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Water Resources Data for North Carolina

U.S. GEOLOGICAL SURVEY
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U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NC-80-1

WATER YEAR 1980

Prepared in cooperation with the North Carolina Department of Natural Resources and Community Development, and with other State, municipal, and Federal agencies

CALENDAR FOR WATER YEAR 1980

1979

OCTOBER

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WATER YEAR 1980

Prepared in cooperation with the North Carolina Department of Natural Resources and Community Development, and with other State, municipal, and Federal agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, Secretary

GEOLOGICAL SURVEY

Doyle G. Frederick, Acting Director

For additional information write to
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U.S. Geological Survey
436 Century Station Post Office Building
300 Fayetteville Street
Raleigh, North Carolina 27602

1981

PREFACE

This report was prepared by the U.S. Geological Survey in cooperation with the State of North Carolina and with other agencies by personnel of the North Carolina district of the Water Resources Division under the supervision of R. C. Heath, District Chief, and J. L. Cook, Regional Hydrologist, Southeastern Region.

This report is one of a series issued State by State under the general direction of Philip Cohen, Chief Hydrologist, and R. J. Dingman, Assistant Chief Hydrologist for Scientific Publications and Data Management.

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WATER RESOURCES DATA FOR NORTH CAROLINA 1980

INTRODUCTION

Water resources data for the 1980 water year for North Carolina consist of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and ground-water levels. This report contains discharge records for 156 gaging stations; stage and contents for 24 lakes and reservoirs; water quality for 57 gaging stations and 7 miscellaneous sites; and water levels for 64 observation wells. Additional water data were collected at various sites, not involved in the systematic data-collection program, and are published as miscellaneous measurements in this report. The collection of water-resources data in North Carolina is a part of the National Water-Data System operated by the U.S. Geological Survey in cooperation with State, municipal, and Federal agencies.

Records of discharge of streams, and contents and stage of lakes or reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1971 in an annual series of water-supply papers entitled, "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled "Ground-Water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities and universities in the United States or may be purchased from Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, Virginia 22202.

Beginning with the 1961 water year and continuing through water year 1974, streamflow data have been released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records beginning with the 1964 water year have been released in similar reports. These reports provided rapid release of water data in each State shortly after the end of the water year. Through 1974 the data were also released in the water-supply paper series mentioned above.

Beginning with the 1975 water year, streamflow, water quality, and ground-water data are published only in reports on a State-boundary basis. These Survey reports carry an identification number consisting of the two letter State abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report NC-80-1." Water-data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161.

Additional information including current prices, for ordering specific reports may be obtained from the district chief at the address given on the back of the title page or by telephone (919) 755-4510.

COOPERATION

Cooperative agreements between the U.S. Geological Survey and organizations of the State of North Carolina for the systematic collection of streamflow records began in 1895 and continued through 1909. After a lapse of eight years, the State of North Carolina resumed cooperation in October 1918. Organizations that assisted in collecting the data contained in this report through cooperative agreements with the Survey are:

State Department of Natural Resources and Community Development,
Howard N. Lee, Secretary through the following:
Division of Environmental Management,
Neil S. Grigg, director.
State Board of Transportation, Division of Highways,
Billy Rose, highway administrator.
City of Burlington, James D. Mackintosh, Jr., city manager.
City of Charlotte, Eddie Knox, mayor.
City of Durham, Dean D. Hunter, city manager.
City of Greensboro, Tom Z. Osborne, city manager.
City of Rocky Mount, William H. Batchelor, mayor.
City of Winston-Salem, Wayne A. Corpening, mayor.

The following Federal agencies assisted in the data collection program by furnishing funds or services:

Corps of Engineers, U.S. Army
Tennessee Valley Authority
Soil Conservation Service, U.S. Department of Agriculture
National Weather Service, NOAA, U.S. Department of Commerce

The following organizations aided in collecting records:

Cities of Danville, Virginia and Raleigh, N.C.; E. I. du Pont de Nemours and Co.; Carolina Power and Light Co.; Champion International Corp.; Duke Power Co.; Fiber Industries, Inc.; J. P. Stevens Co., Inc.; Olin Corp.; P. P. G. Industries; Virginia Electric and Power Co.; and Yadkin, Inc.

ACKNOWLEDGEMENT

North Carolina district personnel who contributed significantly to the collection and preparation of the data in this report were: N. Macon Jackson, Jr., Clyde E. Simmons, Herman C. Gunter, Catherine L. Hill, Ernst G. Wollin, Jr., Thomas E. Dillard, William H. Eddins, Rufus G. Allen, Russell G. Barker, Willie Blount, Pam Breton, Isaac J. Forehand, Ronald G. Garrett, Edwin D. George, Kay E. Harris, Stephen S. Howe, Phyllis M. Joyner, Ruth C. Linder, Lawrence T. Mann, Donald P. McGeary, Bobby C. Ragland, Clarence M. Ray, Jr., Howard E. Reeder, Joseph S. Riggsbee, Jerry F. Rinehardt, Timothy C. Stamey, Eloise H. Stephens, Virginia A. Stricker, James M. West, and Fern S. Wilcox.

HYDROLOGIC CONDITIONS

Streamflow during the 1980 water year was excessive (in the highest 25 percent of record) in the Mountains and western Piedmont and near normal in the eastern Piedmont and Coastal Plain. Annual runoff at the four index stations, as compared to long-term normals, was as follows: French Broad River at Asheville, 136 percent; South Yadkin River near Mocksville, 140 percent; Deep River at Moncure, 91 percent; and Contentnea Creek at Hookerton, 106 percent.

Streamflow was above normal at the beginning of the water year and heavy rains during early October caused above normal flows for the month. Widespread rains on November 2-3, 10-11, and 25-26 caused excessive runoff with flows ranging from 4 times normal in the Mountains to 2½ times normal in the Coastal Plain. The mean monthly flow for the index station, French Broad River at Asheville, was the highest for November since records began in 1895. Even though flows were high, only minor flooding was reported.

Flows remained above normal during December and January with mean flows averaging about 1½ times normal. In February, for the first time in over a year, streamflow was deficient (in the lowest 25 percent of record) across the state; however, above normal streamflows were again prevalent March through May. Minor flooding occurred in Rockingham, Stokes, Surry, and Wilkes Counties on April 8 with flood damage limited primarily to young crops in the field and erosion of topsoil from low-lying farmland.

Streamflow remained near or above normal in the northwestern Piedmont for the remainder of the year but fell below normal in the Mountains, eastern Piedmont, and Coastal Plain. In the eastern Piedmont and Coastal Plain, very hot, dry weather caused streamflow to decline to deficient levels and averaged only 10 to 40 percent of normal in August. The mean monthly flow for August at the index station, Deep River at Moncure, was the lowest since records began in 1930.

In August, 67 counties were declared disaster areas due to drought, and minor water shortages were reported. Rains at the end of September brought some relief, but streamflow remained considerably below normal at the close of the water year.

Ground-water levels were above long-term averages across the state from October through June and remained above normal in the Mountains and western Piedmont for the entire year. Exceptionally hot, dry weather caused water levels in the Coastal Plain to fall below normal in July and August and most of September. At the close of the water year, levels in the Coastal Plain were near normal.

NOTICE

During water year 1978, revisions were made in the terminology used to define 143 of the water-quality parameter codes that have been used by the Geological Survey in its publication of water-quality data and in its WATSTORE data system. These revisions were made to achieve consistency in terminology and to conform to a joint USGS-EPA agreement on terminology. They do not represent a change in the way the codes have been used in the past or in the association of specific code numbers with identified analytical procedures.

Use of the new terminology began with data for the 1978 water year. Definitions on which the terminology is based are included in the "Definitions" section of this report, and a table showing both old and new terminology is attached as an appendix to the report.

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also the table for converting English units to International System of units (SI) on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as the organisms which produce colonies within 24 hours when incubated at 35°C ± 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C ± 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C ± 1.0°C on M-enterrococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass, and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons or 2,447 cubic meters.

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

Chlorophyll refers to the green pigments of plants. Chlorophyl a and b are the two most common pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatnate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artifical structure, or a uniform cross section over a long reach of the channel.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second (FT^3/s, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment), that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

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

Dissolved that material in a representative water sample which passes through a 0.45 um membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

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

Drainage basin is a part of the surface of the earth that is occupied by a drainage system which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the general term "stage", although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height or discharge are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is computed.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCo_3$).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

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

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

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area of habitat, usually square meters (m^2), acres, or hectares. Periphyton benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliters (mL) or liters (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle-size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter or particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology.

The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay.....	0.00024 - 0.004	Sedimentation.
Silt.....	.004 - .062	Sedimentation.
Sand.....	.062 - 2.0	Sedimentation or sieve.
Gravel.....	2.0 - 64.0	Sieve.

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

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

Periphyton is the assemblage of microorganisms attached to and growing upon solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton is a useful indicator of water quality.

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

Picocurie (PC, pCi) is one trillionth (1×10^{12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly-swimming organisms that lives in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrients. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and are commonly known as algae.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column, and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Runoff in inches (IN, in) shows the depth to which the drainage area would be covered if all the runoff for a given time were uniformly distributed on it.

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

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

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

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that passes a section in a given time. It is computed by multiplying discharge times mg/L times 0.0027.

Suspended-sediment load is quantity of suspended sediment passing a section in a specified period.

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

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

Stage-discharge relation is the relation between gage height (stage) and volume of water per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total." Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata is the following:

Kingdom	Animal
Phylum	Arthropoda
Class	Insecta
Order	Ephemeroptera
Family	Ephemeridae
Genus	Hexagenia
Species	Hexagenia limbata

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

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

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

Total load (tons) is the total quantity of any individual constituent, as measured mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge times the mg/L of the constituent times the factor 0.027 times the number of days.

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

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

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

Water year in the Geological Survey reports is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ended September 30, 1978, is called the "1978 water year."

WRD is used as an abbreviation for "Water-Resources Data" in the REVISED RECORDS paragraph to refer to State annual basic-data reports published since 1970.

WSP is used as an abbreviation for "Water-Supply Paper" in reference to previously published reports.

DOWNTREAM ORDER AND STATION NUMBER

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary that enters between two main-stream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is situated with respect to the stream to which it is immediately tributary is indicated by an indention in a list of stations in the front of the report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

As an added means of identification, each gaging station, partial-record station, and water-quality station has been assigned a station number. These are in the same downstream order used in this report. In assigning station number, no distinction is made between partial-record stations and gaging stations; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Water-quality stations located at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station. Gaps are left in the numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station, such as 03460000 which appears just to the left of the station name includes the 2-digit part number "03" plus the 6-digit downstream order number "460000". In this report, the records are listed in downstream order by parts. The part number refers to an area whose boundaries coincide with certain natural drainage lines. Records in this report are in Part 2 (South Atlantic Slope basins) and Part 3 (Ohio River basin). All records for a drainage basin encompassing more than one State can be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

NUMBERING SYSTEM FOR WELLS

Downstream order station numbers are not assigned to wells. The well numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits is a sequential number for wells within a 1-second grid. In the event that several wells are within the same 1-second grid, a different sequential number, such as "01", "02", etc., is assigned to each well to ensure a unique station number. See figure 2 below.

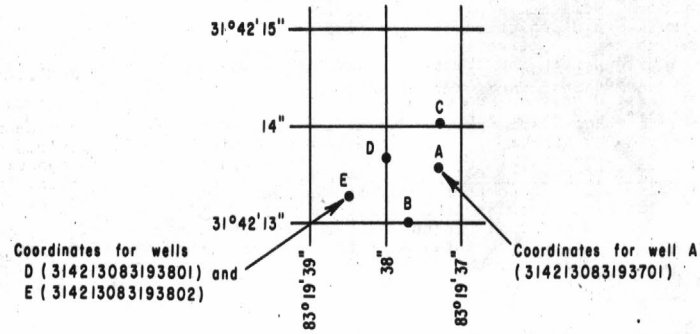

FIGURE 1.--System for numbering wells (latitude and longitude).

SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a benchmark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

National stream-quality accounting network (NASQAN) is a data collection network designed by the U.S. Geological Survey to meet many of the information needs of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Tritium network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams, and stage, surface area, and contents of lake or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from either direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at selected time intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey. These methods are decribed in standard textbooks, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating table, then the monthly and yearly mean discharge are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes by hydrologists and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

At some stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of gage-height record and occasional winter discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins. Likewise daily contents may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams or canals, a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs, a monthly summary table of stage and contents is given. Records are published for the water year, which begins on October 1 and ends on September 30.

The description of the gaging stations gives the location, drainage area, period of record, type and history of gages, average discharge, extremes of discharge or contents, general remarks, and notations of revisions of previously published records. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD". The type of gage currently in use, the datum of the present gage referred to National Geodetic Vertical Datum; and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE". National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS" on page 5. The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for the stations where changes in water development during the period of record cause the figure to have little significance. Average runoff in inches is also shown.

The maximum discharge (or contents) and the maximum gage height, the minimum instantaneous discharge if there is little or no regulation (or the minimum contents), and the minimum gage height if it is significant are given under "EXTREMES". The minimum daily discharge is given if there is extensive regulation (also the minimum instantaneous discharge and gage height if they are abnormally low). In the first paragraph headed "Current year", the data given are for the complete water year unless otherwise specified. In the second paragraph under "EXTREMES" headed "Period of record", the data given are for the period of record given in the PERIOD OF RECORD paragraph. Reliable information concerning major floods that occurred outside the period of record is given in the third or last paragraph under "EXTREMES". Unless otherwise qualified, the maximum discharge (or contents) corresponds to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur at the same time as the maximum discharge or contents, it is given separately.

Information pertaining to the accuracy of the discharge records, to conditions that affect the natural flow at the gaging station, and availability of water-quality records, is given under "REMARKS"; for reservoir stations most of this information and information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir are contained in one or two paragraphs.

Previously published records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records. To make it easier to find such revised records, a paragraph headed "REVISIONS (WATER YEARS)" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only the year is given. If no daily, monthly, or annual figures of discharge were revised, that fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

Peak discharges and their times of occurrence and corresponding gage heights for many stations are also listed. All independent peaks above the selected base are given. The base discharge which is given in parentheses, is selected so that an average of about three peaks a year can be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subjected to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030 and 1:30 p.m. is 1330.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas.

In the yearly summary below the monthly summary, the figures following "MAX" are the maximum daily discharges for the calendar and water years; likewise, those following "MIN" are the minimum daily discharges.

Footnotes to the table of daily discharges are introduced by the word "Note". Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated.

Data collected at partial-record and miscellaneous stations follow the information for continuous record sites. These data consist of site location information and listings of discharge measurements.

Accuracy of field data and computed results

The accuracy of streamflow data depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretations of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent; "good", within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 cfs; to tenths between 1.0 and 10 cfs; to whole numbers between 10 and 1,000 cfs; and to 3 significant figures above 1,000 cfs. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artifical causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other data available

Information of a more detailed nature than that published for most of the gaging stations such as observations of water temperatures, discharge measurements, gage-height record, and rating tables is on file in the district office. Also most gaging-station records are available in computer-usable form and many statistical analyses have been made.

Information on the availablity of unpublished data or statistical analyses may be obtained from the district office.

Records of discharge collected by agencies other than the Geological Survey

Records of stream stage not published by the U.S. Geological Survey were collected in North Carolina during the 1980 water year by the National Weather Service, NOAA, U.S. Department of Commerce and other Federal agencies. The National Water Data Exchange (NAWDEX), Water Resources Division, U.S. Geological Survey, National Center, Reston, VA 22092, maintains an index of such sites. Information on records available at specific sites can be obtained upon request.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

Surface water samples for analyses usually are collected at or near gaging stations. The quality-of-water records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, pH, dissolved oxygen, water temperature, sediment discharge, etc.); extremes for the period of daily record; extremes for the current year, and general remarks.

Water analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations listed on a following page.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the district office.

Water temperature

Water temperatures are measured at most of the water-quality stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature.

At stations where recording instruments are used, either mean temperature or maximum and minimum temperatures for each day are published.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the times of observation, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

The ground-water level data from a basic network of observation wells and special project wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is provided for local needs. See figure 2.

Measurements are made in many types of wells, under varying conditions of access and at different temperatures, hence, neither the method of measurement nor the equipment can be standardized. At each observation well, however, the equipment and techniques used are those that will ensure that measurements at each well are consistent.

Water-level measurements in this report are given in feet with reference to either National Geodetic Vertical Datum (NGVD) or land-surface datum (lsd). National Geodetic Vertical Datum is the plane on which the national network of precise levels is based; land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum above mean sea level is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (EOM).

Water levels are reported to as many significant figures as can be justified by the local conditions. Accordingly, most measurements are reported to a hundredth of a foot.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-four manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office).

NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations".

1-D1. *Water temperature--influential factors, field measurement, and data presentation,* by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents,* by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
2-D1. *Application of surface geophysics to ground-water investigations,* by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
2-E1. *Application of borehole geophysics to water-resources investigations,* by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
3-A1. *General field and office procedures for indirect discharge measurements,* by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
3-A2. *Measurement of peak discharge by the slope-area method,* by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
3-A3. *Measurement of peak discharge at culverts by indirect methods,* by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
3-A4. *Measurement of peak discharge at width contractions by indirect methods,* by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
3-A5. *Measurement of peak discharge at dams by indirect methods,* by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
3-A6. *General procedure for gaging streams,* by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
3-A7. *Stage measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
3-A8. *Discharge measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
3-A11. *Measurement of discharge by moving-boat method,* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
3-B1. *Aquifer-test design, observation, and data analysis,* by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction,* by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
3-C1. *Fluvial sediment concepts,* by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
3-C2. *Field methods for measurement of fluvial sediment,* by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
3-C3. *Computation of fluvial-sediment discharge,* by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.

4-A1. *Some statistical tools in hydrology,* by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
4-A2. *Frequency curves,* by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
4-B1. *Low-flow investigations,* by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
4-B2. *Storage analyses for water supply,* by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
4-B3. *Regional analyses of streamflow characteristics,* by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
4-D1. *Computation of rate and volume of stream depletion by wells,* by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
5-A1. *Methods for determination of inorganic substances in water and fluvial sediments,* by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.
5-A2. *Determination of minor elements in water by emission spectroscopy,* by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
5-A3. *Methods for analysis of organic substances in water,* by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.
5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples,* edited by P. E. Greeson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.
5-A5. *Methods for determination of radioactive substances in water and fluvial sediments,* by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
5-C1. *Laboratory theory and methods for sediment analysis,* by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments,* by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water,* by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
8-A1. *Methods of measuring water levels in deep wells,* by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
8-B2. *Calibration and maintenance of vertical-axis type current meters,* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

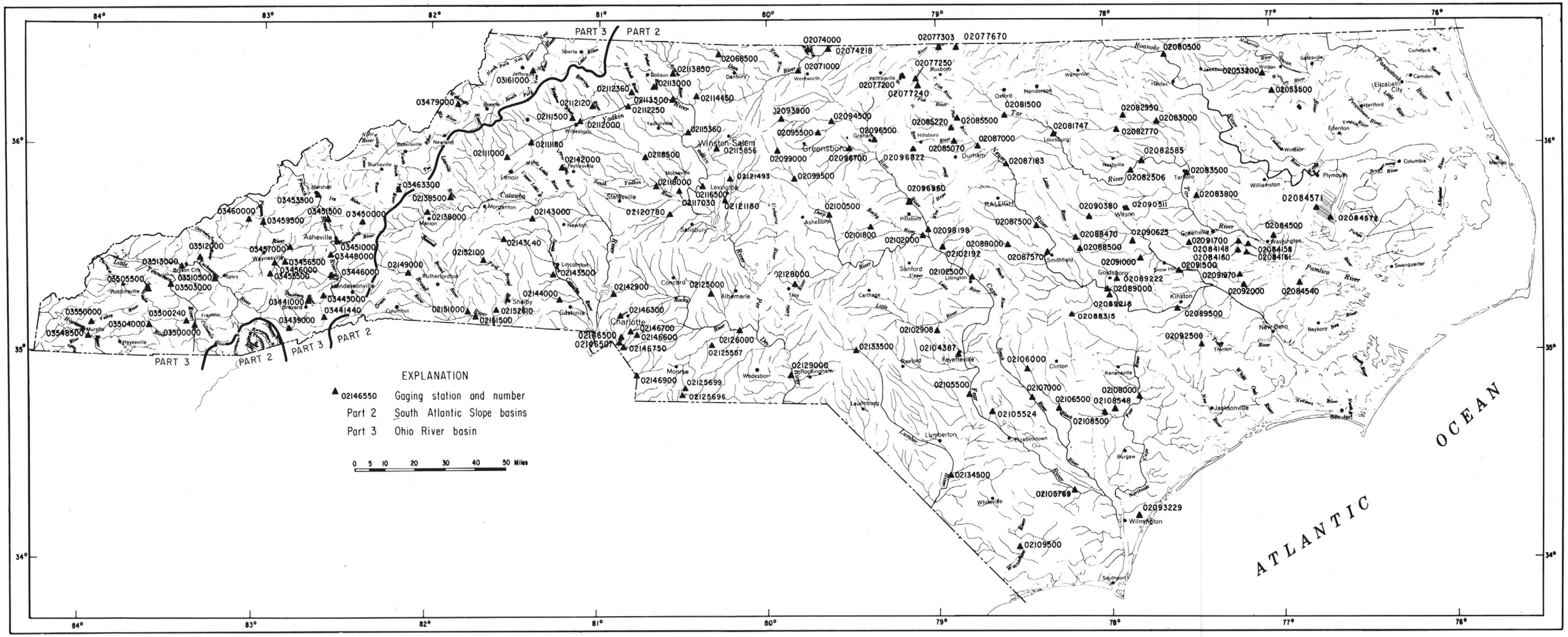

FIGURE 2. Map of North Carolina showing location of gaging stations.

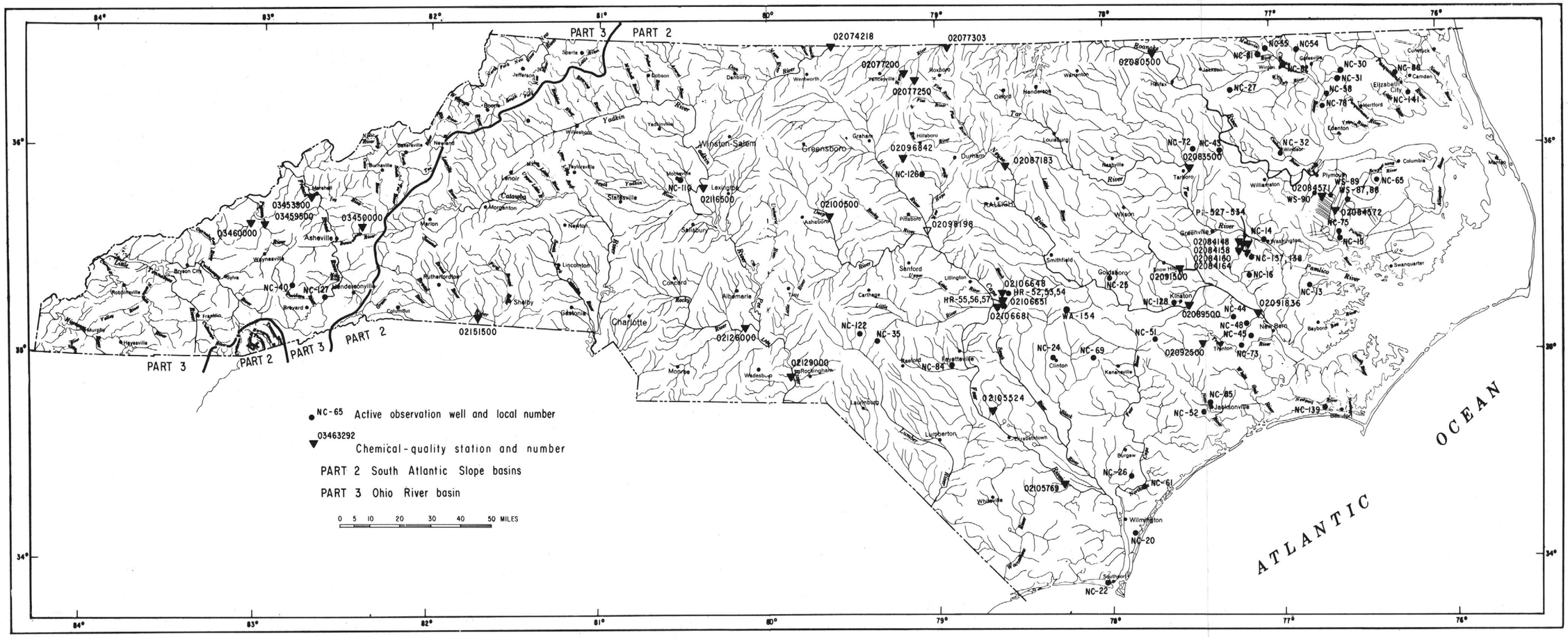

FIGURE 3. Map of North Carolina showing location of chemical-quality stations and observation well sites.

CHOWAN RIVER BASIN

02053200 POTECASI CREEK NEAR UNION, N. C.

LOCATION.--Lat 36°22'14", long 77°01'36", Hertford County, Hydrologic Unit 03010204, on right bank at downstream side of bridge on State Highway 11, 2.8 mi (4.5 km) north of Union, 3 mi (4.8 km) downstream from Cutawhiskie Swamp, and 3.5 mi (5.6 km) upstream from Bells Branch.

DRAINAGE AREA.--193 mi² (500 km²), revised.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1953-57. March 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3.53 ft (1.076 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 1, 1958, nonrecording gage at same site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--22 years, 243 ft³/s (6.882 m³/s), 17.10 in/yr (434 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,280 ft³/s (121 m³/s) Sept. 8, 1979, gage height, 19.77 ft (6.026 m); minimum, 0.2 ft³/s (0.006 m³/s) July 1, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1929 reached a stage of 19.1 ft (5.82 m), discharge, 4,050 ft³/s (115 m³/s), and flood of August 1940 reached a stage of 24.1 ft (7.35 m), discharge, 7,000 ft³/s (198 m³/s) from rating curve extended above 4,000 ft³/s (113 m³/s), from information furnished by North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,260 ft³/s (35.7 m³/s) Mar. 9, gage height, 11.23 ft (3.423 m); minimum, 0.84 ft³/s (0.024 m³/s) Sept. 3, gage height, 2.01 ft (0.613 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	51	288	105	270	322	557	186	17	189	2.3	1.0
2	76	51	265	104	210	281	572	133	15	19	2.1	.98
3	74	64	229	100	160	270	515	110	14	8.2	1.8	.90
4	72	135	194	93	140	251	462	91	13	6.6	1.6	11
5	71	146	167	108	130	297	403	72	11	7.1	1.4	15
6	67	130	150	180	130	654	334	55	10	8.4	4.8	7.8
7	62	158	151	188	150	1030	257	43	10	8.4	9.7	4.8
8	57	168	161	200	180	1180	203	35	10	6.8	7.0	3.2
9	53	158	150	252	200	1250	169	30	10	6.8	5.3	2.3
10	50	148	146	281	220	1160	153	26	8.5	6.8	3.4	2.0
11	50	193	148	280	274	974	130	25	8.5	16	4.6	2.0
12	49	570	143	388	332	792	105	25	8.1	18	4.1	1.7
13	48	943	138	455	337	639	92	22	7.7	11	3.2	1.3
14	52	1170	148	399	345	808	106	21	7.9	8.2	2.7	1.3
15	52	1240	157	665	379	796	271	19	7.7	6.9	2.3	1.3
16	49	1150	142	970	445	690	283	19	7.5	6.7	2.0	1.2
17	45	970	133	853	471	599	220	18	8.1	6.1	1.9	1.0
18	43	770	125	786	411	690	220	122	7.8	6.4	2.5	1.3
19	41	568	116	941	347	896	206	482	7.4	6.1	3.0	1.4
20	43	412	112	1020	316	790	178	454	6.6	5.0	9.3	1.3
21	43	310	107	961	264	725	137	689	5.9	4.7	9.7	1.2
22	42	243	97	888	231	683	103	665	5.6	4.1	5.7	.98
23	42	200	90	889	206	583	80	438	5.1	4.1	4.0	.90
24	61	167	87	1050	193	473	64	275	4.8	8.7	3.2	.90
25	73	143	93	959	183	409	53	166	5.2	9.6	2.7	1.0
26	63	139	104	862	198	384	45	97	6.1	6.2	2.4	1.3
27	56	195	106	759	353	343	40	57	6.5	4.6	2.1	1.4
28	55	216	102	639	369	309	76	36	6.3	4.0	1.8	1.7
29	56	219	105	510	342	349	222	27	5.8	3.8	1.5	1.8
30	55	273	111	401	---	473	208	23	122	3.1	1.3	2.8
31	53	---	110	326	---	484	---	19	---	2.7	1.2	---
TOTAL	1733	11300	4375	16612	7786	19584	6464	4480	369.1	413.1	110.6	76.76
MEAN	55.9	377	141	536	268	632	215	145	12.3	13.3	3.57	2.56
MAX	80	1240	288	1050	471	1250	572	689	122	189	9.7	15
MIN	41	51	87	93	130	251	40	18	4.8	2.7	1.2	.90
CFSM	.29	1.95	.73	2.78	1.39	3.28	1.11	.75	.06	.07	.02	.01
IN.	.33	2.18	.84	3.20	1.50	3.77	1.25	.86	.07	.08	.02	.01

CAL YR 1979 TOTAL 175657.40 MEAN 481 MAX 4210 MIN 6.8 CFSM 2.49 IN 33.86
WTR YR 1980 TOTAL 73303.56 MEAN 200 MAX 1250 MIN .90 CFSM 1.04 IN 14.13

02053500 AHOSKIE CREEK AT AHOSKIE, N. C.

LOCATION.--Lat 36°16'50", long 77°00'00", Hertford County, Hydrologic Unit 03010203, on right bank 10 ft (3 m) downstream from bridge on State Highway 350, 0.5 mi (0.8 km) upstream from Seaboard Coast Line Railroad bridge, and 0.8 mi (1.3 km) southwest of Ahoskie.

DRAINAGE AREA.--57 mi² (148 km²), approximately.

PERIOD OF RECORD.--January 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 17.46 ft (5.322 m) National Geodetic Vertical Datum of 1929 (Soil Conservation Service bench mark). Prior to Jan. 4, 1963, present site at datum 4.00 ft (1.219 m) higher. Jan. 20, 1950, to May 24, 1951, nonrecording gage.

REMARKS.--Records good. Entire basin above station canalized since July 1964. Excavation began downstream in July 1962 and reached the station in December 1962.

AVERAGE DISCHARGE.--30 years, 65.5 ft³/s (1.855 m³/s), 15.61 in/yr (396 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,580 ft³/s (73.1 m³/s) Oct. 5, 1964, gage height, 10.72 ft (3.267 m); no flow at times during most years prior to canalization; minimum daily since canalization, 1.1 ft³/s (0.031 m³/s) Sept. 24, 25, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1940 reached a stage of 15.1 ft (4.60 m), present datum, from floodmark witnessed by local resident (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 712 ft³/s (20.2 m³/s) Mar. 6, gage height, 7.60 ft (2.316 m); no peak above base of 720 ft³/s (20.4 m³/s); minimum daily, 1.1 ft³/s (0.031 m³/s) Sept. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	8.8	19	14	52	74	142	48	10	8.8	3.5	2.3
2	16	9.0	18	15	46	60	94	35	9.6	6.1	3.4	2.3
3	13	13	16	14	40	95	71	27	9.2	5.6	3.3	5.4
4	11	15	15	15	35	66	59	21	8.7	5.7	3.2	23
5	11	12	16	33	32	188	60	18	8.6	6.0	3.8	16
6	10	10	16	51	32	665	48	16	8.3	7.2	72	6.7
7	9.5	10	21	42	34	612	39	14	8.4	7.8	28	4.6
8	9.1	9.7	22	52	37	378	34	13	8.1	6.3	13	3.6
9	8.9	9.4	19	68	45	242	33	13	7.7	6.8	6.9	3.2
10	8.6	9.5	17	67	115	160	31	12	7.5	9.4	5.2	2.9
11	8.7	47	17	71	153	140	27	12	7.2	11	6.4	2.6
12	8.8	286	16	248	137	104	24	11	7.0	10	6.6	2.1
13	9.1	173	17	138	112	209	24	11	6.8	7.6	4.8	2.0
14	11	121	18	106	99	426	52	11	6.7	5.9	3.7	1.7
15	9.5	68	18	607	145	207	183	12	6.7	5.4	3.2	1.4
16	8.6	48	17	408	198	125	96	11	6.5	5.1	3.0	1.3
17	8.1	36	16	205	170	88	57	10	6.1	4.6	2.6	1.4
18	7.8	29	16	187	103	529	41	115	6.0	4.3	2.8	1.4
19	7.6	25	15	407	74	427	32	119	5.8	4.1	3.0	1.5
20	7.5	22	14	229	61	209	27	112	5.6	4.0	14	1.5
21	7.3	20	14	146	52	166	23	220	5.3	3.8	12	1.3
22	7.4	19	14	106	49	135	21	106	5.2	3.7	6.4	1.2
23	20	18	13	406	49	92	19	47	5.0	7.2	4.5	1.2
24	64	17	13	392	54	73	18	31	5.0	8.5	3.8	1.1
25	20	16	17	209	50	90	16	24	5.0	6.6	3.4	1.1
26	13	27	19	135	128	85	16	20	5.7	5.2	2.9	1.3
27	11	43	17	101	212	67	15	16	6.5	4.4	2.8	1.5
28	10	31	16	91	156	54	40	14	5.5	4.0	2.8	1.7
29	9.8	26	15	73	108	159	49	13	4.9	3.8	2.5	1.9
30	9.2	23	15	60	---	173	57	11	21	3.7	2.5	3.1
31	9.0	---	14	55	---	201	---	11	---	3.5	2.4	---
TOTAL	385.5	1201.4	510	4751	2578	6299	1448	1154	219.6	186.1	238.4	102.3
MEAN	12.4	40.0	16.5	153	88.9	203	48.3	37.2	7.32	6.00	7.69	3.41
MAX	64	286	22	607	212	665	183	220	21	11	72	23
MIN	7.3	8.8	13	14	32	54	15	10	4.9	3.5	2.4	1.1
CFSM	.20	.64	.26	2.43	1.41	3.22	.77	.59	.12	.10	.12	.05
IN.	.23	.71	.30	2.81	1.52	3.72	.85	.68	.13	.11	.14	.06

CAL YR 1979 TOTAL 39154.2 MEAN 107 MAX 1060 MIN 4.3 CFSM 1.70 IN 23.12
WTR YR 1980 TOTAL 19073.3 MEAN 52.1 MAX 665 MIN 1.1 CFSM .83 IN 11.26

02068500 DAN RIVER NEAR FRANCISCO, N. C.

LOCATION.--Lat 36°30'53", long 80°18'11", Stokes County, Hydrologic Unit 03010103, on left bank 200 ft (61 m) upstream from bridge on State Highway 704, 700 ft (213 m) downstream from remains of Georges Mill, 0.2 mi (0.3 km) downstream from Elk Creek, 3 mi (5 km) east of Francisco, and 7.9 mi (12.7 km) downstream from Little Dan River.

DRAINAGE AREA.--129 mi² (334 km²), revised.

PERIOD OF RECORD.--August 1924 to current year. Monthly discharge only for some periods, published in WSP 1303.

REVISED RECORDS.--WSP 1303: 1938-50 (monthly runoff). WSP 1433: 1925-26, 1928-29, 1931, 1942, 1948.

GAGE.--Water-stage recorder. Altitude of gage is 830 ft (253 m), from topographic map. Prior to Nov. 15, 1929, nonrecording gage at same site and datum.

REMARKS.--Records good. Since 1938, considerable diurnal fluctuation and regulation by Talbott and Townes reservoirs and Pinnacles Hydroelectric Plant in Virginia, 28 mi (45 km) above station (see p. 331).

AVERAGE DISCHARGE.--56 years, 192 ft³/s (5.437 m³/s), 20.21 in/yr (513 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,900 ft³/s (535 m³/s) Sept. 22, 1979, gage height, 18.11 ft (5.520 m), from rating curve extended above 8,400 ft³/s (238 m³/s) on basis of slope-area measurement of peak flow; minimum, 7.1 ft³/s (0.20 m³/s) Sept. 8, 1932, gage height, 0.43 ft (0.131 m); minimum daily, 28 ft³/s (0.79 m³/s) Aug. 17, 18, 1963, Sept, 12, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1916 reached a stage of about 15 ft (4.6 m), from information by local residents, discharge, 16,000 ft³/s (453 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	1730	2040	57.8	4.59	1.399	Apr 9	0430	*12600	357	*13.48	4.109
Mar 21	0830	3750	106	6.26	1.908	Apr 14	0900	2780	78.7	5.34	1.628

Minimum discharge, 72 ft³/s (2.04 m³/s) Aug. 16, gage height, 1.31 ft (0.399 m); minimum daily, 84 ft³/s (2.38 m³/s) Aug. 14, Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	430	212	260	252	273	202	280	375	255	163	120	95
2	561	571	197	117	276	262	266	293	272	168	139	126
3	495	519	251	197	234	202	232	238	262	196	99	136
4	438	421	269	195	198	171	246	274	242	148	96	250
5	532	392	268	233	268	200	289	270	220	173	128	115
6	442	382	266	184	175	202	223	283	202	185	103	131
7	418	279	249	174	175	192	222	265	214	125	112	100
8	395	209	204	233	170	185	778	245	207	125	124	94
9	340	254	174	206	154	157	4510	236	197	173	134	92
10	250	335	201	200	187	200	966	234	192	175	93	92
11	272	376	225	244	227	241	648	220	220	158	89	88
12	360	429	211	268	162	206	609	219	198	151	146	87
13	352	433	268	207	172	180	613	282	197	181	95	86
14	331	245	278	981	181	181	1930	307	202	139	84	85
15	295	217	286	434	157	170	1210	237	186	113	107	85
16	231	251	234	326	155	173	723	217	164	167	96	84
17	263	229	242	350	177	307	595	220	156	198	89	89
18	230	234	247	733	200	496	547	468	168	214	103	96
19	244	210	216	506	167	433	519	318	187	115	120	89
20	237	277	199	386	146	543	501	790	154	124	101	93
21	244	280	199	346	196	2200	487	648	146	129	110	104
22	251	249	164	336	196	686	467	442	134	147	167	93
23	251	228	149	359	166	478	447	687	151	129	123	98
24	264	258	145	362	174	509	442	626	174	147	102	86
25	250	232	229	272	161	556	440	533	240	113	104	111
26	245	363	160	210	161	458	427	453	432	124	96	104
27	237	469	157	226	164	401	429	431	269	120	93	91
28	211	452	150	270	156	401	424	352	213	127	92	89
29	171	409	186	229	159	413	419	262	209	158	91	92
30	267	387	244	247	---	331	414	267	189	141	90	100
31	179	---	273	245	---	302	---	266	---	117	89	---
TOTAL	9686	9802	6801	9528	5387	11638	20303	10958	6252	4643	3335	3081
MEAN	312	327	219	307	186	375	677	353	208	150	108	103
MAX	561	571	286	981	276	2200	4510	790	432	214	167	250
MIN	171	209	145	117	146	157	222	217	134	113	84	84
(†)	0	-3	+1	-4	+1	+1	-1	+1	+3	-9	-12	-5

CAL YR 1979 TOTAL 120081 MEAN 329 MAX 6830 MIN 103 MEAN‡ 330 CFSM‡ 2.56 IN‡ 34.75
WTR YR 1980 TOTAL 101414 MEAN 277 MAX 4510 MIN 84 MEAN‡ 274 CFSM‡ 2.12 IN‡ 28.86

† Change in contents, equivalent in cubic feet per second, in Talbott and Townes Reservoirs; furnished by city of Danville, VA.
‡ Adjusted for change in contents.

02071000 DAN RIVER NEAR WENTWORTH, N. C.

LOCATION (REVISED).--Lat 36°24'46", long 79°49'35", Rockingham County, Hydrologic Unit 03010103, on right bank 600 ft (183 m) downstream from Settles Bridge on Secondary Road 2150, 3.5 mi (5.6 km) northwest of Wentworth, 7.5 mi (12.1 km) downstream from Mayo River, and 103.7 mi (166.9 km) upstream from mouth.

DRAINAGE AREA.--1,042 mi² (2,699 km²), revised.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for October 1939, published in WSP 1303.

REVISED RECORDS.--WRD N. C. 1972: 1945(M).

GAGE.--Water-stage recorder. Datum of gage is 512.98 ft (156.356 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 3, 1949, water-stage recorder at site 150 ft (46 m) upstream at same datum.

REMARKS.--Records good. Diurnal fluctuation and regulation at low flow caused by Talbott and Townes reservoirs. (See p. 331).

AVERAGE DISCHARGE.--41 years, 1,232 ft³/s (34.89 m³/s), 16.06 in/yr (408 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,200 ft³/s (1,530 m³/s) June 22, 1972, gage height, 31.60 ft (9.632 m), from high-water mark in well; minimum, 65 ft³/s (1.84 m³/s) Oct. 8, 1954, gage height, 0.93 ft (0.283 m); minimum daily, 107 ft³/s (3.03 m³/s) Oct. 2, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1908 reached a stage of 34.9 ft (10.64 m), from information by North Carolina State Highway Commission, and flood in 1937 reached a stage of 29.8 ft (9.08 m), from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,000 ft³/s (340 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct 3	0930	15200	430	18.42	5.614	Apr 10	0200	*20200	572	*21.58	6.578
Mar 21	2400	17600	498	20.00	6.096						

Minimum discharge, 376 ft³/s (10.6 m³/s) Sept. 16, 17, gage height, 1.36 ft (0.415 m); minimum daily, 380 ft³/s (10.8 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2940	941	1270	953	1120	860	1720	1470	1200	868	609	432
2	3200	1090	1140	927	1010	827	1550	1390	1090	785	605	442
3	11000	2790	1050	813	995	985	1470	1280	1050	767	608	553
4	3020	1740	1070	864	1100	1020	1440	1210	1010	814	551	537
5	5530	1420	1090	950	947	1160	1420	1210	942	843	537	694
6	4170	1310	1090	950	1120	1510	1340	1260	910	801	552	508
7	2510	1270	1130	868	1030	1380	1250	1260	1080	745	521	501
8	1950	1140	1060	863	980	1300	1290	1130	948	658	520	448
9	1650	1070	981	933	991	1490	13400	1110	870	692	522	423
10	2080	1190	935	912	1050	1330	13500	1080	828	792	554	415
11	2360	1980	967	1060	1040	1250	3590	1060	823	1130	507	411
12	1670	2780	974	2580	1080	1100	2770	1040	837	851	477	399
13	1570	1920	1020	1700	989	1090	3440	1020	811	841	513	390
14	1490	1650	1250	4130	975	1270	5850	1100	799	876	460	391
15	1360	1340	1110	5130	1020	1240	6960	1100	794	707	444	388
16	1290	1230	1080	2410	1110	1140	3400	992	768	648	483	380
17	1190	1200	1050	1870	1100	1140	2590	957	733	666	484	381
18	1190	1150	996	3780	997	3140	2260	1560	726	2460	452	414
19	1140	1120	995	6340	1000	2470	2070	1740	765	1390	510	445
20	1140	1070	956	2710	981	2070	1940	1840	787	1000	645	459
21	1110	1120	923	2060	987	13000	1850	4610	708	895	647	462
22	1100	1100	920	1800	1010	10100	1750	2240	671	749	887	462
23	1110	1060	895	1930	996	3480	1670	1760	654	1400	936	433
24	1150	1060	887	1630	949	3410	1600	2870	656	1320	610	417
25	1100	1080	999	1480	936	4410	1610	2650	1290	954	544	685
26	1060	2070	1050	1330	946	2840	1600	1940	4650	706	520	598
27	1040	2600	910	1220	896	2240	1630	1520	2010	637	493	498
28	1030	1710	880	1200	891	2090	1550	1370	1210	644	470	447
29	1010	1500	861	1190	881	2410	1500	1230	986	813	456	448
30	961	1360	892	1130	---	1930	1580	1160	995	784	445	497
31	1030	---	937	1170	---	1840	---	1110	---	649	439	---
TOTAL	64151	44061	31368	56883	29127	75522	89590	47269	31601	27885	17001	13958
MEAN	2069	1469	1012	1835	1004	2436	2986	1525	1053	900	548	465
MAX	11000	2790	1270	6340	1120	13000	13500	4610	4650	2460	936	694
MIN	961	941	861	813	881	827	1250	957	654	637	439	380
CFSM	1.99	1.41	.97	1.76	.96	2.34	2.87	1.46	1.01	.86	.53	.45
IN.	2.29	1.57	1.12	2.03	1.04	2.70	3.20	1.69	1.13	1.00	.61	.50

CAL YR 1979 TOTAL 715644 MEAN 1961 MAX 31600 MIN 510 CFSM 1.88 IN 25.55
WTR YR 1980 TOTAL 528416 MEAN 1444 MAX 13500 MIN 380 CFSM 1.39 IN 18.86

02074000 SMITH RIVER AT EDEN, N. C.

LOCATION.--Lat 36°31'31" long 79°45'57", Rockingham County, Hydrologic Unit 03010103, on right bank at Eden, 0.3 mi (0.5 km) downstream from bridge on State Highway 14, 0.8 mi (1.3 km) upstream from bridge on Secondary Road 1714, 1.2 mi (1.9 km) south of Virginia-North Carolina State line, 1.3 mi (2.1 km) downstream from Stuart Creek, and 3.9 mi (6.3 km) upstream from mouth.

DRAINAGE AREA.--538 mi^2 (1,393 km^2).

PERIOD OF RECORD.--October 1939 to current year. Prior to October 1970 published as "at Spray".

REVISED RECORDS.--WSP 1433: 1946.

GAGE.--Water-stage recorder. Datum of gage is 539.56 ft (164.458 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated since August 1950 by Philpott Lake 40 mi (64 km) upstream (usable capacity, 6,325,000,000 ft^3 or 179.1 hm^3). Additional regulation by hydroelectric plant at Martinsville, Virginia 18 mi (29 km) upstream. Suspended-sediment records for the current year are published on page 417 of this report.

AVERAGE DISCHARGE.--41 years, 629 ft^3/s (17.81 m^3/s), 15.88 in/yr (403 mm/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,600 ft^3/s (1,290 m^3/s) Aug. 15, 1940, gage height, 19.28 ft (5.877 m), from rating curve extended above 12,000 ft^3/s (340 m^3/s) on basis of computation of peak flow over dam 1.5 mi (2.4 km) downstream; minimum, 38 ft^3/s (1.08 m^3/s) Aug. 7, 1967; minimum daily, 46 ft^3/s (1.30 m^3/s) Aug. 14, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,800 ft^3/s (419 m^3/s) Apr. 9, gage height, 12.33 ft (3.758 m); minimum, 86 ft^3/s (2.44 m^3/s) Aug. 18, gage height, 1.46 ft (0.445 m); minimum daily, 137 ft^3/s (3.88 m^3/s) Aug. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1300	960	1060	517	1010	374	1190	1200	1080	978	594	167
2	2960	1240	386	412	811	263	986	1190	340	985	428	434
3	4290	1420	388	652	308	504	954	974	651	969	228	340
4	2220	471	999	657	492	678	943	364	801	931	309	398
5	3010	437	1010	703	790	826	777	535	967	1040	488	424
6	2330	850	1020	567	837	885	366	1140	954	286	437	358
7	1480	840	1010	332	837	796	496	1140	784	277	534	178
8	637	828	902	567	819	653	1190	1140	305	534	479	161
9	1240	826	321	554	725	501	9260	1150	337	524	397	390
10	1780	825	389	563	350	552	2420	943	824	687	199	363
11	1590	620	734	685	391	754	2410	334	851	684	259	343
12	1310	1070	736	1160	569	745	2310	439	833	562	459	336
13	1260	1200	787	552	572	790	2280	826	836	462	459	368
14	1070	774	804	1410	582	842	3480	895	768	368	459	141
15	542	678	673	1510	600	859	3090	834	267	544	439	150
16	1160	672	311	1210	534	412	4430	820	340	499	587	386
17	1150	640	406	1060	346	600	4400	719	468	533	137	318
18	1140	274	731	2040	365	1150	2580	794	491	654	236	378
19	1130	516	735	1860	465	761	2110	692	504	542	422	384
20	1120	1010	733	853	473	1340	1460	1200	480	252	467	389
21	995	998	727	701	468	5760	636	2280	408	258	541	183
22	424	960	630	1100	458	2100	1140	1190	233	475	638	171
23	1000	1040	310	1080	397	1620	1130	1100	267	693	530	374
24	1020	886	289	980	296	1690	1110	892	445	607	178	433
25	985	333	518	951	341	1840	1140	579	865	530	283	402
26	989	1160	447	776	452	1520	953	581	2010	529	469	376
27	864	1540	542	356	431	1390	407	995	749	222	471	377
28	321	1350	539	525	424	1300	619	939	980	253	462	170
29	363	1280	548	1070	429	1340	1240	1140	333	1060	447	170
30	976	1250	408	1000	---	1180	1220	1130	411	618	372	346
31	968	---	416	1040	---	472	---	1120	---	546	173	---
TOTAL	41624	26948	19509	27443	15572	34497	56727	29275	19582	18102	12581	9408
MEAN	1343	898	629	885	537	1113	1891	944	653	584	406	314
MAX	4290	1540	1060	2040	1010	5760	9260	2280	2010	1060	638	434
MIN	321	274	289	332	296	263	366	334	233	222	137	141
(†)	-177	+4	-32	+10	+27	+96	+24	-50	-11	-59	-80	-26

CAL YR 1979 TOTAL 391597 MEAN 1073 MAX 14500 MIN 153 MEAN‡ 1072 CFSM‡ 1.99 IN‡ 27.01
WTR YR 1980 TOTAL 311268 MEAN 850 MAX 9260 MIN 137 MEAN‡ 827 CFSM‡ 1.54 IN‡ 20.96

† Change in contents, equivalent in cubic feet per second, in Philpott Lake; furnished by Corps of Engineers,
‡ Adjusted for change in contents.

02074218 DAN RIVER NEAR MAYFIELD, N. C.

LOCATION.--Lat 36°32'29", long 79°36'21", Rockingham County, Hydrologic Unit 03010103, near right bank on downstream end of bridge pier on Secondary Road 1761, at North Carolina-Virginia State line, 2.2 mi (3.5 km) upstream from Whiteoak Creek, 3.0 mi (4.8 km) northwest of Mayfield, and at mile 81.0 (130.3 km).

DRAINAGE AREA.--1,780 mi² (4,610 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 458.4 ft (139.7 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Water-discharge record good. Diurnal fluctuation and regulation at low flow caused by mills and Talbott and Townes reservoirs on the Dan River (see p. 331) and Philpott Lake on Smith River (see sta 02074000). Duke Power Company has a coded gage-height and temperature telephone telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,300 ft³/s (1,060 m³/s) Sept. 23, 1979, gage height, 27.31 ft (8.324 m); minimum, 345 ft³/s (9.77 m³/s) Aug. 2, 1977, gage height 1.95 ft (0.594 m); minimum daily, 395 ft³/s (11.2 m³/s) July 18, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 22, 1972 reached a stage of 28.1 ft (8.56 m), from floodmarks, discharge, 40,000 ft³/s (1,130 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 13,000 ft³/s (370 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct 3	0830	20000	566	20.06	6.114	Apr 10	1200	*24600	697	*22.24	6.779
Jan 19	0730	13200	374	16.07	4.898	Apr 15	0630	14800	419	17.15	5.227
Mar 21	2230	21500	609	20.79	6.337						

Minimum discharge, 493 ft³/s (14.0 m³/s) Sept. 15, gage height, 2.34 ft (0.713 m); minimum daily, 524 ft³/s (14.8 m³/s) Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4490	1990	2640	1720	2360	1470	3150	2810	2390	1980	1240	596
2	5690	2180	1730	1400	2110	1290	2870	2680	1640	1820	1050	777
3	18600	4220	1510	1620	1510	1380	2730	2570	1790	1790	870	813
4	6790	2680	2140	1630	1550	1880	2670	1770	1730	1800	871	996
5	8490	2010	2210	1790	1950	2210	2580	1720	1950	2120	984	1060
6	8790	2290	2190	1830	2040	2730	2030	2420	1900	1290	969	960
7	4870	2230	2260	1340	2070	2590	1900	2470	2110	1120	1060	723
8	2950	2140	2260	1550	1990	2410	2500	2360	1390	1240	968	671
9	3190	2010	1420	1670	1990	2240	16700	2320	1290	1270	894	703
10	3690	2160	1350	1670	1650	2190	23400	2250	1670	1660	774	753
11	4720	2780	1790	1840	1620	2280	7770	1530	1690	2080	771	749
12	3390	4480	1830	4030	1830	2140	5570	1510	1700	1750	894	732
13	3050	3710	1900	3050	1810	2120	6000	1900	1680	1690	913	706
14	2990	2750	2220	3990	1760	2440	7860	1980	1640	1580	911	574
15	1960	2360	2100	8730	1830	2570	12200	2030	1140	1400	825	524
16	2610	2120	1570	4520	1980	1910	8400	1900	1110	1260	979	629
17	2530	2050	1550	3380	1730	1890	7400	1820	1250	1240	716	721
18	2420	1680	1840	5220	1570	4030	5590	1830	1240	2350	629	758
19	2420	1630	1870	10600	1650	4290	4400	2860	1300	2750	821	807
20	2350	2180	1820	4620	1670	3710	3920	2660	1340	1440	1050	803
21	2370	2210	1790	3250	1690	16200	2650	6900	1240	1290	1160	705
22	1580	2200	1820	3260	1700	18300	3070	4520	988	1340	1350	659
23	2190	2190	1320	3350	1670	6080	2970	2910	911	1780	1690	756
24	2260	2180	1300	3040	1470	5550	2870	3650	1110	2500	975	773
25	2200	1580	1710	2760	1440	7380	2830	3750	1700	1690	893	1190
26	2140	2750	1600	2600	1610	5370	2820	2860	7520	1380	983	1110
27	2140	4930	1640	1890	1560	4150	2280	2720	4000	975	960	928
28	1440	3410	1580	1790	1530	3640	2170	2490	2600	939	930	694
29	1440	3000	1560	2420	1490	4220	2800	2500	1590	1760	894	643
30	2000	2790	1550	2340	---	3710	2900	2360	1590	1610	827	759
31	2090	---	1370	2370	---	2710	---	2310	---	1290	654	---
TOTAL	117840	76890	55440	95270	50830	125080	157000	80360	55199	50184	29505	23272
MEAN	3801	2563	1788	3073	1753	4035	5233	2592	1840	1619	952	776
MAX	18600	4930	2640	10600	2360	18300	23400	6900	7520	2750	1690	1190
MIN	1440	1580	1300	1340	1440	1290	1900	1510	911	939	629	524
(†)	-17	+4	-34	+10	+27	+98	+24	-50	-11	-39	-80	-26

CAL YR 1979 TOTAL 1203815 MEAN 3298 MAX 36200 MIN 801 MEAN‡ 3297 CFSM‡ 1.85 IN‡ 25.11
WTR YR 1980 TOTAL 916870 MEAN 2505 MAX 23400 MIN 524 MEAN‡ 2482 CFSM‡ 1.39 IN‡ 18.92

† Change in contents, equivalent in cubic feet per second, in Philpott Lake; furnished by Corps of Engineers.
‡ Adjusted for change in contents.

02074218 DAN RIVER NEAR MAYFIELD, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968-70, 1972-73, 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1976 to current year.
WATER TEMPERATURES: October 1976 to current year.

INSTRUMENTATION.--Temperature recorder since October 1977.

REMARKS.--Station is part of district's Primary Accounting Network used to define stream-quality characteristics of the State's major streams. Water temperatures near left bank sometimes affected by heated releases from power plant located 8.4 mi (13.5 km) upstream. Releases from town of Eden's sewage treatment plant enter river on left bank approximately 10.2 mi (16.4 km) upstream. Temperature recorder located at gaging station.

COOPERATION.--Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 227 micromhos Sept. 16, 1980; minimum daily, 37 micromhos Oct. 10, 1976.
WATER TEMPERATURES: Maximum daily, 33.0°C July 20, 1977; minimum, 0.0°C Feb. 11, 12, 18, 19, 1979, Feb. 3, Mar. 3, 1980.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 227 micromhos Sept. 16; minimum daily, 41 micromhos Apr. 10.
WATER TEMPERATURES: Maximum, 31.0°C Aug. 11; minimum, 0.0°C Feb. 3, Mar. 3.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT 10...	1015	3700	92	5.9	16.0	25	9.6	20	0	4.9	1.9
FEB 05...	1130	1830	97	7.7	3.0	4	13.9	20	0	4.9	1.9
MAY 01...	1130	3190	84	7.5	12.5	4	10.5	17	0	4.3	1.6
JUL 30...	1400	1880	85	6.6	27.0	80	7.5	18	0	4.5	1.6
SEP 03...	1130	687	100	7.0	28.0	5	7.7	26	0	6.8	2.1

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 10...	11	63	1.1	1.6	26	0	21	52	6.5	12	.1
FEB 05...	11	63	1.1	1.3	30	0	25	1.0	7.8	10	.1
MAY 01...	8.3	49	.9	1.2	28	0	23	1.6	5.4	7.7	.1
JUL 30...	8.4	48	.9	1.7	24	0	20	9.3	5.3	9.2	.1
SEP 03...	10	44	.9	1.8	33	0	*29	5.3	6.8	8.5	.1

* Lab alkalinity

02074218 DAN RIVER NEAR MAYFIELD, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
OCT 10...	14	68	65	.09	679	.22	.01	.23	.25	--	.06
FEB 05...	15	75	68	.10	371	.23	.02	.25	.25	--	.16
MAY 01...	13	58	59	.08	500	.22	.01	.23	.31	--	.02
JUL 30...	13	60	57	.08	305	.32	.01	.33	.32	3.1	.03
SEP 03...	15	78	70	.11	145	.45	.03	.48	.48	--	.01

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)
OCT 10...	.08	.07	.10	.35	.19	.41	.14	.27	--	.64	2.8
FEB 05...	.17	.19	.22	1.3	.51	1.5	.82	.68	--	1.8	7.7
MAY 01...	.16	.02	.21	.15	--	.17	--	--	--	.40	1.8
JUL 30...	.05	.04	.06	.44	.20	.47	.22	.25	2800	.80	3.5
SEP 03...	.04	.01	.05	.31	.24	.32	.04	.28	--	.80	3.5

DATE	NITRO-GEN, TOT IN BOT-TOM MA-TERIAL (MG/KG AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS PO4)	PHOS-PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)
OCT 10...	--	.120	.09	.37	.060	.03	.04	.12	--	--	--
FEB 05...	--	.140	.25	.43	.090	.08	.09	.28	--	--	--
MAY 01...	--	.080	.25	.25	.070	.08	.05	.15	--	--	--
JUL 30...	2800	.190	.15	.58	.070	.05	.03	.09	510	--	--
SEP 03...	--	.360	.25	1.1	.320	.08	.08	.25	--	2	0

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)
OCT 10...	--	--	--	--	--	--	10	10	0	--
FEB 05...	--	--	--	--	--	--	30	8	22	--
MAY 01...	--	--	--	--	--	--	<10	<9	1	--
JUL 30...	--	2	--	--	--	<10	10	8	2	20
SEP 03...	2	--	0	0	0	--	20	19	1	--

02074218 DAN RIVER NEAR MAYFIELD, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)
OCT										
10...	--	--	--	--	51	44	7	--	3000	2900
FEB										
05...	--	--	--	--	16	8	8	--	840	680
MAY										
01...	--	--	--	--	6	3	3	--	1600	1500
JUL										
30...	--	--	--	40	12	7	5	20	7700	7700
SEP										
03...	0	0	0	--	6	1	5	--	660	440

DATE	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT										
10...	140	--	5	5	0	--	--	--	--	--
FEB										
05...	160	--	1	1	0	--	--	--	--	--
MAY										
01...	150	--	3	3	0	--	--	--	--	--
JUL										
30...	40	19000	20	20	0	<10	--	--	--	340
SEP										
03...	220	--	1	0	1	--	30	20	10	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
OCT									
10...	--	--	--	--	--	--	--	--	30
FEB									
05...	--	--	--	--	--	--	--	--	20
MAY									
01...	--	--	--	--	--	--	--	--	20
JUL									
30...	--	--	--	.00	--	--	--	0	--
SEP									
03...	<.1	.0	<.1	--	0	0	0	--	10

DATE	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT									
10...	30	2	--	11	.9	--	--	--	.00
FEB									
05...	0	30	--	2.0	1.3	--	--	--	.00
MAY									
01...	0	20	--	2.9	.8	--	--	--	.00
JUL									
30...	--	2	51	12	2.0	8.9	.0	8.9	.00
SEP									
03...	0	10	--	2.7	1.0	--	--	--	.00

02074218 DAN RIVER NEAR MAYFIELD, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO JULY 1980

DATE	OCT 10,79		FEB 5,80		MAY 1,80		JUL 30,80	
TIME	1015		1130		1130		1400	
TOTAL CELLS/ML	170		120000		5800		8700	
DIVERSITY: DIVISION	1.1		0.0		0.8		0.8	
.CLASS	1.1		0.0		0.8		0.8	
..ORDER	1.1		0.0		1.3		1.6	
...FAMILY	1.4		0.0		1.4		2.0	
....GENUS	1.4		0.0		2.1		2.1	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	--	-	*	0
...HYDRODICTYACEAE								
....PEDIASTRUM	--	-	--	-	--	-	250	3
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	*	0	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	15	9	*	0	69	1	120	1
....DICTYOSPHAERIUM	--	-	--	-	320	5	230	3
....KIRCHNERIELLA	--	-	--	-	*	0	55	1
....OOCYSTIS	--	-	--	-	--	-	55	1
....TETRAEDRON	--	-	--	-	*	0	--	-
...SCENEDESMACEAE								
....SCENEDESMUS	100#	59	--	-	*	0	96	1
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	--	-	96	2	55	1
..ZYGNEMATALES								
...DESMIDIACEAE								
....SPONDYLOSIUM	--	-	--	-	--	-	69	1
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	--	-	--	-	120	2	120	1
....MELOSIRA	--	-	--	-	*	0	*	0
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	--	-	41	1	*	0
....COCCONEIS	--	-	--	-	--	-	*	0
...CYMBELLACEAE								
....AMPHORA	--	-	--	-	--	-	*	0
....CYMBELLA	--	-	*	0	--	-	--	-
...DIATOMACEAE								
....DIATOMA	--	-	*	0	--	-	--	-
...GOMPHONEMATACEAE								
....GOMPHONEMA	--	-	--	-	--	-	*	0
...NAVICULACEAE								
....NAVICULA	--	-	--	-	41	1	83	1
...NITZSCHIACEAE								
....NITZSCHIA	5	3	--	-	*	0	150	2
...SURIRELLACEAE								
....SURIRELLA	--	-	--	-	--	-	*	0

02074218 DAN RIVER NEAR MAYFIELD, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO JULY 1980

DATE TIME	OCT 10,79 1015		FEB 5,80 1130		MAY 1,80 1130		JUL 30,80 1400	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CRYPTOPHYTA (CRYPTOMONADS)								
.CRYPTOPHYCEAE								
..CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
....CHROOMONAS	--	-	--	-	*	0	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	--	-	--	-	490	9	1600#	19
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	--	-	290	3
...OSCILLATORIACEAE								
....LYNGBYA	--	-	120000#	100	3000#	52	--	-
....OSCILLATORIA	--	-	--	-	1400#	25	5300#	61
....SCHIZOTHRIX	50#	29	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....TRACHELOMONAS	--	-	--	-	--	-	*	0
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..PERIDINIALES								
...PERIDINIACEAE								
....PERIDINIUM	--	-	--	-	*	0	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02074218 DAN RIVER NEAR MAYFIELD, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	110	64	84	86	109	75	75	76	92	115	113
2	71	114	64	64	92	106	75	82	77	76	103	122
3	50	62	67	84	69	82	78	79	100	73	117	97
4	64	63	120	86	96	97	94	65	113	75	107	106
5	69	68	93	89	113	87	82	80	97	74	123	109
6	53	86	82	84	90	108	70	74	95	63	114	93
7	61	87	89	78	88	95	72	85	87	69	133	173
8	56	91	92	84	92	86	79	86	79	83	110	123
9	81	104	64	90	85	80	48	77	92	88	120	138
10	79	103	86	85	99	86	41	80	130	88	119	145
11	71	77	90	91	86	94	57	73	98	95	124	132
12	76	70	90	80	92	97	61	85	147	81	142	156
13	84	71	84	61	113	88	62	103	94	77	123	195
14	95	71	93	72	96	104	60	104	120	85	109	187
15	71	78	85	52	95	97	51	90	78	94	116	132
16	83	82	87	85	92	84	58	88	89	95	144	227
17	57	83	87	89	84	90	61	108	91	100	115	144
18	93	74	95	70	85	75	61	72	108	95	107	145
19	98	87	80	54	85	72	68	64	113	89	131	138
20	89	96	76	83	108	76	66	85	136	73	139	125
21	64	91	94	57	98	80	61	59	108	80	133	142
22	104	90	82	89	102	49	74	85	94	89	130	132
23	92	87	86	76	103	80	76	79	108	105	100	154
24	113	86	71	81	92	70	75	68	124	88	84	159
25	97	84	80	89	99	80	78	85	95	76	105	100
26	99	87	85	78	93	85	75	81	87	86	139	116
27	96	82	80	83	108	86	70	80	71	89	101	131
28	89	74	87	77	120	71	84	82	103	97	133	190
29	83	72	76	96	116	79	82	113	89	136	112	116
30	116	74	79	82	---	73	74	99	79	100	108	127
31	106	---	87	80	---	85	---	83	---	115	181	---
MEAN	81	80	79	76	96	82	69	82	98	87	121	139

WTR YR 1980 MEAN 91 MAX 227 MIN 41

02074218 DAN RIVER NEAR MAYFIELD, N. C.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.0	19.5	15.0	10.0	7.5	6.0	5.5	4.5	3.5	2.0	6.5	2.5
2	21.0	18.5	15.5	14.5	6.0	4.5	5.0	4.0	2.5	1.0	2.5	1.0
3	19.0	18.0	15.5	14.5	5.0	4.0	6.0	4.0	1.5	.0	2.5	.0
4	18.5	17.5	14.5	12.5	4.5	3.0	5.5	4.5	2.5	.5	3.5	.5
5	18.0	11.0	12.5	10.5	6.0	3.5	4.5	4.0	2.5	1.0	4.5	3.0
6	16.5	15.0	11.0	10.0	6.5	4.5	4.5	4.0	2.5	1.5	6.0	4.0
7	16.0	15.0	10.5	9.5	7.5	5.5	4.0	4.0	3.5	2.0	7.5	6.0
8	16.0	14.5	10.5	9.5	8.0	6.5	4.0	4.0	3.5	2.5	9.5	7.5
9	17.0	15.0	11.5	10.0	6.5	5.5	5.0	4.0	3.5	3.0	11.5	9.5
10	18.0	15.0	12.5	11.0	5.5	4.5	5.5	4.0	3.5	2.0	11.0	10.5
11	15.0	14.0	12.5	12.5	5.5	4.0	6.0	5.0	4.0	2.0	11.0	9.5
12	14.5	13.5	14.0	12.0	7.0	5.0	6.0	5.5	4.5	2.5	10.5	8.0
13	14.5	10.0	12.5	11.5	10.0	7.0	5.5	4.5	3.5	2.5	8.0	5.5
14	13.5	13.0	12.0	10.5	9.5	8.5	5.5	4.5	4.0	2.5	6.5	4.5
15	14.0	11.5	10.5	9.0	8.5	7.0	6.5	4.5	5.0	3.5	7.5	5.5
16	14.0	12.5	10.0	8.5	7.0	6.0	7.5	6.5	6.0	5.0	9.0	6.5
17	15.0	13.5	10.0	8.5	6.5	5.0	7.5	7.0	5.5	4.5	10.5	9.0
18	15.5	14.5	9.5	8.5	6.0	4.5	7.5	7.0	6.0	3.5	12.0	10.5
19	16.0	15.0	10.0	8.5	5.0	4.0	7.5	7.0	5.5	3.5	11.0	10.0
20	16.5	15.5	10.5	9.5	4.5	3.5	7.0	6.5	6.5	4.0	10.5	10.0
21	18.0	16.5	11.0	10.0	5.0	4.0	7.0	6.5	8.0	6.0	10.5	10.0
22	19.0	17.5	11.5	10.5	5.5	4.0	7.5	6.5	10.5	8.0	10.5	10.0
23	20.0	18.0	12.5	11.0	6.5	5.5	7.5	7.0	12.5	10.5	10.0	9.0
24	18.0	16.0	14.0	12.5	9.0	6.5	7.0	6.0	12.5	11.0	10.5	9.5
25	16.5	14.0	14.5	13.5	9.5	9.0	6.0	5.0	12.0	11.0	10.5	9.5
26	14.5	12.5	16.0	14.5	9.0	8.0	6.0	5.0	11.0	9.0	10.5	9.5
27	12.5	11.5	15.0	13.0	8.0	7.0	5.5	5.5	9.5	7.5	11.0	9.5
28	11.5	10.0	13.0	11.0	7.0	6.0	6.5	5.0	8.0	6.5	11.0	10.0
29	13.0	11.5	11.0	9.0	6.0	5.0	6.5	6.0	8.0	6.0	12.5	10.0
30	14.5	13.0	9.0	7.5	5.5	5.0	6.0	4.5	---	---	12.5	11.5
31	15.0	14.0	---	---	5.0	4.5	4.5	3.5	---	---	13.5	12.5
MONTH	21.0	10.0	16.0	7.5	10.0	3.0	7.5	3.5	12.5	.0	13.5	.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.0	12.0	14.5	12.5	21.5	19.5	22.5	22.5	27.5	27.0	29.5	27.5
2	15.0	12.5	15.0	13.0	24.5	21.0	22.5	22.0	27.0	26.5	30.0	28.0
3	15.5	13.5	16.0	14.0	25.5	23.5	22.5	22.0	27.5	26.5	30.5	28.0
4	17.0	15.5	18.0	15.5	26.0	24.5	22.0	21.5	28.5	27.0	29.0	27.5
5	---	---	19.5	17.0	25.0	21.5	22.5	21.5	28.5	28.0	28.0	27.0
6	---	---	19.5	18.5	23.0	20.0	24.5	22.5	28.0	27.0	27.5	26.0
7	---	---	19.5	17.5	22.0	19.5	25.5	24.0	28.0	27.5	27.0	26.0
8	---	---	19.5	17.0	24.0	22.0	25.5	25.0	29.0	27.5	27.0	25.5
9	---	---	17.0	14.5	24.5	22.0	26.0	25.0	29.5	28.5	27.0	25.5
10	14.0	12.5	16.0	14.0	23.5	21.5	25.5	24.5	29.5	28.0	26.5	25.5
11	13.5	12.5	18.0	15.5	23.5	20.5	25.0	24.0	31.0	28.5	26.0	24.0
12	13.5	12.0	21.0	17.5	22.0	20.0	25.5	24.5	30.5	29.5	25.5	23.5
13	14.0	12.5	22.0	20.5	21.5	19.0	25.5	24.5	30.0	28.5	24.5	22.5
14	14.0	12.0	---	---	21.5	19.0	26.5	25.0	29.5	28.0	23.5	23.5
15	12.0	10.0	---	---	24.0	20.5	28.0	26.0	29.5	28.0	23.5	23.5
16	10.5	9.5	---	---	26.0	24.0	30.0	27.5	28.5	26.5	25.0	23.5
17	12.5	10.0	---	---	26.0	23.0	30.0	27.5	26.5	24.0	25.5	24.0
18	13.5	11.5	---	---	25.0	22.5	28.5	26.0	26.5	23.0	25.5	25.0
19	15.0	12.5	---	---	23.5	20.5	27.0	24.5	28.0	25.5	25.0	24.5
20	17.0	14.5	---	---	24.5	21.0	27.5	26.0	28.0	26.0	25.0	25.0
21	17.5	15.0	---	---	23.5	21.0	30.5	27.0	28.0	26.5	25.5	24.0
22	18.0	16.0	---	---	24.5	21.5	30.0	28.0	27.0	25.0	26.5	25.0
23	18.5	17.0	---	---	27.0	23.5	29.5	26.5	25.0	23.0	27.0	25.5
24	18.5	18.0	---	---	26.0	24.0	26.5	24.5	24.5	22.5	27.0	26.0
25	18.5	16.0	---	---	24.5	20.5	26.5	25.0	27.0	23.0	26.0	23.0
26	16.5	15.0	---	---	20.5	18.5	26.5	25.0	27.0	25.5	24.0	23.0
27	16.5	14.5	---	---	21.0	19.0	27.5	25.0	27.0	25.5	23.0	20.0
28	15.5	14.5	---	---	21.0	21.0	28.5	26.0	27.5	25.5	20.0	19.0
29	14.5	13.0	21.0	18.5	22.0	21.0	28.5	25.5	28.0	25.5	20.0	18.0
30	14.5	13.0	21.5	19.5	22.5	22.0	26.5	25.5	27.0	25.5	20.0	19.5
31	---	---	22.0	19.5	---	---	27.5	26.0	28.5	26.0	---	---
MONTH	18.5	9.5	22.0	12.5	27.0	18.5	30.5	21.5	31.0	22.5	30.5	18.0
YEAR	31.0	.0										

02074218 DAN RIVER NEAR MAYFIELD, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
10...	1015	3700	77	769	61
FEB					
05...	1130	1830	27	133	44
MAY					
01...	1130	3190	58	500	--
JUL					
30...	1400	1880	126	640	87
SEP					
03...	1130	687	45	83	--

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	PH LAB (UNITS)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	FIELD ALKA-LINITY (MG/L AS CACO3)	LAB ALKA-LINITY (MG/L AS CACO3)
OCT												
29...	1529	1340	--	6.8	--	10.0	10.4	<10	.4	1200	--	20
NOV												
26...	1312	2540	--	--	6.7	12.0	9.5	12	1.1	6100	--	20
DEC												
11...	1500	1880	--	--	--	7.0	14.1	10	1.0	60	--	--
JAN												
28...	1135	1780	--	--	6.2	2.0	12.4	<10	.0	160	--	17
FEB												
18...	1156	1530	--	--	7.0	.0	13.2	<10	.3	140	--	20
MAR												
20...	1230	3560	--	--	6.9	7.0	11.2	<10	2.7	210	--	17
APR												
28...	1130	2140	--	--	7.0	10.0	9.9	<10	.9	180	--	20
MAY												
19...	1625	2480	--	--	7.2	17.0	9.1	<10	.9	2000	--	18
JUN												
19...	1546	1240	--	--	7.4	21.0	8.4	10	1.0	160	--	25
JUL												
15...	1410	1620	--	6.7	--	25.0	7.7	12	.6	200	22	--
AUG												
21...	1440	1390	--	6.8	--	27.5	7.5	<10	1.1	600	18	--
SEP												
16...	1047	562	140	6.8	--	21.0	7.6	<10	.9	20	29	--

02077200 HYCO CREEK NEAR LEASBURG, N. C.

LOCATION (REVISED).--Lat 36°23'57", long 79°11'50", Caswell County, Hydrologic Unit 03010104, on right bank 10 ft (3 m) upstream from bridge on U.S. Highway 158, 1.5 mi (2.4 km) upstream from Kilgore Creek, and 2.5 mi (4.0 km) west of Leasburg.

