL)	16	84.000	6.000	33.625	84.000	54.750	24.500	11.500	6.000
00900	Hardness, total (mg/L as CaCO_3)	14	45.000	11.000	21.857	45.000	25.000	18.000	15.000	11.000
00915	Calcium, dissolved (mg/L as Ca)	14	11.000	2.100	4.964	11.000	5.700	4.200	3.450	2.100
00925	Magnesium, dissolved (mg/L as Mg)	14	5.100	1.400	2.314	5.100	2.625	1.950	1.575	1.400
90410	Alkalinity, lab (mg/L as CaCO_3)	17	44.000	13.000	21.412	44.000	22.500	19.000	17.000	13.000
00530	Solids, total suspended (mg/L)	16	42.000	2.000	11.000	42.000	13.500	9.000	6.000	2.000
00535	Solids, volatile suspended (mg/L)	16	10.000	<1.000	3.279*	10.000	4.000	3.000	1.000	1.000
70300	Dissolved solids, residue at 180 $^{\circ}\text{C}$ (mg/L)	17	106.000	34.000	55.294	106.000	63.000	48.000	40.000	34.000
00631	Nitrogen, NO_2 + NO_3 dissolved (mg/L as N)	17	2.770	0.110	0.727	2.770	0.959	0.470	0.281	0.110
00608	Nitrogen, ammonia dissolved (mg/L as N)	17	0.080	<0.002	0.025*	0.080	0.036	0.014	<0.002	<0.002
00625	Nitrogen, ammonia + organic total (mg/L as N)	17	0.800	<0.200	0.408*	0.800	0.500	0.430	0.300	0.200
00623	Nitrogen, ammonia + organic dissolved (mg/L as N)	17	0.270	<0.200	--	0.270	<0.200	<0.200	<0.200	<0.200
00600	Nitrogen, total (mg/L as N)	16	3.200	0.390	1.161	3.200	1.300	0.965	0.623	0.390
00605	Nitrogen, organic total (mg/L as N)	10	0.500	0.160	0.329	0.500	0.435	0.345	0.183	0.160
00665	Phosphorous, total (mg/L as P)	17	0.300	0.016	0.086	0.300	0.097	0.061	0.045	0.016
00666	Phosphorous, dissolved (mg/L as P)	17	0.210	0.004	0.037	0.210	0.060	0.016	0.006	0.004
00671	Phosphorous, orthophosphate dissolved (mg/L as P)	17	0.210	<0.001	0.034*	0.210	0.053	0.009	0.002	0.001
01045	Iron, total ($\mu\text{g}/\text{L}$ as Fe)	14	1100.000	120.000	382.857	1100.000	382.500	325.000	212.500	120.000
00680	Carbon, total organic (mg/L as C)	14	6.700	2.200	3.650	6.700	4.300	3.450	2.675	2.200
70953	Chlorophyll a ($\mu\text{g}/\text{L}$)	17	13.000	0.300	3.410	13.000	4.950	1.570	0.800	0.300
70954	Chlorophyll b ($\mu\text{g}/\text{L}$)	17	1.800	<0.100	0.269*	1.800	0.200	<0.100	<0.100	<0.100
00720	Cyanide, total ($\mu\text{g}/\text{L}$ as Cn)	3	<0.010	<0.010	--	--	--	--	--	--
01002	Arsenic, total ($\mu\text{g}/\text{L}$ as As)	3	2.000	<1.000	--	--	--	--	--	--
01012	Beryllium, total ($\mu\text{g}/\text{L}$ as Be)	3	<10.000	<10.000	--	--	--	--	--	--
01027	Cadmium, total ($\mu\text{g}/\text{L}$ as Cd)	3	<1.000	<1.000	--	--	--	--	--	--
01034	Chromium, total ($\mu\text{g}/\text{L}$ as Cr)	3	<1.000	<1.000	--	--	--	--	--	--
01042	Copper, total ($\mu\text{g}/\text{L}$ as Cu)	3	3.000	2.000	--	--	--	--	--	--
01051	Lead, total ($\mu\text{g}/\text{L}$ as Pb)	3	<1.000	<1.000	--	--	--	--	--	--
01067	Nickel, total ($\mu\text{g}/\text{L}$ as Ni)	3	<1.000	<1.000	--	--	--	--	--	--
01077	Silver, total ($\mu\text{g}/\text{L}$ as Ag)	3	<1.000	<1.000	--	--	--	--	--	--
01092	Zinc, total ($\mu\text{g}/\text{L}$ as Zn)	3	<10.000	<10.000	--	--	--	--	--	--
01097	Antimony, total ($\mu\text{g}/\text{L}$ as Sb)	3	1.000	<1.000	--	--	--	--	--	--
01147	Selenium, total ($\mu\text{g}/\text{L}$ as Se)	3	<1.000	<1.000	--	--	--	--	--	--
71900	Mercury, total ($\mu\text{g}/\text{L}$ as Hg)	3	<0.100	<0.100	--	--	--	--	--	--
NEAR-BOTTOM SAMPLES										
00098	Sampling depth (meters)	17	2.800	1.800	2.229	2.800	2.450	2.200	2.000	1.800
00095	Specific conductance ($\mu\text{S}/\text{cm}$ at 25 $^{\circ}\text{C}$)	17	153.000	52.000	87.647	153.000	106.000	84.000	64.500	52.000
00400	pH, field (standard pH units)	17	8.000	6.500	7.000	8.000	7.200	6.900	6.700	6.500
00010	Water temperature ($^{\circ}\text{C}$)	17	29.500	8.500	20.559	29.500	27.500	21.500	13.250	8.500
00300	Oxygen, dissolved (mg/L)	16	9.700	5.100	7.363	9.700	8.875	7.300	5.975	5.100
00301	Oxygen, dissolved (percent of saturation)	16	113.000	67.000	83.750	113.000	90.500	83.500	72.250	67.000
00310	Biochemical oxygen demand, 5-day (mg/L)	17	3.000	<2.000	2.092*	3.000	2.400	<2.000	<2.000	<2.000
00900	Hardness, total (mg/L as CaCO_3)	14	45.000	13.000	22.143	45.000	27.500	20.000	16.750	13.000
00915	Calcium, dissolved (mg/L as Ca)	14	11.000	3.000	5.100	11.000	6.075	4.650	3.700	3.000
00925	Magnesium, dissolved (mg/L as Mg)	14	4.200	1.400	2.286	4.200	2.975	1.900	1.700	1.400
90410	Alkalinity, lab (mg/L as CaCO_3)	17	43.000	15.000	22.294	43.000	24.500	20.000	17.500	15.000
00530	Solids, total suspended (mg/L)	16	108.000	8.000	21.000	108.000	20.750	13.500	9.500	8.000
00535	Solids, volatile suspended (mg/L)	16	32.000	<1.000	6.491*	32.000	6.000	3.000	1.000	<1.000
70300	Dissolved solids, residue at 180 $^{\circ}\text{C}$ (mg/L)	17	98.000	34.000	60.412	98.000	69.000	56.000	53.000	34.000
00631	Nitrogen, NO_2 + NO_3 dissolved (mg/L as N)	17	1.800	0.323	0.800	1.800	1.100	0.650	0.460	0.323
00608	Nitrogen, ammonia dissolved (mg/L as N)	17	0.120	<0.002	0.044*	0.120	0.056	0.040	0.019	0.005
00625	Nitrogen, ammonia + organic total (mg/L as N)	17	0.710	<0.200	0.374*	0.710	0.400	0.400	0.300	0.200
00623	Nitrogen, ammonia + organic dissolved (mg/L as N)	17	0.390	<0.200	0.158*	0.390	0.200	<0.200	<0.200	<0.200
00600	Nitrogen, total (mg/L as N)	16	2.500	0.570	1.212	2.500	1.475	1.100	0.950	0.570
00605	Nitrogen, organic total (mg/L as N)	15	0.640	0.170	0.345	0.640	0.400	0.340	0.250	0.170

NOTE: Multiple detection limits during the period of record may result in different values flagged with a "<".

* Value is estimated by using a log-probability regression to predict the values of data below the detection limit.

Table 39. Statistical summary of water-quality sample data at Mountain Island Lake site 07, May 1996 through September 1997—Continued

[ft, foot; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; $^{\circ}\text{C}$, degrees Celsius; mg/L , milligrams per liter; <, less than; --, insufficient data to calculate statistic;

Parameter code	Property or constituent	Descriptive statistics				Percent of samples in which values were less than or equal to those shown				
		Sample size	Maximum	Minimum	Mean	95%	75%	50% (median)	25%	5%
NEAR-BOTTOM SAMPLES (Continued)										
00665	Phosphorous, total (mg/L as P)	17	0.600	0.011	0.138	0.600	0.152	0.109	0.052	0.011
00666	Phosphorous, dissolved (mg/L as P)	17	0.200	0.003	0.059	0.200	0.084	0.038	0.019	0.003
00671	Phosphorous, orthophosphate dissolved (mg/L as P)	17	0.200	0.002	0.053	0.200	0.081	0.030	0.013	0.002
01045	Iron, total ($\mu\text{g}/\text{L}$ as Fe)	14	2100.000	150.000	692.143	2100.000	702.500	530.000	320.000	150.000
00680	Carbon, total organic (mg/L as C)	14	7.500	1.900	3.407	7.500	3.900	3.100	2.675	1.900
00720	Cyanide, total (mg/L as Cn)	3	<0.010	<0.010	--	--	--	--	--	--
01002	Arsenic, total ($\mu\text{g}/\text{L}$ as As)	3	3.000	<1.000	--	--	--	--	--	--
01012	Beryllium, total ($\mu\text{g}/\text{L}$ as Be)	3	<10.000	<10.000	--	--	--	--	--	--
01027	Cadmium, total ($\mu\text{g}/\text{L}$ as Cd)	3	<1.000	<1.000	--	--	--	--	--	--
01034	Chromium, total ($\mu\text{g}/\text{L}$ as Cr)	3	1.000	<1.000	--	--	--	--	--	--
01042	Copper, total ($\mu\text{g}/\text{L}$ as Cu)	3	4.000	2.000	--	--	--	--	--	--
01051	Lead, total ($\mu\text{g}/\text{L}$ as Pb)	3	1.000	<1.000	--	--	--	--	--	--
01067	Nickel, total ($\mu\text{g}/\text{L}$ as Ni)	3	2.000	<1.000	--	--	--	--	--	--
01077	Silver, total ($\mu\text{g}/\text{L}$ as Ag)	3	<1.000	<1.000	--	--	--	--	--	--
01092	Zinc, total ($\mu\text{g}/\text{L}$ as Zn)	3	<10.000	<10.000	--	--	--	--	--	--
01097	Antimony, total ($\mu\text{g}/\text{L}$ as Sb)	3	2.000	<1.000	--	--	--	--	--	--
01147	Selenium, total ($\mu\text{g}/\text{L}$ as Se)	3	<1.000	<1.000	--	--	--	--	--	--
71900	Mercury, total ($\mu\text{g}/\text{L}$ as Hg)	3	<0.100	<0.100	--	--	--	--	--	--

NOTE: Multiple detection limits during the period of record may result in different values flagged with a "<".

* Value is estimated by using a log-probability regression to predict the values of data below the detection limit.

Table 40. Statistical summary of water-quality sample data at Mountain Island Lake site 09, May 1996 through September 1997

[ft, foot; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; $^{\circ}\text{C}$, degrees Celsius; mg/L , milligrams per liter; <, less than; --, insufficient data to calculate statistic; mL , milliliter; $\mu\text{g}/\text{L}$, micrograms per liter]

Parameter code	Property or constituent	Descriptive statistics				Percent of samples in which values were less than or equal to those shown				
		Sample size	Maximum	Minimum	Mean	95%	75%	50% (median)	25%	5%
NEAR-SURFACE SAMPLES										
00098	Sampling depth (meters)	17	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500
00095	Specific conductance ($\mu\text{S}/\text{cm}$ at 25 $^{\circ}\text{C}$)	32	61.000	52.000	56.531	60.350	58.000	57.000	55.000	52.000
00400	pH, field (standard pH units)	32	7.700	6.600	7.044	7.505	7.200	7.050	6.900	6.600
00010	Water temperature ($^{\circ}\text{C}$)	32	31.500	9.000	21.469	31.175	29.000	21.750	13.375	9.325
00078	Transparency, secchi disk (meters)	17	2.200	0.200	1.335	2.200	1.650	1.300	1.050	0.200
00300	Oxygen, dissolved (mg/L)	31	10.200	6.100	8.165	10.140	9.300	8.000	7.400	6.220
00301	Oxygen, dissolved (percent of saturation)	30	110.000	81.000	93.633	108.900	99.000	92.000	88.750	82.650
00310	Biochemical oxygen demand, 5-day (mg/L)	17	<2.000	<2.000	--	<2.000	<2.000	<2.000	<2.000	<2.000
31616	Fecal coliform bacteria (colonies/100 mL)	16	58.000	<1.000	11.395*	58.000	9.000	4.000	2.000	1.000
00900	Hardness, total (mg/L as CaCO_3)	14	13.000	10.000	11.857	13.000	13.000	12.000	11.000	10.000
00915	Calcium, dissolved (mg/L as Ca)	14	3.100	1.900	2.543	3.100	2.800	2.650	2.250	1.900
00925	Magnesium, dissolved (mg/L as Mg)	14	1.500	1.200	1.321	1.500	1.400	1.300	1.300	1.200
90410	Alkalinity, lab (mg/L as CaCO_3)	17	16.000	12.000	14.176	16.000	15.000	14.000	13.500	12.000
00530	Solids, total suspended (mg/L)	17	35.000	<1.000	7.467*	35.000	7.000	6.000	5.000	3.000
00535	Solids, volatile suspended (mg/L)	17	9.000	<1.000	3.098*	9.000	4.000	3.000	1.000	<1.000
70300	Dissolved solids, residue at 180 $^{\circ}\text{C}$ (mg/L)	17	49.000	22.000	36.941	49.000	40.000	38.000	35.000	22.000
00631	Nitrogen, NO_2 + NO_3 dissolved (mg/L as N)	17	0.262	0.027	0.155	0.262	0.225	0.160	0.090	0.027
00608	Nitrogen, ammonia dissolved (mg/L as N)	17	0.036	<0.002	0.015*	0.036	0.020	0.017	0.007	<0.002
00625	Nitrogen, ammonia + organic total (mg/L as N)	17	0.300	<0.200	--	0.300	<0.200	<0.200	<0.200	<0.200
00623	Nitrogen, ammonia + organic dissolved (mg/L as N)	17	0.220	<0.200	--	0.220	<0.200	<0.200	<0.200	<0.200
00600	Nitrogen, total (mg/L as N)	3	0.560	0.380	--	--	--	--	--	--
00605	Nitrogen, organic total (mg/L as N)	2	0.280	0.190	--	--	--	--	--	--
00665	Phosphorous, total (mg/L as P)	17	0.048	0.005	0.014	0.048	0.015	0.012	0.009	0.005
00666	Phosphorous, dissolved (mg/L as P)	17	0.005	0.001	0.003	0.005	0.004	0.002	0.002	0.001
00671	Phosphorous, orthophosphate dissolved (mg/L as P)	17	0.007	<0.001	0.001*	0.007	0.001	<0.001	<0.001	<0.001
01045	Iron, total ($\mu\text{g}/\text{L}$ as Fe)	13	690.000	60.000	170.769	690.000	175.000	120.000	95.000	60.000
00680	Carbon, total organic (mg/L as C)	14	3.500	1.500	2.286	3.500	2.650	2.150	1.900	1.500
70953	Chlorophyll a ($\mu\text{g}/\text{L}$)	16	2.100	0.100	0.904	2.100	1.425	0.750	0.450	0.100
70954	Chlorophyll b ($\mu\text{g}/\text{L}$)	16	0.300	<0.100	--	0.300	<0.100	<0.100	<0.100	<0.100
00720	Cyanide, total (mg/L as Cn)	3	<0.010	<0.010	--	--	--	--	--	--
01002	Arsenic, total ($\mu\text{g}/\text{L}$ as As)	3	1.000	<1.000	--	--	--	--	--	--
01012	Beryllium, total ($\mu\text{g}/\text{L}$ as Be)	3	<10.000	<10.000	--	--	--	--	--	--
01027	Cadmium, total ($\mu\text{g}/\text{L}$ as Cd)	3	<1.000	<1.000	--	--	--	--	--	--
01034	Chromium, total ($\mu\text{g}/\text{L}$ as Cr)	3	<1.000	<1.000	--	--	--	--	--	--
01042	Copper, total ($\mu\text{g}/\text{L}$ as Cu)	3	3.000	1.000	--	--	--	--	--	--
01051	Lead, total ($\mu\text{g}/\text{L}$ as Pb)	2	<1.000	<1.000	--	--	--	--	--	--
01067	Nickel, total ($\mu\text{g}/\text{L}$ as Ni)	2	<1.000	<1.000	--	--	--	--	--	--
01077	Silver, total ($\mu\text{g}/\text{L}$ as Ag)	2	<1.000	<1.000	--	--	--	--	--	--
01092	Zinc, total ($\mu\text{g}/\text{L}$ as Zn)	3	<10.000	<10.000	--	--	--	--	--	--
01097	Antimony, total ($\mu\text{g}/\text{L}$ as Sb)	3	<1.000	<1.000	--	--	--	--	--	--
01147	Selenium, total ($\mu\text{g}/\text{L}$ as Se)	3	<1.000	<1.000	--	--	--	--	--	--
71900	Mercury, total ($\mu\text{g}/\text{L}$ as Hg)	3	<0.100	<0.100	--	--	--	--	--	--
NEAR-BOTTOM SAMPLES										
00098	Sampling depth (meters)	17	11.200	7.400	9.794	11.200	10.900	9.500	9.000	7.400
00095	Specific conductance ($\mu\text{S}/\text{cm}$ at 25 $^{\circ}\text{C}$)	17	67.000	52.000	57.824	67.000	59.000	58.000	56.000	52.000
00400	pH, field (standard pH units)	17	7.100	6.400	6.700	7.100	6.900	6.700	6.500	6.400
00010	Water temperature ($^{\circ}\text{C}$)	17	29.000	9.000	20.441	29.000	27.500	22.000	12.750	9.000
00300	Oxygen, dissolved (mg/L)	16	10.000	3.600	6.925	10.000	8.625	6.800	5.450	3.600
00301	Oxygen, dissolved (percent of saturation)	16	90.000	43.000	77.688	90.000	88.000	83.000	71.250	43.000
00310	Biochemical oxygen demand, 5-day (mg/L)	17	2.200	<2.000	--	2.200	<2.000	<2.000	<2.000	<2.000
00900	Hardness, total (mg/L as CaCO_3)	14	16.000	10.000	12.429	16.000	13.000	12.000	12.000	10.000
00915	Calcium, dissolved (mg/L as Ca)	14	3.900	1.800	2.686	3.900	2.900	2.800	2.375	1.800
00925	Magnesium, dissolved (mg/L as Mg)	14	1.600	1.300	1.379	1.600	1.400	1.400	1.300	1.300
90410	Alkalinity, lab (mg/L as CaCO_3)	17	16.000	13.000	14.529	16.000	15.000	15.000	14.000	13.000
00530	Solids, total suspended (mg/L)	17	92.000	<1.000	14.794*	92.000	14.000	10.000	6.000	2.000
00535	Solids, volatile suspended (mg/L)	17	16.000	<1.000	4.539*	16.000	6.000	4.000	1.000	<1.000

NOTE: Multiple detection limits during the period of record may result in different values flagged with a "<".
 * Value is estimated by using a log-probability regression to predict the values of data below the detection limit.

Table 40. Statistical summary of water-quality sample data at Mountain Island Lake site 09, May 1996 through September 1997—Continued

[ft, foot; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; $^{\circ}\text{C}$, degrees Celsius; mg/L , milligrams per liter; <, less than; --, insufficient data to calculate statistic; mL , milliliter; $\mu\text{g}/\text{L}$, micrograms per liter]

Parameter code	Property or constituent	Descriptive statistics				Percent of samples in which values were less than or equal to those shown				
		Sample size	Maximum	Minimum	Mean	95%	75%	50% (median)	25%	5%
NEAR-BOTTOM SAMPLES (Continued)										
70300	Dissolved solids, residue at 180 $^{\circ}\text{C}$ (mg/L)	17	64.000	26.000	39.176	64.000	43.500	40.000	34.000	26.000
00631	Nitrogen, $\text{NO}_2 + \text{NO}_3$ dissolved (mg/L as N)	17	0.348	0.068	0.192	0.348	0.223	0.180	0.145	0.068
00608	Nitrogen, ammonia dissolved (mg/L as N)	17	0.073	<0.002	0.035*	0.073	0.043	0.029	0.021	0.015
00625	Nitrogen, ammonia + organic total (mg/L as N)	17	0.670	<0.200	0.156*	0.670	0.200	<0.200	<0.200	<0.200
00623	Nitrogen, ammonia + organic dissolved (mg/L as N)	17	0.300	<0.200	--	0.300	<0.200	<0.200	<0.200	<0.200
00600	Nitrogen, total (mg/L as N)	6	1.000	0.320	0.538	1.000	0.678	0.480	0.365	0.320
00605	Nitrogen, organic total (mg/L as N)	6	0.610	0.140	0.272	0.610	0.347	0.220	0.170	0.140
00665	Phosphorous, total (mg/L as P)	17	0.143	0.006	0.024	0.143	0.025	0.017	0.010	0.006
00666	Phosphorous, dissolved (mg/L as P)	17	0.028	0.001	0.005	0.028	0.004	0.003	0.002	0.001
00671	Phosphorous, orthophosphate dissolved (mg/L as P)	17	0.025	<0.001	0.002*	0.025	0.001	0.001	<0.001	<0.001
01045	Iron, total ($\mu\text{g}/\text{L}$ as Fe)	14	1800.000	120.000	427.143	1800.000	402.500	310.000	200.000	120.000
00680	Carbon, total organic (mg/L as C)	14	7.300	1.700	2.493	7.300	2.300	2.250	1.900	1.700
00720	Cyanide, total (mg/L as Cn)	3	<0.010	<0.010	--	--	--	--	--	--
01002	Arsenic, total ($\mu\text{g}/\text{L}$ as As)	3	1.000	<1.000	--	--	--	--	--	--
01012	Beryllium, total ($\mu\text{g}/\text{L}$ as Be)	3	<10.000	<10.000	--	--	--	--	--	--
01027	Cadmium, total ($\mu\text{g}/\text{L}$ as Cd)	3	<1.000	<1.000	--	--	--	--	--	--
01034	Chromium, total ($\mu\text{g}/\text{L}$ as Cr)	3	<1.000	<1.000	--	--	--	--	--	--
01042	Copper, total ($\mu\text{g}/\text{L}$ as Cu)	3	2.000	1.000	--	--	--	--	--	--
01051	Lead, total ($\mu\text{g}/\text{L}$ as Pb)	3	<1.000	<1.000	--	--	--	--	--	--
01067	Nickel, total ($\mu\text{g}/\text{L}$ as Ni)	3	<1.000	<1.000	--	--	--	--	--	--
01077	Silver, total ($\mu\text{g}/\text{L}$ as Ag)	3	<1.000	<1.000	--	--	--	--	--	--
01092	Zinc, total ($\mu\text{g}/\text{L}$ as Zn)	3	80.000	<10.000	--	--	--	--	--	--
01097	Antimony, total ($\mu\text{g}/\text{L}$ as Sb)	3	<1.000	<1.000	--	--	--	--	--	--
01147	Selenium, total ($\mu\text{g}/\text{L}$ as Se)	3	<1.000	<1.000	--	--	--	--	--	--
71900	Mercury, total ($\mu\text{g}/\text{L}$ as Hg)	3	<0.100	<0.100	--	--	--	--	--	--

NOTE: Multiple detection limits during the period of record may result in different values flagged with a "<".

* Value is estimated by using a log-probability regression to predict the values of data below the detection limit.