DRAINAGE AREA.--45.9 mi² (118.9 km²), revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1964 to current year. Prior to October 1968 published as North Hyco Creek near Leasburg.

GAGE.--Water-stage recorder. Datum of gage is 400.08 ft (121.944 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge record good.

AVERAGE DISCHARGE.--16 years, 46.0 ft³/s (1.303 m³/s), 13.61 in/yr (346 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,720 ft³/s (190 m³/s) July 14, 1975, gage height, 39.84 ft (12.143 m), from rating curve extended above 1,200 ft³/s (340 m³/s); no flow at times, most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 900 ft³/s (25.5 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 12	0630	*1040	29.5	*33.72	10.278

No flow Sept. 5, 12-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	202	9.8	22	12	34	20	70	20	8.8	18	.76	.04
2	76	11	21	12	31	14	54	18	8.8	14	.84	.04
3	76	31	20	11	29	25	45	17	7.9	12	1.0	.02
4	48	42	20	11	26	44	40	16	6.8	12	.72	.01
5	127	25	21	20	25	89	33	15	5.2	10	.68	.00
6	166	18	21	22	23	233	28	13	4.5	9.3	.56	.08
7	66	16	30	18	22	137	25	12	141	7.6	.44	.44
8	38	14	25	18	21	90	24	11	85	6.1	.36	.19
9	30	13	23	18	23	91	226	11	27	7.5	.36	.10
10	32	13	20	16	30	70	113	11	18	10	.32	.02
11	41	190	17	85	31	57	65	10	14	10	.32	.02
12	28	724	17	276	40	43	51	10	11	8.6	.24	.00
13	22	179	18	121	34	40	54	9.4	9.4	6.7	.24	.00
14	24	104	25	93	35	45	112	9.2	8.3	6.0	.28	.00
15	20	73	20	117	51	34	152	8.7	7.8	5.2	.44	.00
16	17	58	18	77	86	29	80	9.3	6.9	4.5	.56	.00
17	16	46	18	61	68	30	59	8.5	5.9	3.7	.36	.00
18	14	39	16	166	44	203	50	11	5.1	3.7	.18	.00
19	13	33	15	378	37	125	43	14	5.8	3.5	.36	.00
20	12	29	15	137	34	81	38	34	5.9	3.4	.68	.00
21	12	27	14	89	32	247	34	300	4.6	3.2	.68	.00
22	12	24	14	75	30	209	31	69	3.7	2.8	.84	.00
23	12	23	14	180	27	100	28	33	3.4	5.4	.84	.00
24	20	22	14	121	24	130	26	26	3.1	6.0	.72	.00
25	16	21	23	83	23	170	25	22	34	4.3	.60	.00
26	12	41	22	65	31	130	25	18	524	3.1	.48	.00
27	11	53	15	53	29	100	25	14	347	1.8	.36	.00
28	9.9	35	14	46	25	70	22	12	61	1.5	.20	.00
29	9.8	29	13	39	23	120	20	11	33	1.3	.16	.00
30	11	24	13	33	---	94	20	10	24	1.1	.14	.00
31	10	---	13	35	---	82	---	9.5	---	.88	.10	---
TOTAL	1203.7	1966.8	571	2488	968	2952	1618	792.6	1430.9	193.18	14.82	.96
MEAN	38.8	65.6	18.4	80.3	33.4	95.2	53.9	25.6	47.7	6.23	.48	.032
MAX	202	724	30	378	86	247	226	300	524	18	1.0	.44
MIN	9.8	9.8	13	11	21	14	20	8.5	3.1	.88	.10	.00
CFSM	.85	1.43	.40	1.75	.73	2.07	1.17	.56	1.04	.14	.01	.001
IN.	.98	1.59	.46	2.02	.78	2.39	1.31	.64	1.16	.16	.01	.00

CAL YR 1979 TOTAL 28538.60 MEAN 78.2 MAX 2140 MIN 2.1 CFSM 1.70 IN 23.13
WTR YR 1980 TOTAL 14199.96 MEAN 38.8 MAX 724 MIN .00 CFSM .85 IN 11.51

02077200 HYCO CREEK NEAR LEASBURG, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: May 1964 to current year.

INSTRUMENTATION.--Temperature recorder since May 1964.

REMARKS.--Miscellaneous chemical data published for water years, 1959, 1965-67; 1959 data published as 02077202 North Hyco Creek near Leasburg. Prior to October 1967 daily water temperature data published as North Hyco Creek near Leasburg. Zero flow Sept. 5, 12-30.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 29.5°C Aug. 11, 12, 1980; minimum, 0.0°C on several days during winter months in most years.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 29.5°C Aug. 11, 12; minimum, 0.5°C Mar. 1-5.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.0	20.5	14.0	12.0	5.0	4.0	5.0	4.0	3.0	1.0	5.0	.5
2	21.0	20.5	15.0	14.0	4.0	3.5	4.0	3.5	1.5	1.0	.5	.5
3	21.0	20.0	15.0	14.0	3.5	2.0	3.5	2.0	1.0	1.0	.5	.5
4	20.0	18.5	14.0	11.5	3.0	1.5	3.0	3.0	1.0	1.0	.5	.5
5	19.0	18.0	11.5	10.0	3.5	2.0	3.0	3.0	1.0	1.0	2.0	.5
6	18.0	15.5	10.0	9.0	4.0	3.5	3.0	2.0	1.0	1.0	5.5	2.0
7	16.5	15.5	10.0	8.5	5.5	4.0	2.0	1.5	2.0	1.0	6.5	5.5
8	16.0	15.0	9.5	8.5	6.0	5.5	4.0	2.0	2.0	1.5	9.0	6.5
9	16.0	15.5	10.0	9.0	5.5	4.5	4.5	3.5	2.0	1.5	10.5	9.0
10	16.5	14.0	12.0	10.0	4.5	3.5	4.5	3.5	1.5	1.0	10.5	9.0
11	14.0	13.0	12.0	12.0	5.0	4.0	5.0	3.5	1.5	1.0	9.5	8.5
12	13.5	11.0	12.0	11.0	6.5	5.0	5.0	5.0	1.5	1.0	9.0	6.5
13	13.5	13.5	11.0	10.5	9.0	6.5	5.0	4.5	1.5	1.0	6.5	5.0
14	13.5	11.5	10.5	9.0	9.0	8.0	4.5	4.0	3.0	1.0	6.0	4.5
15	11.5	10.5	9.0	8.0	8.0	6.0	6.5	4.5	4.5	3.0	8.0	5.0
16	13.0	11.0	9.0	8.0	6.5	6.0	6.5	6.5	6.0	4.5	9.0	6.5
17	13.5	11.5	9.0	8.0	6.5	4.5	6.5	6.0	6.0	4.0	10.5	9.0
18	14.0	12.0	9.0	8.0	4.5	3.5	6.5	6.0	4.0	1.5	11.0	10.5
19	15.0	13.5	9.0	8.5	3.5	3.5	6.5	6.0	3.0	1.5	11.0	9.0
20	16.0	14.5	9.5	9.0	3.5	3.0	6.0	6.0	5.5	3.0	10.0	9.5
21	17.0	15.5	10.0	9.5	3.5	3.0	6.0	6.0	8.5	5.5	12.0	10.0
22	18.0	16.0	10.5	9.5	4.5	3.5	6.5	6.0	10.5	8.5	12.0	9.0
23	18.0	16.5	11.5	10.5	6.0	4.5	7.0	6.5	11.0	10.0	9.5	8.5
24	16.5	14.5	13.5	11.5	9.0	6.0	6.5	4.5	11.5	10.5	9.0	9.0
25	14.5	12.0	14.5	13.5	9.0	8.5	5.5	4.5	11.0	9.0	11.0	9.0
26	13.0	10.5	15.5	14.5	8.5	6.5	6.0	5.5	9.0	6.5	11.0	10.0
27	11.0	9.5	14.5	11.5	6.5	5.5	6.0	6.0	6.5	5.0	10.0	8.5
28	10.5	9.5	11.5	10.5	5.5	4.5	6.0	5.5	6.0	5.0	10.0	10.0
29	12.0	10.5	10.5	8.0	4.5	3.5	5.5	5.5	6.0	5.0	11.5	9.5
30	13.5	12.0	8.0	5.0	4.5	4.0	5.5	4.5	---	---	11.5	11.5
31	13.5	13.0	---	---	5.0	4.5	4.5	3.0	---	---	13.0	11.5
MONTH	21.0	9.5	15.5	5.0	9.0	1.5	7.0	1.5	11.5	1.0	13.0	.5

02077200 HYCO CREEK NEAR LEASBURG, N. C.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.0	11.0	14.0	13.0	23.5	21.0	24.0	21.0	28.0	25.5	25.0	23.5
2	14.0	11.5	15.5	12.0	24.5	22.0	24.5	21.0	27.0	24.5	25.5	24.0
3	15.5	13.5	17.0	14.5	25.5	23.0	24.5	23.5	28.5	26.0	25.0	24.0
4	18.0	15.5	19.0	15.0	25.5	23.5	25.0	23.0	28.5	25.5	25.0	24.0
5	17.0	14.0	19.5	16.0	24.5	21.0	26.5	24.0	28.0	25.5	---	---
6	15.0	11.5	19.5	16.5	23.0	20.0	26.5	25.0	28.0	25.5	24.5	23.5
7	14.0	12.0	21.0	18.0	20.5	20.0	26.5	24.0	28.0	25.5	25.0	23.5
8	13.5	12.0	20.5	16.5	22.0	20.5	26.0	23.5	28.5	25.5	25.0	23.0
9	16.0	13.5	16.5	14.5	22.0	20.0	25.5	23.5	28.0	25.5	24.0	22.0
10	16.0	14.0	17.0	13.5	21.0	19.0	25.0	24.0	27.0	25.5	23.5	22.0
11	15.0	13.5	18.5	15.5	21.0	19.5	25.0	23.0	29.5	26.5	23.0	21.0
12	15.0	14.0	21.0	17.0	20.5	19.0	26.0	23.5	29.5	27.0	---	---
13	14.0	13.5	21.0	20.0	20.5	18.0	26.5	25.0	28.5	25.5	---	---
14	15.5	14.0	22.0	20.0	21.0	18.5	26.5	24.5	27.0	24.5	---	---
15	15.5	12.0	21.5	20.0	23.5	20.0	26.5	24.0	27.0	25.0	---	---
16	12.0	10.5	20.0	17.0	23.5	22.0	28.5	25.0	27.0	25.5	---	---
17	13.0	10.5	19.5	18.0	23.5	22.0	29.0	26.5	27.0	24.0	---	---
18	14.0	11.0	21.0	18.5	23.5	20.5	29.0	26.0	24.5	23.0	---	---
19	15.0	11.5	21.0	19.0	20.5	18.5	28.0	25.5	25.5	24.0	---	---
20	16.5	13.5	21.0	19.0	23.0	19.5	28.5	26.0	27.0	25.0	---	---
21	18.0	15.0	19.0	18.5	22.0	19.0	28.5	26.0	27.0	25.5	---	---
22	17.0	14.5	19.5	19.0	22.0	19.0	28.0	26.0	25.5	24.5	---	---
23	19.0	16.0	21.0	19.5	23.0	20.0	28.0	25.0	24.5	23.0	---	---
24	20.0	18.0	21.5	20.5	23.0	21.5	25.5	23.5	24.0	23.0	---	---
25	20.0	19.0	21.0	20.0	21.5	19.5	26.0	23.5	24.5	22.0	---	---
26	19.5	18.0	21.0	19.5	19.5	19.0	26.5	24.0	24.5	22.0	---	---
27	18.0	16.5	20.5	18.0	20.0	19.0	26.0	24.0	24.5	21.5	---	---
28	17.0	16.0	20.5	18.0	22.0	20.0	26.5	25.0	25.0	22.0	---	---
29	16.5	14.5	22.0	19.0	24.5	22.0	27.0	25.5	25.0	22.0	---	---
30	14.5	13.5	22.0	21.0	24.5	23.0	27.0	24.5	25.0	23.0	---	---
31	---	---	23.0	21.0	---	---	28.0	25.0	25.0	23.5	---	---
MONTH	20.0	10.5	23.0	12.0	25.5	18.0	29.0	21.0	29.5	21.5	25.5	21.0
YEAR	29.5	.5										

02077240 DOUBLE CREEK NEAR ROSEVILLE, N. C.

LOCATION.--Lat 36°21'44", long 79°05'48", Person County, Hydrologic Unit 03010104, on left bank 21 ft (6 m) downstream from culvert on Secondary Road 1166, 1.0 mi (1.6 km) upstream from Mill Creek, and 3.0 mi (4.8 km) northwest of Roseville.

DRAINAGE AREA.--7.47 mi² (19.35 km²).

PERIOD OF RECORD.--May 1964 to September 1975. April 1977 to current year.

REVISED RECORDS.--WRD N.C. 1972: 1964-66, 1967(M), 1968-71(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 450.39 ft (137.279 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Recording rain gage at station.

AVERAGE DISCHARGE.--14 years (water years 1965-75, 1978-80), 7.86 ft³/s (0.223 m³/s), 14.29 in/yr (363 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,390 ft³/s (96.0 m³/s), July 13, 1975, gage height, 7.41 ft (2.259 m), from rating curve extended above 620 ft³/s (17.6 m³/s) on basis of computation of peak flow through culvert at gage height 5.79 ft (1.765 m); minimum, 0.03 ft³/s (<0.001 m³/s) Oct. 3, 4, 5, 7, 1968, Oct. 6, 7, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 170 ft³/s (4.81 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 11	1145	272	7.70	4.21	1.283	May 20	2230	*510	14.4	*5.20	1.585

Minimum discharge, 0.05 ft³/s (0.001 m³/s) Sept. 24, gage height, 1.52 ft (0.463 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	3.2	4.2	2.9	4.7	4.2	8.2	4.4	2.7	2.7	9.7	.19
2	7.8	3.9	4.1	2.9	4.5	4.4	7.4	4.2	2.5	2.5	7.3	.16
3	7.7	8.1	3.9	2.8	4.0	4.7	7.0	4.0	2.4	2.4	5.1	1.6
4	6.8	5.2	4.0	3.1	3.7	5.6	6.7	3.8	2.3	2.5	4.6	3.0
5	16	4.2	4.0	4.5	3.4	22	6.1	3.7	2.1	2.3	4.9	.78
6	7.5	3.9	4.5	4.3	3.2	20	5.7	3.7	2.8	2.1	4.4	.59
7	5.6	3.9	4.8	3.9	3.0	12	5.7	3.4	9.2	1.9	3.9	.49
8	4.9	3.9	4.1	4.2	3.0	10	5.7	3.2	3.5	2.0	3.7	.40
9	4.3	3.9	3.5	4.0	5.0	8.9	14	3.2	2.5	2.4	3.6	.32
10	5.5	4.0	3.5	3.9	6.2	7.5	8.9	3.1	2.3	3.8	3.7	.26
11	5.0	120	3.5	15	6.0	6.8	7.1	3.1	2.3	3.1	3.3	.22
12	4.4	40	3.5	20	6.0	6.1	6.6	3.0	2.1	2.1	2.8	.18
13	4.2	16	3.8	9.5	6.0	6.7	7.4	2.9	2.0	1.9	2.5	.16
14	4.3	11	4.1	11	6.3	6.8	16	2.9	2.0	1.7	2.2	.13
15	3.8	8.3	3.5	9.7	8.2	5.8	13	2.7	1.9	1.5	2.2	.14
16	3.8	7.2	3.5	7.5	10	5.5	8.6	2.7	1.8	2.1	2.0	.12
17	3.2	6.2	3.4	6.7	7.5	6.7	7.2	2.6	1.6	3.2	1.8	.27
18	3.2	5.7	3.2	55	6.1	23	6.6	3.9	1.8	5.7	1.4	.63
19	3.3	5.3	3.2	25	5.8	11	6.2	2.9	2.0	3.4	1.2	.45
20	3.3	5.0	3.0	13	5.6	9.9	5.7	53	1.6	3.0	1.1	.39
21	3.3	4.9	2.9	9.6	5.3	36	5.6	40	1.5	2.8	.80	.45
22	3.6	4.9	2.9	11	5.1	14	5.3	8.6	1.5	3.0	.70	.32
23	4.3	4.8	2.9	23	4.9	9.6	5.1	6.5	1.3	6.5	.60	.16
24	4.9	4.6	3.1	12	4.7	11	4.8	5.5	1.3	6.0	.51	.09
25	3.9	4.5	4.3	8.8	4.6	14	4.7	5.3	26	4.5	.48	.39
26	3.7	7.9	3.4	7.5	5.4	9.2	4.6	4.2	42	4.3	.39	.53
27	3.5	5.8	3.0	6.7	4.8	7.8	4.7	3.4	9.0	3.6	.31	.27
28	3.6	5.1	2.9	6.2	5.0	7.4	4.7	3.2	5.1	3.7	.29	.27
29	3.6	4.7	2.9	5.7	4.5	16	4.8	2.9	4.1	3.5	.26	.40
30	3.5	4.4	3.0	5.4	---	11	4.9	2.8	3.3	3.1	.23	1.5
31	3.2	---	2.9	5.8	---	10	---	2.7	---	3.8	.21	---
TOTAL	155.7	320.5	109.5	310.6	152.5	333.6	209.0	201.5	146.5	97.1	76.18	14.86
MEAN	5.02	10.7	3.53	10.0	5.26	10.8	6.97	6.50	4.88	3.13	2.46	.50
MAX	16	120	4.8	55	10	36	16	53	42	6.5	9.7	3.0
MIN	3.2	3.2	2.9	2.8	3.0	4.2	4.6	2.6	1.3	1.5	.21	.09
CFSM	.67	1.43	.47	1.34	.70	1.45	.93	.87	.65	.42	.33	.07
IN.	.78	1.60	.55	1.55	.76	1.66	1.04	1.00	.73	.48	.38	.07

CAL YR 1979 TOTAL 3928.90 MEAN 10.8 MAX 294 MIN 1.3 CFSM 1.45 IN 19.56
WTR YR 1980 TOTAL 2127.54 MEAN 5.81 MAX 120 MIN .09 CFSM .78 IN 10.59

02077250 SOUTH HYCO CREEK NEAR ROSEVILLE, N. C.

LOCATION.--Lat 36°23'12", long 79°06'22", Person County, Hydrologic Unit 03010104, on right bank at downstream side of bridge on U.S. Highway 158, 1.2 mi (1.9 km) downstream from Double Creek, and 4.2 mi (6.8 km) northwest of Roseville.

DRAINAGE AREA.--55 mi² (140 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1964-66. October 1966 to September 1980 (discontinued). Since October 1978 medium and high water discharges only.

REVISED RECORDS.--WRD N. C. 1973: 1967-72(P).

GAGE.--Water-stage recorder. Datum of gage is 400.05 ft (121.935 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge record good. Since December 1976 some regulation by Lake Roxboro 3.9 mi (6.3 km) upstream (see p. 333).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,030 ft³/s (227 m³/s) July 13, 1975, gage height, 30.04 ft (9.156 m), from rating curve extended above 2,000 ft³/s (566 m³/s); no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--No flow observed many days in July and September 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,390 ft³/s (39.4 m³/s) Nov. 12, gage height, 19.46 ft (5.931 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	252	---		---		---	---	---	---			
2	---	---		---		---	---	---	---			
3	---	---		---		---	---	---	---			
4	---	---		---		---	---	---	---			
5	---	---		---		---	---	---	---			
6	---	---		---		337	---	---	---			
7	---	---		---		268	---	---	---			
8	---	---		---		---	---	---	---			
9	---	---		---		---	286	---	---			
10	---	---		---		---	---	---	---			
11	---	567		---		---	---	---	---			
12	---	933		309		---	---	---	---			
13	---	354		---		---	---	---	---			
14	---	---		---		---	---	---	---			
15	---	---		---		---	250	---	---			
16	---	---		---		---	---	---	---			
17	---	---		---		---	---	---	---			
18	---	---		336		298	---	---	---			
19	---	---		573		254	---	---	---			
20	---	---		292		---	---	---	---			
21	---	---		---		398	---	548	---			
22	---	---		---		352	---	---	---			
23	---	---		305		---	---	---	---			
24	---	---		265		---	---	---	---			
25	---	---		---		257	257	---	---			
26	---	---		---		---	---	---	485			
27	---	---		---		---	---	---	386			
28	---	---		---		---	---	---	---			
29	---	---		---		---	---	---	---			
30	---	---		---		---	---	---	---			
31	---	---		---		---	---	---	---			
TOTAL	---	---		---		---	---	---	---			
MEAN	---	---		---		---	---	---	---			
MAX	---	---		---		---	---	---	---			
MIN	---	---		---		---	---	---	---			

02077250 SOUTH HYCO CREEK NEAR ROSEVILLE, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to September 1980 (discontinued).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: January 1967 to September 1980.

INSTRUMENTATION.--Temperature recorder since January 1967.

REMARKS.--Miscellaneous chemical data published for water years 1966-67. Interruptions of daily record during October and June were due to malfunctions of thermograph.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 30.5°C Aug. 22, 1968; minimum, 0.0°C on several days during winter months in most years.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 26.0°C July 17, 18, 21; minimum, 1.0°C Feb. 3, 5, Mar. 1, 2, 3.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	13.5	11.5	7.0	6.0	5.5	4.5	3.0	1.5	6.0	1.0
2	---	---	14.5	13.5	6.5	5.5	5.0	3.5	2.0	1.5	1.0	1.0
3	---	---	14.5	12.0	5.5	4.5	4.0	3.0	2.0	1.0	1.5	1.0
4	---	---	12.0	9.5	5.0	4.5	3.5	3.5	2.0	1.5	3.5	1.5
5	---	---	10.0	8.5	5.5	5.0	3.5	3.0	2.0	1.0	4.0	3.0
6	---	---	9.0	8.5	6.5	5.5	3.5	2.0	2.0	2.0	8.5	4.0
7	---	---	10.5	9.0	8.0	6.5	3.5	3.0	3.0	2.0	8.5	5.5
8	---	---	10.0	9.0	8.0	7.0	5.0	3.5	3.0	1.5	9.0	8.0
9	---	---	11.0	9.5	7.0	5.5	5.0	5.0	3.0	2.0	10.5	9.0
10	18.5	14.5	14.0	11.0	6.0	5.0	5.0	3.5	3.0	1.5	10.0	7.0
11	14.5	13.5	14.0	12.0	6.5	5.5	5.0	4.0	3.5	1.5	9.5	8.0
12	15.0	13.5	12.0	12.0	8.5	6.5	5.5	5.0	3.5	2.0	9.0	6.0
13	15.5	15.0	12.0	11.5	10.0	8.5	5.5	4.5	3.5	2.0	6.5	5.0
14	15.0	13.0	11.5	10.5	10.0	9.0	5.0	4.5	4.5	2.0	8.5	5.0
15	13.5	12.0	10.5	8.5	9.0	6.5	7.0	5.0	6.0	3.5	9.5	5.5
16	13.5	12.0	10.0	9.5	8.5	6.5	7.0	5.0	6.5	5.5	10.0	6.5
17	15.0	13.5	10.0	9.0	8.5	6.0	6.0	5.5	5.5	3.0	10.0	9.5
18	15.5	14.0	10.0	9.0	6.0	4.5	6.5	6.0	4.5	2.0	12.0	10.0
19	15.5	14.0	10.0	9.5	4.5	4.0	6.5	5.0	5.0	2.0	11.0	6.5
20	16.0	14.5	10.0	10.0	4.5	4.0	6.5	5.0	7.0	4.5	11.0	10.0
21	17.0	15.5	10.5	10.0	5.0	4.0	6.5	5.0	9.0	6.5	13.0	10.0
22	18.0	16.0	11.5	10.5	5.5	5.0	6.5	5.5	9.5	9.0	11.5	8.5
23	17.0	16.0	12.0	11.0	8.0	5.5	6.5	6.0	10.0	9.5	11.0	7.0
24	16.5	14.0	13.5	12.0	9.0	8.0	6.0	3.5	10.0	9.0	11.0	10.0
25	14.0	11.5	14.0	13.5	9.0	8.5	6.5	5.0	10.0	8.5	13.5	10.0
26	12.0	10.5	15.0	14.0	8.5	6.5	6.5	6.0	8.5	5.5	12.0	9.5
27	11.0	9.0	14.0	11.0	6.5	5.0	6.5	6.0	6.5	4.5	13.0	9.0
28	10.5	8.5	11.5	11.0	5.5	4.5	6.5	5.0	6.0	5.0	12.0	10.0
29	11.5	9.5	12.0	10.0	4.5	4.0	6.5	6.0	6.0	4.5	14.0	10.0
30	13.0	11.5	10.0	7.0	5.0	4.5	6.0	4.0	---	---	14.0	12.0
31	13.0	11.5	---	---	5.5	5.0	4.0	2.0	---	---	14.0	12.0
MONTH	18.5	8.5	15.0	7.0	10.0	4.0	7.0	2.0	10.0	1.0	14.0	1.0

02077250 SOUTH HYCO CREEK NEAR ROSEVILLE, N. C.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	15.0	10.5	14.0	13.0	---	---	24.5	21.0	24.5	23.5	23.0	22.0
2	15.5	11.5	16.5	13.0	---	---	24.0	21.5	24.5	22.0	23.0	23.0
3	16.5	13.0	18.0	15.0	---	---	24.0	23.5	25.0	24.0	23.0	23.0
4	18.0	15.0	18.5	15.0	---	---	24.0	23.0	25.0	24.0	23.5	23.0
5	16.5	12.0	19.5	15.5	---	---	25.0	23.5	25.0	24.5	23.5	23.0
6	14.5	10.5	19.0	16.5	---	---	25.0	24.0	25.0	24.5	23.5	23.0
7	14.5	12.0	19.5	16.5	---	---	25.0	22.0	25.0	24.0	23.5	23.0
8	14.5	12.0	19.5	15.5	---	---	23.5	21.5	25.0	24.0	23.0	22.0
9	17.0	13.5	15.5	13.0	---	---	23.5	22.0	25.0	24.5	22.0	20.5
10	17.0	13.0	16.0	13.0	---	---	23.5	22.0	24.5	24.0	21.5	21.0
11	16.5	12.0	18.0	15.0	---	---	24.0	22.0	24.5	24.5	21.5	20.5
12	16.5	14.0	20.0	16.5	---	---	24.5	23.0	25.0	24.5	21.0	19.5
13	14.5	14.0	20.0	19.0	---	---	25.0	24.0	25.0	24.0	20.0	20.0
14	16.5	14.5	20.0	18.5	---	---	25.0	23.0	24.5	23.0	20.5	20.0
15	16.0	13.0	20.0	18.0	---	---	24.5	23.0	24.5	23.5	21.0	20.0
16	16.0	11.5	18.5	15.5	22.0	22.0	25.5	24.0	24.5	24.0	21.0	21.0
17	15.5	10.5	18.0	16.5	22.0	20.5	26.0	25.0	24.5	23.5	21.0	20.5
18	16.0	12.0	19.5	16.5	21.5	19.5	26.0	24.0	23.5	21.0	21.0	20.5
19	17.0	12.0	19.5	18.0	20.0	18.5	25.0	23.5	23.0	21.5	21.0	20.5
20	18.0	14.0	19.5	18.0	21.5	19.5	25.5	24.0	24.5	23.5	21.0	20.5
21	19.0	14.5	20.5	17.0	21.5	19.0	26.0	24.5	24.5	24.0	20.5	20.5
22	19.0	14.0	21.0	19.0	20.5	18.5	25.5	24.5	24.0	22.0	21.5	20.5
23	20.0	15.5	21.0	20.5	21.5	20.0	25.5	24.0	22.0	21.0	21.5	21.5
24	20.0	17.0	21.0	20.5	21.5	20.5	24.0	22.0	21.5	21.0	21.5	21.5
25	19.5	17.0	21.0	19.5	20.5	19.0	24.0	22.0	22.0	21.0	21.5	21.0
26	19.0	16.5	20.5	19.0	20.5	19.0	24.0	22.0	21.5	21.0	20.5	20.5
27	16.5	14.5	20.0	16.5	24.0	20.5	24.0	22.0	22.0	21.0	20.5	18.0
28	16.5	15.0	19.5	16.5	25.5	23.0	24.5	23.0	21.5	21.0	18.0	16.0
29	16.0	13.5	20.5	18.5	25.5	24.0	24.5	23.5	22.0	21.5	16.0	16.0
30	14.5	13.0	21.0	19.5	25.5	23.5	24.5	23.0	22.0	21.5	16.0	16.0
31	---	---	21.0	20.0	---	---	24.0	23.5	22.0	22.0	---	---
MONTH	20.0	10.5	21.0	13.0	25.5	18.5	26.0	21.0	25.0	21.0	23.5	16.0
YEAR	26.0	1.0										

02077303 HYCO RIVER BELOW AFTERBAY DAM NEAR MCGEHEES MILL, N. C.

LOCATION.--Lat 36°31'54", long 78°59'48", Person County, Hydrologic Unit 03010104, on right bank 600 ft (183 m) downstream from afterbay dam of Carolina Power and Light Company, 1.2 mi (1.9 km) upstream from Ghent Creek, and 1.8 mi (2.9 km) east-northeast of McGehees Mill.

DRAINAGE AREA.--196 mi² (508 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 342.98 ft (104.540 m) National Geodetic Vertical Datum of 1929 (levels by Carolina Power and Light Company). August, 1964 to September, 1973, at site, 2.8 mi (4.5 km) upstream at datum 349.78 ft (106.613 m) National Geodetic Vertical Datum of 1929. Published as Hyco River at McGehees Mill, N. C.

REMARKS.--Water-discharge record good above 10 ft³/s (0.28 m³/s), and poor below. Flow regulated by Roxboro Steam-Electric Generating Plant afterbay Reservoir (see p. 333).

AVERAGE DISCHARGE.--7 years, 215 ft³/s (6.089 m³/s), 14.90 in/yr (378 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,300 ft³/s (320 m³/s) July 14, 1975, gage height, 24.40 ft (7.437 m); no flow part of day June 26, 1980; minimum daily, 0.31 ft³/s (0.009 m³/s) Sept. 21, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,340 ft³/s (66.3 m³/s) Nov. 12, gage height, 13.79 ft (4.203 m); no flow part of day June 26; minimum daily, 11 ft³/s (0.31 m³/s) Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	30	85	79	89	87	519	84	82	123	102	25
2	41	30	85	79	89	87	506	84	82	123	102	23
3	74	30	85	79	89	87	422	84	81	122	100	22
4	337	30	84	79	88	87	85	84	81	121	100	22
5	478	30	84	79	88	96	84	84	81	121	99	21
6	760	30	85	78	88	112	83	83	80	120	98	21
7	1270	30	84	78	88	370	83	83	83	120	97	21
8	540	30	84	78	87	737	83	85	82	119	95	20
9	31	30	84	78	88	663	244	87	82	122	94	20
10	91	31	84	78	89	518	585	87	82	123	94	20
11	27	350	83	82	89	474	566	87	82	123	93	20
12	26	1790	83	102	89	304	553	87	82	121	92	81
13	26	1940	83	84	89	302	408	87	82	120	91	18
14	26	1360	83	85	90	229	92	87	81	119	90	18
15	26	643	83	94	90	86	91	87	81	118	88	70
16	26	429	82	201	158	85	87	87	85	118	87	14
17	25	420	82	266	347	85	87	87	93	117	87	13
18	26	372	82	431	344	97	87	88	92	117	85	16
19	26	285	82	1160	340	89	96	88	92	116	84	18
20	27	205	81	1480	334	295	119	90	91	115	83	18
21	28	83	81	980	329	739	124	374	91	114	74	19
22	28	83	81	431	246	864	118	384	90	113	60	11
23	30	83	81	455	87	755	114	382	90	113	47	26
24	30	84	81	465	87	557	103	376	89	112	43	50
25	30	84	81	466	87	588	96	370	89	110	40	50
26	30	84	80	426	87	558	89	363	84	109	37	47
27	30	85	80	415	87	545	85	356	116	108	34	43
28	30	85	80	409	87	536	84	246	120	106	32	43
29	30	85	80	404	87	541	84	82	122	105	30	42
30	30	85	80	279	---	530	84	82	123	104	28	42
31	30	---	80	90	---	525	---	82	---	103	26	---
TOTAL	4251	8936	2553	9590	4037	11628	5861	4817	2691	3595	2312	874
MEAN	137	298	82.4	309	139	375	195	155	89.7	116	74.6	29.1
MAX	1270	1940	85	1480	347	864	585	384	123	123	102	81
MIN	25	30	80	78	87	85	83	82	80	103	26	11

CAL YR 1979 TOTAL 117826 MEAN 323 MAX 8000 MIN 10
WTR YR 1980 TOTAL 61145 MEAN 167 MAX 1940 MIN 11

02077303 HYCO RIVER BELOW AFTERBAY DAM NEAR McGEHEES MILL, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: June 1974 to current year.

INSTRUMENTATION.--Temperature recorder since June 1974.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 33.5°C July 20, 21, 22, 1977; minimum, 2.0°C Jan. 11, 12, 13, Feb. 1, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 31.0°C Aug. 8, 10-13; minimum, 5.5°C Feb. 8-11.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.0	21.5	16.5	16.0	12.0	11.5	8.5	8.5	8.0	8.0	8.5	8.0
2	22.0	21.5	16.5	16.5	11.5	11.0	8.5	8.5	8.0	7.0	8.0	7.0
3	23.0	21.5	16.5	16.0	11.0	10.5	8.5	8.5	6.5	6.5	7.0	7.0
4	23.0	23.0	16.0	15.0	10.5	10.0	8.5	8.5	6.5	6.5	7.0	6.5
5	23.0	23.0	15.5	15.0	10.0	10.0	8.5	8.5	6.5	6.0	6.5	6.5
6	23.0	22.0	15.0	14.5	10.0	10.0	8.5	8.5	6.0	6.0	6.5	6.5
7	22.0	21.5	14.5	14.0	10.0	10.0	8.5	8.0	6.0	6.0	7.0	6.5
8	21.5	20.5	14.0	14.0	10.0	9.5	8.0	8.0	6.0	5.5	8.0	7.0
9	21.0	20.5	14.5	14.0	9.5	9.5	8.0	8.0	5.5	5.5	9.0	8.0
10	21.0	19.5	15.0	14.5	9.5	9.5	8.0	8.0	5.5	5.5	9.0	8.5
11	19.5	19.0	15.0	14.5	9.5	9.5	8.0	8.0	6.0	5.5	9.5	9.0
12	19.5	19.0	14.5	14.5	9.5	9.5	8.0	8.0	6.0	6.0	9.5	8.5
13	19.5	19.0	14.5	14.5	9.5	9.5	8.0	8.0	6.0	6.0	8.5	8.5
14	18.5	18.0	14.5	14.5	9.5	9.5	8.0	8.0	6.0	6.0	8.5	8.0
15	18.0	17.0	14.5	14.0	9.5	9.5	8.0	8.0	6.0	6.0	8.5	8.0
16	18.5	18.0	14.0	13.5	9.5	9.5	8.5	8.0	6.0	6.0	9.0	8.5
17	18.5	18.0	13.5	13.5	9.5	9.0	8.5	8.5	6.0	6.0	9.0	8.5
18	18.5	18.0	13.5	13.5	9.0	9.0	8.5	8.5	6.0	6.0	9.5	9.0
19	18.5	18.0	13.5	13.5	9.0	8.5	9.0	8.5	6.0	6.0	9.5	9.0
20	19.0	18.0	13.5	13.5	8.5	8.5	9.5	9.0	6.5	6.0	10.0	9.0
21	19.0	18.5	13.5	13.5	8.5	8.5	10.0	9.5	7.0	6.5	11.0	10.0
22	19.0	18.0	13.5	13.5	8.5	8.5	10.0	9.5	8.5	7.0	11.0	10.5
23	18.5	18.5	13.5	13.5	8.5	8.5	10.0	10.0	8.0	8.0	10.5	10.5
24	18.5	16.5	13.5	13.5	8.5	8.5	10.0	9.5	8.5	8.0	11.0	10.5
25	17.0	16.5	13.5	13.5	9.0	8.5	9.5	9.5	8.0	7.0	12.0	11.0
26	17.0	16.5	14.0	13.5	9.0	9.0	9.5	9.5	8.5	7.0	12.0	11.5
27	16.5	16.0	14.0	14.0	9.0	9.0	9.5	9.0	8.5	8.0	11.5	11.5
28	17.0	16.0	14.0	14.0	9.0	9.0	9.0	9.0	8.5	8.0	11.5	11.0
29	17.0	16.5	14.0	13.0	9.0	9.0	9.0	9.0	8.5	8.5	11.5	11.0
30	16.5	16.5	13.0	12.0	9.0	9.0	9.0	9.0	---	---	11.5	11.5
31	16.5	16.0	---	---	8.5	8.5	9.0	8.0	---	---	13.0	11.5
MONTH	23.0	16.0	16.5	12.0	12.0	8.5	10.0	8.0	8.5	5.5	13.0	6.5

02077303 HYCO RIVER BELOW AFTERBAY DAM NEAR McGEHEES MILL, N. C.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.0	12.0	16.0	15.5	23.5	22.0	24.5	24.5	30.0	29.5	28.5	27.0
2	14.0	13.0	16.0	15.5	24.0	23.0	25.5	24.5	30.0	29.5	28.5	28.0
3	14.5	13.5	16.0	15.5	24.5	23.5	25.5	25.0	30.5	29.5	29.0	28.0
4	15.0	13.5	16.0	15.5	24.0	23.5	25.5	25.0	30.5	30.0	27.0	26.0
5	15.0	14.5	16.0	15.5	23.5	23.0	25.5	25.0	30.5	30.0	28.0	26.5
6	14.5	14.0	16.5	15.5	24.0	23.0	25.5	25.0	30.5	30.0	29.0	27.0
7	14.0	13.5	16.0	16.0	24.5	24.0	25.5	25.0	30.5	30.0	28.5	27.0
8	13.5	13.5	16.0	15.5	25.5	24.5	26.0	25.5	31.0	30.0	28.0	26.5
9	15.5	13.5	16.5	15.5	25.0	24.0	26.0	25.5	30.5	30.0	27.0	26.5
10	16.5	15.5	17.0	16.0	24.5	24.0	27.0	25.5	31.0	30.0	26.5	26.0
11	16.5	16.5	18.5	16.5	24.5	23.5	26.5	26.0	31.0	30.5	26.5	25.5
12	16.5	16.5	18.5	18.0	23.5	23.5	26.5	26.0	31.0	30.5	26.0	25.0
13	16.5	15.5	18.0	18.0	23.5	23.5	26.5	26.5	31.0	30.0	26.5	25.5
14	15.5	15.5	18.5	18.0	24.0	23.5	26.5	26.5	30.5	29.5	26.0	24.5
15	16.0	15.5	18.0	16.5	24.5	23.5	27.0	26.5	30.5	30.0	28.0	25.5
16	16.5	15.5	18.0	18.0	24.5	24.5	28.0	27.0	30.5	30.0	26.5	25.0
17	16.0	15.5	18.0	18.0	24.5	24.0	28.0	27.0	30.0	28.5	25.5	24.5
18	16.0	15.5	19.0	18.0	24.5	24.5	28.0	27.0	28.5	27.0	25.5	24.5
19	16.0	15.5	19.0	18.5	24.5	24.5	28.0	28.0	28.5	28.0	25.5	24.5
20	17.0	16.0	18.5	18.5	25.5	24.5	28.5	28.0	29.0	28.0	25.0	24.5
21	17.0	17.0	20.5	18.5	25.0	25.0	29.0	28.5	29.0	28.0	25.5	24.5
22	17.0	16.5	21.0	20.5	25.0	24.5	29.0	28.5	28.0	26.5	27.0	25.0
23	18.5	16.5	21.5	21.0	25.0	24.5	29.0	28.5	26.5	26.0	28.0	25.5
24	16.5	16.0	22.0	21.5	25.0	25.0	28.5	28.5	26.0	25.5	28.0	26.5
25	16.5	16.0	23.0	22.0	25.0	24.5	28.5	28.0	26.5	25.5	26.5	25.5
26	16.0	15.5	23.0	22.0	24.5	24.5	28.5	28.0	26.0	25.5	25.5	25.0
27	16.0	15.5	23.0	23.0	24.5	24.0	28.5	28.5	26.0	25.0	25.0	23.5
28	16.0	15.5	23.0	21.5	24.5	24.0	28.5	28.5	27.0	25.5	23.5	21.5
29	15.5	15.5	22.0	21.5	25.0	24.5	29.5	28.5	26.5	25.5	21.5	21.0
30	16.5	15.5	23.0	21.5	25.0	24.5	29.5	29.0	27.0	25.5	21.0	20.5
31	---	---	23.5	22.0	---	---	29.5	29.0	28.0	26.5	---	---
MONTH	18.5	12.0	23.5	15.5	25.5	22.0	29.5	24.5	31.0	25.0	29.0	20.5
YEAR	31.0	5.5										

02077670 MAYO CREEK NEAR BETHEL HILL, N. C.

LOCATION.--Lat 36°32'26", long 78°52'21", Person County, Hydrologic Unit 03010104, on right bank 0.1 mi (0.2 km) upstream from Virginia State line, 0.3 mi (0.5 km) downstream from Mayo Steam Electric Generating Plant Dam, 2.9 mi (4.7 km) northeast of Bethel Hill, and 4.8 mi (7.7 km) downstream from Spoonwater Creek.

DRAINAGE AREA.--52.6 mi^2 (136.2 km^2).

PERIOD OF RECORD.--August 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 338.84 ft (103.278 m) National Geodetic Vertical Datum of 1929 (levels by Carolina Power & Light Company).

REMARKS.--Records excellent, except those for period of no gage-height record, Nov. 12 to Dec. 19, which are poor. Construction of Mayo Steam Electric Generating Plant Dam completed and gates closed Aug. 1, 1980 (see page 333). Suspended-sediment records for the current year are published on page 417 of this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,950 ft^3/s (112 m^3/s) Apr. 26, 1978; no flow Aug. 1-13, 1977; no flow Aug. 28 to Sept. 30, 1980 due to regulation.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 4, 1974 reached a stage of 11.11 ft (3.39 m) from floodmarks, discharge, 4,300 ft^3/s (122 m^3/s); no flow July 31, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 663 ft^3/s (18.8 m^3/s) Nov. 13, gage height, 5.79 ft (1.765 m) from floodmark, no peak above base of 850 ft^3/s (24.1 m^3/s); no flow Aug. 28 to Sept. 30 due to regulation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	11	29	20	38	29	84	35	20	10	1.1	
2	81	18	28	19	33	24	66	32	17	8.3	.33	
3	66	58	26	19	30	40	56	28	15	7.4	.14	
4	38	57	25	19	31	42	51	25	14	8.3	.07	
5	93	31	25	29	29	102	46	22	13	7.9	.19	
6	129	24	28	37	31	207	40	21	14	7.1	.33	
7	65	22	31	32	32	142	38	20	27	6.3	.19	
8	36	20	27	39	32	104	42	19	26	6.7	.14	
9	28	20	26	37	33	83	87	19	18	19	.11	
10	35	20	25	30	46	62	112	19	14	23	.07	
11	41	100	24	48	53	53	85	18	13	22	.06	
12	29	300	23	146	57	45	60	18	12	19	.08	
13	26	650	23	112	49	43	53	18	12	12	.19	
14	27	250	29	72	45	57	89	17	11	8.3	.22	
15	23	110	26	73	53	46	162	16	10	5.9	.17	
16	21	50	25	54	70	38	147	15	9.6	4.7	.12	
17	20	45	24	45	63	38	104	15	9.2	5.6	.07	
18	19	40	23	145	46	118	74	17	9.7	13	.05	
19	18	38	22	334	40	117	57	21	9.3	11	.16	
20	18	36	22	268	38	86	47	34	9.5	6.9	.31	
21	18	33	21	122	37	152	42	214	8.5	8.1	.13	
22	16	31	21	86	35	197	38	200	7.4	9.4	.07	
23	19	30	21	140	34	125	35	126	7.0	35	.05	
24	24	29	24	127	34	91	36	72	7.5	20	.03	
25	21	27	29	91	31	109	30	47	9.0	11	.02	
26	18	40	29	64	40	100	29	37	47	7.0	.01	
27	16	80	23	52	44	75	29	27	45	5.7	.01	
28	17	45	21	46	38	60	33	22	25	4.9	.00	
29	16	35	20	42	34	91	32	20	15	4.2	.00	
30	16	30	20	38	---	102	34	19	12	3.5	.00	
31	16	---	21	39	---	94	---	18	---	4.2	.00	---
TOTAL	1142	2280	761	2425	1176	2672	1838	1231	466.7	325.4	4.42	.00
MEAN	36.8	76.0	24.5	78.2	40.6	86.2	61.3	39.7	15.6	10.5	.14	.000
MAX	132	650	31	334	70	207	162	214	47	35	1.1	.00
MIN	16	11	20	19	29	24	29	15	7.0	3.5	.00	.00
CFSM	.70	1.45	.47	1.49	.77	1.64	1.17	.76	.30	.20	.003	.000
IN.	.81	1.61	.54	1.71	.83	1.89	1.30	.87	.33	.23	.00	.00

CAL YR 1979 TOTAL 28947.00 MEAN 79.3 MAX 773 MIN 1.3 CFSM 1.51 IN 20.47
WTR YR 1980 TOTAL 14321.52 MEAN 39.1 MAX 650 MIN .00 CFSM .74 IN 10.13

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.

LOCATION (REVISED).--Lat 36°27'37", long 77°38'04", Halifax County, Hydrologic Unit 03010107, on right bank 1.2 mi (1.9 km) downstream from bridge on State Highway 48 at Roanoke Rapids, 2.5 mi (4.0 km) upstream from Chockoyotte Creek, 2.8 mi (4.5 km) downstream from Roanoke Rapids dam, and 133.6 mi (215.0 km) upstream from mouth in Albemarle Sound.

DRAINAGE AREA.--8,410 mi² (21,780 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1911 to current year. Prior to January 1933, published as "at Old Gaston". Records published for both sites February 1930 to December 1932. Gage-height records collected at site of auxiliary gage since November 1890 are contained in reports of National Weather Service, NOAA, U.S. Department of Commerce.

REVISED RECORDS.--WSP 712: 1930. WSP 822: 1936. WSP 1032: 1912, 1928(M), 1930(M), 1932-33(M). WSP 1433: 1912-23, 1925-28, 1930, 1932-33, 1935, 1937-39. WSP 1904: 1958, 1960.

GAGE.--Water-stage recorder. Datum of gage is 43.84 ft (13.362 m) National Geodetic Vertical Datum of 1929. Dec. 7, 1911, to Nov. 21, 1921, and Apr. 7, to Dec. 31, 1932, nonrecording gage and Nov. 21, 1921, to Apr. 7, 1932, water-stage recorder, both at site 9 mi (14 km) upstream at different datum. Aug. 6, 1941 to Mar. 1, 1973, auxiliary water-stage recorder, 3.6 mi (5.8 km) downstream from base gage. Gage height telemeter at station.

REMARKS.--Water-discharge record excellent. Flow regulated since August 1950 by Philpott Lake on Smith River, usable capacity, 6,325,000,000 ft³ (179,124,000 m³); since September 1950 by John H. Kerr Reservoir, usable capacity, 101,247,000,000 ft³ (2,867,315,000 m³); since June 1955 by Roanoke Rapids Lake (see p. 331); since September 1962 by Leesville Lake, since October 1962 by Lake Gaston (see p. 331); and since September 1963 by Smith Mountain Lake.

AVERAGE DISCHARGE.--68 years (1912-80), 8,153 ft³/s (230.9 m³/s) adjusted for storage, 13.17 in/yr (335 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 261,000 ft³/s (7,390 m³/s) Aug. 18, 1940, gage height, 39.0 ft (11.89 m) from floodmarks; minimum, about 250 ft³/s (7.08 m³/s) Dec. 16, 1955; minimum daily, 472 ft³/s (13.4 m³/s) Sept. 21, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1877, discharge, 212,000 ft³/s (6,000 m³/s), reached a stage of about 2 ft (0.61 m) lower at Old Gaston than flood in August 1940 which was 21.5 ft (6.55 m). Flood in August 1940 is the maximum known since at least 1771.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25,800 ft³/s (731 m³/s) Oct. 10, gage height, 9.75 ft (2.972 m); minimum, 777 ft³/s (22.0 m³/s) May 21, gage height, 1.69 ft (0.515 m). Minimum daily, 1,090 ft³/s (30.9 m³/s) Jan. 11, Feb. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19400	19700	13900	2200	19200	10000	18200	18100	13000	4930	7360	2380
2	19400	19800	4570	8770	19200	13900	18200	18100	14000	8620	2390	2400
3	19400	19800	10700	13800	19400	13800	16000	17200	14000	9550	2480	2410
4	19300	19700	14000	11100	19500	9910	13900	13800	12000	2290	4850	3350
5	20800	19900	14000	13700	19400	9150	13900	13900	8520	2970	12300	4940
6	24800	19900	13900	12200	19700	9420	9530	13900	6210	2310	11000	2450
7	24900	19900	13200	11200	17700	3620	13900	13900	9420	3910	6150	2350
8	25100	19900	2570	8930	13800	1130	13900	13900	6160	3060	7480	2690
9	25000	19700	1150	6220	13800	1120	15400	13900	6210	6820	4590	2470
10	25000	19000	6820	4300	13200	9900	18000	13100	6140	8530	2370	2350
11	25000	5190	3400	1090	7860	4250	18100	6220	6130	9980	7220	2400
12	24800	10200	8810	1220	7830	7910	17900	8660	4420	9530	3240	2590
13	24900	15700	9660	2400	8190	13800	17900	9990	2220	2430	2370	2430
14	24900	18200	10100	6250	8020	10300	18000	9100	2230	4490	7140	2320
15	25200	18100	10400	4070	6610	1630	18100	6170	2220	6360	4320	2270
16	23400	17400	9770	8420	1120	1130	18000	6160	8170	9090	2360	2340
17	20000	14000	10100	9360	2580	1480	18000	6070	6520	10700	2340	2340
18	19800	14000	13900	9590	4190	9290	18000	6120	8730	4820	2310	2990
19	16700	16400	11800	10000	10100	11000	18100	10800	8470	7880	2430	2300
20	6120	18200	13800	14000	12600	10900	18000	6180	6120	8720	2520	2340
21	6100	18100	13700	16400	3720	9990	18200	6870	3320	9840	2400	2300
22	14500	18200	1300	19200	2440	13900	18200	10100	3010	4020	2390	5740
23	19700	17400	1100	19200	1110	13900	18100	11000	7700	2300	2380	2270
24	19500	14000	1100	19200	1090	15500	18100	6160	3960	2290	2310	2350
25	19500	14000	1110	19300	4450	17700	18200	8070	2980	2350	2370	2470
26	19600	14000	4460	19400	9810	17800	18200	8140	5760	2870	2390	2470
27	19600	14000	10000	19400	9090	17900	18200	10200	10200	2310	2390	2380
28	19600	13800	10600	19300	4970	17900	18300	11000	10300	2440	5950	2370
29	19700	13900	7740	19100	10100	17900	18400	11400	8770	2350	2430	2370
30	19800	13900	2340	19300	---	18000	18100	12400	2580	2670	2370	2410
31	19600	---	5820	19100	---	18100	---	9710	---	5720	2430	---
TOTAL	631120	495990	255820	367720	290780	332230	513030	330320	209470	166150	127030	79240
MEAN	20360	16530	8252	11860	10030	10720	17100	10660	6982	5360	4098	2641
MAX	25200	19900	14000	19400	19700	18100	18400	18100	14000	10700	12300	5740
MIN	6100	5190	1100	1090	1090	1120	9530	6070	2220	2290	2310	2270
(†)	-6405	-4586	-1897	+2774	-3057	+6450	+563	-2033	-1645	-1292	-2297	-1241

CAL YR 1979 TOTAL 4825400 MEAN 13220 MAX 25800 MIN 1100 MEAN‡ 13200 CFSM‡ 1.57 IN‡ 21.31
WTR YR 1980 TOTAL 3798900 MEAN 10380 MAX 25200 MIN 1090 MEAN‡ 9146 CFSM‡ 1.09 IN‡ 14.84

† Change in contents, equivalent in cubic feet per second, in Leesville and Smith Mountain Lakes, furnished by Appalachian Power Co.; Philpott and Kerr Reservoirs, furnished by Corps of Engineers, and Lake Gaston and Roanoke Rapids Lake, furnished by Virginia Electric and Power Co.

‡ Adjusted for change in contents.

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.--Continued
(National stream-quality accounting network and pesticide station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949, 1968-73, 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1976 to current year.
WATER TEMPERATURES: October 1948 to September 1949, October 1976 to current year.

REMARKS.--Station operated as part of NASQAN network from October 1976 to present. Samples collected at bridge on State Highway 48 at Roanoke Rapids, 1.2 mi (1.9 km) upstream from gaging station. Miscellaneous chemical data collected at bridge on State Highway 48 and/or at gaging station 1.2 mi (1.9 km) downstream are published for water years 1946-47, 1955-67.

COOPERATION.--Pesticide samples were collected by the U.S. Geological Survey and were analyzed by the Environmental Protection Agency. Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 129 micromhos Jan. 3, 7, Nov. 19, 1978; minimum daily, 65 micromhos Apr. 7, 1979.
WATER TEMPERATURES: Maximum daily, 32.5°C July 30, 1949; minimum daily, 1.0°C Jan. 18-22, 30, 31, Feb. 1, 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 116 micromhos July 23; minimum daily, 68 micromhos Oct. 10.
WATER TEMPERATURES: Maximum daily, 29.5°C Aug. 12, 15; minimum daily, 4.0°C Feb. 5-13.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT												
09...	1230	24500	70	6.5	20.5	30	7.0	K7	K1	24	6	5.8
NOV												
06...	1200	20000	70	6.8	15.5	15	--	K15	K15	26	0	6.2
DEC												
11...	1000	2620	80	6.4	10.5	7.0	10.1	20	K3	24	0	5.8
JAN												
30...	1200	19300	82	6.9	6.0	4.0	11.9	30	K9	27	0	6.6
MAR												
05...	1300	13800	90	6.9	2.5	7.0	13.7	K6	K7	26	0	6.2
APR												
01...	1300	18200	90	6.8	12.0	60	13.8	K5	K5	26	0	6.2
MAY												
06...	1045	14000	81	6.5	17.0	14	10.6	K1	K3	27	0	6.4
JUN												
03...	1300	14000	80	7.4	22.5	3.2	8.2	K2	K10	27	0	6.5
JUL												
01...	1100	3500	85	7.5	25.0	1.7	8.0	K4	K9	28	6	6.6
AUG												
05...	1300	3600	89	7.5	28.0	2.6	8.0	K1	K2	30	1	7.0
SEP												
03...	1200	2340	95	7.2	28.0	.80	8.3	K2	K4	35	2	8.6

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT												
09...	2.2	5.3	30	.5	2.3	22	0	18	11	5.8	5.0	.1
NOV												
06...	2.5	5.4	39	.5	2.3	32	0	26	8.1	7.4	4.9	.1
DEC												
11...	2.2	5.1	39	.5	2.1	29	0	24	18	6.0	6.3	.1
JAN												
30...	2.5	5.6	29	.5	1.9	33	0	27	6.6	6.6	5.4	.1
MAR												
05...	2.5	5.4	30	.5	1.6	36	0	30	7.3	7.0	5.4	.1
APR												
01...	2.5	6.0	32	.5	1.6	40	0	33	10	7.2	5.4	.1
MAY												
06...	2.6	5.2	28	.4	1.6	32	0	26	20	6.9	5.3	.1
JUN												
03...	2.7	5.2	28	.4	1.4	35	0	29	2.2	6.8	4.9	.1
JUL												
01...	2.7	5.2	28	.4	1.7	34	0	28	1.4	6.6	5.0	.1
AUG												
05...	3.1	6.3	30	.5	1.8	37	0	*29	1.8	7.5	6.4	.2
SEP												
03...	3.2	6.5	28	.5	1.9	38	0	*33	4.1	6.5	5.6	.1

K Results based on colony count outside the acceptable range (non-ideal colony count).
* Lab alkalinity.