Table 41. Statistical summary of water-quality sample data at Mountain Island Lake site 11, May 1996 through September 1997

[ft, foot; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; $^{\circ}\text{C}$, degrees Celsius; mg/L , milligrams per liter; <, less than; --, insufficient data to calculate statistic; mL , milliliter; $\mu\text{g}/\text{L}$, micrograms per liter]

Parameter code	Property or constituent	Descriptive statistics				Percent of samples in which values were less than or equal to those shown				
		Sample size	Maximum	Minimum	Mean	95%	75%	50% (median)	25%	5%
NEAR-SURFACE SAMPLES										
00098	Sampling depth (meters)	17	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500
00095	Specific conductance ($\mu\text{S}/\text{cm}$ at 25 $^{\circ}\text{C}$)	32	65.000	49.000	55.875	64.350	60.000	56.000	51.000	49.650
00400	pH, field (standard pH units)	32	7.100	6.500	6.875	7.100	7.000	6.900	6.725	6.565
00010	Water temperature ($^{\circ}\text{C}$)	32	31.000	7.500	21.609	31.000	29.500	24.250	13.625	7.500
00078	Transparency, secchi disk (meters)	17	2.400	0.500	1.094	2.400	1.350	1.000	0.750	0.500
00300	Oxygen, dissolved (mg/L)	31	10.800	5.700	7.881	10.440	9.000	7.500	7.000	5.820
00301	Oxygen, dissolved (percent of saturation)	28	102.000	75.000	90.607	100.200	95.000	90.500	88.250	77.250
00310	Biochemical oxygen demand, 5-day (mg/L)	17	<2.000	<2.000	--	<2.000	<2.000	<2.000	<2.000	<2.000
31616	Fecal coliform bacteria (colonies/100 mL)	16	48.000	<1.000	9.327*	48.000	8.000	6.000	3.000	<1.000
00900	Hardness, total (mg/L as CaCO_3)	14	16.000	9.000	11.857	16.000	14.250	11.500	9.750	9.000
00915	Calcium, dissolved (mg/L as Ca)	14	3.600	0.930	2.009	3.600	2.950	1.650	1.400	0.930
00925	Magnesium, dissolved (mg/L as Mg)	14	2.000	1.400	1.636	2.000	1.700	1.650	1.500	1.400
90410	Alkalinity, lab (mg/L as CaCO_3)	17	18.000	11.000	14.235	18.000	16.000	14.000	12.000	11.000
00530	Solids, total suspended (mg/L)	16	10.000	3.000	5.750	10.000	7.750	5.500	3.250	3.000
00535	Solids, volatile suspended (mg/L)	16	8.000	<1.000	3.910*	8.000	6.000	4.000	1.000	<1.000
70300	Dissolved solids, residue at 180 $^{\circ}\text{C}$ (mg/L)	17	49.000	28.000	41.588	49.000	47.000	42.000	38.500	28.000
00631	Nitrogen, NO_2 + NO_3 dissolved (mg/L as N)	17	0.207	<0.005	0.101*	0.207	0.169	0.083	0.038	0.019
00608	Nitrogen, ammonia dissolved (mg/L as N)	17	0.072	<0.002	0.018*	0.072	0.019	0.015	0.007	0.002
00625	Nitrogen, ammonia + organic total (mg/L as N)	17	0.310	<0.200	0.244*	0.310	0.300	0.200	<0.200	<0.200
00623	Nitrogen, ammonia + organic dissolved (mg/L as N)	17	<0.200	<0.200	--	<0.200	<0.200	<0.200	<0.200	<0.200
00600	Nitrogen, total (mg/L as N)	8	0.480	0.220	0.339	0.480	0.373	0.335	0.297	0.220
00605	Nitrogen, organic total (mg/L as N)	8	0.310	0.150	0.254	0.310	0.290	0.285	0.190	0.150
00665	Phosphorous, total (mg/L as P)	17	0.029	0.007	0.017	0.029	0.022	0.016	0.012	0.007
00666	Phosphorous, dissolved (mg/L as P)	17	0.016	0.002	0.005	0.016	0.005	0.003	0.003	0.002
00671	Phosphorous, orthophosphate dissolved (mg/L as P)	16	0.002	<0.001	0.001*	0.002	0.001	<0.001	<0.001	<0.001
01045	Iron, total ($\mu\text{g}/\text{L}$ as Fe)	14	430.000	120.000	242.857	430.000	302.500	230.000	185.000	120.000
00680	Carbon, total organic (mg/L as C)	14	4.600	2.300	3.200	4.600	3.875	2.900	2.675	2.300
70953	Chlorophyll a ($\mu\text{g}/\text{L}$)	17	3.200	0.100	1.218	3.200	1.850	0.800	0.595	0.100
70954	Chlorophyll b ($\mu\text{g}/\text{L}$)	17	0.400	<0.100	0.104*	0.400	0.100	<0.100	<0.100	<0.100
00720	Cyanide, total (mg/L as Cn)	3	<0.010	<0.010	--	--	--	--	--	--
01002	Arsenic, total ($\mu\text{g}/\text{L}$ as As)	3	<1.000	<1.000	--	--	--	--	--	--
01012	Beryllium, total ($\mu\text{g}/\text{L}$ as Be)	3	<10.000	<10.000	--	--	--	--	--	--
01027	Cadmium, total ($\mu\text{g}/\text{L}$ as Cd)	3	<1.000	<1.000	--	--	--	--	--	--
01034	Chromium, total ($\mu\text{g}/\text{L}$ as Cr)	3	<1.000	<1.000	--	--	--	--	--	--
01042	Copper, total ($\mu\text{g}/\text{L}$ as Cu)	3	2.000	2.000	--	--	--	--	--	--
01051	Lead, total ($\mu\text{g}/\text{L}$ as Pb)	3	<1.000	<1.000	--	--	--	--	--	--
01067	Nickel, total ($\mu\text{g}/\text{L}$ as Ni)	3	<1.000	<1.000	--	--	--	--	--	--
01077	Silver, total ($\mu\text{g}/\text{L}$ as Ag)	3	<1.000	<1.000	--	--	--	--	--	--
01092	Zinc, total ($\mu\text{g}/\text{L}$ as Zn)	3	<10.000	<10.000	--	--	--	--	--	--
01097	Antimony, total ($\mu\text{g}/\text{L}$ as Sb)	3	<1.000	<1.000	--	--	--	--	--	--
01147	Selenium, total ($\mu\text{g}/\text{L}$ as Se)	3	<1.000	<1.000	--	--	--	--	--	--
71900	Mercury, total ($\mu\text{g}/\text{L}$ as Hg)	3	<0.100	<0.100	--	--	--	--	--	--
NEAR-BOTTOM SAMPLES										
00098	Sampling depth (meters)	17	2.800	2.300	2.518	2.800	2.600	2.500	2.450	2.300
00095	Specific conductance ($\mu\text{S}/\text{cm}$ at 25 $^{\circ}\text{C}$)	17	65.000	49.000	55.824	65.000	60.000	56.000	51.000	49.000
00400	pH, field (standard pH units)	17	7.100	6.300	6.776	7.100	6.950	6.700	6.700	6.300
00010	Water temperature ($^{\circ}\text{C}$)	17	30.500	7.500	21.441	30.500	29.000	24.500	13.000	7.500
00300	Oxygen, dissolved (mg/L)	16	10.000	4.100	7.344	10.000	8.750	7.000	6.600	4.100
00301	Oxygen, dissolved (percent of saturation)	16	92.000	55.000	84.563	92.000	89.000	88.000	85.000	55.000
00310	Biochemical oxygen demand, 5-day (mg/L)	17	<2.000	<2.000	--	<2.000	<2.000	<2.000	<2.000	<2.000
00900	Hardness, total (mg/L as CaCO_3)	14	17.000	9.000	11.786	17.000	13.500	11.000	9.000	9.000
00915	Calcium, dissolved (mg/L as Ca)	14	3.800	0.930	2.048	3.800	2.875	1.800	1.250	0.930
00925	Magnesium, dissolved (mg/L as Mg)	14	1.900	1.400	1.614	1.900	1.700	1.600	1.500	1.400
90410	Alkalinity, lab (mg/L as CaCO_3)	17	18.000	12.000	14.294	18.000	16.500	13.000	12.500	12.000
00530	Solids, total suspended (mg/L)	17	13.000	<1.000	6.743*	13.000	8.000	6.000	5.000	2.000
00535	Solids, volatile suspended (mg/L)	17	13.000	<1.000	4.100*	13.000	6.000	4.000	1.000	<1.000
70300	Dissolved solids, residue at 180 $^{\circ}\text{C}$ (mg/L)	17	55.000	34.000	41.882	55.000	44.000	42.000	37.500	34.000

NOTE: Multiple detection limits during the period of record may result in different values flagged with a "<".

* Value is estimated by using a log-probability regression to predict the values of data below the detection limit.

Table 41. Statistical summary of water-quality sample data at Mountain Island Lake site 11, May 1996 through September 1997—Continued

[ft, foot; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; $^{\circ}\text{C}$, degrees Celsius; mg/L , milligrams per liter; <, less than; --, insufficient data to calculate statistic; mL , milliliter; $\mu\text{g}/\text{L}$, micrograms per liter]

Parameter code	Property or constituent	Descriptive statistics				Percent of samples in which values were less than or equal to those shown				
		Sample size	Maximum	Minimum	Mean	95%	75%	50% (median)	25%	5%
NEAR-BOTTOM SAMPLES (Continued)										
00631	Nitrogen, $\text{NO}_2 + \text{NO}_3$ dissolved (mg/L as N)	17	0.210	0.010	0.107	0.210	0.174	0.082	0.050	0.010
00608	Nitrogen, ammonia dissolved (mg/L as N)	17	0.075	0.008	0.022	0.075	0.025	0.016	0.012	0.008
00625	Nitrogen, ammonia + organic total (mg/L as N)	17	0.300	<0.200	0.196*	0.300	0.200	0.200	<0.200	<0.200
00623	Nitrogen, ammonia + organic dissolved (mg/L as N)	17	<0.200	<0.200	--	<0.200	<0.200	<0.200	<0.200	<0.200
00600	Nitrogen, total (mg/L as N)	9	0.380	0.230	0.312	0.380	0.375	0.310	0.275	0.230
00605	Nitrogen, organic total (mg/L as N)	9	0.290	0.160	0.217	0.290	0.275	0.190	0.175	0.160
00665	Phosphorous, total (mg/L as P)	17	0.034	0.008	0.018	0.034	0.021	0.018	0.013	0.008
00666	Phosphorous, dissolved (mg/L as P)	17	0.007	0.002	0.003	0.007	0.004	0.003	0.002	0.002
00671	Phosphorous, orthophosphate dissolved (mg/L as P)	17	0.002	<0.001	0.001*	0.002	0.001	<0.001	<0.001	<0.001
01045	Iron, total ($\mu\text{g}/\text{L}$ as Fe)	14	500.000	170.000	290.000	500.000	325.000	265.000	225.000	170.000
00680	Carbon, total organic (mg/L as C)	14	4.300	2.100	2.907	4.300	3.275	2.800	2.450	2.100
00720	Cyanide, total (mg/L as Cn)	3	<0.010	<0.010	--	--	--	--	--	--
01002	Arsenic, total ($\mu\text{g}/\text{L}$ as As)	3	<1.000	<1.000	--	--	--	--	--	--
01012	Beryllium, total ($\mu\text{g}/\text{L}$ as Be)	3	<10.000	<10.000	--	--	--	--	--	--
01027	Cadmium, total ($\mu\text{g}/\text{L}$ as Cd)	3	<1.000	<1.000	--	--	--	--	--	--
01034	Chromium, total ($\mu\text{g}/\text{L}$ as Cr)	3	<1.000	<1.000	--	--	--	--	--	--
01042	Copper, total ($\mu\text{g}/\text{L}$ as Cu)	3	2.000	<1.000	--	--	--	--	--	--
01051	Lead, total ($\mu\text{g}/\text{L}$ as Pb)	3	<1.000	<1.000	--	--	--	--	--	--
01067	Nickel, total ($\mu\text{g}/\text{L}$ as Ni)	3	<1.000	<1.000	--	--	--	--	--	--
01077	Silver, total ($\mu\text{g}/\text{L}$ as Ag)	3	<1.000	<1.000	--	--	--	--	--	--
01092	Zinc, total ($\mu\text{g}/\text{L}$ as Zn)	3	<10.000	<10.000	--	--	--	--	--	--
01097	Antimony, total ($\mu\text{g}/\text{L}$ as Sb)	3	<1.000	<1.000	--	--	--	--	--	--
01147	Selenium, total ($\mu\text{g}/\text{L}$ as Se)	3	<1.000	<1.000	--	--	--	--	--	--
71900	Mercury, total ($\mu\text{g}/\text{L}$ as Hg)	3	<0.100	<0.100	--	--	--	--	--	--

NOTE: Multiple detection limits during the period of record may result in different values flagged with a "<".

* Value is estimated by using a log-probability regression to predict the values of data below the detection limit.

Table 42. Statistical summary of water-quality sample data at Mountain Island Lake site 13, May 1996 through September 1997

[ft, foot; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; $^{\circ}\text{C}$, degrees Celsius; mg/L , milligrams per liter; <, less than; --, insufficient data to calculate statistic; mL, milliliter; $\mu\text{g}/\text{L}$, micrograms per liter]

Parameter code	Property or constituent	Descriptive statistics				Percent of samples in which values were less than or equal to those shown				
		Sample size	Maximum	Minimum	Mean	95%	75%	50% (median)	25%	5%
NEAR-SURFACE SAMPLES										
00098	Sampling depth (meters)	17	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500
00095	Specific conductance ($\mu\text{S}/\text{cm}$ at 25 $^{\circ}\text{C}$)	32	61.000	53.000	57.313	60.350	59.000	57.500	56.000	53.000
00400	pH, field (standard pH units)	32	7.700	6.500	7.019	7.635	7.100	7.000	6.900	6.630
00010	Water temperature ($^{\circ}\text{C}$)	32	32.000	8.500	22.484	31.675	29.875	24.250	14.375	9.150
00078	Transparency, secchi disk (meters)	17	2.600	0.700	1.776	2.600	2.200	1.900	1.450	0.700
00300	Oxygen, dissolved (mg/L)	31	10.100	5.400	7.903	9.980	9.000	7.600	6.900	6.060
00301	Oxygen, dissolved (percent of saturation)	29	105.000	72.000	92.552	104.000	95.000	93.000	89.500	79.000
00310	Biochemical oxygen demand, 5-day (mg/L)	17	<2.000	<2.000	--	<2.000	<2.000	<2.000	<2.000	<2.000
31616	Fecal coliform bacteria (colonies/100 mL)	16	90.000	<1.000	9.529*	90.000	6.000	5.000	2.000	1.000
00900	Hardness, total (mg/L as CaCO_3)	14	13.000	11.000	12.071	13.000	13.000	12.000	11.000	11.000
00915	Calcium, dissolved (mg/L as Ca)	14	3.000	2.200	2.636	3.000	2.825	2.700	2.375	2.200
00925	Magnesium, dissolved (mg/L as Mg)	14	1.400	1.300	1.350	1.400	1.400	1.350	1.300	1.300
90410	Alkalinity, lab (mg/L as CaCO_3)	17	17.000	14.000	14.824	17.000	15.000	15.000	14.000	14.000
00530	Solids, total suspended (mg/L)	14	9.000	<1.000	4.113*	9.000	6.000	4.000	1.000	<1.000
00535	Solids, volatile suspended (mg/L)	14	7.000	<1.000	2.440*	7.000	3.000	2.000	<1.000	<1.000
70300	Dissolved solids, residue at 180 $^{\circ}\text{C}$ (mg/L)	17	44.000	28.000	38.706	44.000	43.000	41.000	35.000	28.000
00631	Nitrogen, $\text{NO}_2 + \text{NO}_3$ dissolved (mg/L as N)	17	0.248	0.047	0.150	0.248	0.211	0.150	0.082	0.047
00608	Nitrogen, ammonia dissolved (mg/L as N)	17	0.045	0.004	0.023	0.045	0.029	0.025	0.015	0.004
00625	Nitrogen, ammonia + organic total (mg/L as N)	17	0.230	<0.200	--	0.230	<0.200	<0.200	<0.200	<0.200
00623	Nitrogen, ammonia + organic dissolved (mg/L as N)	17	<0.200	<0.200	--	<0.200	<0.200	<0.200	<0.200	<0.200
00600	Nitrogen, total (mg/L as N)	3	0.470	0.250	--	--	--	--	--	--
00605	Nitrogen, organic total (mg/L as N)	3	0.220	0.170	--	--	--	--	--	--
00665	Phosphorous, total (mg/L as P)	17	0.083	0.005	0.014	0.083	0.014	0.009	0.007	0.005
00666	Phosphorous, dissolved (mg/L as P)	17	0.014	<0.001	0.003*	0.014	0.002	0.002	0.001	<0.001
00671	Phosphorous, orthophosphate dissolved (mg/L as P)	17	0.003	<0.001	0.001*	0.003	0.001	<0.001	<0.001	<0.001
01045	Iron, total ($\mu\text{g}/\text{L}$ as Fe)	14	170.000	40.000	102.857	170.000	130.000	105.000	75.000	40.000
00680	Carbon, total organic (mg/L as C)	14	3.500	1.700	2.150	3.500	2.300	2.000	1.900	1.700
70953	Chlorophyll a ($\mu\text{g}/\text{L}$)	17	3.500	<0.100	0.707*	3.500	0.700	0.560	0.100	<0.100
70954	Chlorophyll b ($\mu\text{g}/\text{L}$)	17	0.600	<0.100	--	0.600	<0.100	<0.100	<0.100	<0.100
00720	Cyanide, total (mg/L as Cn)	3	<0.010	<0.010	--	--	--	--	--	--
01002	Arsenic, total ($\mu\text{g}/\text{L}$ as As)	3	<1.000	<1.000	--	--	--	--	--	--
01012	Beryllium, total ($\mu\text{g}/\text{L}$ as Be)	3	<10.000	<10.000	--	--	--	--	--	--
01027	Cadmium, total ($\mu\text{g}/\text{L}$ as Cd)	3	<1.000	<1.000	--	--	--	--	--	--
01034	Chromium, total ($\mu\text{g}/\text{L}$ as Cr)	3	<1.000	<1.000	--	--	--	--	--	--
01042	Copper, total ($\mu\text{g}/\text{L}$ as Cu)	3	4.000	1.000	--	--	--	--	--	--
01051	Lead, total ($\mu\text{g}/\text{L}$ as Pb)	3	<1.000	<1.000	--	--	--	--	--	--
01067	Nickel, total ($\mu\text{g}/\text{L}$ as Ni)	3	<1.000	<1.000	--	--	--	--	--	--
01077	Silver, total ($\mu\text{g}/\text{L}$ as Ag)	3	<1.000	<1.000	--	--	--	--	--	--
01092	Zinc, total ($\mu\text{g}/\text{L}$ as Zn)	3	<10.000	<10.000	--	--	--	--	--	--
01097	Antimony, total ($\mu\text{g}/\text{L}$ as Sb)	3	<1.000	<1.000	--	--	--	--	--	--
01147	Selenium, total ($\mu\text{g}/\text{L}$ as Se)	3	<1.000	<1.000	--	--	--	--	--	--
71900	Mercury, total ($\mu\text{g}/\text{L}$ as Hg)	3	<0.100	<0.100	--	--	--	--	--	--
NEAR-BOTTOM SAMPLES										
00098	Sampling depth (meters)	17	5.500	4.800	5.129	5.500	5.350	5.000	5.000	4.800
00095	Specific conductance ($\mu\text{S}/\text{cm}$ at 25 $^{\circ}\text{C}$)	17	60.000	53.000	57.353	60.000	59.000	58.000	56.000	53.000
00400	pH, field (standard pH units)	17	7.000	6.400	6.671	7.000	6.900	6.700	6.450	6.400
00010	Water temperature ($^{\circ}\text{C}$)	17	30.000	9.000	21.176	30.000	28.500	23.000	13.250	9.000
00300	Oxygen, dissolved (mg/L)	16	10.000	3.600	6.412	10.000	8.025	6.000	4.475	3.600
00301	Oxygen, dissolved (percent of saturation)	16	90.000	47.000	72.250	90.000	84.250	76.000	58.250	47.000
00310	Biochemical oxygen demand, 5-day (mg/L)	17	<2.000	<2.000	--	<2.000	<2.000	<2.000	<2.000	<2.000
00900	Hardness, total (mg/L as CaCO_3)	14	13.000	11.000	12.286	13.000	13.000	12.500	11.750	11.000
00915	Calcium, dissolved (mg/L as Ca)	14	2.900	2.000	2.593	2.900	2.825	2.750	2.275	2.000
00925	Magnesium, dissolved (mg/L as Mg)	14	1.400	1.300	1.371	1.400	1.400	1.400	1.300	1.300
90410	Alkalinity, lab (mg/L as CaCO_3)	17	16.000	14.000	14.588	16.000	15.000	15.000	14.000	14.000
00530	Solids, total suspended (mg/L)	15	13.000	<1.000	5.949*	13.000	9.000	5.000	3.000	<1.000
00535	Solids, volatile suspended (mg/L)	15	7.000	<1.000	3.009*	7.000	4.000	3.000	1.000	<1.000
70300	Dissolved solids, residue at 180 $^{\circ}\text{C}$ (mg/L)	17	52.000	30.000	38.706	52.000	43.000	38.000	34.500	30.000
00631	Nitrogen, $\text{NO}_2 + \text{NO}_3$ dissolved (mg/L as N)	17	0.253	0.043	0.158	0.253	0.222	0.170	0.090	0.043
00608	Nitrogen, ammonia dissolved (mg/L as N)	17	0.075	0.018	0.045	0.075	0.060	0.046	0.032	0.018
00625	Nitrogen, ammonia + organic total (mg/L as N)	17	0.300	<0.200	0.165*	0.300	0.200	<0.200	<0.200	<0.200
00623	Nitrogen, ammonia + organic dissolved (mg/L as N)	17	0.200	<0.200	--	0.200	<0.200	<0.200	<0.200	<0.200

NOTE: Multiple detection limits during the period of record may result in different values flagged with a "<".

* Value is estimated by using a log-probability regression to predict the values of data below the detection limit.

Table 42. Statistical summary of water-quality sample data at Mountain Island Lake site 13, May 1996 through September 1997—Continued

[ft, foot; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; $^{\circ}\text{C}$, degrees Celsius; mg/L , milligrams per liter; <, less than; --, insufficient data to calculate statistic; mL , milliliter; $\mu\text{g}/\text{L}$, micrograms per liter]

Parameter code	Property or constituent	Descriptive statistics				Percent of samples in which values were less than or equal to those shown				
		Sample size	Maximum	Minimum	Mean	95%	75%	50% (median)	25%	5%
NEAR-BOTTOM SAMPLES (Continued)										
00600	Nitrogen, total (mg/L as N)	6	0.530	0.270	0.358	0.530	0.433	0.330	0.285	0.270
00605	Nitrogen, organic total (mg/L as N)	6	0.250	0.130	0.153	0.250	0.168	0.135	0.130	0.130
00665	Phosphorous, total (mg/L as P)	17	0.023	0.004	0.011	0.023	0.015	0.010	0.007	0.004
00666	Phosphorous, dissolved (mg/L as P)	17	0.008	<0.001	0.002*	0.008	0.003	0.002	0.001	<0.001
00671	Phosphorous, orthophosphate dissolved (mg/L as P)	17	0.003	<0.001	0.001*	0.003	0.001	<0.001	<0.001	<0.001
01045	Iron, total ($\mu\text{g}/\text{L}$ as Fe)	14	330.000	110.000	180.714	330.000	240.000	155.000	110.000	110.000
00680	Carbon, total organic (mg/L as C)	14	2.700	0.800	1.993	2.700	2.250	2.050	1.775	0.800
00720	Cyanide, total (mg/L as Cn)	3	<0.010	<0.010	--	--	--	--	--	--
01002	Arsenic, total ($\mu\text{g}/\text{L}$ as As)	3	<1.000	<1.000	--	--	--	--	--	--
01012	Beryllium, total ($\mu\text{g}/\text{L}$ as Be)	3	<10.000	<10.000	--	--	--	--	--	--
01027	Cadmium, total ($\mu\text{g}/\text{L}$ as Cd)	3	<1.000	<1.000	--	--	--	--	--	--
01034	Chromium, total ($\mu\text{g}/\text{L}$ as Cr)	3	<1.000	<1.000	--	--	--	--	--	--
01042	Copper, total ($\mu\text{g}/\text{L}$ as Cu)	3	2.000	1.000	--	--	--	--	--	--
01051	Lead, total ($\mu\text{g}/\text{L}$ as Pb)	3	<1.000	<1.000	--	--	--	--	--	--
01067	Nickel, total ($\mu\text{g}/\text{L}$ as Ni)	3	<1.000	<1.000	--	--	--	--	--	--
01077	Silver, total ($\mu\text{g}/\text{L}$ as Ag)	3	<1.000	<1.000	--	--	--	--	--	--
01092	Zinc, total ($\mu\text{g}/\text{L}$ as Zn)	3	<10.000	<10.000	--	--	--	--	--	--
01097	Antimony, total ($\mu\text{g}/\text{L}$ as Sb)	3	<1.000	<1.000	--	--	--	--	--	--
01147	Selenium, total ($\mu\text{g}/\text{L}$ as Se)	3	<1.000	<1.000	--	--	--	--	--	--
71900	Mercury, total ($\mu\text{g}/\text{L}$ as Hg)	3	<0.100	<0.100	--	--	--	--	--	--

NOTE: Multiple detection limits during the period of record may result in different values flagged with a "<".