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
OCT												
09...	8.6	65	47	.09	4300	.22	.22	.10	.09	.12	.12	.24
NOV												
06...	9.9	66	56	.09	3560	.27	.26	.00	.03	.00	.04	.45
DEC												
11...	9.6	77	53	.10	545	.24	.24	.01	.01	.01	.01	.28
JAN												
30...	11	63	57	.09	3280	.21	.21	.00	.01	.00	.01	.22
MAR												
05...	8.9	62	56	.08	2310	.19	.17	.00	.01	.00	.01	.38
APR												
01...	6.2	63	56	.09	3100	.16	.18	.02	.01	.02	.01	.17
MAY												
06...	8.4	62	57	.08	2340	.19	.20	.02	.03	.02	.04	.24
JUN												
03...	8.9	62	54	.08	2340	.19	.20	.03	.05	.04	.06	--
JUL												
01...	7.3	67	49	.09	633	.08	.09	.03	.03	.04	.04	.22
AUG												
05...	8.3	68	58	.09	661	.05	.03	.05	.04	.06	.05	.10
SEP												
03...	9.1	74	61	.10	468	.04	.03	.04	.03	.05	.04	.14

DATE	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)
OCT												
09...	.23	.34	.02	.32	.56	2.5	.050	.15	.020	--	--	--
NOV												
06...	.39	.45	.03	.42	.72	3.2	.040	.12	.010	2	0	2
DEC												
11...	.26	.29	.02	.27	.53	2.3	.030	.09	.020	--	--	--
JAN												
30...	.16	.22	.05	.17	.43	1.9	.030	.09	.010	--	--	--
MAR												
05...	.43	.38	.00	.44	.57	2.5	.200	.61	.010	2	0	2
APR												
01...	.20	.19	.00	.21	.35	1.6	.030	.09	.010	--	--	--
MAY												
06...	.21	.26	.02	.24	.45	2.0	.030	.09	.010	2	0	2
JUN												
03...	.00	--	--	.00	--	--	.030	.09	.010	--	--	--
JUL												
01...	.10	.25	.12	.13	.33	1.5	.020	.06	.000	--	--	--
AUG												
05...	.05	.15	.06	.09	.20	.89	.040	.12	.040	1	1	0
SEP												
03...	.17	.18	.00	.20	.22	.97	.240	.74	.230	--	--	--

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)
OCT 09...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	300	300	30	0	0	1	30	0	30	0	0	2
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 30...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 05...	<50	<20	30	0	0	7	30	10	20	0	0	0
APR 01...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 06...	<50	<20	30	0	0	4	<10	0	<10	0	0	0
JUN 03...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 01...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	100	60	40	0	0	1	30	20	<10	0	0	0
SEP 03...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 09...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	2	0	2	1100	960	140	1	1	0	50	40	9
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 30...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 05...	2	2	0	440	240	200	4	4	0	20	20	1
APR 01...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 06...	2	0	2	880	740	140	2	2	0	30	30	4
JUN 03...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 01...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	0	0	2	200	180	20	2	2	0	170	120	50
SEP 03...	--	--	--	--	--	--	--	--	--	--	--	--

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)
OCT												
09...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
06...	<.1	.0	<.1	4	4	0	0	0	0	0	0	0
DEC												
11...	--	--	--	--	--	--	--	--	--	0	--	--
JAN												
30...	--	--	--	--	--	--	--	--	--	0	--	--
MAR												
05...	<.1	.0	<.1	1	1	0	0	0	0	0	0	0
APR												
01...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
06...	.1	.0	.1	6	1	5	0	0	0	0	0	0
JUN												
03...	--	--	--	--	--	--	--	--	--	0	--	--
JUL												
01...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
05...	<.1	.0	<.1	2	2	0	0	0	0	0	0	0
SEP												
03...	--	--	--	--	--	--	--	--	--	0	--	--

DATE	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	BIOMASS CHLORO-PHYLL RATIO PERI-PHYTON (UNITS)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPO-SURE (DAYS)
OCT												
09...	--	--	--	6.0	--	--	--	--	--	--	--	--
NOV												
06...	10	10	0	--	5.7	.6	--	--	--	--	--	--
DEC												
11...	--	--	--	5.9	--	--	1.42	1.26	390	.410	.000	34
JAN												
30...	--	--	--	4.4	--	--	--	--	--	--	--	--
MAR												
05...	20	0	20	--	7.7	.6	.080	.080	--	.000	.000	34
APR												
01...	--	--	--	6.8	--	--	.000	.000	.00	.080	.000	26
MAY												
06...	--	--	--	--	4.7	--	--	--	--	--	--	--
JUN												
03...	--	--	--	5.0	--	--	--	--	--	--	--	--
JUL												
01...	--	--	--	3.9	--	--	--	--	--	--	--	--
AUG												
05...	10	8	2	--	6.7	.9	--	--	--	--	--	--
SEP												
03...	--	--	--	8.7	--	--	--	--	--	--	--	--

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.--Continued

WATER QUALITY DATA, PERIOD MAY TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)
MAY 22...	1030	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 07...	1030	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
MAY 22...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 07...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)
MAY 22...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 07...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL (UG/L)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
MAY 22...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 07...	ND	--	ND	--	ND	--	ND	--	ND	--

ND Not detected.

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.--Continued

WATER QUALITY DATA, PERIOD OCTOBER 1979 TO MAY 1980

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 06...	1200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAR 05...	1300	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 06...	1045	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL (UG/L)
NOV 06...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAR 05...	ND	--	ND	--	ND	--	ND	--	ND	--	ND
MAY 06...	ND	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)
NOV 06...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAR 05...	--	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 06...	--	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL (UG/L)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 06...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAR 05...	ND	--	ND	--	ND	--	ND	--	--	--	--
MAY 06...	ND	--	ND	--	ND	--	ND	--	--	--	--

ND Not detected.

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.--Continued

PHYTOPLANKTON ANALYSES, AUGUST 1979 TO SEPTEMBER 1979

DATE	AUG 7,79	SEP 4,79
TIME	1030	1355
TOTAL CELLS/ML	670	23000
DIVERSITY: DIVISION	0.9	0.9
.CLASS	0.9	0.9
..ORDER	1.4	1.4
...FAMILY	2.1	1.6
....GENUS	2.5	1.8

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)				
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...CHARACIACEAE				
....SCHROEDERIA	--	-	*	0
...CHLOROCOCCACEAE				
....CHLOROCOCCUM	--	-	*	0
...COELASTRACEAE				
....COELASTRUM	150#	23	--	-
...HYDRODICTYACEAE				
....PEDIASTRUM	--	-	170	1
...MICRACTINIACEAE				
....GOLENKINIA	--	-	*	0
....MICRACTINIUM	--	-	*	0
...OOCYSTACEAE				
....ANKISTRODESMUS	--	-	210	1
....CHLORELLA	--	-	940	4
....CHODATELLA	--	-	*	0
....KIRCHNERIELLA	--	-	*	0
....OOCYSTIS	52	8	170	1
....POLYEDRIOPSIS	13	2	--	-
....SELENASTRUM	240#	37	--	-
...SCENEDESMACEAE				
....CRUCIGENIA	--	-	1500	6
....SCENEDESMUS	--	-	190	1
..TETRASPORALES				
...COCCOMYXACEAE				
....ELAKATOTHRIX	13	2	--	-
..ZYGNEMATALES				
...DESMIDIACEAE				
....EUASTRUM	13	2	--	-
....STAURASTRUM	--	-	210	1
CHRYSOPHYTA				
.BACILLARIOPHYCEAE				
..CENTRALES				
...COSCINODISCACEAE				
....CYCLOTELLA	--	-	150	1
....MELOSIRA	--	-	440	2
..PENNALES				
...ACHNANTHACEAE				
....ACHNANTHES	13	2	--	-
....COCCONEIS	--	-	*	0
...FRAGILARIACEAE				
....FRAGILARIA	--	-	*	0
....SYNEDRA	--	-	210	1
...NAVICULACEAE				
....NAVICULA	--	-	130	1
...NITZSCHIACEAE				
....NITZSCHIA	--	-	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)				
.CYANOPHYCEAE				
..CHROOCOCCALES				
...CHROOCOCCACEAE				
....AGMENELLUM	52	8	--	-
....ANACYSTIS	--	-	17000#	72
..HORMOGONALES				
...NOSTOCACEAE				
....ANABAENA	120#	17	--	-
...OSCILLATORIACEAE				
....OSCILLATORIA	--	-	1400	6
....SCHIZOTHRIX	--	-	690	3

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO AUGUST 1980

DATE	NOV 6,79	MAR 5,80	MAY 6,80	JUN 3,80	JUL 1,80	AUG 5,80
TIME	1200	1300	1045	1300	1100	1300
TOTAL CELLS/ML	1200	13000	5900	1400	13000	32000
DIVERSITY: DIVISION	1.6	0.2	1.2	1.6	0.9	0.7
.CLASS	1.6	0.2	1.2	1.6	0.9	0.7
..ORDER	2.2	0.5	1.4	1.8	1.8	1.3
...FAMILY	2.3	0.5	1.5	2.1	2.5	1.4
....GENUS	2.7	1.3	1.7	2.6	2.8	1.5

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)												
.CHLOROPHYCEAE												
..CHLOROCOCCALES												
...CHARACIACEAE												
....CHARACIUM	--	-	--	-	--	-	--	-	--	-	*	0
....SCHROEDERIA	--	-	--	-	--	-	--	-	*	0	--	-
...HYDRODICTYACEAE												
....PEDIASTRUM	--	-	--	-	--	-	--	-	--	-	450	1
...MICRACTINIACEAE												
....GOLENKINIA	--	-	--	-	--	-	13	1	--	-	--	-
...OOCYSTACEAE												
....ANKISTRODESMUS	100	9	190	1	320	5	130	9	84	1	*	0
....CHODATELLA	--	-	--	-	--	-	13	1	*	0	--	-
....DICTYOSPHAERIUM	--	-	93	1	--	-	--	-	67	1	*	0
....KIRCHNERIELLA	--	-	*	0	69	1	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	13	1	--	-	--	-
....SELENASTRUM	--	-	--	-	--	-	--	-	*	0	*	0
....TETRAEDRON	--	-	--	-	*	0	--	-	*	0	*	0
...SCENEDESMACEAE												
....ACTINASTRUM	--	-	--	-	--	-	--	-	--	-	320	1
....CRUCIGENIA	--	-	--	-	--	-	100	8	340	3	280	1
....SCENEDESMUS	100	9	--	-	83	1	78	6	270	2	240	1
....TETRASTRUM	--	-	--	-	--	-	--	-	--	-	160	1
..TETRASPORALES												
...COCCOMYXACEAE												
....ELAKATOTHRIX	--	-	--	-	--	-	26	2	--	-	--	-
..VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	13	1	--	-	--	-	13	1	100	1	220	1
..ZYGNEMATALES												
...DESMIDIACEAE												
....SPONDYLOSIUM	--	-	--	-	--	-	--	-	--	-	*	0
....STAURASTRUM	--	-	--	-	--	-	--	-	--	-	*	0
CHRYSOPHYTA												
.BACILLARIOPHYCEAE												
..CENTRALES												
...COSCINODISCACEAE												
....CYCLOTELLA	260#	21	3300#	26	41	1	52	4	*	0	*	0
....MELOSIRA	220#	18	8300#	66	4200#	71	590#	42	710	5	1000	3
....STEPHANODISCUS	--	-	--	-	*	0	--	-	--	-	--	-
..PENNALES												
...FRAGILARIACEAE												
....ASTERIONELLA	--	-	470	4	--	-	--	-	67	1	--	-
....FRAGILARIA	--	-	--	-	--	-	--	-	770	6	380	1
....SYNEDRA	--	-	140	1	*	0	--	-	--	-	*	0
...NAVICULACEAE												
....NAVICULA	13	1	--	-	--	-	--	-	*	0	--	-
...NITZSCHIACEAE												
....NITZSCHIA	--	-	--	-	--	-	26	2	240	2	280	1

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO AUGUST 1980

DATE / TIME	NOV 6,79 1200		MAR 5,80 1300		MAY 6,80 1045		JUN 3,80 1300		JUL 1,80 1100		AUG 5,80 1300	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CRYPTOPHYTA (CRYPTOMONADS)												
.CRYPTOPHYCEAE												
..CRYPTOMONADALES												
...CRYPTOCHRYSIDACEAE												
....CHROOMONAS	--	-	--	-	150	3	--	-	*	0	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)												
.CYANOPHYCEAE												
..CHROOCOCCALES												
...CHROOCOCCACEAE												
....AGMENELLUM	--	-	--	-	140	2	--	-	--	-	--	-
....ANACYSTIS	280#	23	--	-	110	2	--	-	3100#	24	4500	14
..HORMOGONALES												
...NOSTOCACEAE												
....APHANIZOMENON	--	-	--	-	620	10	310#	23	4400#	33	--	-
...OSCILLATORIACEAE												
....LYNGBYA	--	-	--	-	--	-	--	-	1500	11	23000#	74
....OSCILLATORIA	190#	16	--	-	96	2	--	-	1400	11	--	-
EUGLENOPHYTA (EUGLENOIDS)												
.EUGLENOPHYCEAE												
..EUGLENALES												
...EUGLENACEAE												
....EUGLENA	--	-	--	-	--	-	--	-	--	-	*	0
....TRACHELOMONAS	13	1	--	-	--	-	13	1	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)												
.DINOPHYCEAE												
..GYMNODINIALES												
...GYMNODINIACEAE												
....GYMNODINIUM	--	-	--	-	*	0	--	-	--	-	--	-
..PERIDINIALES												
...GLENODINIACEAE												
....GLENODINIUM	13	1	--	-	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	73	82	82	94	90	93	92	94	89	89	102
2	87	74	80	81	94	89	94	92	104	92	98	103
3	88	80	78	84	95	87	98	89	105	98	98	107
4	87	78	80	82	94	86	92	91	93	106	98	103
5	88	78	79	80	96	90	93	92	97	112	97	105
6	91	78	79	83	97	86	94	91	98	97	96	101
7	84	80	82	82	95	87	95	92	100	102	92	97
8	79	79	82	83	96	87	94	90	98	94	91	106
9	80	78	78	82	94	87	98	90	91	115	96	105
10	88	80	79	87	94	85	94	92	94	104	99	106
11	76	77	80	84	96	88	94	88	100	106	101	105
12	75	77	79	82	94	85	95	92	96	102	102	99
13	76	77	79	82	94	85	90	90	96	104	100	102
14	78	78	78	82	96	86	92	91	94	94	103	100
15	79	79	78	80	94	85	92	91	98	106	101	105
16	80	75	80	80	94	84	93	88	96	108	96	100
17	82	77	80	82	96	83	93	92	94	105	98	104
18	80	82	80	84	94	86	93	92	97	97	100	107
19	81	79	80	83	94	85	91	92	100	110	96	109
20	80	75	81	82	93	83	93	92	103	101	98	105
21	80	78	78	82	93	84	94	91	100	106	95	109
22	79	77	79	81	94	83	90	92	95	108	99	104
23	80	72	80	82	94	84	88	91	97	116	98	104
24	80	73	82	80	93	86	91	92	95	111	99	107
25	80	73	80	81	92	84	90	88	91	103	98	107
26	82	78	80	80	92	87	87	88	91	103	99	107
27	79	75	78	82	93	87	90	92	100	105	96	105
28	79	75	80	82	92	86	90	89	97	97	99	98
29	76	77	82	80	93	84	90	92	94	108	98	105
30	76	77	80	95	---	86	90	90	93	107	98	109
31	74	---	80	95	---	85	---	91	---	95	99	---
MEAN	80	77	80	83	94	86	92	91	97	103	98	104

WTR YR 1980 MEAN 90 MAX 116 MIN 66

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.5	17.5	12.0	9.0	5.0	4.5	11.0	16.5	21.0	24.5	28.5	27.0
2	23.0	16.0	12.0	9.0	5.0	4.5	11.5	16.5	21.5	25.0	28.5	27.0
3	23.0	17.5	11.0	8.5	5.0	4.5	11.5	17.0	21.0	25.0	28.5	27.5
4	23.0	17.0	11.0	8.0	5.0	4.5	12.0	17.0	20.5	25.0	29.0	27.0
5	22.5	16.0	11.0	8.0	4.0	5.0	11.5	17.5	21.0	25.0	29.0	27.0
6	22.0	15.5	12.0	7.5	4.0	5.5	12.0	18.0	21.0	25.0	29.0	27.5
7	21.5	16.0	12.0	7.0	4.0	6.0	12.5	18.0	21.5	25.5	29.0	27.5
8	21.5	16.0	11.0	7.0	4.0	7.0	13.0	18.0	21.5	25.5	29.0	27.5
9	21.5	16.0	11.0	7.0	4.0	7.0	12.5	18.0	22.0	26.0	28.5	26.0
10	20.0	16.5	10.5	7.0	4.0	8.0	13.5	18.5	22.5	26.0	28.5	26.0
11	19.5	15.0	11.0	6.5	4.0	8.0	14.0	19.0	22.5	26.0	29.0	25.5
12	19.5	15.0	11.0	6.5	4.0	8.0	14.0	19.5	23.5	26.0	29.5	25.0
13	18.0	15.0	11.0	7.0	4.0	7.0	14.0	19.0	23.5	26.0	29.0	25.0
14	18.0	15.0	11.0	7.0	4.5	7.0	14.0	19.5	24.0	26.0	29.0	25.5
15	19.0	14.5	11.0	7.5	4.5	7.0	14.5	19.5	24.5	26.0	29.5	25.5
16	19.5	14.5	11.0	8.0	5.0	7.0	14.0	20.0	24.5	26.0	27.5	25.5
17	19.5	15.0	10.0	7.5	5.0	7.0	14.5	20.0	25.0	27.0	27.5	25.5
18	19.5	15.0	10.0	7.0	5.0	8.5	14.5	19.5	25.5	27.0	27.5	25.5
19	19.5	15.0	9.5	7.0	5.0	9.0	14.5	19.5	25.5	27.5	27.5	26.0
20	19.0	15.0	10.0	7.0	5.0	9.0	15.0	19.5	25.5	27.5	27.0	26.0
21	19.0	15.0	9.0	7.5	6.0	8.5	15.0	20.0	25.5	28.0	27.0	26.0
22	20.5	15.0	9.5	7.0	7.0	8.5	15.5	19.5	25.5	28.0	26.5	25.5
23	19.5	15.0	9.5	7.0	7.0	8.5	15.5	20.0	26.0	28.0	26.5	25.5
24	18.5	15.0	10.0	7.0	7.0	8.5	16.0	20.5	26.0	28.0	26.0	25.0
25	18.0	15.0	10.0	7.0	7.0	9.0	16.5	20.5	26.5	28.0	26.0	25.0
26	18.0	16.0	9.5	7.0	7.0	9.5	16.0	21.0	26.5	28.5	26.5	25.0
27	18.0	15.5	9.5	7.0	6.5	10.0	16.5	21.0	26.5	28.0	27.0	24.0
28	18.0	15.0	9.0	7.0	6.5	10.0	16.5	21.5	27.0	28.5	27.0	24.0
29	18.0	14.5	9.0	7.0	6.5	9.5	16.0	21.5	27.0	28.0	26.5	23.0
30	18.0	13.5	9.0	6.0	---	10.5	16.0	22.0	27.0	28.0	27.0	23.0
31	17.5	---	9.0	5.5	---	10.5	---	22.0	---	28.0	27.0	---
MEAN	20.0	15.5	10.5	7.0	5.0	7.5	14.0	19.5	24.0	26.5	28.0	25.5

WTR YR 1980 MEAN 17.0 MAX 29.5 MIN 4.0

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
09...	1230	24500	18	1190	86
NOV					
06...	1200	20000	11	594	97
DEC					
11...	1000	2620	5	35	94
JAN					
30...	1200	19300	6	313	95
MAR					
05...	1300	13800	7	261	97
APR					
01...	1300	18200	12	590	88
MAY					
06...	1045	14000	10	378	82
JUN					
03...	1300	14000	41	1550	--
JUL					
01...	1100	3500	5	47	72
AUG					
05...	1300	3600	3	29	92
SEP					
03...	1200	2340	3	19	62

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH LAB (UNITS)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	LAB ALKA-LINITY (MG/L AS CACO3)
NOV										
07...	0940	19900	--	6.9	16.0	8.8	12	.6	380	21
DEC										
17...	1340	13800	91	6.8	9.0	10.5	12	.9	810	23
JAN										
30...	1055	19000	120	--	4.0	14.2	12	1.3	90	--
FEB										
25...	1350	2960	95	7.2	8.0	12.2	11	1.5	110	25
MAR										
27...	1130	17800	--	7.9	9.0	10.2	10	1.8	90	21
APR										
25...	1020	18000	90	7.1	18.0	9.2	<10	1.5	1600	24
MAY										
15...	1115	6250	60	7.3	20.0	9.8	16	1.6	14500	25
JUN										
19...	1215	13400	60	7.3	23.0	8.2	16	.9	980	26
JUL										
21...	1100	13400	95	7.0	30.5	5.4	11	1.4	170	24
AUG										
18...	1704	2320	110	6.8	28.0	7.7	17	2.6	60000	30
SEP										
29...	1045	2400	--	7.2	--	8.4	<10	1.0	530	31

02081500 TAR RIVER NEAR TAR RIVER, N. C.

LOCATION.--Lat 36°11'41", long 78°35'00", Granville County, Hydrologic Unit 03020101, on right bank 90 ft (27 m) upstream from bridge on State Highway 96, 1.2 mi (1.9 km) upstream from Fishing Creek, 2.5 mi (4.0 km) east of town of Tar River, and 8 mi (13 km) south of Oxford.

DRAINAGE AREA.--167 mi² (433 km²).

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1303.

REVISED RECORDS.--WSP 972: 1940-41. WSP 1112: 1941 (calendar year figures). WSP 1273: 1941(M). WSP 1723: Drainage area.

GAGE.--Water-stage recorder and concrete control with a sharp-crested weir notch. Datum of gage is 287.25 ft (87.554 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, Nov. 11 to Dec. 17, which are poor. Town of Oxford had no diversion for municipal water supply during the water year. Occasional intermittent diversion for irrigation.

AVERAGE DISCHARGE.--41 years, 156 ft³/s (4.418 m³/s), 12.69 in/yr (322 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft³/s (402 m³/s) Apr. 27, 1978, gage height, 18.87 ft (5.752 m); no flow for part of Aug. 14, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 12	Unknown	*7230	205	a*13.54	4.127	Apr 14	Unknown	4180	118	10.24	3.121
Jan 19	0900	2470	70.0	7.97	2.429	May 21	Unknown	Unknown		Unknown	

a From high-water mark in well.

Minimum discharge, 1.1 ft³/s (0.031 m³/s) Aug. 14-18, Sept. 29, 30; minimum gage height, 1.24 ft (0.378 m) Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1120	22	130	58	112	90	334	120	42	21	5.8	2.1
2	319	28	110	54	99	88	201	105	38	17	12	2.0
3	158	1000	96	50	94	120	156	83	35	15	10	2.1
4	155	500	90	49	92	200	139	72	33	15	6.8	9.6
5	191	150	90	74	87	500	125	63	30	14	4.6	24
6	402	80	120	164	92	1200	105	56	28	12	3.2	17
7	152	64	110	141	96	600	97	50	79	11	2.3	9.7
8	89	60	96	146	101	400	105	46	70	11	2.1	6.6
9	64	55	90	154	112	310	235	43	43	16	1.8	5.2
10	50	50	90	115	181	220	360	41	32	22	1.9	4.5
11	74	1500	120	207	229	180	159	40	27	26	1.9	3.9
12	74	3500	140	1200	246	143	115	38	24	19	1.5	2.9
13	56	950	120	426	199	123	116	38	22	14	1.3	2.5
14	48	400	100	241	169	151	1700	36	22	11	1.2	2.4
15	44	250	90	234	235	131	800	38	21	11	1.1	2.1
16	40	170	88	187	332	105	400	37	19	10	1.1	1.8
17	36	130	84	145	260	100	250	33	17	8.5	1.1	1.7
18	32	110	78	526	155	1120	180	42	16	24	1.2	1.6
19	30	100	71	1980	122	564	150	70	16	18	1.2	1.6
20	27	96	68	566	111	266	135	194	16	11	2.6	1.8
21	25	92	64	294	108	1660	122	1600	15	8.7	8.7	1.8
22	23	88	65	220	104	1180	110	500	13	7.5	9.7	1.7
23	26	84	60	925	102	345	100	201	10	19	6.3	1.3
24	39	82	60	561	100	245	95	138	11	29	4.9	1.2
25	44	80	89	290	98	1010	90	126	13	15	4.3	1.3
26	38	1600	115	204	111	441	100	121	141	10	4.3	1.2
27	32	1000	92	164	130	254	110	82	122	8.9	4.0	1.2
28	28	400	76	143	120	188	150	65	54	8.4	3.6	1.2
29	26	250	67	128	100	435	120	57	33	7.2	3.1	1.1
30	25	170	63	113	---	392	106	50	29	6.5	2.7	1.4
31	23	---	61	112	---	291	---	46	---	5.9	2.4	---
TOTAL	3490	13061	2793	9871	4097	13052	6965	4231	1071	432.6	118.7	118.5
MEAN	113	435	90.1	318	141	421	232	136	35.7	14.0	3.83	3.95
MAX	1120	3500	140	1980	332	1660	1700	1600	141	29	12	24
MIN	23	22	60	49	87	88	90	33	10	5.9	1.1	1.1
CFSM	.68	2.61	.54	1.90	.84	2.52	1.39	.81	.21	.08	.02	.02
IN.	.78	2.91	.62	2.20	.91	2.91	1.55	.94	.24	.10	.03	.03

CAL YR 1979 TOTAL 91350.8 MEAN 250 MAX 5540 MIN 3.7 CFSM 1.50 IN 20.35
WTR YR 1980 TOTAL 59300.8 MEAN 162 MAX 3500 MIN 1.1 CFSM .97 IN 13.21

02081747 TAR RIVER AT U.S. 401 AT LOUISBURG, N. C.

LOCATION (REVISED).--Lat 36°05'33", long 78°17'48", Franklin County, Hydrologic Unit 03020101, on left bank 0.1 mi (0.2 km) downstream from bridge on U.S. Highway 401 (Bickett Boulevard), at Louisburg, and 0.2 mi (0.3 km) upstream from Fox Creek.

DRAINAGE AREA.--430 mi² (1,110 km²), approximately.

PERIOD OF RECORD.--October 1963 to current year. Published as Tar River at Louisburg, N. C. (02081740) October 1963 to September 1973. Prior to October 1972 medium and high water discharges only.

GAGE.--Water-stage recorder. Datum of gage is 176.71 ft (53.861 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 21, 1973, nonrecording gage at bridge 0.4 mi (0.6 km) upstream at datum 1.82 ft (0.555 m) higher; Nov. 22, 1973 to June 24, 1980 at site 0.1 mi (0.2 km) upstream at same datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--7 years, 451 ft³/s (12.77 m³/s), 14.24 in/yr (362 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,100 ft³/s (371 m³/s) Apr. 28, 1978, gage height, 24.36 ft (7.425 m) from floodmarks; minimum gage height observed, 1.30 ft (0.396 m) several days in September 1967, August, September and October 1968 at site and datum 0.4 mi (0.6 km) upstream. Minimum discharge, 7.3 ft³/s (0.21 m³/s) Aug. 14, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of December 1934, September 1945 and August 1955 reached stages of 26 ft (7.9 m), 24 ft (7.3 m) and 24 ft (7.3 m) respectively, at site and datum 0.4 mi (0.6 km) upstream, from information of Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (113 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 13	1300	*7740	219	*21.05	6.416

Minimum discharge, 11 ft³/s (0.31 m³/s) Sept. 17, 25, 26, gage height, 3.81 ft (1.161 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1300	126	389	191	393	297	812	287	140	107	36	17
2	2200	132	340	182	346	244	711	299	130	82	43	16
3	500	796	300	174	320	263	553	246	121	73	49	17
4	350	1820	277	171	300	458	487	205	114	73	44	17
5	426	816	273	210	290	627	443	179	105	72	38	44
6	982	435	298	327	294	1910	384	159	102	71	33	64
7	652	329	385	385	310	2660	344	145	160	62	30	42
8	335	274	405	344	323	1400	350	134	227	57	28	32
9	235	240	325	402	349	850	363	129	154	83	27	26
10	196	225	274	353	464	720	639	122	115	108	25	22
11	196	736	253	339	596	619	519	119	99	123	46	19
12	215	3670	242	1650	616	523	362	116	91	91	127	18
13	191	7280	238	2540	589	523	333	111	85	73	42	16
14	181	4000	276	850	503	550	738	108	81	61	30	15
15	160	1200	350	650	521	485	2390	156	79	54	27	15
16	143	600	295	600	701	395	2900	150	78	51	27	13
17	133	549	263	508	781	361	850	111	74	49	24	12
18	126	454	237	599	565	1020	533	271	72	73	22	13
19	121	394	219	2260	428	2000	433	277	80	88	25	15
20	115	353	211	3370	392	800	376	197	79	75	72	15
21	112	320	204	1300	378	1360	336	1160	74	54	188	16
22	109	296	200	700	363	3110	304	2730	69	46	58	16
23	115	279	202	1340	350	2800	278	2200	65	47	44	15
24	627	267	199	2270	339	800	253	446	56	81	36	13
25	321	255	253	1000	314	1320	229	348	59	87	31	11
26	207	808	323	700	351	2000	217	361	247	58	28	12
27	169	2160	286	592	386	800	228	283	484	46	25	12
28	150	1900	233	512	374	650	245	213	212	43	22	14
29	143	600	208	450	338	814	385	186	128	43	21	14
30	137	486	199	405	---	1100	291	168	136	42	19	21
31	131	---	197	397	---	800	---	153	---	38	18	---
TOTAL	10978	31800	8354	25771	12274	32259	17286	11769	3716	2111	1285	592
MEAN	354	1060	269	831	423	1041	576	380	124	68.1	41.5	19.7
MAX	2200	7280	405	3370	781	3110	2900	2730	484	123	188	64
MIN	109	126	197	171	290	244	217	108	56	38	18	11
CFSM	.82	2.47	.63	1.93	.98	2.42	1.34	.88	.29	.16	.10	.05
IN.	.95	2.75	.72	2.23	1.06	2.79	1.50	1.02	.32	.18	.11	.05

CAL YR 1979 TOTAL 240411 MEAN 659 MAX 8800 MIN 44 CFSM 1.53 IN 20.80
WTR YR 1980 TOTAL 158195 MEAN 432 MAX 7280 MIN 11 CFSM 1.01 IN 13.69

02082506 TAR RIVER BELOW TAR RIVER RESERVOIR NEAR ROCKY MOUNT, N. C.

LOCATION.--Lat 35°53'30", long 77°52'18", Nash County, Hydrologic Unit 03020101, near center of span on downstream side of bridge on Secondary Road 1544, 1.8 mi (2.9 km) downstream from Tar River Reservoir, 2.8 mi (4.5 km) downstream from Sapony Creek, 2.9 mi (4.7 km) upstream from Grape Branch, and 5.0 mi (8.0 km) southwest of Rocky Mount.

DRAINAGE AREA.--777 mi^2 (2,012 km^2).

PERIOD OF RECORD.--August 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 85.9 ft (26.18 m) National Geodetic Vertical Datum of 1929 (levels by North Carolina State Highway Commission).

REMARKS.--Records good except those for period of no gage-height record, Nov. 22 to Jan. 3, which are poor. The city of Rocky Mount diverted an average of 10.9 ft^3/s (0.31 m^3/s) for municipal water supply, most of which was returned as sewage below station. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--8 years, 884 ft^3/s (25.03 m^3/s), 15.45 in/yr (392 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft^3/s (326 m^3/s) Apr. 30, 1978, gage height, 21.62 ft (6.590 m); minimum, 46 ft^3/s (1.30 m^3/s) Oct. 10, 1973, gage height, 3.32 ft (1.012 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,120 ft^3/s (173 m^3/s) Nov. 16, gage height, 14.89 ft (4.538 m); minimum, 57 ft^3/s (1.61 m^3/s) Aug. 18, gage height, 3.40 ft (1.036 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	808	250	1000	430	894	1140	1630	561	256	280	142	88
2	1860	254	820	400	880	852	1280	510	234	240	128	90
3	2530	718	700	380	884	969	1170	503	218	199	102	95
4	1210	1570	660	378	857	658	1070	457	200	169	94	98
5	640	2300	620	432	899	189	967	399	189	149	96	98
6	621	1490	700	487	1000	846	888	361	181	142	100	99
7	968	904	900	581	900	2930	805	319	179	138	102	99
8	853	644	1000	970	900	3560	773	298	178	138	103	99
9	560	535	940	1070	940	2650	792	286	199	138	102	98
10	399	478	740	1010	1050	1760	782	271	213	146	99	98
11	342	737	640	954	1250	1450	938	269	191	151	95	95
12	326	1750	560	2060	1300	1190	900	255	179	144	95	82
13	321	3560	580	2350	1200	1300	784	251	168	138	97	77
14	348	4540	600	2850	1100	1880	1140	239	165	135	93	77
15	333	5510	640	1470	1000	1720	1830	231	163	140	94	77
16	310	5920	660	465	1100	1420	2810	260	162	135	84	72
17	286	2220	600	547	1300	1130	3240	280	165	134	64	68
18	273	971	540	693	1100	1660	1760	926	147	132	87	62
19	258	763	500	778	980	2340	938	1290	146	131	82	68
20	243	669	480	1060	960	2910	764	1100	144	130	89	66
21	237	603	460	1230	940	2200	589	927	143	129	87	66
22	231	580	440	1280	940	2500	545	1420	144	129	88	64
23	231	560	460	1200	940	3410	550	2420	142	130	88	66
24	236	540	480	1090	920	3640	505	2420	142	129	89	65
25	449	520	560	1040	900	2020	464	904	142	129	87	66
26	519	1500	600	1120	900	2050	427	615	145	128	79	65
27	381	2700	640	1280	920	2470	419	542	159	127	80	64
28	324	3400	560	1210	950	1610	551	452	496	130	100	64
29	281	3100	500	990	1270	1540	560	359	442	127	92	64
30	267	1500	460	869	---	1760	629	312	330	125	92	65
31	255	---	440	858	---	2040	---	281	---	124	90	---
TOTAL	16900	50786	19480	31532	29174	57794	30500	19718	5962	4516	2920	2355
MEAN	545	1693	628	1017	1006	1864	1017	636	199	146	94.2	78.5
MAX	2530	5920	1000	2850	1300	3640	3240	2420	496	280	142	99
MIN	231	250	440	378	857	189	419	231	142	124	64	62
CFSM	.70	2.18	.81	1.31	1.30	2.40	1.31	.82	.26	.19	.12	.10
IN.	.81	2.43	.93	1.51	1.40	2.77	1.46	.94	.29	.22	.14	.11

CAL YR 1979 TOTAL 426836 MEAN 1169 MAX 10300 MIN 115 CFSM 1.51 IN 20.44
WTR YR 1980 TOTAL 271637 MEAN 742 MAX 5920 MIN 62 CFSM .96 IN 13.00

02082585 TAR RIVER AT N. C. 97 AT ROCKY MOUNT, N. C.

LOCATION.--Lat 35°57'14", long 77°47'20", Edgecombe County, Hydrologic Unit 03020101, on left bank 20 ft (6 m) downstream from bridge on N. C. Highway 97, 0.5 mi (0.8 km) above Cowlick Branch, and 1.0 mi (1.6 km) north-northeast of Rocky Mount.

DRAINAGE AREA.--916 mi² (2372 km²).

PERIOD OF RECORD.--August 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 53.882 ft (16.423 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, Jan. 20 to Feb. 27, which are poor. Some regulation at low flow by mill above station. The City of Rocky Mount diverted an average of 14.0 ft³/s (0.40 m³/s) for municipal water supply, most of which was returned as sewage below station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,300 ft³/s (348 m³/s) May 1, 1978, gage height, 23.66 ft (7.212 m); minimum, 10 ft³/s (0.28 m³/s) May 30, 1977, gage height, 3.03 ft (0.924 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,370 ft³/s (180 m³/s) Nov. 16, gage height, 16.05 ft (4.892 m); minimum, 24 ft³/s (0.68 m³/s) Sept. 3, 23, minimum gage height, 3.04 ft (0.927 m) Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	776	300	1160	484	1000	1480	1970	696	324	351	139	90
2	1710	600	915	480	980	1390	1510	635	309	303	246	184
3	2430	1500	791	447	960	1220	1320	573	302	151	110	83
4	1450	2200	716	448	1000	1270	1220	559	183	149	187	132
5	709	2600	668	536	1000	1170	1090	508	293	190	135	137
6	614	1700	684	603	1000	1190	1000	470	214	181	118	75
7	993	1000	916	687	960	2990	909	420	177	170	63	75
8	941	700	1030	1010	960	4100	885	382	225	212	133	162
9	565	552	987	1210	1000	3370	896	364	292	161	77	66
10	400	512	834	911	1100	2330	881	318	248	168	103	117
11	338	1040	717	1070	1300	1940	989	346	256	181	160	37
12	314	2040	615	1140	1400	1700	987	384	204	132	115	135
13	310	3690	606	1810	1300	1630	897	310	150	191	115	53
14	353	4720	635	2900	1200	2100	1400	313	172	219	113	53
15	330	5560	644	2240	1100	2350	2060	310	197	166	52	114
16	309	6250	686	1620	1200	2100	2960	311	218	162	63	72
17	295	3130	655	1350	1400	1740	3380	339	201	173	75	40
18	267	1150	595	1310	1300	1910	2120	1440	178	166	137	49
19	261	911	550	1750	1100	2550	1130	1680	179	103	121	74
20	186	796	522	2500	1000	3450	936	1330	160	155	179	122
21	221	717	495	2600	980	2920	785	1150	145	228	141	39
22	220	662	478	2200	980	2680	626	1390	173	139	30	124
23	240	621	487	1700	980	3560	689	2270	216	156	98	31
24	360	592	497	1400	960	3950	633	2510	170	133	77	29
25	520	566	608	1300	960	2740	537	1180	170	144	185	119
26	580	1520	647	1400	1000	2150	529	801	269	129	112	34
27	500	2740	676	1500	1150	2580	536	662	234	149	42	36
28	420	3500	641	1400	1270	2140	744	543	539	229	93	66
29	350	3470	549	1200	1420	1880	707	475	643	206	138	127
30	320	1800	514	1100	---	1980	770	409	649	158	56	53
31	290	---	487	1000	---	2350	---	313	---	148	59	---
TOTAL	17572	57139	21005	41306	31960	70910	35096	23391	7690	5503	3472	2528
MEAN	567	1905	678	1332	1102	2287	1170	755	256	178	112	84.3
MAX	2430	6250	1160	2900	1420	4100	3380	2510	649	351	246	184
MIN	186	300	478	447	960	1170	529	310	145	103	30	29
CFSM	.62	2.08	.74	1.45	1.20	2.50	1.28	.82	.28	.19	.12	.09
IN.	.71	2.32	.85	1.68	1.30	2.88	1.43	.95	.31	.22	.14	.10

CAL YR 1979 TOTAL 504465 MEAN 1382 MAX 11200 MIN 88 CFSM 1.51 IN 20.49
WTR YR 1980 TOTAL 317572 MEAN 868 MAX 6250 MIN 29 CFSM .95 IN 12.90

02082770 SWIFT CREEK AT HILLIARDSTON, N. C.

LOCATION.--Lat 36°06'42", long 77°55'16", Nash County, Hydrologic Unit 03020101, near left bank at downstream side of bridge on Secondary Road 1310, 0.7 mi (1.1 km) northeast of Hilliardston, and 2.8 mi (4.5 km) downstream from Gideon Swamp.

DRAINAGE AREA.--163 mi^2 (422 km^2).

PERIOD OF RECORD.--July 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 130.42 ft (39.752 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for periods of no gage height record, Dec. 2 to Jan. 16 and Aug. 27 to Sept. 30, which are poor. An average of 7.5 ft^3/s (0.21 m^3/s) was diverted from Kerr Reservoir for Henderson municipal water supply. About 0.5 ft^3/s (0.01 m^3/s) of sewage effluent was discharged into the Tar River and about 1.8 ft^3/s (0.05 m^3/s) was diverted into the Roanoke River basin. Withdrawals from Sandy Creek tributary for municipal water supply ended Feb. 21, 1978.

AVERAGE DISCHARGE.--17 years, 151 ft^3/s (4.276 m^3/s), 12.58 in/yr (320 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,030 ft^3/s (171 m^3/s) June 5, 1979, gage height, 14.27 ft (4.349 m); minimum, 0.60 ft^3/s (0.017 m^3/s) Sept. 25, 26, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1924 reached a stage of 14.5 ft (4.42 m) discharge not determined, from information by North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 943 ft^3/s (26.7 m^3/s) Nov. 26, gage height 8.02 ft (2.444 m), no peak above base of 1,000 ft^3/s (28.3 m^3/s); minimum daily, 3.0 ft^3/s (0.085 m^3/s) Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	149	71	170	100	168	137	299	125	85	121	34	4.5
2	155	73	155	98	154	135	257	124	81	67	39	4.0
3	165	253	140	95	151	146	233	121	77	52	32	3.5
4	114	420	140	110	169	192	211	116	73	47	27	3.0
5	94	316	327	150	164	321	198	111	70	45	23	3.5
6	126	223	378	170	138	568	180	107	69	45	22	10
7	171	135	418	150	139	534	168	103	83	49	19	15
8	148	115	285	180	143	452	168	100	101	45	16	30
9	96	106	190	190	148	352	173	98	97	40	15	25
10	80	101	160	170	229	271	170	97	80	63	13	17
11	75	122	140	400	256	240	157	97	70	307	12	13
12	79	526	130	580	236	211	146	95	65	170	12	11
13	79	630	140	700	209	359	145	94	62	78	11	9.0
14	79	792	160	500	189	459	268	92	60	57	12	8.5
15	79	597	150	600	197	288	409	117	58	48	23	8.0
16	76	259	140	240	232	222	314	109	57	42	23	7.5
17	71	188	130	210	243	193	226	104	54	39	14	8.0
18	67	160	120	277	197	533	175	240	52	47	12	9.0
19	65	144	110	598	168	498	158	255	52	70	12	8.0
20	64	133	110	507	155	377	148	162	54	69	16	7.0
21	62	125	105	498	153	436	141	156	53	51	16	7.0
22	61	120	105	323	150	542	136	208	49	42	20	7.0
23	61	117	110	458	147	499	131	230	46	43	24	7.0
24	67	114	120	520	146	406	126	161	44	44	20	6.0
25	169	115	140	440	139	523	122	126	44	46	16	6.0
26	161	618	170	325	188	457	119	126	169	40	13	7.0
27	98	784	150	240	214	352	118	116	178	35	11	7.0
28	81	629	120	212	181	276	127	103	115	33	8.0	8.0
29	76	389	105	187	156	383	127	95	78	36	6.6	9.0
30	74	215	105	170	---	403	129	91	87	34	5.6	10
31	73	---	110	166	---	377	---	87	---	33	5.4	---
TOTAL	3015	8590	5033	9564	5159	11142	5479	3966	2263	1938	532.6	278.5
MEAN	97.3	286	162	309	178	359	183	128	75.4	62.5	17.2	9.28
MAX	171	792	418	700	256	568	409	255	178	307	39	30
MIN	61	71	105	95	138	135	118	87	44	33	5.4	3.0
CFSM	.60	1.76	.99	1.90	1.09	2.20	1.12	.79	.46	.38	.11	.06
IN.	.69	1.96	1.15	2.18	1.18	2.54	1.25	.91	.52	.44	.12	.06

CAL YR 1979 TOTAL 93004.0 MEAN 255 MAX 4710 MIN 27 CFSM 1.56 IN 21.23
WTR YR 1980 TOTAL 56960.1 MEAN 156 MAX 792 MIN 3.0 CFSM .96 IN 13.00

02082950 LITTLE FISHING CREEK NEAR WHITE OAK, N. C.

LOCATION.--Lat 36°11'08", long 77°52'34", Halifax County, Hydrologic Unit 03020102, on right bank 8 ft (2 m) downstream from bridge on Secondary Road 1338, 1.1 mi (1.8 km) west of White Oak, 1.8 mi (2.9 km) upstream from Powells Creek, 4.3 mi (6.9 km) upstream from mouth, and 12 mi (19 km) west of Enfield.

DRAINAGE AREA.--175 mi² (453 km²).

PERIOD OF RECORD.--October 1959 to current year.

REVISED RECORDS.--WSP 1723: 1960(M).

GAGE.--Water-stage recorder. Datum of gage is 116.44 ft (35.491 m) National Geodetic Vertical Datum of 1929. Feb. 14, 1962 to Apr. 23, 1979, auxiliary nonrecording gage 3.6 mi (5.8 km) downstream.

REMARKS.--Records excellent.

AVERAGE DISCHARGE.--21 years, 169 ft³/s (4.786 m³/s), 13.11 in/yr (333 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft³/s (510 m³/s) Oct. 7, 1972, gage height, 24.80 ft (7.559 m) from floodmarks, from rating curve extended above 3,400 ft³/s (96.3 m³/s) on basis of slope-conveyance study of peak flow; minimum, 0.72 ft³/s (0.020 m³/s) Sept. 5, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1959 reached a stage of 19.3 ft (5.88 m), from floodmarks (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 13	1000	1220	34.6	9.63	2.935	Jan 20	0730	1210	34.3	9.60	2.926
Nov 27	1900	*1610	45.6	*11.25	3.429						

Minimum discharge, 0.72 ft³/s (0.020 m³/s) Sept. 5, gage height, 1.02 ft (0.311 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	501	43	160	90	168	139	358	124	44	45	10	1.4
2	571	45	145	88	150	126	275	108	41	25	9.3	1.1
3	181	405	130	85	161	181	223	96	38	18	9.9	.92
4	83	613	122	84	161	215	205	87	36	17	10	.78
5	63	307	121	113	156	358	201	80	34	16	8.1	.85
6	113	131	144	146	153	735	179	75	34	19	6.7	2.7
7	106	99	287	124	146	753	158	70	49	28	5.8	2.3
8	65	85	210	138	145	470	161	66	64	22	5.4	10
9	51	78	147	170	156	332	171	66	45	17	4.8	6.5
10	46	75	129	146	207	252	171	65	36	22	5.0	4.4
11	47	245	122	135	232	277	148	63	32	333	4.6	3.6
12	53	996	117	433	228	306	135	62	30	257	4.6	3.0
13	49	1190	115	630	204	320	139	60	29	64	4.0	2.5
14	52	667	138	300	187	466	280	58	28	37	3.8	2.3
15	52	308	138	438	219	316	574	65	27	28	4.7	2.2
16	46	198	118	579	272	221	355	76	26	23	3.7	2.2
17	42	158	113	327	265	195	198	60	24	21	3.2	2.2
18	40	136	103	365	185	632	162	108	22	30	3.0	2.4
19	38	122	99	985	156	657	150	164	22	37	4.9	2.3
20	37	112	99	1100	155	352	139	115	23	30	3.7	2.0
21	36	103	96	452	154	463	131	176	22	22	3.0	1.8
22	35	97	96	282	148	692	122	138	19	17	3.2	1.8
23	35	94	97	595	145	467	114	82	17	19	3.4	1.8
24	82	92	99	693	136	270	107	71	16	23	3.2	1.4
25	114	93	124	423	127	371	99	68	16	19	2.9	1.2
26	67	1090	139	280	157	416	96	68	34	17	2.5	1.2
27	52	1450	111	225	237	267	101	64	41	14	2.2	1.1
28	46	1030	97	204	195	217	121	55	36	13	2.0	1.1
29	45	288	92	184	164	410	123	51	28	13	1.8	1.1
30	45	195	92	167	---	442	111	48	33	12	1.6	2.0
31	44	---	93	164	---	357	---	47	---	11	1.5	---
TOTAL	2837	10545	3893	10145	5169	11675	5507	2536	946	1269	142.5	70.15
MEAN	91.5	352	126	327	178	377	184	81.8	31.5	40.9	4.60	2.34
MAX	571	1450	287	1100	272	753	574	176	64	333	10	10
MIN	35	43	92	84	127	126	96	47	16	11	1.5	.78
CFSM	.52	2.01	.72	1.87	1.02	2.15	1.05	.47	.18	.23	.03	.01
IN.	.60	2.24	.83	2.16	1.10	2.48	1.17	.54	.20	.27	.03	.01

CAL YR 1979 TOTAL 87763.00 MEAN 240 MAX 3250 MIN 10 CFSM 1.37 IN 18.66
WTR YR 1980 TOTAL 54734.65 MEAN 150 MAX 1450 MIN .78 CFSM .86 IN 11.63

02083000 FISHING CREEK NEAR ENFIELD, N. C.

LOCATION.--Lat 36°09'03", long 77°41'35", Edgecombe County, Hydrologic Unit 03020102, on right bank 15 ft (5 m) downstream from bridge on U.S. Highway 301, 2,000 ft (610 m) downstream from Seaboard Coast Line Railroad bridge, 2 mi (3 km) southwest of Enfield, 4.8 mi (7.7 km) downstream from Rocky Creek, and 40 mi (64 km) upstream from mouth.

DRAINAGE AREA.--521 mi² (1,349 km²).

PERIOD OF RECORD.--October 1923 to current year. Figures of daily discharge below 250 ft³/s (7.08 m³/s) Oct 1, 1923, to July 3, 1924, below 350 ft³/s (9.91 m³/s) May 30, 1925, to May 31, 1926, below 150 ft³/s (4.25 m³/s) June 1 to Nov. 16, 1926, and below 100 ft³/s (2.83 m³/s) Nov. 17, 1926, to Sept. 30, 1928, published in WSP 622, 642, and 662 are unreliable and should not be used. Gage-height records collected at site 2,000 ft (610 m) upstream at different datum July 1, 1910, to Apr. 30, 1914, and at present site and datum since May 1, 1914, are contained in reports of National Weather Service, NOAA, U.S. Department of Commerce.

REVISED RECORDS.--WSP 872: 1935(M), WSP 1172: Drainage area. WSP 1333: 1928(M), 1932-33, 1935. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 76.26 ft (23.244 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 28, 1932, nonrecording gage, at same site and datum.

REMARKS.--Records good except those for periods of no gage-height record, Dec. 14 to Jan. 16 and Sept. 6-30, which are poor. Slight diurnal fluctuation and some regulation at low flow caused by mills above station.

AVERAGE DISCHARGE.-- 57 years, 494 ft³/s (13.99 m³/s), 12.88 in/yr (327 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft³/s (357 m³/s) Dec. 2, 1934, Aug. 18, 1940; maximum gage height, 17.72 ft (5.401 m) Aug. 18, 1940; minimum daily discharge, 6.9 ft³/s (0.20 m³/s) Oct. 5, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Apr. 19, 1910 reached a stage of 20.1 ft (6.13 m), present datum (from floodmarks of Seaboard Coast Line Railroad Co.) at site 2,000 ft (610 m) upstream. Flood of July 24, 1919, reached a stage of 19.6 ft (5.97 m) discharge, 20,300 ft³/s (575 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,930 ft³/s (83.0 m³/s) Nov. 29, gage height, 12.94 ft (3.944 m); minimum daily, 10 ft³/s (0.28 m³/s) Sept. 26-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	439	170	681	370	534	496	1050	383	162	160	49	14
2	1060	170	508	350	518	446	902	388	155	163	48	12
3	737	409	452	340	438	363	735	364	146	105	51	13
4	405	1290	411	340	392	495	646	336	138	88	45	14
5	276	1370	391	370	452	769	607	312	130	84	41	11
6	235	824	395	430	503	1650	573	290	122	81	33	22
7	451	478	534	490	492	2090	518	270	127	80	33	20
8	400	350	746	520	489	1990	496	252	173	84	32	15
9	277	303	597	640	498	1430	508	240	211	79	30	22
10	209	279	471	590	610	1040	519	236	164	73	28	18
11	183	323	416	540	773	799	494	233	131	190	27	17
12	182	1530	395	800	765	823	447	228	117	560	26	15
13	194	2310	383	1300	710	870	421	225	109	340	25	14
14	193	2640	440	2400	632	1450	510	218	104	156	24	13
15	190	2350	500	1200	611	1260	1200	217	101	103	27	12
16	189	1330	540	1300	694	858	1280	236	99	79	25	12
17	174	711	470	1150	791	740	901	248	96	69	24	13
18	163	520	420	811	702	1400	625	284	91	77	22	15
19	156	453	380	1780	563	2200	535	550	87	84	30	13
20	150	412	370	2220	510	1800	496	483	86	99	38	12
21	147	381	360	2240	506	1600	466	431	88	89	30	12
22	143	359	350	1450	502	2000	441	572	86	74	29	11
23	142	345	360	1250	491	2400	416	505	80	66	22	11
24	148	337	380	1830	483	1800	393	369	76	80	25	11
25	341	332	420	1730	458	1600	372	283	73	71	24	11
26	395	815	460	1160	486	1900	352	292	83	69	23	10
27	266	2320	480	842	637	1700	343	269	241	64	22	10
28	201	2760	450	688	673	1500	377	233	236	57	20	10
29	178	2690	420	620	569	1600	416	198	166	53	18	10
30	173	1320	400	566	---	1900	405	180	130	51	17	32
31	173	---	390	535	---	1200	---	169	---	49	15	---
TOTAL	8570	29881	13970	30852	16482	42169	17444	9494	3808	3477	903	425
MEAN	276	996	451	995	568	1360	581	306	127	112	29.1	14.2
MAX	1060	2760	746	2400	791	2400	1280	572	241	560	51	32
MIN	142	170	350	340	392	363	343	169	73	49	15	10
CFSM	.53	1.91	.87	1.91	1.09	2.61	1.12	.59	.24	.22	.06	.03
IN.	.61	2.13	1.00	2.20	1.18	3.01	1.25	.68	.27	.25	.06	.03

CAL YR 1979 TOTAL 280240 MEAN 768 MAX 7790 MIN 75 CFSM 1.47 IN 20.01
WTR YR 1980 TOTAL 177475 MEAN 485 MAX 2760 MIN 10 CFSM .93 IN 12.67

02083500 TAR RIVER AT TARBORO, N. C.

LOCATION.--Lat 35°53'38", long 77°32'00", Edgecombe County, Hydrologic Unit 03020103, near right bank on downstream end of pier of bridge on U.S. Highway 64 in Tarboro, 6.5 mi (10.5 km) downstream from Fishing Creek, and 49.2 mi (79.2 km) upstream from Pamlico River at Washington.

DRAINAGE AREA.--2,140 mi² (5,540 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1896 to December 1900, October 1931 to current year. Gage-height records at various datums collected at same site since 1905 are contained in reports of National Weather Service, NOAA, U.S. Department of Commerce.

REVISED RECORDS.--WSP 1273: 1899-1900, 1933. WSP 1503: 1932.

GAGE.--Water-stage recorder. Datum of gage is 10.37 ft (3.161 m) National Geodetic Vertical Datum of 1929. July 1896 to December 1900 nonrecording gage at Seaboard Coast Line Railroad bridge 600 ft (183 m) downstream at different datum, Oct. 1, to Dec. 8, 1931, nonrecording gage at site 100 ft (30 m) upstream at present datum.

REMARKS.--Water-discharge record good. Some diurnal fluctuation at low flow caused by mills above station. Town of Tarboro diverted 2.9 ft³/s (0.08 m³/s) for municipal water supply.

AVERAGE DISCHARGE.--53 years, 2,249 ft³/s (63.69 m³/s), 14.27 in/yr (362 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,200 ft³/s (1,050 m³/s) Aug. 20, 1940, gage height, 31.77 ft (9.683 m); minimum, 36 ft³/s (1.02 m³/s) Oct. 17, 22, 1933, Oct. 6, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 27, 1919, reached a stage of 34.0 ft (10.36 m), present datum, from floodmarks, discharge, 52,800 ft³/s (1,500 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,910 ft³/s (252 m³/s) Nov. 18, gage height, 17.58 ft (5.358 m); minimum, 121 ft³/s (3.43 m³/s) Sept. 28, gage height, 1.33 ft (0.405 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1510	627	5890	1370	2150	3090	5720	1920	816	897	338	149
2	1690	615	5270	1310	1920	2860	5510	1740	761	642	407	154
3	2980	668	4010	1270	1740	2340	4900	1590	705	601	423	242
4	3610	1720	2740	1210	1690	2250	4200	1470	659	528	272	236
5	2400	2920	2200	1280	1800	2560	3670	1370	549	647	325	221
6	1570	3750	1930	1480	1890	3310	3150	1270	574	593	281	453
7	1310	3580	1990	1600	1990	5240	2780	1160	531	653	259	351
8	1590	2660	2270	1730	2040	7020	2510	1060	486	510	225	214
9	1670	2090	2460	2090	2090	7900	2370	975	500	488	242	242
10	1270	1730	2440	2390	2450	8470	2300	913	584	474	217	209
11	996	1630	2190	2240	3140	7990	2220	841	603	694	205	217
12	886	3250	1980	2530	3590	6380	2240	825	567	571	259	193
13	819	4730	1830	2800	3840	5120	2170	848	458	620	232	207
14	836	5670	1820	3700	3770	5090	2280	767	461	792	217	189
15	851	6680	1780	4640	3580	5520	3460	706	384	702	211	160
16	795	7610	1750	4910	3360	5750	4180	726	417	576	183	180
17	755	8470	1740	4490	3300	5580	5000	714	431	507	161	181
18	716	8730	1670	4180	3360	5440	5480	1360	413	440	173	170
19	663	6210	1560	4280	3290	6070	4470	3920	390	405	232	157
20	630	3760	1470	4720	2930	6630	2990	3760	373	326	229	163
21	556	2660	1420	5410	2620	7120	2450	3180	353	352	258	198
22	545	2120	1310	6160	2480	7300	2040	2760	319	416	231	165
23	575	1870	1290	6670	2470	7030	1750	2910	346	395	188	167
24	587	1710	1280	6560	2580	6920	1670	3790	381	371	173	165
25	585	1590	1360	6570	2610	7100	1540	3850	345	338	180	129
26	652	1700	1620	6720	2610	6800	1400	2760	387	340	235	167
27	993	3320	1690	6500	2920	5930	1310	2010	464	313	211	159
28	907	4480	1710	5710	2980	5620	1460	1590	449	328	180	125
29	765	5380	1640	4480	3190	5300	1740	1300	734	425	159	129
30	685	6000	1510	3710	---	5170	1830	1100	912	401	207	200
31	666	---	1430	2670	---	5370	---	969	---	321	176	---
TOTAL	35063	107930	65250	115380	78380	174270	88790	54154	15352	15666	7289	5892
MEAN	1131	3598	2105	3722	2703	5622	2960	1747	512	505	235	196
MAX	3610	8730	5890	6720	3840	8470	5720	3920	912	897	423	453
MIN	545	615	1280	1210	1690	2250	1310	706	319	313	159	125
CFSM	.53	1.68	.98	1.74	1.26	2.63	1.38	.82	.24	.24	.11	.09
IN.	.61	1.88	1.13	2.01	1.36	3.03	1.54	.94	.27	.27	.13	.10

CAL YR 1979 TOTAL 1276861 MEAN 3498 MAX 22300 MIN 310 CFSM 1.64 IN 22.20
WTR YR 1980 TOTAL 763416 MEAN 2086 MAX 8730 MIN 125 CFSM .98 IN 13.27

02083500 TAR RIVER AT TARBORO, N. C.--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1945, 1954, 1958 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1964 to September 1967, July 1973 to current year.
WATER TEMPERATURES: October 1944 to September 1945, October 1953 to September 1954, October 1961 to September 1967, July 1973 to current year.

REMARKS.--Station operated as part of NASQAN network from October 1974 to present. Daily records of specific conductance for water years 1954, 1959-64 are available in files of district office in Raleigh, N. C. Miscellaneous chemical data published for water years 1944, 1947, 1955-61.

COOPERATION.--Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 231 micromhos Sept. 29, 1980; minimum daily, 34 micromhos Aug. 22, 1967.
WATER TEMPERATURES: Maximum daily, 32.0°C July 8, 9, 10, 20, 21, Aug. 7, 8, 12, 1977, Aug. 4-9, 1980; minimum daily, 0.0°C on several days in 1963 and 1966, Jan. 18, 19, 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 231 micromhos Sept. 29; minimum daily, 58 micromhos Nov. 17.
WATER TEMPERATURES: Maximum daily, 32.0°C Aug. 4-9; minimum daily, 2.0°C Feb. 4, 5, 6.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT												
02...	1100	1590	72	6.0	22.0	30	7.0	630	350	21	6	5.4
DEC												
11...	1130	2160	70	6.7	5.5	8.0	10.4	100	K64	17	0	4.3
JAN												
30...	1430	3560	61	6.3	5.5	5.0	11.4	290	80	18	5	4.5
MAR												
24...	1300	6890	62	6.2	11.0	2.5	9.6	100	K64	17	2	4.0
APR												
21...	1230	2410	75	6.1	16.0	18	8.0	92	220	20	2	5.0
MAY												
14...	1300	764	84	7.0	22.5	3.8	8.2	80	84	26	0	6.1
JUN												
23...	1100	347	120	7.0	23.5	1.5	10.0	K24	K40	26	0	6.6
JUL												
22...	1215	442	125	7.2	29.0	8.5	8.0	84	K48	26	0	6.5
AUG												
18...	1345	185	145	5.9	24.5	4.3	7.9	K56	K40	30	0	7.4
SEP												
10...	1015	207	178	6.3	24.5	1.9	6.4	84	180	37	5	10

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT												
02...	1.8	5.6	33	.5	2.7	18	0	15	29	7.8	6.9	.1
DEC												
11...	1.6	4.9	45	.5	1.9	22	0	18	7.0	5.3	6.2	.1
JAN												
30...	1.6	4.7	43	.5	1.7	16	0	13	13	7.5	6.3	.1
MAR												
24...	1.6	5.3	38	.6	1.6	18	0	15	18	6.2	5.5	.1
APR												
21...	1.9	7.1	40	.7	1.9	22	0	18	28	6.3	6.2	.1
MAY												
14...	2.5	7.0	36	.6	1.6	33	0	27	4.5	4.9	6.0	.1
JUN												
23...	2.4	13	49	1.1	2.3	38	0	31	4.9	9.9	12	.2
JUL												
22...	2.3	12	47	1.0	2.8	35	0	*29	3.6	11	11	.2
AUG												
18...	2.9	14	47	1.1	2.9	45	0	*38	93	11	11	.2
SEP												
10...	3.0	19	50	1.4	3.6	40	0	*32	31	20	16	.3

K Results based on colony count outside the acceptable range (non-ideal colony count).
* Lab alkalinity.