* Value is estimated by using a log-probability regression to predict the values of data below the detection limit.

Table 43. Statistical summary of water-quality sample data at Mountain Island Lake site 14, May 1996 through September 1997

[ft, foot; $\mu\text{S/cm}$, microsiemens per centimeter; $^{\circ}\text{C}$, degrees Celsius; mg/L, milligrams per liter; <, less than; --, insufficient data to calculate statistic; mL, milliliter; $\mu\text{g/L}$, micrograms per liter]

Parameter code	Property or constituent	Descriptive statistics				Percent of samples in which values were less than or equal to those shown				
		Sample size	Maximum	Minimum	Mean	95%	75%	50% (median)	25%	5%
NEAR-SURFACE SAMPLES										
00065	Gage height (ft)	32	5.330	2.920	3.620	4.914	3.880	3.690	3.173	2.927
00098	Sampling depth (meters)	17	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500
00095	Specific conductance ($\mu\text{S/cm}$ at 25 $^{\circ}\text{C}$)	32	62.000	54.000	57.563	61.350	59.000	58.000	56.000	54.000
00400	pH, field (standard pH units)	32	7.300	6.100	6.969	7.300	7.100	7.000	6.900	6.425
00010	Water temperature ($^{\circ}\text{C}$)	32	33.500	9.500	23.266	32.850	31.375	25.000	15.125	9.825
00078	Transparency, secchi disk (meters)	17	2.600	0.400	1.632	2.600	1.950	1.600	1.375	0.400
00300	Oxygen, dissolved (mg/L)	31	10.300	6.000	7.929	10.180	9.000	7.800	7.000	6.120
00301	Oxygen, dissolved (percent of saturation)	31	106.000	80.000	94.129	104.800	99.000	93.000	91.000	83.000
00310	Biochemical oxygen demand, 5-day (mg/L)	17	<2.000	<2.000	--	<2.000	<2.000	<2.000	<2.000	<2.000
31616	Fecal coliform bacteria (colonies/100 mL)	16	97.000	<1.000	17.098*	97.000	17.000	7.000	4.000	1.000
00900	Hardness, total (mg/L as CaCO_3)	14	13.000	11.000	12.071	13.000	12.000	12.000	12.000	11.000
00915	Calcium, dissolved (mg/L as Ca)	14	2.900	2.400	2.693	2.900	2.800	2.800	2.500	2.400
00925	Magnesium, dissolved (mg/L as Mg)	14	1.400	1.300	1.314	1.400	1.300	1.300	1.300	1.300
90410	Alkalinity, lab (mg/L as CaCO_3)	17	15.000	14.000	14.471	15.000	15.000	14.000	14.000	14.000
00530	Solids, total suspended (mg/L)	15	15.000	<1.000	4.742*	15.000	6.000	4.000	1.000	<1.000
00535	Solids, volatile suspended (mg/L)	15	28.000	1.000	5.133	28.000	6.000	3.000	1.000	1.000
70300	Dissolved solids, residue at 180 $^{\circ}\text{C}$ (mg/L)	17	150.000	28.000	43.588	150.000	40.000	37.000	35.000	28.000
00631	Nitrogen, $\text{NO}_2 + \text{NO}_3$ dissolved (mg/L as N)	17	0.270	0.006	0.146	0.270	0.195	0.157	0.086	0.006
00608	Nitrogen, ammonia dissolved (mg/L as N)	17	0.036	<0.002	0.017*	0.036	0.031	0.012	0.005	<0.002
00625	Nitrogen, ammonia + organic total (mg/L as N)	17	0.310	<0.200	--	0.310	<0.200	<0.200	<0.200	<0.200
00623	Nitrogen, ammonia + organic dissolved (mg/L as N)	17	<0.200	<0.200	--	<0.200	<0.200	<0.200	<0.200	<0.200
00600	Nitrogen, total (mg/L as N)	3	0.560	0.410	--	--	--	--	--	--
00605	Nitrogen, organic total (mg/L as N)	3	0.300	0.190	--	--	--	--	--	--
00665	Phosphorous, total (mg/L as P)	17	0.023	0.006	0.009	0.023	0.011	0.008	0.006	0.006
00666	Phosphorous, dissolved (mg/L as P)	17	0.005	<0.001	0.002*	0.005	0.003	0.001	0.001	<0.001
00671	Phosphorous, orthophosphate dissolved (mg/L as P)	17	0.006	<0.001	0.001*	0.006	0.001	<0.001	<0.001	<0.001
01045	Iron, total ($\mu\text{g/L}$ as Fe)	14	300.000	50.000	116.429	300.000	130.000	100.000	70.000	50.000
00680	Carbon, total organic (mg/L as C)	13	3.100	1.500	2.077	3.100	2.400	1.900	1.750	1.500
70953	Chlorophyll a ($\mu\text{g/L}$)	16	2.300	<0.100	0.701*	2.300	0.880	0.520	0.300	<0.100
70954	Chlorophyll b ($\mu\text{g/L}$)	16	<0.100	<0.100	--	<0.100	<0.100	<0.100	<0.100	<0.100
00720	Cyanide, total (mg/L as Cn)	3	<0.010	<0.010	--	--	--	--	--	--
01002	Arsenic, total ($\mu\text{g/L}$ as As)	3	<1.000	<1.000	--	--	--	--	--	--
01012	Beryllium, total ($\mu\text{g/L}$ as Be)	3	<10.000	<10.000	--	--	--	--	--	--
01027	Cadmium, total ($\mu\text{g/L}$ as Cd)	3	<1.000	<1.000	--	--	--	--	--	--
01034	Chromium, total ($\mu\text{g/L}$ as Cr)	3	<1.000	<1.000	--	--	--	--	--	--
01042	Copper, total ($\mu\text{g/L}$ as Cu)	3	5.000	2.000	--	--	--	--	--	--
01051	Lead, total ($\mu\text{g/L}$ as Pb)	3	<1.000	<1.000	--	--	--	--	--	--
01067	Nickel, total ($\mu\text{g/L}$ as Ni)	3	<1.000	<1.000	--	--	--	--	--	--
01077	Silver, total ($\mu\text{g/L}$ as Ag)	3	<1.000	<1.000	--	--	--	--	--	--
01092	Zinc, total ($\mu\text{g/L}$ as Zn)	3	<10.000	<10.000	--	--	--	--	--	--
01097	Antimony, total ($\mu\text{g/L}$ as Sb)	3	<1.000	<1.000	--	--	--	--	--	--
01147	Selenium, total ($\mu\text{g/L}$ as Se)	3	<1.000	<1.000	--	--	--	--	--	--
71900	Mercury, total ($\mu\text{g/L}$ as Hg)	3	<0.100	<0.100	--	--	--	--	--	--
NEAR-BOTTOM SAMPLES										
00065	Gage height (ft)	17	5.300	2.960	3.772	5.300	4.205	3.700	3.265	2.960
00098	Sampling depth (meters)	17	11.200	9.900	10.476	11.200	10.800	10.500	10.100	9.900
00095	Specific conductance ($\mu\text{S/cm}$ at 25 $^{\circ}\text{C}$)	17	62.000	53.000	57.529	62.000	60.000	57.000	56.000	53.000
00400	pH, field (standard pH units)	17	7.100	6.300	6.629	7.100	6.850	6.600	6.400	6.300
00010	Water temperature ($^{\circ}\text{C}$)	17	29.000	9.000	20.353	29.000	27.500	22.000	13.000	9.000
00300	Oxygen, dissolved (mg/L)	16	10.000	2.500	6.350	10.000	8.225	6.350	4.450	2.500
00301	Oxygen, dissolved (percent of saturation)	16	90.000	33.000	70.438	90.000	83.500	77.500	58.500	33.000
00310	Biochemical oxygen demand, 5-day (mg/L)	17	<2.000	<2.000	--	<2.000	<2.000	<2.000	<2.000	<2.000
00900	Hardness, total (mg/L as CaCO_3)	14	14.000	11.000	12.286	14.000	13.000	12.000	11.750	11.000
00915	Calcium, dissolved (mg/L as Ca)	14	3.200	2.000	2.650	3.200	2.900	2.700	2.375	2.000
00925	Magnesium, dissolved (mg/L as Mg)	14	1.500	1.300	1.386	1.500	1.425	1.400	1.300	1.300
90410	Alkalinity, lab (mg/L as CaCO_3)	17	15.000	12.000	14.353	15.000	15.000	15.000	14.000	12.000
00530	Solids, total suspended (mg/L)	16	36.000	2.000	9.813	36.000	11.500	8.000	5.000	2.000
00535	Solids, volatile suspended (mg/L)	16	14.000	<1.000	4.938*	14.000	6.000	3.000	1.000	<1.000
70300	Dissolved solids, residue at 180 $^{\circ}\text{C}$ (mg/L)	17	82.000	30.000	41.176	82.000	43.500	38.000	36.000	30.000
00631	Nitrogen, $\text{NO}_2 + \text{NO}_3$ dissolved (mg/L as N)	17	0.291	0.067	0.183	0.291	0.230	0.180	0.150	0.067
00608	Nitrogen, ammonia dissolved (mg/L as N)	17	0.158	0.012	0.052	0.158	0.067	0.036	0.027	0.012

NOTE: Multiple detection limits during the period of record may result in different values flagged with a "<".
 * Value is estimated by using a log-probability regression to predict the values of data below the detection limit.

Table 43. Statistical summary of water-quality sample data at Mountain Island Lake site 14, May 1996 through September 1997—Continued

[ft, foot; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; $^{\circ}\text{C}$, degrees Celsius; mg/L , milligrams per liter; <, less than; --, insufficient data to calculate statistic; mL , milliliter; $\mu\text{g}/\text{L}$, micrograms per liter]

Parameter code	Property or constituent	Descriptive statistics				Percent of samples in which values were less than or equal to those shown				
		Sample size	Maximum	Minimum	Mean	95%	75%	50% (median)	25%	5%
NEAR-BOTTOM SAMPLES (Continued)										
00625	Nitrogen, ammonia + organic total (mg/L as N)	17	0.350	<0.200	0.182*	0.350	0.200	<0.200	<0.200	<0.200
00623	Nitrogen, ammonia + organic dissolved (mg/L as N)	17	0.300	<0.200	--	0.300	<0.200	<0.200	<0.200	<0.200
00600	Nitrogen, total (mg/L as N)	6	0.640	0.340	0.463	0.640	0.565	0.445	0.363	0.340
00605	Nitrogen, organic total (mg/L as N)	6	0.310	0.130	0.183	0.310	0.228	0.160	0.138	0.130
00665	Phosphorous, total (mg/L as P)	17	0.060	0.004	0.015	0.060	0.013	0.010	0.008	0.004
00666	Phosphorous, dissolved (mg/L as P)	17	0.019	<0.001	0.004*	0.019	0.004	0.002	0.001	<0.001
00671	Phosphorous, orthophosphate dissolved (mg/L as P)	17	0.011	<0.001	0.001*	0.011	0.001	<0.001	<0.001	<0.001
01045	Iron, total ($\mu\text{g}/\text{L}$ as Fe)	14	850.000	130.000	252.143	850.000	270.000	190.000	160.000	130.000
00680	Carbon, total organic (mg/L as C)	14	4.800	1.600	2.221	4.800	2.300	2.050	1.800	1.600
00720	Cyanide, total (mg/L as Cn)	3	<0.010	<0.010	--	--	--	--	--	--
01002	Arsenic, total ($\mu\text{g}/\text{L}$ as As)	3	1.000	<1.000	--	--	--	--	--	--
01012	Beryllium, total ($\mu\text{g}/\text{L}$ as Be)	3	<10.000	<10.000	--	--	--	--	--	--
01027	Cadmium, total ($\mu\text{g}/\text{L}$ as Cd)	3	<1.000	<1.000	--	--	--	--	--	--
01034	Chromium, total ($\mu\text{g}/\text{L}$ as Cr)	3	<1.000	<1.000	--	--	--	--	--	--
01042	Copper, total ($\mu\text{g}/\text{L}$ as Cu)	3	2.000	2.000	--	--	--	--	--	--
01051	Lead, total ($\mu\text{g}/\text{L}$ as Pb)	3	<1.000	<1.000	--	--	--	--	--	--
01067	Nickel, total ($\mu\text{g}/\text{L}$ as Ni)	3	<1.000	<1.000	--	--	--	--	--	--
01077	Silver, total ($\mu\text{g}/\text{L}$ as Ag)	3	<1.000	<1.000	--	--	--	--	--	--
01092	Zinc, total ($\mu\text{g}/\text{L}$ as Zn)	3	<10.000	<10.000	--	--	--	--	--	--
01097	Antimony, total ($\mu\text{g}/\text{L}$ as Sb)	3	<1.000	<1.000	--	--	--	--	--	--
01147	Selenium, total ($\mu\text{g}/\text{L}$ as Se)	3	<1.000	<1.000	--	--	--	--	--	--
71900	Mercury, total ($\mu\text{g}/\text{L}$ as Hg)	3	<0.100	<0.100	--	--	--	--	--	--

NOTE: Multiple detection limits during the period of record may result in different values flagged with a "<".

* Value is estimated by using a log-probability regression to predict the values of data below the detection limit.

Table 44. Statistical summary of water-quality sample data at Catawba River site 17, May 1996 through September 1997

[ft, foot; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; $^{\circ}\text{C}$, degrees Celsius; mg/L , milligrams per liter; <, less than; --, insufficient data to calculate statistic; mL, milliliter; $\mu\text{g}/\text{L}$, micrograms per liter]

Parameter code	Property or constituent	Descriptive statistics				Percent of samples in which values were less than or equal to those shown				
		Sample size	Maximum	Minimum	Mean	95%	75%	50% (median)	25%	5%
00065	Gage height (ft)	16	6.080	3.930	4.679	6.080	4.948	4.590	4.265	3.930
00095	Specific Conductance ($\mu\text{S}/\text{cm}$ at 25 $^{\circ}\text{C}$)	17	69.000	52.000	60.353	69.000	63.500	59.000	57.500	52.000
00400	pH, field (standard pH units)	17	8.200	6.500	7.141	8.200	7.200	7.000	6.900	6.500
00010	Water temperature ($^{\circ}\text{C}$)	16	28.500	9.500	21.281	28.500	27.625	22.500	14.750	9.500
00078	Transparency, secchi disk (meters)	15	2.600	0.300	1.320	2.600	2.000	1.100	0.600	0.300
00300	Oxygen, dissolved (mg/L)	16	10.100	4.900	7.063	10.100	8.725	6.550	5.600	4.900
00301	Oxygen, dissolved (percent of saturation)	16	92.000	64.000	78.813	92.000	87.000	78.000	71.000	64.000
00310	Biochemical oxygen demand, 5-day (mg/L)	17	<2.000	<2.000	--	<2.000	<2.000	<2.000	<2.000	<2.000
31616	Fecal coliform bacteria (colonies/100 mL)	13	130.000	<1.000	27.606*	130.000	26.000	9.000	1.000	1.000
00900	Hardness, total (mg/L as CaCO_3)	14	15.000	11.000	12.857	15.000	14.000	12.500	12.000	11.000
00915	Calcium, dissolved (mg/L as Ca)	14	3.600	2.200	2.900	3.600	3.300	2.850	2.675	2.200
00925	Magnesium, dissolved (mg/L as Mg)	14	1.600	1.200	1.386	1.600	1.425	1.400	1.300	1.200
90410	Alkalinity, lab (mg/L as CaCO_3)	17	18.000	14.000	15.353	18.000	16.000	15.000	15.000	14.000
00530	Solids, total suspended (mg/L)	14	46.000	1.000	12.429	46.000	14.500	10.500	4.000	1.000
00535	Solids, volatile suspended (mg/L)	14	7.000	<1.000	3.062*	7.000	4.000	2.000	<1.000	<1.000
70300	Dissolved solids, residue at 180 $^{\circ}\text{C}$ (mg/L)	15	58.000	32.000	42.800	58.000	50.000	39.000	36.000	32.000
00631	Nitrogen, $\text{NO}_2 + \text{NO}_3$ dissolved (mg/L as N)	17	0.273	0.057	0.177	0.273	0.240	0.210	0.110	0.057
00608	Nitrogen, ammonia dissolved (mg/L as N)	17	0.070	0.010	0.038	0.070	0.056	0.034	0.025	0.010
00625	Nitrogen, ammonia + organic total (mg/L as N)	17	0.470	<0.200	0.186*	0.470	0.210	<0.200	<0.200	<0.200
00623	Nitrogen, ammonia + organic dissolved (mg/L as N)	17	0.220	<0.200	0.185*	0.220	0.200	<0.200	<0.200	<0.200
00600	Nitrogen, total (mg/L as N)	8	0.710	0.310	0.459	0.710	0.558	0.435	0.332	0.310
00605	Nitrogen, organic total (mg/L as N)	8	0.440	0.130	0.229	0.440	0.265	0.215	0.148	0.130
00665	Phosphorous total (mg/L as P)	17	0.091	0.005	0.023	0.091	0.026	0.014	0.010	0.005
00666	Phosphorous dissolved (mg/L as P)	17	0.022	0.002	0.005	0.022	0.007	0.004	0.003	0.002
00671	Phosphorous, orthophosphate dissolved (mg/L as P)	17	0.004	<0.001	0.002*	0.004	0.002	0.001	<0.001	<0.001
01045	Iron, total ($\mu\text{g}/\text{L}$ as Fe)	12	1100.000	120.000	389.167	1100.000	535.000	315.000	205.000	120.000
00680	Carbon, total organic (mg/L as C)	13	4.900	1.300	2.492	4.900	2.850	2.300	2.050	1.300
70953	Chlorophyll a ($\mu\text{g}/\text{L}$)	9	1.000	<0.100	0.420*	1.000	0.700	0.300	<0.100	<0.100
70954	Chlorophyll b ($\mu\text{g}/\text{L}$)	9	0.200	<0.100	--	0.200	<0.100	<0.100	<0.100	<0.100
80154	Suspended sediment (mg/L)	15	132.000	6.000	26.000	132.000	28.000	12.000	9.000	6.000
00720	Cyanide, total (mg/L as Cn)	3	<0.010	<0.010	--	--	--	--	--	--
01002	Arsenic, total ($\mu\text{g}/\text{L}$ as As)	3	<1.000	<1.000	--	--	--	--	--	--
01012	Beryllium, total ($\mu\text{g}/\text{L}$ as Be)	3	<10.000	<10.000	--	--	--	--	--	--
01027	Cadmium, total ($\mu\text{g}/\text{L}$ as Cd)	3	<1.000	<1.000	--	--	--	--	--	--
01034	Chromium, total ($\mu\text{g}/\text{L}$ as Cr)	3	1.000	<1.000	--	--	--	--	--	--
01042	Copper, total ($\mu\text{g}/\text{L}$ as Cu)	3	4.000	2.000	--	--	--	--	--	--
01051	Lead, total ($\mu\text{g}/\text{L}$ as Pb)	3	<1.000	<1.000	--	--	--	--	--	--
01067	Nickel, total ($\mu\text{g}/\text{L}$ as Ni)	3	1.000	<1.000	--	--	--	--	--	--
01077	Silver, total ($\mu\text{g}/\text{L}$ as Ag)	3	<1.000	<1.000	--	--	--	--	--	--
01092	Zinc, total ($\mu\text{g}/\text{L}$ as Zn)	3	<10.000	<10.000	--	--	--	--	--	--
01097	Antimony, total ($\mu\text{g}/\text{L}$ as Sb)	3	<1.000	<1.000	--	--	--	--	--	--
01147	Selenium, total ($\mu\text{g}/\text{L}$ as Se)	3	<1.000	<1.000	--	--	--	--	--	--
71900	Mercury, total ($\mu\text{g}/\text{L}$ as Hg)	3	<0.100	<0.100	--	--	--	--	--	--

NOTE: Multiple detection limits during the period of record may result in different values flagged with a "<".

* Value is estimated by using a log-probability regression to predict the values of data below the detection limit.

Table 45. Water-quality field measurements and sample analyses at Mountain Island Lake site O1, May 1996 through September 1997

CATAWBA RIVER AT NC 73 NEAR HICKS CROSSROADS, NC (MTN01)

[Site O1 is at latitude 35°25'39", longitude 80°57'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214264800; ft, foot; µS/cm, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; mL, milliliter; <, less than; --, missing data; K, results based on nonideal colony count; >, greater than; E, estimated]

Date	Water level (ft above sea level) (00065)	Specific conduc- tance (µS/cm) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Secchi disk trans- parency (m) (00078)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	Biochemical oxygen demand, 5-day (mg/L) (00310)	Fecal coliform bacteria (colonies/ 100 mL) (31616)	Total hardness (mg/L as CaCO ₃) (00900)	Dissolved calcium (mg/L as Ca) (00915)
1996											
May 28	643.70	55	6.7	19.0	2.50	6.9	77	<2.0	<1	12	2.8
June 11	643.62	56	6.8	22.5	3.20	6.5	77	<2.0	<10	12	2.8
25	645.45	61	7.6	26.5	1.50	6.5	82	<2.0	K1	12	2.8
July 10	643.80	57	7.1	26.5	2.00	6.0	77	<2.0	K9	13	2.9
24	644.26	66	7.4	28.0	2.70	5.8	76	<2.0	K3	12	2.7
Aug. 07	643.93	58	6.9	28.0	3.40	5.3	68	<2.0	K2	12	2.7
Oct. 22	643.94	62	7.3	19.5	1.80	7.4	83	<2.0	K1	--	--
Nov. 19	644.14	66	7.3	14.5	2.80	8.7	88	<2.0	K1	--	--
Dec. 17	649.18	56	7.2	12.0	--	9.2	88	--	K4	--	--
17	646.03	59	7.2	12.5	1.60	9.2	88	<2.0	--	--	--

1997											
Jan. 29	644.22	58	7.2	11.5	--	10.1	93	--	K9	--	--
29	644.32	57	7.2	11.5	2.40	10.1	94	<2.0	--	12	2.5
Feb. 26	648.56	55	7.0	9.0	--	10.0	88	--	K9	--	--
26	649.35	55	7.2	9.0	2.20	9.8	87	<2.0	--	12	2.5
Mar. 19	646.44	55	7.2	13.0	1.80	9.3	91	<2.0	K6	11	2.6
Apr. 30	646.84	54	7.1	16.0	2.20	8.6	89	<2.0	<1	12	2.9
May 20	645.19	52	6.9	18.0	--	8.0	87	--	<1	--	--
20	645.59	51	7.1	18.5	1.80	8.0	88	<2.0	--	12	2.8
June 17	644.84	58	6.9	20.0	1.70	6.9	78	<2.0	--	12	2.8
July 30	644.10	53	6.6	28.5	--	5.4	71	--	K5	--	--
30	644.10	52	6.9	28.5	2.40	5.5	73	<2.0	--	12	2.5
Sept. 09	644.06	54	6.7	26.0	--	6.3	80	--	39	--	--
09	643.90	54	6.9	26.0	--	6.3	81	<2.0	--	12	2.7

Date	Dissolved magnesium (mg/L as Mg) (00925)	Alkalinity (mg/L as CaCO ₃) (90410)	Total sus- pended solids (mg/L) (00530)	Volatile sus- pended solids (mg/L) (00535)	Total dissolved solids (mg/L) (70300)	Dissolved nitrite + nitrate (mg/L as N) (00631)	Dissolved ammonia (mg/L as N) (00608)	Total ammonia + organic nitrogen (mg/L as N) (00625)	Dissolved ammonia + organic nitrogen (mg/L as N) (00623)	Total nitrogen (mg/L as N) (00600)	Total organic nitrogen (mg/L as N) (00605)
1996											
May 28	1.2	14	<1	<1	48	0.290	0.030	<0.20	<0.20	--	--
June 11	1.2	14	2	<1	20	.230	.035	.30	<2.0	0.53	0.26
25	1.3	14	4	3	30	.210	.048	.20	<2.0	.41	.15
July 10	1.3	15	<1	2	38	.130	.013	.20	<2.0	.33	.19
24	1.3	15	4	1	40	.067	.033	<2.0	<2.0	--	--
Aug. 07	1.3	15	3	2	60	.100	.033	<2.0	<2.0	--	--
Oct. 22	--	15	4	6	50	.065	.028	<2.0	<2.0	--	--
Nov. 19	--	15	2	3	24	.110	.068	.20	<2.0	.31	.13
Dec. 17	--	--	--	--	--	--	--	--	--	--	--
17	--	14	<1	<1	36	.150	.033	<2.0	<2.0	--	--
1997											
Jan. 29	--	--	--	--	--	--	--	--	--	--	--
29	1.3	15	<1	1	34	0.160	0.022	<0.20	<0.20	--	--
Feb. 26	--	--	--	--	--	--	--	--	--	--	--
26	1.3	15	8	3	38	.180	.037	<2.0	<2.0	--	--
Mar. 19	1.2	15	<1	3	36	.270	.014	<2.0	<2.0	--	--
Apr. 30	1.2	14	3	1	35	.236	.008	<2.0	.20	--	--
May 20	--	--	--	--	--	--	--	--	--	--	--
20	1.2	14	4	2	46	.219	.022	<2.0	<2.0	--	--
June 17	1.2	14	--	--	40	.219	.024	.26	<2.0	0.47	0.23
July 30	--	--	--	--	--	--	--	--	--	--	--
30	1.3	14	4	<1	39	.135	.032	<2.0	<2.0	--	--
Sept. 09	--	--	--	--	--	--	--	--	--	--	--
09	1.3	16	--	--	38	.038	.025	<2.0	<2.0	--	--

Table 45. Water-quality field measurements and sample analyses at Mountain Island Lake site 01, May 1996 through September 1997—Continued

CATAWBA RIVER AT NC 73 NEAR HICKS CROSSROADS, NC (MTN01)

[Site 01 is at latitude 35°25'39", longitude 80°57'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214264800; ft, foot; µS/cm, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; mL, milliliter; <, less than; --, missing data; K, results based on nonideal colony count; >, greater than; E, estimated]

Date	Total phosphorus (mg/L as P) (00665)	Dissolved phosphorus (mg/L as P) (00666)	Dissolved orthophosphorus (mg/L as P) (00671)	Total iron (µg/L as Fe) (01045)	Total organic carbon (mg/L as C) (00680)	Chlorophyll a (µg/L) (70953)	Chlorophyll b (µg/L) (70954)	Suspended sediment (mg/L) (80154)	Total cyanide (mg/L as Cn) (00720)	Total arsenic (µg/L as As) (01002)	Total beryllium (µg/L as Be) (01012)
1996											
May 28	0.006	0.004	0.001	70	2.0	0.200	<0.100	5	--	--	--
June 11	.008	.005	<.001	50	1.7	<.100	<.100	2	<0.010	<1	<10
25	.007	.006	<.001	50	1.8	<.100	<.100	2	--	--	--
July 10	.004	.002	.001	50	2.1	.900	.200	8	--	--	--
24	.005	.029	<.001	40	2.1	.300	<.100	7	--	--	--
Aug. 07	.006	.001	<.001	30	1.9	<.100	<.100	10	<.010	<1	<10
Oct. 22	.006	<.001	<.001	--	--	E.400	<.100	4	--	--	--
Nov. 19	.008	.002	<.001	--	--	E.500	<.100	15	--	--	--
Dec. 17	--	--	--	--	--	--	--	--	--	--	--
17	.007	.001	<.001	--	--	.600	<.100	5	--	--	--
1997											
Jan. 29	--	--	--	--	--	--	--	--	--	--	--
29	0.005	0.001	<0.001	60	1.8	--	--	6	--	--	--
Feb. 26	--	--	--	--	--	--	--	--	--	--	--
26	.004	.001	<.001	80	1.8	--	--	8	--	--	--
Mar. 19	.006	.002	<.001	80	1.7	--	--	6	<0.010	<1	<10
Apr. 30	.003	<.001	.002	60	1.6	--	--	4	--	--	--
May 20	--	--	--	--	--	--	--	--	--	--	--
20	.004	.002	.001	60	1.6	--	--	4	--	--	--
June 17	.007	.003	.004	70	1.7	--	--	2	--	--	--
July 30	--	--	--	--	--	--	--	--	--	--	--
30	.010	.001	<.001	60	1.9	--	--	3	--	--	--
Sept. 09	--	--	--	--	--	--	--	--	--	--	--
09	.031	.002	.002	--	1.8	--	--	--	--	--	--
Date	Total cadmium (µg/L as Cd) (01027)	Total chromium (µg/L as Cr) (01034)	Total copper (µg/L as Cu) (01042)	Total lead (µg/L as Pb) (01051)	Total nickel (µg/L as Ni) (01067)	Total silver (µg/L as Ag) (01077)	Total zinc (µg/L as Zn) (01092)	Total antimony (µg/L as Sb) (01097)	Total selenium (µg/L as Se) (01147)	Total mercury (µg/L as Hg) (71900)	
1996											
May 28	--	--	--	--	--	--	--	--	--	--	
June 11	<1	<1	2	<1	<1	<1	<10	<1	<1	<0.10	
25	--	--	--	--	--	--	--	--	--	--	
July 10	--	--	--	--	--	--	--	--	--	--	
24	--	--	--	--	--	--	--	--	--	--	
Aug. 07	<1	<1	3	<1	<1	<1	<10	<1	<1	<10	
Oct. 22	--	--	--	--	--	--	--	--	--	--	
Nov. 19	--	--	--	--	--	--	--	--	--	--	
Dec. 17	--	--	--	--	--	--	--	--	--	--	
17	--	--	--	--	--	--	--	--	--	--	
1997											
Jan. 29	--	--	--	--	--	--	--	--	--	--	
29	--	--	--	--	--	--	--	--	--	--	
Feb. 26	--	--	--	--	--	--	--	--	--	--	
26	--	--	--	--	--	--	--	--	--	--	
Mar. 19	<1	<1	2	<1	<1	<1	<10	<1	<1	<0.10	
Apr. 30	--	--	--	--	--	--	--	--	--	--	
May 20	--	--	--	--	--	--	--	--	--	--	
20	--	--	--	--	--	--	--	--	--	--	
June 17	--	--	--	--	--	--	--	--	--	--	
July 30	--	--	--	--	--	--	--	--	--	--	
30	--	--	--	--	--	--	--	--	--	--	
Sept. 09	--	--	--	--	--	--	--	--	--	--	
09	--	--	--	--	--	--	--	--	--	--	

Table 46. Water-quality field measurements and sample analyses at Mountain Island Lake site 04, May 1996 through September 1997

CATAWBA RIVER AT POWER PLANT NEAR SHUFFLETOWN, NC (MTN04)

[Site 04 is at latitude 35°21'50", longitude 80°58'29", Mecklenburg County, U.S. Geological Survey downstream order number 0214264900; μS/cm, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; mL, milliliter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated

Date	Sampling depth (m) (00098)	Specific conductance (μS/cm) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Secchi disk transparency (m) (00078)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	Biochemical oxygen demand, 5-day (mg/L) (00310)	Fecal coliform bacteria (colonies/100 mL) (31616)	Total hardness (mg/L as CaCO ₃) (00900)	Dissolved calcium (mg/L as Ca) (00915)
1996											
May 28	0.50	58	7.0	24.0	2.00	7.5	92	<2.0	K1	13	2.9
28	1.5	57	6.9	23.0	--	7.5	90	<2.0	--	12	2.8
June 11	--	57	6.8	23.0	--	6.6	79	--	<10	--	--
11	.50	57	6.7	24.0	1.40	6.7	82	<2.0	--	13	2.9
11	.80	57	6.7	24.0	--	6.8	83	<2.0	--	13	2.9
25	--	55	6.9	27.5	--	6.9	89	--	<1	--	--
25	.50	55	6.8	26.5	.90	6.4	82	<2.0	--	12	2.8
25	1.8	55	6.8	26.0	--	6.3	80	<2.0	--	12	2.8
July 10	--	56	6.8	27.0	--	6.0	77	--	50	--	--
10	.50	56	6.8	28.0	1.20	6.3	82	<2.0	--	12	2.8
10	1.3	56	6.8	27.5	--	6.2	81	<2.0	--	12	2.8
24	--	58	6.8	27.5	--	6.4	83	--	<1	--	--
24	.50	58	6.9	28.5	2.20	6.7	88	<2.0	--	12	2.7
24	1.2	58	6.9	28.5	--	6.6	87	<2.0	--	12	2.7
Aug. 07	--	58	6.7	28.0	--	5.7	74	--	K3	--	--
07	.50	58	6.8	28.5	1.80	6.0	79	<2.0	--	12	2.6
07	1.5	58	6.7	28.5	--	6.0	78	<2.0	--	12	2.7
Oct. 22	--	61	7.0	19.0	--	7.8	86	--	K3	--	--
22	.50	61	7.0	20.0	2.40	7.8	88	<2.0	--	--	--
22	1.2	61	7.0	19.5	--	7.8	87	<2.0	--	--	--
Nov. 19	--	59	7.2	15.0	--	8.9	91	--	K8	--	--
19	.50	58	7.2	15.5	2.40	9.0	92	<2.0	--	--	--
19	1.3	58	7.2	15.5	--	9.0	92	<2.0	--	--	--
Dec. 17	--	57	7.1	12.0	--	9.2	88	--	K2	--	--
17	.50	56	7.1	12.5	1.30	9.2	88	<2.0	--	--	--
17	2.1	56	7.0	12.0	--	9.2	88	<2.0	--	--	--
1997											
Jan. 29	--	58	7.1	9.0	--	10.2	89	--	K5	--	--
29	0.50	57	7.0	9.0	1.70	10.3	90	<2.0	--	12	2.6
29	1.3	57	7.0	9.0	--	10.3	90	<2.0	--	12	2.6
Feb. 26	--	56	7.0	9.5	--	10.0	89	--	K14	--	--
26	.50	55	6.9	9.0	1.80	10.0	88	<2.0	--	12	2.5
26	1.6	55	6.9	9.0	--	10.0	88	<2.0	--	12	2.6
Mar. 19	--	56	6.9	11.5	--	9.2	87	--	K7	--	--
19	.50	55	6.9	12.5	1.60	9.2	89	<2.0	--	12	2.7
19	1.5	56	6.9	12.5	--	9.3	89	<2.0	--	12	2.7
Apr. 30	--	51	6.7	16.5	--	8.1	85	--	K160	--	--
30	.50	53	6.7	16.5	.40	8.2	87	<2.0	--	12	2.9
30	1.6	53	6.7	16.5	--	8.2	86	<2.0	--	12	2.9
May 20	--	52	6.9	19.0	--	7.8	86	--	34	--	--
20	.50	51	6.7	18.0	1.40	7.6	82	<2.0	--	12	2.8
20	1.5	51	6.6	18.0	--	7.6	83	<2.0	--	12	2.8
June 17	.50	58	6.8	21.0	1.40	7.0	81	<2.0	--	12	2.7
17	.80	58	6.7	21.0	--	7.0	81	<2.0	--	12	2.8
July 30	--	53	6.6	28.5	--	5.6	73	--	20	--	--
30	.50	52	6.6	28.0	1.70	5.7	75	<2.0	--	12	2.5
30	.90	52	6.6	28.0	--	5.7	75	<2.0	--	11	2.5
Sept. 09	--	54	6.7	26.5	--	6.0	77	--	K18	--	--
09	.50	54	6.7	27.0	1.90	6.2	80	<2.0	--	12	2.6
09	1.7	54	6.7	27.0	--	6.1	78	<2.0	--	12	2.7

Table 46. Water-quality field measurements and sample analyses at Mountain Island Lake site 04, May 1996 through September 1997—Continued

CATAWBA RIVER AT POWER PLANT NEAR SHUFFLETOWN, NC (MTN04)

[Site 04 is at latitude 35°21'50", longitude 80°58'29", Mecklenburg County, U.S. Geological Survey downstream order number 0214264900; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; mL, milliliter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated]

Date	Dissolved magnesium (mg/L as Mg) (00925)	Alkalinity (mg/L as CaCO ₃) (90410)	Total suspended solids (mg/L) (00530)	Volatile suspended solids (mg/L) (00535)	Total dissolved solids (mg/L) (70300)	Dissolved nitrite + nitrate (mg/L as N) (00631)	Dissolved ammonia (mg/L as N) (00608)	Total ammonia + organic nitrogen (mg/L as N) (00625)	Dissolved ammonia + organic nitrogen (mg/L as N) (00623)	Total nitrogen (mg/L as N) (00600)	Total organic nitrogen (mg/L as N) (00605)
1996											
May 28	1.3	14	2	<1	52	0.210	0.021	0.20	<0.20	0.41	0.18
28	1.2	14	<1	<1	42	.280	.025	<.20	<.20	--	--
June 11	--	--	--	--	--	--	--	--	--	--	--
11	1.3	14	1	<1	18	.230	.036	.30	.20	.53	.26
11	1.3	14	4	2	30	.230	.036	.30	<.20	.53	.26
25	--	--	--	--	--	--	--	--	--	--	--
25	1.3	14	10	3	20	.210	.037	<.20	<.20	--	--
25	1.3	14	8	3	34	.220	.043	<.20	<.20	--	--
July 10	--	--	--	--	--	--	--	--	--	--	--
10	1.3	15	<1	2	30	.130	<.002	<.20	<.20	--	--
10	1.3	15	2	3	36	.140	.004	<.20	<.20	--	--
24	--	--	--	--	--	--	--	--	--	--	--
24	1.3	15	6	4	38	.066	.019	<.20	<.20	--	--
24	1.3	15	4	4	40	.070	.017	<.20	<.20	--	--
Aug. 07	--	--	--	--	--	--	--	--	--	--	--
07	1.3	15	4	3	40	.098	.018	<.20	<.20	--	--
07	1.3	15	5	5	40	.099	.017	<.20	<.20	--	--
Oct. 22	--	--	--	--	--	--	--	--	--	--	--
22	--	15	5	<1	44	.078	.017	<.20	<.20	--	--
22	--	16	3	2	40	.079	.016	<.20	.20	--	--
Nov. 19	--	--	--	--	--	--	--	--	--	--	--
19	--	15	2	3	30	.097	.032	<.20	<.20	--	--
19	--	15	2	3	26	.100	.028	<.20	<.20	--	--
Dec. 17	--	--	--	--	--	--	--	--	--	--	--
17	--	14	<1	2	40	.081	.030	<.20	<.20	--	--
17	--	15	<1	2	36	.077	.050	<.20	<.20	--	--
1997											
Jan. 29	--	--	--	--	--	--	--	--	--	--	--
29	1.3	15	2	1	38	0.170	0.043	0.20	<0.20	0.37	0.16
29	1.3	15	2	1	22	.170	.034	.30	<.20	.47	.27
Feb. 26	--	--	--	--	--	--	--	--	--	--	--
26	1.3	15	<1	<1	40	.190	.036	<.20	<.20	--	--
26	1.3	15	10	1	40	.190	.036	<.20	<.20	--	--
Mar. 19	--	--	--	--	--	--	--	--	--	--	--
19	1.3	15	--	--	36	.270	.015	<.20	<.20	--	--
19	1.3	15	--	--	36	.270	.016	<.20	<.20	--	--
Apr. 30	--	--	--	--	--	--	--	--	--	--	--
30	1.2	13	--	--	36	.219	.028	.27	<.20	.49	.25
30	1.2	13	26	15	36	.231	.032	.29	.21	.52	.25
May 20	--	--	--	--	--	--	--	--	--	--	--
20	1.2	14	--	--	48	.228	.017	.32	<.20	.55	.30
20	1.2	14	5	2	47	.227	.027	<.20	<.20	--	--
June 17	1.2	14	7	1	37	.213	.017	.21	<.20	.43	.20
17	1.2	14	8	<1	37	.216	.024	.22	<.20	.44	.20
July 30	--	--	--	--	--	--	--	--	--	--	--
30	1.3	15	5	7	38	.139	.018	<.20	<.20	--	--
30	1.3	14	--	--	40	.142	.019	.22	<.20	.36	.20
Sept. 09	--	--	--	--	--	--	--	--	--	--	--
09	1.4	16	4	3	36	.046	.014	<.20	<.20	--	--
09	1.4	15	12	7	36	.045	.013	<.20	<.20	--	--

Table 46. Water-quality field measurements and sample analyses at Mountain Island Lake site 04, May 1996 through September 1997—Continued

CATAWBA RIVER AT POWER PLANT NEAR SHUFFLETOWN, NC (MTN04)

[Site 04 is at latitude 35°21'50", longitude 80°58'29", Mecklenburg County, U.S. Geological Survey downstream order number 0214264900; μ S/cm, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; mL, milliliter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated]

Date	Total phosphorus (mg/L as P) (00665)	Dissolved phosphorus (mg/L as P) (00666)	Dissolved orthophosphorus (mg/L as P) (00671)	Total iron (μ g/L as Fe) (01045)	Total organic carbon (mg/L as C) (00680)	Chlorophyll a (μ g/L) (70953)	Chlorophyll b (μ g/L) (70954)	Total cyanide (mg/L as Cn) (00720)	Total arsenic (μ g/L as As) (01002)	Total beryllium (μ g/L as Be) (01012)
1996										
May 28	0.012	0.007	<0.001	110	2.4	<0.100	<0.100	--	--	--
28	.007	.007	<.001	120	2.6	--	--	--	--	--
June 11	--	--	--	--	--	--	--	--	--	--
11	.010	.004	<.001	130	1.9	<.100	<.100	<0.010	<1	<10
11	.011	.004	<.001	200	1.6	--	--	<0.010	<1	<10
25	--	--	--	--	--	--	--	--	--	--
25	.013	.004	<.001	310	2.0	<.100	<.100	--	--	--
25	.012	.009	.001	270	2.2	--	--	--	--	--
July 10	--	--	--	--	--	--	--	--	--	--
10	.004	.003	<.001	90	2.4	1.90	.300	--	--	--
10	.007	.001	<.001	90	2.4	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--
24	.004	.003	<.001	60	2.1	.500	<.100	--	--	--
24	.005	.010	<.001	60	2.2	--	--	--	--	--
Aug. 07	--	--	--	--	--	--	--	--	--	--
07	.005	.003	<.001	70	1.9	.200	<.100	<.010	2	<10
07	.007	.003	<.001	70	2.2	--	--	<.010	2	<10
Oct. 22	--	--	--	--	--	--	--	--	--	--
22	.005	<.001	<.001	--	--	E.300	<.100	--	--	--
22	.005	.002	<.001	--	--	--	--	--	--	--
Nov. 19	--	--	--	--	--	--	--	--	--	--
19	.006	.002	<.001	--	--	E.200	<.100	--	--	--
19	.007	.002	<.001	--	--	--	--	--	--	--
Dec. 17	--	--	--	--	--	--	--	--	--	--
17	.008	.002	<.001	--	--	.900	<.100	--	--	--
17	.011	.002	<.001	--	--	--	--	--	--	--
1997										
Jan. 29	--	--	--	--	--	--	--	--	--	--
29	0.006	0.008	<0.001	160	2.0	E0.100	<0.100	--	--	--
29	.006	<.001	<.001	180	2.3	--	--	--	--	--
Feb. 26	--	--	--	--	--	--	--	--	--	--
26	.004	<.001	<.001	110	1.6	1.20	<.100	--	--	--
26	.005	.001	<.001	110	1.8	--	--	--	--	--
Mar. 19	--	--	--	--	--	--	--	--	--	--
19	.005	<.001	<.001	110	1.7	E.320	<.100	<0.010	<1	<10
19	.008	.001	<.001	100	1.6	--	--	<0.010	<1	<10
Apr. 30	--	--	--	--	--	--	--	--	--	--
30	.028	.001	.003	510	2.8	E.510	<.100	--	--	--
30	.028	.002	.003	560	2.8	--	--	--	--	--
May 20	--	--	--	--	--	--	--	--	--	--
20	.005	.002	.002	90	1.8	E.740	<.100	--	--	--
20	.005	.002	.002	100	1.5	--	--	--	--	--
June 17	.007	.001	.001	170	2.0	.580	.220	--	--	--
17	.009	.004	.001	250	1.9	--	--	--	--	--
July 30	--	--	--	--	--	--	--	--	--	--
30	.009	.002	.001	100	2.1	E.890	<.100	--	--	--
30	.008	.003	<.001	100	2.0	--	--	--	--	--
Sept. 09	--	--	--	--	--	--	--	--	--	--
09	.006	.002	.001	90	1.6	1.50	<.100	--	--	--
09	.007	.002	.001	90	1.6	--	--	--	--	--

Table 46. Water-quality field measurements and sample analyses at Mountain Island Lake site 04, May 1996 through September 1997—Continued

CATAWBA RIVER AT POWER PLANT NEAR SHUFFLETOWN, NC (MTN04)

[Site 04 is at latitude 35°21'50", longitude 80°58'29", Mecklenburg County, U.S. Geological Survey downstream order number 0214264900; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; mL, milliliter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated]

Date	Total cadmium ($\mu\text{g}/\text{L}$ as Cd) (01027)	Total chromium ($\mu\text{g}/\text{L}$ as Cr) (01034)	Total copper ($\mu\text{g}/\text{L}$ as Cu) (01042)	Total lead ($\mu\text{g}/\text{L}$ as Pb) (01051)	Total nickel ($\mu\text{g}/\text{L}$ as Ni) (01067)	Total silver ($\mu\text{g}/\text{L}$ as Ag) (01077)	Total zinc ($\mu\text{g}/\text{L}$ as Zn) (01092)	Total antimony ($\mu\text{g}/\text{L}$ as Sb) (01097)	Total selenium ($\mu\text{g}/\text{L}$ as Se) (01147)	Total mercury ($\mu\text{g}/\text{L}$ as Hg) (71900)
1996										
May 28	--	--	--	--	--	--	--	--	--	--
28	--	--	--	--	--	--	--	--	--	--
June 11	--	--	--	--	--	--	--	--	--	--
11	<1	<1	2	<1	<1	<1	<10	<1	<1	<0.10
11	<1	<1	2	<1	<1	<1	<10	<1	<1	<.10
25	--	--	--	--	--	--	--	--	--	--
25	--	--	--	--	--	--	--	--	--	--
25	--	--	--	--	--	--	--	--	--	--
July 10	--	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--
Aug. 07	--	--	--	--	--	--	--	--	--	--
07	<1	<1	2	<1	1	<1	<10	<1	<1	<.10
07	<1	<1	1	<1	<1	<1	<10	<1	<1	<.10
Oct. 22	--	--	--	--	--	--	--	--	--	--
22	--	--	--	--	--	--	--	--	--	--
22	--	--	--	--	--	--	--	--	--	--
Nov. 19	--	--	--	--	--	--	--	--	--	--
19	--	--	--	--	--	--	--	--	--	--
19	--	--	--	--	--	--	--	--	--	--
Dec. 17	--	--	--	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--	--	--	--
1997										
Jan. 29	--	--	--	--	--	--	--	--	--	--
29	--	--	--	--	--	--	--	--	--	--
29	--	--	--	--	--	--	--	--	--	--
Feb. 26	--	--	--	--	--	--	--	--	--	--
26	--	--	--	--	--	--	--	--	--	--
26	--	--	--	--	--	--	--	--	--	--
Mar. 19	--	--	--	--	--	--	--	--	--	--
19	<1	<1	3	<1	<1	<1	<10	<1	<1	<0.10
19	<1	<1	1	<1	<1	<1	<10	<1	<1	<.10
Apr. 30	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
May 20	--	--	--	--	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--	--
June 17	--	--	--	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--	--	--	--
July 30	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
Sept. 09	--	--	--	--	--	--	--	--	--	--
09	--	--	--	--	--	--	--	--	--	--
09	--	--	--	--	--	--	--	--	--	--

Table 47. Water-quality field measurements and sample analyses at Mountain Island Lake site 07, May 1996 through September 1997