02083500 TAR RIVER AT TARBORO, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
OCT												
02...	13	74	55	.10	318	.70	.63	.05	.07	.06	.09	.68
DEC												
11...	14	76	51	.10	443	.29	.31	.05	.05	.06	.06	.58
JAN												
30...	11	63	47	.09	606	.29	.29	.02	.04	.02	.05	.42
MAR												
24...	9.2	68	35	.09	1270	.32	.32	.03	.03	.04	.04	.22
APR												
21...	8.9	87	50	.12	566	.33	.35	.06	.03	.07	.04	.54
MAY												
14...	16	74	63	.10	153	.50	.53	.01	.04	.01	.05	.36
JUN												
23...	11	82	78	.11	76.8	.49	.51	.04	.04	.05	.05	.61
JUL												
22...	13	91	79	.12	109	.62	.60	.05	.04	.06	.05	.60
AUG												
18...	10	95	84	.13	47.5	.36	.36	.03	.01	.04	.01	.69
SEP												
10...	11	112	106	.15	62.6	.86	.88	.12	.09	.15	.12	.61

DATE	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)
OCT												
02...	.33	.73	.33	.40	1.4	6.3	.180	.55	.080	--	--	--
DEC												
11...	.46	.63	.12	.51	.92	4.1	.170	.52	.110	2	0	2
JAN												
30...	.41	.44	.00	.45	.73	3.2	.080	.25	.010	--	--	--
MAR												
24...	.07	.25	.15	.10	.57	2.5	.000	.00	.030	2	1	1
APR												
21...	.32	.60	.25	.35	.93	4.1	.130	.40	.050	--	--	--
MAY												
14...	.35	.37	.00	.39	.87	3.9	.110	.34	.060	1	0	1
JUN												
23...	.37	.65	.24	.41	1.1	5.0	.130	.40	.120	--	--	--
JUL												
22...	.37	.65	.24	.41	1.3	5.6	.240	.74	.150	--	--	--
AUG												
18...	.53	.72	.18	.54	1.1	4.8	.210	.64	.150	--	--	--
SEP												
10...	.47	.73	.17	.56	1.6	7.0	.330	1.0	.230	1	0	1

02083500 TAR RIVER AT TARBORO, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)
OCT 02...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 11...	<50	<10	40	0	0	2	30	10	20	1	1	0
JAN 30...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 24...	100	60	40	0	0	4	<10	0	<10	0	0	1
APR 21...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 14...	<50	0	60	0	0	5	20	10	<10	0	0	0
JUN 23...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 22...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 18...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	<50	<50	0	0	0	0	10	0	10	0	0	0

DATE	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 02...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 11...	2	0	3	1400	870	530	2	2	0	50	30	20
JAN 30...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 24...	2	0	2	1100	950	150	0	0	0	50	40	10
APR 21...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 14...	1	0	4	1000	550	450	3	2	1	80	80	2
JUN 23...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 22...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 18...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	3	0	5	750	560	190	2	0	2	220	90	130

02083500 TAR RIVER AT TARBORO, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)
OCT												
02...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
11...	<.1	.0	<.1	2	1	1	0	0	0	0	0	0
JAN												
30...	--	--	--	--	--	--	--	--	--	0	--	--
MAR												
24...	.2	.0	.2	3	0	3	0	0	0	0	0	0
APR												
21...	--	--	--	--	--	--	--	--	--	0	--	--
MAY												
14...	.2	.0	.2	2	0	2	0	0	0	0	0	0
JUN												
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
22...	--	--	--	--	--	--	--	--	--	0	--	--
AUG												
18...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
10...	.1	.1	<.1	6	5	1	0	0	1	0	0	0

DATE	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	BIOMASS CHLORO-PHYLL RATIO PERI-PHYTON (UNITS)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPO-SURE (DAYS)
OCT												
02...	--	--	--	8.9	--	--	--	--	--	--	--	--
DEC												
11...	0	0	10	--	5.9	.6	--	--	--	--	--	--
JAN												
30...	--	--	--	9.2	--	--	--	--	--	--	--	--
MAR												
24...	10	10	0	--	15	.8	--	--	--	--	--	--
APR												
21...	--	--	--	9.2	--	--	--	--	--	--	--	--
MAY												
14...	10	10	0	--	5.2	.6	--	--	--	--	--	--
JUN												
23...	--	--	--	5.9	--	--	--	--	--	--	--	--
JUL												
22...	--	--	--	15	--	--	--	--	--	--	--	--
AUG												
18...	--	--	--	3.3	--	--	6.06	5.04	118	8.67	1.69	27
SEP												
10...	20	10	10	--	5.0	.8	--	--	--	--	--	--

02083500 TAR RIVER AT TARBORO, N. C.--Continued

PHYTOPLANKTON ANALYSES, AUGUST TO SEPTEMBER 1979

DATE	AUG 1,79	AUG 29,79
TIME	1245	1045
TOTAL CELLS/ML	42000	78000
DIVERSITY: DIVISION	1.5	1.3
.CLASS	1.5	1.3
..ORDER	1.8	1.3
...FAMILY	2.3	1.9
....GENUS	3.0	2.9

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)				
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...CHARACIACEAE				
....SCHROEDERIA	--	-	400	1
...HYDRODICTYACEAE				
....PEDIASTRUM	1800	4	--	-
...MICRACTINIACEAE				
....GOLENKINIA	--	-	*	0
....MICRACTINIUM	--	-	1800	2
...OOCYSTACEAE				
....ANKISTRODESMUS	400	1	1400	2
....DICHOTOMOCOCCUS	--	-	4000	5
....DICTYOSPHAERIUM	810	2	6200	8
....KIRCHNERIELLA	1600	4	4200	5
....OOCYSTIS	1600	4	400	1
....SELENASTRUM	910	2	--	-
....TETRAEDRON	500	1	800	1
....TREUBARIA	*	0	--	-
...SCENEDESMACEAE				
....ACTINASTRUM	810	2	--	-
....CRUCIGENIA	810	2	2400	3
....SCENEDESMUS	3600	9	13000#	17
....TETRASTRUM	1200	3	--	-
..TETRASPORALES				
...PALMELLACEAE				
....SPHAEROCYSTIS	810	2	--	-
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS	300	1	--	-
CHRYSOPHYTA				
.BACILLARIOPHYCEAE				
..CENTRALES				
...COSCINODISCACEAE				
....CYCLOTELLA	810	2	*	0
....MELOSIRA	20000#	47	3000	4
..PENNALES				
...FRAGILARIACEAE				
....FRAGILARIA	*	0	--	-
...NITZSCHIACEAE				
....NITZSCHIA	400	1	*	0
.XANTHOPHYCEAE				
..HETEROCOCCALES				
...CHLOROTHECIACEAE				
....OPHIOCYTIUM	--	-	400	1
CRYPTOPHYTA (CRYPTOMONADS)				
.CRYPTOPHYCEAE				
..CRYPTOMONADALES				
...CRYPTOMONADACEAE				
....CRYPTOMONAS	--	-	*	0

02083500 TAR RIVER AT TARBORO, N. C.--Continued

PHYTOPLANKTON ANALYSES, AUGUST TO SEPTEMBER 1979

ORGANISM	AUG 1,79 1245 CELLS /ML	PER-CENT	AUG 29,79 1045 CELLS /ML	PER-CENT
CYANOPHYTA (BLUE-GREEN ALGAE)				
.CYANOPHYCEAE				
..CHROOCOCCALES				
...CHROOCOCCACEAE				
....AGMENELLUM	--	-	5200	7
....ANACYSTIS	4600	11	32000#	41
....GOMPHOSPHAERIA	--	-	1600	2
..HORMOGONALES				
...RIVULARIACEAE				
....RAPHIDIOPSIS	700	2	--	-
EUGLENOPHYTA (EUGLENOIDS)				
.EUGLENOPHYCEAE				
..EUGLENALES				
...EUGLENACEAE				
....TRACHELOMONAS	*	0	--	-
PYRRHOPHYTA (FIRE ALGAE)				
.DINOPHYCEAE				
..PERIDINIALES				
...GLENODINIACEAE				
....GLENODINIUM	*	0	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO JULY 1980

DATE / TIME	DEC 11,79 1130	MAR 24,80 1300	MAY 14,80 1300	JUN 23,80 1100	JUL 22,80 1215
TOTAL CELLS/ML	500	520	27000	36000	47000
DIVERSITY: DIVISION	1.0	1.4	1.6	1.1	1.3
.CLASS	1.0	1.4	1.6	1.1	1.3
..ORDER	1.5	1.7	2.0	1.8	1.3
...FAMILY	1.9	1.9	2.3	2.7	2.5
....GENUS	2.3	2.1	2.9	3.5	3.7

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...CHLOROCOCCACEAE										
....CHLOROCOCCUM	10	2	--	-	--	-	--	-	--	-
...HYDRODICTYACEAE										
....PEDIASTRUM	--	-	--	-	470	2	--	-	2100	4
...MICRACTINIACEAE										
....GOLENKINIA	--	-	--	-	--	-	320	1	300	1
....MICRACTINIUM	--	-	--	-	470	2	4900	14	3600	8
...OOCYSTACEAE										
....ANKISTRODESMUS	30	6	77	15	410	2	1300	4	2900	6
....CHLORELLA	30	6	--	-	--	-	--	-	--	-
....CHODATELLA	--	-	--	-	*	0	--	-	300	1
....DICTYOSPHAERIUM	--	-	39	7	--	-	4900	14	2000	4
....KIRCHNERIELLA	--	-	--	-	--	-	2000	6	2100	4
....OOCYSTIS	--	-	--	-	--	-	400	1	*	0
....SELENASTRUM	--	-	--	-	530	2	--	-	3300	7
....TETRAEDRON	--	-	--	-	*	0	--	-	450	1
....TREUBARIA	--	-	--	-	--	-	--	-	*	0
...SCENEDESMACEAE										
....ACTINASTRUM	--	-	--	-	--	-	2200	6	--	-
....CRUCIGENIA	20	4	--	-	950	4	640	2	7900#	17
....SCENEDESMUS	40	8	26	5	4300#	16	3700	10	4500	10
....TETRASTRUM	20	4	--	-	240	1	--	-	1200	3
..TETRASPORALES										
...COCCOMYXACEAE										
....ELAKATOTHRIX	--	-	26	5	--	-	--	-	--	-
...PALMELLACEAE										
....SPHAEROCYSTIS	--	-	--	-	470	2	5200	14	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	13	2	*	0	560	2	450	1
..ZYGNEMATALES										
...DESMIDIACEAE										
....STAURASTRUM	--	-	--	-	--	-	*	0	--	-

02083500 TAR RIVER AT TARBORO, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO JULY 1980

DATE TIME	DEC 11,'79 1130		MAR 24,'80 1300		MAY 14,'80 1300		JUN 23,'80 1100		JUL 22,'80 1215	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	--	-	--	-	1800	7	*	0	760	2
....MELOSIRA	--	-	--	-	4300#	16	1800	5	2300	5
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	--	-	--	-	--	-	*	0	--	-
...FRAGILARIACEAE										
....SYNEDRA	--	-	--	-	--	-	*	0	--	-
...NAVICULACEAE										
....NAVICULA	--	-	--	-	--	-	*	0	--	-
...NITZSCHIACEAE										
....NITZSCHIA	5	1	39	7	180	1	*	0	--	-
.XANTHOPHYCEAE										
..HETEROCOCCALES										
...CHLOROTHECIACEAE										
....OPHIOCYTIUM	--	-	--	-	--	-	*	0	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....AGMENELLUM	--	-	--	-	470	2	2100	6	--	-
....ANACYSTIS	80#	16	280#	55	11000#	39	4900	14	9200#	19
....GOMPHOSPHAERIA	--	-	--	-	--	-	--	-	2700	6
..HORMOGONALES										
...OSCILLATORIACEAE										
....OSCILLATORIA	--	-	--	-	1400	5	--	-	--	-
...RIVULARIACEAE										
....RAPHIDIOPSIS	260#	53	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	--	-	*	0	--	-	--	-
....TRACHELOMONAS	--	-	--	-	*	0	--	-	760	2
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..PERIDINIALES										
...GLENODINIACEAE										
....GLENODINIUM	--	-	13	2	--	-	--	-	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02083500 TAR RIVER AT TARBORO, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	93	82	74	74	72	69	86	96	86	113	176
2	74	97	84	74	82	74	69	88	94	88	111	168
3	68	90	86	74	82	78	71	88	97	92	141	150
4	72	84	74	75	81	78	74	89	102	90	145	136
5	72	79	72	77	78	80	76	87	107	88	106	132
6	75	74	75	77	79	75	74	88	102	90	122	136
7	74	73	75	75	80	69	76	96	112	91	112	128
8	73	75	75	71	82	65	74	95	112	99	142	151
9	71	79	76	78	81	64	76	94	108	104	122	140
10	78	79	71	73	80	64	78	96	103	113	137	173
11	84	73	67	74	79	63	80	97	99	97	167	130
12	87	73	69	80	76	65	81	98	112	115	136	123
13	86	71	71	75	75	69	80	94	112	104	142	146
14	84	71	71	71	73	69	83	94	128	88	132	155
15	93	66	73	68	74	67	79	100	116	87	160	165
16	82	60	72	67	75	65	77	102	117	83	156	163
17	87	58	71	64	74	65	73	107	112	93	154	159
18	87	63	71	65	74	65	72	88	112	95	151	162
19	90	63	75	66	75	64	74	63	112	113	131	136
20	91	66	75	65	77	63	76	79	100	115	147	134
21	91	71	75	61	79	63	77	83	99	118	155	150
22	91	75	86	61	82	65	78	80	105	125	165	216
23	88	78	78	63	80	65	84	80	110	120	155	189
24	83	73	76	62	79	66	84	80	109	113	155	161
25	93	75	75	63	78	63	84	78	103	111	155	152
26	97	78	73	65	80	68	91	76	100	111	176	150
27	84	78	71	64	79	67	90	84	123	107	150	140
28	87	71	71	65	79	69	88	83	100	113	128	155
29	89	65	75	67	75	69	86	83	100	118	125	231
30	86	64	74	69	---	65	86	94	84	106	117	162
31	93	---	73	70	---	69	---	101	---	117	138	---
MEAN	83	74	73	69	78	68	79	89	106	103	140	156

WTR YR 1980 MEAN 93 MAX 231 MIN 58

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	16.0	9.0	7.0	4.0	7.0	15.0	17.0	26.0	28.0	31.0	30.0
2	23.0	17.0	8.0	7.0	3.0	6.0	15.0	18.0	26.0	28.0	30.0	31.0
3	22.0	16.0	6.0	6.0	3.0	6.0	16.0	18.0	27.0	27.0	30.0	30.0
4	21.0	15.0	7.0	6.0	2.0	5.0	17.0	19.0	27.0	27.0	32.0	28.0
5	20.0	14.0	7.0	6.0	2.0	4.0	17.0	20.0	26.0	28.0	32.0	28.0
6	20.0	14.0	7.0	5.0	2.0	4.0	16.0	21.0	24.0	28.0	32.0	28.0
7	20.0	13.0	9.0	5.0	3.0	5.0	15.0	22.0	24.0	28.0	32.0	27.0
8	19.0	12.0	9.0	5.0	4.0	6.0	16.0	20.0	25.0	28.0	32.0	27.0
9	19.0	12.0	8.0	6.0	4.0	8.0	17.0	19.0	25.0	28.0	32.0	27.0
10	17.0	14.0	7.0	6.0	3.0	10.0	18.0	19.0	25.0	28.0	30.0	25.0
11	16.0	14.0	7.0	6.0	3.0	10.0	18.0	20.0	25.0	27.0	31.0	26.0
12	16.0	13.0	8.0	8.0	4.0	10.0	18.0	21.0	24.0	28.0	29.0	26.0
13	17.0	12.0	9.0	7.0	4.0	9.0	18.0	23.0	24.0	28.0	31.0	26.0
14	16.0	12.0	10.0	6.0	4.0	9.0	18.0	23.0	24.0	28.0	31.0	27.0
15	15.0	12.0	9.0	8.0	5.0	9.0	17.0	22.0	25.0	28.0	31.0	28.0
16	15.0	12.0	8.0	8.0	4.0	10.0	17.0	22.0	27.0	28.0	29.0	25.0
17	16.0	11.0	8.0	8.0	5.0	10.0	16.0	21.0	26.0	29.0	27.0	27.0
18	16.0	11.0	7.0	8.0	5.0	12.0	16.0	21.0	23.0	29.0	25.0	27.0
19	17.0	11.0	6.0	8.0	5.0	13.0	16.0	21.0	24.0	30.0	27.0	27.0
20	18.0	11.0	6.0	8.0	6.0	12.0	17.0	21.0	25.0	30.0	29.0	26.0
21	19.0	12.0	6.0	8.0	8.0	14.0	17.0	22.0	25.0	29.0	29.0	27.0
22	19.0	13.0	6.0	8.0	10.0	13.0	18.0	22.0	26.0	29.0	28.0	29.0
23	20.0	13.0	8.0	8.0	11.0	12.0	19.0	22.0	26.0	28.0	28.0	29.0
24	18.0	14.0	8.0	7.0	11.0	12.0	20.0	22.0	25.0	28.0	28.0	28.0
25	16.0	15.0	9.0	7.0	11.0	13.0	21.0	22.0	23.0	30.0	28.0	28.0
26	15.0	15.0	9.0	7.0	10.0	13.0	21.0	22.0	24.0	29.0	27.0	28.0
27	14.0	15.0	9.0	7.0	9.0	13.0	20.0	21.0	26.0	28.0	28.0	23.0
28	14.0	14.0	8.0	7.0	8.0	12.0	19.0	21.0	28.0	28.0	29.0	22.0
29	15.0	14.0	6.0	7.0	8.0	13.0	19.0	23.0	28.0	29.0	29.0	20.0
30	15.0	12.0	7.0	6.0	---	13.0	18.0	24.0	28.0	29.0	29.0	20.0
31	15.0	---	8.0	5.0	---	14.0	---	25.0	---	30.0	29.5	---
MEAN	17.5	13.5	7.5	7.0	5.5	10.0	17.5	21.0	25.5	28.5	29.5	26.5

WTR YR 1980 MEAN 17.5 MAX 32.0 MIN 2.0

02083500 TAR RIVER AT TARBORO, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
02...	1100	1590	35	150	95
DEC					
11...	1130	2160	80	467	--
JAN					
30...	1430	3560	19	183	76
MAR					
24...	1300	6890	30	558	79
APR					
21...	1230	2410	33	215	71
MAY					
14...	1300	764	12	25	93
JUN					
23...	1100	347	11	10	89
JUL					
22...	1215	442	14	17	97
AUG					
18...	1345	185	7	3.5	94
SEP					
10...	1015	207	12	6.7	97

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH LAB (UNITS)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	LAB ALKA-LINITY (MG/L AS CACO3)
NOV										
06...	1425	3860	--	6.8	15.0	8.2	29	2.8	100	20
DEC										
31...	1030	1440	93	7.1	7.0	10.8	16	.9	90	29
JAN										
28...	1235	5720	68	6.4	9.0	10.8	24	1.2	60	10
FEB										
21...	1215	2610	77	6.8	11.0	10.1	18	1.4	20	15
MAR										
20...	1250	6650	64	6.5	15.0	9.8	29	2.1	180	13
APR										
15...	1200	3360	70	6.6	16.0	8.0	28	3.0	590	21
MAY										
28...	1115	1600	80	6.8	21.0	8.0	34	.9	150	20
JUN										
24...	1720	420	90	8.0	24.0	8.5	24	2.8	50	30
JUL										
16...	1235	502	55	6.8	27.0	7.3	19	1.3	<10	20
AUG										
18...	1420	182	150	7.0	24.0	8.4	66	2.4	100	32
SEP										
29...	1400	125	--	7.1	--	7.9	14	2.2	30	45

02083800 CONETOE CREEK NEAR BETHEL, N. C.

LOCATION.--Lat 35°46'33", long 77°27'45", Pitt County, Hydrologic Unit 03020103, on right bank 5 ft (2 m) downstream from bridge on Secondary Road 1409, 5.5 mi (8.8 km) downstream from Crisp Creek, and 5.5 mi (8.8 km) west of Bethel.

DRAINAGE AREA.--78.1 mi² (202 km²).

PERIOD OF RECORD.--December 1956 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 30 ft (9 m), from topographic map.

REMARKS.--Records good.

AVERAGE DISCHARGE.--23 years, (1957-80), 86.4 ft³/s (2.447 m³/s), 15.02 in/yr (382 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,580 ft³/s (73.1 m³/s) Aug. 23, 1967, gage height, 15.74 ft (4.798 m); minimum, 0.40 ft³/s (0.011 m³/s) Aug. 28, 29, Sept. 3, 1980, gage height, 0.07 ft (0.021 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1955 reached a stage of 16.7 ft (5.09 m), from information by local resident (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 470 ft³/s (13.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar 7	0930	*671	19.0	*9.96	3.036	Mar 18	2100	648	18.4	9.74	2.969

Minimum discharge, 0.40 ft³/s (0.011 m³/s) Aug. 28, 29, Sept. 3, gage height 0.07 ft (0.021 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	251	16	32	30	89	101	244	80	22	8.3	6.6	2.1
2	207	16	31	30	82	90	180	70	19	6.7	13	1.7
3	162	18	28	29	75	84	150	62	18	6.6	10	1.7
4	119	20	27	28	71	107	130	54	16	7.0	8.0	5.9
5	93	18	27	39	66	160	170	48	15	20	6.0	4.7
6	78	17	27	54	68	424	150	44	14	14	5.4	17
7	66	17	39	50	69	653	120	40	14	10	8.7	5.0
8	54	17	40	52	70	578	96	32	14	8.3	5.1	3.4
9	47	16	34	73	77	449	88	26	13	8.4	4.3	2.5
10	41	16	32	76	153	295	80	22	12	15	4.0	2.4
11	38	19	30	73	189	228	68	19	13	33	4.0	2.2
12	35	61	29	139	169	182	72	18	11	14	4.0	1.7
13	32	74	30	117	155	215	100	20	11	11	3.8	1.7
14	38	67	63	101	144	339	170	22	10	9.1	3.7	1.7
15	40	56	58	133	155	231	150	20	9.9	8.7	3.6	1.7
16	36	49	51	145	165	175	130	20	9.4	8.2	3.3	1.7
17	31	43	47	118	155	149	100	19	9.3	8.0	3.0	1.7
18	29	39	40	112	125	491	76	27	8.8	7.5	1.9	1.1
19	27	35	38	197	110	510	60	40	9.0	6.9	3.2	1.1
20	25	32	36	160	103	286	54	30	8.5	6.7	4.8	1.7
21	24	30	32	130	97	234	50	61	7.8	6.5	3.4	1.7
22	22	28	32	112	94	197	45	46	7.4	14	2.8	1.7
23	22	27	31	154	92	154	42	60	7.1	9.1	2.6	1.9
24	22	26	31	173	127	134	38	101	6.9	7.1	2.4	1.7
25	21	25	39	138	124	137	35	71	7.0	6.6	2.4	1.7
26	20	37	44	115	145	122	40	115	11	7.0	2.4	1.7
27	19	57	38	110	180	108	54	59	9.3	6.8	1.7	1.1
28	19	48	34	123	148	98	74	41	7.3	13	1.7	1.1
29	18	42	33	110	121	221	70	33	7.9	18	1.7	1.1
30	17	36	32	96	---	265	90	28	17	12	2.4	3.6
31	17	---	32	93	---	347	---	24	---	9.0	2.3	---
TOTAL	1670	1002	1117	3110	3418	7764	2926	1352	345.6	326.5	132.2	80.0
MEAN	53.9	33.4	36.0	100	118	250	97.5	43.6	11.5	10.5	4.26	2.67
MAX	251	74	63	197	189	653	244	115	22	33	13	17
MIN	17	16	27	28	66	84	35	18	6.9	6.5	1.7	1.1
CFSM	.69	.43	.46	1.28	1.51	3.20	1.25	.56	.15	.13	.06	.03
IN.	.80	.48	.53	1.48	1.63	3.70	1.39	.64	.16	.16	.06	.04

CAL YR 1979 TOTAL 42582.8 MEAN 117 MAX 906 MIN 6.0 CFSM 1.50 IN 20.28
WTR YR 1980 TOTAL 23243.3 MEAN 63.5 MAX 653 MIN 1.1 CFSM .81 IN 11.07

02084148 CHICOD CREEK AT SECONDARY ROAD 1565 NEAR GRIMESLAND, N. C.

LOCATION.--Lat 35°31'57", long 77°11'13", Pitt County, Hydrologic Unit 03020103, at bridge on Secondary Road 1565, 2.0 mi (3.2 km) upstream from Cow Swamp and 2.2 mi (3.5 km) south of Grimesland.

DRAINAGE AREA.--19 mi² (49 km²), approximately.

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Station operated to define the effects of channelization on stream quantity and quality in the Chicod Creek basin.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT											
01...	1435	19	83	4.9	23.0	150	5.0	--	--	21	18
NOV											
06...	0900	2.0	130	6.6	10.0	200	5.7	K200	K240	21	0
JAN											
02...	1225	2.9	74	6.5	6.0	100	10.4	140	190	17	6
FEB											
13...	0930	58	65	6.3	2.0	30	12.0	80	K60	17	9
MAR											
07...	1245	212	49	5.4	5.0	50	11.4	--	--	12	8
MAY											
21...	1135	106	64	5.8	20.5	150	6.1	--	--	12	5
JUL											
29...	1230	.83	85	5.8	25.0	65	--	--	--	21	16

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT											
01...	5.5	1.7	5.1	31	.5	3.3	3	0	2	60	16
NOV											
06...	5.3	1.8	11	45	1.1	7.2	49	0	40	20	5.4
JAN											
02...	4.6	1.3	5.5	46	.6	2.1	--	0	*11	--	6.6
FEB											
13...	4.0	1.6	4.9	37	.5	1.3	--	0	*8	--	9.5
MAR											
07...	2.7	1.2	2.7	30	.3	1.5	4	0	3	25	6.5
MAY											
21...	3.0	1.1	3.1	30	.4	3.0	9	0	7	23	7.1
JUL											
29...	5.6	1.7	6.3	34	.6	4.5	7	0	*5	15	14

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
OCT											
01...	8.6	.1	11	86	54	.12	4.41	.35	.03	.38	.39
NOV											
06...	13	.1	12	96	81	.13	.52	.34	.03	.37	.42
JAN											
02...	10	.1	8.0	62	45	.08	.49	.74	.01	.75	.74
FEB											
13...	8.7	.1	6.0	62	41	.08	9.71	.88	.01	.89	.86
MAR											
07...	5.0	.1	3.8	49	26	.07	28.0	.92	.00	.92	.92
MAY											
21...	4.9	.2	3.5	55	30	.07	15.7	--	--	1.5	--
JUL											
29...	11	.1	9.4	80	62	.11	.18	1.2	.02	1.2	1.3

K Results based on colony count outside the acceptable range (non-ideal colony count).
* Lab alkalinity.

02084148 CHICOD CREEK AT SECONDARY ROAD 1565 NEAR GRIMESLAND, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	NITRO-GEN, TOT IN BOT-TOM MA-TERIAL (MG/KG AS N)
OCT											
01...	--	--	--	--	1.3	1.2	.10	--	1.7	7.4	--
NOV											
06...	--	--	--	--	5.2	.20	5.0	--	5.6	25	--
JAN											
02...	--	--	--	--	1.0	.00	1.2	--	1.8	7.7	--
FEB											
13...	--	--	--	--	.64	.25	.39	--	1.5	6.8	--
MAR											
07...	1.5	--	--	--	.62	.00	.79	1200	1.5	6.8	1200
MAY											
21...	--	1.4	1.7	1.3	2.7	--	--	--	4.2	19	--
JUL											
29...	--	--	--	--	1.0	.00	1.3	--	2.2	9.7	--

DATE	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)
OCT										
01...	.110	.34	.060	--	4	2	2	--	2	0
NOV										
06...	.220	.67	.090	--	1	0	1	--	2	0
JAN										
02...	.100	.31	.050	--	2	2	0	--	1	0
FEB										
13...	.040	.12	.020	--	--	--	--	--	--	--
MAR										
07...	.060	.18	.020	34	0	0	0	0	1	0
MAY										
21...	.270	.83	--	--	--	--	--	--	--	--
JUL										
29...	.120	.37	.070	--	1	0	1	--	1	0

DATE	COPPER, DIS-SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)
OCT										
01...	3	--	1400	300	1100	--	10	8	2	--
NOV										
06...	5	--	1700	1000	660	--	2	1	1	--
JAN										
02...	3	--	940	850	90	--	3	3	0	--
FEB										
13...	--	--	--	--	--	--	--	--	--	--
MAR										
07...	1	<10	990	880	110	550	0	0	0	<10
MAY										
21...	--	--	--	--	--	--	--	--	--	--
JUL										
29...	3	--	1800	1600	240	--	5	4	1	--

02084148 CHICOD CREEK AT SECONDARY ROAD 1565 NEAR GRIMESLAND, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)
OCT 01...	<.5	.0	<.5	--	80	70	10	--	17	.5	--
NOV 06...	.3	.2	<.1	--	10	2	8	--	17	1.0	--
JAN 02...	<.1	.0	.1	--	20	0	30	--	8.8	2.0	--
FEB 13...	--	--	--	--	--	--	--	--	7.4	.2	--
MAR 07...	.1	.0	.1	.00	10	0	20	3	13	1.1	7.8
JUL 29...	<.1	.0	.2	--	10	0	10	--	7.8	.6	--

DATE	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL (UG/L)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 01...	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	--	--	--	--	--	--	--	--	--	--	--
JAN 02...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 07...	.0	7.8	.0	25	.00	.00	.0	.0	1	.00	1.8
JUL 29...	--	--	--	--	--	--	--	--	--	--	--

DATE	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-AZINON, TOTAL (UG/L)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-ELDRIN TOTAL (UG/L)	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 01...	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	--	--	--	--	--	--	--	--	--	--	--
JAN 02...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 07...	.00	3.2	.00	.9	.00	.0	.00	.3	.00	.00	.0
JUL 29...	--	--	--	--	--	--	--	--	--	--	--

02084148 CHICOD CREEK AT SECONDARY ROAD 1565 NEAR GRIMESLAND, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT										
01...	--	--	--	--	--	--	--	--	--	--
NOV										
06...	--	--	--	--	--	--	--	--	--	--
JAN										
02...	--	--	--	--	--	--	--	--	--	--
FEB										
13...	--	--	--	--	--	--	--	--	--	--
MAR										
07...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
JUL										
29...	--	--	--	--	--	--	--	--	--	--

DATE	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE TOTAL (UG/L)
OCT										
01...	--	--	--	--	--	--	--	--	--	--
NOV										
06...	--	--	--	--	--	--	--	--	--	--
JAN										
02...	--	--	--	--	--	--	--	--	--	--
FEB										
13...	--	--	--	--	--	--	--	--	--	--
MAR										
07...	.00	.0	.00	.0	.00	.0	.00	.00	.0	.00
JUL										
29...	--	--	--	--	--	--	--	--	--	--

DATE	TOXAPHENE, TOTAL (UG/L)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
MAR				
07...	0	0	.00	.0

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)
OCT				
01...	1435	19	22	1.1
NOV				
06...	0900	2.0	17	.09
JAN				
02...	1225	2.9	22	.17
FEB				
13...	0930	58	7	1.1
MAR				
07...	1245	212	28	16
24...	1820	24	10	.65
APR				
17...	1130	23	9	.56
MAY				
21...	1135	106	410	117
21...	1150	104	400	112
21...	1320	98	257	68
21...	1435	89	301	72
21...	1530	85	266	61
JUL				
29...	1230	.83	38	.09

02084158 COW SWAMP NEAR GRIMESLAND, N. C.

LOCATION.--Lat 35°32'00", long 77°13'30", Pitt County, Hydrologic Unit 03020103, at bridge on Secondary Road 1756, 1.0 mi (1.6 km) upstream from mouth, and 3.0 mi (4.8 km) southwest of Grimesland.

DRAINAGE AREA.--17 mi² (44 km²), approximately.

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Station operated to define the effects of channelization on stream quantity and quality in the Chicod Creek basin.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT											
02...	0800	24	145	5.6	22.0	80	4.9	--	--	42	21
NOV											
05...	1400	2.6	305	6.4	12.0	40	2.0	K14000	>10000	79	0
JAN											
02...	1255	8.5	170	6.2	6.0	100	9.4	76	400	55	18
FEB											
12...	1500	50	130	6.8	6.0	30	12.5	K1000	K1600	37	15
MAR											
07...	1200	179	89	6.1	4.5	50	12.0	--	--	23	12
MAY											
21...	1105	298	60	6.2	20.5	120	6.6	--	--	15	6
JUL											
29...	1145	1.3	120	6.7	25.0	35	--	--	--	67	37

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT											
02...	13	2.3	7.1	24	.5	5.0	26	0	21	105	27
NOV											
05...	25	4.0	15	28	.7	16	166	0	136	106	11
JAN											
02...	18	2.5	7.6	25	.4	3.3	--	0	*37	--	16
FEB											
12...	11	2.2	7.2	28	.5	2.6	26	0	21	6.6	19
MAR											
07...	6.7	1.5	3.8	24	.3	2.7	13	0	11	17	11
MAY											
21...	4.4	1.0	2.2	20	.2	3.0	11	0	9	4.9	7.3
JUL											
29...	22	2.9	6.9	16	.4	8.0	54	0	*30	12	30

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
OCT											
02...	13	.1	11	109	92	.15	7.06	1.0	.06	1.1	1.5
NOV											
05...	16	.4	7.9	210	179	.29	1.47	.27	.01	.28	.29
JAN											
02...	13	.2	10	159	93	.22	3.65	1.1	.01	1.1	1.1
FEB											
12...	11	.2	7.2	92	73	.13	12.4	2.2	.03	2.2	2.3
MAR											
07...	6.4	.1	4.2	64	43	.09	30.9	1.6	.01	1.6	1.6
MAY											
21...	3.3	.2	2.6	56	29	.08	45.1	--	--	1.1	--
JUL											
29...	9.2	.2	7.2	155	112	.21	.54	1.3	.26	1.6	1.7

K Results based on colony count outside the acceptable range (non-ideal colony count).
* Lab alkalinity.

02084158 COW SWAMP NEAR GRIMESLAND, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	NITRO-GEN,TOT IN BOT-TOM MA-TERIAL (MG/KG AS N)
OCT											
02...	--	--	--	--	1.8	.00	1.9	--	2.9	13	--
NOV											
05...	--	--	--	--	4.4	.00	4.4	--	4.7	21	--
JAN											
02...	--	--	--	--	1.6	.00	1.9	--	2.7	12	--
FEB											
12...	--	--	--	--	1.2	.35	.85	--	3.4	15	--
MAR											
07...	2.1	--	--	--	1.5	.20	1.3	1200	3.1	14	1200
MAY											
21...	--	.92	1.1	1.3	2.2	--	--	--	3.3	15	--
JUL											
29...	--	--	--	--	2.7	.00	3.2	--	4.3	19	--

DATE	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)
OCT										
02...	.530	1.6	.440	--	4	1	3	--	2	0
NOV										
05...	2.700	8.3	1.100	--	2	0	2	--	4	0
JAN										
02...	.350	1.1	.170	--	2	1	1	--	0	0
FEB										
12...	.220	.67	.130	--	--	--	--	--	--	--
MAR										
07...	.210	.64	.080	120	1	0	1	0	2	0
MAY										
21...	.930	2.9	--	--	--	--	--	--	--	--
JUL										
29...	.390	1.2	.450	--	5	0	5	--	2	0

DATE	COPPER, DIS-SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)
OCT										
02...	3	--	1000	490	510	--	3	0	6	--
NOV										
05...	4	--	1100	700	400	--	0	0	0	--
JAN										
02...	2	--	1300	1200	60	--	4	4	0	--
FEB										
12...	--	--	--	--	--	--	--	--	--	--
MAR										
07...	2	<10	740	630	110	990	1	1	0	<10
MAY										
21...	--	--	--	--	--	--	--	--	--	--
JUL										
29...	4	--	960	520	440	--	11	10	1	--

02084158 COW SWAMP NEAR GRIMESLAND, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)
OCT 02...	<.5	.0	<.5	--	10	2	8	--	12	.4	--
NOV 05...	.2	.0	.2	--	10	10	0	--	11	1.2	--
JAN 02...	<.1	.0	.1	--	20	0	30	--	12	1.9	--
FEB 12...	--	--	--	--	--	--	--	--	9.6	.7	--
MAR 07...	.2	.0	.2	.00	20	0	20	9	8.8	--	5.6
JUL 29...	<.1	.0	.2	--	10	0	10	--	7.8	.4	--

DATE	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL (UG/L)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 02...	--	--	--	--	--	--	--	--	--	--	--
NOV 05...	--	--	--	--	--	--	--	--	--	--	--
JAN 02...	--	--	--	--	--	--	--	--	--	--	--
FEB 12...	--	--	--	--	--	--	--	--	--	--	--
MAR 07...	.1	5.7	.0	3	.00	.00	.0	.0	0	.00	3.8
JUL 29...	--	--	--	--	--	--	--	--	--	--	--

DATE	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-AZINON, TOTAL (UG/L)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-ELDRIN TOTAL (UG/L)	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 02...	--	--	--	--	--	--	--	--	--	--	--
NOV 05...	--	--	--	--	--	--	--	--	--	--	--
JAN 02...	--	--	--	--	--	--	--	--	--	--	--
FEB 12...	--	--	--	--	--	--	--	--	--	--	--
MAR 07...	.00	2.9	.00	1.1	.00	.0	.00	.8	.00	.00	.0
JUL 29...	--	--	--	--	--	--	--	--	--	--	--

02084158 COW SWAMP NEAR GRIMESLAND, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT										
02...	--	--	--	--	--	--	--	--	--	--
NOV										
05...	--	--	--	--	--	--	--	--	--	--
JAN										
02...	--	--	--	--	--	--	--	--	--	--
FEB										
12...	--	--	--	--	--	--	--	--	--	--
MAR										
07...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
JUL										
29...	--	--	--	--	--	--	--	--	--	--

DATE	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE TOTAL (UG/L)
OCT										
02...	--	--	--	--	--	--	--	--	--	--
NOV										
05...	--	--	--	--	--	--	--	--	--	--
JAN										
02...	--	--	--	--	--	--	--	--	--	--
FEB										
12...	--	--	--	--	--	--	--	--	--	--
MAR										
07...	.00	.0	.00	.0	.00	.0	.00	.00	.0	.00
JUL										
29...	--	--	--	--	--	--	--	--	--	--

DATE	TOXAPHENE, TOTAL (UG/L)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
MAR				
07...	0	0	.00	.0

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)
OCT				
02...	0800	24	15	.97
NOV				
05...	1400	2.6	30	.21
JAN				
02...	1255	8.5	18	.41
FEB				
12...	1500	50	18	2.4
MAR				
07...	1200	179	54	26
24...	1805	20	18	.97
APR				
17...	1110	12	23	.75
MAY				
21...	1105	298	295	237
21...	1125	282	383	292
21...	1315	225	229	139
21...	1430	183	206	102
21...	1520	161	190	83
JUL				
29...	1145	1.3	10	.04

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, N. C.

LOCATION.--Lat 35°33'47", long 77°13'43", Pitt County, Hydrologic Unit 03020103, on left bank at downstream side of bridge on Secondary Road 1760, 0.6 mi (1 km) upstream from Juniper Branch, and 2.8 mi (4.5 km) east-southeast of Simpson.

DRAINAGE AREA.--45 mi² (117 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is National Geodetic Vertical Datum of 1929 (Soil Conservation Service benchmark). Prior to July 25, 1977, at datum 4.92 ft (1.500 m) higher.

REMARKS.--Water-discharge record good.

AVERAGE DISCHARGE.--5 years, 55.0 ft³/s (1.558 m³/s), 16.60 in/yr (422 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,510 ft³/s (71.1 m³/s) Nov. 7, 1977, gage height, 12.50 ft (3.810 m); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.50 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 27	0330	381	10.8	8.39	2.557	Mar 29	1530	782	22.1	9.44	2.877
Mar 7	0330	732	20.7	9.32	2.841	Apr 28	1600	348	9.86	8.29	2.527
Mar 18	1730	440	12.5	8.56	2.609	May 21	0600	*960	27.2	*9.84	2.999

No flow June 15-18, 22-25, July 7-10, 14-22, Aug. 10, 11, 17, 18, 26-31, Sept. 1-3, 22-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	4.0	40	14	48	22	279	75	5.7	5.4	7.2	.00
2	50	3.4	30	14	49	21	179	52	4.4	2.6	58	.00
3	45	5.4	23	13	48	26	121	38	3.3	1.0	14	.00
4	32	6.4	19	13	46	39	88	29	2.6	.18	6.0	16
5	24	3.5	17	18	41	59	68	22	2.0	.02	3.0	6.6
6	20	2.7	18	20	31	304	52	17	1.5	.04	1.4	14
7	17	2.4	31	20	28	634	42	14	1.2	.00	.52	9.8
8	14	2.3	41	24	31	504	37	12	1.1	.00	.11	3.5
9	13	2.3	38	48	34	408	34	10	.77	.00	.01	2.1
10	11	2.2	29	80	99	286	30	8.8	.46	.00	.00	1.5
11	10	4.4	24	82	249	206	26	7.6	.36	.18	.00	1.2
12	9.2	30	21	217	185	151	22	6.5	.30	.95	.01	.61
13	8.1	92	19	214	139	166	21	5.2	.13	.14	1.5	.52
14	9.1	90	33	127	97	250	34	4.5	.05	.00	2.2	.61
15	8.9	62	33	103	75	177	90	3.9	.00	.00	.61	.65
16	8.5	41	30	104	68	119	87	3.3	.00	.00	.12	.56
17	7.3	29	26	81	68	88	53	2.8	.00	.00	.00	.52
18	6.5	22	21	63	58	284	39	2.7	.00	.00	.00	.61
19	5.6	18	19	80	45	276	32	5.4	.18	.00	.44	.61
20	4.2	15	17	86	39	165	26	29	.22	.00	6.0	.31
21	3.8	14	16	63	36	122	22	613	.10	.00	1.8	.11
22	3.2	12	15	49	33	116	19	160	.00	.00	1.6	.00
23	2.4	12	15	62	30	83	16	55	.00	2.8	.85	.00
24	2.9	11	14	129	28	63	15	45	.00	45	.20	.00
25	3.7	10	17	97	25	65	17	32	.00	30	.04	.00
26	5.5	98	19	64	30	69	14	25	.10	10	.00	2.1
27	7.0	334	19	52	35	57	14	19	1.7	4.4	.00	.90
28	6.9	210	17	77	32	48	232	15	1.9	2.6	.00	.85
29	6.1	105	16	78	27	501	237	12	1.0	2.9	.00	.85
30	5.4	58	15	57	---	453	121	9.4	2.8	3.5	.00	2.1
31	4.5	---	15	47	---	457	---	7.4	---	2.6	.00	---
TOTAL	403.8	1302.0	707	2196	1754	6219	2067	1341.5	31.87	114.31	105.61	66.61
MEAN	13.0	43.4	22.8	70.8	60.5	201	68.9	43.3	1.06	3.69	3.41	2.22
MAX	50	334	41	217	249	634	279	613	5.7	45	58	16
MIN	2.4	2.2	14	13	25	21	14	2.7	.00	.00	.00	.00
CFSM	.29	.96	.51	1.57	1.34	4.47	1.53	.96	.02	.08	.08	.05
IN.	.33	1.08	.58	1.82	1.45	5.14	1.71	1.11	.03	.09	.09	.06

CAL YR 1979 TOTAL 26170.42 MEAN 71.7 MAX 1280 MIN .00 CFSM 1.59 IN 21.63
WTR YR 1980 TOTAL 16308.70 MEAN 44.6 MAX 634 MIN .00 CFSM .99 IN 13.48

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1975 to current year.
WATER TEMPERATURES: November 1975 to current year.
SUSPENDED-SEDIMENT DISCHARGE: November 1975 to current year.

INSTRUMENTATION.--Water-quality monitor and sediment pumping sampler since November 1975.

REMARKS.--Station operated to define the effects of channelization on stream quantity and quality in the Chicod Creek basin. Zero flow June 15-18, 22-25, July 7-10, 14-22, Aug. 10, 11, 17, 18, 26-31, Sept. 1-3, 22-25.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 398 micromhos Nov. 23, 1978; minimum, 30 micromhos May 5, 1978.
WATER TEMPERATURES: Maximum, 31.5°C Aug. 2, 3, 1979; minimum, 0.0°C Dec. 20, 1975, Jan. 10, 11, 18-25, 1976.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 662 mg/L May 5, 1978; minimum daily mean, 0 mg/L during periods of zero flow.
SEDIMENT LOADS: Maximum daily, 3650 tons (3310 tonnes) May 5, 1978; minimum daily, 0.0 tons (0.0 tonnes) during periods of zero flow.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 383 micromhos July 2; minimum, 62 micromhos Mar. 29.
WATER TEMPERATURES: Maximum, 31.0°C Aug. 5, 6; minimum, 0.5°C Feb. 1-5, 7, 8, Mar. 1-4.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 422 mg/L May 21; minimum daily mean, 0 mg/L during periods of zero flow.
SEDIMENT LOADS: Maximum daily, 844 tons (766 tonnes) May 21; minimum daily, 0.0 tons (0.0 tonnes) during periods of zero flow.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT											
01...	1215	53	162	5.5	22.5	200	4.9	--	--	41	15
NOV											
05...	1230	3.3	150	5.8	10.0	70	4.3	160	400	44	0
JAN											
02...	1100	14	120	6.4	6.0	50	9.6	K120	100	39	14
FEB											
12...	1400	185	97	7.6	3.5	40	13.4	--	--	28	14
MAR											
07...	1345	632	70	5.9	5.0	100	12.1	--	--	17	7
MAY											
21...	1200	704	77	6.1	21.0	130	6.7	--	--	14	4
JUL											
28...	1330	2.5	150	5.4	25.0	55	--	--	--	44	33

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT											
01...	12	2.6	7.3	24	.5	7.8	31	0	25	157	22
NOV											
05...	13	2.7	9.0	27	.6	8.0	60	0	49	152	8.1
JAN											
02...	12	2.1	6.8	25	.5	3.8	--	0	*25	--	11
FEB											
12...	8.1	1.8	5.3	27	.4	2.3	17	0	14	.7	13
MAR											
07...	4.8	1.2	3.3	26	.4	2.5	12	0	10	24	7.9
MAY											
21...	4.1	.9	2.3	21	.3	3.9	16	0	13	16	6.4
JUL											
28...	13	2.7	6.5	21	.4	6.9	18	0	*11	85	32

K Results based on colony count outside the acceptable range (non-ideal colony count).
* Lab alkalinity.

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)
OCT											
01...	12	.2	10	137	90	.19	19.6	.99	.11	1.1	1.1
NOV											
05...	13	.4	10	114	94	.16	1.02	1.2	.03	1.2	.29
JAN											
02...	12	.1	8.5	93	72	.13	3.52	1.8	.01	1.8	1.7
FEB											
12...	9.2	.2	6.3	75	55	.10	37.5	1.6	.02	1.6	1.6
MAR											
07...	5.5	.1	3.5	53	35	.07	90.4	1.2	.01	1.2	1.2
MAY											
21...	3.4	.3	2.3	56	30	.08	106	--	--	1.3	--
JUL											
28...	9.7	.1	9.3	117	95	.16	.79	2.1	.09	2.2	1.8

DATE	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	NITROGEN, TOT IN BOTTOM MATERIAL (MG/KG AS N)
OCT											
01...	--	--	--	--	4.4	.40	4.0	--	5.5	24	--
NOV											
05...	--	--	--	--	1.7	.00	2.2	--	2.9	13	--
JAN											
02...	--	--	--	--	.90	--	--	--	2.7	12	--
FEB											
12...	--	--	--	--	.88	.24	.64	--	2.5	11	--
MAR											
07...	2.0	--	--	--	1.4	.30	1.1	100	2.6	12	102
MAY											
21...	--	1.6	1.9	1.0	2.6	--	--	--	3.9	17	--
JUL											
28...	--	--	--	--	.81	.12	.69	--	3.0	13	--

DATE	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)
OCT										
01...	.760	2.3	.710	--	5	2	3	--	3	1
NOV										
05...	.330	1.0	.290	--	1	0	1	--	1	0
JAN										
02...	.210	.64	.150	--	1	0	1	--	20	18
FEB										
12...	.150	.46	.080	--	--	--	--	--	--	--
MAR										
07...	.190	.58	.070	36	0	0	0	0	2	0
MAY										
21...	.780	2.4	--	--	--	--	--	--	--	--
JUL										
28...	.220	.67	.140	--	1	0	1	--	2	0

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	COPPER, DIS-SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)
OCT 01...	2	--	1100	770	330	--	3	0	3	--
NOV 05...	2	--	870	340	530	--	0	0	1	--
JAN 02...	2	--	780	480	300	--	13	13	0	--
FEB 12...	--	--	--	--	--	--	--	--	--	--
MAR 07...	2	<10	950	840	110	1000	0	0	0	<10
MAY 21...	--	--	--	--	--	--	--	--	--	--
JUL 28...	2	--	770	540	230	--	0	0	0	--

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)
OCT 01...	<.5	.0	<.5	--	30	10	20	--	17	1.3	--
NOV 05...	.3	.2	<.1	--	10	9	1	--	12	.4	--
JAN 02...	<.1	.0	<.1	--	20	10	10	--	11	.8	--
FEB 12...	--	--	--	--	--	--	--	--	6.1	.5	--
MAR 07...	.1	.0	.1	.00	10	0	10	9	10	2.5	3.6
JUL 28...	<.1	.0	.3	--	10	0	10	--	9.3	.5	--

DATE	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL (UG/L)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 01...	--	--	--	--	--	--	--	--	--	--	--
NOV 05...	--	--	--	--	--	--	--	--	--	--	--
JAN 02...	--	--	--	--	--	--	--	--	--	--	--
FEB 12...	--	--	--	--	--	--	--	--	--	--	--
MAR 07...	.9	4.5	.0	0	.00	.00	.0	.0	2	.00	5.8
JUL 28...	--	--	--	--	--	--	--	--	--	--	--

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 01...	--	--	--	--	--	--	--	--	--	--	--
NOV 05...	--	--	--	--	--	--	--	--	--	--	--
JAN 02...	--	--	--	--	--	--	--	--	--	--	--
FEB 12...	--	--	--	--	--	--	--	--	--	--	--
MAR 07...	.00	18	.00	2.0	.00	.0	.00	2.8	.00	.00	.0
JUL 28...	--	--	--	--	--	--	--	--	--	--	--

DATE	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 01...	--	--	--	--	--	--	--	--	--	--
NOV 05...	--	--	--	--	--	--	--	--	--	--
JAN 02...	--	--	--	--	--	--	--	--	--	--
FEB 12...	--	--	--	--	--	--	--	--	--	--
MAR 07...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
JUL 28...	--	--	--	--	--	--	--	--	--	--

DATE	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE TOTAL (UG/L)
OCT 01...	--	--	--	--	--	--	--	--	--	--
NOV 05...	--	--	--	--	--	--	--	--	--	--
JAN 02...	--	--	--	--	--	--	--	--	--	--
FEB 12...	--	--	--	--	--	--	--	--	--	--
MAR 07...	.00	.0	.00	.0	.00	.0	.00	.00	.0	.00
JUL 28...	--	--	--	--	--	--	--	--	--	--

DATE	TOXAPHENE, TOTAL (UG/L)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
MAR 07...	0	0	.00	.0

02184160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	191	158	149	146	87	86	119	116	104	98	108	102
2	156	117	148	145	90	87	126	118	110	102	116	104
3	117	106	150	145	97	90	126	124	113	108	131	117
4	106	102	154	144	95	91	126	124	114	109	139	131
5	102	101	158	154	96	94	142	124	115	110	141	120
6	104	102	255	161	101	96	143	135	112	111	120	87
7	106	103	279	257	115	103	134	121	113	110	86	67
8	106	103	234	203	114	98	125	115	117	111	78	72
9	103	101	202	190	98	94	126	119	113	111	77	73
10	104	102	190	183	94	93	149	123	114	109	76	74
11	109	103	184	157	95	93	126	106	111	93	78	75
12	116	110	222	156	99	95	122	101	96	94	78	78
13	124	117	189	131	104	97	100	93	105	97	98	79
14	122	120	130	122	113	99	98	96	115	105	99	86
15	132	122	121	116	115	105	101	98	107	105	88	86
16	142	133	116	114	104	102	101	99	106	102	87	86
17	149	143	115	113	103	101	100	99	103	100	90	87
18	147	143	113	112	102	100	101	99	100	98	96	76
19	148	144	115	113	103	101	107	100	99	98	86	81
20	154	147	114	113	105	102	105	102	102	99	85	83
21	169	155	116	114	106	105	103	101	104	103	89	85
22	191	169	115	114	107	104	102	101	106	104	90	86
23	194	187	116	115	109	107	110	102	109	106	87	86
24	213	194	118	117	116	110	111	101	110	109	89	87
25	195	175	119	119	128	111	108	101	110	109	97	90
26	175	161	119	90	130	118	103	100	122	109	97	89
27	228	162	117	86	118	112	103	99	122	110	90	89
28	249	215	86	84	119	109	107	100	110	106	92	90
29	214	181	87	85	124	113	100	98	107	106	89	62
30	180	156	87	86	113	112	100	98	---	---	72	67
31	155	149	---	---	116	113	100	95	---	---	76	70
MONTH	249	101	279	84	130	86	149	93	122	93	141	62
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	76	74	86	83	120	116	233	167	135	84	---	---
2	77	74	86	83	124	118	383	227	177	89	---	---
3	82	77	91	85	127	124	359	257	213	180	---	---
4	84	82	92	91	131	127	249	222	201	194	130	78
5	85	84	95	90	135	131	222	212	198	183	220	130
6	86	85	97	92	140	133	211	203	181	169	172	114
7	89	86	100	96	145	140	---	---	167	165	141	117
8	95	89	105	100	151	144	---	---	164	160	137	123
9	99	96	109	105	154	151	---	---	158	157	123	115
10	101	99	113	109	157	154	---	---	---	---	119	115
11	103	100	120	113	158	155	174	163	---	---	121	118
12	106	102	124	120	163	159	181	154	150	131	122	121
13	109	104	127	123	164	162	181	171	182	120	125	123
14	122	109	131	126	164	162	---	---	203	148	128	125
15	122	97	133	129	---	---	---	---	154	149	130	128
16	96	85	138	133	---	---	---	---	151	148	132	130
17	85	83	142	139	---	---	---	---	---	---	135	132
18	85	83	149	142	---	---	---	---	---	---	138	135
19	90	85	148	139	156	154	---	---	145	110	141	139
20	95	90	152	76	163	156	---	---	151	109	143	142
21	100	96	88	65	168	162	---	---	145	144	146	143
22	102	99	94	88	---	---	---	---	169	143	---	---
23	106	102	101	91	---	---	127	106	169	156	---	---
24	112	105	103	100	---	---	164	118	154	141	---	---
25	117	111	100	98	---	---	157	144	140	137	---	---
26	119	115	105	99	164	159	154	148	---	---	179	125
27	122	119	105	102	208	157	155	149	---	---	197	178
28	129	91	105	102	211	199	154	150	---	---	194	180
29	91	82	108	104	216	207	151	146	---	---	180	173
30	86	83	112	108	206	137	151	145	---	---	174	159
31	---	---	115	112	---	---	147	126	---	---	---	---
MONTH	129	74	152	65	216	116	383	106	213	84	220	78
YEAR	383	62										

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, N. C.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	24.5	23.0	15.0	14.0	7.0	5.0	7.0	6.0	1.5	.5	7.0	.5
2	25.0	23.0	16.0	15.0	6.0	5.0	7.5	5.0	1.0	.5	1.0	.5
3	24.0	21.0	16.5	14.5	5.0	3.5	6.0	5.0	1.0	.5	1.0	.5
4	21.0	19.0	14.5	12.5	4.5	2.5	6.5	5.0	1.0	.5	1.0	.5
5	20.0	18.5	12.0	10.5	6.0	3.5	7.0	5.0	1.5	.5	1.0	1.0
6	18.5	16.5	12.5	10.5	9.0	6.0	5.5	4.0	1.0	1.0	1.0	1.0
7	17.5	17.0	12.5	11.0	11.0	9.5	6.0	3.0	2.0	.5	6.5	1.0
8	16.5	15.0	12.0	10.5	10.0	8.5	7.0	6.0	2.5	.5	10.0	6.5
9	18.0	15.5	13.0	10.5	8.0	6.5	7.5	7.0	2.5	2.0	13.5	10.0
10	17.5	15.0	15.0	13.0	7.0	5.0	7.0	5.5	2.5	1.5	12.0	10.5
11	15.0	13.0	17.0	15.0	7.5	5.0	12.0	6.5	4.0	1.0	13.5	11.0
12	14.5	12.0	15.5	13.5	9.0	6.0	12.5	10.5	5.5	2.5	11.0	8.0
13	16.5	14.5	13.5	13.0	13.0	9.0	10.0	8.0	5.5	2.5	9.0	7.0
14	15.5	13.5	13.0	11.0	13.0	9.0	8.5	8.0	6.5	2.5	11.0	7.5
15	13.0	11.5	11.0	9.0	9.0	7.0	10.5	8.5	7.5	4.0	12.5	7.5
16	14.0	12.0	11.0	9.0	10.0	8.0	10.0	8.0	8.5	7.0	14.0	8.5
17	15.5	13.0	10.5	8.5	9.5	6.0	9.5	7.5	8.0	5.0	14.5	12.0
18	16.5	14.5	11.5	9.5	5.5	4.0	10.0	9.0	6.0	2.5	15.5	14.0
19	17.0	15.5	12.0	10.0	4.5	3.0	10.5	8.5	5.5	3.0	14.5	11.5
20	18.5	16.0	12.5	10.5	5.5	3.5	9.0	7.0	9.0	5.0	15.0	12.0
21	18.5	17.0	13.0	11.0	6.0	5.0	9.0	7.5	12.0	8.0	18.0	14.5
22	19.0	17.5	13.5	11.0	7.5	6.0	10.5	7.5	14.5	11.5	14.0	11.0
23	19.5	18.0	15.5	13.0	9.5	7.5	11.0	8.5	16.5	13.0	13.5	9.0
24	19.0	16.0	16.5	14.5	12.0	8.5	8.5	6.0	16.0	13.5	13.0	10.5
25	16.0	13.5	16.5	15.0	12.0	9.5	8.5	6.0	14.5	10.5	16.5	12.0
26	13.5	12.0	19.0	16.5	9.5	8.0	9.0	8.0	10.5	7.0	14.5	13.0
27	12.5	10.0	16.5	14.5	7.5	6.0	8.5	7.0	8.5	4.5	15.5	11.5
28	12.5	9.5	15.5	13.5	6.5	5.0	8.0	6.0	8.5	6.0	13.0	11.5
29	14.0	12.0	14.5	10.0	6.0	4.0	7.5	6.5	9.0	6.5	15.0	13.0
30	14.5	13.5	9.5	6.5	6.5	5.0	6.5	4.5	---	---	14.5	14.0
31	14.5	14.0	---	---	8.0	6.0	4.0	1.0	---	---	16.5	14.0
MONTH	25.0	9.5	19.0	6.5	13.0	2.5	12.5	1.0	16.5	.5	18.0	.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	17.0	14.0	15.5	14.5	26.0	23.0	27.0	24.0	29.5	25.0	---	---
2	17.5	12.5	17.0	14.0	27.0	23.5	28.0	24.0	27.0	23.5	---	---
3	20.5	14.5	18.0	15.5	28.0	24.0	28.5	26.5	30.0	27.0	---	---
4	21.5	17.5	19.5	16.5	28.0	26.5	28.0	27.0	30.5	29.0	27.0	25.0
5	18.5	15.0	20.5	17.5	26.0	21.5	28.0	26.5	31.0	29.5	27.5	25.0
6	17.5	12.5	20.5	18.5	22.5	20.5	28.5	28.0	31.0	30.0	27.5	25.0
7	16.0	13.5	21.0	19.0	23.0	21.5	---	---	30.0	29.0	28.5	26.0
8	17.0	15.0	20.5	17.0	26.5	23.5	---	---	30.0	28.5	27.0	24.5
9	21.0	16.5	17.0	15.5	26.0	21.0	---	---	29.5	28.5	25.0	21.5
10	20.5	17.0	16.0	13.5	21.0	20.0	---	---	---	---	24.0	21.5
11	19.5	16.0	17.5	14.5	22.0	21.0	27.5	25.5	---	---	23.5	22.0
12	19.0	16.0	21.0	17.0	21.5	20.5	28.0	26.0	29.5	27.5	23.0	21.0
13	18.5	18.0	22.5	20.0	20.0	19.0	28.5	28.0	29.5	26.0	22.0	21.0
14	19.0	17.5	22.5	21.5	19.0	18.0	---	---	29.5	27.0	22.5	22.0
15	19.0	15.5	22.0	19.5	---	---	---	---	29.5	28.5	24.0	23.0
16	16.0	13.5	19.5	17.0	---	---	---	---	30.0	29.5	24.5	24.0
17	15.0	11.5	18.5	16.0	---	---	---	---	---	---	24.5	23.5
18	16.0	12.0	20.5	18.0	---	---	---	---	---	---	26.0	24.5
19	17.0	13.5	22.5	20.0	19.5	18.5	---	---	24.5	23.5	26.0	25.5
20	17.5	14.5	22.5	21.5	20.5	19.5	---	---	28.0	25.0	26.0	24.5
21	18.0	15.5	22.0	21.5	20.5	20.0	---	---	27.5	26.0	24.5	24.0
22	18.0	15.5	22.5	21.0	---	---	---	---	25.5	24.0	---	---
23	20.0	16.5	23.0	21.5	---	---	27.5	25.5	24.5	23.0	---	---
24	20.5	18.0	23.0	22.0	---	---	26.0	24.0	23.5	22.0	---	---
25	22.0	19.0	22.5	21.5	---	---	25.5	23.0	22.0	21.0	---	---
26	21.5	19.5	22.5	21.0	22.0	20.5	25.5	22.5	---	---	27.5	26.0
27	20.5	20.0	21.0	19.0	26.0	22.0	25.5	23.5	---	---	26.0	20.0
28	19.5	17.0	20.5	18.0	28.5	24.5	25.5	24.5	---	---	20.0	18.5
29	17.5	16.0	22.5	19.5	29.0	27.0	27.5	25.5	---	---	18.5	18.0
30	16.5	15.5	24.5	21.5	29.5	27.0	28.0	25.0	---	---	20.0	18.5
31	---	---	25.0	22.5	---	---	29.5	26.0	---	---	---	---
MONTH	22.0	11.5	25.0	13.5	29.5	18.0	29.5	22.5	31.0	21.0	28.5	18.0
YEAR	31.0	.5										

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, N. C.--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	33	4.4	10	.11	9	.97	7	.26	12	1.6	7	.42
2	16	2.2	8	.07	6	.49	5	.19	10	1.3	7	.40
3	13	1.6	11	.16	5	.31	11	.39	9	1.2	7	.49
4	16	1.4	14	.24	2	.10	14	.49	8	.99	7	.74
5	15	.97	8	.08	7	.32	19	.92	6	.66	9	1.4
6	12	.65	5	.04	9	.44	23	1.2	6	.50	39	44
7	6	.28	5	.03	24	2.0	17	.92	6	.45	53	91
8	6	.23	5	.03	15	1.7	15	.97	8	.67	36	49
9	10	.35	9	.06	7	.72	21	2.7	8	.73	31	34
10	12	.36	7	.04	9	.70	31	6.7	17	5.6	12	9.3
11	13	.35	22	35	7	.45	27	6.0	27	18	10	5.6
12	10	.25	51	4.1	10	.57	63	37	14	7.0	11	4.5
13	7	.15	39	9.7	16	.82	23	13	10	3.8	16	8.7
14	7	.17	16	3.9	28	2.5	16	5.5	7	1.8	23	16
15	7	.17	12	2.0	17	1.5	13	3.6	4	.81	11	5.3
16	4	.09	6	.66	9	.73	15	4.2	5	.92	9	2.9
17	7	.14	7	.55	8	.56	14	3.1	5	.92	9	2.1
18	8	.14	6	.36	7	.40	15	2.6	9	1.4	101	96
19	4	.06	6	.29	14	.72	24	5.2	5	.61	68	54
20	9	.10	5	.20	20	.92	19	4.4	6	.63	22	9.8
21	10	.10	6	.23	17	.73	12	2.0	9	.87	17	5.6
22	10	.09	8	.26	18	.73	11	1.5	8	.71	14	4.4
23	6	.04	10	.32	14	.57	16	2.7	9	.73	14	3.1
24	7	.05	10	.30	11	.42	24	8.4	9	.68	12	2.0
25	4	.04	6	.16	10	.46	25	6.5	12	.81	7	1.2
26	6	.09	40	19	8	.41	19	3.3	12	.97	12	2.2
27	7	.13	52	47	10	.51	21	2.9	12	1.1	10	1.5
28	12	.22	22	12	12	.55	26	5.4	10	.86	10	1.3
29	10	.16	15	4.3	13	.56	22	4.6	8	.58	219	401
30	10	.15	12	1.9	12	.49	10	1.5	---	---	94	124
31	8	.10	---	---	6	.24	10	1.3	---	---	60	74
TOTAL	---	15.23	---	143.09	---	22.59	---	139.44	---	56.90	---	1055.95
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	35	26	20	4.1	16	.25	51	.74	25	.63	0	.00
2	20	9.7	15	2.1	16	.19	27	.19	74	13	0	.00
3	15	4.9	14	1.4	17	.15	22	.06	23	.87	0	.00
4	12	2.9	16	1.3	19	.13	19	.01	16	.26	267	20
5	15	2.8	16	.95	19	.10	18	.00	20	.16	57	1.0
6	14	2.0	17	.78	16	.06	16	.00	25	.09	24	.91
7	11	1.2	18	.68	15	.05	0	.00	12	.02	26	.69
8	12	1.2	16	.52	15	.04	0	.00	12	.00	25	.24
9	13	1.2	16	.43	16	.03	0	.00	10	.00	23	.13
10	16	1.3	14	.33	14	.02	0	.00	0	.00	17	.07
11	15	1.1	13	.27	14	.01	25	.01	0	.00	19	.06
12	12	.71	14	.25	13	.01	30	.08	14	.00	13	.02
13	13	.74	12	.17	10	.00	14	.01	38	.15	12	.02
14	35	3.7	14	.17	11	.00	0	.00	13	.08	9	.01
15	41	10	14	.15	0	.00	0	.00	7	.01	7	.01
16	27	6.3	14	.12	0	.00	0	.00	6	.00	7	.01
17	18	2.6	12	.09	0	.00	0	.00	0	.00	7	.01
18	12	1.3	14	.10	0	.00	0	.00	0	.00	8	.01
19	11	.95	24	.35	7	.00	0	.00	16	.02	9	.01
20	10	.70	29	4.1	7	.00	0	.00	40	.65	14	.01
21	12	.71	422	844	10	.00	0	.00	22	.11	9	.00
22	13	.67	68	33	0	.00	0	.00	12	.05	0	.00
23	12	.52	35	5.2	0	.00	255	4.6	13	.03	0	.00
24	15	.61	35	4.3	0	.00	250	30	12	.01	0	.00
25	21	.96	34	2.9	0	.00	80	6.5	13	.00	0	.00
26	14	.53	26	1.8	8	.00	30	.81	0	.00	14	.08
27	18	.68	22	1.1	11	.05	24	.29	0	.00	9	.02
28	183	115	19	.77	11	.06	23	.16	0	.00	6	.01
29	88	56	17	.55	11	.03	31	.24	0	.00	7	.02
30	30	9.8	17	.43	34	.43	49	.46	0	.00	9	.05
31	---	---	16	.32	---	---	22	.15	0	.00	---	---
TOTAL	---	266.78	---	912.73	---	1.61	---	44.31	---	16.14	---	23.39

TOTAL LOAD FOR YEAR: 2698.16 TONS.

02084164 JUNIPER BRANCH NEAR SIMPSON, N. C.

LOCATION.--Lat 35°33'55", long 77°14'43", Pitt County, Hydrologic Unit 03020103, on right bank at downstream side of bridge on Secondary Road 1766, 0.8 mi (1.3 km) upstream from mouth, and 1.8 mi (2.9 km) southwest of Simpson.

DRAINAGE AREA.--7.5 mi² (19.4 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is National Geodetic Vertical Datum of 1929 (Soil Conservation Service, bench mark). Prior to July 25, 1977, at datum 11.41 ft (3.478 m) higher.

REMARKS.--Water-discharge record good. Channel improvement, beginning Aug. 10, 1979, extends upstream from a point 0.5 mi (0.8 km) upstream from gage.

AVERAGE DISCHARGE.--5 years, 8.0 ft³/s (0.227 m³/s), 14.49 in/yr (368 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 996 ft³/s (28.2 m³/s) May 5, 1978, gage height, 16.83 ft (5.130 m), present datum; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 30 ft³/s (0.85 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 26	1145	61	1.73	14.10	4.298	Mar 29	0700	182	5.15	15.11	4.606
Jan 11	2100	97	2.75	14.52	4.426	Apr 28	0345	292	8.27	15.67	4.776
Mar 6	2015	89	2.52	14.44	4.401	May 21	0130	*470	13.3	*16.16	4.926
Mar 13	1530	38	1.08	13.71	4.179	July 23	1830	42	1.19	13.79	4.203
Mar 18	0745	218	6.17	15.30	4.663	Aug 1	2315	40	1.13	13.74	4.188

Minimum discharge, 0.24 ft³/s (0.007 m³/s) June 10, due to regulation; minimum unregulated, 0.30 ft³/s (0.008 m³/s) July 21; minimum gage height, 12.64 ft (3.853 m) June 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	1.0	6.0	3.1	9.7	6.1	24	13	2.2	.98	5.8	.64
2	9.4	1.1	5.2	3.0	9.0	6.3	18	11	1.9	.89	7.9	.63
3	6.7	2.8	4.6	2.7	8.9	6.4	16	9.2	1.7	.85	1.9	1.9
4	4.7	2.3	4.4	3.2	8.5	6.8	15	7.4	1.6	1.1	1.4	1.4
5	4.4	1.5	4.2	6.9	8.1	14	13	6.2	1.5	.86	1.1	1.0
6	4.5	1.4	6.7	4.5	8.5	50	11	5.1	1.4	.75	1.0	6.4
7	3.3	1.6	9.3	3.7	8.8	45	10	4.1	1.3	.73	.97	1.3
8	2.4	1.4	6.3	8.0	8.7	39	9.8	3.8	1.3	.63	1.0	1.0
9	2.2	1.5	5.0	12	9.9	30	9.5	3.6	1.2	.60	.93	.89
10	2.0	1.6	4.7	9.6	25	22	8.4	3.0	.67	1.5	.92	.84
11	2.0	7.4	4.4	26	21	18	7.4	2.6	1.2	1.8	.83	.79
12	2.2	13	4.1	33	18	15	6.9	2.3	.84	.88	4.7	.73
13	1.8	9.5	6.0	16	17	29	8.3	2.0	.82	.71	2.7	.73
14	3.7	6.9	8.6	14	15	24	16	2.0	.86	.63	1.5	.70
15	2.5	5.1	5.7	15	15	17	12	1.8	.92	.57	1.1	.64
16	1.9	4.4	5.1	13	15	15	8.8	1.6	.84	.55	.93	.61
17	1.6	3.9	4.7	11	14	13	7.3	1.5	1.2	.51	.85	.64
18	1.5	3.7	4.1	12	12	81	6.7	1.7	1.3	.55	.85	.60
19	1.3	3.3	3.9	14	11	28	6.0	1.9	1.2	.52	6.6	.61
20	1.3	3.2	3.6	12	11	20	5.4	35	.99	.47	2.1	.63
21	1.2	3.1	3.4	10	11	19	4.9	116	.89	.45	1.4	.59
22	1.2	3.0	3.2	10	10	15	4.4	14	.82	.44	1.1	.55
23	1.1	3.0	3.0	18	9.5	13	3.9	11	.77	12	1.0	.53
24	1.3	2.9	2.8	15	8.8	12	3.7	8.9	.72	4.5	.92	.52
25	1.4	2.9	3.0	12	8.3	13	3.8	7.6	.94	1.6	.86	1.0
26	1.4	29	5.0	11	11	11	3.0	7.4	7.5	1.1	.81	1.6
27	1.3	15	4.4	13	9.0	10	37	4.9	4.5	1.1	.71	.74
28	1.1	10	3.6	13	8.3	9.8	110	3.9	1.7	2.0	.70	.74
29	1.2	8.4	3.4	11	7.3	74	24	3.4	1.3	1.5	.71	.92
30	1.1	6.9	3.3	10	---	44	18	2.8	1.2	1.2	.70	2.6
31	1.0	---	3.2	11	---	41	---	2.5	---	1.1	.67	---
TOTAL	86.7	160.8	144.9	356.7	337.3	747.4	432.2	301.2	45.28	43.07	54.66	32.47
MEAN	2.80	5.36	4.67	11.5	11.6	24.1	14.4	9.72	1.51	1.39	1.76	1.08
MAX	14	29	9.3	33	25	81	110	116	7.5	12	7.9	6.4
MIN	1.0	1.0	2.8	2.7	7.3	6.1	3.0	1.5	.67	.44	.67	.52
CFSM	.37	.72	.62	1.53	1.55	3.21	1.92	1.30	.20	.19	.24	.14
IN.	.43	.80	.72	1.77	1.67	3.71	2.14	1.49	.22	.21	.27	.16

CAL YR 1979 TOTAL 3662.38 MEAN 10.0 MAX 241 MIN .10 CFSM 1.33 IN 18.16
WTR YR 1980 TOTAL 2742.68 MEAN 7.49 MAX 116 MIN .44 CFSM 1.00 IN 13.60

02084164 JUNIPER BRANCH NEAR SIMPSON, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Station operated to define the effects of channelization on stream quantity and quality in the Chicod Creek basin.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT											
02...	1315	10	142	5.7	23.0	40	7.8	--	--	44	26
23...	1100	1.2	187	6.8	18.0	50	4.3	--	--	62	6
24...	1020	1.5	175	6.8	16.0	60	4.1	--	--	61	11
NOV											
06...	1510	1.3	180	6.0	15.0	60	6.5	2900	9800	61	6
JAN											
02...	1330	2.9	144	6.5	7.0	25	11.5	76	510	52	23
FEB											
13...	1450	16	140	6.1	6.5	5	13.4	--	K52	46	33
MAR											
07...	1055	38	118	6.1	6.0	30	11.6	--	--	35	29
MAY											
21...	1040	44	82	5.9	20.0	100	7.2	--	--	24	18
JUL											
28...	1445	1.3	162	6.8	26.5	27	--	--	--	74	17

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT											
02...	13	2.8	7.1	24	.5	4.4	22	0	18	70	24
23...	20	2.9	7.8	23	.4	5.6	68	0	56	17	13
24...	20	2.8	8.2	21	.5	5.0	62	0	51	16	13
NOV											
06...	20	2.6	7.2	19	.4	4.7	67	0	55	107	12
JAN											
02...	17	2.3	6.2	20	.4	2.3	--	0	*29	--	15
FEB											
13...	13	3.2	6.8	23	.4	2.4	--	0	*13	--	22
MAR											
07...	9.9	2.6	5.2	23	.4	2.5	8	0	7	10	19
MAY											
21...	6.9	1.6	3.9	24	.3	2.8	4	0	3	15	17
JUL											
28...	26	2.2	6.0	14	.3	2.5	68	0	*57	18	14

K Results based on colony count outside the acceptable range (non-ideal colony count).
* Lab alkalinity.

02084164 JUNIPER BRANCH NEAR SIMPSON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)
OCT											
02...	13	.2	9.3	106	85	.14	2.86	2.3	.04	2.3	2.5
23...	12	.2	11	134	107	.18	.43	1.1	.01	1.1	1.1
24...	12	.2	11	137	103	.19	.55	.91	.03	.94	.88
NOV											
06...	13	.2	12	129	105	.18	.45	.72	.02	.74	.65
JAN											
02...	11	.2	9.5	121	81	.16	.95	1.5	.02	1.5	1.5
FEB											
13...	12	.2	7.0	96	74	.13	4.15	3.6	.02	3.6	3.5
MAR											
07...	9.1	.1	5.0	99	57	.13	10.2	2.3	.01	2.3	2.2
MAY											
21...	5.5	.2	4.6	82	46	.11	9.74	--	--	1.5	--
JUL											
28...	9.5	.2	9.1	122	110	.17	.43	1.7	.03	1.7	1.3

DATE	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	NITROGEN, TOT IN BOTTOM MATERIAL (MG/KG AS N)
OCT											
02...	--	--	--	--	1.1	.25	.85	--	3.4	15	--
23...	--	--	--	--	3.4	.80	2.6	--	4.5	20	--
24...	--	--	--	--	1.4	.20	1.2	--	2.3	10	--
NOV											
06...	--	--	--	--	2.5	.30	2.2	--	3.2	14	--
JAN											
02...	--	--	--	--	1.0	.00	1.2	--	2.5	11	--
FEB											
13...	--	--	--	--	.46	.05	.41	--	4.1	18	--
MAR											
07...	2.4	--	--	--	.90	.29	.61	1600	3.2	14	1600
MAY											
21...	--	.18	.22	1.1	1.3	--	--	--	2.8	12	--
JUL											
28...	--	--	--	--	.48	.00	.54	--	2.2	9.7	--

DATE	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)
OCT										
02...	.150	.46	.070	--	4	0	4	--	4	2
23...	.220	.67	.100	--	3	0	3	--	3	0
24...	.190	.58	.060	--	4	1	3	--	3	0
NOV										
06...	.210	.64	.050	--	1	0	1	--	1	0
JAN										
02...	.090	.28	.060	--	2	1	1	--	0	0
FEB										
13...	.070	.21	.020	--	--	--	--	--	--	--
MAR										
07...	.180	.55	.020	150	2	0	2	0	2	0
MAY										
21...	.350	1.1	--	--	--	--	--	--	--	--
JUL										
28...	.110	.34	.060	--	1	0	1	--	2	0

02084164 JUNIPER BRANCH NEAR SIMPSON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	COPPER, DIS-SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)
OCT										
02...	2	--	1200	650	550	--	5	1	4	--
23...	5	--	1700	1200	470	--	3	0	3	--
24...	4	--	1800	1300	490	--	0	0	1	--
NOV										
06...	6	--	1900	1400	490	--	1	0	3	--
JAN										
02...	1	--	710	390	320	--	1	1	0	--
FEB										
13...	--	--	--	--	--	--	--	--	--	--
MAR										
07...	2	<10	890	800	90	1400	0	0	0	<10
MAY										
21...	--	--	--	--	--	--	--	--	--	--
JUL										
28...	2	--	710	520	190	--	0	0	0	--

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)
OCT											
02...	<.5	.0	<.5	--	20	20	1	--	10	1.2	--
23...	<.1	.0	<.1	--	10	0	10	--	10	1.2	--
24...	.1	.0	<.1	--	10	0	10	--	11	1.2	--
NOV											
06...	.3	.1	.2	--	10	9	1	--	12	1.0	--
JAN											
02...	<.1	.0	.1	--	20	10	10	--	5.3	.8	--
FEB											
13...	--	--	--	--	--	--	--	--	4.6	.3	--
MAR											
07...	<.1	.0	<.1	.00	20	0	20	10	14	3.0	6.5
JUL											
28...	.1	.0	.2	--	10	4	6	--	9.3	.4	--

DATE	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL (UG/L)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT											
02...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	.0	9	.00	.00	.0	.0	80	.00	58
24...	--	--	.0	--	.00	.00	--	.0	--	.00	--
NOV											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN											
02...	--	--	--	--	--	--	--	--	--	--	--
FEB											
13...	--	--	--	--	--	--	--	--	--	--	--
MAR											
07...	.2	6.7	.0	3	.00	.00	.0	.0	5	.00	15
JUL											
28...	--	--	--	--	--	--	--	--	--	--	--

02084164 JUNIPER BRANCH NEAR SIMPSON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
02...	--	--	--	--	--	--	--	--	--	--	--
23...	.00	37	.00	20	.00	.0	.00	11	.00	.00	.0
24...	.00	--	.00	--	.00	--	.00	--	.00	.00	--
NOV											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN											
02...	--	--	--	--	--	--	--	--	--	--	--
FEB											
13...	--	--	--	--	--	--	--	--	--	--	--
MAR											
07...	.00	2.5	.00	12	.00	.0	.00	4.3	.00	.00	.3
JUL											
28...	--	--	--	--	--	--	--	--	--	--	--

DATE	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT										
02...	--	--	--	--	--	--	--	--	--	--
23...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
24...	.00	--	.00	--	.00	--	.00	--	.00	--
NOV										
06...	--	--	--	--	--	--	--	--	--	--
JAN										
02...	--	--	--	--	--	--	--	--	--	--
FEB										
13...	--	--	--	--	--	--	--	--	--	--
MAR										
07...	.00	.0	.00	8.1	.00	.0	.00	.0	.00	.0
JUL										
28...	--	--	--	--	--	--	--	--	--	--

DATE	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE TOTAL (UG/L)
OCT										
02...	--	--	--	--	--	--	--	--	--	--
23...	.00	.0	.00	.0	.00	.0	.00	.00	.0	.00
24...	.00	--	.00	--	.00	--	.00	.00	--	.00
NOV										
06...	--	--	--	--	--	--	--	--	--	--
JAN										
02...	--	--	--	--	--	--	--	--	--	--
FEB										
13...	--	--	--	--	--	--	--	--	--	--
MAR										
07...	.00	.0	.00	.0	.00	.0	.00	.00	.0	.00
JUL										
28...	--	--	--	--	--	--	--	--	--	--

DATE	TOXAPHENE, TOTAL (UG/L)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT				
23...	0	0	.00	.0
24...	0	--	.00	--
MAR				
07...	0	0	.00	.0

02084164 JUNIPER BRANCH NEAR SIMPSON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
02...	1315	10	35	.94
23...	1100	1.2	12	.04
23...	1415	1.1	16	.05
23...	1830	.40	5	.01
24...	1020	1.5	21	.09
24...	1520	1.5	21	.09
NOV				
06...	1510	1.3	14	.05
27...	1205	14	43	1.6
30...	1355	7.1	24	.46
30...	1545	7.1	18	.35
30...	1650	7.1	51	.98
30...	1815	6.7	163	2.9
DEC				
03...	1450	4.4	5	.06
03...	1645	4.2	11	.12
06...	1830	11	46	1.4
07...	1214	9.1	24	.59
JAN				
02...	1330	2.9	3	.02
FEB				
13...	1450	16	9	.39
MAR				
06...	1410	42	241	27
06...	1630	66	381	68
06...	1900	85	361	83
07...	1045	38	51	5.2
07...	1055	38	85	8.7
24...	1532	12	11	.36
APR				
17...	1030	7.5	13	.26
MAY				
21...	1040	44	142	17
21...	1055	43	131	15
21...	1300	35	110	10
21...	1405	32	106	9.2
21...	1505	30	108	8.7
JUN				
16...	1530	.84	5	.01
JUL				
28...	1445	1.3	6	.02

02084500 HERRING RUN NEAR WASHINGTON, N. C.

LOCATION.--Lat 35°34'03", long 77°01'09", Beaufort County, Hydrologic Unit 03020104, on left bank 10 ft (3 m) downstream from bridge on Secondary Road 1506, 400 ft (122 m) upstream from Pineywood Branch, 1.2 mi (1.9 km) upstream from mouth, and 2.8 mi (4.5 km) northeast of Washington.

DRAINAGE AREA.--About 15 mi² (39 km²).

PERIOD OF RECORD.--Occasional low-flow measurements in 1949. January 1950 to September 1980 (discontinued).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 2 ft (0.6 m), from topographic map. Prior to May 8, 1951, nonrecording gage at same site and datum.

REMARKS.--Records good. Runoff affected by ditches and canals above station.

AVERAGE DISCHARGE.--30 years, 10.5 ft³/s (0.297 m³/s), 9.51 in/yr (242 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 620 ft³/s (17.6 m³/s) Sept. 13, 1964, gage height, 14.85 ft (4.526 m) from floodmark; minimum, 0.50 ft³/s (0.014 m³/s) Sept. 27, 28, 29, 30, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1946 reached a stage of 17 ft (5.2 m), from information by local resident (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 120 ft³/s (3.40 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar 6	1900	*131	3.71	*9.42	2.871

Minimum discharge, 0.54 ft³/s (0.015 m³/s), July 19, 20, 21; minimum gage height, 5.09 ft (1.551 m), Sept. 18, 19, 20, 21, 22, 23, 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	.78	5.6	1.6	5.8	4.5	36	21	2.3	.74	15	.96
2	1.3	.94	4.8	1.7	4.9	5.3	28	16	2.0	.69	25	.96
3	1.6	1.3	4.0	1.5	4.4	5.9	23	10	1.6	.69	8.9	.90
4	1.0	.86	3.7	1.6	4.1	6.1	19	6.9	1.4	.79	4.7	1.0
5	1.0	.80	3.4	3.4	3.8	18	15	5.6	1.2	.74	3.3	1.4
6	.89	.83	4.1	4.3	3.9	69	11	4.4	1.1	.74	2.6	1.2
7	.80	.84	12	3.6	4.2	75	8.7	3.7	.96	1.6	2.1	1.0
8	.79	.84	7.9	6.1	4.2	72	7.3	3.1	.96	1.5	1.6	.90
9	.76	.84	5.2	16	4.7	62	6.1	2.7	.84	.74	1.4	.90
10	.74	.84	4.4	14	26	47	5.6	2.4	.79	1.2	1.4	.84
11	.74	12	3.9	16	28	36	4.8	2.1	.84	1.3	1.3	.84
12	.72	21	3.4	28	24	29	4.3	2.0	.84	1.1	1.8	.79
13	.68	21	3.4	19	21	38	7.6	2.1	.72	.74	1.3	.79
14	.74	12	6.3	15	19	37	21	1.7	.69	.64	1.2	.79
15	.69	6.2	5.4	20	18	29	26	1.5	.69	.64	1.1	.79
16	.69	4.7	4.5	19	19	24	19	1.4	.68	.64	1.1	.74
17	.67	3.8	4.2	14	20	20	14	1.4	.68	.59	.96	.79
18	.65	3.3	3.6	9.7	16	35	9.6	2.1	.73	.59	.96	.74
19	.66	2.8	3.4	12	12	29	7.1	2.0	.81	.59	22	.74
20	.71	2.4	3.2	8.5	8.6	24	5.7	11	.79	.74	5.2	.74
21	.73	2.1	2.9	6.3	6.8	24	5.5	19	.74	.84	3.2	.69
22	.72	1.8	2.7	5.2	5.8	23	4.8	8.4	.74	.64	2.3	.69
23	.87	1.7	2.6	17	5.1	19	4.4	21	.74	20	1.7	.69
24	1.5	1.5	2.5	18	4.6	16	4.1	16	.69	11	1.4	.69
25	.93	1.4	2.9	12	4.2	20	3.9	23	.79	3.7	1.2	1.9
26	.89	46	3.0	7.3	6.2	17	3.4	14	1.2	3.7	1.2	2.1
27	.87	29	2.5	11	7.8	14	3.9	8.2	.90	2.7	1.0	1.7
28	.85	19	2.2	16	6.7	11	62	6.2	.90	25	.96	1.2
29	.80	12	2.1	11	5.3	63	35	5.0	.84	13	.90	1.0
30	.79	7.2	2.0	7.2	---	53	27	4.0	.84	5.3	.90	2.1
31	.76	---	1.8	6.8	---	53	---	3.0	---	3.7	.90	---
TOTAL	27.24	219.77	123.6	332.8	304.1	978.8	432.8	230.9	29.00	106.58	118.58	30.57
MEAN	.88	7.33	3.99	10.7	10.5	31.6	14.4	7.45	.97	3.44	3.83	1.02
MAX	1.7	46	12	28	28	75	62	23	2.3	25	25	2.1
MIN	.65	.78	1.8	1.5	3.8	4.5	3.4	1.4	.68	.59	.90	.69

CAL YR 1979 TOTAL 4646.16 MEAN 12.7 MAX 149 MIN .58
WTR YR 1980 TOTAL 2934.74 MEAN 8.02 MAX 75 MIN .59

02084540 DURHAM CREEK AT EDWARD, N. C.

LOCATION.--Lat 35°19'25", long 76°52'26", Beaufort County, Hydrolgic Unit 03020104, on left bank 5 ft (2 m) downstream from bridge on Secondary Road 1949, at Edward, and 6.8 mi (10.9 km) upstream from mouth.

DRAINAGE AREA.--About 26 mi² (67 km²).

PERIOD OF RECORD.--Occasional low-flow measurements water years 1950-54, 1956-65. August 1965 to current year. Records of runoff in cubic feet per second and inches published in WRD N.C. 1978 and 1979 are unreliable and should not be used.

REVISED RECORDS.--WRD N. C. 1974: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.19 ft (0.058 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, Feb. 21 to Mar. 25, which are poor. Runoff affected by ditches and canals above station. Suspended sediment records for the current year are published on page 417 of this report.

AVERAGE DISCHARGE.--15 years, 39.3 ft³/s (1.113 m³/s), 25.41 in/yr (645 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,070 ft³/s (58.6 m³/s) Oct. 1, 1971, gage height, 13.24 ft (4.036 m); no flow at times many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 194 ft³/s (5.49 m³/s) Apr. 15, gage height, 7.94 ft (2.420 m). No flow July 3, 10, 12-31; Aug. 1 to Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134	3.3	41	17	46	30	151	28	3.8	.10		
2	114	3.2	34	16	41	28	120	24	3.2	.02		
3	90	5.1	29	16	36	26	98	22	2.5	.00		
4	79	6.5	26	15	32	30	83	19	1.9	.09		
5	67	6.2	23	21	29	50	70	17	1.4	.03		
6	56	5.5	24	24	26	120	58	14	1.1	.28		
7	47	4.9	65	23	27	160	49	12	.85	.27		
8	37	4.4	93	25	28	180	43	10	.67	.15		
9	29	4.1	87	40	31	120	40	10	.53	.05		
10	24	3.8	72	47	62	100	41	9.0	.34	.00		
11	21	4.1	60	44	101	80	39	7.9	.24	.06		
12	19	11	52	48	99	70	33	6.9	.22	.00		
13	16	16	46	51	90	100	46	6.1	.20	.00		
14	14	18	47	56	80	80	151	5.3	.18	.00		
15	13	16	44	69	74	70	186	4.6	.15	.00		
16	11	15	39	69	71	62	149	4.1	.12	.00		
17	9.8	14	35	61	68	50	107	3.4	.38	.00		
18	8.7	13	31	54	62	70	81	3.7	.46	.00		
19	7.7	12	27	56	55	100	65	6.7	1.2	.00		
20	8.8	12	25	55	50	90	52	7.3	1.6	.00		
21	15	11	23	49	46	80	44	15	1.1	.00		
22	10	10	21	43	42	70	38	14	.64	.00		
23	7.5	9.2	20	55	38	60	31	12	.43	.00		
24	7.9	8.4	19	75	36	90	26	16	.26	.00		
25	7.1	8.1	22	68	34	100	24	14	.21	.00		
26	6.2	23	24	58	40	86	20	12	.24	.00		
27	5.4	60	23	52	36	72	18	9.6	.43	.00		
28	4.8	60	22	54	34	60	33	7.7	.56	.00		
29	4.5	60	20	53	32	79	41	6.4	.36	.00		
30	4.1	50	19	48	---	118	35	5.4	.22	.00		
31	3.7	---	18	46	---	163	---	4.6	---	.00		
TOTAL	882.2	477.8	1131	1408	1446	2594	1972	337.7	25.49	1.05	.00	.00
MEAN	28.5	15.9	36.5	45.4	49.9	83.7	65.7	10.9	.85	.034	.000	.000
MAX	134	60	93	75	101	180	186	28	3.8	.28	.00	.00
MIN	3.7	3.2	18	15	26	26	18	3.4	.12	.00	.00	.00

CAL YR 1979 TOTAL 12751.66 MEAN 34.9 MAX 290 MIN .27
WTR YR 1980 TOTAL 10275.24 MEAN 28.1 MAX 186 MIN .00

02084571 VAN SWAMP NEAR HOKE, N. C.

LOCATION.--Lat 35°43'49", long 76°44'49", Washington County, Hydrologic Unit 03020104, on left bank at upstream side of culvert on State Highway 32, 4.8 mi (7.7 km) east of Hoke.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--23 mi² (60 km²), approximately.

PERIOD OF RECORD.--May 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 20 ft (6 m) from topographic map.

REMARKS.--Water-discharge record good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 409 ft³/s (11.6 m³/s) Nov. 6, 1977, gage height, 4.45 ft (1.356 m), no flow part of day Oct. 1, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 100 ft³/s (2.83 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar 10	0030	*216	6.12	*3.64	1.109	Mar 31	1400	155	4.39	3.31	1.009
Mar 13	1900	191	5.41	3.52	1.073	Apr 29	0400	129	3.65	3.12	0.951

Minimum discharge, 0.01 ft³/s (<0.001 m³/s) Sept. 22, 23, 24, 25; minimum gage height, 0.11 ft (0.034 m) Sept. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	1.5	37	14	40	54	147	108	2.4	.34	.90	.03
2	24	1.4	33	14	37	48	134	97	2.0	.34	.78	.03
3	22	1.9	29	14	34	46	119	83	1.7	.34	.66	.03
4	20	2.2	26	14	30	44	107	67	1.3	.34	.50	.03
5	17	2.3	23	21	27	48	98	54	.90	.34	.42	.03
6	15	2.2	23	31	26	72	85	41	.78	.34	.42	.05
7	14	1.9	28	33	25	110	72	31	.66	.28	.78	.07
8	11	1.8	30	35	23	154	61	24	.58	.28	1.6	.06
9	11	1.8	28	48	23	199	52	20	.50	.28	1.3	.04
10	8.4	1.7	26	57	33	212	45	16	.42	.28	.90	.04
11	7.0	2.3	25	57	43	203	39	14	.66	.34	.66	.04
12	6.2	15	23	78	48	185	33	11	.78	.28	.50	.03
13	5.6	31	22	81	52	182	31	9.0	.58	.34	.58	.03
14	5.4	38	27	75	52	183	42	7.4	.50	.28	.42	.03
15	5.0	37	28	89	57	164	57	6.1	.42	.22	.34	.04
16	4.5	34	28	97	68	146	56	5.3	.34	.14	.28	.04
17	4.1	30	27	90	90	127	49	4.5	.34	.14	.22	.04
18	3.7	26	26	80	89	126	42	4.0	.34	.07	.14	.04
19	3.3	23	24	76	80	124	36	3.8	.28	.07	.90	.03
20	3.0	21	23	71	72	114	31	3.5	.22	.07	1.8	.03
21	2.8	19	21	64	66	108	27	5.5	.22	.07	1.4	.02
22	2.6	17	20	57	63	105	24	5.8	.22	.04	1.0	.02
23	2.4	15	19	61	58	96	21	7.5	.14	1.5	.66	.01
24	3.0	14	18	69	55	85	18	9.6	.14	3.5	.42	.01
25	3.0	12	18	66	51	81	16	8.6	.22	1.7	.34	.02
26	2.7	29	19	59	54	75	14	7.8	.34	.90	.28	.02
27	2.6	54	18	54	66	67	14	6.3	.42	.58	.22	.02
28	2.3	53	17	53	65	59	110	5.3	.34	.90	.14	.02
29	2.1	48	16	50	60	100	127	4.5	.34	2.1	.07	.02
30	1.8	42	15	46	---	126	119	3.5	.50	2.0	.07	.12
31	1.6	---	14	44	---	152	---	2.8	---	1.4	.03	---
TOTAL	239.1	579.0	731	1698	1487	3595	1826	676.8	18.58	19.80	18.73	1.04
MEAN	7.71	19.3	23.6	54.8	51.3	116	60.9	21.8	.62	.64	.60	.035
MAX	24	54	37	97	90	212	147	108	2.4	3.5	1.8	.12
MIN	1.6	1.4	14	14	23	44	14	2.8	.14	.04	.03	.01
CFSM	.34	.84	1.03	2.38	2.23	5.04	2.65	.95	.03	.03	.03	.002
IN.	.39	.94	1.18	2.75	2.40	5.81	2.95	1.09	.03	.03	.03	.00

CAL YR 1979 TOTAL 12558.39 MEAN 34.4 MAX 178 MIN .07 CFSM 1.50 IN 20.31
WTR YR 1980 TOTAL 10890.05 MEAN 29.8 MAX 212 MIN .01 CFSM 1.30 IN 17.61

02084571 VAN SWAMP NEAR HOKE, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to September 1980 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1977 to September 1980.
WATER TEMPERATURES: May 1977 to September 1980.

INSTRUMENTATION.--Water-quality monitor since May 1977.

REMARKS.--Station operated to define the effects of land clearing on stream quantity and quality. Interruptions in the daily record were due to malfunctions of the monitor.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 169 micromhos Nov. 8, 1977; minimum recorded, 30 micromhos Aug. 17, 1977.
WATER TEMPERATURES: Maximum, 31.0°C July 21, Aug. 9, 11, 12, 1977; minimum recorded, 1.5°C Mar. 2, 1980.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 167 micromhos July 4; minimum recorded, 46 micromhos Aug. 19, 20.
WATER TEMPERATURES: Maximum, 28.5°C Aug. 1, 4, 5, 6; minimum recorded, 1.5°C Mar. 2.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)
NOV 19...	1200	24	110	3.4	13.0	70	8.6	69	11	11	.7

DATE	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)
NOV 19...	35	2.3	1.2	5.1	64	.7	.5	0	0	0	.0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
NOV 19...	16	7.5	.3	13	82	48	.11	5.31	.85	.00	.85

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
NOV 19...	.88	.67	.00	.81	1.5	6.7	.010	.03	.010	1

DATE	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)
NOV 19...	0	6	880	280	600	3	2	1	25	.5

02084571 VAN SWAMP NEAR HOKE, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	83	71	87	84	124	116	---	---	113	108	115	101
2	92	82	87	84	121	115	---	---	112	106	111	101
3	102	92	86	83	120	117	---	---	113	105	109	97
4	103	100	86	81	120	112	---	---	112	106	106	94
5	104	94	89	81	118	112	---	---	112	105	103	94
6	103	99	88	82	---	---	---	---	110	101	95	82
7	102	99	89	83	---	---	---	---	109	102	92	86
8	102	99	91	83	---	---	---	---	111	103	113	92
9	101	93	89	81	---	---	---	---	110	106	122	113
10	102	99	85	80	---	---	---	---	106	93	125	121
11	102	100	83	79	---	---	---	---	99	93	124	122
12	101	98	82	72	---	---	---	---	100	94	137	122
13	101	97	97	78	---	---	---	---	100	93	125	118
14	100	95	117	97	---	---	---	---	101	94	126	120
15	100	94	119	114	---	---	---	---	100	93	127	120
16	97	93	118	112	---	---	130	120	101	94	125	121
17	96	92	118	113	---	---	127	120	112	101	125	122
18	96	92	115	109	---	---	127	122	113	107	122	111
19	95	91	124	107	---	---	129	122	114	110	116	111
20	94	90	112	101	---	---	130	124	114	107	115	109
21	93	90	111	107	---	---	130	124	114	103	111	103
22	94	89	110	106	---	---	129	123	108	105	113	107
23	93	85	108	103	---	---	123	115	109	108	115	109
24	89	81	105	102	---	---	123	117	113	105	114	109
25	91	84	105	101	---	---	124	119	116	112	109	100
26	92	85	105	87	---	---	123	120	116	108	106	101
27	92	84	121	107	---	---	124	120	112	106	107	100
28	93	85	123	121	---	---	121	115	114	108	107	101
29	89	85	124	119	---	---	121	117	114	108	100	83
30	90	85	125	119	---	---	124	119	---	---	91	87
31	90	84	---	---	---	---	124	111	---	---	97	90
MONTH	104	71	125	72	124	112	130	111	116	93	137	82
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	100	96	100	96	74	67	130	109	60	55	63	61
2	102	97	99	95	75	71	130	103	63	58	63	61
3	100	99	97	93	73	70	164	132	62	59	63	61
4	101	99	95	93	71	69	167	144	64	61	62	60
5	103	98	94	90	70	68	146	129	66	63	62	60
6	105	99	97	89	69	67	139	118	67	61	62	60
7	104	99	95	87	68	67	111	103	63	58	62	61
8	102	99	97	88	68	67	106	96	57	54	61	60
9	100	99	97	92	67	63	105	95	57	55	60	59
10	100	98	98	92	71	67	102	87	55	53	60	59
11	102	97	97	94	74	64	101	85	56	54	60	59
12	102	97	96	88	66	61	99	92	57	55	60	59
13	98	92	95	89	65	62	98	93	57	55	60	59
14	92	83	94	91	66	62	98	91	57	55	61	59
15	95	88	93	82	70	64	94	91	57	55	61	60
16	98	94	93	87	79	68	95	90	57	56	61	60
17	100	94	91	83	78	73	96	91	58	56	62	60
18	101	95	89	83	76	72	103	92	58	56	63	61
19	101	95	88	85	84	73	101	91	59	46	64	61
20	101	95	87	77	79	75	105	94	55	46	63	61
21	99	95	79	73	78	76	104	93	56	54	67	61
22	100	94	79	71	82	77	100	93	58	54	65	61
23	97	94	76	56	88	81	99	49	58	57	68	62
24	106	94	72	66	89	86	64	58	59	57	67	63
25	105	102	73	65	91	86	60	54	60	57	65	60
26	103	93	75	70	87	83	60	55	61	59	66	61
27	94	86	75	73	88	78	63	59	61	59	63	60
28	105	64	75	74	101	88	65	51	62	59	61	59
29	105	98	76	74	104	94	60	58	62	60	60	58
30	100	95	75	73	117	101	62	59	63	60	58	56
31	---	---	75	72	---	---	60	57	63	61	---	---
MONTH	106	64	100	56	117	61	167	49	67	46	68	56
YEAR	167	46										

02084571 VAN SWAMP NEAR HOKE, N. C.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	23.0	22.5	15.0	13.5	11.0	10.0	---	---	7.0	6.0	9.0	4.0
2	23.0	22.0	16.0	15.0	10.5	10.0	---	---	7.0	5.5	5.0	1.5
3	22.5	20.5	16.5	15.0	10.0	9.0	---	---	6.5	5.0	4.0	2.0
4	20.5	18.5	14.5	12.0	10.0	8.5	---	---	6.5	5.5	6.0	4.0
5	19.0	18.0	12.0	11.5	10.5	9.0	---	---	7.0	5.5	7.5	6.0
6	18.0	16.0	12.5	11.5	---	---	---	---	6.5	4.0	9.0	7.0
7	17.5	16.5	13.0	12.5	---	---	---	---	6.5	5.0	8.5	6.5
8	16.5	15.5	12.0	11.5	---	---	---	---	7.5	5.5	9.0	8.0
9	18.0	15.0	12.5	11.5	---	---	---	---	7.5	6.5	9.5	8.5
10	17.0	14.5	15.5	13.0	---	---	---	---	7.5	6.5	9.5	8.5
11	14.5	13.0	16.0	15.5	---	---	---	---	7.5	5.5	10.0	9.0
12	15.5	12.0	15.5	14.5	---	---	---	---	8.0	6.5	9.0	8.5
13	16.5	15.0	15.0	14.5	---	---	---	---	7.5	6.0	9.5	8.5
14	15.5	12.5	15.0	13.5	---	---	---	---	8.5	6.5	10.0	9.0
15	14.0	11.5	13.5	12.0	---	---	---	---	9.0	7.0	10.5	8.5
16	15.0	12.0	13.5	12.0	---	---	12.0	11.5	9.0	8.5	10.5	9.0
17	15.5	13.0	13.5	11.0	---	---	11.5	10.5	9.0	8.0	11.0	10.0
18	16.0	14.0	14.0	12.0	---	---	12.0	11.5	8.5	7.0	12.0	11.0
19	16.5	15.0	14.5	12.5	---	---	12.0	11.0	8.5	7.5	12.0	10.0
20	17.0	16.0	14.5	12.5	---	---	11.0	10.0	10.0	8.0	11.5	10.5
21	18.0	17.0	14.5	12.5	---	---	11.0	10.5	11.5	10.0	13.5	11.5
22	18.5	17.0	15.0	12.5	---	---	12.0	10.5	12.5	10.5	12.0	10.5
23	18.5	17.5	16.0	14.0	---	---	12.0	11.0	13.5	11.5	12.0	10.0
24	18.5	15.0	16.5	15.0	---	---	10.5	9.5	13.0	11.5	11.0	10.5
25	15.5	13.0	17.0	16.0	---	---	11.5	10.0	12.0	11.0	13.0	11.0
26	13.5	12.0	18.0	16.5	---	---	11.5	11.0	10.5	9.0	12.5	11.5
27	12.0	10.5	16.0	15.0	---	---	11.0	10.5	10.0	8.0	13.0	11.0
28	11.5	10.5	15.5	14.0	---	---	11.0	10.0	10.0	8.5	12.0	11.0
29	13.0	11.5	15.5	13.0	---	---	10.0	9.5	10.0	9.0	13.0	11.5
30	14.0	13.0	12.5	11.0	---	---	9.5	8.5	---	---	12.5	12.0
31	14.0	13.5	---	---	---	---	8.5	7.0	---	---	13.5	12.0
MONTH	23.0	10.5	18.0	11.0	11.0	8.5	12.0	7.0	13.5	4.0	13.5	1.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.0	12.0	14.5	14.0	22.5	21.0	25.0	22.5	28.5	25.0	25.5	24.0
2	13.5	11.5	15.0	13.5	23.0	22.0	24.5	23.0	27.0	25.5	26.5	25.0
3	14.0	12.5	15.5	14.0	24.5	22.5	25.5	24.5	28.0	26.0	26.0	25.0
4	14.5	13.0	16.5	14.5	24.5	23.0	25.5	25.0	28.5	27.0	25.5	24.5
5	14.0	13.0	17.0	15.0	22.5	20.5	26.5	25.0	28.5	27.0	26.0	24.5
6	14.0	12.0	18.5	16.0	21.0	20.0	27.0	25.0	28.5	27.0	25.5	24.5
7	14.0	12.5	18.5	16.0	22.5	20.0	25.5	22.5	27.5	26.0	25.5	24.5
8	13.5	12.5	17.0	15.5	24.0	22.0	24.5	22.5	26.5	25.5	25.0	23.5
9	15.0	13.5	16.0	14.5	23.0	20.5	25.0	21.5	27.0	26.0	23.5	22.0
10	16.0	14.0	16.0	13.5	22.5	20.0	25.5	22.5	27.0	26.5	23.0	22.0
11	16.0	13.5	17.0	14.0	21.5	20.0	25.5	22.5	27.5	26.5	23.0	22.5
12	15.5	13.5	19.5	16.0	21.5	20.0	25.5	23.0	28.0	26.5	22.5	21.0
13	15.0	15.0	20.5	18.0	20.0	18.5	25.5	22.5	27.0	25.5	22.0	20.5
14	16.0	14.5	20.0	19.5	20.0	17.0	25.0	22.0	27.5	25.5	23.5	22.0
15	15.5	14.0	19.5	17.5	22.5	19.0	23.5	20.5	28.0	26.5	24.5	23.0
16	14.5	13.0	18.0	16.5	24.5	21.0	24.5	21.5	28.0	26.5	23.5	23.0
17	14.0	12.0	17.5	15.5	23.5	22.0	25.5	22.0	26.5	24.5	24.5	23.0
18	14.5	12.0	19.0	17.0	21.5	19.5	25.5	22.5	24.5	23.5	25.0	24.5
19	15.0	12.5	20.0	18.5	21.0	18.5	26.5	22.5	24.0	23.5	25.0	24.5
20	15.5	13.0	20.0	19.5	22.0	19.5	27.0	22.5	25.0	24.0	24.0	23.0
21	15.5	13.5	22.0	19.5	21.0	19.5	27.0	23.5	24.5	24.5	24.0	22.5
22	16.0	13.5	22.5	20.0	21.5	19.0	27.0	24.0	24.0	23.0	25.0	23.5
23	16.5	14.5	22.0	20.0	21.5	19.0	27.0	23.0	24.0	22.5	26.0	24.5
24	17.5	15.0	22.0	20.0	22.0	20.0	25.0	20.0	23.0	22.0	26.0	25.0
25	19.0	16.0	21.5	19.5	21.5	20.5	25.0	20.0	22.5	21.0	25.0	24.5
26	19.0	16.5	22.0	19.5	22.0	20.5	25.0	21.5	22.5	21.0	25.0	24.5
27	18.5	16.5	20.0	17.5	24.0	21.0	25.0	23.5	23.0	21.5	24.0	21.0
28	17.5	15.0	20.5	17.5	25.5	22.5	24.5	24.0	23.0	22.0	21.0	19.5
29	15.5	14.0	22.0	18.5	26.5	24.0	26.0	22.5	23.5	22.0	20.0	19.5
30	15.0	14.5	22.0	20.0	26.0	24.5	26.5	23.0	24.0	22.5	21.0	20.0
31	---	---	22.0	20.5	---	---	26.5	24.0	25.0	23.0	---	---
MONTH	19.0	11.5	22.5	13.5	26.5	17.0	27.0	20.0	28.5	21.0	26.5	19.5
YEAR	28.5	1.5										

02084571 VAN SWAMP NEAR HOKE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
01...	0915	24	21	1.4
03...	0930	22	15	.89
05...	1330	17	14	.64
08...	0905	11	8	.24
13...	1210	5.4	9	.13
16...	1000	4.3	11	.13
18...	0945	3.6	7	.07
24...	1730	32	27	2.3
27...	1015	2.6	5	.04
NOV				
01...	0820	2.0	7	.04
03...	1045	3.2	13	.11
07...	1200	1.8	12	.06
08...	0830	1.7	4	.02
11...	1600	2.3	8	.05
18...	0955	26	3	.21
19...	1200	24	5	.32
24...	1030	14	3	.11
27...	1115	56	14	2.1
DEC				
01...	0905	38	4	.41
04...	1020	26	2	.14
06...	0700	22	2	.12
11...	0950	24	1	.06
15...	1140	29	3	.23
19...	1310	24	1	.06
24...	1040	17	1	.05
27...	0945	24	1	.06
31...	0905	14	1	.04
JAN				
01...	1550	23	7	.43
06...	0905	31	9	.75
08...	1245	35	6	.57
12...	0730	79	37	7.9
15...	1315	96	31	8.0
19...	1200	77	7	1.5
22...	1015	57	4	.62
25...	1330	67	4	.72
FEB				
05...	1145	27	3	.22
09...	1120	23	3	.19
12...	1200	49	4	.53
14...	1330	56	5	.76
17...	1730	90	4	.97
19...	1320	82	7	1.5
26...	1515	56	9	1.4
29...	1120	102	4	1.1
MAR				
06...	1645	84	37	8.4
08...	1615	187	41	21
12...	1040	184	32	16
13...	0915	169	15	6.8
18...	1420	137	13	4.8
20...	1340	109	77	23
22...	0940	104	7	2.0
25...	1245	67	8	1.4
29...	1710	117	35	11
31...	1500	207	54	30
APR				
06...	1155	87	6	1.4
08...	0920	62	5	.84
13...	1015	29	6	.47
16...	1520	56	3	.45
20...	1150	31	22	1.8
MAY				
06...	1000	41	6	.66
JUN				
19...	0900	.34	35	.03
JUL				
30...	1015	1.9	31	.16

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.

LOCATION.--Lat 35°38'18", long 76°40'19", Beaufort County, Hydrologic Unit 03020104, near right bank on downstream side of bridge on Secondary Road 1626, and 1.4 miles (2.3 km) northeast of Swindell.

DRAINAGE AREA.--68 mi² (176 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 0 ft from topographic map.

REMARKS.--Water-discharge records fair from 100 ft³/s (2.83 m³/s) to 300 ft³/s (8.50 m³/s), good above and poor below. The flow is affected by tide at all but extreme high stages and occasionally reverses at low flow. Daily discharges below 50 ft³/s (1.42 m³/s) are computed based on records of stage, discharge measurement, hydrographic comparisons, and runoff from Van Swamp near Hoke (Sta. No. 02084507) and individual daily values are subject to considerable error and should be used with caution. Flows in this range averaged over several days have greater reliability.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1590 ft³/s (45.0 m³/s) Nov. 7, 1977, gage height, 12.17 ft (3.709 m); minimum gage height, 3.28 ft (1.000 m) Aug. 16, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1200 ft³/s (34.0 m³/s) Apr. 28, gage height, 10.21 ft (3.11 m); minimum gage height, 3.28 ft (1.000 m) Aug. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	6.8	60	24	52	110	477	265	11	5.2	6.2	3.7
2	111	6.6	40	24	47	70	326	220	10	5.2	6.0	3.7
3	82	7.4	32	24	49	74	241	167	8.0	5.2	5.7	3.7
4	94	7.7	28	21	36	80	183	122	7.4	5.1	5.4	3.7
5	91	7.8	27	36	33	90	129	90	6.8	5.1	5.3	3.8
6	80	7.6	30	152	35	195	133	70	6.4	5.1	5.5	4.0
7	30	7.2	60	137	24	729	106	50	6.0	5.0	6.0	4.2
8	20	7.0	70	109	33	1120	90	40	5.8	4.9	7.0	3.9
9	20	7.2	55	213	43	1040	92	33	5.6	5.0	6.8	3.8
10	16	7.0	34	249	90	676	60	28	5.4	5.0	6.2	3.9
11	14	30	28	180	299	453	50	24	6.0	5.2	5.9	3.9
12	13	60	23	332	287	344	46	21	6.2	5.0	5.5	3.8
13	12	257	21	285	282	372	44	18	5.8	5.0	5.8	3.8
14	12	309	38	205	251	413	137	15	5.6	4.9	5.2	3.7
15	11	188	56	355	325	295	206	13	5.3	4.8	5.0	3.8
16	11	100	50	401	342	223	125	12	5.2	4.6	4.8	3.9
17	10	66	40	284	342	183	105	11	5.2	4.5	4.6	3.9
18	9.4	45	50	236	250	224	80	10	5.1	4.1	4.5	3.8
19	9.0	33	40	232	175	244	60	9.6	4.9	4.0	6.6	3.8
20	8.6	32	26	226	143	187	50	9.4	4.8	4.0	7.4	3.7
21	8.4	29	29	173	118	199	40	20	4.8	4.0	6.8	3.6
22	8.2	28	38	146	104	201	38	50	4.8	3.8	6.5	3.6
23	8.0	27	38	177	94	149	36	76	4.6	7.0	6.0	3.5
24	8.6	22	45	267	86	124	30	70	4.5	9.4	5.2	3.6
25	8.6	24	30	175	84	134	27	45	4.8	7.0	5.1	3.7
26	8.2	326	31	135	82	140	25	70	5.2	6.2	4.9	3.7
27	8.0	588	29	116	200	123	24	52	5.3	5.7	4.8	3.7
28	7.8	282	28	134	173	99	1070	48	5.1	6.2	4.6	3.7
29	7.4	147	27	116	125	329	816	34	5.2	7.5	4.2	4.0
30	7.2	90	25	90	---	502	433	26	5.4	7.5	4.0	4.5
31	6.8	---	24	70	---	684	---	18	---	6.5	3.8	---
TOTAL	850.2	2755.3	1152	5324	4204	9806	5279	1737.0	176.2	167.7	171.3	114.1
MEAN	27.4	91.8	37.2	172	145	316	176	56.0	5.87	5.41	5.53	3.80
MAX	111	588	70	401	342	1120	1070	265	11	9.4	7.4	4.5
MIN	6.8	6.6	21	21	24	70	24	9.4	4.5	3.8	3.8	3.5
CFSM	.40	1.35	.55	2.53	2.13	4.65	2.59	.82	.09	.08	.08	.06
IN.	.47	1.51	.63	2.91	2.30	5.36	2.89	.95	.10	.09	.09	.06

CAL YR 1979 TOTAL 40983.4 MEAN 112 MAX 1470 MIN 3.8 CFSM 1.65 IN 22.42
WTR YR 1980 TOTAL 31736.8 MEAN 86.7 MAX 1120 MIN 3.5 CFSM 1.28 IN 17.36

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978 to September 1980 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1978 to September 1980.
WATER TEMPERATURES: March 1978 to September 1980.

INSTRUMENTATION.--Water-quality monitor since March 1978.

REMARKS.--Station operated to define the effects of land clearing on stream quantity and quality. Malfunctions of water-quality monitor caused some loss of daily records during December 1979, January, August, and September 1980.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, ≥ 573 micromhos Oct. 2, 3, 6, 7, 13-31, Nov. 1-29, Dec. 22, 1978; minimum, 59 micromhos Aug. 14, 1978.
WATER TEMPERATURES: Maximum, 37.0°C July 13, Aug. 1, 6, 1980; minimum, 1.0°C Feb. 10, 18, 1979, Feb. 2, Mar. 2-5, 1980.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 556 micromhos July 2; minimum, 105 micromhos Mar. 4.
WATER TEMPERATURES: Maximum, 37.0°C July 13, Aug. 1, 6; minimum, 1.0°C Feb. 2, Mar. 2-5.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	COLOR (PLATINUM COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
NOV 19...	1355	210	5.8	14.5	80	9.0	25	75	67	20	6.2	7.5

DATE	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
NOV 19...	24	.4	2.3	0	*8	54	15	.4	22	202	133	.27

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)
NOV 19...	2.4	.02	2.4	2.5	1.6	.20	1.4	4.0	18	.060	.18	.020

DATE	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED (MG/L AS C)
NOV 19...	2	0	4	1400	760	640	0	0	1	19	1.4

* Lab alkalinity.

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	326	255	386	366	201	193	212	208	206	192	182	171
2	262	259	386	351	204	196	244	208	215	182	173	155
3	262	241	357	336	196	181	---	---	215	199	175	112
4	254	240	357	342	194	188	225	196	215	204	115	105
5	251	230	375	353	205	192	244	230	217	202	141	116
6	259	229	368	360	206	196	250	225	217	204	173	141
7	237	228	364	343	253	208	228	213	223	202	171	133
8	256	232	348	321	271	252	218	207	223	207	137	122
9	267	258	331	310	251	230	231	216	227	222	152	130
10	266	245	322	305	235	217	235	214	229	226	164	153
11	269	251	323	306	232	212	218	210	226	211	166	162
12	279	267	322	261	230	211	226	202	215	209	162	155
13	290	273	275	201	226	209	205	198	214	208	179	152
14	305	275	221	209	244	208	213	204	218	209	181	164
15	307	290	221	213	249	228	227	211	226	212	164	155
16	316	295	216	209	227	224	222	209	224	218	155	149
17	322	303	215	199	237	225	214	205	217	198	149	145
18	324	307	212	195	242	212	205	197	197	187	172	144
19	355	320	255	156	221	204	221	199	187	183	171	148
20	356	324	220	212	215	208	220	208	185	183	149	146
21	352	330	217	208	210	207	208	200	186	182	183	144
22	355	330	220	210	211	207	200	196	183	178	186	164
23	357	329	223	206	218	208	236	195	184	181	163	152
24	374	331	231	216	228	216	242	218	186	181	152	148
25	359	338	236	225	241	216	217	208	185	182	171	149
26	381	352	237	156	254	241	208	200	201	181	171	153
27	372	352	192	154	260	239	200	194	218	200	153	151
28	381	352	207	193	238	223	217	198	200	191	153	150
29	391	374	215	207	226	207	217	212	190	182	221	151
30	381	367	209	200	212	207	212	204	---	---	165	160
31	393	364	---	---	212	207	205	196	---	---	180	169
MONTH	393	228	386	154	271	181	250	194	229	178	221	105
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	170	159	170	161	296	280	551	428	265	223	---	---
2	158	151	162	153	309	298	556	431	259	233	---	---
3	151	146	153	150	323	296	513	436	292	260	---	---
4	148	144	151	148	360	316	479	444	311	288	419	409
5	149	146	150	148	379	316	488	448	327	215	420	410
6	148	136	153	149	322	310	490	453	345	258	413	379
7	138	134	161	153	363	316	491	461	245	177	395	358
8	139	136	165	159	374	346	507	456	240	195	386	372
9	148	140	170	162	373	350	482	454	286	244	396	373
10	155	148	176	164	369	348	513	454	300	286	430	398
11	157	153	185	171	367	359	463	446	296	201	446	425
12	160	153	210	183	385	363	457	443	286	258	451	433
13	165	154	213	197	387	363	468	453	297	263	459	450
14	204	169	222	213	399	373	468	454	300	268	469	459
15	224	199	238	222	399	385	468	450	300	279	480	469
16	198	180	243	229	420	391	475	463	352	276	474	469
17	179	168	246	237	429	402	481	473	341	317	475	468
18	168	166	256	244	425	396	485	469	341	311	485	473
19	170	163	281	250	428	400	487	472	349	307	480	471
20	172	165	277	245	419	406	485	470	296	258	478	465
21	177	169	257	213	431	415	482	469	296	141	482	467
22	186	171	272	256	440	415	479	465	268	227	487	477
23	188	179	265	208	441	420	471	127	272	213	491	483
24	191	184	242	202	467	428	235	120	314	143	494	488
25	200	190	251	236	483	426	293	234	322	117	492	359
26	212	200	243	226	457	409	312	286	332	128	418	345
27	222	167	241	230	474	396	309	300	339	245	345	309
28	175	130	247	241	441	405	311	278	344	260	310	284
29	181	160	253	246	536	416	284	255	---	---	311	294
30	179	166	272	251	549	424	287	258	---	---	327	313
31	---	---	279	267	---	---	256	246	---	---	---	---
MONTH	224	130	281	148	549	280	556	120	352	117	494	284
YEAR	556	105										

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	25.5	23.0	17.5	15.5	9.5	7.5	---	---	5.5	2.5	9.0	2.5
2	26.0	23.0	19.0	16.5	9.0	7.5	---	---	5.5	1.0	2.5	1.0
3	25.5	23.0	19.0	15.5	7.5	5.5	---	---	5.5	1.5	1.0	1.0
4	23.5	20.5	15.5	13.0	8.0	5.0	---	---	5.0	2.0	1.0	1.0
5	22.0	19.5	13.5	11.0	8.5	6.0	---	---	5.5	1.5	3.0	1.0
6	20.0	17.5	14.5	11.5	11.0	8.5	---	---	5.0	1.5	5.5	2.5
7	21.0	18.0	15.5	12.5	13.5	11.5	---	---	6.0	1.5	3.5	1.5
8	19.5	16.0	14.0	12.5	12.5	10.5	---	---	6.0	1.5	4.5	2.5
9	20.5	17.0	14.5	12.5	10.5	8.5	---	---	6.0	4.5	9.0	4.5
10	19.5	16.0	18.5	14.0	10.0	7.5	---	---	7.0	4.5	10.0	8.5
11	15.5	14.0	19.0	17.5	10.5	7.5	---	---	5.0	2.0	12.0	9.5
12	17.0	12.5	17.5	14.0	12.0	8.0	---	---	6.0	3.0	10.5	8.5
13	20.0	15.5	14.5	14.0	14.5	10.5	---	---	6.0	3.0	10.5	8.0
14	18.0	15.5	14.5	12.5	14.5	11.0	---	---	7.5	4.0	11.5	9.0
15	17.0	14.0	12.5	10.5	10.5	9.0	---	---	7.5	5.0	12.5	8.5
16	17.5	14.0	12.5	10.5	11.0	9.5	---	---	8.0	7.0	13.5	9.5
17	18.5	15.0	12.5	9.5	11.0	8.0	11.5	10.5	7.5	6.0	13.5	11.0
18	19.5	16.5	13.5	10.0	8.0	6.5	11.0	10.5	8.0	5.0	15.5	13.5
19	20.5	17.5	23.0	10.5	7.5	5.5	12.0	10.0	7.5	6.0	14.5	11.0
20	22.0	18.5	14.5	11.5	8.5	5.5	10.5	9.0	10.5	7.0	14.5	12.0
21	23.0	19.5	15.0	12.0	8.5	7.5	11.0	9.0	14.0	10.0	17.5	14.0
22	23.0	20.0	15.5	12.5	10.5	8.5	11.0	9.5	15.5	12.0	14.0	11.0
23	23.5	20.5	17.5	14.0	12.0	10.0	12.0	10.5	18.0	14.0	14.0	10.0
24	22.0	19.0	18.0	15.5	14.0	10.5	10.0	8.0	17.5	14.0	12.5	11.0
25	19.0	16.5	19.0	16.5	14.5	11.5	10.0	7.5	15.0	11.0	16.0	12.0
26	16.5	14.0	20.0	18.5	12.0	10.0	10.5	9.0	11.0	7.5	15.0	13.5
27	14.5	12.0	18.0	15.5	---	---	9.5	8.5	9.0	6.0	16.0	12.0
28	15.0	12.0	16.0	14.0	---	---	10.5	8.5	9.5	7.5	14.0	12.0
29	17.0	13.5	15.5	12.0	---	---	9.0	8.0	10.5	8.0	16.0	13.0
30	18.0	15.0	11.5	8.5	---	---	8.0	7.0	---	---	15.0	14.0
31	17.5	15.0	---	---	---	---	7.0	4.5	---	---	16.5	13.5
MONTH	26.0	12.0	23.0	8.5	14.5	5.0	12.0	4.5	18.0	1.0	17.5	1.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16.0	13.5	17.5	15.5	32.0	25.5	34.5	30.0	37.0	30.5	---	---
2	16.5	12.5	19.0	15.0	32.0	26.0	34.0	30.0	35.5	28.5	---	---
3	18.5	14.5	20.5	16.0	33.0	25.0	35.0	30.5	36.5	31.5	---	---
4	19.5	16.5	23.5	17.0	32.5	28.5	33.5	30.0	36.0	31.5	33.0	27.5
5	18.5	15.0	24.5	18.0	30.5	25.0	34.5	30.0	36.0	31.0	32.5	28.0
6	18.5	13.5	25.0	19.5	28.0	24.5	36.5	31.0	37.0	31.0	31.5	27.5
7	18.0	13.5	25.5	20.0	28.5	23.0	35.0	31.0	35.0	27.0	33.0	27.0
8	17.0	14.5	24.0	18.5	32.5	25.0	33.5	28.5	35.5	28.0	31.5	26.5
9	20.0	15.5	20.0	16.5	30.0	24.0	35.0	28.5	35.0	30.0	32.5	24.0
10	21.5	16.5	21.5	16.5	30.5	23.0	35.0	31.0	33.5	30.5	28.0	24.0
11	21.5	16.0	23.0	18.5	28.5	24.0	35.5	29.5	33.5	28.5	30.5	23.5
12	19.5	16.0	27.0	19.5	28.5	23.0	35.5	31.0	36.0	31.0	31.5	23.0
13	19.0	18.0	28.5	22.5	27.5	21.5	37.0	31.5	36.0	30.0	29.5	24.0
14	19.5	17.5	26.5	24.5	28.0	21.0	35.0	30.5	36.0	32.5	32.0	25.0
15	19.5	17.5	24.0	21.0	30.5	23.5	34.0	27.5	36.5	32.5	33.5	26.5
16	18.5	15.0	24.5	19.5	34.0	25.5	33.5	28.5	36.0	30.5	31.0	28.0
17	18.5	13.0	23.5	19.5	31.5	27.0	35.5	29.0	35.0	30.0	32.5	27.0
18	19.0	13.5	24.5	21.5	27.5	23.0	36.5	28.5	29.5	26.0	33.0	28.5
19	20.5	14.0	29.5	22.0	31.0	21.0	36.5	30.5	26.0	23.5	32.5	29.5
20	20.5	15.5	29.0	25.0	31.5	23.5	36.0	31.0	31.5	23.5	32.0	27.0
21	21.0	16.5	29.5	22.5	29.5	24.0	36.0	30.5	29.5	21.5	32.0	26.5
22	22.5	15.5	29.5	24.5	30.5	23.0	36.5	30.5	28.0	24.0	33.0	26.5
23	23.0	17.0	27.5	24.0	30.5	23.5	34.5	23.0	27.0	23.5	33.0	28.0
24	24.5	18.5	27.5	23.0	29.5	25.0	29.5	23.0	29.5	21.5	32.0	28.5
25	26.0	20.0	28.0	23.0	27.0	24.5	33.0	24.0	29.0	21.5	31.0	28.0
26	25.0	21.5	27.5	22.5	29.0	24.0	32.5	26.0	30.5	23.0	32.5	27.0
27	23.0	20.5	26.5	21.5	30.5	25.0	31.5	27.5	31.0	24.5	30.0	24.0
28	20.5	17.5	28.5	21.5	34.0	28.5	30.5	27.5	31.0	25.0	24.5	21.5
29	19.5	17.0	30.0	23.5	36.0	30.0	32.5	25.5	---	---	22.5	21.5
30	19.0	17.0	33.5	25.0	35.5	31.0	33.5	27.5	---	---	22.5	21.5
31	---	---	31.0	25.5	---	---	35.0	30.0	---	---	---	---
MONTH	26.0	12.5	33.5	15.0	36.0	21.0	37.0	23.0	37.0	21.5	33.5	21.5
YEAR	37.0	1.0										

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SEDIMENT, SUSPENDED (MG/L)
OCT		
01...	0950	17
03...	1138	15
05...	1255	8
08...	0720	6
13...	1120	8
18...	1015	8
21...	1800	9
24...	1815	12
27...	1050	10
NOV		
01...	0900	10
03...	1000	8
08...	0915	4
11...	0730	8
18...	1905	3
19...	1355	8
24...	1000	5
27...	1145	57
DEC		
01...	0825	7
04...	0945	6
06...	0735	3
11...	1030	6
15...	1220	8
19...	1345	5
24...	1120	22
27...	1035	5
29...	1600	4
JAN		
01...	1630	5
04...	1200	6
06...	1055	23
08...	1410	5
12...	0805	22
15...	1350	50
16...	1330	49
19...	1200	11
22...	1100	10
25...	1415	11
FEB		
05...	1420	6
12...	1235	11
19...	2100	12
21...	1700	13
26...	1515	9
29...	1225	12
MAR		
06...	1730	35
10...	0850	31
13...	1000	12
17...	1745	9
20...	1420	16
22...	1015	21
25...	1445	11
29...	1745	73
31...	1545	48
APR		
05...	1815	11
08...	1020	8
12...	0950	8
17...	0845	8
20...	1110	83
JUN		
18...	1545	20

02085070 ENO RIVER NEAR DURHAM, N. C.

LOCATION.--Lat 36°04'21", long 78°54'24", Durham County, Hydrologic unit 03020201, on right bank 275 ft (84 m) downstream from bridge on U.S. Highway 501, 0.2 mi (0.3 km) downstream from Crooked Creek, and 5 mi (8 km) north of Durham.

DRAINAGE AREA.--141 mi² (365 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water year 1955. August 1963 to current year.

REVISED RECORDS.--WRD N. C. 1972: 1968-71(M), 1971(P).

GAGE.--Water-stage recorder. Altitude of gage is 270 ft (82 m), from topographic map. Prior to Nov. 19, 1966, at site 275 ft (84 m) upstream at datum 2.35 ft (0.716 m) higher. Nov. 20, 1966 to Sept. 30, 1967 water-stage recorder and crest-stage gage at present site at datum 0.94 ft (0.287 m) higher.

REMARKS.--Records good. Some regulation during periods of low flow caused by mill 600 ft (183 m) upstream.

AVERAGE DISCHARGE.--17 years, 127 ft³/s (3.597 m³/s), 12.23 in/yr (311 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,620 ft³/s (272 m³/s) Apr. 26, 1978, gage height, 19.65 ft (5.989 m), minimum, 0.06 ft³/s (0.002 m³/s) Aug. 14, 15, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,300 ft³/s (65.1 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 11	1930	*3550	101	*11.48	3.499

Minimum discharge, 1.7 ft³/s (0.048 m³/s) Aug. 15, 16, 30; minimum gage height, 1.09 ft (0.332 m) Aug. 15, 16, Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	20	67	43	92	82	211	75	36	46	7.0	2.3
2	64	32	60	42	79	84	175	69	34	35	5.9	2.3
3	42	310	55	41	71	99	157	66	32	30	8.2	2.6
4	33	150	52	40	69	106	147	63	28	27	8.3	18
5	89	74	50	50	67	350	136	59	25	33	6.3	21
6	115	53	55	59	68	698	118	56	19	40	5.1	16
7	64	44	67	56	70	433	108	53	100	29	4.2	5.4
8	43	39	65	52	70	293	110	51	150	23	3.4	4.0
9	35	35	58	51	77	401	118	49	67	22	2.9	3.3
10	32	36	54	51	126	280	120	47	44	21	2.4	2.9
11	34	1840	49	98	146	209	106	44	35	30	2.4	2.7
12	35	1200	48	445	144	173	94	44	30	39	2.3	2.5
13	32	343	46	216	128	157	108	43	27	27	3.1	2.2
14	30	192	54	143	115	166	700	43	25	25	1.9	2.2
15	28	126	63	153	140	137	499	48	24	27	1.8	2.2
16	28	97	55	124	203	116	256	44	22	20	2.2	2.1
17	25	79	49	101	185	134	179	41	21	16	2.0	2.9
18	23	70	46	525	126	746	147	100	21	21	2.5	2.8
19	21	63	43	837	100	370	130	75	22	27	2.7	2.9
20	20	58	42	327	93	252	116	127	24	18	3.5	3.0
21	19	54	42	206	93	1310	107	502	22	15	3.4	5.6
22	18	51	41	175	94	594	100	244	18	12	3.3	6.4
23	18	49	41	492	86	312	93	122	17	34	3.3	4.8
24	22	49	43	338	90	274	84	87	15	34	3.3	4.2
25	23	49	62	210	87	896	78	80	54	33	3.2	4.0
26	24	768	68	162	174	440	82	76	188	23	2.6	3.7
27	21	257	57	134	161	281	80	59	245	16	2.2	3.4
28	20	133	49	120	117	224	79	48	130	14	1.9	3.8
29	20	98	46	107	96	393	76	43	74	12	1.8	2.9
30	21	78	44	94	---	312	79	41	57	11	1.8	5.2
31	20	---	44	93	---	262	---	39	---	8.3	2.1	---
TOTAL	1111	6447	1615	5585	3167	10584	4593	2538	1606	768.3	107.0	147.3
MEAN	35.8	215	52.1	180	109	341	153	81.9	53.5	24.8	3.45	4.91
MAX	115	1840	68	837	203	1310	700	502	245	46	8.3	21
MIN	18	20	41	40	67	82	76	39	15	8.3	1.8	2.1
CFSM	.25	1.53	.37	1.28	.77	2.42	1.09	.58	.38	.18	.02	.04
IN.	.29	1.70	.43	1.47	.84	2.79	1.21	.67	.42	.20	.03	.04

CAL YR 1979 TOTAL 62737.1 MEAN 172 MAX 4010 MIN 2.2 CFSM 1.22 IN 16.55
WTR YR 1980 TOTAL 38268.6 MEAN 105 MAX 1840 MIN 1.8 CFSM .75 IN 10.10

02085220 LITTLE RIVER NEAR ORANGE FACTORY, N. C.

LOCATION.--Lat 36°08'20", long 78°54'24", Durham County, Hydrologic Unit 03020201, on right bank 125 ft (38 m) upstream from bridge on U.S. Highway 501, 1 mi (1.6 km) upstream from Mountain Creek, and 1.2 mi (1.9 km) northwest of Orange Factory.

DRAINAGE AREA.--81.6 mi² (211 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1930, 1954-59, 1961. September 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 333.98 ft (101.797 m) National Vertical Datum of 1929 (levels by North Carolina State Highway Commission).

REMARKS.--Records good.

AVERAGE DISCHARGE.--19 years, 73.0 ft³/s (2.067 m³/s), 12.15 in/yr (309 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,070 ft³/s (257 m³/s) Oct. 25, 1971, gage height, 12.56 ft (3.828 m) from high-water mark in well; minimum, 0.01 ft³/s (<0.001 m³/s) Sept. 3-7, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--A field estimate of 0.03 ft³/s (<0.001 m³/s) was made on Sept. 18, 19, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s (45.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 11	1830	*2760	78.2	*6.42	1.957	May 20	2130	2050	58.1	5.45	1.661

Minimum discharge, 0.93 ft³/s (0.026 m³/s) Sept. 3, gage height, 0.61 ft (0.186 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	13	31	29	50	46	98	39	17	22	6.1	1.2
2	31	17	30	28	47	70	81	37	17	20	15	1.1
3	22	147	27	27	46	92	71	35	17	20	11	7.5
4	20	63	28	27	42	89	71	34	17	19	7.2	125
5	73	30	28	38	42	243	66	32	16	21	5.5	13
6	91	22	34	48	44	397	60	31	14	20	4.7	6.9
7	38	20	38	42	45	197	58	30	367	21	4.2	5.6
8	25	18	36	40	46	156	60	29	114	19	3.8	2.5
9	20	17	34	40	49	187	83	28	38	20	3.2	2.4
10	21	19	35	40	75	124	79	28	25	21	2.8	2.0
11	24	1500	31	96	87	96	61	27	21	23	2.7	1.8
12	23	786	26	304	92	73	56	26	19	21	2.4	1.7
13	20	159	28	120	77	68	176	25	18	22	2.4	1.5
14	19	89	57	86	73	75	868	27	17	15	2.4	1.4
15	18	57	40	100	114	61	291	29	17	9.9	3.1	1.3
16	17	41	36	72	167	51	134	27	18	10	2.4	1.5
17	16	31	35	54	119	54	92	24	18	9.3	2.6	1.8
18	14	28	31	484	75	431	76	37	18	15	2.3	1.7
19	14	26	28	536	58	157	64	35	18	13	3.0	2.0
20	14	25	28	164	51	112	58	238	18	9.1	5.4	3.0
21	13	23	27	110	51	735	53	483	18	7.9	4.8	5.0
22	13	23	26	95	50	230	49	78	19	7.5	4.9	7.5
23	15	23	27	313	49	128	45	41	18	16	4.0	6.5
24	19	23	28	166	46	123	42	31	18	44	3.3	5.0
25	16	22	39	111	47	632	38	31	236	15	2.9	4.5
26	16	530	42	85	71	181	38	28	705	9.9	2.5	4.3
27	16	137	35	76	73	122	39	23	176	7.8	2.1	4.0
28	15	67	31	68	56	93	41	22	68	7.1	1.8	4.5
29	16	48	29	55	49	194	41	18	38	6.7	1.4	6.0
30	17	35	30	49	---	138	46	18	28	6.6	1.3	8.0
31	14	---	30	53	---	120	---	17	---	6.1	1.2	---
TOTAL	751	4039	1005	3556	1891	5475	3035	1608	2148	484.9	122.4	240.2
MEAN	24.2	135	32.4	115	65.2	177	101	51.9	71.6	15.6	3.95	8.01
MAX	91	1500	57	536	167	735	868	483	705	44	15	125
MIN	13	13	26	27	42	46	38	17	14	6.1	1.2	1.1
CFSM	.30	1.65	.40	1.41	.80	2.17	1.24	.64	.88	.19	.05	.10
IN.	.34	1.84	.46	1.62	.86	2.50	1.38	.73	.98	.22	.06	.11

CAL YR 1979 TOTAL 40387.3 MEAN 111 MAX 2550 MIN 4.2 CFSM 1.36 IN 18.41
WTR YR 1980 TOTAL 24355.5 MEAN 66.5 MAX 1500 MIN 1.1 CFSM .82 IN 11.10

02085500 FLAT RIVER AT BAHAMA, N. C.

LOCATION.--Lat 36°10'57", long 78°52'44", Durham County, Hydrologic Unit 03020201, on right bank 0.5 mi (0.8 km) upstream from Lake Michie, 1.2 mi (1.9 km) upstream from bridge on Secondary Road 1616, 1.2 mi (1.9 km) north of Bahama, and 1.5 mi (2.4 km) upstream from Dial Creek.