MCDOWELL CREEK NEAR SHUFFLETOWN, NC (MTN07)

[Site 07 is at latitude 35°22'22", longitude 80°56'43", Mecklenburg County, U.S. Geological Survey downstream order number 0214266024; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; <, less than; --, missing data; K, results based on nonideal colony count; >, greater than; E, estimated]

Date	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Secchi disk transparency (m) (00078)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	Biochemical oxygen demand, 5-day (mg/L) (00310)	Fecal coliform bacteria (colonies/100 mL) (31616)	Total hardness (mg/L as CaCO_3) (00900)	Dissolved calcium (mg/L as Ca) (00915)
1996											
May 29	0.50	74	7.7	26.0	0.70	8.3	105	3.2	--	16	3.9
29	2.2	88	7.2	25.5	--	7.2	90	2.5	--	20	4.9
29	--	--	--	--	--	--	--	--	26	--	--
June 11	--	65	7.0	25.5	--	6.8	86	--	K16	--	--
11	.50	60	8.0	27.5	.60	8.8	113	2.6	--	13	3.0
11	1.8	86	6.8	25.5	--	5.8	72	2.3	--	17	3.9
25	--	102	7.1	29.5	--	6.3	--	--	K84	--	--
25	.50	72	7.9	30.5	.40	7.6	104	3.0	--	17	4.2
25	2.8	74	6.7	28.0	--	5.1	67	<2.0	--	18	4.4
July 10	--	71	6.8	27.5	--	5.2	67	--	56	--	--
10	.50	89	7.7	28.5	.30	8.3	110	5.8	--	22	5.5
10	2.4	63	6.7	27.0	--	5.3	69	3.0	--	21	5.3
24	--	91	7.0	29.5	--	7.0	95	--	K10	--	--
24	.50	66	8.3	30.5	.60	9.0	122	5.5	--	17	4.1
24	2.0	61	6.7	29.5	--	6.6	88	2.4	--	16	3.8
Aug. 07	--	66	7.0	29.5	--	7.4	99	--	51	--	--
07	.50	59	8.2	30.5	.70	9.0	122	2.0	--	11	2.1
07	2.2	75	6.9	29.0	--	7.4	98	<2.0	--	18	3.8
Oct. 22	--	76	7.1	18.0	--	8.4	91	--	K6	--	--
22	.50	70	7.8	19.5	.90	9.6	108	4.2	--	--	--
22	2.2	84	7.4	18.5	--	9.3	101	<2.0	--	--	--
Nov. 19	--	62	7.2	13.5	--	9.1	90	--	K7	--	--
19	.50	61	7.3	14.5	1.60	9.6	96	<2.0	--	--	--
19	2.5	73	7.2	13.0	--	8.9	87	<2.0	--	--	--
Dec. 17	--	62	7.1	12.0	--	2.3	22	--	K76	--	--
18	.50	73	7.0	11.0	.80	9.2	87	<2.0	--	--	--
18	2.0	134	7.1	9.5	--	9.0	81	<2.0	--	--	--
1997											
Jan. 29	--	75	7.1	8.5	--	10.1	87	--	K18	--	--
30	0.50	95	8.6	8.0	0.70	--	--	<2.0	--	19	4.2
30	2.2	114	7.4	8.5	--	--	--	<2.0	--	27	6.0
Feb. 26	--	105	7.1	10.5	--	9.7	88	--	K16	--	--
26	.50	93	7.1	10.0	.70	9.8	89	<2.0	--	25	5.7
26	2.5	122	7.0	10.0	--	9.7	87	<2.0	--	30	6.9
Mar. 19	--	108	7.1	13.5	--	8.6	84	--	23	--	--
19	.50	153	7.2	13.5	.20	8.3	82	2.0	--	45	11
19	2.0	153	7.1	13.5	--	8.2	81	2.6	--	45	11
Apr. 30	--	58	6.6	16.5	--	7.5	79	--	>60	--	--
30	.50	57	6.6	18.0	.20	8.0	87	3.2	--	15	3.6
30	2.5	66	6.5	16.0	--	6.9	72	2.5	--	21	5.3
May 20	--	166	7.0	21.5	--	6.0	70	--	43	--	--
20	.50	116	7.1	22.5	.40	7.3	87	<2.0	--	43	9.0
20	2.4	52	6.8	19.5	--	7.7	86	<2.0	--	13	3.0
June 17	.50	100	8.6	25.5	.40	10.5	133	2.8	--	25	5.7
17	2.0	60	6.7	21.5	--	6.5	76	<2.0	--	15	3.4
July 30	--	86	6.7	28.5	--	5.5	72	--	38	--	--
30	.50	87	6.7	28.0	.40	5.4	71	<2.0	--	23	4.9
30	2.1	98	6.8	28.0	--	5.4	71	<2.0	--	29	6.3
Sept. 09	--	110	7.8	27.0	--	8.5	110	--	K8	--	--
09	.50	67	8.6	27.5	1.00	9.5	124	2.8	--	15	2.6
09	2.1	87	8.0	27.0	--	8.8	113	2.2	--	20	3.4

Table 47. Water-quality field measurements and sample analyses at Mountain Island Lake site 07, May 1996 through September 1997—Continued

MCDOWELL CREEK NEAR SHUFFLETOWN, NC (MTN07)

[Site 07 is at latitude 35°22'22", longitude 80°56'43", Mecklenburg County, U.S. Geological Survey downstream order number 0214266024; $\mu\text{S/cm}$, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; <, less than; --, missing data; K, results based on nonideal colony count; >, greater than; E, estimated]

Date	Dissolved magnesium (mg/L as Mg) (00925)	Alkalinity (mg/L as CaCO ₃) (90410)	Total suspended solids (mg/L) (00530)	Volatile suspended solids (mg/L) (00535)	Total dissolved solids (mg/L) (70300)	Dissolved nitrite + nitrate (mg/L as N) (00631)	Dissolved ammonia (mg/L as N) (00608)	Total ammonia + organic nitrogen (mg/L as N) (00625)	Dissolved ammonia + organic nitrogen (mg/L as N) (00623)	Total nitrogen (mg/L as N) (00600)	Total organic nitrogen (mg/L as N) (00605)
1996											
May 29	1.6	18	6	1	48	0.470	0.018	0.50	<0.20	0.97	0.48
29	1.9	21	13	2	66	.750	.056	.40	.30	1.1	.34
29	--	--	--	--	--	--	--	--	--	--	--
June 11	--	--	--	--	--	--	--	--	--	--	--
11	1.4	15	11	4	34	.250	<.002	.50	<.20	.75	--
11	1.7	17	12	3	34	.450	.030	.50	.20	.95	.47
25	--	--	--	--	--	--	--	--	--	--	--
25	1.7	19	2	3	40	.420	.005	.50	<.20	.92	.50
25	1.7	19	37	6	68	.550	.119	.40	.20	.95	.28
July 10	--	--	--	--	--	--	--	--	--	--	--
10	1.9	22	12	3	70	1.10	<.002	.50	<.20	1.6	--
10	1.8	21	18	6	52	1.00	.051	.40	<.20	1.4	.35
24	--	--	--	--	--	--	--	--	--	--	--
24	1.7	21	6	4	56	.500	<.002	.80	<.20	1.3	--
24	1.7	19	9	6	54	.560	.037	.40	<.20	.96	.36
Aug. 07	--	--	--	--	--	--	--	--	--	--	--
07	1.5	13	8	3	46	.110	.006	.30	<.20	.41	.29
07	2.0	17	20	4	56	.650	.007	.30	<.20	.95	.29
Oct. 22	--	--	--	--	--	--	--	--	--	--	--
22	--	18	7	3	48	.460	<.002	.50	<.20	.96	--
22	--	20	11	1	68	.840	<.002	.30	<.20	1.1	--
Nov. 19	--	--	--	--	--	--	--	--	--	--	--
19	--	16	2	2	40	.190	.014	.20	<.20	.39	.19
19	--	19	8	3	46	.470	.005	.20	<.20	.67	.19
Dec. 17	--	--	--	--	--	--	--	--	--	--	--
18	--	18	10	1	38	.350	.036	.20	<.20	.55	.16
18	--	31	14	2	70	1.30	.040	.30	<.20	1.6	.26
1997											
Jan. 29	--	--	--	--	--	--	--	--	--	--	--
30	2.0	19	6	4	46	0.520	0.034	<0.20	<0.20	--	--
30	2.9	24	8	<1	60	.940	.032	.20	<.20	1.1	0.17
Feb. 26	--	--	--	--	--	--	--	--	--	--	--
26	2.7	27	18	1	64	.990	.038	.20	<.20	1.2	.16
26	3.2	31	21	<1	76	1.20	.051	.30	.20	1.5	.25
Mar. 19	--	--	--	--	--	--	--	--	--	--	--
19	4.2	44	--	--	96	1.90	.076	.50	.20	2.4	.42
19	4.2	43	--	--	98	1.80	.120	.70	.30	2.5	.58
Apr. 30	--	--	--	--	--	--	--	--	--	--	--
30	1.5	14	42	9	40	.313	.035	.43	.27	.75	.40
30	1.9	18	108	32	54	.446	.071	.71	.39	1.2	.64
May 20	--	--	--	--	--	--	--	--	--	--	--
20	5.1	38	14	<1	106	2.77	.080	.43	<.20	3.2	.35
20	1.4	15	8	1	55	.323	.019	<.20	<.20	--	--
June 17	2.5	23	12	1	62	.923	<.002	.41	<.20	1.3	--
17	1.5	16	17	11	42	.346	.040	.23	<.20	.57	.19
July 30	--	--	--	--	--	--	--	--	--	--	--
30	2.6	21	18	10	62	.928	.060	.40	.21	1.3	.34
30	3.2	25	21	13	74	1.42	.067	.47	<.20	1.9	.40
Sept. 09	--	--	--	--	--	--	--	--	--	--	--
09	2.0	18	2	3	44	.172	<.002	.41	<.20	.58	--
09	2.9	23	11	13	54	.549	.006	.40	<.20	.95	.40

Table 47. Water-quality field measurements and sample analyses at Mountain Island Lake site 07, May 1996 through September 1997—Continued

MCDOWELL CREEK NEAR SHUFFLETOWN, NC (MTN07)

[Site 07 is at latitude 35°22'22", longitude 80°56'43", Mecklenburg County, U.S. Geological Survey downstream order number 0214266024; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; <, less than; --, missing data; K, results based on nonideal colony count; >, greater than; E, estimated]

Date	Total phosphorus (mg/L as P) (00665)	Dissolved phosphorus (mg/L as P) (00666)	Dissolved orthophosphorus (mg/L as P) (00671)	Total iron ($\mu\text{g}/\text{L}$ as Fe) (01045)	Total organic carbon (mg/L as C) (00680)	Chlorophyll <i>a</i> ($\mu\text{g}/\text{L}$) (70953)	Chlorophyll <i>b</i> ($\mu\text{g}/\text{L}$) (70954)	Total cyanide (mg/L as Cn) (00720)	Total arsenic ($\mu\text{g}/\text{L}$ as As) (01002)	Total beryllium ($\mu\text{g}/\text{L}$ as Be) (01012)
1996										
May 29	0.095	0.027	0.020	230	3.5	0.300	<0.100	--	--	--
29	.100	.072	.061	400	3.4	--	--	--	--	--
29	--	--	--	--	--	--	--	--	--	--
June 11	--	--	--	--	--	--	--	--	--	--
11	.058	.009	.002	260	3.5	.500	.100	<0.010	<1	<10
11	.061	.029	.020	640	4.1	--	--	<.010	<1	<10
25	--	--	--	--	--	--	--	--	--	--
25	.094	.016	.009	270	3.4	2.10	.100	--	--	--
25	.110	.038	.030	890	3.2	--	--	--	--	--
July 10	--	--	--	--	--	--	--	--	--	--
10	.140	.075	.093	370	4.9	13.0	1.80	--	--	--
10	.190	.120	.120	530	3.0	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--
24	.150	.074	.065	160	6.7	12.0	1.40	--	--	--
24	.130	.074	.069	270	2.8	--	--	--	--	--
Aug. 07	--	--	--	--	--	--	--	--	--	--
07	.036	.007	.001	120	4.1	2.00	.300	<.010	2	<10
07	.100	.054	.048	330	3.8	--	--	<.010	1	<10
Oct. 22	--	--	--	--	--	--	--	--	--	--
22	.061	.017	.006	--	--	5.50	.300	--	--	--
22	.056	.029	.018	--	--	--	--	--	--	--
Nov. 19	--	--	--	--	--	--	--	--	--	--
19	.016	.005	<.001	--	--	.800	.200	--	--	--
19	.042	.026	.016	--	--	--	--	--	--	--
Dec. 17	--	--	--	--	--	--	--	--	--	--
18	.051	.030	.019	--	--	.800	<.100	--	--	--
18	.600	.160	.140	--	--	--	--	--	--	--
1997										
Jan. 29	--	--	--	--	--	--	--	--	--	--
30	0.027	0.004	0.002	310	2.2	E0.300	<0.100	--	--	--
30	.048	.011	.007	550	2.7	--	--	--	--	--
Feb. 26	--	--	--	--	--	--	--	--	--	--
26	.100	.069	.063	370	2.2	1.40	<.100	--	--	--
26	.150	.095	.093	590	2.6	--	--	--	--	--
Mar. 19	--	--	--	--	--	--	--	--	--	--
19	.300	.210	.210	1100	4.0	1.30	.200	<0.010	<1	<10
19	.340	.200	.200	2100	3.9	--	--	<.010	3	<10
Apr. 30	--	--	--	--	--	--	--	--	--	--
30	.085	.015	.016	910	4.9	1.57	<.100	--	--	--
30	.153	.027	.027	1900	7.5	--	--	--	--	--
May 20	--	--	--	--	--	--	--	--	--	--
20	.095	.050	.053	370	2.3	1.40	<.100	--	--	--
20	.011	.003	.003	150	1.9	--	--	--	--	--
June 17	.039	.005	.001	340	3.3	4.20	<.100	--	--	--
17	.030	.004	.002	520	2.2	--	--	--	--	--
July 30	--	--	--	--	--	--	--	--	--	--
30	.059	.005	.003	420	3.3	4.40	<.100	--	--	--
30	.109	.010	.009	530	3.9	--	--	--	--	--
Sept. 09	--	--	--	--	--	--	--	--	--	--
09	.061	.011	.007	130	2.8	6.40	<.100	--	--	--
09	.112	.045	.038	290	2.7	--	--	--	--	--

Table 47. Water-quality field measurements and sample analyses at Mountain Island Lake site 07, May 1996 through September 1997—Continued

MCDOWELL CREEK NEAR SHUFFLETOWN, NC (MTN07)

[Site 07 is at latitude 35°22'22", longitude 80°56'43", Mecklenburg County, U.S. Geological Survey downstream order number 0214266024; $\mu\text{S/cm}$, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; <, less than; --, missing data; K, results based on nonideal colony count; >, greater than; E, estimated]

Date	Total cadmium ($\mu\text{g/L}$ as Cd) (01027)	Total chromium ($\mu\text{g/L}$ as Cr) (01034)	Total copper ($\mu\text{g/L}$ as Cu) (01042)	Total lead ($\mu\text{g/L}$ as Pb) (01051)	Total nickel ($\mu\text{g/L}$ as Ni) (01067)	Total silver ($\mu\text{g/L}$ as Ag) (01077)	Total zinc ($\mu\text{g/L}$ as Zn) (01092)	Total antimony ($\mu\text{g/L}$ as Sb) (01097)	Total selenium ($\mu\text{g/L}$ as Se) (01147)	Total mercury ($\mu\text{g/L}$ as Hg) (71900)
1996										
May 29	--	--	--	--	--	--	--	--	--	--
29	--	--	--	--	--	--	--	--	--	--
29	--	--	--	--	--	--	--	--	--	--
June 11	--	--	--	--	--	--	--	--	--	--
11	<1	<1	2	<1	<1	<1	<10	<1	<1	<0.10
11	<1	<1	2	<1	<1	<1	<10	<1	<1	<0.10
25	--	--	--	--	--	--	--	--	--	--
25	--	--	--	--	--	--	--	--	--	--
25	--	--	--	--	--	--	--	--	--	--
July 10	--	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--
Aug. 07	--	--	--	--	--	--	--	--	--	--
07	<1	<1	2	<1	<1	<1	<10	1	<1	<0.10
07	<1	<1	4	<1	2	<1	<10	1	<1	<0.10
Oct. 22	--	--	--	--	--	--	--	--	--	--
22	--	--	--	--	--	--	--	--	--	--
22	--	--	--	--	--	--	--	--	--	--
Nov. 19	--	--	--	--	--	--	--	--	--	--
19	--	--	--	--	--	--	--	--	--	--
19	--	--	--	--	--	--	--	--	--	--
Dec. 17	--	--	--	--	--	--	--	--	--	--
18	--	--	--	--	--	--	--	--	--	--
18	--	--	--	--	--	--	--	--	--	--
1997										
Jan. 29	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
Feb. 26	--	--	--	--	--	--	--	--	--	--
26	--	--	--	--	--	--	--	--	--	--
26	--	--	--	--	--	--	--	--	--	--
Mar. 19	--	--	--	--	--	--	--	--	--	--
19	<1	<1	3	<1	<1	<1	<10	<1	<1	<0.10
19	<1	1	4	1	<1	<1	<10	2	<1	<0.10
Apr. 30	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
May 20	--	--	--	--	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--	--
June 17	--	--	--	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--	--	--	--
July 30	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
Sept. 09	--	--	--	--	--	--	--	--	--	--
09	--	--	--	--	--	--	--	--	--	--
09	--	--	--	--	--	--	--	--	--	--

Table 48. Water-quality field measurements and sample analyses at Mountain Island Lake site 09, May 1996 through September 1997

CATAWBA RIVER BELOW MCDOWELL CREEK NEAR SHUFFLETOWN, NC (MTN09)

[Site 09 is at latitude 35°21'34", longitude 80°55'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214266045; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated]

Date	Sampling depth (m) (00098)	Specific conductance ($\mu\text{S}/\text{cm}$) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Secchi disk transparency (m) (00078)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	Biochemical oxygen demand, 5-day (mg/L) (00310)	Fecal coliform bacteria (colonies/100 mL) (31616)	Total hardness (mg/L as CaCO_3) (00900)	Dissolved calcium (mg/L as Ca) (00915)
1996											
May 29	0.50	58	7.3	26.0	1.10	7.7	98	<2.0	--	12	2.6
29	7.4	60	6.4	23.0	--	3.6	43	<2.0	--	13	2.9
29	--	--	--	--	--	--	--	--	K3	--	--
June 11	--	57	7.2	26.5	--	7.8	99	--	58	--	--
12	.50	57	7.7	27.5	.90	8.3	107	<2.0	--	12	2.4
12	11.1	59	6.7	25.0	--	5.8	72	<2.0	--	13	3.0
25	--	55	7.1	31.0	--	7.4	--	--	K9	--	--
26	.50	55	6.8	27.5	.90	6.9	90	<2.0	--	12	2.7
26	9.2	56	6.7	27.5	--	6.5	84	<2.0	--	12	2.8
July 10	--	57	7.3	29.5	--	7.4	99	--	41	--	--
11	.50	57	7.3	29.0	1.10	7.5	100	<2.0	--	12	2.6
11	8.7	58	6.6	27.5	--	5.6	73	<2.0	--	12	2.6
24	--	56	6.8	30.0	--	7.0	95	--	K1	--	--
24	.50	56	7.4	31.5	1.60	7.9	110	<2.0	--	10	1.9
24	9.0	58	6.5	29.0	--	5.3	71	<2.0	--	12	2.3
Aug. 07	--	55	7.1	30.5	--	7.3	99	--	K4	--	--
08	.50	55	6.9	29.5	1.30	7.2	96	<2.0	--	10	1.9
08	9.0	57	6.4	29.0	--	5.4	71	<2.0	--	10	1.8
Oct. 22	--	61	7.1	19.5	--	8.0	89	--	33	--	--
22	.50	60	7.2	21.0	1.70	8.4	97	<2.0	--	--	--
22	9.5	67	6.9	18.0	--	7.8	85	<2.0	--	--	--
Nov. 19	--	59	7.2	14.5	--	9.1	91	--	K5	--	--
19	.50	58	7.3	15.5	1.70	9.4	97	<2.0	--	--	--
19	11.0	61	7.0	13.5	--	8.9	87	<2.0	--	--	--
Dec. 17	--	58	7.1	12.0	--	9.4	90	--	K4	--	--
18	.50	59	6.9	12.0	1.40	9.3	88	<2.0	--	--	--
18	9.0	59	6.9	11.5	--	9.3	88	<2.0	--	--	--
1997											
Jan. 29	--	59	7.0	9.0	--	10.1	88	--	K6	--	--
30	0.50	59	7.1	9.5	1.50	--	--	<2.0	--	13	2.8
30	9.7	59	7.1	9.0	--	--	--	<2.0	--	13	2.8
Feb. 26	--	57	7.0	9.5	--	10.1	90	--	K2	--	--
27	.50	56	6.9	9.5	2.10	10.2	91	<2.0	--	13	2.7
27	10.7	57	6.9	9.5	--	10.0	89	<2.0	--	12	2.6
Mar. 19	--	57	7.0	13.0	--	9.3	90	--	K3	--	--
20	.50	57	6.9	12.5	1.60	9.5	91	<2.0	--	12	2.8
20	11.2	57	6.9	12.0	--	9.4	90	<2.0	--	12	2.8
Apr. 30	--	58	6.9	16.0	--	8.3	86	--	<1	--	--
30	.50	54	6.6	17.5	.20	8.1	87	<2.0	--	13	3.1
30	9.3	56	6.5	16.0	--	7.0	73	2.2	--	16	3.9
May 20	--	53	6.9	20.5	--	8.1	92	--	K2	--	--
20	.50	55	6.9	21.5	1.20	8.1	94	<2.0	--	13	2.9
20	11.0	52	6.7	19.5	--	7.8	87	<2.0	--	12	2.8
June 17	.50	58	6.7	22.0	1.00	7.1	84	<2.0	--	12	2.8
17	10.5	58	6.6	22.0	--	7.0	82	<2.0	--	13	2.9
July 30	--	52	6.7	29.0	--	6.3	84	--	K9	--	--
30	.50	52	6.6	29.0	1.20	6.1	81	<2.0	--	11	2.3
30	10.8	53	6.4	28.5	--	4.8	63	<2.0	--	12	2.4
Sept. 09	--	56	7.1	27.5	--	7.8	101	--	K2	--	--
09	.50	53	7.4	28.0	2.20	8.0	106	<2.0	--	11	2.1
09	9.4	56	6.7	27.0	--	6.6	84	<2.0	--	12	2.0

Table 48. Water-quality field measurements and sample analyses at Mountain Island Lake site 09, May 1996 through September 1997—Continued

CATAWBA RIVER BELOW MCDOWELL CREEK NEAR SHUFFLETOWN, NC (MTN09)

[Site 09 is at latitude 35°21'34", longitude 80°55'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214266045; μ S/cm, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated]

Date	Dissolved magnesium (mg/L as Mg) (00925)	Alkalinity (mg/L as CaCO ₃) (90410)	Total suspended solids (mg/L) (00530)	Volatile suspended solids (mg/L) (00535)	Total dissolved solids (mg/L) (70300)	Dissolved nitrite + nitrate (mg/L as N) (00631)	Dissolved ammonia (mg/L as N) (00608)	Total ammonia + organic nitrogen (mg/L as N) (00625)	Dissolved ammonia + organic nitrogen (mg/L as N) (00623)	Total nitrogen (mg/L as N) (00600)	Total organic nitrogen (mg/L as N) (00605)
1996											
May 29	1.3	14	<1	<1	38	0.180	0.008	0.20	<0.20	0.38	0.19
29	1.4	15	8	1	44	.220	.073	.30	.30	.52	.23
29	--	--	--	--	--	--	--	--	--	--	--
June 11	--	--	--	--	--	--	--	--	--	--	--
12	1.4	13	5	2	22	.160	<.002	.30	<.20	.46	--
12	1.4	14	14	5	26	.270	.043	.30	<.20	.57	.26
25	--	--	--	--	--	--	--	--	--	--	--
26	1.3	14	5	3	36	.180	.011	<.20	<.20	--	--
26	1.3	14	17	6	40	.180	.021	.20	<.20	.38	.18
July 10	--	--	--	--	--	--	--	--	--	--	--
11	1.3	15	3	4	42	.084	.007	<.20	<.20	--	--
11	1.3	15	10	5	40	.140	.015	<.20	<.20	--	--
24	--	--	--	--	--	--	--	--	--	--	--
24	1.3	12	6	6	30	.055	<.002	<.20	<.20	--	--
24	1.4	14	14	6	42	.070	.061	<.20	<.20	--	--
Aug. 07	--	--	--	--	--	--	--	--	--	--	--
08	1.3	13	6	1	34	.087	.017	<.20	.20	--	--
08	1.4	13	15	6	36	.120	.065	.20	.20	.32	.14
Oct. 22	--	--	--	--	--	--	--	--	--	--	--
22	--	15	6	4	44	.094	<.002	<.20	<.20	--	--
22	--	16	10	3	46	.330	<.002	<.20	<.20	--	--
Nov. 19	--	--	--	--	--	--	--	--	--	--	--
19	--	15	3	5	40	.120	.019	<.20	<.20	--	--
19	--	15	6	8	64	.170	.022	<.20	<.20	--	--
Dec. 17	--	--	--	--	--	--	--	--	--	--	--
18	--	15	6	1	28	.130	.030	<.20	<.20	--	--
18	--	15	6	1	28	.150	.029	<.20	<.20	--	--
1997											
Jan. 29	--	--	--	--	--	--	--	--	--	--	--
30	1.4	15	6	3	36	0.170	0.024	<0.20	<0.20	--	--
30	1.4	15	<1	<1	36	.170	.034	<.20	<.20	--	--
Feb. 26	--	--	--	--	--	--	--	--	--	--	--
27	1.4	16	6	2	40	.220	.036	<.20	<.20	--	--
27	1.3	15	7	<1	26	.210	.037	<.20	<.20	--	--
Mar. 19	--	--	--	--	--	--	--	--	--	--	--
20	1.2	15	9	9	38	.230	.018	<.20	<.20	--	--
20	1.3	15	2	4	34	.226	.017	<.20	<.20	--	--
Apr. 30	--	--	--	--	--	--	--	--	--	--	--
30	1.3	14	35	3	39	.256	.025	.30	.22	0.56	0.28
30	1.5	14	92	16	43	.348	.055	.67	.30	1.0	.61
May 20	--	--	--	--	--	--	--	--	--	--	--
20	1.3	14	5	1	49	.262	.020	<.20	<.20	--	--
20	1.3	14	6	2	50	.214	.024	<.20	<.20	--	--
June 17	1.2	14	10	<1	37	.242	.020	<.20	<.20	--	--
17	1.3	14	26	1	37	.216	.021	.23	<.20	.44	.21
July 30	--	--	--	--	--	--	--	--	--	--	--
30	1.3	13	7	7	39	.145	.008	<.20	<.20	--	--
30	1.4	14	11	8	40	.157	.040	<.20	<.20	--	--
Sept. 09	--	--	--	--	--	--	--	--	--	--	--
09	1.5	14	7	<1	36	.027	.003	<.20	<.20	--	--
09	1.6	15	6	4	34	.068	.029	<.20	<.20	--	--

Table 48. Water-quality field measurements and sample analyses at Mountain Island Lake site 09, May 1996 through September 1997—Continued

CATAWBA RIVER BELOW MCDOWELL CREEK NEAR SHUFFLETOWN, NC (MTN09)

[Site 09 is at latitude 35°21'34", longitude 80°55'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214266045; μ S/cm, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated]

Date	Total phosphorus (mg/L as P) (00665)	Dissolved phosphorus (mg/L as P) (00666)	Dissolved orthophosphorus (mg/L as P) (00671)	Total iron (μ g/L as Fe) (01045)	Total organic carbon (mg/L as C) (00680)	Chlorophyll <i>a</i> (μ g/L) (70953)	Chlorophyll <i>b</i> (μ g/L) (70954)	Total cyanide (mg/L as Cn) (00720)	Total arsenic (μ g/L as As) (01002)	Total beryllium (μ g/L as Be) (01012)
1996										
May 29	0.016	0.003	<0.001	120	2.3	0.400	<0.100	--	--	--
29	.026	.004	.001	370	2.3	--	--	--	--	--
29	--	--	--	--	--	--	--	--	--	--
June 11	--	--	--	--	--	--	--	--	--	--
12	.026	.005	<0.001	--	2.2	.900	<.100	<0.010	1	<10
12	.030	.004	<0.001	390	2.2	--	--	<.010	<1	<10
25	--	--	--	--	--	--	--	--	--	--
26	.016	.004	<0.001	130	2.8	1.50	<.100	--	--	--
26	.024	.005	.002	440	2.3	--	--	--	--	--
July 10	--	--	--	--	--	--	--	--	--	--
11	.015	.002	<0.001	90	2.9	2.10	.300	--	--	--
11	.016	.002	<0.001	220	2.3	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--
24	.012	.002	<0.001	70	2.6	1.60	<.100	--	--	--
24	.016	.001	<0.001	320	2.3	--	--	--	--	--
Aug. 08	--	--	--	--	--	--	--	--	--	--
08	.015	.005	<0.001	100	2.5	.600	<.100	<.010	1	<10
08	.026	.004	<0.001	300	2.7	--	--	<.010	1	<10
Oct. 22	--	--	--	--	--	--	--	--	--	--
22	.008	.002	<0.001	--	--	--	--	--	--	--
22	.017	.007	.002	--	--	--	--	--	--	--
Nov. 19	--	--	--	--	--	--	--	--	--	--
19	.010	.002	<0.001	--	--	.800	<.100	--	--	--
19	.012	.004	<0.001	--	--	--	--	--	--	--
Dec. 17	--	--	--	--	--	--	--	--	--	--
18	.009	.003	<0.001	--	--	.700	<.100	--	--	--
18	.018	.003	<0.001	--	--	--	--	--	--	--
1997										
Jan. 29	--	--	--	--	--	--	--	--	--	--
30	0.008	0.002	<0.001	210	1.9	E0.100	<0.100	--	--	--
30	.008	.004	<0.001	270	1.9	--	--	--	--	--
Feb. 26	--	--	--	--	--	--	--	--	--	--
27	.012	.002	<0.001	110	1.5	1.20	<.100	--	--	--
27	.006	.002	<0.001	120	1.7	--	--	--	--	--
Mar. 19	--	--	--	--	--	--	--	--	--	--
20	.010	.001	<0.001	130	1.9	E.370	<.100	<0.010	<1	<10
20	.008	.003	.001	140	1.9	--	--	<.010	<1	<10
Apr. 30	--	--	--	--	--	--	--	--	--	--
30	.048	.005	.007	690	3.5	E.370	<.100	--	--	--
30	.143	.028	.025	1800	7.3	--	--	--	--	--
May 20	--	--	--	--	--	--	--	--	--	--
20	.005	.002	.002	110	1.8	E.680	<.100	--	--	--
20	.006	.002	.002	140	1.7	--	--	--	--	--
June 17	.009	.001	.001	260	1.9	.650	<.100	--	--	--
17	.017	.002	.001	820	2.1	--	--	--	--	--
July 30	--	--	--	--	--	--	--	--	--	--
30	.012	.005	.002	140	2.1	E1.00	<.100	--	--	--
30	.018	.001	.001	370	2.3	--	--	--	--	--
Sept. 09	--	--	--	--	--	--	--	--	--	--
09	.014	.003	.002	60	2.1	1.50	<.100	--	--	--
09	.017	.002	.001	280	1.9	--	--	--	--	--

Table 48. Water-quality field measurements and sample analyses at Mountain Island Lake site 09, May 1996 through September 1997—Continued

CATAWBA RIVER BELOW MCDOWELL CREEK NEAR SHUFFLETOWN, NC (MTN09)

[Site 09 is at latitude 35°21'34", longitude 80°55'24", Mecklenburg County, U.S. Geological Survey downstream order number 0214266045; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; $^{\circ}\text{C}$, degrees Celsius; m, meter; mg/L , milligrams per liter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated]

Date	Total cadmium ($\mu\text{g}/\text{L}$ as Cd) (01027)	Total chromium ($\mu\text{g}/\text{L}$ as Cr) (01034)	Total copper ($\mu\text{g}/\text{L}$ as Cu) (01042)	Total lead ($\mu\text{g}/\text{L}$ as Pb) (01051)	Total nickel ($\mu\text{g}/\text{L}$ as Ni) (01067)	Total silver ($\mu\text{g}/\text{L}$ as Ag) (01077)	Total zinc ($\mu\text{g}/\text{L}$ as Zn) (01092)	Total antimony ($\mu\text{g}/\text{L}$ as Sb) (01097)	Total selenium ($\mu\text{g}/\text{L}$ as Se) (01147)	Total mercury ($\mu\text{g}/\text{L}$ as Hg) (71900)
1996										
May 29	--	--	--	--	--	--	--	--	--	--
29	--	--	--	--	--	--	--	--	--	--
29	--	--	--	--	--	--	--	--	--	--
June 11	--	--	--	--	--	--	--	--	--	--
12	<1	<1	2	--	--	--	<10	<1	<1	<0.10
12	<1	<1	2	<1	<1	<1	<10	<1	<1	<.10
25	--	--	--	--	--	--	--	--	--	--
26	--	--	--	--	--	--	--	--	--	--
26	--	--	--	--	--	--	--	--	--	--
July 10	--	--	--	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--
Aug. 07	--	--	--	--	--	--	--	--	--	--
08	<1	<1	3	<1	<1	<1	<10	<1	<1	<.10
08	<1	<1	2	<1	<1	<1	80	<1	<1	<.10
Oct. 22	--	--	--	--	--	--	--	--	--	--
22	--	--	--	--	--	--	--	--	--	--
22	--	--	--	--	--	--	--	--	--	--
Nov. 19	--	--	--	--	--	--	--	--	--	--
19	--	--	--	--	--	--	--	--	--	--
19	--	--	--	--	--	--	--	--	--	--
Dec. 17	--	--	--	--	--	--	--	--	--	--
18	--	--	--	--	--	--	--	--	--	--
18	--	--	--	--	--	--	--	--	--	--
1997										
Jan. 29	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
Feb. 26	--	--	--	--	--	--	--	--	--	--
27	--	--	--	--	--	--	--	--	--	--
27	--	--	--	--	--	--	--	--	--	--
Mar. 19	--	--	--	--	--	--	--	--	--	--
20	<1	<1	1	<1	<1	<1	<10	<1	<1	<0.10
20	<1	<1	1	<1	<1	<1	<10	<1	<1	<.10
Apr. 30	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
May 20	--	--	--	--	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--	--
June 17	--	--	--	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--	--	--	--
July 30	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
Sept. 09	--	--	--	--	--	--	--	--	--	--
09	--	--	--	--	--	--	--	--	--	--
09	--	--	--	--	--	--	--	--	--	--

Table 49. Water-quality field measurements and sample analyses at Mountain Island Lake site 11, May 1996 through September 1997

GAR CREEK NEAR SHUFFLETOWN, NC (MTN11)

[Site 11 is at latitude 35°20'55", longitude 80°55'30", Mecklenburg County, U.S. Geological Survey downstream order number 0214266250; μS/cm, microsiemens per centimeters; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated]

Date	Sampling depth (m) (00098)	Specific conductance (μS/cm) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Secchi disk transparency (m) (00078)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	Biochemical oxygen demand, 5-day (mg/L) (00310)	Fecal coliform bacteria (colonies/100 mL) (31616)	Total hardness (mg/L as CaCO ₃) (00900)	Dissolved calcium (mg/L as Ca) (00915)
1996											
May 29	0.50	60	7.1	27.0	0.90	7.4	96	<2.0	--	13	2.4
29	2.5	59	6.9	26.0	--	6.7	85	<2.0	--	13	2.4
29	--	--	--	--	--	--	--	--	K6	--	--
June 11	--	55	6.9	26.5	--	7.2	92	--	K8	--	--
12	.50	54	7.0	27.5	.90	7.5	97	<2.0	--	11	1.6
12	2.5	53	6.9	27.0	--	6.9	89	<2.0	--	11	1.7
25	--	51	6.7	31.0	--	6.4	--	--	K7	--	--
26	.50	51	6.7	31.0	.60	7.0	96	<2.0	--	10	1.5
26	2.6	53	6.3	29.5	--	4.1	55	<2.0	--	11	1.7
July 10	--	53	7.1	30.0	--	7.2	97	--	K15	--	--
11	.50	53	6.9	29.5	.60	7.1	96	<2.0	--	10	1.6
11	2.5	52	6.7	29.5	--	6.6	89	<2.0	--	9	1.3
24	--	51	6.6	30.5	--	6.3	86	--	K8	--	--
25	.50	50	6.7	30.5	1.30	6.6	90	<2.0	--	9	.93
25	2.6	50	6.7	30.5	--	6.6	90	<2.0	--	9	.93
Aug. 07	--	50	6.8	29.5	--	6.9	92	--	K5	--	--
08	.50	51	6.9	30.0	.90	7.2	97	<2.0	--	9	1.0
08	2.4	50	6.7	29.5	--	6.4	86	<2.0	--	9	.94
Oct. 22	--	57	6.9	18.0	--	8.0	87	--	21	--	--
23	.50	57	7.0	19.0	1.60	8.0	89	<2.0	--	--	--
23	2.3	56	7.0	18.5	--	8.0	89	<2.0	--	--	--
Nov. 19	--	58	7.1	12.5	--	9.3	89	--	K2	--	--
20	.50	60	7.1	13.5	2.40	9.0	89	<2.0	--	--	--
20	2.8	60	7.1	12.5	--	9.2	89	<2.0	--	--	--
Dec. 17	--	59	7.1	10.0	--	9.8	90	--	K8	--	--
18	.50	60	7.0	10.5	1.50	9.9	90	<2.0	--	--	--
18	2.5	60	7.0	10.0	--	10.0	91	<2.0	--	--	--
1997											
Jan. 29	--	65	7.1	7.5	--	10.8	--	--	K8	--	--
30	0.50	63	6.9	7.5	1.40	--	--	<2.0	--	16	3.6
30	2.4	65	7.0	7.5	--	--	--	<2.0	--	17	3.8
Feb. 26	--	64	7.1	11.5	--	10.2	95	--	K3	--	--
27	.50	61	6.9	11.0	1.30	9.9	92	<2.0	--	15	3.1
27	2.5	62	6.9	11.0	--	9.9	92	<2.0	--	15	3.1
Mar. 19	--	61	6.9	14.5	--	9.0	--	--	<1	--	--
20	.50	60	6.8	14.0	1.20	8.9	89	<2.0	--	14	2.9
20	2.7	58	6.8	13.5	--	9.0	89	<2.0	--	13	2.8
Apr. 30	--	60	6.8	17.0	--	8.0	85	--	48	--	--
May 01	.50	60	6.8	18.0	.50	8.4	92	<2.0	--	16	3.2
01	2.5	60	6.6	17.0	--	7.5	80	<2.0	--	16	3.2
20	--	52	6.7	23.0	--	7.4	89	--	<1	--	--
21	.50	55	6.8	23.0	.80	7.5	89	<2.0	--	12	2.0
21	2.5	55	6.7	22.5	--	7.2	86	<2.0	--	12	2.2
June 18	.50	58	7.0	25.5	1.00	8.1	102	<2.0	--	12	1.7
18	2.4	57	6.7	24.5	--	7.1	87	<2.0	--	11	1.9
July 30	--	50	6.6	30.0	--	5.9	80	--	K4	--	--
31	.50	50	6.5	28.5	.70	5.7	74	<2.0	--	10	1.5
31	2.6	50	6.5	28.5	--	5.6	73	<2.0	--	10	1.6
Sept. 09	--	50	6.8	27.0	--	7.1	91	--	K4	--	--
10	.50	49	6.7	27.0	1.00	6.6	86	<2.0	--	9	1.1
10	2.5	49	6.7	27.0	--	6.7	86	<2.0	--	9	1.1

Table 49. Water-quality field measurements and sample analyses at Mountain Island Lake site 11, May 1996 through September 1997—Continued

GAR CREEK NEAR SHUFFLETOWN, NC (MTN11)

[Site 11 is at latitude 35°20'55", longitude 80°55'30", Mecklenburg County, U.S. Geological Survey downstream order number 0214266250; $\mu\text{S}/\text{cm}$, microsiemens per centimeters; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated]

Date	Dissolved magnesium (mg/L as Mg) (00925)	Alkalinity (mg/L as CaCO ₃) (90410)	Total suspended solids (mg/L) (00530)	Volatile suspended solids (mg/L) (00535)	Total dissolved solids (mg/L) (70300)	Dissolved nitrite + nitrate (mg/L as N) (00631)	Dissolved ammonia (mg/L as N) (00608)	Total ammonia + organic nitrogen (mg/L as N) (00625)	Dissolved ammonia + organic nitrogen (mg/L as N) (00623)	Total nitrogen (mg/L as N) (00600)	Total organic nitrogen (mg/L as N) (00605)
1996											
May 29	1.7	16	3	1	42	0.079	0.015	0.30	<0.20	0.38	0.28
29	1.7	16	6	<1	44	.082	.010	.20	<.20	.28	.19
29	--	--	--	--	--	--	--	--	--	--	--
June 11	--	--	--	--	--	--	--	--	--	--	--
12	1.7	13	3	2	28	.055	.006	.30	<.20	.35	.29
12	1.7	13	2	1	44	.066	.008	.30	<.20	.37	.29
25	--	--	--	--	--	--	--	--	--	--	--
26	1.6	12	3	4	46	.038	.008	.30	<.20	.34	.29
26	1.6	12	8	5	38	.072	.040	.20	<.20	.27	.16
July 10	--	--	--	--	--	--	--	--	--	--	--
11	1.5	13	5	6	42	<.005	<.002	.30	<.20	--	--
11	1.5	13	10	6	42	.010	.012	.30	<.20	.31	.29
24	--	--	--	--	--	--	--	--	--	--	--
25	1.5	11	7	7	48	.020	.049	.20	<.20	.22	.15
25	1.5	12	13	10	42	.013	.035	.30	<.20	.31	.26
Aug. 07	--	--	--	--	--	--	--	--	--	--	--
08	1.5	12	9	5	46	.021	.007	.30	<.20	.32	.29
08	1.5	12	7	4	34	.034	.020	.20	<.20	.23	.18
Oct. 22	--	--	--	--	--	--	--	--	--	--	--
23	--	14	5	4	32	.075	.028	<.20	<.20	--	--
23	--	13	6	3	36	.077	.028	.20	<.20	.28	.17
Nov. 19	--	--	--	--	--	--	--	--	--	--	--
20	--	15	4	5	48	.120	.015	<.20	<.20	--	--
20	--	15	4	4	54	.110	.010	<.20	<.20	--	--
Dec. 17	--	--	--	--	--	--	--	--	--	--	--
18	--	16	5	1	30	.140	.018	<.20	<.20	--	--
18	--	17	5	<1	34	.140	.014	<.20	<.20	--	--
1997											
Jan. 29	--	--	--	--	--	--	--	--	--	--	--
30	1.7	18	3	3	42	0.170	0.019	<0.20	<0.20	--	--
30	1.8	18	<1	1	42	.170	.015	<.20	<.20	--	--
Feb. 26	--	--	--	--	--	--	--	--	--	--	--
27	1.7	17	10	<1	42	.180	.021	<.20	<.20	--	--
27	1.7	17	5	<1	44	.180	.018	<.20	<.20	--	--
Mar. 19	--	--	--	--	--	--	--	--	--	--	--
20	1.6	16	7	8	44	.200	.019	<.20	<.20	--	--
20	1.5	16	6	7	38	.210	.022	<.20	<.20	--	--
Apr. 30	--	--	--	--	--	--	--	--	--	--	--
May 01	2.0	17	--	--	48	.169	.005	.31	<.20	0.48	0.31
01	1.9	17	13	4	47	.175	.022	.20	<.20	.38	.18
20	--	--	--	--	--	--	--	--	--	--	--
21	1.7	14	8	<1	49	.207	.012	<.20	<.20	--	--
21	1.7	14	2	<1	55	.203	.016	<.20	<.20	--	--
June 18	1.8	14	8	2	39	.126	.002	<.20	<.20	--	--
18	1.6	13	6	2	37	.174	.016	<.20	<.20	--	--
July 30	--	--	--	--	--	--	--	--	--	--	--
31	1.4	12	6	6	38	.083	.072	.24	<.20	.33	.17
31	1.5	13	12	13	39	.078	.075	.30	<.20	.38	.23
Sept. 09	--	--	--	--	--	--	--	--	--	--	--
10	1.5	12	6	7	43	.019	.014	.27	<.20	.29	.25
10	1.4	12	8	7	42	.018	.011	<.20	<.20	--	--

Table 49. Water-quality field measurements and sample analyses at Mountain Island Lake site 11, May 1996 through September 1997—Continued

GAR CREEK NEAR SHUFFLETOWN, NC (MTN11)

[Site 11 is at latitude 35°20'55", longitude 80°55'30", Mecklenburg County, U.S. Geological Survey downstream order number 0214266250; μ S/cm, microsiemens per centimeters; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated]

Date	Total phosphorus (mg/L as P) (00665)	Dissolved phosphorus (mg/L as P) (00666)	Dissolved orthophosphorus (mg/L as P) (00671)	Total iron (μ g/L as Fe) (01045)	Total organic carbon (mg/L as C) (00680)	Chlorophyll a (μ g/L) (70953)	Chlorophyll b (μ g/L) (70954)	Total cyanide (mg/L as Cn) (00720)	Total arsenic (μ g/L as As) (01002)	Total beryllium (μ g/L as Be) (01012)
1996										
May 29	0.021	0.005	<0.001	190	2.8	0.700	0.100	--	--	--
29	.020	.003	<.001	210	3.1	--	--	--	--	--
29	--	--	--	--	--	--	--	--	--	--
June 11	--	--	--	--	--	--	--	--	--	--
12	.019	.004	<.001	150	3.8	.200	.100	<0.010	<1	<10
12	.018	.005	<.001	190	3.2	--	--	<.010	<1	<10
25	--	--	--	--	--	--	--	--	--	--
26	.029	.006	.001	190	3.8	2.40	.300	--	--	--
26	.029	.007	<.001	270	3.6	--	--	--	--	--
July 10	--	--	--	--	--	--	--	--	--	--
11	.022	.009	<.001	200	4.1	3.20	.400	--	--	--
11	.020	.003	.001	230	3.5	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--
25	.015	.016	--	120	2.9	2.90	.300	--	--	--
25	.018	.005	<.001	290	2.8	--	--	--	--	--
Aug. 07	--	--	--	--	--	--	--	--	--	--
08	.022	.004	<.001	170	4.1	2.90	<100	<.010	<1	<10
08	.016	.003	<.001	170	3.0	--	--	<.010	<1	<10
Oct. 22	--	--	--	--	--	--	--	--	--	--
23	.009	.003	<.001	--	--	E.200	<100	--	--	--
23	.009	.002	<.001	--	--	--	--	--	--	--
Nov. 19	--	--	--	--	--	--	--	--	--	--
20	.007	.002	<.001	--	--	E.600	<100	--	--	--
20	.008	.002	<.001	--	--	--	--	--	--	--
Dec. 17	--	--	--	--	--	--	--	--	--	--
18	.013	.003	<.001	--	--	.800	.200	--	--	--
18	.012	.003	<.001	--	--	--	--	--	--	--
1997										
Jan. 29	--	--	--	--	--	--	--	--	--	--
30	0.011	0.003	<0.001	240	2.7	E0.100	<0.100	--	--	--
30	.013	.002	<.001	270	2.6	--	--	--	--	--
Feb. 26	--	--	--	--	--	--	--	--	--	--
27	.014	.005	<.001	250	2.6	1.30	<100	--	--	--
27	.013	.003	<.001	260	2.1	--	--	--	--	--
Mar. 19	--	--	--	--	--	--	--	--	--	--
20	.016	.002	<.001	370	2.9	E.590	<100	<0.010	<1	<10
20	.013	.003	<.001	280	2.5	--	--	<.010	<1	<10
Apr. 30	--	--	--	--	--	--	--	--	--	--
May 01	.026	.003	.002	430	4.6	E1.19	<100	--	--	--
01	.034	.004	.002	500	4.3	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--	--
21	.012	.003	.002	290	2.6	.850	<100	--	--	--
21	.021	.003	.002	480	2.6	--	--	--	--	--
June 18	.012	.002	.001	230	2.7	1.30	<100	--	--	--
18	.011	.002	.002	240	2.3	--	--	--	--	--
July 30	--	--	--	--	--	--	--	--	--	--
31	.026	.003	.001	340	2.9	E.680	<100	--	--	--
31	.024	.004	.001	430	2.8	--	--	--	--	--
Sept. 09	--	--	--	--	--	--	--	--	--	--
10	.019	.004	<.001	230	2.3	.800	<100	--	--	--
10	.019	.003	<.001	240	2.3	--	--	--	--	--