DRAINAGE AREA.--150 mi² (388 km²).

PERIOD OF RECORD.--July 1925 to current year.

REVISED RECORDS.--WSP 1333: 1926, 1928(M), 1938, 1946.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 346.85 ft (105.720 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 22, 1925, nonrecording gage at same site at datum 0.58 ft (0.177 m) lower.

REMARKS.--Records good except those for period of no gage-height record, May 18 to June 17, which are poor. Prior to December 1962, some diurnal fluctuation and infrequent regulation at low flow caused by small mill 5 mi (8 km) upstream.

AVERAGE DISCHARGE.--55 years, 143 ft³/s (4.050 m³/s), 12.95 in/yr (329 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 20,000 ft³/s (566 m³/s) July 26, 1938 (gage height, not determined), computed on basis of records for nearby stations; minimum, 0.23 ft³/s (0.007 m³/s) Sept. 26, 28, 29, Oct. 1, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (127 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 11	2030	*5150	146	*7.25	2.210

Minimum discharge, 2.4 ft³/s (0.068 m³/s) Sept. 3, gage height, 0.87 ft (0.265 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	280	28	102	58	105	83	247	92	47	44	9.2	3.3
2	116	31	91	57	92	74	186	79	42	38	21	2.8
3	97	342	81	54	84	110	161	70	39	35	30	3.8
4	73	196	76	54	87	109	148	62	36	33	17	318
5	239	92	75	84	81	385	132	58	33	31	12	61
6	299	65	78	135	87	865	112	54	30	29	9.3	34
7	116	53	100	107	90	402	107	50	80	27	8.2	22
8	74	47	98	104	91	274	113	48	64	24	7.4	13
9	57	44	79	105	102	298	301	46	50	23	6.9	9.4
10	54	44	72	87	142	211	279	45	43	28	6.6	7.0
11	70	2200	70	154	168	172	159	44	37	30	6.3	5.7
12	64	1830	68	731	183	139	127	43	32	41	5.9	5.0
13	53	454	71	269	160	128	358	41	30	26	5.2	4.7
14	49	281	107	191	146	157	1240	41	28	19	5.2	4.3
15	46	195	93	229	213	131	695	42	26	15	4.9	4.2
16	42	151	77	165	309	109	298	39	24	13	4.5	3.8
17	38	123	73	132	224	108	204	37	22	13	4.1	4.0
18	36	105	67	808	147	962	166	70	22	22	4.0	4.3
19	35	94	64	1160	120	355	140	110	23	40	4.8	3.8
20	32	85	63	374	113	238	125	200	22	22	6.9	4.0
21	30	79	60	243	109	1200	114	1100	20	15	8.6	4.8
22	29	75	59	195	104	537	102	350	18	14	12	4.4
23	31	72	59	683	102	278	92	180	17	19	9.9	4.0
24	42	70	61	371	96	240	84	150	16	43	7.9	3.7
25	44	68	81	233	88	753	77	130	39	27	6.7	4.1
26	37	1490	97	179	104	324	78	120	964	18	5.9	4.5
27	32	436	73	151	120	229	79	90	251	14	5.2	5.5
28	30	221	64	133	101	190	93	70	90	12	4.5	4.1
29	29	158	60	118	91	382	86	60	59	11	4.2	3.8
30	29	121	59	108	---	301	98	55	49	10	3.9	5.2
31	29	---	59	109	---	257	---	50	---	9.4	3.6	---
TOTAL	2232	9250	2337	7581	3659	10001	6201	3626	2253	745.4	251.8	562.2
MEAN	72.0	308	75.4	245	126	323	207	117	75.1	24.0	8.12	18.7
MAX	299	2200	107	1160	309	1200	1240	1100	964	44	30	318
MIN	29	28	59	54	81	74	77	37	16	9.4	3.6	2.8
CFSM	.48	2.05	.50	1.63	.84	2.15	1.38	.78	.50	.16	.05	.13
IN.	.55	2.29	.58	1.88	.91	2.48	1.54	.90	.56	.18	.06	.14

CAL YR 1979 TOTAL 78305.7 MEAN 215 MAX 5090 MIN 7.2 CFSM 1.43 IN 19.42
WTR YR 1980 TOTAL 48699.4 MEAN 133 MAX 2200 MIN 2.8 CFSM .89 IN 12.08

02087000 NEUSE RIVER NEAR NORTHSIDE, N. C.

LOCATION.--Lat 36°02'54", long 78°44'59", Durham County, Hydrologic Unit 03020201, on right bank 25 ft (8 m) upstream from Fish Dam Bridge on Secondary Road 1801, 1.5 mi (2.4 km) downstream from Rocky Creek, 2.5 mi (4.0 km) downstream from Seaboard Coast Line Railroad bridge, 2.5 mi (4.0 km) south of Northside, 8.5 mi (13.7 km) downstream from confluence of Eno and Flat Rivers, and 9.5 mi (15.3 km) northeast of Durham.

DRAINAGE AREA.--526 mi² (1,362 km²).

PERIOD OF RECORD.--July 1927 to September 1980 (discontinued).

REVISED RECORDS.--WSP 822: Drainage area. WSP 1032: 1933(M), 1935-36, 1937(M), 1938-39, 1944(M). WSP 1333: 1928-31, 1933, 1934(M). WSP 1703: 1948.

GAGE.--Water-stage recorder. Datum of gage is 225.91 ft (68.857 m) National Geodetic Vertical Datum of 1929. Prior to June 2, 1928, nonrecording gage at site 10 ft (3 m) upstream at same datum. Mar. 25, 1949, to Sept. 28, 1950, auxiliary nonrecording gage, and Sept. 29, 1950, to Jan. 14, 1968, auxiliary water-stage recorder at bridge on U.S. Highway 15, 4 mi (6 km) upstream. Mar. 5, 1968 to Oct. 7, 1969, auxiliary water-stage recorder and Oct. 7, 1969, to June 30, 1977, nonrecording auxiliary gage on bridge on Secondary Road 1900, 3.7 mi (6.0 km) downstream.

REMARKS.--Records good except those for period of no gage-height record, Nov. 17 to Dec. 16, which are fair. Slight diurnal fluctuation caused by water plants above station. Flow regulated by Lake Michie (see p. 333). An average of 27.8 ft³/s (0.79 m³/s) was diverted from Flat River, an upstream tributary, for Durham municipal water supply, and an average of 2.3 ft³/s (0.065 m³/s) from Knap of Reeds Creek, an upstream tributary for Butner municipal water supply. Sewage effluent from Durham, about 13.0 ft³/s (0.37 m³/s) and Butner 2.7 ft³/s (0.076 m³/s) was returned to Neuse River 3 mi (5 km) upstream from station, the remainder, about 12.0 ft³/s (0.34 m³/s) was diverted into the Cape Fear River basin.

AVERAGE DISCHARGE.--53 years, 518 ft³/s (14.67 m³/s), 13.37 in/yr (340 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,600 ft³/s (1,040 m³/s) Sept. 18, 1945; maximum gage height, 31.02 ft (9.455 m) Sept. 18, 1945, from floodmark; minimum discharge, 3.1 ft³/s (0.088 m³/s) Sept. 30, 1932, gage height, 0.87 ft (0.265 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (127 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 13	0600	*8180	232	*20.32	6.194	May 22	1130	5290	150	17.49	5.331
Mar 22	1630	4600	130	16.62	5.066						

Maximum discharge, 12 ft³/s (0.34 m³/s) Sept. 29, 30; minimum gage height, 1.22 ft (0.372 m) Sept. 16, 17, 22, 23, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	550	51	400	164	375	334	847	233	192	187	35	21
2	536	52	340	157	333	327	731	249	177	181	36	19
3	285	706	300	155	306	343	630	233	108	163	70	26
4	191	806	270	174	272	425	563	198	105	145	58	150
5	309	380	250	189	284	965	529	209	100	138	41	151
6	666	249	270	199	310	2580	473	206	90	102	36	134
7	457	196	350	253	297	2830	433	199	333	82	32	74
8	269	179	320	257	322	1340	465	196	853	65	29	39
9	204	171	270	261	315	1080	403	189	363	67	28	31
10	159	173	240	229	544	939	606	161	213	64	27	24
11	197	1370	220	294	712	751	475	115	183	88	26	21
12	198	5640	230	1720	678	530	386	103	169	107	24	19
13	165	7730	240	1490	602	517	375	101	159	85	24	18
14	158	3860	230	765	537	605	1520	99	156	64	30	20
15	166	1800	260	653	570	506	3320	258	106	60	28	13
16	176	1000	250	590	846	414	2410	157	72	61	24	13
17	150	600	209	467	916	396	988	172	75	51	22	16
18	150	460	196	875	625	1870	577	419	71	98	20	39
19	140	400	204	3220	453	2580	487	324	68	91	39	24
20	133	350	196	3860	402	1090	435	305	56	77	43	18
21	70	310	161	1740	419	2480	400	2730	54	52	32	16
22	49	280	160	892	410	4330	356	5010	47	45	34	14
23	52	260	165	1730	362	2900	322	3430	40	105	32	16
24	126	250	160	2260	407	1280	296	961	39	159	30	22
25	77	250	228	1090	349	2150	280	2200	280	119	26	39
26	64	1000	249	783	534	2880	287	999	2440	87	28	19
27	56	3000	245	603	527	1370	279	349	3350	61	28	15
28	54	2200	204	550	461	838	308	253	1170	46	26	17
29	49	720	180	440	381	1260	263	216	325	43	25	12
30	51	500	168	375	---	1480	278	206	277	39	23	21
31	50	---	166	377	---	1070	---	200	---	37	21	---
TOTAL	5957	34943	7331	26812	13549	42460	19722	20680	11671	2769	977	1061
MEAN	192	1165	236	865	467	1370	657	667	389	89.3	31.5	35.4
MAX	666	7730	400	3860	916	4330	3320	5010	3350	187	70	151
MIN	49	51	160	155	272	327	263	99	39	37	20	12
CFSM	.37	2.22	.45	1.64	.89	2.61	1.25	1.27	.74	.17	.06	.07
IN.	.42	2.47	.52	1.90	.96	3.00	1.39	1.46	.83	.20	.07	.08

CAL YR 1979 TOTAL 277694 MEAN 761 MAX 15500 MIN 24 CFSM 1.45 IN 19.64
WTR YR 1980 TOTAL 187932 MEAN 513 MAX 7730 MIN 12 CFSM .98 IN 13.29

02087183 NEUSE RIVER NEAR FALLS, N. C.

LOCATION.--Lat 35°56'24", long 78°34'32", Wake County, Hydrologic Unit 03020201, on left bank, 0.3 mi (0.5 km) downstream from bridge on Secondary Road 2000, 0.4 mi (0.6 km) northeast of Falls, and 0.5 mi (0.8 km) downstream from Falls Dam (under construction).

DRAINAGE AREA.--770 mi² (1,994 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 182.62 ft (55.663 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge record good. Diversions for municipal water supply for cities of Durham and Butner (see sta 02087000). Since June 5, 1980, flows regulated by temporary storage in Falls Reservoir. The city of Raleigh diverted an average of 31.9 ft³/s (0.90 m³/s) 1.2 mi (1.9 km) upstream from station for municipal water supply, most of which was returned downstream as sewage effluent. Gage height telemeter at station.

AVERAGE DISCHARGE.--10 years, 852 ft³/s (24.13 m³/s), 15.03 in/yr (382 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft³/s (385 m³/s) July 17, 1975, gage height, 25.21 ft (7.684 m); minimum, 4.6 ft³/s (0.13 m³/s) Sept. 24, 1980, gage height, 2.13 ft (0.649 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1945 reached a stage of 216.1 ft (65.9 m) above mean sea level, discharge, 23,300 ft³/s (660 m³/s) at bridge 0.4 mi (0.6 km) upstream from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (113 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 14	1700	*6750	191	*18.01	5.489	May 23	1600	4210	119	13.87	4.228
Jan 21	0200	4150	118	13.75	4.191	June 27	2200	6060	172	17.09	5.209
Mar 23	1030	4640	132	14.70	4.481						

Minimum discharge, 4.6 ft³/s (0.13 m³/s) Sept. 24, gage height, 2.13 ft (0.649 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	764	87	524	239	513	478	1240	337	188	334	43	25
2	892	75	452	235	487	449	1000	295	175	315	47	11
3	625	891	403	214	432	439	845	303	151	340	63	20
4	358	1750	337	215	390	519	739	280	102	326	67	74
5	378	1020	329	274	368	995	680	242	80	319	72	132
6	677	547	345	295	408	2750	621	244	125	295	54	123
7	749	388	404	314	419	3620	557	221	149	258	40	105
8	449	300	464	340	421	3210	566	216	637	180	38	66
9	297	262	416	355	434	1840	545	204	590	115	37	30
10	245	257	344	371	613	1490	574	192	246	129	33	15
11	208	1230	316	395	964	1140	655	154	177	150	32	19
12	217	4820	328	1780	974	863	519	120	151	140	32	29
13	204	5850	331	2630	894	877	476	107	142	137	28	33
14	183	6630	315	1640	788	1130	1000	95	132	100	26	34
15	183	6220	353	959	769	851	3120	124	121	85	24	29
16	184	4460	365	830	1010	667	3700	257	91	65	21	17
17	180	1260	348	669	1230	579	2670	159	65	50	12	9.3
18	156	651	301	894	959	1440	976	453	36	97	24	9.6
19	154	543	282	3030	695	2950	681	706	41	99	30	15
20	153	501	275	3970	574	2570	572	389	49	95	27	23
21	140	461	259	4000	567	2840	507	1270	51	79	26	24
22	94	425	240	2170	562	4310	469	3240	48	58	24	19
23	69	397	243	2020	514	4600	414	4090	29	52	30	8.9
24	390	368	232	3000	521	3940	363	3140	40	65	25	5.2
25	306	344	287	2440	507	2510	340	2570	56	149	20	14
26	196	938	383	1300	584	3180	349	2700	1260	122	19	31
27	144	3020	351	908	724	2990	340	964	3100	95	14	25
28	118	3680	324	738	643	1550	353	531	3530	73	9.3	8.8
29	106	2300	288	646	552	1450	353	295	845	62	30	13
30	89	799	262	540	---	1940	346	168	397	53	56	19
31	76	---	238	513	---	1650	---	168	---	47	40	---
TOTAL	8984	50474	10339	37924	18516	59817	25570	24234	12804	4484	1043.3	986.8
MEAN	290	1682	334	1223	638	1930	852	782	427	145	33.7	32.9
MAX	892	6630	524	4000	1230	4600	3700	4090	3530	340	72	132
MIN	69	75	232	214	368	439	340	95	29	47	9.3	5.2
CFSM	.38	2.18	.43	1.59	.83	2.51	1.11	1.02	.56	.19	.04	.04
IN.	.43	2.44	.50	1.83	.89	2.89	1.24	1.17	.62	.22	.05	.05

CAL YR 1979 TOTAL 400847.0 MEAN 1098 MAX 12400 MIN 16 CFSM 1.43 IN 19.37
WTR YR 1980 TOTAL 255176.1 MEAN 697 MAX 6630 MIN 5.2 CFSM .91 IN 12.33

02087183 NEUSE RIVER NEAR FALLS, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954, 1961-1973, 1979 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1960 to September 1967, October 1978 to current year.
WATER TEMPERATURES: October 1953 to September 1954, November 1960 to September 1967, October 1978 to current year.

REMARKS.--Station is part of district's Primary Accounting Network used to define stream-quality characteristics of the State's major streams. Accidental spillage of sodium hydroxide occurred on July 8, 1980 at Raleigh Water Treatment Plant located approximately 0.9 mi (1.4 km) upstream. Daily records of specific conductance for period November 1960 to September 1964 are available in the district office in Raleigh, N. C. For water years 1954, 1961-73, data were published as Neuse River at Falls (station 02087182).

COOPERATION.--Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 355 micromhos Sept. 22, 1966; minimum daily, 37 micromhos Aug. 4, 1961.
WATER TEMPERATURES: Maximum daily, 32.0°C Aug. 7, 16, 1980; minimum daily, 0.0°C on many days during 1960-62.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 245 micromhos July 9; minimum daily, 55 micromhos May 22.
WATER TEMPERATURES: Maximum daily, 32.0°C Aug. 7, 16; minimum daily, 1.5°C Feb. 3, 5, 10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
JAN 02...	1325	237	98	6.2	6.5	35	12.4	26	0	6.4	2.5
APR 30...	0945	338	107	6.9	15.5	10	8.6	30	7	7.2	2.9
JUN 16...	1450	87	98	6.8	24.5	20	8.2	25	0	6.0	2.4
AUG 12...	1445	37	150	7.4	31.0	20	7.8	34	0	8.0	3.4
SEP 02...	1115	11	150	6.9	29.0	30	7.9	36	0	8.6	3.5

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JAN 02...	8.5	50	.7	2.1	35	0	29	35	7.8	7.8	.2
APR 30...	9.5	39	.8	2.1	28	0	23	5.6	7.5	8.5	.1
JUN 16...	8.3	40	.7	2.2	30	0	25	7.4	6.9	7.7	.2
AUG 12...	12	41	.9	3.2	50	0	*42	3.3	6.6	9.8	.3
SEP 02...	16	46	1.2	3.9	56	0	46	11	10	13	.4

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
JAN 02...	13	70	68	.10	44.8	.52	.03	.55	.35	17	.00
APR 30...	12	89	66	.12	81.2	.44	.04	.48	.54	--	.22
JUN 16...	13	84	66	.11	19.7	.86	.02	.88	.87	--	.04
AUG 12...	12	103	81	.14	10.3	.01	.00	.01	.02	--	.03
SEP 02...	10	93	93	.13	2.76	.19	.02	.21	.03	--	.07

* Lab alkalinity.

02087183 NEUSE RIVER NEAR FALLS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)
JAN 02...	.00	.00	.00	.90	.70	.90	.20	.70	500	1.5	6.4
APR 30...	.05	.27	.06	.43	.39	.65	.21	.44	--	1.1	5.0
JUN 16...	.03	.05	.04	.64	.59	.68	.06	.62	--	1.6	6.9
AUG 12...	.01	.04	.01	.49	.33	.52	.18	.34	--	.53	2.3
SEP 02...	.03	.08	.04	.44	.60	.51	.00	.63	--	.72	3.2

DATE	NITROGEN, TOT IN BOTTOM MATERIAL (MG/KG AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHOPHOSPHATE TOTAL (MG/L AS PO4)	PHOSPHORUS, TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHOPHOSPHATE TOTAL (MG/L AS P)	PHOSPHORUS, ORTHOPHOSPHATE DISSOL. (MG/L AS P)	PHOSPHORUS, ORTHOPHOSPHATE DISSOL. (MG/L AS PO4)	PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUSPENDED TOTAL (UG/L AS AS)
JAN 02...	517	.180	.18	.55	.150	.06	.09	.28	160	--	--
APR 30...	--	.180	.31	.55	.140	.10	.05	.15	--	2	0
JUN 16...	--	.210	.40	.64	.110	.13	.09	.28	--	4	0
AUG 12...	--	.260	.37	.80	.140	.12	.11	.34	--	--	--
SEP 02...	--	.200	.40	.61	.130	.13	.00	.00	--	1	0

DATE	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)
JAN 02...	--	1	--	--	--	<10	10	9	1	30
APR 30...	2	--	0	0	8	--	20	12	8	--
JUN 16...	4	--	0	0	0	--	10	3	7	--
AUG 12...	--	--	--	--	--	--	--	--	--	--
SEP 02...	1	--	0	0	0	--	20	18	2	--

DATE	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)
JAN 02...	--	--	--	10	1	0	3	<10	1100	820
APR 30...	0	0	2	--	8	1	7	--	1100	1100
JUN 16...	0	0	0	--	4	1	3	--	2300	2100
AUG 12...	--	--	--	--	--	--	--	--	--	--
SEP 02...	0	0	0	--	3	0	3	--	1400	1300

02087183 NEUSE RIVER NEAR FALLS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)
JAN										
02...	280	1300	1	1	0	<10	--	--	--	150
APR										
30...	0	--	2	2	0	--	170	170	0	--
JUN										
16...	240	--	6	6	0	--	280	90	190	--
AUG										
12...	--	--	--	--	--	--	--	--	--	--
SEP										
02...	120	--	0	0	4	--	340	310	30	--

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
JAN											
02...	--	--	--	.00	--	--	--	0	10	0	20
APR											
30...	<.1	.0	.1	--	0	0	0	--	10	10	0
JUN											
16...	.1	.0	<.1	--	0	0	0	--	20	10	8
AUG											
12...	--	--	--	--	--	--	--	--	--	--	--
SEP											
02...	.2	.1	.1	--	0	0	0	--	20	0	20

DATE	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	LENGTH OF EXPO-SURE (DAYS)
JAN										
02...	10	15	.6	.8	.0	.8	.00	--	--	--
APR										
30...	--	8.4	1.0	--	--	--	.00	--	--	--
JUN										
16...	--	10	1.0	--	--	--	.00	--	--	--
AUG										
12...	--	6.8	.8	--	--	--	.10	1.73	1.42	56
SEP										
02...	--	7.2	1.5	--	--	--	.10	11.3	9.76	20

02087183 NEUSE RIVER NEAR FALLS, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE	JAN 2,80		APR 30,80		JUN 16,80		AUG 12,80		SEP 2,80	
TIME	1325		0945		1450		1445		1115	
TOTAL CELLS/ML	2300		4400		6100		9000		14000	
DIVERSITY: DIVISION	1.7		1.5		1.7		1.6		1.4	
.CLASS	1.7		1.5		1.7		1.7		1.5	
..ORDER	2.4		1.6		2.1		2.5		2.0	
...FAMILY	3.1		2.0		2.5		3.5		2.6	
....GENUS	3.5		2.7		3.1		4.4		3.6	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...CHARACIACEAE										
....SCHROEDERIA	--	-	--	-	--	-	*	0	--	-
...COELASTRACEAE										
....COELASTRUM	--	-	--	-	--	-	370	4	--	-
...HYDRODICTYACEAE										
....PEDIASTRUM	--	-	--	-	--	-	370	4	350	3
...MICRACTINIACEAE										
....ACANTHOSPHAERA	--	-	--	-	--	-	--	-	*	0
....GOLENKINIA	--	-	--	-	120	2	47	1	--	-
....MICRACTINIUM	--	-	130	3	--	-	93	1	180	1
...OOCYSTACEAE										
....ANKISTRODESMUS	220	10	290	7	170	3	140	2	610	4
....CHLORELLA	--	-	45	1	49	1	--	-	--	-
....CHODATELLA	--	-	110	3	--	-	47	1	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	470	5	350	3
....KIRCHNERIELLA	55	2	180	4	240	4	93	1	1400	10
....OOCYSTIS	--	-	--	-	--	-	190	2	180	1
....SELENASTRUM	--	-	--	-	73	1	120	1	--	-
....TETRAEDRON	--	-	--	-	49	1	*	0	*	0
....TREUBARIA	--	-	--	-	49	1	--	-	--	-
...SCENEDESMACEAE										
....ACTINASTRUM	--	-	90	2	--	-	190	2	--	-
....CRUCIGENIA	130	6	90	2	780	13	370	4	700	5
....SCENEDESMUS	260	12	360	8	440	7	880	10	1200	9
....TETRASTRUM	--	-	--	-	97	2	280	3	180	1
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	77	3	--	-	460	8	260	3	*	0
...VOLVOCACEAE										
....PANDORINA	--	-	--	-	--	-	740	8	--	-
..ZYGNEMATALES										
...DESMIDIACEAE										
....COSMARIUM	--	-	--	-	--	-	--	-	180	1
....EUASTRUM	--	-	--	-	--	-	*	0	130	1
....STAURASTRUM	*	0	--	-	--	-	*	0	130	1

02087183 NEUSE RIVER NEAR FALLS, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	JAN 2,80 1325		APR 30,80 0945		JUN 16,80 1450		AUG 12,80 1445		SEP 2,80 1115	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...BIDDULPHIACEAE										
....BIDDULPHIA	--	-	--	-	--	-	--	-	88	1
...COSCINODISCACEAE										
....CYCLOTELLA	88	4	--	-	240	4	400	4	480	3
....MELOSIRA	110	5	200	5	460	8	--	-	--	-
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	*	0	--	-	--	-	--	-	--	-
....COCCONEIS	22	1	--	-	--	-	--	-	--	-
...FRAGILARIACEAE										
....ASTERIONELLA	--	-	90	2	--	-	--	-	--	-
....SYNEDRA	44	2	--	-	*	0	--	-	--	-
...GOMPHONEMATACEAE										
....GOMPHONEMA	*	0	--	-	--	-	*	0	*	0
...NAVICULACEAE										
....GYROSIGMA	--	-	--	-	--	-	--	-	88	1
....NAVICULA	120	5	--	-	--	-	--	-	--	-
...NITZSCHIACEAE										
....NITZSCHIA	560#	25	220	5	170	3	440	5	350	3
...SURIRELLACEAE										
....SURIRELLA	*	0	--	-	--	-	--	-	--	-
.CHRYSOPHYCEAE										
..CHRYSOMONADALES										
...OCHROMONADACEAE										
....OCHROMONAS	--	-	--	-	*	0	--	-	--	-
.XANTHOPHYCEAE										
..HETEROCOCCALES										
...CENTRITRACTACEAE										
....CENTRITRACTUS	--	-	--	-	--	-	--	-	260	2
...CHLOROTHECIACEAE										
....OPHIOCYTIUM	--	-	--	-	--	-	330	4	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
.CRYPTOPHYCEAE										
..CRYPTOMONADALES										
...CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	--	-	*	0	140	2	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....AGMENELLUM	--	-	--	-	--	-	--	-	1800	13
....ANACYSTIS	170	7	2200#	51	2500#	40	700	8	4300#	31
....COCCOCHLORIS	--	-	270	6	--	-	--	-	--	-
..HORMOGONALES										
...NOSTOCACEAE										
....ANABAENA	--	-	--	-	--	-	280	3	--	-
....ANABAENOPSIS	--	-	--	-	--	-	--	-	700	5
...OSCILLATORIACEAE										
....LYNGBYA	--	-	--	-	--	-	840	9	--	-
....OSCILLATORIA	--	-	--	-	--	-	930	10	--	-
....SCHIZOTHRIX	300	13	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	*	0	67	2	49	1	70	1	*	0
....TRACHELOMONAS	44	2	22	1	120	2	93	1	*	0
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..PERIDINIALES										
...GLENODINIACEAE										
....GLENODINIUM	--	-	--	-	*	0	--	-	88	1

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02087183 NEUSE RIVER NEAR FALLS, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	117	80	102	87	85	78	95	96	86	137	175
2	100	117	86	102	91	84	78	108	98	90	130	158
3	83	103	90	102	108	85	88	96	98	120	134	153
4	84	117	86	102	96	86	82	99	96	98	166	146
5	85	91	90	102	94	93	84	98	98	104	152	148
6	89	94	94	111	99	84	89	100	98	100	140	139
7	99	89	90	107	100	71	84	106	108	106	150	216
8	88	89	97	121	97	71	83	99	108	106	160	184
9	92	94	99	102	106	77	89	103	78	245	159	167
10	92	98	92	102	102	79	84	99	78	112	158	160
11	94	62	92	102	102	80	90	99	78	110	150	148
12	94	59	97	82	102	90	84	98	84	120	140	135
13	96	65	94	83	100	78	89	99	92	94	135	121
14	98	63	112	79	94	78	83	98	98	123	134	122
15	100	60	102	80	91	86	66	122	98	139	135	132
16	96	68	122	83	92	86	69	113	96	147	138	122
17	102	76	102	84	90	84	77	127	100	147	140	122
18	105	80	102	87	84	80	80	107	100	127	142	118
19	98	84	100	71	84	74	80	89	123	121	148	118
20	96	80	102	67	84	80	83	95	110	122	162	130
21	100	81	102	73	87	71	84	91	122	134	170	131
22	100	79	102	73	87	83	90	55	120	160	157	126
23	103	86	102	72	90	66	88	62	129	158	144	147
24	98	90	112	73	91	74	90	74	144	159	152	147
25	94	90	105	73	92	73	94	73	133	159	158	158
26	104	73	102	77	91	89	91	57	108	150	171	164
27	103	64	128	79	117	73	94	69	61	162	176	174
28	103	72	101	83	97	78	113	77	71	161	178	179
29	100	76	102	83	93	77	95	82	86	163	177	179
30	104	77	100	84	---	77	108	86	84	136	189	178
31	111	---	102	86	---	74	---	93	---	150	176	---
MEAN	96	83	100	88	95	78	86	93	100	133	153	150

WTR YR 1980 MEAN 105 MAX 245 MIN 55

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	14.0	8.0	6.0	3.5	6.0	12.0	14.5	22.5	25.0	30.0	28.5
2	21.0	14.0	6.5	6.0	2.5	5.0	15.0	15.0	23.0	24.0	29.0	28.0
3	20.5	15.0	6.0	5.0	1.5	3.5	15.0	15.5	23.0	27.5	30.0	29.0
4	19.5	14.0	5.5	4.5	2.5	2.0	17.0	16.5	25.0	25.5	30.0	27.5
5	19.0	12.5	5.0	5.0	1.5	3.0	15.0	17.0	25.0	28.5	30.5	28.0
6	17.0	11.0	5.5	4.5	2.0	4.0	15.0	18.0	23.5	26.5	31.5	28.5
7	19.0	11.5	7.0	4.0	2.0	5.0	14.0	19.0	22.5	27.0	32.0	27.0
8	17.0	10.0	7.5	4.0	3.0	7.0	15.0	18.0	23.5	26.5	31.0	27.0
9	16.0	10.5	6.0	5.0	3.0	6.0	16.0	18.0	22.5	27.0	30.5	26.5
10	16.0	13.0	6.0	5.0	1.5	9.5	16.0	16.5	22.5	26.5	29.5	26.5
11	15.0	10.0	6.5	5.5	3.0	9.0	16.0	17.0	21.5	27.0	30.0	25.0
12	15.0	8.0	6.5	7.5	4.0	6.5	16.0	18.0	21.5	28.0	30.5	25.5
13	14.5	12.0	7.5	6.0	4.0	7.0	16.0	20.0	22.0	27.0	31.0	27.0
14	14.0	11.5	8.5	5.5	4.0	6.0	17.0	20.0	22.0	27.0	30.0	26.0
15	14.0	10.5	8.5	6.5	4.5	7.5	16.0	20.0	21.5	28.5	31.0	26.0
16	13.0	10.0	8.0	7.0	5.5	8.0	14.0	20.0	24.0	29.5	32.0	26.0
17	12.5	10.0	8.0	7.0	4.0	10.0	12.5	19.0	23.5	30.0	26.0	26.0
18	13.0	10.5	5.0	7.0	4.0	11.0	14.0	19.0	23.0	29.0	27.0	25.0
19	14.0	11.0	6.5	6.5	4.5	10.0	14.5	19.0	24.5	29.0	27.5	27.0
20	15.0	11.0	4.5	6.5	6.0	10.5	15.0	20.0	23.0	28.5	28.0	25.5
21	18.0	11.0	5.0	7.5	6.5	12.0	16.0	20.0	24.0	29.5	28.0	25.0
22	17.0	11.5	5.0	7.5	8.5	11.0	16.0	20.0	22.0	30.5	26.5	25.0
23	17.5	12.0	6.0	7.5	9.5	10.5	17.5	20.5	24.0	29.5	28.0	27.0
24	16.0	13.0	7.5	6.5	9.5	10.5	18.0	20.5	24.5	29.0	25.0	28.0
25	14.5	13.0	8.0	6.5	10.5	11.5	19.0	19.5	22.5	28.0	26.5	27.0
26	13.5	15.0	8.5	6.5	9.0	10.5	18.0	19.5	21.0	28.5	26.0	26.0
27	12.5	14.0	8.5	6.5	7.5	11.0	18.0	19.0	21.0	28.0	26.0	21.0
28	12.0	13.0	7.0	6.5	7.5	11.0	18.0	20.0	24.5	27.5	26.0	23.5
29	13.0	11.5	6.5	6.5	6.5	11.5	17.0	22.0	23.0	28.5	25.5	26.5
30	13.0	10.0	5.5	6.0	---	12.0	15.5	21.5	25.5	28.5	28.0	21.0
31	14.0	---	6.5	4.0	---	12.5	---	24.0	---	29.0	27.0	---
MEAN	15.5	12.0	6.5	6.0	5.0	8.5	16.0	19.0	23.0	28.0	28.5	26.0

WTR YR 1980 MEAN 16.0 MAX 32.0 MIN 1.5

02087183 NEUSE RIVER NEAR FALLS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JAN					
02...	1325	237	12	7.7	67
APR					
30...	0945	338	27	25	--
JUN					
16...	1450	87	25	5.9	82
AUG					
12...	1445	37	23	2.3	89
SEP					
02...	1115	14	49	1.5	98

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	PH LAB (UNITS)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	LAB ALKA-LINITY (MG/L AS CACO3)
OCT											
22...	1140	95	--	6.9	--	19.0	9.2	26	1.1	40	26
NOV											
09...	0820	272	--	--	6.6	11.5	10.8	18	.4	70	26
DEC											
10...	1653	336	100	--	6.6	8.0	10.8	23	.8	30	27
JAN											
16...	1430	839	79	--	7.0	12.0	11.0	22	2.4	220	15
FEB											
04...	0920	375	94	--	6.7	.5	14.8	16	.9	40	21
MAR											
27...	1540	2880	62	--	6.6	14.0	10.2	27	1.4	1200	14
APR											
01...	1250	1240	70	--	6.9	18.5	9.2	20	1.6	60	17
MAY											
19...	1550	653	90	--	6.9	20.0	8.2	26	2.4	400	22
JUN											
05...	1410	38	110	--	7.2	28.0	6.2	39	3.1	--	31
JUL											
10...	1230	172	75	--	7.6	27.0	7.6	24	3.1	30	36
AUG											
06...	1317	60	100	--	8.3	34.0	5.8	27	6.3	<10	36
SEP											
16...	1920	22	145	--	7.3	25.0	6.5	20	1.8	60	37

02087500 NEUSE RIVER NEAR CLAYTON, N. C.

LOCATION.--Lat 35°38'50", long 78°24'21", Johnston County, Hydrologic Unit 03020201, on left bank at downstream side of bridge on State Highway 42, 2.3 mi (3.7 km) upstream from Mill Creek, and 3 mi (5 km) east of Clayton.

DRAINAGE AREA.--1,140 mi² (2,953 km²), approximately.

PERIOD OF RECORD.--July 1927 to current year.

REVISED RECORDS.--WSP 822: Drainage area. WSP 1032: 1930, 1935(M). WSP 1333: 1935. WSP 1503: 1949.

GAGE.--Water-stage recorder. Datum of gage is 128.41 ft (39.139 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 18, 1942, at site 1,100 ft (335 m) upstream at same datum.

REMARKS.--Records excellent. Diversions for municipal water supply for cities of Durham and Butner (see sta 02087000). The city of Raleigh diverted from Swift Creek (see p. 333), a downstream tributary, an average of 5.5 ft³/s (0.16 m³/s), and from the Neuse River upstream from station an average of 39.0 ft³/s (1.10 m³/s), most of which was returned as sewage effluent upstream from station.

AVERAGE DISCHARGE.--53 years, 1,183 ft³/s (33.50 m³/s), 14.09 in/yr (358 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,900 ft³/s (649 m³/s) Sept. 19, 1945, gage height, 22.12 ft (6.742 m); minimum, 44 ft³/s (1.25 m³/s) Sept. 15, 1932, gage height, 0.28 ft (0.085 m), site then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 23, 1919, reached a stage of 21.15 ft (6.447 m), from floodmark at former site, discharge, 21,200 ft³/s (600 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6480 ft³/s (184 m³/s) Nov. 16, gage height, 10.32 ft (3.146 m), no peak above base of 7,100 ft³/s (201 m³/s); minimum, 63 ft³/s (1.78 m³/s) Aug. 30, gage height, 0.81 ft (0.247 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1670	248	1160	477	972	913	2270	674	431	723	132	111
2	1300	327	904	478	908	858	1800	626	399	512	190	105
3	1330	2660	789	460	820	862	1550	577	374	391	164	99
4	898	3260	688	443	755	929	1390	576	337	374	165	238
5	736	2180	619	541	691	1530	1250	528	273	399	156	199
6	1230	1290	636	585	702	3600	1150	493	249	344	161	257
7	1150	864	807	559	766	4180	1040	476	318	302	144	244
8	924	671	782	591	760	4170	1000	458	395	259	129	185
9	618	575	767	670	781	3590	1040	450	987	262	125	152
10	484	528	674	695	1240	2480	958	430	690	264	116	114
11	449	962	606	702	1690	2110	1070	413	422	257	111	100
12	412	4710	578	2100	1710	1720	996	375	342	237	113	89
13	412	6150	594	3000	1590	1910	898	340	313	219	131	84
14	462	5890	612	2830	1420	3130	1340	324	300	219	115	93
15	408	6270	580	1840	1340	2050	3390	332	283	211	108	95
16	384	6390	602	1400	1450	1510	3820	378	269	187	101	96
17	377	4870	608	1230	1760	1260	3910	456	239	161	91	93
18	367	1460	565	1280	1680	2460	2540	1370	224	297	83	183
19	339	994	529	3480	1330	3390	1340	1820	260	296	86	126
20	331	846	513	4010	1100	3610	1100	1170	231	236	107	98
21	327	781	501	4200	1040	4090	950	1020	215	213	120	93
22	314	707	481	4030	1040	5540	877	2400	190	194	111	97
23	290	665	467	3350	988	5070	801	3400	180	270	116	101
24	285	618	477	3960	1000	5010	715	3960	174	286	108	96
25	613	596	609	3590	980	4540	651	3130	232	205	104	118
26	477	2160	641	2620	1110	3440	623	2980	1850	259	98	109
27	373	3710	642	1760	1320	3640	658	2420	2820	223	89	94
28	321	3800	587	1450	1210	3120	1040	1090	3520	198	84	96
29	298	3810	544	1260	1070	2560	757	731	3030	179	80	95
30	284	2180	514	1080	---	2800	696	507	1080	164	74	118
31	266	---	509	973	---	2800	---	445	---	143	89	---
TOTAL	18129	70172	19585	55644	33223	88872	41620	34349	20627	8484	3601	3778
MEAN	585	2339	632	1795	1146	2867	1387	1108	688	274	116	126
MAX	1670	6390	1160	4200	1760	5540	3910	3960	3520	723	190	257
MIN	266	248	467	443	691	858	623	324	174	143	74	84
CFSM	.51	2.05	.55	1.58	1.01	2.52	1.22	.97	.60	.24	.10	.11
IN.	.59	2.29	.64	1.82	1.08	2.90	1.36	1.12	.67	.28	.12	.12

CAL YR 1979 TOTAL 590256 MEAN 1617 MAX 13900 MIN 114 CFSM 1.42 IN 19.26
WTR YR 1980 TOTAL 398084 MEAN 1088 MAX 6390 MIN 74 CFSM .95 IN 12.99

02087570 NEUSE RIVER AT SMITHFIELD, N. C.

LOCATION.--Lat 35°30'46", long 78°21'00", Johnston County, Hydrologic Unit 03020201, on left bank 10 ft (3 m) downstream from bridge on U.S. Highway 70, at Smithfield, 2.1 mi (3.4 km) upstream from Swift Creek and 177.6 mi (285.8 km) upstream from mouth.

DRAINAGE AREA.--1,200 mi² (3,110 km²), approximately.

PERIOD OF RECORD.--October 1959 to current year. Prior to October 1970 medium and high water discharges only. Gage height records at different datum collected at this site since July 1911 are contained in reports of the National Weather Service, NOAA, U.S. Department of Commerce.

GAGE.--Water-stage recorder. Datum of gage is 99.26 ft (30.254 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 21, 1971, nonrecording gage on upstream side of bridge near center of span at same datum.

REMARKS.--Records good. Diversions for municipal water supply for cities of Durham and Butner (see sta 0208700). The city of Raleigh diverted from Swift Creek (see p. 333), a downstream tributary, an average of 5.5 ft³/s (0.16 m³/s), and from Neuse River upstream from station an average of 39.0 ft³/s (1.10 m³/s), most of which was returned as sewage effluent upstream from station. The city of Smithfield diverted an average of 3.8 ft³/s (0.11 m³/s) 0.2 mi (0.3 km) upstream from station for municipal water supply, most of which was returned downstream as sewage effluent.

AVERAGE DISCHARGE.--8 years, 1,416 ft³/s (40.10 m³/s), 16.02 in/yr (407 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,300 ft³/s (433 m³/s) Feb. 5, 1973, Mar. 21, 1975, gage height, 23.65 ft (7.209 m); minimum, 61 ft³/s (1.73 m³/s) July 29, 1977, gage height, 2.47 ft (0.753 m); minimum gage height observed, 2.38 ft (0.725 m) Sept. 26, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1908 reached a stage of 27.1 ft (8.26 m), discharge, 19,900 ft³/s (564 m³/s) July 24, 1919, 26.8 ft (8.17 m), discharge, 19,400 ft³/s (549 m³/s); Oct. 3, 1929, 26.4 ft (8.05 m), discharge, 18,700 ft³/s (530 m³/s); Sept. 20, 1945, 25.9 ft (7.89 m), discharge, 17,900 ft³/s (507 m³/s), from stage information furnished by National Weather Service and Corps of Engineers, and discharges determined from ratings developed since 1959.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 16	1700	*7730	219	*17.82	5.432	Mar 23	1030	6240	177	16.55	5.044

Minimum discharge, 66 ft³/s (1.87 m³/s) Aug. 31, gage height, 2.64 ft (0.805 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1840	225	1740	608	1050	1070	2500	785	518	950	142	99
2	1540	231	1000	587	1000	993	2000	756	489	691	154	104
3	1410	1670	900	589	950	964	1700	681	449	494	193	112
4	1160	3580	860	551	918	1050	1500	658	419	435	160	199
5	752	2900	800	610	862	1450	1400	626	344	464	155	267
6	1210	1800	805	731	841	3050	1300	568	292	415	156	224
7	1230	1100	1020	688	907	4420	1230	548	322	358	148	300
8	1120	856	997	721	926	4800	1160	517	406	310	134	205
9	770	690	971	893	934	4600	1180	504	871	267	128	172
10	572	617	882	928	1380	3000	1140	487	937	305	123	132
11	498	962	783	878	1910	2200	1130	461	569	278	113	108
12	448	3220	741	1700	1990	1700	1190	423	422	271	111	102
13	439	5270	742	3000	1840	1500	1060	376	364	243	122	91
14	467	5800	776	3190	1630	3000	1410	345	341	231	122	93
15	471	6040	740	2000	1480	2300	2850	329	326	231	113	98
16	413	6690	745	1300	1490	1600	3980	349	298	211	105	100
17	393	6620	751	1080	1760	1200	4310	468	282	187	90	97
18	385	4200	724	1030	1830	2470	3940	772	262	195	83	145
19	359	1800	670	2700	1520	3600	2200	2000	273	385	126	162
20	336	1040	647	4020	1260	3990	1350	1440	267	265	154	110
21	332	948	633	4380	1150	4340	1140	1060	246	233	120	98
22	317	863	614	4560	1160	5420	1030	1800	226	212	112	95
23	287	794	592	3300	1140	6180	960	2870	207	198	111	102
24	303	747	592	3600	1130	6000	870	3470	198	369	113	101
25	476	699	695	3500	1110	5600	784	3480	206	240	107	146
26	582	1660	808	3100	1190	4200	737	2700	1160	244	104	135
27	425	3820	796	2000	1380	3600	736	2400	2530	252	93	107
28	339	4360	732	1500	1360	3200	1140	1390	2990	216	85	96
29	292	4710	684	1300	1210	2680	987	954	3400	198	78	103
30	271	3300	658	1200	---	2700	859	691	1500	179	74	119
31	253	---	637	1100	---	3000	---	558	---	159	71	---
TOTAL	19690	77212	24735	57344	37308	95877	47773	34466	21114	9686	3700	4022
MEAN	635	2574	798	1850	1286	3093	1592	1112	704	312	119	134
MAX	1840	6690	1740	4560	1990	6180	4310	3480	3400	950	193	300
MIN	253	225	592	551	841	964	736	329	198	159	71	91
CFSM	.53	2.15	.67	1.54	1.07	2.58	1.33	.93	.59	.26	.10	.11
IN.	.61	2.39	.77	1.78	1.16	2.97	1.48	1.07	.65	.30	.11	.12

CAL YR 1979 TOTAL 669391 MEAN 1834 MAX 14300 MIN 124 CFSM 1.53 IN 20.75
WTR YR 1980 TOTAL 432927 MEAN 1183 MAX 6690 MIN 71 CFSM .99 IN 13.42

02088000 MIDDLE CREEK NEAR CLAYTON, N. C.

LOCATION.--35°34'12", long 78°35'30", Johnston County, Hydrologic Unit 03020201, on right bank 300 ft (91 m) downstream from bridge on State Highway 50, 0.5 mi (0.8 km) upstream from Buffalo Branch, 3.7 mi (6.0 km) downstream from Wake-Johnston County line, and 9.5 mi (15.3 km) southwest of Clayton.

DRAINAGE AREA.--80.7 mi² (209 km²).

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for October 1939, published in WSP 1303.

REVISED RECORDS.--WSP 952: 1940(M), 1941. WSP 1233: 1943(M), 1945, 1949.

GAGE.--Water-stage recorder. Datum of gage is 184.53 ft (56.245 m) National Geodetic Vertical Datum of 1929. Nov. 1-20, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good except those for period of no gage-height record, July 13 to Aug. 14, which are poor.

AVERAGE DISCHARGE.--41 years, 92.3 ft³/s (2.614 m³/s), 15.53 in/yr (394 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,510 ft³/s (241 m³/s) Feb. 3, 1973, gage height, 13.42 ft (4.090 m), result of dam failure; no flow Oct. 11-13, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 4	0900	735	20.8	7.18	2.188	Nov 27	1100	*750	21.2	*7.25	2.210
Nov 13	0800	744	21.1	7.22	2.201						

Minimum discharge, 0.88 ft³/s (0.025 m³/s) Aug. 29; minimum gage height, 1.50 ft (0.457 m) June 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	133	99	97	62	97	82	184	69	18	32	7.0	1.5
2	78	115	89	60	94	82	139	59	17	24	10	.93
3	53	319	79	59	87	100	122	52	16	21	9.0	2.5
4	41	671	76	56	84	113	116	48	15	20	8.0	3.5
5	49	406	74	66	80	170	106	42	14	32	7.0	3.9
6	119	114	81	78	85	336	92	37	12	31	6.2	18
7	66	87	139	68	91	397	86	34	84	23	5.2	9.1
8	44	75	112	70	95	253	88	31	99	18	4.5	2.1
9	35	68	84	103	97	197	92	30	53	18	4.0	2.4
10	32	64	74	110	204	164	88	28	32	20	3.5	2.7
11	30	146	71	99	227	135	78	26	23	35	3.0	2.8
12	32	421	69	234	166	120	72	25	18	29	4.0	2.4
13	33	688	68	198	137	192	77	24	16	20	6.0	2.7
14	38	404	73	121	119	316	224	22	15	27	5.5	2.5
15	43	157	70	121	113	222	444	21	14	17	5.1	2.6
16	37	115	66	103	112	131	389	19	13	19	4.5	2.8
17	35	96	65	90	110	113	138	19	12	23	5.4	4.5
18	33	87	59	111	94	278	106	90	13	18	5.9	33
19	32	79	57	298	87	395	93	197	18	15	8.5	6.3
20	31	71	57	255	86	226	85	76	17	10	9.8	1.5
21	34	66	55	136	87	326	77	74	14	9.0	9.0	1.4
22	36	64	54	113	86	527	71	58	13	25	7.6	1.9
23	52	61	56	250	86	445	64	41	12	15	6.6	3.4
24	73	60	57	356	107	190	57	36	11	10	5.9	5.2
25	67	58	99	228	100	247	52	34	29	8.0	3.9	7.8
26	56	326	106	141	124	211	49	54	222	7.0	2.7	9.0
27	51	682	82	131	129	151	49	45	196	6.6	1.6	7.7
28	49	489	71	140	103	129	207	32	82	6.0	1.2	6.0
29	51	166	66	119	92	246	123	23	49	5.4	1.1	6.7
30	68	116	64	105	---	270	84	22	36	5.0	1.4	12
31	81	---	71	100	---	246	---	19	---	4.5	1.5	---
TOTAL	1612	6370	2341	4181	3179	7010	3652	1387	1183	553.5	164.6	168.83
MEAN	52.0	212	75.5	135	110	226	122	44.7	39.4	17.9	5.31	5.63
MAX	133	688	139	356	227	527	444	197	222	35	10	33
MIN	30	58	54	56	80	82	49	19	11	4.5	1.1	.93
CFSM	.64	2.63	.94	1.67	1.36	2.80	1.51	.55	.49	.22	.07	.07
IN.	.74	2.94	1.08	1.93	1.47	3.23	1.68	.64	.55	.26	.08	.08

CAL YR 1979 TOTAL 43137.20 MEAN 118 MAX 1230 MIN 4.7 CFSM 1.46 IN 19.88
WTR YR 1980 TOTAL 31801.93 MEAN 86.9 MAX 688 MIN .93 CFSM 1.08 IN 14.66

02088315 BEAVERDAM CREEK NEAR GRANTHAM, N. C.

LOCATION.--Lat 35°17'08", long 78°15'17", Wayne County, Hydrologic Unit 03020201, on right bank at upstream side of culvert on U.S. Highway 13, 0.6 mi (1.0 km) upstream from Falling Creek, and 5.3 mi (8.5 km) west of Grantham.

DRAINAGE AREA.--4.84 mi² (12.54 km²).

PERIOD OF RECORD.--April 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 220 ft (67 m) from toporgraphic map.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 417 of this report. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 163 ft³/s (4.62 m³/s) June 26, 1980, gage height, 7.59 ft (2.313 m); no flow at times, most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 40 ft³/s (1.13 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 12	0045	52	1.47	5.94	1.811	Apr 14	2015	58	1.64	6.06	1.847
Mar 18	1245	53	1.50	5.96	1.817	June 26	2015	*163	4.62	*7.59	2.313

No flow Aug. 18 to Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	2.5	6.4	4.1	6.0	5.5	10	5.4	.75	2.0	.20	.00
2	11	2.6	6.0	3.9	5.3	5.7	9.0	4.4	.60	1.7	1.6	.00
3	6.7	12	5.6	3.7	4.8	6.4	8.4	3.8	.42	1.6	.50	.00
4	5.0	11	5.5	4.0	4.7	7.0	8.1	3.3	.34	4.1	.20	1.2
5	6.1	5.1	10	5.6	4.6	13	7.5	2.9	.20	4.2	.08	.30
6	5.6	4.5	13	4.2	4.9	30	7.1	2.5	.18	2.1	.04	4.2
7	4.3	4.1	11	3.8	5.2	26	6.5	2.3	1.3	1.4	.03	1.5
8	3.6	3.9	7.3	6.9	5.6	18	6.0	2.3	.85	1.1	.03	.50
9	3.3	3.8	6.1	14	6.7	13	5.3	2.4	.34	1.3	.90	.14
10	3.2	3.7	5.7	12	25	10	4.5	2.1	.20	1.8	.20	.08
11	3.4	15	5.5	9.8	22	8.3	3.8	2.0	.23	4.4	.09	.09
12	3.2	40	5.2	13	15	6.8	3.6	1.9	.12	1.8	.05	.06
13	2.8	22	7.4	8.8	12	23	5.1	1.7	.10	1.1	.10	.05
14	5.0	13	15	7.8	10	21	24	1.7	.09	.80	.07	.04
15	3.6	9.5	8.8	7.6	10	12	29	1.7	.08	.42	.02	.04
16	3.1	8.0	7.3	6.6	9.5	8.6	14	1.6	.04	.26	.02	.03
17	2.8	6.9	6.5	6.0	8.3	7.5	9.7	1.5	.09	.14	.01	.04
18	2.6	6.2	5.7	8.4	6.8	36	8.3	3.2	3.6	.34	.00	.75
19	2.4	5.8	5.5	13	6.3	24	7.2	2.7	2.3	.20	.00	.95
20	2.3	5.5	5.2	8.6	6.2	15	6.4	4.5	1.4	.11	.00	1.8
21	2.2	5.2	4.9	7.0	6.4	18	5.8	10	.85	.08	.00	1.1
22	2.1	5.0	4.9	6.6	5.8	15	5.4	2.6	.46	.06	.00	.50
23	2.4	5.0	4.8	13	6.0	9.7	4.7	2.5	.23	3.0	.00	.18
24	3.8	4.9	4.7	11	13	8.4	4.0	2.4	.16	4.6	.00	.10
25	3.2	4.9	7.1	8.1	7.8	8.7	3.6	2.3	2.0	1.6	.00	7.2
26	2.9	22	5.4	6.8	11	6.7	3.4	2.4	20	.80	.00	6.3
27	2.7	21	4.6	8.0	8.0	6.0	3.6	1.7	39	.60	.00	2.0
28	2.7	11	4.4	8.0	6.9	8.0	11	1.4	6.8	.75	.00	1.4
29	2.7	8.5	4.3	6.6	5.9	25	6.9	1.3	3.9	.50	.00	2.1
30	2.6	7.1	4.2	5.9	---	15	8.8	1.0	2.8	.26	.00	4.2
31	2.5	---	4.2	6.3	---	12	---	.90	---	.12	.00	---
TOTAL	131.8	279.7	202.2	239.1	249.7	429.3	240.7	82.40	89.43	43.24	4.14	36.85
MEAN	4.25	9.32	6.52	7.71	8.61	13.8	8.02	2.66	2.98	1.39	.13	1.23
MAX	22	40	15	14	25	36	29	10	39	4.6	1.6	7.2
MIN	2.1	2.5	4.2	3.7	4.6	5.5	3.4	.90	.04	.06	.00	.00
CFSM	.88	1.93	1.35	1.59	1.78	2.85	1.66	.55	.62	.29	.03	.25
IN.	1.01	2.15	1.55	1.84	1.92	3.30	1.85	.63	.69	.33	.03	.28

CAL YR 1979 TOTAL 2285.61 MEAN 6.26 MAX 76 MIN .00 CFSM 1.29 IN 17.56
WTR YR 1980 TOTAL 2028.56 MEAN 5.54 MAX 40 MIN .00 CFSM 1.15 IN 15.59

02088470 LITTLE RIVER NEAR KENLY, N. C.

LOCATION.--Lat 35°35'18", long 78°11'12", Johnston County, Hydrologic Unit 03020201, near left bank on downstream side of bridge on Secondary Road 1934, 0.7 mi (1.1 km) downstream from Buffalo Creek, and 3.7 mi (6.0 km) west of Kenly.

DRAINAGE AREA.--190 mi² (492 km²), approximately.

PERIOD OF RECORD.--July 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 129.24 ft (39.392 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some diurnal fluctuation and some regulation during periods of low flow caused by mill 10 mi (16 km) upstream.

AVERAGE DISCHARGE.--16 years, 189 ft³/s (5.352 m³/s), 13.51 in/yr (343 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,030 ft³/s (142 m³/s) Oct. 6, 1964, gage height, 16.30 ft (4.968 m); minimum, 0.18 ft³/s (0.005 m³/s) Oct, 4, 5, 6, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 821 ft³/s (23.3 m³/s) Nov. 13, gage height, 10.40 ft (3.170 m); no peak above base of 1,000 ft³/s (28.3 m³/s); minimum discharge, 1.7 ft³/s (0.048 m³/s) Sept. 1, 2, gage height, 2.75 ft (0.838 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	210	23	467	128	243	203	578	206	45	100	11	1.8
2	169	23	322	118	216	180	466	147	38	87	11	3.2
3	134	191	240	108	184	164	380	122	32	64	10	4.8
4	118	512	201	101	173	212	315	105	28	47	9.6	5.5
5	86	516	184	143	160	340	267	91	23	39	8.9	5.7
6	82	537	188	169	169	582	226	79	21	91	8.3	9.7
7	78	438	289	158	177	732	202	69	19	61	6.9	8.7
8	81	314	301	160	192	705	193	62	19	48	7.4	9.0
9	87	199	259	241	207	618	186	59	18	32	5.9	8.5
10	62	133	231	264	357	515	181	56	16	26	6.8	7.8
11	45	228	207	220	443	424	166	51	15	38	5.9	7.2
12	38	667	181	348	402	350	149	49	13	55	6.7	6.1
13	34	782	168	368	367	390	146	46	12	41	5.8	4.9
14	39	719	172	310	324	537	324	43	11	28	5.3	4.3
15	43	662	166	304	295	540	634	42	11	20	5.0	4.1
16	43	553	158	292	281	523	544	39	10	16	4.5	3.8
17	37	414	152	246	273	472	398	37	9.5	13	4.2	3.5
18	33	299	139	241	251	644	315	58	9.6	14	4.6	3.5
19	29	223	128	405	234	792	250	347	10	14	4.9	8.7
20	26	174	123	415	226	737	197	563	11	20	4.4	15
21	24	151	118	396	224	698	171	473	13	26	4.0	11
22	24	143	114	380	218	752	152	384	12	18	3.5	8.3
23	24	124	114	427	220	680	135	242	10	14	3.4	6.9
24	39	112	114	494	252	602	118	170	8.9	16	3.0	7.0
25	59	103	145	484	266	578	103	120	9.6	30	2.8	8.1
26	42	301	180	462	274	482	91	134	34	37	2.5	7.6
27	30	622	172	421	306	386	85	123	231	27	2.3	8.3
28	26	711	157	398	277	327	220	92	323	18	2.2	7.2
29	26	752	140	335	239	513	340	72	253	14	2.1	7.4
30	25	661	126	276	---	603	292	58	188	13	1.9	8.7
31	23	---	128	248	---	640	---	50	---	11	1.8	---
TOTAL	1816	11287	5784	9060	7450	15921	7824	4189	1453.6	1078	166.6	206.3
MEAN	58.6	376	187	292	257	514	261	135	48.5	34.8	5.37	6.88
MAX	210	782	467	494	443	792	634	563	323	100	11	15
MIN	23	23	114	101	160	164	85	37	8.9	11	1.8	1.8
CFSM	.31	1.98	.98	1.54	1.35	2.71	1.37	.71	.26	.18	.03	.04
IN.	.36	2.21	1.13	1.77	1.46	3.12	1.53	.82	.28	.21	.03	.04

CAL YR 1979 TOTAL 107964.2 MEAN 296 MAX 2900 MIN 4.1 CFSM 1.56 IN 21.14
WTR YR 1980 TOTAL 66235.5 MEAN 181 MAX 792 MIN 1.8 CFSM .95 IN 12.97

02088500 LITTLE RIVER NEAR PRINCETON, N. C.

LOCATION.--Lat 35°30'40", long 78°09'36", Johnston County, Hydrologic Unit 03020201, on left bank 600 ft (183 m) downstream from bridge on Secondary Road 2320, 0.8 mi (1.3 km) upstream from Little Creek, and 3 mi (5 km) north of Princeton.

DRAINAGE AREA.--229 mi² (593 km²).

PERIOD OF RECORD.--February 1930 to current year. Monthly discharge only for some periods, published in WSP 1303.

REVISED RECORD.--WSP 822: Drainage area. WSP 1233: 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 107.75 ft (32.842 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 17, 1934, nonrecording gage at same site and datum.

REMARKS.--Records good except those for period of no gage-height record, June 6 to Aug. 14, which are fair. Slight diurnal fluctuation and occasional regulation for short periods, caused by mills above station.

AVERAGE DISCHARGE.--50 years, 253 ft³/s (7.165 m³/s), 15.00 in/yr (381 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,150 ft³/s (202 m³/s) Oct. 6, 1964, gage height, 13.94 ft (4.249 m); minimum, 0.95 ft³/s (0.027 m³/s) Sept. 3, 4, 5, 1980, gage height, 0.86 ft (0.262 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1919 reached a stage of 14.57 ft (4.441 m); September 1924, 14.90 ft (4.542 m); September 1928, 13.3 ft (4.054 m); October 1929, 13.47 ft (4.106 m); from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar 19	1600	*1250	35.4	*7.15	2.179

Minimum discharge, 0.95 ft³/s (0.027 m³/s) Sept. 3, 4, 5, gage height, 0.86 ft (0.262 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	238	43	611	136	326	263	894	317	60	100	12	1.2
2	201	43	410	130	293	236	676	179	53	85	12	1.2
3	143	88	289	123	249	200	518	141	46	70	11	1.0
4	127	485	226	118	231	261	418	123	41	60	10	1.2
5	112	587	199	144	219	443	353	110	36	50	9.5	.95
6	103	574	198	192	216	828	285	99	30	100	9.0	17
7	95	526	317	179	235	1110	244	90	28	85	8.5	3.8
8	94	374	374	176	260	1110	228	83	27	65	8.0	2.8
9	98	253	319	305	281	921	220	78	26	50	8.0	2.7
10	90	160	265	395	491	746	211	75	24	30	7.0	3.0
11	74	212	234	321	693	592	193	70	21	40	6.8	3.0
12	65	777	202	413	638	485	173	67	16	60	7.0	2.7
13	60	1120	185	504	546	496	175	64	8.2	50	6.0	2.4
14	63	1040	203	418	473	711	432	61	9.1	40	5.2	2.4
15	66	863	191	376	418	739	869	57	9.7	30	5.0	1.8
16	68	697	176	369	391	662	880	55	9.6	20	4.6	1.3
17	64	522	167	316	374	608	562	52	9.3	14	4.2	1.3
18	59	367	153	297	339	947	413	53	10	15	4.2	1.3
19	55	257	141	514	308	1220	311	222	11	15	6.4	1.1
20	51	188	134	582	292	1130	230	555	11	22	4.6	1.2
21	48	152	130	510	294	983	184	568	13	30	3.8	1.3
22	46	140	126	477	293	1000	162	455	16	25	3.4	1.7
23	45	126	126	547	286	941	143	296	14	18	2.8	2.2
24	48	116	126	666	315	772	128	181	13	20	2.8	2.2
25	70	108	145	638	348	759	116	131	14	30	2.6	3.9
26	71	302	190	583	350	674	106	117	34	40	2.3	3.6
27	58	739	189	549	399	517	104	130	150	42	2.1	2.7
28	50	924	167	557	366	423	201	106	400	30	1.9	3.6
29	47	925	151	480	314	694	441	89	420	23	1.7	3.7
30	46	829	137	384	---	941	451	76	220	24	1.4	6.8
31	44	---	134	332	---	1000	---	66	---	23	1.3	---
TOTAL	2499	13537	6615	11731	10238	22412	10321	4766	1779.9	1306	175.1	85.05
MEAN	80.6	451	213	378	353	723	344	154	59.3	42.1	5.65	2.84
MAX	238	1120	611	666	693	1220	894	568	420	100	12	17
MIN	44	43	126	118	216	200	104	52	8.2	14	1.3	.95
CFSM	.35	1.97	.93	1.65	1.54	3.16	1.50	.67	.26	.18	.03	.01
IN.	.41	2.20	1.07	1.91	1.66	3.64	1.68	.77	.29	.21	.03	.01

CAL YR 1979 TOTAL 135830.10 MEAN 372 MAX 2910 MIN 4.2 CFSM 1.62 IN 22.06
WTR YR 1980 TOTAL 85465.05 MEAN 234 MAX 1220 MIN .95 CFSM 1.02 IN 13.88

02089000 NEUSE RIVER NEAR GOLDSBORO, N. C.

LOCATION.--Lat 35°20'14", long 77°59'51", Wayne County, Hydrologic Unit 03020202, on left bank at downstream side of bridge on Secondary Road 1915, 0.2 mi (0.3 km) upstream from Stony Creek, 1.5 mi (2.4 km) downstream from Seaboard Coast Line Railroad bridge, 3.2 mi (5.1 km) south of Wayne County courthouse in Goldsboro, 4.3 mi (6.9 km) downstream from Little River, and 135 mi (217 km) upstream from mouth.

DRAINAGE AREA.--2,390 mi² (6,190 km²), approximately.

PERIOD OF RECORD.--February 1930 to current year.

REVISED RECORDS.--WSP 822: Drainage area. WSP 1333: 1931, 1935.

GAGE.--Water-stage recorder. Datum of gage is 42.95 ft (13.091 m) National Geodetic Vertical Datum of 1929. Prior to July 24, 1931, nonrecording gage at railroad bridge, 1.5 mi (2.4 km) upstream at datum 2.00 ft (0.610 m) higher. July 24, 1931, to Aug. 31, 1948, water-stage recorder at site 2.3 mi (3.7 km) upstream at datum 1.71 ft (0.521 m) higher than present datum.