Table 49. Water-quality field measurements and sample analyses at Mountain Island Lake site 11, May 1996 through September 1997—Continued

GAR CREEK NEAR SHUFFLETOWN, NC (MTN11)

[Site 11 is at latitude 35°20'55", longitude 80°55'30", Mecklenburg County, U.S. Geological Survey downstream order number 0214266250; $\mu\text{S}/\text{cm}$, microsiemens per centimeters; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated]

Date	Total cadmium ($\mu\text{g}/\text{L}$ as Cd) (01027)	Total chromium ($\mu\text{g}/\text{L}$ as Cr) (01034)	Total copper ($\mu\text{g}/\text{L}$ as Cu) (01042)	Total lead ($\mu\text{g}/\text{L}$ as Pb) (01051)	Total nickel ($\mu\text{g}/\text{L}$ as Ni) (01067)	Total silver ($\mu\text{g}/\text{L}$ as Ag) (01077)	Total zinc ($\mu\text{g}/\text{L}$ as Zn) (01092)	Total antimony ($\mu\text{g}/\text{L}$ as Sb) (01097)	Total selenium ($\mu\text{g}/\text{L}$ as Se) (01147)	Total mercury ($\mu\text{g}/\text{L}$ as Hg) (71900)
1996										
May 29	--	--	--	--	--	--	--	--	--	--
29	--	--	--	--	--	--	--	--	--	--
29	--	--	--	--	--	--	--	--	--	--
June 11	--	--	--	--	--	--	--	--	--	--
12	<1	<1	2	<1	<1	<1	<10	<1	<1	<0.10
12	<1	<1	2	<1	<1	<1	<10	<1	<1	<0.10
25	--	--	--	--	--	--	--	--	--	--
26	--	--	--	--	--	--	--	--	--	--
26	--	--	--	--	--	--	--	--	--	--
July 10	--	--	--	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--
25	--	--	--	--	--	--	--	--	--	--
25	--	--	--	--	--	--	--	--	--	--
Aug. 07	--	--	--	--	--	--	--	--	--	--
08	<1	<1	2	<1	<1	<1	<10	<1	<1	<.10
08	<1	<1	<1	<1	<1	<1	<10	<1	<1	<.10
Oct. 22	--	--	--	--	--	--	--	--	--	--
23	--	--	--	--	--	--	--	--	--	--
23	--	--	--	--	--	--	--	--	--	--
Nov. 19	--	--	--	--	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--	--
Dec. 17	--	--	--	--	--	--	--	--	--	--
18	--	--	--	--	--	--	--	--	--	--
18	--	--	--	--	--	--	--	--	--	--
1997										
Jan. 29	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
Feb. 26	--	--	--	--	--	--	--	--	--	--
27	--	--	--	--	--	--	--	--	--	--
27	--	--	--	--	--	--	--	--	--	--
Mar. 19	--	--	--	--	--	--	--	--	--	--
20	<1	<1	2	<1	<1	<1	<10	<1	<1	<0.10
20	<1	<1	2	<1	<1	<1	<10	<1	<1	<.10
Apr. 30	--	--	--	--	--	--	--	--	--	--
May 01	--	--	--	--	--	--	--	--	--	--
01	--	--	--	--	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--	--
21	--	--	--	--	--	--	--	--	--	--
21	--	--	--	--	--	--	--	--	--	--
June 18	--	--	--	--	--	--	--	--	--	--
18	--	--	--	--	--	--	--	--	--	--
July 30	--	--	--	--	--	--	--	--	--	--
31	--	--	--	--	--	--	--	--	--	--
31	--	--	--	--	--	--	--	--	--	--
Sept. 09	--	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--	--

Table 50. Water-quality field measurements and sample analyses at Mountain Island Lake site 13, May 1996 through September 1997

CATAWBA RIVER AT INLET NEAR SHUFFLETOWN, NC (MTN13)

[Site 13 is at latitude 35°20'35", longitude 80°57'13", Mecklenburg County, U.S. Geological Survey downstream order number 0214267000; μS/cm, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated]

Date	Sampling depth (m) (00098)	Specific conductance (μS/cm) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Secchi disk transparency (m) (00078)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	Biochemical oxygen demand, 5-day (mg/L) (00310)	Fecal coliform bacteria (colonies/100 mL) (31616)	Total hardness (mg/L as CaCO ₃) (00900)	Dissolved calcium (mg/L as Ca) (00915)
1996											
May 29	0.50	58	7.1	27.5	1.50	7.3	96	<2.0	K7	12	2.7
29	5.0	59	6.7	25.5	--	5.4	68	<2.0	--	13	2.9
June 11	--	57	7.2	27.0	--	7.6	98	--	<1	--	--
12	.50	57	7.2	29.0	1.90	7.2	96	<2.0	--	12	2.6
12	5.0	59	6.6	25.0	--	5.0	62	<2.0	--	13	2.8
25	--	56	7.0	32.0	--	6.6	--	--	K2	--	--
26	.50	56	6.9	31.0	1.30	6.9	95	<2.0	--	13	2.7
26	5.0	56	6.4	28.5	--	4.3	57	<2.0	--	13	2.7
July 10	--	59	7.6	30.0	--	7.6	103	--	K7	--	--
11	.50	59	7.7	29.5	.80	7.8	105	<2.0	--	13	3.0
11	5.2	60	6.4	28.5	--	3.6	48	<2.0	--	13	2.9
24	--	57	6.8	31.0	--	6.6	91	--	K6	--	--
25	.50	57	7.1	31.5	2.40	7.1	98	<2.0	--	11	2.4
25	5.4	58	6.4	30.0	--	4.2	56	<2.0	--	12	2.3
Aug. 07	--	57	6.9	31.0	--	6.9	95	--	K4	--	--
08	.50	57	7.2	31.5	2.20	6.5	90	<2.0	--	11	2.3
08	5.0	56	6.4	29.5	--	3.7	50	<2.0	--	11	2.0
Oct. 22	--	61	7.0	20.5	--	7.9	90	--	K90	--	--
23	.50	60	7.0	20.0	1.90	7.6	86	<2.0	--	--	--
23	5.0	60	6.9	20.0	--	7.5	85	<2.0	--	--	--
Nov. 19	--	59	7.2	15.5	--	9.0	93	--	K6	--	--
20	.50	60	7.2	15.5	2.60	8.9	92	<2.0	--	--	--
20	5.3	60	6.9	14.0	--	8.2	82	<2.0	--	--	--
Dec. 17	--	58	7.1	12.0	--	9.2	88	--	K2	--	--
18	.50	58	7.0	12.0	2.20	9.4	89	<2.0	--	--	--
18	5.2	58	6.9	12.0	--	9.3	88	<2.0	--	--	--
1997											
Jan. 29	--	60	7.1	9.5	--	10.1	89	--	K5	--	--
30	0.50	59	7.0	8.5	2.10	--	--	<2.0	--	13	2.9
30	5.1	59	7.0	9.0	--	--	--	<2.0	--	13	2.8
Feb. 26	--	60	7.0	11.0	--	9.9	91	--	K8	--	--
27	.50	59	6.9	11.0	1.80	9.9	92	<2.0	--	13	2.8
27	5.5	56	6.9	9.5	--	10.0	90	<2.0	--	12	2.5
Mar. 19	--	58	7.0	14.0	--	9.4	--	--	K5	--	--
20	.50	58	7.0	14.0	2.20	9.6	96	<2.0	--	13	2.9
20	5.5	57	6.8	12.5	--	9.2	89	<2.0	--	12	2.8
Apr. 30	--	57	6.9	18.0	--	8.6	93	--	K2	--	--
May 01	.50	56	6.8	19.5	.70	8.4	94	<2.0	--	12	2.7
01	5.0	57	6.6	16.5	--	7.5	80	<2.0	--	13	2.9
20	--	54	6.9	22.5	--	7.9	94	--	K5	--	--
21	.50	54	6.9	23.0	1.60	7.8	93	<2.0	--	12	2.8
21	5.0	55	6.7	20.5	--	7.1	81	<2.0	--	12	2.8
June 18	.50	59	6.9	25.5	1.40	7.6	95	<2.0	--	12	2.6
18	4.8	59	6.6	23.0	--	6.0	71	<2.0	--	13	2.7
July 30	--	53	6.7	30.5	--	6.5	88	--	K1	--	--
31	.50	53	6.5	29.5	1.50	5.4	72	<2.0	--	11	2.2
31	5.4	53	6.5	28.5	--	5.6	73	<2.0	--	11	2.2
Sept. 09	--	54	6.9	28.0	--	7.1	93	--	K2	--	--
10	.50	54	6.9	28.5	2.10	6.7	89	<2.0	--	11	2.3
10	4.8	53	6.7	27.5	--	6.0	78	<2.0	--	11	2.0

Table 50. Water-quality field measurements and sample analyses at Mountain Island Lake site 13, May 1996 through September 1997—Continued

CATAWBA RIVER AT INLET NEAR SHUFFLETOWN, NC (MTN13)

[Site 13 is at latitude 35°20'35", longitude 80°57'13", Mecklenburg County, U.S. Geological Survey downstream order number 0214267000; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated]

Date	Dissolved magnesium (mg/L as Mg) (00925)	Alkalinity (mg/L as CaCO ₃) (90410)	Total suspended solids (mg/L) (00530)	Volatile suspended solids (mg/L) (00535)	Total dissolved solids (mg/L) (70300)	Dissolved nitrite + nitrate (mg/L as N) (00631)	Dissolved ammonia (mg/L as N) (00608)	Total ammonia + organic nitrogen (mg/L as N) (00625)	Dissolved ammonia + organic nitrogen (mg/L as N) (00623)	Total nitrogen (mg/L as N) (00600)	Total organic nitrogen (mg/L as N) (00605)
1996											
May 29	1.3	15	1	3	44	0.210	0.027	<0.20	<0.20	--	--
29	1.4	16	4	2	44	.200	.068	.20	<.20	0.40	0.13
June 11	--	--	--	--	--	--	--	--	--	--	--
12	1.4	14	<1	<1	44	.170	.025	.20	<.20	.37	.17
12	1.4	14	9	<1	30	.230	.054	.30	.20	.53	.25
25	--	--	--	--	--	--	--	--	--	--	--
26	1.4	14	3	3	34	.150	.017	<.20	<.20	--	--
26	1.4	14	8	4	30	.170	.057	.20	<.20	.37	.14
July 10	--	--	--	--	--	--	--	--	--	--	--
11	1.4	16	3	2	42	.051	.031	.20	<.20	.25	.17
11	1.4	15	4	3	38	.090	.075	.20	<.20	.29	.13
24	--	--	--	--	--	--	--	--	--	--	--
25	1.3	14	5	4	44	.060	.018	<.20	<.20	--	--
25	1.4	14	7	6	44	.066	.069	.20	<.20	.27	.13
Aug. 07	--	--	--	--	--	--	--	--	--	--	--
08	1.3	14	4	2	32	.087	.004	<.20	<.20	--	--
08	1.4	14	13	7	46	.089	.063	.20	.20	.29	.14
Oct. 22	--	--	--	--	--	--	--	--	--	--	--
23	--	15	6	2	36	.078	.037	<.20	<.20	--	--
23	--	15	7	3	52	.082	.046	<.20	<.20	--	--
Nov. 19	--	--	--	--	--	--	--	--	--	--	--
20	--	15	1	4	44	.130	.025	<.20	<.20	--	--
20	--	15	2	3	40	.130	.032	<.20	<.20	--	--
Dec. 17	--	--	--	--	--	--	--	--	--	--	--
18	--	15	5	1	28	.130	.044	<.20	<.20	--	--
18	--	15	3	<1	34	.140	.035	<.20	<.20	--	--
1997											
Jan. 29	--	--	--	--	--	--	--	--	--	--	--
30	1.4	15	<1	3	40	0.160	0.018	<0.20	<0.20	--	--
30	1.4	15	<1	3	36	.180	.041	<.20	<.20	--	--
Feb. 26	--	--	--	--	--	--	--	--	--	--	--
27	1.4	17	7	<1	42	.210	.026	<.20	<.20	--	--
27	1.3	15	11	<1	40	.190	.032	<.20	<.20	--	--
Mar. 19	--	--	--	--	--	--	--	--	--	--	--
20	1.3	16	9	7	38	.230	.013	<.20	<.20	--	--
20	1.3	15	9	7	38	.230	.022	<.20	<.20	--	--
Apr. 30	--	--	--	--	--	--	--	--	--	--	--
May 01	1.3	14	--	--	42	.248	.016	<.20	<.20	--	--
01	1.4	15	4	1	42	.249	.035	<.20	<.20	--	--
20	--	--	--	--	--	--	--	--	--	--	--
21	1.3	14	8	<1	41	.243	.012	.23	<.20	0.47	0.22
21	1.3	14	--	--	32	.253	.018	<.20	<.20	--	--
June 18	1.4	15	4	<1	36	.213	.027	<.20	<.20	--	--
18	1.4	14	5	1	40	.215	.050	<.20	<.20	--	--
July 30	--	--	--	--	--	--	--	--	--	--	--
31	1.3	14	--	--	29	.137	.045	<.20	<.20	--	--
31	1.3	14	--	--	37	.131	.046	<.20	<.20	--	--
Sept. 09	--	--	--	--	--	--	--	--	--	--	--
10	1.4	15	--	--	42	.047	.005	<.20	<.20	--	--
10	1.4	14	<1	3	35	.043	.025	<.20	<.20	--	--

Table 50. Water-quality field measurements and sample analyses at Mountain Island Lake site 13, May 1996 through September 1997—Continued

CATAWBA RIVER AT INLET NEAR SHUFFLETOWN, NC (MTN13)

[Site 13 is at latitude 35°20'35", longitude 80°57'13", Mecklenburg County, U.S. Geological Survey downstream order number 0214267000; μ S/cm, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated]

Date	Total phosphorus (mg/L as P) (00665)	Dissolved phosphorus (mg/L as P) (00666)	Dissolved orthophosphorus (mg/L as P) (00671)	Total iron (μ g/L as Fe) (01045)	Total organic carbon (mg/L as C) (00680)	Chlorophyll <i>a</i> (μ g/L) (70953)	Chlorophyll <i>b</i> (μ g/L) (70954)	Total cyanide (mg/L as Cn) (00720)	Total arsenic (μ g/L as As) (01002)	Total beryllium (μ g/L as Be) (01012)
	1996									
May 29	0.011	0.002	<0.001	100	2.2	<0.100	<0.100	--	--	--
29	.017	.004	<.001	290	2.2	--	--	--	--	--
June 11	--	--	--	--	--	--	--	--	--	--
12	.015	.004	<.001	80	1.9	.100	<.100	<0.010	<1	<10
12	.023	.008	<.001	330	2.5	--	--	<0.010	<1	<10
25	--	--	--	--	--	--	--	--	--	--
26	.014	.006	.001	120	2.4	.800	<.100	--	--	--
26	.022	.005	.001	240	2.2	--	--	--	--	--
July 10	--	--	--	--	--	--	--	--	--	--
11	.014	.003	<.001	100	3.5	3.50	.600	--	--	--
11	.015	.002	<.001	190	2.4	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--
25	.008	.014	.003	50	2.3	1.40	<.100	--	--	--
25	.010	.003	<.001	110	2.0	--	--	--	--	--
Aug. 07	--	--	--	--	--	--	--	--	--	--
08	.009	.002	<.001	40	1.9	.600	<.100	<0.010	<1	<10
08	.010	.002	<.001	150	.80	--	--	<0.010	<1	<10
Oct. 22	--	--	--	--	--	--	--	--	--	--
23	.009	.002	<.001	--	--	<.100	<.100	--	--	--
23	.008	.003	<.001	--	--	--	--	--	--	--
Nov. 19	--	--	--	--	--	--	--	--	--	--
20	.006	.002	<.001	--	--	E.300	<.100	--	--	--
20	.005	.002	<.001	--	--	--	--	--	--	--
Dec. 17	--	--	--	--	--	--	--	--	--	--
18	.007	.002	<.001	--	--	.600	<.100	--	--	--
18	.011	.001	<.001	--	--	--	--	--	--	--
1997										
Jan. 29	--	--	--	--	--	--	--	--	--	--
30	0.005	<0.001	<0.001	110	1.9	<0.100	<0.100	--	--	--
30	.005	<.001	<.001	120	2.1	--	--	--	--	--
Feb. 26	--	--	--	--	--	--	--	--	--	--
27	.006	.001	<.001	130	2.0	1.40	<.100	--	--	--
27	.004	.002	<.001	110	1.7	--	--	--	--	--
Mar. 19	--	--	--	--	--	--	--	--	--	--
20	.007	.001	<.001	140	1.9	E.430	<.100	<0.010	<1	<10
20	.008	.001	<.001	140	1.9	--	--	<0.010	<1	<10
Apr. 30	--	--	--	--	--	--	--	--	--	--
May 01	.015	<.001	.002	170	2.0	E.670	<.100	--	--	--
01	.015	<.001	.003	240	2.7	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--	--
21	.007	.001	.001	90	2.3	E.560	<.100	--	--	--
21	.006	.001	.001	110	1.8	--	--	--	--	--
June 18	.007	.002	.001	130	1.9	<.100	<.100	--	--	--
18	.010	.002	.002	230	1.9	--	--	--	--	--
July 30	--	--	--	--	--	--	--	--	--	--
31	.009	.001	<.001	120	2.2	E.700	<.100	--	--	--
31	.010	.001	.001	160	2.2	--	--	--	--	--
Sept. 09	--	--	--	--	--	--	--	--	--	--
10	.083	.002	<.001	60	1.7	E.550	<.100	--	--	--
10	.009	.001	<.001	110	1.5	--	--	--	--	--

Table 50. Water-quality field measurements and sample analyses at Mountain Island Lake site 13, May 1996 through September 1997—Continued

CATAWBA RIVER AT INLET NEAR SHUFFLETOWN, NC (MTN13)

[Site 13 is at latitude 35°20'35", longitude 80°57'13", Mecklenburg County, U.S. Geological Survey downstream order number 0214267000; $\mu\text{S/cm}$, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated]

Date	Total cadmium ($\mu\text{g/L}$ as Cd) (01027)	Total chromium ($\mu\text{g/L}$ as Cr) (01034)	Total copper ($\mu\text{g/L}$ as Cu) (01042)	Total lead ($\mu\text{g/L}$ as Pb) (01051)	Total nickel ($\mu\text{g/L}$ as Ni) (01067)	Total silver ($\mu\text{g/L}$ as Ag) (01077)	Total zinc ($\mu\text{g/L}$ as Zn) (01092)	Total antimony ($\mu\text{g/L}$ as Sb) (01097)	Total selenium ($\mu\text{g/L}$ as Se) (01147)	Total mercury ($\mu\text{g/L}$ as Hg) (71900)
1996										
May 29	--	--	--	--	--	--	--	--	--	--
29	--	--	--	--	--	--	--	--	--	--
June 11	--	--	--	--	--	--	--	--	--	--
12	<1	<1	2	<1	<1	<1	<10	<1	<1	<0.10
12	<1	<1	2	<1	<1	<1	<10	<1	<1	<.10
25	--	--	--	--	--	--	--	--	--	--
26	--	--	--	--	--	--	--	--	--	--
26	--	--	--	--	--	--	--	--	--	--
July 10	--	--	--	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--
25	--	--	--	--	--	--	--	--	--	--
25	--	--	--	--	--	--	--	--	--	--
Aug. 07	--	--	--	--	--	--	--	--	--	--
08	<1	<1	4	<1	<1	<1	<10	<1	<1	<.10
08	<1	<1	2	<1	<1	<1	<10	<1	<1	<.10
Oct. 22	--	--	--	--	--	--	--	--	--	--
23	--	--	--	--	--	--	--	--	--	--
23	--	--	--	--	--	--	--	--	--	--
Nov. 19	--	--	--	--	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--	--
Dec. 17	--	--	--	--	--	--	--	--	--	--
18	--	--	--	--	--	--	--	--	--	--
18	--	--	--	--	--	--	--	--	--	--
1997										
Jan. 29	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
Feb. 26	--	--	--	--	--	--	--	--	--	--
27	--	--	--	--	--	--	--	--	--	--
27	--	--	--	--	--	--	--	--	--	--
Mar. 19	--	--	--	--	--	--	--	--	--	--
20	<1	<1	1	<1	<1	<1	<10	<1	<1	<0.10
20	<1	<1	1	<1	<1	<1	<10	<1	<1	<.10
Apr. 30	--	--	--	--	--	--	--	--	--	--
May 01	--	--	--	--	--	--	--	--	--	--
01	--	--	--	--	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--	--
21	--	--	--	--	--	--	--	--	--	--
21	--	--	--	--	--	--	--	--	--	--
June 18	--	--	--	--	--	--	--	--	--	--
18	--	--	--	--	--	--	--	--	--	--
July 30	--	--	--	--	--	--	--	--	--	--
31	--	--	--	--	--	--	--	--	--	--
31	--	--	--	--	--	--	--	--	--	--
Sept. 09	--	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--	--

Table 51. Water-quality field measurements and sample analyses at Mountain Island Lake site 14, May 1996 through September 1997

CATAWBA RIVER AT NC 16 NEAR SHUFFLETOWN, NC (MTN14)

[Site 14 is at latitude 35°21'01", longitude 80°58'21", Mecklenburg County, U.S. Geological Survey downstream order number 0214267200; ft, foot; μ S/cm, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; mL, milliliter; <, less than; --, missing data; K, results based on non-ideal colony count; E, estimated]

Date	Water level (ft above sea level) (00065)	Sampling depth (m) (00098)	Specific conduc- tance (μ S/cm) (00095)	pH (standard units) (00400)	Tempera- ture of water (°C) (00010)	Secchi disk trans- parency (m) (00078)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	Biochemical oxygen demand, 5-day (mg/L) (00310)	Fecal coliform bacteria (colonies/ 100 mL) (31616)	Total hardness (mg/L as CaCO ₃) (00900)
1996											
May 30	643.73	0.50	58	7.0	26.0	1.70	7.5	95	<2.0	K8	12
30	643.69	9.9	60	6.4	22.5	--	4.2	49	<2.0	--	14
June 11	643.60	--	57	7.3	27.0	--	7.9	102	--	20	--
12	643.59	.50	57	7.2	28.0	1.40	7.6	99	<2.0	--	12
12	643.59	10.8	61	6.5	23.5	--	3.2	38	<2.0	--	13
25	643.80	--	58	7.3	32.5	--	7.1	101	--	K3	--
26	643.80	.50	56	7.1	32.5	1.00	7.5	106	<2.0	--	12
26	643.73	10.2	56	6.6	27.5	--	5.9	77	<2.0	--	12
July 10	644.02	--	58	6.9	30.0	--	6.7	91	--	58	--
11	644.02	.50	58	7.1	31.5	1.35	7.2	101	<2.0	--	12
11	644.28	10.4	58	6.4	27.5	--	4.8	63	<2.0	--	12
24	644.34	--	58	6.8	31.5	--	6.7	93	--	K7	--
25	644.59	.50	58	7.3	32.0	2.60	7.4	104	<2.0	--	12
25	644.61	11.2	60	6.3	28.0	--	2.5	33	<2.0	--	12
Aug. 07	644.02	--	59	6.1	32.5	--	6.6	93	--	K17	--
08	643.53	.50	58	7.0	33.5	2.00	7.0	100	<2.0	--	12
08	643.51	10.0	57	6.4	28.5	--	4.6	61	<2.0	--	11
Oct. 22	643.24	--	62	7.1	20.5	--	8.0	91	--	<1	--
23	643.27	.50	61	7.0	20.5	1.90	7.8	90	<2.0	--	--
23	643.31	10.5	62	6.8	18.5	--	7.3	80	<2.0	--	--
Nov. 19	644.15	--	60	7.2	15.0	--	9.0	91	--	K1	--
20	644.49	.50	60	7.2	15.5	2.40	9.0	92	<2.0	--	--
20	644.46	10.2	61	6.9	13.5	--	8.5	84	<2.0	--	--
Dec. 17	644.00	--	60	7.1	13.0	--	9.3	91	--	21	--
18	644.56	.50	59	7.0	17.0	1.50	9.4	100	<2.0	--	--
18	644.59	10.8	57	6.9	12.0	--	9.3	89	<2.0	--	--
1997											
Jan. 29	643.34	--	60	7.1	11.0	--	10.3	94	--	K7	--
30	644.21	0.50	59	7.1	10.0	1.70	--	--	<2.0	--	12
30	644.25	10.9	60	7.1	9.0	--	--	--	<2.0	--	13
Feb. 26	644.21	--	58	7.0	10.0	--	10.1	91	--	K4	--
27	645.01	.50	56	6.9	9.5	1.80	10.0	90	<2.0	--	12
27	644.94	10.7	57	6.9	9.5	--	10.0	90	<2.0	--	12
Mar. 19	643.28	--	58	7.0	14.0	--	9.4	93	--	K4	--
20	645.65	.50	57	6.9	14.5	1.50	9.2	94	<2.0	--	13
20	645.62	11.0	56	6.8	12.5	--	9.4	90	<2.0	--	13
Apr. 30	643.25	--	56	6.9	19.5	--	8.4	94	--	K97	--
May 01	644.17	.50	56	6.9	20.5	.40	8.5	97	<2.0	--	13
01	644.22	10.0	56	6.5	16.5	--	7.4	78	<2.0	--	14
20	643.33	--	54	7.0	23.0	--	8.1	97	--	K6	--
21	643.32	.50	54	6.9	24.0	1.40	8.1	98	<2.0	--	12
21	643.28	10.0	53	6.7	19.5	--	7.4	83	<2.0	--	12
June 18	643.48	.50	58	6.8	28.0	1.20	7.1	94	<2.0	--	12
18	643.58	10.5	56	6.6	22.0	--	6.7	78	<2.0	--	12
July 30	644.10	--	54	6.7	31.5	--	6.2	86	--	K11	--
31	644.04	.50	54	6.6	30.0	1.60	6.0	80	<2.0	--	11
31	644.02	10.5	53	6.3	29.0	--	4.4	58	<2.0	--	11
Sept. 09	644.04	--	56	6.7	29.5	--	6.3	85	--	K9	--
10	643.91	.50	55	6.8	31.0	2.30	6.4	89	<2.0	--	12
10	643.89	10.5	55	6.6	26.5	--	6.0	77	<2.0	--	11

Table 51. Water-quality field measurements and sample analyses at Mountain Island Lake site 14, May 1996 through September 1997—Continued

CATAWBA RIVER AT NC 16 NEAR SHUFFLETOWN, NC (MTN14)

[Site 14 is at latitude 35°21'01", longitude 80°58'21", Mecklenburg County, U.S. Geological Survey downstream order number 0214267200; ft, foot; μS/cm, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; mL, milliliter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated]

Date	Dissolved calcium (mg/L as Ca) (00915)	Dissolved magnesium (mg/L as Mg) (00925)	Alkalinity (mg/L as CaCO ₃) (90410)	Total suspended solids (mg/L) (00530)	Volatile suspended solids (mg/L) (00535)	Total dissolved solids (mg/L) (70300)	Dissolved nitrite + nitrate (mg/L as N) (00631)	Dissolved ammonia (mg/L as N) (00608)	Total ammonia + organic nitrogen (mg/L as N) (00625)	Dissolved ammonia + organic nitrogen (mg/L as N) (00623)	Total nitrogen (mg/L as N) (00600)
1996											
May 30	2.8	1.3	14	1	1	36	0.210	0.010	0.20	<0.20	0.41
30	3.1	1.4	15	2	<1	44	.220	.063	.20	.20	.42
June 11	--	--	--	--	--	--	--	--	--	--	--
12	2.8	1.3	14	2	1	34	.200	.005	.30	<.20	.50
12	2.9	1.4	15	10	1	38	.240	.122	.30	.20	.54
25	--	--	--	--	--	--	--	--	--	--	--
26	2.8	1.3	14	6	6	32	.170	<.002	<.20	<.20	--
26	2.8	1.3	14	12	8	30	.180	.027	<.20	<.20	--
July 10	--	--	--	--	--	--	--	--	--	--	--
11	2.6	1.3	15	<1	3	40	.120	<.002	<.20	<.20	--
11	2.6	1.3	15	16	14	42	.140	.072	.20	<.20	.34
24	--	--	--	--	--	--	--	--	--	--	--
25	2.5	1.3	14	6	6	40	.058	.002	<.20	<.20	--
25	2.4	1.4	15	5	5	50	.067	.158	.30	.30	.37
Aug. 07	--	--	--	--	--	--	--	--	--	--	--
08	2.5	1.3	14	4	1	150	.088	.005	<.20	<.20	--
08	2.0	1.5	12	15	3	82	.170	.097	.30	.30	.47
Oct. 22	--	--	--	--	--	--	--	--	--	--	--
23	--	--	15	4	2	34	.083	.034	<.20	<.20	--
23	--	--	15	10	3	36	.150	.036	<.20	<.20	--
Nov. 19	--	--	--	--	--	--	--	--	--	--	--
20	--	--	15	<1	3	44	.120	.018	<.20	<.20	--
20	--	--	15	5	3	46	.160	.032	<.20	<.20	--
Dec. 17	--	--	--	--	--	--	--	--	--	--	--
18	--	--	15	5	3	28	.140	.030	<.20	<.20	--
18	--	--	15	7	<1	30	.150	.039	<.20	<.20	--
1997											
Jan. 29	--	--	--	--	--	--	--	--	--	--	--
30	2.8	1.3	15	4	3	36	0.180	0.031	<0.20	<0.20	--
30	2.8	1.5	15	2	3	38	.180	.025	<.20	<.20	--
Feb. 26	--	--	--	--	--	--	--	--	--	--	--
27	2.6	1.3	15	6	28	40	.190	.032	<.20	<.20	--
27	2.6	1.4	15	6	<1	38	.200	.035	<.20	<.20	--
Mar. 19	--	--	--	--	--	--	--	--	--	--	--
20	2.9	1.4	15	9	8	36	.270	.036	<.20	<.20	--
20	2.9	1.4	15	9	8	34	.260	.018	<.20	<.20	--
Apr. 30	--	--	--	--	--	--	--	--	--	--	--
May 01	2.9	1.3	14	15	1	41	.254	.012	.31	<.20	0.56
01	3.2	1.4	14	36	6	43	.291	.038	.35	<.20	.64
20	--	--	--	--	--	--	--	--	--	--	--
21	2.8	1.3	14	--	--	38	.006	<.002	<.20	<.20	--
21	2.7	1.3	13	--	--	40	.272	.012	<.20	<.20	--
June 18	2.8	1.3	14	--	--	37	.186	.026	<.20	<.20	--
18	2.7	1.3	14	7	6	37	.203	.027	<.20	<.20	--
July 30	--	--	--	--	--	--	--	--	--	--	--
31	2.4	1.3	14	6	8	36	.157	.033	<.20	<.20	--
31	2.3	1.3	13	10	11	36	.158	.060	<.20	<.20	--
Sept. 09	--	--	--	--	--	--	--	--	--	--	--
10	2.5	1.4	15	<1	3	39	.051	.008	<.20	<.20	--
10	2.1	1.5	14	5	5	36	.072	.030	<.20	<.20	--

Table 51. Water-quality field measurements and sample analyses at Mountain Island Lake site 14, May 1996 through September 1997—Continued

CATAWBA RIVER AT NC 16 NEAR SHUFFLETOWN, NC (MTN14)

[Site 14 is at latitude 35°21'01", longitude 80°58'21", Mecklenburg County, U.S. Geological Survey downstream order number 0214267200; ft, foot; μ S/cm, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; mL, milliliter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated]

Date	Total organic nitrogen (mg/L as N) (00605)	Total phosphorus (mg/L as P) (00665)	Dissolved phosphorus (mg/L as P) (00666)	Dissolved orthophosphorus (mg/L as P) (00671)	Total iron (μ g/L as Fe) (01045)	Total organic carbon (mg/L as C) (00680)	Chlorophyll a (μ g/L) (70953)	Chlorophyll b (μ g/L) (70954)	Total cyanide (mg/L as Cn) (00720)	Total arsenic (μ g/L as As) (01002)	Total beryllium (μ g/L as Be) (01012)
1996											
May 30	0.19	0.011	0.004	<0.001	100	--	0.200	<0.100	--	--	--
30	.14	.010	.003	.001	190	2.2	--	--	--	--	--
June 11	--	--	--	--	--	--	--	--	--	--	--
12	.29	.013	.005	<0.001	80	1.8	.300	<.100	<0.010	<1	<10
12	.18	.044	.005	.002	360	1.8	--	--	<0.010	<1	<10
25	--	--	--	--	--	--	--	--	--	--	--
26	--	.015	.004	.001	100	2.7	--	--	--	--	--
26	--	.004	.019	.003	220	2.2	--	--	--	--	--
July 10	--	--	--	--	--	--	--	--	--	--	--
11	--	.011	.001	.001	70	2.5	.700	<.100	--	--	--
11	.13	.009	.004	<0.001	160	2.3	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--	--
25	--	.008	.003	<0.001	50	2.3	.600	<.100	--	--	--
25	.14	.011	.014	.004	190	2.3	--	--	--	--	--
Aug. 07	--	--	--	--	--	--	--	--	--	--	--
08	--	.008	.001	<0.001	70	2.1	2.30	<.100	<0.010	<1	<10
08	.20	.024	.002	<0.001	300	2.4	--	--	<0.010	1	<10
Oct. 22	--	--	--	--	--	--	--	--	--	--	--
23	--	.006	.002	<0.001	--	--	<.100	<.100	--	--	--
23	--	.012	.001	<0.001	--	--	--	--	--	--	--
Nov. 19	--	--	--	--	--	--	--	--	--	--	--
20	--	.008	.005	<0.001	--	--	E.400	<.100	--	--	--
20	--	.009	.002	<0.001	--	--	--	--	--	--	--
Dec. 17	--	--	--	--	--	--	--	--	--	--	--
18	--	.008	.003	<0.001	--	--	.400	<.100	--	--	--
18	--	.009	.002	<0.001	--	--	--	--	--	--	--
1997											
Jan. 29	--	--	--	--	--	--	--	--	--	--	--
30	--	0.006	<0.001	<0.001	130	1.7	<0.100	<0.100	--	--	--
30	--	.012	.001	<0.001	140	1.9	--	--	--	--	--
Feb. 26	--	--	--	--	--	--	--	--	--	--	--
27	--	.006	.001	<0.001	110	1.8	1.30	<.100	--	--	--
27	--	.006	<.001	<.001	130	1.9	--	--	--	--	--
Mar. 19	--	--	--	--	--	--	--	--	--	--	--
20	--	.007	.001	.006	130	1.8	E.330	<.100	<0.010	<1	<10
20	--	.008	<.001	<.001	160	2.0	--	--	<0.010	<1	<10
Apr. 30	--	--	--	--	--	--	--	--	--	--	--
May 01	0.30	.023	<.001	.003	300	2.1	E1.20	<.100	--	--	--
01	.31	.060	.012	.011	850	4.8	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--	--	--
21	--	.006	.002	.001	100	3.1	E.880	<.100	--	--	--
21	--	.007	.001	.001	170	2.1	--	--	--	--	--
June 18	--	.006	.001	.002	220	1.7	E.520	<.100	--	--	--
18	--	.007	.001	.001	230	1.8	--	--	--	--	--
July 30	--	--	--	--	--	--	--	--	--	--	--
31	--	.010	<.001	<.001	110	1.9	E.720	<.100	--	--	--
31	--	.014	.001	<.001	260	1.8	--	--	--	--	--
Sept. 09	--	--	--	--	--	--	--	--	--	--	--
10	--	.007	.001	<.001	60	1.5	E1.10	<.100	--	--	--
10	--	.011	.003	<.001	170	1.6	--	--	--	--	--

Table 51. Water-quality field measurements and sample analyses at Mountain Island Lake site 14, May 1996 through September 1997—Continued

CATAWBA RIVER AT NC 16 NEAR SHUFFLETOWN, NC (MTN14)

[Site 14 is at latitude 35°21'01", longitude 80°58'21", Mecklenburg County, U.S. Geological Survey downstream order number 0214267200; ft, foot; μS/cm, microsiemens per centimeter; °C, degrees Celsius; m, meter; mg/L, milligrams per liter; mL, milliliter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated]

Date	Total cadmium (μg/L as Cd) (01027)	Total chromium (μg/L as Cr) (01034)	Total copper (μg/L as Cu) (01042)	Total lead (μg/L as Pb) (01051)	Total nickel (μg/L as Ni) (01067)	Total silver (μg/L as Ag) (01077)	Total zinc (μg/L as Zn) (01092)	Total antimony (μg/L as Sb) (01097)	Total selenium (μg/L as Se) (01147)	Total mercury (μg/L as Hg) (71900)
1996										
May 30	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
June 11	--	--	--	--	--	--	--	--	--	--
12	<1	<1	5	<1	<1	<1	<10	<1	<1	<0.10
12	<1	<1	2	<1	<1	<1	<10	<1	<1	<10
25	--	--	--	--	--	--	--	--	--	--
26	--	--	--	--	--	--	--	--	--	--
26	--	--	--	--	--	--	--	--	--	--
July 10	--	--	--	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--
25	--	--	--	--	--	--	--	--	--	--
25	--	--	--	--	--	--	--	--	--	--
Aug. 07	--	--	--	--	--	--	--	--	--	--
08	<1	<1	5	<1	<1	<1	<10	<1	<1	<10
08	<1	<1	2	<1	<1	<1	<10	<1	<1	<10
Oct. 22	--	--	--	--	--	--	--	--	--	--
23	--	--	--	--	--	--	--	--	--	--
23	--	--	--	--	--	--	--	--	--	--
Nov. 19	--	--	--	--	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--	--
Dec. 17	--	--	--	--	--	--	--	--	--	--
18	--	--	--	--	--	--	--	--	--	--
18	--	--	--	--	--	--	--	--	--	--
1997										
Jan. 29	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--
Feb. 26	--	--	--	--	--	--	--	--	--	--
27	--	--	--	--	--	--	--	--	--	--
27	--	--	--	--	--	--	--	--	--	--
Mar. 19	--	--	--	--	--	--	--	--	--	--
20	<1	<1	2	<1	<1	<1	<10	<1	<1	<0.10
20	<1	<1	2	<1	<1	<1	<10	<1	<1	<10
Apr. 30	--	--	--	--	--	--	--	--	--	--
May 01	--	--	--	--	--	--	--	--	--	--
01	--	--	--	--	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--	--
21	--	--	--	--	--	--	--	--	--	--
21	--	--	--	--	--	--	--	--	--	--
June 18	--	--	--	--	--	--	--	--	--	--
18	--	--	--	--	--	--	--	--	--	--
July 30	--	--	--	--	--	--	--	--	--	--
31	--	--	--	--	--	--	--	--	--	--
31	--	--	--	--	--	--	--	--	--	--
Sept. 09	--	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--	--

Table 52. Water-quality field measurements and sample analyses at Catawba River site 17, May 1996 through September 1997

CATAWBA RIVER AT HWY 27 AT MOUNT HOLLY, NC (MTN17)

[Site 17 is at latitude 35°17'46", longitude 81°00'28", Gaston County, U.S. Geological Survey downstream order number 02142808; ft, foot; μS/cm, microsiemens per centimeter; °C, degrees Celsius; m, meter; mL, milliliter; mg/L, milligrams per liter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated; >, greater than]

Date	Water level (ft above sea level) (00065)	Specific conductance (μS/cm) (00095)	pH (standard units) (00400)	Temperature of water (°C) (00010)	Secchi disk transparency (m) (00078)	Dissolved oxygen (mg/L) (00300)	Dissolved oxygen (percent saturation) (00301)	Biochemical oxygen demand 5-day (mg/L) (00310)	Fecal coliform bacteria (colonies/100 mL) (31616)	Total hardness (mg/L as CaCO ₃) (00900)	Dissolved calcium (mg/L as Ca) (00915)
1996											
May 30	566.73	69	6.8	23.0	0.90	6.1	73	<2.0	K88	15	3.6
June 10	567.22	60	6.9	24.5	.50	5.6	68	<2.0	--	13	3.0
24	566.90	59	7.1	28.0	.90	5.4	70	<2.0	30	12	2.7
July 09	566.90	61	7.0	28.5	1.50	5.6	74	<2.0	26	13	2.9
23	566.59	59	6.9	28.5	2.60	5.3	70	<2.0	22	12	2.6
Aug. 06	566.47	57	6.5	28.5	.60	4.9	64	<2.0	>60	11	2.2
Oct. 21	566.53	62	7.2	20.0	2.40	7.3	82	<2.0	<1	--	--
Nov. 18	566.24	65	7.5	14.0	2.50	8.9	88	<2.0	K6	--	--
Dec.16	566.71	68	8.0	--	1.10	--	--	<2.0	--	--	--
1997											
Jan. 28	566.90	68	8.2	9.5	--	10.1	90	<2.0	K1	12	2.7
Feb. 25	567.03	60	7.2	11.0	0.90	10.1	93	<2.0	K9	13	3.0
Mar. 17	567.29	59	7.2	13.5	1.80	9.3	90	<2.0	K7	12	2.7
May 02	568.39	58	6.9	17.0	.30	8.2	87	<2.0	K130	14	3.3
19	--	53	7.0	19.5	1.20	7.8	87	<2.0	K1	12	2.8
June 16	567.27	59	7.0	22.0	.60	7.0	82	<2.0	--	15	3.3
July 29	568.09	57	7.1	26.5	--	5.6	71	<2.0	--	14	3.3
Sept. 08	566.57	52	6.9	26.5	2.00	5.8	73	<2.0	K11	12	2.5

Date	Dissolved magnesium (mg/L as Mg) (00925)	Alkalinity (mg/L as CaCO ₃) (90410)	Total suspended solids (mg/L) (00530)	Volatile suspended solids (mg/L) (00535)	Total dissolved solids (mg/L) (70300)	Dissolved nitrite + nitrate (mg/L as N) (00631)	Dissolved ammonia (mg/L as N) (00608)	Total ammonia + organic nitrogen (mg/L as N) (00625)	Dissolved ammonia + organic nitrogen (mg/L as N) (00623)	Total nitrogen (mg/L as N) (00600)	Total organic nitrogen (mg/L as N) (00605)
1996											
May 30	1.5	17	11	2	58	0.240	0.056	0.20	0.20	0.44	0.14
June 10	1.4	15	46	7	54	.220	.060	.30	.20	.52	.24
24	1.3	14	8	4	58	.230	.059	<.20	.20	--	--
July 09	1.4	16	2	3	38	.069	.055	.30	<.20	.37	.25
23	1.3	15	7	5	34	.110	.055	<.20	<.20	--	--
Aug. 06	1.4	14	14	5	--	.120	.070	.20	<.20	.32	.13
Oct. 21	--	15	4	2	32	.110	.010	.20	<.20	.31	.19
Nov. 18	--	18	12	4	38	.140	.025	<.20	<.20	--	--
Dec. 16	--	15	1	<1	34	.098	.034	<.20	<.20	--	--
1997											
Jan. 28	1.3	15	4	2	50	0.180	0.032	<0.20	<0.20	--	--
Feb. 25	1.4	16	10	<1	46	.210	.018	<.20	<.20	--	--
Mar. 17	1.2	15	--	--	38	.240	.019	<.20	<.20	--	--
May 02	1.4	15	27	4	43	.273	.027	.30	<.20	0.57	0.27
19	1.3	14	16	<1	39	.252	.025	<.20	<.20	--	--
June 16	1.6	17	12	<1	44	.219	.039	.21	.20	.43	.17
July 29	1.4	15	--	--	--	.246	.025	.47	.22	.71	.44
Sept. 08	1.5	15	--	--	36	.057	.038	<.20	<.20	--	--

Table 52. Water-quality field measurements and sample analyses at Catawba River site 17, May 1996 through September 1997—Continued

CATAWBA RIVER AT HWY 27 AT MOUNT HOLLY, NC (MTN17)

[Site 17 is at latitude 35°17'46", longitude 81°00'28", Gaston County, U.S. Geological Survey downstream order number 02142808; ft, foot; μ S/cm, microsiemens per centimeter; °C, degrees Celsius; m, meter; mL, milliliter; mg/L, milligrams per liter; <, less than; --, missing data; K, results based on nonideal colony count; E, estimated; >, greater than]

Date	Total phosphorus (mg/L as P) (00665)	Dissolved phosphorus (mg/L as P) (00666)	Dissolved orthophosphorus (mg/L as P) (00671)	Total iron (μ g/L as Fe) (01045)	Total organic carbon (mg/L as C) (00680)	Chlorophyll a (μ g/L) (70953)	Chlorophyll b (μ g/L) (70954)	Suspended sediment (mg/L) (80154)	Total cyanide (mg/L as Cn) (00720)	Total arsenic (μ g/L as As) (01002)	Total beryllium (μ g/L as Be) (01012)
1996											
May 30	0.017	0.007	0.003	340	2.3	<0.100	<0.100	12	--	--	--
June 10	.048	.008	.003	1100	2.6	<.100	<.100	23	<0.010	<1	<10
24	.022	.006	<.001	320	2.4	<.100	<.100	12	--	--	--
July 09	.008	.003	.001	180	2.1	1.00	.200	9	--	--	--
23	.012	.002	<.001	150	2.1	.400	<.100	12	--	--	--
Aug. 06	.031	.007	<.001	310	2.8	.800	<.100	20	<.010	<1	<10
Oct. 21	.007	.004	<.001	--	--	E.300	<.100	16	--	--	--
Nov. 18	.012	.004	<.001	--	--	<.100	<.100	55	--	--	--
Dec. 16	.010	.004	<.001	--	--	.700	<.100	9	--	--	--
1997											
Jan. 28	0.005	0.002	0.002	120	1.9	--	--	6	--	--	--
Feb. 25	.021	.003	.001	590	2.9	--	--	40	--	--	--
Mar. 17	.014	.003	<.001	280	2.0	--	--	132	<0.010	<1	<10
May 02	.046	.007	.004	610	3.0	--	--	28	--	--	--
19	.013	.003	.002	300	4.9	--	--	--	--	--	--
June 16	.017	.005	.004	370	2.1	--	--	10	--	--	--
July 29	.091	.022	.002	--	--	--	--	--	--	--	--
Sept. 08	.010	.002	.001	--	1.3	--	--	6	--	--	--

Date	Total cadmium (μ g/L as Cd) (01027)	Total chromium (μ g/L as Cr) (01034)	Total copper (μ g/L as Cu) (01042)	Total lead (μ g/L as Pb) (01051)	Total nickel (μ g/L as Ni) (01067)	Total silver (μ g/L as Ag) (01077)	Total zinc (μ g/L as Zn) (01092)	Total antimony (μ g/L as Sb) (01097)	Total selenium (μ g/L as Se) (01147)	Total mercury (μ g/L as Hg) (71900)
1996										
May 30	--	--	--	--	--	--	--	--	--	--
June 10	<1	1	3	<1	<1	<1	<10	<1	<1	<0.10
24	--	--	--	--	--	--	--	--	--	--
July 09	--	--	--	--	--	--	--	--	--	--
23	--	--	--	--	--	--	--	--	--	--
Aug. 06	<1	<1	4	<1	1	<1	<10	<1	<1	<10
Oct. 21	--	--	--	--	--	--	--	--	--	--
Nov. 18	--	--	--	--	--	--	--	--	--	--
Dec. 16	--	--	--	--	--	--	--	--	--	--
1997										
Jan. 28	--	--	--	--	--	--	--	--	--	--
Feb. 25	--	--	--	--	--	--	--	--	--	--
Mar. 17	<1	<1	2	<1	<1	<1	<10	<1	<1	<0.10
May 02	--	--	--	--	--	--	--	--	--	--
19	--	--	--	--	--	--	--	--	--	--
June 16	--	--	--	--	--	--	--	--	--	--
July 29	--	--	--	--	--	--	--	--	--	--
Sept. 08	--	--	--	--	--	--	--	--	--	--