REMARKS.--Records good. Diversions for municipal water supply for cities of Durham and Butner (see sta 02087000). National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--50 years, 2,523 ft³/s (71.45 m³/s), 14.34 in/yr (364 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,700 ft³/s (869 m³/s) Sept. 23, 1945; maximum gage height, 26.72 ft (8.144 m) Sept. 23, 1945, site and datum then in use; minimum discharge, 76 ft³/s (2.15 m³/s) Sept. 26, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of June 1866 and July 1919, reached stages of about 29 ft (8.8 m) and 28 ft (8.5 m), respectively, at site 2.3 mi (3.7 km) upstream at present datum, from flood profiles of Corps of Engineers. Flood of Oct. 5, 1929, reached a stage of 27.3 ft (8.32 m) at railroad bridge at present datum, discharge, 38,600 ft³/s (1,090 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,400 ft³/s (238 m³/s) Mar. 31, gage height, 17.02 ft (5.188 m); minimum, 98 ft³/s (2.78 m³/s) Sept. 2, 3, gage height, 2.10 ft (0.640 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2300	710	5900	1200	3310	2780	8380	3180	875	3160	281	111
2	3440	820	6200	1200	2860	2490	8230	2670	728	1740	328	107
3	3910	1200	6140	1400	2600	2210	7930	2120	711	1050	291	143
4	3600	2000	4590	1500	2370	2100	7360	1740	657	829	253	218
5	3020	2800	2740	1700	2160	2500	6020	1500	613	661	264	152
6	2200	3300	2130	1900	2040	3780	4540	1330	567	595	236	366
7	1950	3500	2080	2150	1990	4990	3360	1190	509	577	229	340
8	2040	2570	2320	2400	2060	5630	2900	1070	473	525	214	299
9	1930	1490	2540	2800	2210	6280	2570	993	500	508	215	324
10	1620	1250	2450	3100	2770	6780	2420	931	764	430	214	280
11	1400	2260	2240	3500	3570	7110	2330	883	1020	408	195	236
12	1300	3630	2020	3800	4440	7170	2180	838	815	427	190	187
13	1250	4390	1850	4000	4920	7120	2160	786	603	426	182	153
14	1200	5110	2000	4200	4930	6760	2310	732	500	427	180	137
15	1150	5700	2070	4400	4560	6160	3800	664	454	387	204	121
16	1100	6240	2000	4640	4000	5850	4710	638	422	373	217	111
17	1050	6730	1890	4660	3570	5740	5440	616	407	399	196	114
18	1000	7210	1820	4200	3430	6110	5760	655	435	353	165	128
19	960	7640	1710	3530	3430	6240	5790	781	425	308	275	124
20	900	7890	1580	3760	3260	6480	5790	2030	413	322	352	155
21	840	7740	1500	4370	2870	6930	5430	2650	421	382	178	261
22	800	5810	1400	4760	2570	7270	3340	2290	395	337	205	236
23	760	3210	1300	5300	2510	7410	2290	2350	366	360	171	185
24	730	2100	1300	5700	2530	7470	1940	2910	338	393	158	170
25	720	1860	1500	6180	2570	7540	1690	3160	365	349	151	479
26	720	2200	1650	6430	2770	7650	1490	3370	617	447	155	284
27	780	3190	1600	6540	2870	7830	1340	3550	1360	400	149	311
28	860	4410	1500	6570	3030	7930	2660	3600	2240	355	145	307
29	760	4940	1400	6460	3050	8160	3370	3020	2890	368	136	262
30	740	5470	1300	5530	---	8220	3430	1650	3250	313	125	340
31	700	---	1250	4100	---	8370	---	1130	---	294	120	---
TOTAL	45730	117370	71970	121980	89250	189060	120960	55027	24133	17903	6374	6641
MEAN	1475	3912	2322	3935	3078	6099	4032	1775	804	578	206	221
MAX	3910	7890	6200	6570	4930	8370	8380	3600	3250	3160	352	479
MIN	700	710	1250	1200	1990	2100	1340	616	338	294	120	107
CFSM	.62	1.64	.97	1.65	1.29	2.55	1.69	.74	.34	.24	.09	.09
IN.	.71	1.83	1.12	1.90	1.39	2.94	1.88	.86	.38	.28	.10	.10

CAL YR 1979 TOTAL 1242082 MEAN 3403 MAX 18100 MIN 195 CFSM 1.42 IN 19.33
WTR YR 1980 TOTAL 866398 MEAN 2367 MAX 8380 MIN 107 CFSM .99 IN 13.49

02089216 DAILEYS CREEK NEAR LIDDELL, N. C.

LOCATION.--Lat 35°12'30", long 77°48'32", Lenoir County, Hydrologic Unit 0320202, on left bank at downstream side of culvert on State Highway 55, 2.0 mi (3.2 km) upstream from mouth and 2.5 mi (4.0 km) north of Liddell.

DRAINAGE AREA.--3.81 mi² (9.87 km²).

PERIOD OF RECORD.--April 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 65 ft (20 m) from topographic map.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 417 of this report. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 170 ft³/s (481 m³/s) July 25, 1978, gage height, 5.49 ft (1.673 m); minimum, 0.56 ft³/s (0.016 m³/s) July 14, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 35 ft³/s (0.99 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar 18	0700	*100	2.83	*5.14	1.567	May 25	2145	68	1.93	4.92	1.500
Mar 29	0630	70	1.98	4.94	1.506	Sept 25	1000	64	1.81	4.88	1.487
Apr 13	2345	51	1.44	4.76	1.451						

Minimum discharge, 0.60 ft³/s (0.017 m³/s) Sept. 12, 13; minimum gage height, 3.25 ft (0.991 m) Aug. 15, 16, 17, Sept. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	2.2	3.2	2.5	3.6	4.9	12	8.3	4.7	1.2	1.2	.85
2	5.3	2.3	3.0	2.3	3.4	5.5	11	7.3	4.3	1.2	1.4	.79
3	4.0	3.8	3.2	2.2	3.5	7.2	9.9	6.7	4.0	1.4	1.2	1.6
4	3.5	3.0	3.2	2.7	3.5	8.1	9.5	6.1	3.6	2.9	1.3	3.4
5	3.7	2.8	3.3	3.6	3.6	11	8.1	5.5	3.2	2.3	1.1	1.5
6	3.3	2.8	10	2.5	4.5	19	7.5	5.1	3.1	1.6	1.0	3.9
7	2.9	2.8	8.3	2.3	5.1	19	7.2	4.7	3.5	1.5	1.0	1.5
8	2.8	2.8	3.8	4.0	5.1	18	7.1	4.8	3.2	1.4	1.0	1.2
9	2.8	3.0	3.4	4.9	6.5	12	7.0	4.8	2.6	2.0	1.2	1.0
10	3.0	3.3	3.4	3.4	16	9.1	6.3	4.4	2.5	2.0	1.0	.94
11	3.3	15	3.2	3.8	8.1	7.8	5.9	4.2	2.5	2.7	.99	.92
12	3.0	11	3.0	4.6	7.1	7.3	5.7	3.9	2.3	1.6	.94	.77
13	2.5	4.5	5.6	3.7	6.4	21	13	3.5	2.2	1.4	1.1	1.0
14	2.9	3.7	5.7	4.3	6.3	11	26	3.5	2.1	1.2	.94	1.6
15	2.5	3.6	3.5	4.0	6.1	7.5	12	3.4	2.0	1.1	.83	1.1
16	2.3	3.5	3.5	3.1	6.4	7.9	8.3	3.2	1.8	1.1	.79	.94
17	2.1	3.4	3.2	2.9	5.7	7.3	7.2	3.1	2.2	1.0	.79	1.0
18	2.0	3.4	3.2	3.7	5.0	42	6.7	9.6	6.3	1.1	.88	1.0
19	1.9	3.5	3.3	4.2	5.1	16	6.2	7.9	3.8	.99	2.0	1.7
20	1.9	3.5	3.2	3.2	5.0	12	5.9	5.9	2.5	.99	1.9	1.4
21	1.8	3.7	3.1	2.9	5.4	12	5.5	6.6	2.1	.94	1.2	1.1
22	1.8	3.6	3.2	3.0	4.8	10	5.0	5.9	1.9	.94	1.3	1.0
23	2.9	3.9	3.2	5.9	5.7	9.0	4.5	13	1.8	2.6	1.1	.87
24	7.2	3.8	3.2	3.7	14	9.0	4.3	10	1.8	3.5	.91	.84
25	2.5	4.0	5.6	3.1	6.6	12	4.1	21	5.0	1.8	.87	20
26	2.3	14	3.2	2.9	7.7	8.5	3.8	21	6.4	1.4	.86	6.2
27	2.3	5.0	2.9	5.1	5.9	7.7	4.5	8.9	5.1	1.9	.84	2.0
28	2.2	3.7	2.8	3.7	5.4	8.8	18	7.2	2.5	2.1	.86	1.7
29	2.1	3.4	2.7	3.4	4.6	38	10	6.5	1.7	2.1	.86	3.5
30	2.2	3.2	2.7	3.2	---	25	13	5.7	1.4	1.5	.86	9.3
31	2.2	---	2.7	4.5	---	20	---	5.2	---	1.2	.87	---
TOTAL	92.3	132.2	117.5	109.3	176.1	413.6	255.2	216.9	92.1	50.66	33.09	74.62
MEAN	2.98	4.41	3.79	3.53	6.07	13.3	8.51	7.00	3.07	1.63	1.07	2.49
MAX	7.2	15	10	5.9	16	42	26	21	6.4	3.5	2.0	20
MIN	1.8	2.2	2.7	2.2	3.4	4.9	3.8	3.1	1.4	.94	.79	.77
CFSM	.78	1.16	1.00	.93	1.59	3.49	2.23	1.84	.81	.43	.28	.65
IN.	.90	1.29	1.15	1.07	1.72	4.04	2.49	2.12	.90	.49	.32	.73

CAL YR 1979 TOTAL 1678.85 MEAN 4.60 MAX 42 MIN .83 CFSM 1.21 IN 16.39
WTR YR 1980 TOTAL 1763.57 MEAN 4.82 MAX 42 MIN .77 CFSM 1.27 IN 17.21

02089222 BEAR CREEK NEAR PARKSTOWN, N. C.

LOCATION.--Lat 35°22'22", long 77°48'10", Greene County, Hydrologic Unit 03020203 on left bank at upstream side of culvert on Secondary Road 1136, 0.9 mi (1.4 km) east of Parkstown and 1.7 mi (2.7 km) upstream from mouth.

DRAINAGE AREA.--12.6 mi² (32.6 km²).

PERIOD OF RECORD.--March 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 80 ft (25 m) from topographic map.

REMARKS.--Records good. Suspended-sediment records for the period March to September 1978 and the current year are published on page 417 of this report. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72 ft³/s (2.04 m³/s) Sept. 6, 1979, gage height, 7.36 ft (2.243 m); no flow July 8, 9, 26-31, Aug. 1-7, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 48 ft³/s (1.36 m³/s) Oct. 2, gage height, 5.08 ft (1.548 m); no flow July 8, 9, 26-31, Aug. 1-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	1.0	4.4	2.4	6.4	5.2	17	5.0	.54	.68	.00	.14
2	46	1.0	3.9	2.3	5.3	6.1	11	3.7	.47	.45	.00	.16
3	28	2.7	3.3	2.2	4.6	6.2	8.7	2.0	.37	6.5	.00	.14
4	13	4.5	3.1	2.3	4.4	6.0	7.6	2.3	.30	7.9	.00	.19
5	8.3	2.7	3.0	4.2	4.1	9.6	6.4	2.3	.22	5.3	.00	.24
6	6.5	2.0	4.2	4.0	4.9	38	5.0	2.4	.19	3.0	.00	.27
7	4.9	1.7	7.0	3.3	5.4	45	4.5	1.7	.16	.10	.00	.24
8	3.5	1.5	6.0	4.6	5.5	34	4.3	1.2	.14	.00	.01	.27
9	2.8	1.4	4.5	11	6.2	22	4.5	.99	.08	.00	.02	.30
10	2.4	1.5	3.9	12	20	15	4.0	.77	.03	2.7	.02	.33
11	2.2	6.2	3.7	9.8	22	12	3.6	.73	.02	4.3	.01	.33
12	2.1	19	3.8	18	17	8.9	3.1	.68	.02	2.7	.01	.31
13	2.3	11	3.8	14	14	20	5.0	.61	.02	1.8	.01	.26
14	3.5	7.6	6.9	10	12	25	10	.61	.02	1.2	.01	.25
15	2.8	5.3	5.8	9.9	12	16	12	.57	.01	.83	.01	.23
16	2.3	4.2	4.9	9.2	12	12	7.8	.45	.01	.56	.01	.18
17	2.1	3.4	4.4	7.2	10	8.9	5.5	.41	.01	.37	.02	.19
18	1.9	3.0	3.6	7.9	8.3	39	4.3	.53	.02	.24	.02	.19
19	1.7	2.5	3.2	14	7.0	37	3.3	.74	.02	.14	.02	.19
20	1.6	2.2	3.0	11	6.5	18	2.7	.99	.02	.05	.11	.19
21	1.5	2.1	2.8	8.1	6.2	14	2.6	2.7	.02	.02	.11	.16
22	1.4	2.0	2.7	6.9	5.9	11	2.5	1.8	.02	.01	.11	.14
23	1.4	1.9	2.7	11	5.6	8.4	2.1	19	.01	.46	.11	.13
24	1.5	1.9	2.7	13	6.4	7.3	1.8	14	.01	2.6	.14	.33
25	1.4	1.9	4.8	9.4	6.1	7.3	1.7	5.5	.11	1.3	.14	.50
26	1.3	15	4.4	7.4	7.6	6.1	1.6	4.1	13	.00	.11	.64
27	1.1	17	3.5	7.6	7.1	5.3	1.7	2.6	9.2	.00	.14	.68
28	1.1	10	2.9	8.6	6.0	5.4	7.3	1.7	3.5	.00	.14	.64
29	1.1	7.3	2.5	7.5	5.4	24	5.9	1.2	1.5	.00	.14	.61
30	1.0	5.5	2.5	6.4	---	24	7.1	.90	.95	.00	.14	.73
31	.99	---	2.5	7.0	---	28	---	.68	---	.00	.14	---
TOTAL	183.69	149.0	120.4	252.2	243.9	524.7	164.6	82.86	30.99	43.21	1.70	9.16
MEAN	5.93	4.97	3.88	8.14	8.41	16.9	5.49	2.67	1.03	1.39	.055	.31
MAX	46	19	7.0	18	22	45	17	19	13	7.9	.14	.73
MIN	.99	1.0	2.5	2.2	4.1	5.2	1.6	.41	.01	.00	.00	.13
CFSM	.47	.39	.31	.65	.67	1.34	.44	.21	.08	.11	.004	.03
IN.	.54	.44	.36	.74	.72	1.55	.49	.24	.09	.13	.01	.03

CAL YR 1979 TOTAL 2628.57 MEAN 7.20 MAX 69 MIN .01 CFSM .57 IN 7.76
WTR YR 1980 TOTAL 1806.41 MEAN 4.94 MAX 46 MIN .00 CFSM .39 IN 5.33

02089500 NEUSE RIVER AT KINSTON, N. C.

LOCATION.--Lat 35°15'29", long 77°35'09", Lenoir County, Hydrologic Unit 03020202, on left bank at Kinston, 600 ft (183 m) downstream from bridge on State Highway 11, and 90 mi (145 km) upstream from mouth.

DRAINAGE AREA.--2,690 mi² (6,970 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1930 to current year.

REVISED RECORDS.--WSP 822: Drainage area. WSP 1333: 1931-32.

GAGE.--Water-stage recorder. Datum of gage is 10.90 ft (3.322 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 25, 1934, nonrecording gage at highway bridge 1 mi (1.6 km) downstream at datum 0.80 ft (0.244 m) lower.

REMARKS.--Water-discharge record excellent. Diversions for municipal water supply for cities of Durham and Butner (see sta 02087000).

AVERAGE DISCHARGE.--50 years, 2,896 ft³/s (82.01 m³/s), 14.62 in/yr (371 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,000 ft³/s (736 m³/s) Oct. 13, 1964; maximum gage height, 22.86 ft (6.968 m) Oct. 13, 1964; minimum discharge, 124 ft³/s (3.51 m³/s) Sept. 26, 1932, gage height, 1.29 ft (0.393 m), site and datum then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1919 reached a stage of 25.0 ft (7.62 m), present site and datum, discharge, about 39,000 ft³/s (1,100 m³/s), from information by North Carolina State Highway Commission. Flood in October 1924 reached a stage of 24.7 ft (7.53 m), present site and datum, discharge, 36,000 ft³/s (1,020 m³/s), from information by North Carolina State Highway Commission. Flood of Sept. 25-26, 1928, reached a stage of 24.2 ft (7.38 m), present site and datum, discharge, 34,000 ft³/s (963 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,870 ft³/s (280 m³/s) Apr. 1, gage height, 15.98 ft (4.871 m); minimum, 185 ft³/s (5.24 m³/s) Sept. 3, gage height, 2.37 ft (0.722 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3170	832	4730	1900	6500	3440	9790	3700	1910	2940	474	203
2	3540	792	5210	1820	5380	3420	9590	3780	1390	3130	452	196
3	3880	792	5640	1760	4310	3260	9340	3570	1140	2830	486	364
4	4290	852	5980	1700	3790	3030	9120	3100	1020	1710	487	429
5	4480	1340	6090	1710	3280	2910	8780	2540	927	1340	415	375
6	4280	2490	5600	1770	2960	3210	8260	2100	850	1060	410	321
7	3510	2980	4060	1770	2770	4200	7540	1840	792	903	389	425
8	2820	3400	3220	1910	2660	5270	6160	1650	717	838	365	492
9	2610	3740	2990	2190	2670	5940	4930	1490	650	792	353	428
10	2450	3830	2970	2460	2940	6520	3980	1370	630	761	348	428
11	2200	3160	2940	2800	3310	6860	3520	1280	754	710	332	415
12	1860	2740	2810	3230	3760	7130	3150	1210	1100	662	329	364
13	1570	2920	2630	3510	4240	7590	3000	1160	1090	643	302	317
14	1400	3410	2550	3660	4740	7960	3140	1110	847	631	282	279
15	1350	4000	2550	3910	5130	8070	3330	1040	667	621	268	255
16	1300	4600	2560	4280	5310	7840	3610	964	579	591	261	235
17	1270	5190	2510	4610	5200	7360	4090	901	536	553	277	220
18	1230	5730	2420	4870	4820	7260	4700	944	561	569	274	215
19	1170	6220	2310	5020	4400	7570	5280	1150	637	541	276	231
20	1120	6690	2190	4840	4140	7650	5740	1200	602	490	328	224
21	1060	7120	2070	4460	3990	7490	5980	2330	516	463	618	228
22	1000	7470	1950	4380	3760	7380	6060	2890	499	533	378	281
23	960	7600	1870	4680	3440	7410	5840	2920	483	539	313	332
24	969	7100	1810	5080	3270	7550	4500	3060	443	576	291	325
25	924	5110	1790	5440	3220	7800	3230	3530	430	645	264	555
26	885	3700	1830	5800	3180	7900	2480	3730	780	528	249	874
27	893	3280	1880	6150	3230	7930	2160	3820	938	586	243	681
28	1040	3290	2020	6480	3300	7990	2260	3890	1490	605	240	498
29	1100	3680	2130	6680	3360	8780	2920	3950	2140	646	232	494
30	991	4180	2120	6770	---	9410	3320	3870	2590	622	223	544
31	894	---	2010	6800	---	9800	---	3030	---	528	212	---
TOTAL	60216	118238	93440	122440	113060	205930	155800	73119	27708	28586	10371	11228
MEAN	1942	3941	3014	3950	3899	6643	5193	2359	924	922	335	374
MAX	4480	7600	6090	6800	6500	9800	9790	3950	2590	3130	618	874
MIN	885	792	1790	1700	2660	2910	2160	901	430	463	212	196
CFSM	.72	1.47	1.12	1.47	1.45	2.47	1.93	.88	.34	.34	.13	.14
IN.	.83	1.64	1.29	1.69	1.56	2.85	2.15	1.01	.38	.40	.14	.16

CAL YR 1979 TOTAL 1410193 MEAN 3864 MAX 20100 MIN 321 CFSM 1.44 IN 19.50
WTR YR 1980 TOTAL 1020136 MEAN 2787 MAX 9800 MIN 196 CFSM 1.04 IN 14.11

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued
(National stream-quality accounting network and pesticide station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950, 1955-56, 1959-67, 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1973 to current year.
WATER TEMPERATURES: October 1949 to September 1950, January 1955 to September 1956, July 1973 to current year.

REMARKS.--Station operated as part of NASQAN network from October 1974 to present. Daily records of specific conductance for January 1955 to September 1956 are available in files of district office in Raleigh, N. C.

COOPERATION.--Pesticide samples were collected by the U.S. Geological Survey and were analyzed by the Environmental Protection Agency. Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 218 micromhos Nov. 7, 1978; minimum daily, 43 micromhos Mar. 28, 1975.
WATER TEMPERATURES: Maximum daily, 33.5°C July 3, 1956; minimum daily, 0.0°C Feb. 7, 1978.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 186 micromhos Sept. 11; minimum daily, 60 micromhos Nov. 19.
WATER TEMPERATURES: Maximum daily, 30.0°C Aug. 30; minimum daily, 1.0°C Feb. 5, 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT												
01...	1330	3200	70	6.5	22.5	20	6.9	K5700	K5800	19	9	5.0
NOV												
06...	1145	2350	105	6.5	13.0	25	9.1	240	200	21	0	5.2
DEC												
17...	1200	2510	78	5.3	9.0	15	10.4	470	280	18	4	4.3
JAN												
22...	1230	4370	75	6.5	10.5	8.0	10.0	220	410	18	6	4.3
FEB												
19...	1300	4380	79	7.0	5.0	6.0	12.1	K64	K24	18	5	4.4
MAR												
26...	1300	7900	64	7.0	--	2.0	12.9	K48	K40	16	6	3.9
APR												
21...	1300	5910	74	6.3	16.0	12	7.3	100	K40	17	4	4.1
MAY												
13...	1430	1150	95	7.1	23.0	14	--	K56	K40	22	5	4.9
JUN												
16...	1630	649	109	7.8	27.0	.63	9.6	350	84	24	0	5.4
JUL												
22...	1445	547	115	8.6	31.0	19	12.0	660	K72	18	0	4.0
AUG												
19...	1215	296	140	8.6	26.0	12	7.0	--	1600	22	0	4.5
SEP												
10...	1200	431	165	7.8	26.0	1.1	10.4	200	240	25	3	5.2

K Results based on colony count outside the acceptable range (non-ideal colony count).

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT												
01...	1.7	8.0	43	.8	2.9	13	0	11	6.6	7.7	7.1	.2
NOV												
06...	2.0	13	62	1.2	3.6	28	0	23	14	9.6	11	.2
DEC												
17...	1.7	7.0	52	.7	2.6	17	0	14	136	7.6	9.0	.1
JAN												
22...	1.8	6.1	39	.6	1.8	15	0	12	7.6	9.0	7.7	--
FEB												
19...	1.7	7.0	43	.7	1.8	16	0	13	2.6	8.8	8.9	.1
MAR												
26...	1.6	5.6	40	.6	1.8	13	0	11	2.1	8.0	6.1	.1
APR												
21...	1.6	5.2	37	.6	2.1	16	0	13	13	7.3	6.4	.1
MAY												
13...	2.3	8.8	44	.8	2.4	24	0	20	2.6	9.2	8.9	.2
JUN												
16...	2.5	11	47	1.0	2.7	37	0	30	.7	11	9.9	.2
JUL												
22...	2.0	15	60	1.5	3.0	36	0	*27	.1	14	11	.2
AUG												
19...	2.5	15	56	1.4	3.5	32	0	*29	.1	14	14	.3
SEP												
10...	2.8	21	61	1.8	4.0	34	0	*22	.7	18	20	.3

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)
OCT												
01...	9.5	74	52	.10	639	.77	.78	.07	.04	.08	.05	.90
NOV												
06...	13	86	76	.12	546	.93	.91	.06	.03	.07	.04	.73
DEC												
17...	11	75	55	.10	508	.74	.72	.08	.03	.10	.04	.57
JAN												
22...	9.5	72	51	.10	850	.72	.74	.13	.04	.16	.05	.57
FEB												
19...	8.6	64	54	.09	757	1.0	1.0	.10	.14	.12	.18	.30
MAR												
26...	6.2	61	34	.08	1300	.56	.03	.05	.06	.06	.08	.25
APR												
21...	7.5	68	44	.09	1090	.49	.47	.08	.08	.10	.10	.59
MAY												
13...	12	72	64	.10	224	1.1	1.1	.02	.06	.02	.08	.44
JUN												
16...	11	88	77	.12	154	1.1	1.1	.02	.02	.02	.03	.71
JUL												
22...	10	84	75	.11	124	.01	.00	.01	.01	.01	.01	.90
AUG												
19...	12	80	84	.11	63.9	.07	.06	.09	.00	.11	.00	.75
SEP												
10...	11	114	97	.16	133	.31	.36	.06	.03	.07	.04	.56

* Lab alkalinity.

NEUSE RIVER BASIN

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)
OCT												
01...	.42	.97	.51	.46	1.7	7.7	.240	.74	.120	--	--	--
NOV												
06...	.45	.79	.31	.48	1.7	7.6	.350	1.1	.240	2	1	1
DEC												
17...	.52	.65	.10	.55	1.4	6.2	.170	.52	.150	--	--	--
JAN												
22...	.39	.70	.27	.43	1.4	6.3	.130	.40	.080	--	--	--
FEB												
19...	.28	.40	.00	.42	1.4	6.2	.120	.37	.070	--	--	--
MAR												
26...	.24	.30	.00	.30	.86	3.8	.110	.34	.060	1	0	1
APR												
21...	.44	.67	.15	.52	1.2	5.1	.170	.52	.100	--	--	--
MAY												
13...	.39	.46	.01	.45	1.6	6.9	.220	.67	.170	2	1	1
JUN												
16...	.21	.73	.50	.23	1.8	8.1	.210	.64	.120	--	--	--
JUL												
22...	.27	.91	.63	.28	.92	4.1	.250	.77	.160	--	--	--
AUG												
19...	.49	.84	.35	.49	.91	4.0	.140	.43	.120	--	--	--
SEP												
10...	.19	.62	.40	.22	.93	4.1	.270	.83	.160	1	0	1

DATE	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)
OCT												
01...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
06...	100	50	50	0	0	3	10	0	10	0	0	2
DEC												
17...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
22...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
19...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
26...	<50	<10	40	0	0	5	<10	0	<10	0	0	1
APR												
21...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
13...	<50	0	50	0	0	0	10	0	<10	0	0	0
JUN												
16...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
22...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
19...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
10...	<50	<50	0	0	0	0	10	0	10	0	0	0

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 01...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	3	0	3	2200	1500	660	2	1	1	100	90	10
DEC 17...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 19...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 26...	3	0	3	900	800	100	3	3	0	30	20	10
APR 21...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	2	0	3	1400	820	580	1	1	0	300	270	30
JUN 16...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 22...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	3	0	3	1000	880	120	2	1	1	150	110	40

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)
OCT 01...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	<.1	.0	<.1	5	5	0	0	0	0	0	0	0
DEC 17...	--	--	--	--	--	--	--	--	--	0	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	0	--	--
FEB 19...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 26...	.1	.0	.1	1	0	1	0	0	0	0	0	0
APR 21...	--	--	--	--	--	--	--	--	--	0	--	--
MAY 13...	.2	.0	.2	3	1	2	0	0	0	0	0	0
JUN 16...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 22...	--	--	--	--	--	--	--	--	--	0	--	--
AUG 19...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	.1	.0	.1	5	5	0	0	0	0	0	0	0

NEUSE RIVER BASIN

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	BIOMASS CHLORO-PHYLL RATIO PERI-PHYTON (UNITS)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPO-SURE (DAYS)
OCT												
01...	--	--	--	11	--	--	.310	.240	--	.000	.000	55
NOV												
06...	20	10	6	--	9.1	1.3	--	--	--	--	--	--
DEC												
17...	--	--	--	4.7	--	--	--	--	--	--	--	--
JAN												
22...	--	--	--	8.2	--	--	--	--	--	--	--	--
FEB												
19...	--	--	--	20	--	--	--	--	--	--	--	--
MAR												
26...	10	2	8	--	9.1	1.1	--	--	--	--	--	--
APR												
21...	--	--	--	8.7	--	--	--	--	--	--	--	--
MAY												
13...	10	6	4	--	8.3	.9	--	--	--	--	--	--
JUN												
16...	--	--	--	10	--	--	20.2	8.03	239	50.9	19.3	33
JUL												
22...	--	--	--	14	--	--	--	--	--	--	--	--
AUG												
19...	--	--	--	3.6	--	--	32.9	27.1	537	10.8	1.42	27
SEP												
10...	20	10	10	--	18	1.7	--	--	--	--	--	--

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

WATER QUALITY DATA, PERIOD MAY TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)
MAY 23...	1135	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 06...	1215	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL (UG/L)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
MAY 23...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 06...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)
MAY 23...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 06...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
MAY 23...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 06...	ND	--	ND	--	ND	--	ND	--	ND	--

ND Not detected.

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

WATER QUALITY DATA, PERIOD OCTOBER 1979 TO FEBRUARY 1980

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 06...	1145	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 19...	1300	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL (UG/L)
NOV 06...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 19...	ND	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)
NOV 06...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 19...	--	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL (UG/L)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 06...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 19...	ND	--	ND	--	ND	--	ND	--	--	--	--

ND Not detected.

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

PHYTOPLANKTON ANALYSES, SEPTEMBER 1979

DATE	SEP 10,79
TIME	1130
TOTAL CELLS/ML	1200
DIVERSITY: DIVISION	1.1
.CLASS	1.1
..ORDER	1.7
...FAMILY	2.5
....GENUS	2.8

ORGANISM	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)		
.CHLOROPHYCEAE		
..CHLOROCOCCALES		
...CHLOROCOCCACEAE		
....CHLOROCOCCUM	*	0
...OOCYSTACEAE		
....ANKISTRODESMUS	35	3
....CHLORELLA	86	7
...SCENEDESMACEAE		
....CRUCIGENIA	60	5
....SCENEDESMUS	160	14
CHRYSOPHYTA		
.BACILLARIOPHYCEAE		
..CENTRALES		
...COSCINODISCACEAE		
....CYCLOTELLA	10	1
....MELOSIRA	25	2
....SKELETONEMA	20	2
..PENNALES		
...NITZSCHIACEAE		
....NITZSCHIA	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)		
.CYANOPHYCEAE		
..CHROOCOCCALES		
...CHROOCOCCACEAE		
....ANACYSTIS	210#	17
..HORMOGONALES		
...NOSTOCACEAE		
....ANABAENA	40	3
...OSCILLATORIACEAE		
....SCHIZOTHRIX	86	7
...RIVULARIACEAE		
....RAPHIDIOPSIS	450#	38

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO AUGUST 1980

DATE	NOV 6,79		MAR 26,80		MAY 13,80		JUN 16,80		JUL 22,80		AUG 19,80	
TIME	1145		1300		1430		1630		1445		1215	
TOTAL CELLS/ML	7900		940		14000		95000		350000		270000	
DIVERSITY: DIVISION	0.8		1.4		1.4		1.1		0.6		0.2	
.CLASS	0.8		1.4		1.4		1.1		0.6		0.2	
..ORDER	1.4		1.6		1.7		1.3		1.1		0.7	
...FAMILY	1.5		2.0		1.9		1.5		1.2		0.7	
....GENUS	1.7		2.5		2.5		2.0		1.9		1.3	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)												
.CHLOROPHYCEAE												
..CHLOROCOCCALES												
...COELASTRACEAE												
....COELASTRUM	--	-	--	-	--	-	--	-	3400	1	--	-
...MICRACTINIACEAE												
....GOLENKINIA	--	-	27	3	--	-	1500	2	*	0	--	-
....MICRACTINIUM	--	-	--	-	200	1	2400	2	3900	1	2400	1
...OOCYSTACEAE												
....ANKISTRODESMUS	40	1	430#	46	650	5	1200	1	*	0	*	0
....CHLORELLA	--	-	27	3	--	-	590	1	--	-	--	-
....CHODATELLA	--	-	7	1	200	1	1500	2	*	0	--	-
....DICTYOSPHAERIUM	120	2	--	-	650	5	--	-	6200	2	--	-
....KIRCHNERIELLA	--	-	27	3	--	-	590	1	--	-	--	-
....OOCYSTIS	--	-	--	-	200	1	*	0	--	-	--	-
....SELENASTRUM	*	0	--	-	750	6	--	-	*	0	--	-
....TETRAEDRON	*	0	--	-	*	0	890	1	*	0	--	-
....TREUBARIA	--	-	--	-	--	-	--	-	*	0	--	-
...SCENEDESMACEAE												
....ACTINASTRUM	160	2	--	-	--	-	--	-	--	-	--	-
....CRUCIGENIA	160	2	--	-	--	-	--	-	*	0	--	-
....SCENEDESMUS	400	5	13	1	300	2	4700	5	*	0	*	0
....TETRASTRUM	--	-	--	-	200	1	--	-	--	-	--	-
..TETRASPORALES												
...PALMELLACEAE												
....SPHAEROCYSTIS	--	-	--	-	--	-	--	-	2000	1	--	-
..VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	--	-	13	1	250	2	590	1	*	0	--	-
....CHLOROGONIUM	--	-	--	-	--	-	590	1	--	-	--	-
..ZYGNEMATALES												
...DESMIDIACEAE												
....SPONDYLOSIUM	--	-	--	-	--	-	--	-	*	0	--	-
CHRYSOPHYTA												
.BACILLARIOPHYCEAE												
..CENTRALES												
...COSCINODISCACEAE												
....CYCLOTELLA	120	2	27	3	1400	10	6800	7	12000	3	3600	1
....MELOSIRA	100	1	--	-	400	3	2400	2	*	0	--	-
..PENNALES												
...FRAGILARIACEAE												
....ASTERIONELLA	--	-	33	4	--	-	--	-	--	-	--	-
....FRAGILARIA	--	-	40	4	--	-	--	-	--	-	--	-
....SYNEDRA	--	-	20	2	*	0	--	-	--	-	--	-
...GOMPHONEMATACEAE												
....GOMPHONEMA	--	-	--	-	*	0	--	-	--	-	--	-
...NAVICULACEAE												
....NAVICULA	--	-	--	-	--	-	--	-	--	-	*	0
...NITZSCHIACEAE												
....NITZSCHIA	100	1	20	2	600	4	2400	2	*	0	--	-
CRYPTOPHYTA (CRYPTOMONADS)												
.CRYPTOPHYCEAE												
..CRYPTOMONADALES												
...CRYPTOCHRYSIDACEAE												
....CHROOMONAS	--	-	--	-	--	-	--	-	*	0	--	-

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO AUGUST 1980

DATE	NOV 6,79		MAR 26,80		MAY 13,80		JUN 16,80		JUL 22,80		AUG 19,80	
TIME	1145		1300		1430		1630		1445		1215	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CYANOPHYTA (BLUE-GREEN ALGAE)												
.CYANOPHYCEAE												
..CHROOCOCCALES												
...CHROOCOCCACEAE												
....AGMENELLUM	--	-	--	-	--	-	2400	2	46000	13	43000#	16
....ANACYSTIS	5400#	69	--	-	7600#	56	65000#	69	220000#	64	190000#	70
....COCCOCHLORIS	--	-	--	-	--	-	590	1	--	-	--	-
....GOMPHOSPHAERIA	--	-	--	-	--	-	--	-	3900	1	--	-
..HORMOGONALES												
...OSCILLATORIACEAE												
....OSCILLATORIA	1200#	15	--	-	--	-	--	-	44000	13	32000	12
....SCHIZOTHRIX	--	-	240#	26	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)												
.EUGLENOPHYCEAE												
..EUGLENALES												
...EUGLENACEAE												
....EUGLENA	--	-	7	1	--	-	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)												
.DINOPHYCEAE												
..PERIDINIALES												
...GLENODINIACEAE												
....GLENODINIUM	--	-	--	-	--	-	--	-	--	-	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	96	66	78	65	81	65	77	86	83	139	146
2	74	103	66	89	69	80	69	74	87	67	138	147
3	74	100	66	82	71	82	65	74	91	73	156	144
4	72	112	64	80	79	82	64	78	92	83	128	125
5	165	104	68	82	74	81	67	84	98	82	135	137
6	75	160	66	80	85	82	73	87	97	86	131	146
7	72	80	69	80	88	76	70	92	96	88	128	145
8	81	80	71	84	84	80	71	90	108	92	150	142
9	80	80	74	80	90	83	78	94	98	95	148	158
10	84	74	73	83	87	78	83	97	103	98	131	166
11	84	80	72	74	83	72	82	96	108	99	128	186
12	81	78	73	72	87	69	82	96	111	98	159	173
13	84	75	73	71	80	70	84	98	122	96	155	178
14	89	78	75	74	81	69	86	98	117	98	138	160
15	87	78	77	71	82	70	85	96	108	98	133	152
16	91	68	73	71	81	73	84	98	114	102	164	163
17	93	64	74	71	83	75	77	98	107	101	153	155
18	93	64	77	69	82	92	75	98	103	105	140	146
19	93	60	75	68	82	82	71	97	101	118	136	158
20	92	62	77	69	82	72	69	92	98	116	147	154
21	95	64	78	72	81	72	71	94	106	141	138	147
22	97	62	80	71	81	65	74	90	108	146	123	145
23	100	64	82	68	82	64	75	79	110	139	103	148
24	98	68	83	64	80	69	78	76	106	120	117	164
25	97	73	84	64	80	68	84	78	109	140	130	134
26	100	80	82	65	80	63	86	78	93	119	138	129
27	104	78	82	64	79	62	86	69	87	134	130	126
28	105	76	82	62	78	62	94	71	96	148	144	109
29	108	78	80	66	78	65	86	78	88	152	148	119
30	103	68	77	66	---	61	76	68	92	129	147	123
31	103	---	75	64	---	61	---	80	---	136	147	---
MEAN	92	80	75	73	80	73	77	86	101	109	139	148

WTR YR 1980 MEAN 94 MAX 186 MIN 60

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	15.0	10.0	7.0	3.0	6.5	13.5	16.0	25.0	24.0	27.5	28.0
2	21.0	15.5	9.0	6.5	2.0	3.5	13.5	16.0	23.0	25.0	27.0	26.0
3	21.0	16.5	7.0	5.5	2.0	3.5	15.0	16.5	23.5	25.0	28.5	27.0
4	20.0	14.5	6.0	6.0	1.5	4.0	16.5	17.0	25.0	25.0	28.0	24.5
5	20.0	12.0	5.5	6.0	1.0	4.5	15.0	18.0	24.0	24.0	28.5	25.5
6	18.5	12.5	6.5	5.0	2.0	4.0	15.0	18.5	23.5	24.5	28.5	26.0
7	18.5	13.0	8.0	4.0	2.0	4.0	15.0	19.0	23.0	26.5	28.0	26.5
8	17.0	11.5	8.0	6.0	1.0	6.0	15.5	20.0	24.0	26.0	27.5	25.5
9	17.0	11.5	7.0	6.0	3.0	10.0	16.0	18.0	23.5	26.5	28.0	24.5
10	18.0	13.0	6.5	5.5	2.5	8.5	16.0	17.0	23.0	27.0	28.5	24.0
11	15.0	14.5	6.5	6.5	2.0	9.5	16.0	18.0	23.0	26.5	28.0	24.0
12	14.0	13.5	7.0	7.5	3.0	10.0	16.0	19.0	23.0	26.5	28.0	23.0
13	15.5	13.0	8.0	7.0	2.5	9.0	17.5	20.5	22.0	27.5	26.5	24.0
14	17.0	12.5	9.0	7.0	3.0	8.5	18.0	22.0	21.0	27.0	28.0	24.0
15	14.0	11.0	9.0	7.5	4.0	8.0	16.0	21.0	23.0	26.5	27.0	24.5
16	14.0	11.0	8.5	7.0	5.5	8.5	16.0	20.0	24.5	27.0	28.0	25.0
17	14.5	10.0	8.5	6.5	4.0	10.0	14.0	20.0	25.0	27.0	26.0	24.5
18	15.0	10.0	6.5	7.0	3.5	12.0	14.5	20.5	23.5	27.5	25.5	25.5
19	16.0	10.0	6.5	7.5	4.0	11.0	14.5	21.5	21.0	28.0	25.5	25.5
20	17.0	10.0	6.0	7.0	5.0	11.5	15.0	22.0	22.0	28.0	25.0	24.5
21	17.0	10.5	6.0	7.0	6.0	13.5	15.0	22.0	22.5	28.5	26.0	23.5
22	18.0	10.5	7.0	7.5	8.0	11.5	15.0	21.5	22.0	28.5	25.0	24.0
23	18.0	11.5	8.0	9.0	10.0	11.0	16.0	22.0	22.5	28.0	23.5	25.0
24	17.0	12.5	9.0	6.5	10.0	12.0	17.5	22.0	23.5	26.5	23.5	25.5
25	16.0	13.5	9.5	7.0	11.0	12.0	18.5	21.5	23.0	25.5	23.0	24.0
26	15.0	15.0	8.0	7.5	7.0	12.5	20.5	21.5	23.0	26.0	24.0	24.5
27	13.0	14.0	7.5	7.0	8.0	12.5	20.0	20.0	23.0	26.0	24.0	22.5
28	14.5	14.5	7.5	6.0	8.5	12.0	19.5	20.0	25.0	26.0	25.0	20.5
29	13.5	13.0	7.0	6.5	8.0	13.0	18.5	20.5	26.0	26.0	25.0	20.0
30	14.0	11.0	7.0	6.0	---	13.0	16.5	21.0	25.0	26.0	30.0	20.0
31	14.5	---	7.0	4.0	---	13.0	---	22.0	---	27.0	29.0	---
MEAN	16.5	12.5	7.5	6.5	4.5	9.5	16.0	20.0	23.5	26.5	26.5	24.5

WTR YR 1980 MEAN 16.0 MAX 30.0 MIN 1.0

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
01...	1330	3200	43	372	92
NOV					
06...	1145	2350	40	254	75
DEC					
17...	1200	2510	30	203	--
JAN					
22...	1230	4370	32	378	78
FEB					
19...	1300	4380	16	189	73
MAR					
26...	1300	7900	31	661	51
APR					
21...	1300	5910	19	303	76
MAY					
13...	1430	1150	23	71	92
JUN					
16...	1630	649	26	46	91
JUL					
22...	1445	547	23	34	97
AUG					
19...	1215	296	20	16	92
SEP					
10...	1200	431	24	28	97

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH LAB (UNITS)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	LAB ALKA-LINITY (MG/L AS CACO3)
JAN										
09...	1415	2230	55	7.0	7.0	8.2	21	1.1	210	20
FEB										
11...	1300	3330	60	6.6	3.0	11.5	19	1.6	50	13
MAR										
13...	1315	7660	40	6.6	8.0	9.6	21	1.9	280	14
APR										
28...	1440	2270	80	6.6	20.0	8.2	24	1.7	1200	18
MAY										
14...	1520	1100	80	7.0	23.0	7.6	19	2.1	90	22
JUN										
10...	1410	695	90	7.4	19.0	9.0	20	2.2	320	20
JUL										
09...	1310	786	--	7.4	28.0	--	28	2.6	480	21
AUG										
11...	1315	335	170	8.7	30.0	9.5	34	4.9	100	28
SEP										
10...	1500	435	205	8.1	27.0	10.3	27	3.2	--	28

02090380 CONTENTNEA CREEK NEAR LUCAMA, N. C.

LOCATION.--Lat 35°41'29", long 78°06'29", Wilson County, Hydrologic Unit 03020203, on right bank 250 ft (76 m) upstream from bridge on State Highway 581, 1.0 mi (1.6 km) downstream from Buckhorn Reservoir, 1.0 mi (1.6 km) upstream from Buckhorn Branch, and 6.5 mi (10.4 km) northwest of Lucama.

DRAINAGE AREA.--156 mi² (404 km²).

PERIOD OF RECORD.--September 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 117.43 ft (35.793 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good. Since September 1976, some regulation at low flow by Buckhorn Reservoir 1 mile (1.6 km) upstream (see page 333).

AVERAGE DISCHARGE.--16 years, 156 ft³/s (4.418 m³/s), 13.58 in/yr (345 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,860 ft³/s (166 m³/s) Oct. 6, 1964, gage height, 16.28 ft (4.962 m); minimum, 0.04 ft³/s (0.001 m³/s) Sept. 9-14, 1976, due to regulation; minimum gage height, 1.07 ft (0.326 m) July 14, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 820 ft³/s (23.2 m³/s) Mar. 19, gage height, 7.48 ft (2.280 m), no peak above base of 1000 ft³/s (28.3 m³/s); minimum, 0.07 ft³/s (0.002 m³/s) Aug. 22, 23; minimum gage height, 1.27 ft (0.387 m) Sept. 15-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	21	196	90	176	172	499	142	38	40	6.0	18
2	92	25	153	83	156	179	353	106	33	38	4.4	18
3	81	167	123	76	142	158	259	89	28	31	4.5	19
4	59	441	114	75	132	180	217	77	26	26	1.6	16
5	59	496	106	100	125	259	185	67	20	23	1.0	13
6	48	363	117	113	127	515	156	60	18	21	.67	13
7	46	173	172	116	135	779	141	53	21	14	.53	13
8	32	104	224	120	147	753	132	47	26	14	.31	9.1
9	31	84	196	147	163	568	140	44	17	22	.45	.32
10	29	76	153	158	265	398	143	38	15	22	.85	.16
11	23	184	127	153	395	329	127	39	11	29	.66	.19
12	24	601	112	234	408	264	109	36	11	35	.41	.13
13	27	764	106	276	352	310	115	35	11	29	.28	.10
14	33	644	108	239	291	471	238	34	13	18	.22	.09
15	29	480	114	199	251	545	516	30	14	13	.71	.09
16	29	310	108	182	256	502	549	26	13	9.7	.70	.08
17	28	198	104	161	253	332	382	23	11	8.0	.37	.08
18	27	150	88	161	234	509	229	99	12	14	.28	.11
19	25	128	84	291	194	776	157	508	14	12	.16	.10
20	24	114	83	396	171	733	129	746	16	11	.12	.10
21	23	105	81	372	165	633	115	496	11	7.0	.09	.10
22	22	97	78	264	169	637	103	258	11	5.1	.07	.10
23	24	90	79	286	192	567	94	161	7.5	4.8	.09	.09
24	35	88	80	402	232	433	79	124	6.2	7.6	.18	.12
25	32	84	103	441	258	360	74	102	27	5.5	.17	.15
26	31	221	111	368	261	306	65	106	156	5.2	2.7	.20
27	26	514	107	275	276	248	65	114	152	5.2	11	.12
28	25	659	99	251	252	211	191	80	113	5.4	11	.10
29	23	613	89	231	202	370	339	61	79	9.3	13	.13
30	22	360	84	192	---	530	225	49	54	7.3	18	.37
31	22	---	87	184	---	590	---	43	---	5.9	18	---
TOTAL	1124	8354	3586	6636	6380	13617	6126	3893	984.7	498.0	98.52	122.13
MEAN	36.3	278	116	214	220	439	204	126	32.8	16.1	3.18	4.07
MAX	93	764	224	441	408	779	549	746	156	40	18	19
MIN	22	21	78	75	125	158	65	23	6.2	4.8	.07	.08
CFSM	.23	1.78	.74	1.37	1.41	2.81	1.31	.81	.21	.10	.02	.03
IN.	.27	1.99	.86	1.58	1.52	3.25	1.46	.93	.23	.12	.02	.03

CAL YR 1979 TOTAL 85880.00 MEAN 235 MAX 2490 MIN 2.6 CFSM 1.51 IN 20.48
WTR YR 1980 TOTAL 51419.35 MEAN 140 MAX 779 MIN .07 CFSM .90 IN 12.26

02090512 HOMINY SWAMP AT PHILLIPS ST. AT WILSON, N. C.

LOCATION.--Lat 35°42'39", long 77°55'00", Wilson County, Hydrologic Unit 03020203, on left bank 17 ft (5.2 m) upstream from culvert on Phillips St, at Wilson, and 0.2 mi (0.3 km) upstream from Seaboard Coastline Railroad.

DRAINAGE AREA.--7.92 mi² (20.51 km²).

PERIOD OF RECORD.--August 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 90 ft (27 m) from topographic map.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 417 of this report. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 411 ft³/s (11.6 m³/s) Mar. 18, 1980, gage height, 7.75 ft (2.362 m); minimum daily, 0.01 ft³/s (<0.001 m³/s) July 7, Aug. 7, 26-31.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar 18	0215	*411	11.6	*7.75	2.362

Minimum daily discharge, 0.01 ft³/s (<0.001 m³/s) July 7, Aug. 7, 26-31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	.18	3.8	1.4	7.2	3.7	14	2.9	.39	.04	7.1	.94
2	1.3	.16	3.2	1.4	5.4	4.1	9.8	2.0	.42	.03	6.0	1.1
3	.74	20	2.8	1.4	4.8	6.4	7.9	1.5	.38	.02	4.7	6.4
4	.45	10	2.8	7.3	4.6	20	9.4	1.2	.36	2.0	.18	6.0
5	4.3	5.0	2.4	18	4.3	58	5.5	1.1	.33	1.3	.02	1.7
6	.64	2.0	13	6.5	7.2	75	4.4	1.7	.32	.02	.03	23
7	.41	1.0	8.8	4.0	7.0	36	4.2	.99	.32	.01	.01	1.4
8	.31	.74	5.1	12	6.2	24	3.9	.63	.27	2.1	1.3	.04
9	.30	.62	3.6	15	12	16	4.2	.63	.27	6.2	4.3	.13
10	.38	.56	3.1	7.6	41	12	3.3	.52	.24	12	.62	.18
11	.36	74	2.8	15	18	15	2.7	.45	.22	6.5	.02	.14
12	.33	56	2.5	16	13	8.4	2.5	.46	.25	1.1	1.7	.05
13	4.2	19	6.3	8.4	10	42	13	.42	.15	.03	6.2	.16
14	7.4	10	2.9	7.5	9.0	19	42	.39	.10	.02	1.0	1.0
15	.40	6.3	2.1	8.0	8.8	10	16	.37	.10	.03	.18	.45
16	.75	4.6	2.1	5.8	9.5	8.0	7.2	.40	1.8	.03	.07	.38
17	.31	3.5	1.9	5.2	7.0	10	4.6	.36	8.5	.68	.04	.45
18	.16	3.0	1.6	29	5.4	164	3.8	24	1.1	6.0	.02	1.6
19	.19	2.7	1.5	18	5.0	24	3.1	4.1	.33	1.1	12	1.0
20	.17	2.3	1.5	9.0	5.5	16	2.6	9.5	.14	.07	6.5	.74
21	.16	2.1	1.3	7.2	6.8	23	2.4	4.5	.07	.04	1.3	.45
22	.15	1.9	1.3	12	5.3	11	2.0	1.3	.04	.03	.22	.07
23	.14	1.8	1.4	48	8.0	7.5	1.7	37	.04	6.4	.05	.07
24	1.0	1.7	2.4	12	8.9	10	1.3	3.5	.14	4.9	.02	2.3
25	.60	14	9.6	8.5	7.1	9.2	1.1	10	33	.18	.02	4.8
26	.36	105	3.0	6.8	14	5.4	1.7	5.2	5.5	.04	.01	1.3
27	.30	19	2.1	15	7.2	4.3	20	1.7	3.5	.03	.01	.22
28	.26	10	1.7	8.8	5.8	13	19	1.1	.90	2.7	.01	.18
29	.24	6.8	1.6	7.0	4.7	77	20	1.4	4.8	3.5	.01	.85
30	.22	4.7	1.6	5.4	---	47	6.1	.65	3.3	.10	.01	14
31	.20	---	1.6	9.5	---	33	---	.47	---	.05	.01	---
TOTAL	30.83	388.66	101.4	336.7	258.7	812.0	239.4	120.44	67.28	57.25	53.66	71.10
MEAN	.99	13.0	3.27	10.9	8.92	26.2	7.98	3.89	2.24	1.85	1.73	2.37
MAX	7.4	105	13	48	41	164	42	37	33	12	12	23
MIN	.14	.16	1.3	1.4	4.3	3.7	1.1	.36	.04	.01	.01	.04
CFSM	.12	1.59	.40	1.33	1.09	3.20	.97	.47	.27	.23	.21	.29
IN.	.14	1.76	.46	1.53	1.17	3.68	1.09	.55	.31	.26	.24	.32

CAL YR 1979 TOTAL 4481.33 MEAN 12.3 MAX 322 MIN .07 CFSM 1.50 IN 20.33
WTR YR 1980 TOTAL 2537.42 MEAN 6.93 MAX 164 MIN .01 CFSM .85 IN 11.51

02090625 TURNER SWAMP NEAR EUREKA, N. C.

LOCATION.--Lat 35°34'10", long 77°52'40", Wayne County, Hydrologic Unit 03020203, on right bank at downstream side of bridge on Secondary Road 1505, 2.0 mi (3.2 km) north of Eureka, and 2.5 mi (4.0 km) upstream from mouth.

DRAINAGE AREA.--2.2 mi^2 (5.7 km^2), approximately.

PERIOD OF RECORD.--June 1968 to current year.

GAGE.--Water-stage recorder and Y-notch sharp-crested weir. Altitude of gage is 90 ft (27 m), by barometer.

REMARKS.--Records good except those for period of no gage-height record, Apr. 10 to May 15, which are fair.

AVERAGE DISCHARGE.--12 years, 2.44 ft^3/s (0.0691 m^3/s), 15.06 in/yr (383 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 652 ft^3/s (18.5 m^3/s) Aug. 5, 1974, gage height, 5.78 ft (1.762 m); minimum, 0.23 ft^3/s (0.007 m^3/s) Sept. 1, 2, 3, 23, 1980; gage height, 0.82 ft (0.250 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft^3/s (1.42 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar 18	0515	*78	2.21	*3.31	1.009

Minimum discharge, 0.23 ft^3/s (0.007 m^3/s) Sept. 1, 2, 3, 23, gage height, 0.82 ft (0.250 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	.64	1.2	1.1	2.2	2.2	6.1	4.0	.66	.54	1.2	.31
2	.85	.65	1.1	1.1	2.0	2.3	4.8	3.4	.63	.52	1.1	.30
3	.71	2.3	1.0	1.1	1.8	2.6	4.3	3.0	.61	.50	.50	.33
4	.67	.92	1.1	1.4	1.8	3.1	4.1	2.7	.59	.55	.44	.40
5	.77	.73	1.0	2.0	1.8	6.2	3.4	2.5	.58	.52	.41	.39
6	.71	.71	1.9	1.3	2.0	15	2.9	2.1	.59	.49	.41	1.4
7	.62	.78	2.0	1.2	2.2	11	2.8	1.9	.61	.45	.40	.44
8	.60	.68	1.3	2.4	2.2	8.8	2.6	1.7	.59	.46	.39	.39
9	.58	.67	1.2	5.4	2.7	5.9	2.7	1.5	.54	.56	.40	.37
10	.61	.70	1.1	3.2	7.9	4.6	2.3	1.4	.54	.52	.38	.38
11	.67	2.0	1.1	3.5	5.0	4.1	2.2	1.2	.54	.59	.37	.37
12	.66	4.4	1.1	4.1	4.5	3.5	2.0	1.1	.57	.48	.41	.35
13	.62	2.4	2.5	2.6	4.1	8.0	3.8	1.0	.56	.44	.41	.36
14	1.1	1.6	3.0	2.4	4.1	5.9	7.0	.90	.55	.43	.36	.37
15	.73	1.4	1.7	2.5	4.3	4.2	12	.80	.53	.42	.34	.35
16	.68	1.2	1.5	2.1	4.6	3.7	7.8	.90	.51	.41	.34	.35
17	.66	1.0	1.3	2.0	3.8	3.5	5.6	.77	.52	.40	.33	.37
18	.64	.97	1.2	3.7	2.9	32	4.6	1.0	.71	.41	.37	.41
19	.62	.92	1.2	4.2	2.7	7.7	3.7	.88	.64	.40	.73	.41
20	.62	.89	1.1	2.8	2.7	5.4	3.0	1.2	.56	.39	.55	.42
21	.62	.87	1.1	2.4	3.2	5.9	2.6	1.3	.53	.37	.43	.39
22	.61	.87	1.1	2.4	2.9	4.6	2.1	.86	.51	.37	.44	.35
23	.64	.86	1.1	4.7	2.6	3.8	1.9	3.8	.50	1.1	.40	.32
24	.75	.87	1.2	3.4	2.5	3.8	1.6	1.5	.51	.75	.37	.32
25	.66	1.0	2.8	2.6	2.4	4.7	1.4	1.3	1.1	.50	.35	.67
26	.65	7.8	1.5	2.2	3.6	3.7	1.3	1.4	2.3	.45	.34	.53
27	.64	2.9	1.3	3.2	2.8	3.2	1.3	.94	.76	.45	.34	.37
28	.65	1.9	1.2	2.9	2.5	3.3	2.7	.85	.61	.47	.33	.38
29	.65	1.4	1.2	2.4	2.2	18	8.0	.79	.56	.46	.33	.49
30	.64	1.2	1.2	2.1	---	12	6.0	.73	.68	.42	.33	1.0
31	.64	---	1.2	2.4	---	11	---	.70	---	.40	.33	---
TOTAL	21.47	45.23	43.5	80.8	90.0	213.7	116.6	48.12	19.69	15.22	13.83	13.29
MEAN	.69	1.51	1.40	2.61	3.10	6.89	3.89	1.55	.66	.49	.45	.44
MAX	1.2	7.8	3.0	5.4	7.9	32	12	4.0	2.3	1.1	1.2	1.4
MIN	.58	.64	1.0	1.1	1.8	2.2	1.3	.70	.50	.37	.33	.30
CFSM	.31	.69	.64	1.19	1.41	3.13	1.77	.71	.30	.22	.21	.20
IN.	.36	.76	.74	1.37	1.52	3.61	1.97	.81	.33	.26	.23	.22

CAL YR 1979 TOTAL 1075.89 MEAN 2.95 MAX 55 MIN .42 CFSM 1.34 IN 18.18
WTR YR 1980 TOTAL 721.45 MEAN 1.97 MAX 32 MIN .30 CFSM .90 IN 12.19

02091000 NAHUNTA SWAMP NEAR SHINE, N. C.

LOCATION.--Lat 35°29'20", long 77°48'22", Greene County, Hydrologic Unit 03020203, on right bank 10 ft (3 m) downstream from bridge on Secondary Road 1058, 2 mi (3.2 km) upstream from Appletree Swamp, 3.5 mi (5.6 km) north of Shine, and 8 mi (12.9 km) northwest of Snow Hill.

DRAINAGE AREA.--77.6 mi² (201 km²).

PERIOD OF RECORD.--April 1954 to current year. Monthly discharges only for some periods, published in WSP 1723.

GAGE.--Water-stage recorder. Datum of gage is 50.74 ft (15.466 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 1, 1955, nonrecording gage at same site and datum.

REMARKS.--Records good except those for period of no gage-height record, Nov. 17 to Dec. 20, which are poor.

AVERAGE DISCHARGE.--26 years, 88.1 ft³/s (2.495 m³/s), 15.42 in/yr (392 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,470 ft³/s (155 m³/s) Oct. 6, 1964, gage height, 14.14 ft (4.310 m); minimum, 1.0 ft³/s (0.028 m³/s) Oct. 7, 8, 1954, gage height, 0.80 ft (0.244 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 580 ft³/s (16.4 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar 18	1330	640	18.1	6.83	2.082	June 26	2330	*909	25.7	*7.94	2420

Minimum discharge, 2.8 ft³/s (0.079 m³/s) Sept. 3, gage height, 1.03 feet (0.314 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	23	68	50	84	73	237	114	18	22	9.5	3.4
2	126	23	66	49	75	78	166	79	17	18	64	3.1
3	59	92	60	46	70	106	134	62	15	17	26	3.6
4	44	80	68	48	68	95	118	53	14	20	13	26
5	41	49	60	77	66	159	101	45	13	19	10	12
6	40	42	110	64	71	400	85	40	12	16	8.9	29
7	34	40	120	56	76	433	79	35	12	13	8.4	19
8	28	38	70	78	80	311	76	33	12	12	7.9	9.1
9	26	37	52	162	87	230	75	33	11	16	7.2	7.5
10	25	37	52	145	237	177	69	30	10	17	7.2	6.6
11	27	102	52	121	231	147	62	28	10	16	6.4	6.7
12	27	300	60	171	188	120	58	27	12	14	5.5	6.3
13	25	205	92	119	164	211	64	24	11	12	5.6	6.2
14	40	141	100	103	147	230	130	23	10	11	5.8	6.5
15	33	107	70	100	146	161	198	22	10	10	4.9	6.6
16	28	93	64	90	130	128	129	21	9.6	10	4.4	6.4
17	26	87	64	81	115	114	83	20	9.1	9.9	4.1	6.4
18	25	80	60	103	100	510	70	22	10	10	4.0	7.1
19	24	76	58	181	95	439	62	29	13	9.8	12	7.9
20	23	72	56	126	96	241	57	26	11	9.1	32	8.3
21	23	68	55	100	96	218	53	48	9.7	8.4	11	8.5
22	22	66	54	89	91	182	50	29	9.1	7.9	8.2	7.7
23	23	66	53	150	88	136	46	122	8.3	25	7.4	6.9
24	33	63	53	146	95	118	41	80	8.0	55	6.3	6.4
25	28	110	90	110	87	127	38	43	11	19	5.1	29
26	25	200	75	91	110	112	36	49	251	13	4.6	74
27	24	150	62	100	99	96	36	35	326	12	4.3	29
28	24	110	56	111	87	88	192	28	55	11	4.0	16
29	24	70	53	93	78	318	262	24	35	12	3.8	14
30	24	70	53	81	---	321	219	22	26	12	3.7	26
31	23	---	52	85	---	369	---	20	---	10	3.6	---
TOTAL	1069	2697	2058	3126	3157	6448	3026	1266	978.8	467.1	308.8	405.2
MEAN	34.5	89.9	66.4	101	109	208	101	40.8	32.6	15.1	9.96	13.5
MAX	126	300	120	181	237	510	262	122	326	55	64	74
MIN	22	23	52	46	66	73	36	20	8.0	7.9	3.6	3.1
CFSM	.45	1.16	.86	1.30	1.41	2.68	1.30	.53	.42	.20	.13	.17
IN.	.51	1.29	.99	1.50	1.51	3.09	1.45	.61	.47	.22	.15	.19

CAL YR 1979 TOTAL 34362.2 MEAN 94.1 MAX 1400 MIN 6.7 CFSM 1.21 IN 16.47
WTR YR 1980 TOTAL 25006.9 MEAN 68.3 MAX 510 MIN 3.1 CFSM .88 IN 11.99

02091500 CONTENTNEA CREEK AT HOOKERTON, N. C.

LOCATION.--Lat 35°25'38", long 77°35'09", Greene County, Hydrologic Unit 03020203, on right bank at Hookerton, 0.3 mi (0.5 km) upstream from bridge on State Highway 123, and 2.5 mi (4.0 km) upstream from Wheat Swamp Creek.

DRAINAGE AREA.--729 mi² (1,888 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1928 to current year.

REVISED RECORDS.--WSP 1333: 1903-35. WSP 1383: Drainage area. WSP 1503: 1951. WSP 1723: 1932.

GAGE.--Water-stage recorder. Datum of gage is 14.85 ft (4.526 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Nov. 26, 1934, nonrecording gage at site 200 ft (61 m) downstream at same datum.

REMARKS.--Water-discharge record good.

AVERAGE DISCHARGE.--51 years (water years 1929-80), 771 ft³/s (21.83 m³/s), 14.36 in/yr (365 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft³/s (487 m³/s) Oct. 7, 1964; maximum gage height, 22.11 ft (6.739 m) Oct. 8, 1964; minimum discharge, 15 ft³/s (0.42 m³/s) Oct. 28, 1933, gage height, 1.22 ft (0.372 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of September 1928 reached a stage of 23.3 ft (7.10 m), from floodmark; high water of autumn 1924 was about 0.1 ft (0.03 m) lower, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,710 ft³/s (76.7 m³/s) Mar. 13, gage height, 13.17 ft (4.014 m); minimum, 42 ft³/s (1.19 m³/s) Sept. 24, 25, minimum gage height, 2.67 ft (0.814 m), Sept. 2, 3, 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1010	181	1320	498	1250	960	2210	897	302	238	64	44
2	1090	179	1470	474	1160	963	2320	967	258	212	62	44
3	1170	198	1520	458	1050	941	2420	1020	218	182	64	52
4	1060	328	1440	446	959	898	2460	1030	191	160	94	90
5	831	387	1250	469	888	904	2400	946	174	146	93	73
6	652	403	1040	517	841	1090	2220	699	160	130	86	87
7	521	487	902	555	797	1490	1950	508	145	115	75	92
8	451	575	823	604	766	1950	1630	429	136	105	101	99
9	391	624	792	735	764	2190	1230	369	127	102	117	94
10	350	631	785	814	887	2380	1030	333	119	100	91	83
11	321	582	785	899	1040	2540	889	305	114	98	68	70
12	298	717	775	1000	1160	2620	825	283	109	98	60	60
13	275	884	749	1090	1340	2680	759	264	106	100	60	54
14	277	971	753	1150	1500	2660	826	246	103	104	62	50
15	293	1090	797	1170	1660	2460	901	229	99	95	56	48
16	296	1250	807	1170	1760	2210	958	213	95	87	53	46
17	282	1450	778	1140	1780	2010	1020	200	93	82	52	46
18	263	1620	728	1080	1720	2130	1110	194	95	78	50	44
19	248	1680	670	1060	1570	2290	1260	212	99	75	52	44
20	232	1580	630	1070	1400	2410	1390	236	102	70	66	45
21	217	1350	567	1090	1260	2490	1380	444	98	66	115	46
22	205	1010	527	1120	1140	2580	1200	567	91	64	147	46
23	199	808	500	1210	1030	2680	923	771	85	67	120	45
24	200	663	484	1310	968	2670	718	989	81	118	92	43
25	203	598	493	1380	920	2560	580	1030	81	143	71	60
26	202	596	554	1400	906	2370	511	1040	139	112	61	76
27	197	804	605	1410	915	2170	451	905	397	93	54	103
28	192	910	621	1410	934	1980	493	701	567	81	50	101
29	192	1020	619	1400	951	2030	644	519	357	82	48	76
30	192	1160	598	1350	---	2050	824	413	257	73	46	78
31	187	---	542	1320	---	2120	---	358	---	66	45	---
TOTAL	12497	24736	24924	30799	33316	63476	37532	17317	4998	3342	2275	1939
MEAN	403	825	804	994	1149	2048	1251	559	167	108	73.4	64.6
MAX	1170	1680	1520	1410	1780	2680	2460	1040	567	238	147	103
MIN	187	179	484	446	764	898	451	194	81	64	45	43
CFSM	.55	1.13	1.10	1.36	1.58	2.81	1.72	.77	.23	.15	.10	.09
IN.	.64	1.26	1.27	1.57	1.70	3.24	1.92	.88	.26	.17	.12	.10

CAL YR 1979 TOTAL 394158 MEAN 1080 MAX 5540 MIN 69 CFSM 1.48 IN 20.11
WTR YR 1980 TOTAL 257151 MEAN 703 MAX 2680 MIN 43 CFSM .96 IN 13.12

02091500 CONTENTNEA CREEK AT HOOKERTON, N. C.--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950, 1969-72, 1979 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1979 to current year.
WATER TEMPERATURES: October 1949 to September 1950, March 1979 to current year.

REMARKS.--Station operated as part of NASQAN network from March 1979 to present. Miscellaneous chemical data published for water years 1945, 1947-49, 1955-67.

COOPERATION.--Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 166 micromhos Sept. 13, 1980; minimum daily, 41 micromhos June 11, 1979.
WATER TEMPERATURES: Maximum daily, 29.0°C June 27, 28, 1950, July 21, 22, 23, Aug. 4, 5, 6, 1980; minimum daily, 2.0°C Feb. 4-8, 19, Mar. 3, 4, 1980.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 166 micromhos Sept. 13; minimum daily, 62 micromhos Mar. 23.
WATER TEMPERATURES: Maximum daily, 29.0°C July 21, 22, 23, Aug. 4, 5, 6; minimum daily, 2.0°C Feb. 4-8, 19, Mar. 3, 4.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT												
02...	1400	1100	78	5.5	22.0	20	5.8	4600	4600	18	11	4.5
NOV												
06...	1330	403	91	6.1	12.0	6.0	8.2	2000	1100	20	9	5.0
DEC												
11...	1430	785	86	5.8	7.0	7.0	10.8	250	130	16	4	4.0
JAN												
29...	1530	1360	70	6.1	7.0	6.0	10.0	190	130	17	7	4.0
MAR												
24...	1015	2680	60	5.7	11.5	2.0	8.1	110	K100	14	8	3.4
APR												
21...	0930	1400	65	5.0	15.5	4.9	7.1	210	K48	15	8	3.8
MAY												
14...	1530	243	88	6.5	21.0	5.6	6.5	440	130	21	9	5.0
JUN												
23...	1300	87	109	6.4	24.0	1.2	10.8	250	K32	21	8	5.1
JUL												
22...	0945	64	113	6.8	28.0	5.3	7.4	K260	K64	21	6	5.2
AUG												
18...	1100	50	120	5.4	25.0	6.9	6.6	260	310	21	5	4.8
SEP												
10...	1200	82	124	6.3	24.0	1.5	5.9	1100	370	22	12	5.1

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT												
02...	1.6	6.1	37	.6	3.5	8	0	7	40	8.3	10	.1
NOV												
06...	1.9	10	55	1.0	4.0	14	0	11	18	9.2	14	.1
DEC												
11...	1.5	6.4	42	.7	2.6	15	0	12	38	6.9	10	.0
JAN												
29...	1.6	6.4	53	.7	2.0	12	0	10	15	8.9	9.4	.1
MAR												
24...	1.3	5.1	41	.6	1.9	7	0	6	22	7.4	7.2	.1
APR												
21...	1.3	4.8	37	.5	2.1	8	0	7	128	6.4	8.3	.1
MAY												
14...	2.0	7.5	41	.7	2.4	15	0	12	3.7	8.6	10	.1
JUN												
23...	1.9	11	49	1.1	3.2	16	0	13	21	9.0	10	.2
JUL												
22...	2.0	11	48	1.0	3.8	20	0	*15	4.6	12	12	.2
AUG												
18...	2.2	12	49	1.1	4.5	20	0	*16	124	11	13	.2
SEP												
10...	2.3	9.4	41	.9	5.9	24	0	*10	9.8	13	13	.2

K Results based on colony count outside the acceptable range (non-ideal colony count).
* Lab alkalinity.

02091500 CONTENTNEA CREEK AT HOOKERTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
OCT												
02...	8.2	72	54	.10	214	1.2	1.6	.20	.22	.24	.28	.74
NOV												
06...	8.8	85	65	.12	92.5	1.1	1.1	.16	.16	.19	.21	.53
DEC												
11...	9.3	80	52	.11	170	.97	.95	.17	.17	.21	.22	.63
JAN												
29...	8.0	61	51	.08	224	1.1	1.1	.10	.07	.12	.09	.43
MAR												
24...	5.1	66	35	.09	478	.83	.81	.04	.01	.05	.01	.39
APR												
21...	5.7	72	40	.10	272	.68	.70	.10	.09	.12	.12	.62
MAY												
14...	8.5	78	60	.11	51.2	1.6	1.7	.17	.25	.21	.32	.76
JUN												
23...	6.8	93	64	.13	21.8	1.9	2.0	.05	.07	.06	.09	.81
JUL												
22...	5.8	74	67	.10	12.8	1.4	1.4	.06	.07	.07	.09	.81
AUG												
18...	8.2	88	72	.12	11.9	1.5	1.5	.29	.29	.35	.37	.91
SEP												
10...	8.6	85	72	.12	18.8	1.8	1.9	.97	.99	1.2	1.3	.73

DATE	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)
OCT												
02...	.39	.94	.33	.61	2.1	9.5	.380	1.2	.160	--	--	--
NOV												
06...	.55	.69	.00	.71	1.8	7.9	.330	1.0	.250	2	0	2
DEC												
11...	.42	.80	.21	.59	1.8	7.8	.170	.52	.100	--	--	--
JAN												
29...	.55	.53	.00	.62	1.6	7.2	.120	.37	.070	--	--	--
MAR												
24...	.47	.43	.00	.48	1.3	5.6	.120	.37	.060	2	0	2
APR												
21...	.29	.72	.34	.38	1.4	6.2	.160	.49	.110	--	--	--
MAY												
14...	.43	.93	.25	.68	2.5	11	.310	.95	.200	2	1	1
JUN												
23...	.35	.86	.44	.42	2.8	12	.270	.83	.190	--	--	--
JUL												
22...	.46	.87	.34	.53	2.3	10	.410	1.3	.200	--	--	--
AUG												
18...	.47	1.2	.44	.76	2.7	12	.520	1.6	.370	--	--	--
SEP												
10...	.51	1.7	.20	1.5	3.5	16	.660	2.0	.470	1	0	1

02091500 CONTENTNEA CREEK AT HOOKERTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)
OCT												
02...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
06...	200	200	50	0	0	2	10	0	10	0	0	3
DEC												
11...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
29...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
24...	100	50	50	0	0	1	<10	0	10	0	0	1
APR												
21...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
14...	<50	<10	40	0	0	0	10	0	<10	0	0	0
JUN												
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
22...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
18...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
10...	100	0	100	0	0	0	10	0	20	0	0	0

DATE	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT												
02...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
06...	1	0	1	1100	490	610	1	1	0	30	10	20
DEC												
11...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
29...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
24...	2	0	3	720	580	140	0	0	0	30	20	10
APR												
21...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
14...	1	0	4	1700	1100	600	2	2	0	60	20	40
JUN												
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
22...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
18...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
10...	4	1	3	1300	970	330	4	2	2	80	10	70

02091500 CONTENTNEA CREEK AT HOOKERTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)
OCT												
02...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
06...	<.1	.0	<.1	5	5	0	0	0	0	0	0	0
DEC												
11...	--	--	--	--	--	--	--	--	--	0	--	--
JAN												
29...	--	--	--	--	--	--	--	--	--	0	--	--
MAR												
24...	.2	.0	.2	3	1	2	0	0	0	0	0	0
APR												
21...	--	--	--	--	--	--	--	--	--	0	--	--
MAY												
14...	.2	.0	.2	5	4	1	0	0	0	0	0	0
JUN												
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
22...	--	--	--	--	--	--	--	--	--	0	--	--
AUG												
18...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
10...	<.1	.0	<.1	9	9	0	1	1	0	0	0	0

DATE	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	BIOMASS CHLORO-PHYLL RATIO PERI-PHYTON (UNITS)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPO-SURE (DAYS)
OCT												
02...	--	--	--	14	--	--	--	--	--	--	--	--
NOV												
06...	20	10	10	--	12	.7	--	--	--	--	--	--
DEC												
11...	--	--	--	9.6	--	--	--	--	--	--	--	--
JAN												
29...	--	--	--	12	--	--	.550	.470	105	.760	.220	48
MAR												
24...	100	90	10	--	9.3	.9	--	--	--	--	--	--
APR												
21...	--	--	--	9.9	--	--	--	--	--	--	--	--
MAY												
14...	10	0	10	--	6.8	.9	2.05	1.73	305	1.05	.270	22
JUN												
23...	--	--	--	5.9	--	--	--	--	--	--	--	--
JUL												
22...	--	--	--	10	--	--	--	--	--	--	--	--
AUG												
18...	--	--	--	4.3	--	--	3.07	2.28	432	1.83	.720	27
SEP												
10...	150	140	10	--	6.4	1.3	--	--	--	--	--	--

02091500 CONTENTNEA CREEK AT HOOKERTON, N. C.--Continued

PHYTOPLANKTON ANALYSES, AUGUST 1979 TO SEPTEMBER 1979

DATE	AUG 1,79	SEP 10,79
TIME	1530	0945
TOTAL CELLS/ML	32000	620
DIVERSITY: DIVISION	1.3	0.8
.CLASS	1.3	0.8
..ORDER	1.9	1.7
...FAMILY	2.6	2.2
....GENUS	3.1	2.7

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)				
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...COELASTRACEAE				
....COELASTRUM	1500	5	--	-
...HYDRODICTYACEAE				
....PEDIASTRUM	*	0	--	-
...MICRACTINIACEAE				
....GOLENKINIA	*	0	--	-
....MICRACTINIUM	1500	5	--	-
...OOCYSTACEAE				
....ANKISTRODESMUS	1000	3	10	2
....CHLORELLA	--	-	15	2
....DICTYOSPHAERIUM	240	1	--	-
....GLOEOACTINIUM	240	1	--	-
....KIRCHNERIELLA	240	1	--	-
....SELENASTRUM	1400	4	--	-
....TETRAEDRON	240	1	--	-
...SCENEDESMACEAE				
....CRUCIGENIA	--	-	20	3
....SCENEDESMUS	5500#	17	30	5
....TETRASTRUM	640	2	--	-
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS	240	1	--	-
CHRYSOPHYTA				
.BACILLARIOPHYCEAE				
..CENTRALES				
...COSCINODISCACEAE				
....CYCLOTELLA	640	2	5	1
....MELOSIRA	720	2	--	-
....SKELETONEMA	--	-	10	2
....STEPHANODISCUS	640	2	--	-
..PENNALES				
...NITZSCHIACEAE				
....NITZSCHIA	*	0	20	3
CYANOPHYTA (BLUE-GREEN ALGAE)				
.CYANOPHYCEAE				
..CHROOCOCCALES				
...CHROOCOCCACEAE				
....AGMENELLUM	640	2	80	13
....ANACYSTIS	6700#	21	180#	28
..HORMOGONALES				
...NOSTOCACEAE				
....ANABAENA	--	-	170#	27
...OSCILLATORIACEAE				
....OSCILLATORIA	9700#	30	--	-
...RIVULARIACEAE				
....RAPHIDIOPSIS	--	-	86	14

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02091500 CONTENTNEA CREEK AT HOOKERTON, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO JULY 1980

DATE	NOV 6,79		MAR 24,80		MAY 14,80		JUN 23,80		JUL 22,80	
TIME	1330		1015		1530		1300		0945	
TOTAL CELLS/ML	1100		490		17000		49000		160000	
DIVERSITY: DIVISION	1.7		1.7		1.0		1.3		0.8	
.CLASS	1.7		1.7		1.0		1.4		0.8	
..ORDER	1.9		2.0		1.0		1.5		0.8	
...FAMILY	2.5		2.4		1.4		2.0		1.1	
....GENUS	3.0		2.5		1.7		3.3		1.6	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...CHARACIACEAE										
....SCHROEDERIA	--	-	--	-	*	0	--	-	*	0
...COELASTRACEAE										
....COELASTRUM	--	-	--	-	360	2	--	-	--	-
...HYDRODICTYACEAE										
....PEDIASTRUM	--	-	--	-	--	-	--	-	3500	2
...MICRACTINIACEAE										
....GOLENKINIA	--	-	--	-	140	1	*	0	--	-
....MICRACTINIUM	--	-	--	-	290	2	--	-	2700	2
...OOCYSTACEAE										
....ANKISTRODESMUS	26	2	100#	21	180	1	750	2	*	0
....CHLORELLA	--	-	--	-	--	-	450	1	--	-
....CHODATELLA	--	-	--	-	--	-	--	-	*	0
....DICTYOSPHAERIUM	190#	18	--	-	*	0	3800	8	4500	3
....GLOEOACTINIUM	--	-	--	-	--	-	1200	2	--	-
....OOCYSTIS	--	-	--	-	--	-	1500	3	--	-
....SELENASTRUM	--	-	13	3	430	3	--	-	--	-
....TETRAEDRON	--	-	--	-	110	1	300	1	--	-
...SCENEDESMACEAE										
....ACTINASTRUM	--	-	--	-	--	-	--	-	1800	1
....CRUCIGENIA	150	14	--	-	290	2	5400	11	3100	2
....SCENEDESMUS	150	14	52	11	2300	13	14000#	30	6200	4
....TETRASTRUM	--	-	--	-	290	2	3000	6	1300	1
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	26	2	39	8	220	1	*	0	*	0
....CHLOROGONIUM	--	-	--	-	--	-	--	-	*	0
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	13	1	13	3	250	1	1400	3	1500	1
....MELOSIRA	26	2	26	5	--	-	4800	10	1700	1
..PENNALES										
...FRAGILARIACEAE										
....SYNEDRA	--	-	--	-	--	-	*	0	--	-
...GOMPHONEMATACEAE										
....GOMPHONEMA	13	1	--	-	--	-	--	-	--	-
...NAVICULACEAE										
....NAVICULA	13	1	--	-	--	-	--	-	--	-
...NITZSCHIACEAE										
....NITZSCHIA	77	7	13	3	--	-	450	1	*	0
.XANTHOPHYCEAE										
..HETEROCOCCALES										
...CHLOROTHECIACEAE										
....OPHIOCYTIUM	--	-	--	-	--	-	450	1	--	-

02091500 CONTENTNEA CREEK AT HOOKERTON, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO JULY 1980

DATE TIME	NOV 6,79 1330		MAR 24,80 1015		MAY 14,80 1530		JUN 23,80 1300		JUL 22,80 0945	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHRYPTOPHYTA (CRYPTOMONADS)										
.CRYPTOPHYCEAE										
..CRYPTOMONADALES										
...CRYPTOCHRYSIDACEAE										
....CHROOMONAS	--	-	13	3	--	-	--	-	--	-
...CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	--	-	--	-	--	-	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....AGMENELLUM	--	-	--	-	--	-	--	-	7100	4
....ANACYSTIS	320#	30	210#	42	12000#	71	6600	14	120000#	77
....COCCOCHLORIS	--	-	--	-	--	-	3000	6	1300	1
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	39	4	13	3	--	-	*	0	*	0
....TRACHELOMONAS	--	-	--	-	--	-	300	1	*	0
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..PERIDINIALES										
...GLENODINIACEAE										
....GLENODINIUM	26	2	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02091500 CONTENTNEA CREEK AT HOOKERTON, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	105	83	79	78	101	64	82	83	110	118	126
2	82	105	71	82	81	81	65	80	86	106	127	125
3	80	103	71	82	82	79	65	73	88	119	130	129
4	80	104	70	79	94	82	63	71	86	91	137	137
5	82	99	72	82	86	83	63	71	88	91	142	133
6	84	97	73	80	85	82	64	74	92	89	108	132
7	93	108	75	88	86	88	68	77	98	94	128	140
8	85	101	75	88	88	79	70	81	94	94	132	126
9	90	76	81	89	86	68	74	80	103	96	147	116
10	131	76	83	83	89	68	75	84	98	97	108	128
11	148	76	79	85	86	69	77	86	98	93	146	126
12	87	76	75	86	84	67	78	86	97	98	122	144
13	89	81	74	84	86	65	78	86	103	99	128	166
14	89	81	75	84	86	68	76	90	108	97	120	165
15	89	85	74	90	82	68	76	94	108	103	142	160
16	93	78	73	86	82	69	76	91	111	105	142	160
17	100	78	79	81	81	71	87	93	96	107	133	146
18	97	71	77	82	80	69	72	98	99	116	135	137
19	100	72	77	82	80	68	67	98	104	122	128	137
20	100	72	80	82	82	64	67	97	100	127	156	138
21	100	76	82	82	80	64	65	94	110	137	131	141
22	98	79	81	86	83	64	70	88	109	118	137	154
23	95	85	82	86	84	62	73	86	111	147	162	154
24	93	115	82	77	85	63	73	63	113	147	165	156
25	96	84	80	86	86	63	76	68	113	108	121	148
26	100	84	82	84	84	63	82	66	107	108	110	148
27	96	82	81	78	84	64	80	73	109	98	108	130
28	100	83	80	78	82	65	82	73	71	127	116	144
29	98	85	82	80	82	65	83	79	86	108	116	118
30	100	81	80	79	---	65	81	86	99	118	117	111
31	103	---	74	85	---	65	---	82	---	118	120	---
MEAN	96	87	78	83	84	71	73	82	99	109	130	139

WTR YR 1980 MEAN 94 MAX 166 MIN 62

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	15.0	10.0	8.0	4.0	8.0	16.0	17.0	24.0	26.0	28.0	26.0
2	22.0	15.0	9.0	8.0	3.0	4.0	15.0	17.0	24.0	26.0	28.0	27.0
3	22.0	17.0	9.0	7.0	3.0	2.0	15.0	17.0	25.0	27.0	28.0	27.0
4	21.0	15.0	7.0	7.0	2.0	2.0	17.0	18.0	25.0	27.0	29.0	25.0
5	21.0	14.0	8.0	7.0	2.0	3.0	17.0	18.0	24.0	26.0	29.0	26.0
6	19.0	13.0	7.0	6.0	2.0	4.0	17.0	19.0	24.0	27.0	29.0	26.0
7	19.0	12.0	8.0	6.0	2.0	4.0	17.0	20.0	24.0	27.0	28.0	26.0
8	18.0	12.0	8.0	6.0	2.0	7.0	16.0	20.0	24.0	27.0	26.0	26.0
9	18.0	12.0	8.0	6.0	3.0	8.0	17.0	19.0	24.0	27.0	27.0	25.0
10	18.0	14.0	8.0	6.0	3.0	10.0	18.0	17.0	24.0	27.0	27.0	25.0
11	16.0	15.0	9.0	8.0	3.0	10.0	18.0	18.0	24.0	27.0	27.0	24.0
12	15.0	15.0	7.0	8.0	3.0	11.0	18.0	19.0	23.0	27.0	28.0	23.0
13	16.0	14.0	9.0	8.0	3.0	10.0	18.0	20.0	22.0	28.0	27.0	23.0
14	15.0	13.0	9.0	8.0	3.0	9.0	18.0	22.0	22.0	27.0	27.0	24.0
15	15.0	13.0	9.0	8.0	4.0	9.0	18.0	21.0	23.0	26.0	28.0	25.0
16	15.0	11.0	10.0	8.0	5.0	10.0	17.0	20.0	25.0	27.0	28.0	25.0
17	15.0	11.0	10.0	8.0	3.0	11.0	16.0	20.0	25.0	27.0	27.0	25.0
18	15.0	11.0	8.0	8.0	3.0	12.0	15.0	21.0	24.0	28.0	26.0	25.0
19	15.0	11.0	7.0	8.0	2.0	12.0	15.0	22.0	21.0	28.0	25.0	25.0
20	16.0	11.0	7.0	8.0	3.0	13.0	16.0	22.0	23.0	28.0	25.0	25.0
21	17.0	11.0	6.0	8.0	5.0	14.0	17.0	22.0	23.0	29.0	27.0	24.0
22	17.0	12.0	6.0	8.0	10.0	14.0	17.0	23.0	22.0	29.0	26.0	25.0
23	16.0	12.0	6.0	9.0	11.0	13.0	18.0	23.0	23.0	29.0	25.0	25.0
24	17.0	14.0	9.0	8.0	12.0	13.0	18.0	23.0	24.0	27.0	25.0	26.0
25	16.0	14.0	10.0	8.0	13.0	15.0	19.0	22.0	23.0	26.0	24.0	26.0
26	15.0	16.0	9.0	8.0	11.0	14.0	20.0	23.0	23.0	26.0	24.0	25.0
27	13.0	15.0	9.0	8.0	10.0	14.0	20.0	22.0	23.0	26.0	24.0	24.0
28	12.0	15.0	8.0	7.0	9.0	14.0	20.0	21.0	24.0	26.0	24.0	22.0
29	13.0	15.0	7.0	7.0	9.0	14.0	19.0	22.0	25.0	26.0	25.0	21.0
30	14.0	13.0	7.0	7.0	---	14.0	18.0	22.0	26.0	26.0	25.0	20.0
31	14.0	---	7.0	5.0	---	14.0	---	23.0	---	27.0	26.0	---
MEAN	16.5	13.5	8.0	7.5	5.0	10.0	17.5	20.5	23.5	27.0	26.5	24.5

WTR YR 1980 MEAN 16.5 MAX 29.0 MIN 2.0

02091500 CONTENTNEA CREEK AT HOOKERTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
02...	1400	1100	36	107	95
NOV					
06...	1330	403	40	44	66
DEC					
11...	1430	785	11	23	74
JAN					
29...	1530	1360	9	33	87
MAR					
24...	1015	2680	20	145	61
APR					
21...	0930	1400	12	45	92
MAY					
14...	1530	243	10	6.6	92
JUN					
23...	1300	87	14	3.3	80
JUL					
22...	0945	64	17	2.9	96
AUG					
18...	1100	50	15	2.0	97
SEP					
10...	1200	82	10	2.2	85

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH LAB (UNITS)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	LAB ALKA-LINITY (MG/L AS CACO3)
DEC										
17...	1200	779	50	6.4	8.0	9.5	29	1.8	250	8
FEB										
08...	1145	764	--	6.7	2.0	11.0	20	1.2	<10	17
MAR										
13...	1115	2690	50	6.3	9.0	9.0	24	1.9	110	8
APR										
15...	1330	906	65	6.4	17.0	6.0	31	2.1	950	9
MAY										
05...	1345	940	55	6.4	19.0	6.8	33	1.2	280	10
JUN										
09...	1130	127	80	6.6	21.0	6.4	23	2.7	120	15
AUG										
21...	1500	121	200	6.8	25.0	5.2	23	2.5	1700	19
SEP										
16...	1450	43	--	6.8	23.5	6.1	20	1.9	50	20

02091700 LITTLE CONTENTNEA CREEK NEAR FARMVILLE, N. C.

LOCATION.--Lat 35°32'08", long 77°30'41", Pitt County, Hydrologic Unit 03020203, near center of span on downstream side of bridge on U.S. Highway 264, 1.5 mi (2.4 km) upstream from Middle Swamp, and 5.5 mi (8.8 km) southeast of Farmville.

DRAINAGE AREA.--93.3 mi² (241.6 km²).

PERIOD OF RECORD.--Occasional low-flow measurements water years 1952-54, 1956. October 1956 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 30 ft (9 m), from topographic map. Oct. 1, 1956, to Aug. 19, 1958, and June 23, 1964, to Aug. 24, 1965, nonrecording gage at same site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--24 years, 119 ft³/s (3.370 m³/s), 17.32 in/yr (440 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,170 ft³/s (146 m³/s) Oct. 6, 1964 gage height, 19.65 ft (5.989 m) from floodmark, from rating curve extended above 1,500 ft³/s (42.5 m³/s); no flow part of each day July 30, 31, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August and September 1955 reached stages of 18.9 ft (5.76 m) and 18.5 ft (5.64 m), respectively.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 660 ft³/s (18.7 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar 8	1300	*825	23.4	*13.24	4.036	Mar 31	1530	724	20.5	12.89	3.929
Mar 19	0730	718	20.3	12.87	3.923						

Minimum discharge, 0.45 ft³/s (0.013 m³/s) Sept. 2, 3, gage height, 6.62 ft (2.018 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	467	18	91	50	240	87	666	159	8.2	4.3	4.7	.71
2	535	19	69	46	200	76	564	94	6.8	3.4	38	.53
3	471	28	56	42	160	77	388	62	6.8	2.9	17	.79
4	291	78	50	40	120	82	249	45	5.9	2.9	8.5	4.2
5	161	62	47	60	100	166	182	34	5.3	2.7	6.5	4.5
6	108	49	52	77	90	436	129	28	4.8	2.2	6.7	14
7	80	37	90	79	160	743	97	23	3.9	1.8	13	13
8	60	31	106	82	220	814	81	19	3.5	2.5	8.8	4.0
9	47	28	92	168	200	781	75	18	3.0	2.8	5.7	3.0
10	37	26	72	314	300	654	67	15	3.8	3.1	3.1	2.7
11	34	31	61	324	400	490	57	12	4.5	7.5	2.2	2.6
12	32	179	55	381	440	342	48	11	4.1	4.6	2.7	2.4
13	29	322	62	398	380	314	64	11	3.6	2.6	3.8	1.6
14	38	325	169	338	300	455	199	10	2.4	1.7	3.6	1.4
15	44	246	196	271	342	448	320	9.3	2.1	2.2	3.0	1.2
16	40	165	156	239	341	352	249	8.0	1.8	2.4	2.4	1.4
17	35	115	112	202	330	242	153	6.9	3.4	2.1	1.5	1.9
18	31	88	86	175	320	460	94	7.8	4.6	2.1	.99	2.1
19	27	72	71	204	260	706	69	18	4.6	1.5	1.7	2.2
20	25	62	61	310	200	692	54	11	3.6	1.1	3.3	1.8
21	23	55	55	382	160	606	45	24	2.2	.83	3.2	1.3
22	21	49	50	446	120	433	40	21	1.7	1.1	3.5	.86
23	20	43	47	381	100	305	35	39	1.2	2.7	3.2	1.1
24	23	40	50	340	110	213	29	128	1.9	11	1.9	1.8
25	25	39	75	300	120	180	26	77	2.8	4.8	1.1	2.7
26	24	60	100	260	125	186	23	198	24	2.5	1.3	3.1
27	22	160	120	220	138	168	20	63	207	1.7	1.9	2.7
28	21	245	100	240	134	128	175	29	34	2.9	2.0	1.9
29	19	214	80	260	112	351	177	20	11	16	1.9	1.5
30	19	135	70	200	---	565	202	15	6.1	7.8	1.6	3.4
31	19	---	60	220	---	696	---	11	---	4.3	1.0	---
TOTAL	2828	3021	2561	7049	6222	12248	4577	1227.0	378.6	112.03	159.79	86.39
MEAN	91.2	101	82.6	227	215	395	153	39.6	12.6	3.61	5.15	2.88
MAX	535	325	196	446	440	814	666	198	207	16	38	14
MIN	19	18	47	40	90	76	20	6.9	1.2	.83	.99	.53
CFSM	.98	1.08	.89	2.43	2.30	4.23	1.64	.42	.14	.04	.06	.03
IN.	1.13	1.20	1.02	2.81	2.48	4.88	1.82	.49	.15	.04	.06	.03

CAL YR 1979 TOTAL 61046.70 MEAN 167 MAX 2970 MIN 2.2 CFSM 1.79 IN 24.34
WTR YR 1980 TOTAL 40469.81 MEAN 111 MAX 814 MIN .53 CFSM 1.19 IN 16.14

02091836 NEUSE RIVER AT STREETS FERRY NEAR VANCEBORO, N. C.
(Radiochemical station)

LOCATION.--Lat 35°12'20", long 77°07'40", Craven County, Hydrologic Unit 03020202, at bridge on Secondary Road 1400 at Streets Ferry, 1.4 mi (2.3 km) above the Gut, and 7 mi (11 km) south of Vanceboro.

DRAINAGE AREA.--4,040 mi² (10,460 km²).

PERIOD OF RECORD.--Water years 1955-66, 1969 to current year.

REMARKS.--Station operated as part of Radiochemical Network from October 1969 to present. Tritium determinations for period November 1979 to September 1980 were not available at time of this publication. Salinity station prior to October 1966; chemical analysis and temperature values were determined on integrated samples collected three times daily from September 1954 to September 1957, and top (T) and bottom (B) samples collected once daily from October 1957 to September 1964. Daily records of specific conductance for water years 1954-64 available in files of district office in Raleigh, N. C. Records prior to water year 1958 published as Neuse River near Vanceboro.

WATER QUALITY DATA, PERIOD APRIL TO OCTOBER 1979

DATE	TRITIUM IN WATER MOLECULES (TU)	TRITIUM WATER MOLECULES COUNT ERROR (TU)
APR 03...	33.1	1.6
MAY 01...	33.2	1.7
JUN 01...	29.2	1.5
JUL 03...	38.4	1.8
AUG 02...	33.8	1.5
SEP 03...	33.1	1.6
OCT 02...	23.2	1.4

02091970 CREEPING SWAMP NEAR VANCEBORO, N. C.

LOCATION.--Lat 35°23'30", long 77°13'46", Craven County, Hydrologic Unit 03020202, on left bank at downstream side of bridge on State Highway 43, 1.0 mi (1.6 km) upstream from mouth, and 7.9 mi (12.7 km) northwest of Vanceboro.

DRAINAGE AREA.--27 mi² (70 km²), approximately.

PERIOD OF RECORD.--March 1971 to current year.

GAGE.--Water-stage recorder and concrete control with a parabolic shaped sharp-crested weir. Datum of gage is National Geodetic Vertical Datum of 1929 (Soil Conservation Service benchmark). Prior to Oct. 1, 1972, at datum, 16.60 ft (5.060 m) higher.

REMARKS.--Records good.

AVERAGE DISCHARGE.--9 years, 39.3 ft³/s (1.113 m³/s), 19.77 in/yr (502 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,810 ft³/s (51.3 m³/s) Oct. 1, 1971, gage height, 24.53 ft (7.477 m) present datum; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s (7.08 m³/s) and maximum (*):

		Discharge		Gage height				Discharge		Gage height	
Date	Time	(ft³/s)	(m³/s)	(ft)	(m)	Date	Time	(ft³/s)	(m³/s)	(ft)	(m)
Mar 8	1100	*494	14.0	*22.11	6.739	Mar 31	0630	327	9.26	21.68	6.608

No flow June 14-16, July 6 to Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	1.0	67	13	.47	24	268	102	6.3	.04		
2	85	.89	51	12	44	20	179	67	4.2	.02		
3	76	1.0	39	11	38	15	113	46	2.3	.01		
4	57	1.1	31	11	33	17	79	31	1.2	.01		
5	43	1.1	27	14	30	29	59	22	.67	.01		
6	33	1.1	27	17	31	95	45	15	.34	.00		
7	26	1.1	41	16	34	299	35	10	.17	.00		
8	20	.96	45	20	42	482	29	8.0	.10	.00		
9	16	.89	42	41	46	444	26	6.2	.06	.00		
10	13	.81	40	57	65	342	22	4.6	.04	.00		
11	11	3.4	35	68	105	237	19	3.4	.03	.00		
12	9.8	40	31	141	130	153	16	2.3	.02	.00		
13	8.3	65	28	158	122	147	21	1.4	.01	.00		
14	7.5	77	37	143	96	173	66	.97	.00	.00		
15	6.4	80	43	116	77	149	112	.67	.00	.00		
16	5.4	67	39	97	69	112	109	.43	.00	.00		
17	4.4	53	34	80	67	81	88	.26	.14	.00		
18	3.5	41	29	69	61	92	63	.60	.13	.00		
19	2.6	32	25	68	53	107	46	7.0	.34	.00		
20	1.9	26	23	63	47	97	33	9.9	.57	.00		
21	1.4	22	20	56	42	85	26	42	.53	.00		
22	1.2	19	18	51	37	72	21	51	.37	.00		
23	.98	16	17	58	33	58	17	62	.21	.00		
24	1.7	14	16	74	31	49	15	64	.10	.00		
25	2.7	13	17	72	28	61	18	83	.08	.00		
26	3.0	40	18	67	30	62	15	79	.17	.00		
27	2.6	131	17	60	31	56	14	44	.18	.00		
28	2.2	155	16	60	29	50	129	26	.11	.00		
29	1.9	134	14	56	27	156	162	18	.07	.00		
30	1.5	95	14	52	---	260	151	13	.05	.00		
31	1.2	---	13	48	---	321	---	9.0	---	.00		
TOTAL	527.18	1133.35	914	1869	1525	4345	1996	829.73	18.49	.09	.00	.00
MEAN	17.0	37.8	29.5	60.3	52.6	140	66.5	26.8	.62	.003	.000	.000
MAX	85	155	67	158	130	482	268	102	6.3	.04	.00	.00
MIN	.98	.81	13	11	27	15	14	.26	.00	.00	.00	.00
CFSM	.63	1.40	1.09	2.23	1.95	5.19	2.46	.99	.02	.000	.000	.000
IN.	.73	1.56	1.26	2.57	2.10	5.99	2.75	1.14	.03	.00	.00	.00

CAL YR 1979 TOTAL 24261.07 MEAN 66.5 MAX 853 MIN .00 CFSM 2.46 IN 33.43
WTR YR 1980 TOTAL 13157.84 MEAN 36.0 MAX 482 MIN .00 CFSM 1.33 IN 18.13

02092000 SWIFT CREEK NEAR VANCEBORO, N. C.

LOCATION.--Lat 35°20'42", long 77°11'45", Craven County, Hydrologic Unit 03020202, on left bank at downstream side of bridge on Secondary Road 1478, 2.5 mi (4.0 km) upstream from bridge on State Highway 118, 2.5 mi (4.0 km) downstream from Clayroot Swamp, and 3.5 mi (5.6 km) northwest of Vanceboro.

DRAINAGE AREA.--182 mi^2 (471 km^2).

PERIOD OF RECORD.--January 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2.07 ft (0.631 m) below National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Jan. 17, 1951, nonrecording gage and Jan. 17, 1951, to Sept. 30, 1964, water-stage recorder at same site at datum 6.00 ft (1.829 m) higher.

REMARKS.--Records fair. During 1964, the channel was canalized from a point 12.2 mi (19.6 km) upstream to a point 2.5 mi (4.0 km) downstream from the gage.

AVERAGE DISCHARGE.--30 years, 212 ft^3/s (6.004 m^3/s), 15.82 in/yr (402 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,060 ft^3/s (172 m^3/s) Sept. 22, 1955, gage height, 19.67 ft (6.000 m), present datum; no flow Aug. 8-29, Oct. 4 to Nov. 9, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1909 reached a stage of 22 ft (6.7 m), present datum, and flood in 1928 reached a stage of 17.7 ft (5.39 m), present datum, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,090 ft^3/s (59.2 m^3/s) Mar. 9, gage height 13.06 ft (3.981 m); minimum discharge, 4.3 ft^3/s (0.12 m^3/s) Sept. 3; minimum gage height, 4.35 ft (1.326 m) Sept. 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1150	27	309	86	235	168	1690	709	117	91	13	5.4
2	975	26	235	82	213	160	1380	470	103	66	88	5.2
3	645	26	186	78	192	152	1080	311	99	50	88	4.7
4	397	34	156	74	178	169	792	229	81	42	57	19
5	267	35	136	88	164	209	532	177	74	38	38	24
6	201	32	131	107	158	548	346	142	70	42	28	21
7	154	30	200	110	159	1380	257	111	64	39	23	30
8	120	29	239	110	162	1910	210	89	63	31	27	22
9	97	28	230	230	171	2010	183	78	59	27	35	14
10	82	28	200	319	316	1790	163	69	56	25	27	10
11	72	40	176	336	593	1460	142	61	53	26	20	8.5
12	65	152	156	778	622	1130	127	55	56	31	18	7.5
13	59	246	146	798	592	1000	139	49	54	28	22	7.0
14	54	264	200	707	512	1150	300	44	50	24	21	6.1
15	55	255	218	610	418	963	569	40	48	21	17	5.6
16	51	222	214	507	360	752	523	36	48	19	14	5.2
17	46	188	193	419	342	578	389	34	52	18	12	5.3
18	42	154	167	343	304	848	285	45	58	17	11	5.0
19	38	129	147	360	267	1380	221	89	70	17	10	6.4
20	37	99	125	363	240	1070	177	86	62	16	14	6.9
21	36	99	114	312	218	804	149	875	50	16	17	6.5
22	34	91	114	269	201	666	129	808	43	15	14	6.1
23	33	83	107	311	194	512	115	584	37	15	12	5.7
24	37	77	103	438	186	415	103	465	32	74	11	6.0
25	44	73	107	434	180	402	102	415	31	63	9.5	8.7
26	41	244	119	346	179	389	95	847	66	37	8.3	20
27	37	584	118	301	188	341	90	593	201	25	7.4	20
28	35	616	110	328	185	298	827	347	126	20	6.8	15
29	32	548	102	319	178	974	1060	227	87	19	6.4	13
30	31	422	96	280	---	1580	916	167	75	19	6.1	17
31	29	---	91	260	---	1840	---	137	---	16	5.8	---
TOTAL	4996	4881	4945	10103	7907	27048	13091	8389	2085	987	687.3	336.8
MEAN	161	163	160	326	273	873	436	271	69.5	31.8	22.2	11.2
MAX	1150	616	309	798	622	2010	1690	875	201	91	88	30
MIN	29	26	91	74	158	152	90	34	31	15	5.8	4.7
CFSM	.89	.90	.88	1.79	1.50	4.80	2.40	1.49	.38	.18	.12	.06
IN.	1.02	1.00	1.01	2.06	1.62	5.53	2.68	1.71	.43	.20	.14	.07

CAL YR 1979 TOTAL 122586.0 MEAN 336 MAX 3140 MIN 22 CFSM 1.85 IN 25.06
WTR YR 1980 TOTAL 85456.1 MEAN 233 MAX 2010 MIN 4.7 CFSM 1.28 IN 17.47

02092500 TRENT RIVER NEAR TRENTON, N. C.

LOCATION.--Lat 35°03'55", long 77°27'25", Jones County, Hydrologic Unit 03020204, on left bank 50 ft (15 m) downstream from Free Bridge on Secondary Road 1129, 800 ft (244 m) downstream from Little Chinquapin Branch, 1.5 mi (2.4 km) southwest of Phillips Crossroads, and 6 mi (10 km) west of Trenton.

DRAINAGE AREA.--168 mi^2 (435 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 19.15 ft (5.837 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 21, 1951, nonrecording gage on bridge 50 ft (15 m) upstream at same datum.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--29 years, 202 ft^3/s (5.721 m^3/s), 16.33 in/yr (415 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,100 ft^3/s (258 m^3/s) Sept. 21, 1955, gage height, 17.84 ft (5.438 m); minimum, 1.3 ft^3/s (0.037 m^3/s) Oct. 11-15, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1928 reached a stage of 17.3 ft (5.27 m), discharge, 7,600 ft^3/s (215 m^3/s), from information furnished by North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,860 ft^3/s (52.7 m^3/s) Apr. 1, gage height, 13.66 ft (4.164 m); minimum, 3.3 ft^3/s (0.093 m^3/s) Sept. 2, 3; minimum gage height, 2.33 ft (0.710 m) Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	456	57	455	89	248	177	1830	378	249	130	50	3.6
2	1010	52	357	84	236	158	1680	344	150	75	39	3.4
3	1280	49	250	78	223	125	1260	271	101	46	32	3.7
4	1120	49	180	73	204	127	824	178	76	74	27	4.3
5	751	50	147	79	177	161	620	131	60	326	22	4.8
6	566	48	135	95	160	261	456	100	49	536	22	20
7	405	42	176	103	156	550	345	78	43	489	47	35
8	287	39	237	107	164	1130	263	63	42	346	41	38
9	216	38	286	133	177	1600	213	56	40	206	28	29
10	164	39	323	180	281	1770	184	50	35	139	20	17
11	132	46	324	223	411	1540	167	45	31	231	15	12
12	110	122	281	328	561	1160	149	40	29	284	12	9.2
13	88	182	225	439	680	1010	198	37	26	253	11	7.9
14	73	214	185	579	662	1010	520	34	23	190	9.9	7.0
15	64	221	163	634	573	1070	833	39	21	147	9.0	7.0
16	58	213	148	581	472	1100	1030	39	19	108	8.2	7.0
17	53	189	137	497	389	1070	980	31	18	70	7.5	7.9
18	49	156	128	412	319	1040	771	41	24	46	6.9	8.7
19	46	131	119	353	274	1100	570	143	58	34	8.1	12
20	42	114	111	325	247	1070	413	226	76	27	8.6	15
21	39	101	104	319	229	930	255	344	72	23	7.9	16
22	37	91	98	303	214	760	193	410	54	20	7.3	16
23	36	83	93	307	200	610	154	491	40	18	6.8	13
24	41	77	88	358	205	520	128	575	29	37	6.0	11
25	51	76	88	412	224	610	109	569	25	64	5.4	11
26	64	156	99	456	227	390	94	728	40	72	5.0	14
27	64	378	106	454	221	347	83	1020	60	82	4.7	20
28	64	461	106	423	211	327	150	1060	102	93	4.5	53
29	67	540	101	370	196	565	247	893	146	100	4.2	82
30	68	530	97	309	---	898	335	668	162	88	4.0	82
31	64	---	92	266	---	1550	---	438	---	68	3.8	---
TOTAL	7565	4544	5439	9369	8541	24736	15054	9520	1900	4422	483.8	570.5
MEAN	244	151	175	302	295	798	502	307	63.3	143	15.6	19.0
MAX	1280	540	455	634	680	1770	1830	1060	249	536	50	82
MIN	36	38	88	73	156	125	83	31	18	18	3.8	3.4
CFSM	1.45	.90	1.04	1.80	1.76	4.75	2.99	1.83	.38	.85	.09	.11
IN.	1.68	1.01	1.20	2.07	1.89	5.48	3.33	2.11	.42	.98	.11	.13

CAL YR 1979 TOTAL 91551.1 MEAN 251 MAX 2240 MIN 7.6 CFSM 1.49 IN 20.27
WTR YR 1980 TOTAL 92144.3 MEAN 252 MAX 1830 MIN 3.4 CFSM 1.50 IN 20.40

02092500 TRENT RIVER NEAR TRENTON, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952-53, 1955-63, 1965-67, 1979 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1955 to December 1962, October 1978 to current year.
WATER TEMPERATURES: October 1951 to September 1953, January 1955 to December 1962, December 1964 to May 1967, October 1978 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1978.

REMARKS.--Station is part of district's Primary Accounting Network used to define stream-quality characteristics of the State's major streams. Daily records of specific conductance for period January 1955 to December 1962 are available in the district office in Raleigh, N. C. Malfunctions of water-quality monitor caused some loss of daily records during December 1979, January, March and July 1980.

COOPERATION.--Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 284 micromhos Nov. 17, 1978; minimum daily, 31 micromhos July 2, 5, 6, 1962.
WATER TEMPERATURES: Maximum daily, 30.0°C June 17, 1957; minimum daily, 0.0°C on many days during most winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 261 micromhos Sept. 6; minimum, 45 micromhos Mar. 7.
WATER TEMPERATURES: Maximum, 28.0°C Aug. 15; minimum, 0.0°C Feb. 3, Mar. 6.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT											
01...	1115	405	75	5.5	23.0	200	6.0	32	11	11	1.0
JAN											
29...	1200	368	79	6.1	7.5	2	9.9	28	15	9.6	1.0
APR											
21...	1045	269	85	7.3	15.0	75	7.3	35	10	12	1.1
MAY											
13...	1300	35	170	--	19.5	--	--	--	--	--	--
JUN											
16...	1420	19	190	7.1	23.5	40	6.2	84	20	31	1.7
AUG											
19...	1000	8.4	195	6.4	23.0	40	4.7	90	19	33	1.8
SEP											
10...	1400	16	155	6.7	23.0	--	--	--	--	--	--

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT											
01...	3.1	17	.2	1.5	25	0	21	126	5.4	7.8	.0
JAN											
29...	3.8	22	.3	1.0	16	0	13	20	9.0	8.4	.1
APR											
21...	2.9	15	.2	1.2	30	0	25	2.4	7.9	6.5	.1
MAY											
13...	--	--	--	--	--	--	--	--	--	--	--
JUN											
16...	3.9	9	.2	1.3	78	0	64	9.0	13	7.3	.1
AUG											
19...	3.9	8	.2	1.5	76	0	*71	55	13	6.8	.1
SEP											
10...	--	--	--	--	--	--	--	--	--	--	--

* Lab alkalinity.

02092500 TRENT RIVER NEAR TRENTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO GEN, AMMONIA TOTAL (MG/L AS N)
OCT											
01...	5.7	94	48	.13	103	.14	.02	.16	.16	--	.03
JAN											
29...	5.2	80	46	.11	79.5	.37	.01	.38	.38	--	.01
APR											
21...	4.0	70	53	.10	50.8	.52	.01	.53	.53	4.0	.05
MAY											
13...	--	--	--	--	--	--	--	--	--	--	--
JUN											
16...	5.6	124	110	.17	6.36	1.6	.01	1.6	1.7	--	.03
AUG											
19...	6.8	124	113	.17	2.81	.99	.01	1.0	.85	--	.06
SEP											
10...	--	--	--	--	--	--	--	--	--	--	--

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO-GEN, TOTAL (MG/L AS N)
OCT										
01...	.00	.04	.00	.90	.58	.93	.35	.58	--	1.1
JAN										
29...	.01	.01	.01	.38	.37	.39	.01	.38	--	.77
APR										
21...	.05	.06	.06	.40	.27	.45	.13	.32	2700	.98
MAY										
13...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	.07	.04	.09	.31	.17	.34	.10	.24	--	1.9
AUG										
19...	.06	.07	.08	.20	.19	.26	.01	.25	--	1.3
SEP										
10...	--	--	--	--	--	--	--	--	--	--

DATE	NITRO-GEN, TOTAL (MG/L AS NO3)	NITRO-GEN, TOT IN BOT-TOM MA-TERIAL (MG/KG AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS PO4)	PHOS-PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)
OCT										
01...	4.8	--	.070	.09	.21	.040	.03	.00	.00	--
JAN										
29...	3.4	--	.030	.00	.09	.020	.00	.00	.00	--
APR										
21...	4.3	2700	.060	.06	.18	.030	.02	.01	.03	450
MAY										
13...	--	--	--	--	--	--	--	--	--	--
JUN										
16...	8.6	--	.070	.15	.21	.080	.05	.05	.15	--
AUG										
19...	5.6	--	.050	.15	.15	.080	.05	.03	.09	--
SEP										
10...	--	--	--	--	--	--	--	--	--	--

02092500 TRENT RIVER NEAR TRENTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)
OCT 01...	--	--	<10	<10	0	--	--	1	1	0
JAN 29...	--	--	20	1	19	--	--	0	0	4
APR 21...	0	<10	10	8	2	<10	<10	7	6	1
MAY 13...	--	--	--	--	--	--	--	--	--	--
JUN 16...	--	--	10	0	12	--	--	2	1	1
AUG 19...	--	--	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--	--	--

DATE	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 01...	--	860	420	440	--	3	2	1	--	--
JAN 29...	--	380	160	220	--	1	0	3	--	--
APR 21...	<10	550	220	330	1400	3	1	2	10	30
MAY 13...	--	--	--	--	--	--	--	--	--	--
JUN 16...	--	500	190	310	--	1	1	0	--	--
AUG 19...	--	--	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--	--	--

DATE	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED (MG/L AS C)
OCT 01...	--	--	60	60	4	--	20	1.0
JAN 29...	--	--	20	0	20	--	11	.5
APR 21...	.00	0	10	5	5	10	14	.5
MAY 13...	--	--	--	--	--	--	--	--
JUN 16...	--	--	10	4	6	--	12	.4
AUG 19...	--	--	--	--	--	--	6.8	.6
SEP 10...	--	--	--	--	--	--	--	--

02092500 TRENT RIVER NEAR TRENTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)	PERIPHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERIPHYTON BIOMASS ASH WEIGHT G/SQ M	LENGTH OF EXPOSURE (DAYS)
OCT 01...	--	--	--	.10	.880	.300	45
JAN 29...	--	--	--	.00	--	--	--
APR 21...	9.1	.9	10	.00	--	--	--
MAY 13...	--	--	--	--	--	--	--
JUN 16...	--	--	--	.00	--	--	--
AUG 19...	--	--	--	.10	--	--	--
SEP 10...	--	--	--	--	--	--	--

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE	OCT 1,79	JAN 29,80	APR 21,80	JUN 16,80	AUG 19,80
TIME	1115	1200	1045	1420	1000
TOTAL CELLS/ML	39	620	64	90	310
DIVERSITY: DIVISION	0.9	0.2	0.7	2.1	0.9
.CLASS	0.9	0.2	0.7	2.1	0.9
..ORDER	0.9	0.3	0.7	2.1	0.9
...FAMILY	0.9	0.7	0.7	2.1	0.9
....GENUS	0.9	0.9	0.7	2.1	0.9

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...OOCYSTACEAE										
....ANKISTRODESMUS	13#	33	6	1	--	-	--	-	--	-
....CHLORELLA	--	-	540#	87	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	6	1	--	-	--	-	--	-
...SCENEDESMACEAE										
....CRUCIGENIA	--	-	23	4	--	-	--	-	--	-
....SCENEDESMUS	--	-	23	4	52#	80	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	6	1	--	-	13	14	26	8
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	--	-	11	2	--	-	--	-	--	-
..PENNALES										
...NAVICULACEAE										
....NAVICULA	--	-	--	-	--	-	--	-	13	4
...NITZSCHIACEAE										
....NITZSCHIA	--	-	6	1	13#	20	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
.CRYPTOPHYCEAE										
..CRYPTOMONADALES										
...CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	--	-	--	-	13	14	260#	83
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	--	-	--	-	--	-	39#	43	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	26#	67	--	-	--	-	13	14	13	4
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..PERIDINIALES										
...GLENODINIACEAE										
....GLENODINIUM	--	-	--	-	--	-	13	14	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02092500 TRENT RIVER NEAR TRENTON, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	79	67	73	132	129	130	84	81	83	---	---	119
2	66	59	62	136	131	134	89	84	87	---	---	121
3	59	58	58	142	136	139	96	90	93	---	---	123
4	63	59	60	142	140	141	104	96	101	---	---	125
5	70	63	66	146	142	144	108	105	106	---	---	123
6	78	70	74	147	140	142	111	108	110	---	---	117
7	86	78	82	146	142	143	108	99	104	---	---	115
8	90	86	88	148	145	147	99	91	95	---	---	114
9	98	90	94	148	146	147	90	86	88	---	---	108
10	106	98	102	151	145	148	85	82	84	---	---	100
11	114	106	110	155	150	152	85	82	83	---	---	96
12	123	114	118	153	116	131	89	85	87	---	---	88
13	134	123	129	119	104	111	93	90	91	---	---	83
14	141	134	137	104	100	102	101	94	98	---	---	78
15	146	140	143	100	96	97	104	101	102	---	---	77
16	150	146	148	96	95	96	105	104	105	---	---	78
17	156	150	153	100	96	98	108	104	106	---	---	80
18	160	154	157	107	101	104	106	104	105	---	---	84
19	166	160	162	111	107	110	108	105	107	---	---	86
20	168	164	166	116	112	114	109	108	109	---	---	88
21	172	168	170	122	116	119	111	109	110	---	---	88
22	175	171	173	126	122	123	113	111	112	---	---	89
23	179	174	176	131	125	127	114	112	113	---	---	90
24	180	174	178	135	130	132	117	112	114	---	---	86
25	177	167	172	136	132	134	121	119	120	---	---	84
26	166	156	162	134	95	119	---	---	116	---	---	82
27	156	145	149	95	83	88	---	---	114	---	---	82
28	144	135	138	83	81	82	---	---	113	---	---	84
29	136	131	133	82	79	80	---	---	116	81	80	81
30	132	127	129	81	79	80	---	---	117	84	82	83
31	129	126	128	---	---	---	---	---	118	84	81	83
MONTH	180	58	125	155	79	120	121	81	103	84	80	95
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	85	80	83	100	95	98	50	49	49	78	77	77
2	85	81	84	106	98	103	52	50	51	82	78	80
3	86	82	83	112	101	106	58	52	55	88	82	85
4	88	83	86	101	86	94	65	58	62	102	89	95
5	95	86	89	86	64	78	72	65	69	114	102	108
6	99	88	91	64	46	58	78	72	75	123	113	118
7	111	89	96	48	45	47	84	78	81	134	124	129
8	96	86	91	54	47	51	92	84	88	143	134	138
9	95	92	94	56	46	50	99	92	96	151	143	147
10	93	68	79	59	53	57	105	99	102	158	151	155
11	69	64	68	61	53	58	109	104	106	165	158	162
12	68	61	65	61	56	60	114	107	110	171	166	169
13	64	61	63	59	54	57	117	66	103	174	170	172
14	67	64	65	61	56	59	75	60	68	177	171	175
15	72	67	69	65	60	63	64	58	59	177	174	176
16	77	71	74	66	64	65	62	57	59	175	174	174
17	84	75	81	66	63	65	60	59	59	178	173	176
18	86	84	85	64	61	63	66	60	63	180	153	177
19	87	85	87	71	56	66	72	66	69	145	94	109
20	88	87	88	76	68	73	85	72	77	115	77	95
21	91	87	89	80	71	77	92	83	88	76	70	73
22	98	91	94	84	79	82	103	93	98	74	70	72
23	100	89	97	---	---	78	111	103	107	70	68	69
24	102	99	100	---	---	80	119	111	115	67	66	66
25	99	95	97	---	---	78	125	119	122	68	67	68
26	95	93	94	83	81	82	133	125	129	68	58	65
27	94	87	93	81	80	81	139	133	136	58	55	56
28	97	93	95	82	80	82	139	115	123	58	55	56
29	100	89	98	81	58	67	115	86	105	62	58	60
30	---	---	---	59	54	58	85	77	80	68	62	65
31	---	---	---	53	49	50	---	---	---	77	69	73
MONTH	111	61	85	112	45	71	139	49	87	180	55	111

02092500 TRENT RIVER NEAR TRENTON, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	90	78	83	107	97	101	113	109	112	252	248	249
2	106	92	100	119	108	114	120	114	118	254	250	251
3	118	107	113	128	120	124	124	120	122	255	242	251
4	131	118	125	132	102	124	129	122	126	251	245	249
5	138	132	135	---	---	88	137	129	133	256	252	254
6	149	139	144	---	---	80	150	134	140	261	238	256
7	153	149	152	---	---	81	121	100	108	244	184	227
8	159	153	156	---	---	87	128	121	126	194	141	174
9	163	158	161	---	---	98	138	125	132	147	138	142
10	168	163	165	---	---	107	146	139	142	159	148	153
11	171	167	170	---	---	95	151	144	147	163	158	160
12	176	170	173	---	---	91	157	150	153	170	162	165
13	178	174	176	---	---	93	166	155	160	177	168	172
14	183	179	181	---	---	99	174	165	170	182	176	178
15	187	179	182	---	---	106	182	173	177	188	180	182
16	191	188	189	---	---	114	189	180	184	190	184	186
17	198	191	194	---	---	126	196	188	191	197	191	194
18	201	184	195	---	---	139	200	195	198	199	194	196
19	190	162	175	---	---	148	209	195	201	196	193	194
20	163	130	144	---	---	156	211	200	205	196	188	192
21	141	111	135	---	---	161	216	211	213	187	182	183
22	136	131	133	167	162	165	219	216	217	182	177	179
23	146	137	142	170	166	168	222	219	220	177	173	175
24	156	147	152	182	152	169	226	223	224	175	168	173
25	165	156	161	159	124	146	230	225	228	177	170	173
26	169	153	159	125	116	123	232	228	231	185	163	170
27	155	130	149	115	97	102	235	231	233	183	171	177
28	143	117	135	100	93	96	239	234	236	172	126	149
29	114	96	103	101	94	97	242	238	240	123	105	110
30	96	94	95	104	96	102	246	241	243	104	101	102
31	---	---	---	110	104	107	249	245	247	---	---	---
MONTH	201	78	149	182	93	116	249	100	180	261	101	187
YEAR	261	45	119									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.5	22.5	23.0	15.5	14.5	15.0	10.5	8.5	9.0	---	---	---
2	23.5	22.5	23.0	16.5	15.5	16.0	8.5	7.5	8.0	---	---	---
3	23.5	22.5	23.0	17.0	16.0	17.0	7.5	7.0	7.0	---	---	---
4	22.5	21.5	22.0	16.0	14.5	15.5	7.0	6.0	6.5	---	---	---
5	22.0	20.5	21.0	14.5	13.5	14.0	7.5	6.5	7.0	---	---	---
6	20.5	19.0	19.5	15.0	13.5	14.0	8.5	7.5	8.0	---	---	---
7	19.0	18.5	18.5	15.0	14.0	14.0	10.5	8.5	9.5	---	---	---
8	18.5	17.5	18.0	14.0	13.5	13.5	10.5	10.0	10.5	---	---	---
9	18.5	17.0	17.5	14.0	13.0	13.5	10.5	9.0	10.0	---	---	---
10	18.0	17.5	18.0	15.5	14.0	15.0	9.0	8.0	8.5	---	---	---
11	17.5	16.0	16.5	17.0	15.5	16.0	8.0	7.5	8.0	---	---	---
12	16.5	15.5	16.0	16.5	14.5	15.5	8.5	7.5	8.0	---	---	---
13	18.0	16.5	17.0	15.0	14.0	14.5	10.5	8.5	9.5	---	---	---
14	17.0	16.0	16.5	14.5	13.0	14.0	11.5	10.5	11.0	---	---	---
15	16.0	15.0	15.5	13.0	11.5	12.0	11.0	10.5	10.5	---	---	---
16	15.5	14.5	15.0	11.0	10.5	11.0	11.0	10.5	11.0	---	---	---
17	17.0	15.5	16.0	11.0	10.5	10.5	11.0	10.0	10.5	---	---	---
18	17.5	16.0	17.0	11.5	10.5	10.5	9.5	8.0	8.5	---	---	---
19	18.0	16.5	17.0	12.0	11.0	11.5	8.0	7.5	8.0	---	---	---
20	18.5	17.0	18.0	12.0	11.5	12.0	8.0	7.5	7.5	---	---	---
21	18.5	17.5	18.0	12.5	12.0	12.0	8.0	7.5	7.5	---	---	---
22	18.5	17.5	18.5	13.5	12.5	13.0	8.5	8.0	8.0	---	---	---
23	19.0	18.5	18.5	14.5	13.0	14.0	9.5	8.5	9.0	---	---	---
24	19.0	18.0	18.5	15.0	14.5	15.0	11.0	9.5	10.0	---	---	---
25	18.0	16.0	17.0	15.5	15.0	15.5	11.5	11.0	11.5	---	---	---
26	16.0	15.0	15.5	18.5	15.5	17.0	---	---	---	---	---	---
27	15.0	14.0	14.5	17.5	15.5	16.5	---	---	---	---	---	---
28	14.0	13.5	14.0	15.5	15.0	15.0	---	---	---	---	---	---
29	14.5	13.5	14.0	15.5	13.5	14.5	---	---	---	7.5	7.0	7.0
30	15.0	14.0	14.5	13.5	10.5	11.5	---	---	---	7.0	6.5	7.0
31	15.0	14.0	14.5	---	---	---	---	---	---	6.5	4.0	5.0
MONTH	23.5	13.5	17.5	18.5	10.5	14.0	11.5	6.0	9.0	7.5	4.0	6.5

02092500 TRENT RIVER NEAR TRENTON, N. C.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4.0	2.5	3.0	4.0	.5	2.0	16.5	15.5	16.0	16.0	15.0	15.5
2	2.5	.5	2.0	1.0	.5	.5	17.0	15.0	16.0	16.0	14.5	15.5
3	1.5	.0	1.0	2.0	.5	1.5	17.5	16.0	16.5	17.0	15.0	16.0
4	1.5	.5	.5	2.0	1.0	1.5	18.5	17.0	18.0	17.5	16.0	16.5
5	2.0	.5	1.0	2.0	.5	1.5	18.5	17.5	18.0	18.0	16.5	17.5
6	2.0	.5	1.0	1.5	.0	1.0	17.5	15.5	16.0	18.5	17.5	18.0
7	2.5	1.0	1.5	4.5	.5	2.5	16.0	15.0	15.5	19.0	18.0	18.5
8	2.5	1.0	2.0	7.5	4.5	6.5	16.0	14.5	15.5	19.0	18.0	18.5
9	3.0	2.0	2.5	10.0	7.0	8.0	18.0	16.0	17.0	18.0	17.0	17.5
10	2.5	2.0	2.0	10.0	8.0	9.5	18.5	17.0	18.0	17.5	15.5	16.5
11	2.0	1.5	2.0	9.5	7.5	8.5	18.5	17.5	18.0	18.0	16.0	17.0
12	2.5	1.5	2.5	9.0	8.0	8.5	18.0	17.0	17.5	19.5	17.0	18.0
13	3.5	2.5	3.0	9.5	8.0	9.0	18.0	17.5	18.0	20.5	18.5	19.0
14	4.5	3.0	3.5	10.5	8.5	10.0	18.5	18.0	18.0	20.0	19.0	19.5
15	5.0	4.0	4.5	12.5	10.5	11.5	18.0	17.5	18.0	20.5	19.0	19.5
16	7.0	5.0	6.0	14.0	12.5	13.5	17.5	16.0	16.5	20.0	18.5	19.0
17	7.0	6.5	7.0	13.5	12.5	13.0	16.0	14.5	15.0	19.0	18.0	18.5
18	6.5	5.5	6.0	14.0	13.0	13.5	14.5	13.5	14.0	20.0	18.0	19.0
19	5.5	4.5	5.0	14.0	12.5	13.0	14.5	14.0	14.0	21.0	20.0	20.5
20	6.5	4.5	5.5	13.0	11.5	12.0	15.0	14.0	14.5	21.5	20.5	21.0
21	8.0	6.5	7.0	12.5	11.0	12.0	16.0	14.5	15.0	22.0	20.5	21.5
22	11.0	8.0	9.5	14.0	12.5	13.5	16.5	15.0	15.5	21.5	21.0	21.5
23	13.5	11.0	12.0	---	---	---	17.5	16.0	16.5	22.0	21.0	21.5
24	14.5	13.0	13.5	---	---	---	18.0	17.5	17.5	22.0	21.0	21.5
25	14.0	13.0	13.5	---	---	---	19.0	18.0	18.5	22.0	21.0	21.5
26	13.0	9.5	11.0	15.0	14.0	14.5	19.0	18.5	19.0	21.5	20.5	21.0
27	9.5	7.5	8.0	15.0	14.0	14.5	19.5	18.5	19.0	21.0	20.0	20.0
28	8.5	7.5	8.0	14.5	13.5	14.0	19.0	18.0	18.0	20.0	19.0	19.5
29	7.5	2.0	6.0	15.5	13.5	14.5	18.0	17.0	17.5	20.0	19.0	19.5
30	---	---	---	15.5	15.0	15.0	17.0	16.0	16.5	21.0	20.0	20.5
31	---	---	---	16.5	14.5	15.5	---	---	---	22.0	20.5	21.0
MONTH	14.5	.0	5.0	16.5	.0	9.5	19.5	13.5	17.0	22.0	14.5	19.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.0	21.0	21.5	25.5	25.0	25.5	26.0	25.0	25.5	25.0	23.5	24.0
2	22.5	21.5	22.0	26.0	25.0	25.5	26.0	25.0	25.5	26.0	24.0	24.5
3	23.5	21.5	22.5	26.5	25.0	25.5	26.5	25.0	25.5	26.0	24.5	25.0
4	23.5	22.0	23.0	25.5	25.0	25.0	27.0	25.5	26.0	25.5	23.5	24.5
5	23.0	22.0	22.5	---	---	---	27.5	25.5	26.5	26.0	23.5	24.5
6	22.5	21.0	21.5	---	---	---	27.5	25.0	26.0	24.5	24.0	24.0
7	22.0	21.0	21.5	---	---	---	26.0	24.0	25.0	24.5	24.0	24.5
8	23.5	21.5	22.5	---	---	---	26.5	24.5	25.5	24.5	23.5	24.0
9	23.0	21.5	22.5	---	---	---	27.0	25.0	26.0	24.0	23.0	23.5
10	23.0	21.0	22.0	---	---	---	26.5	25.5	26.0	23.0	22.0	23.0
11	22.5	21.0	21.5	---	---	---	27.0	25.0	26.0	24.0	22.5	23.0
12	22.5	21.0	21.5	---	---	---	26.5	25.0	26.0	24.0	22.0	22.5
13	22.0	20.5	21.0	---	---	---	26.5	25.0	25.5	24.0	22.0	23.0
14	22.0	19.5	20.5	---	---	---	27.0	25.0	26.0	24.0	22.5	23.0
15	23.5	20.5	22.0	---	---	---	28.0	25.0	26.0	24.5	22.5	23.5
16	24.0	21.5	23.0	---	---	---	26.5	25.5	26.0	23.5	23.0	23.5
17	23.5	22.5	23.0	---	---	---	26.0	24.5	25.0	24.5	23.0	23.5
18	23.0	20.0	21.0	---	---	---	25.0	23.0	24.0	25.5	23.5	24.5
19	21.0	19.5	20.5	---	---	---	24.5	23.0	23.5	25.0	24.0	24.5
20	21.5	20.0	21.0	---	---	---	25.0	23.0	24.0	24.0	23.0	23.5
21	22.0	21.0	21.5	---	---	---	24.0	23.5	23.5	24.5	22.5	23.5
22	22.0	20.5	21.5	27.0	25.5	26.0	24.0	22.5	23.0	25.0	23.0	24.0
23	23.0	20.5	21.5	25.5	24.0	24.5	24.0	22.0	23.5	25.5	24.0	25.0
24	22.5	21.0	22.0	24.5	23.5	24.0	24.0	22.0	23.0	26.0	24.5	25.0
25	22.0	21.0	21.5	24.5	23.5	24.0	24.0	21.5	22.5	26.0	24.0	25.0
26	23.5	21.5	22.5	24.5	23.5	24.0	24.0	21.5	23.0	25.5	24.5	25.0
27	24.0	22.5	23.5	24.5	23.0	23.5	24.0	21.5	23.0	24.0	22.0	23.0
28	25.0	23.0	24.0	24.5	23.5	24.0	24.0	22.0	23.0	22.0	21.0	21.5
29	25.5	24.0	25.0	25.0	23.5	24.0	24.0	22.0	23.0	21.5	20.0	21.0
30	26.0	25.0	25.5	25.0	24.0	24.5	24.0	22.5	23.5	20.0	19.5	20.0
31	---	---	---	25.5	24.0	25.0	25.0	22.5	24.0	---	---	---
MONTH	26.0	19.5	22.0	27.0	23.0	24.5	28.0	21.5	24.5	26.0	19.5	23.5
YEAR	28.0	.0	16.5									

02092500 TRENT RIVER NEAR TRENTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 01...	1115	405	16	17	94
JAN 29...	1200	368	8	7.9	56
APR 21...	1045	269	7	5.1	--
MAY 26...	1128	414	15	17	--
JUN 16...	1420	19	5	.26	73
AUG 19...	1000	8.4	5	.11	45

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH LAB (UNITS)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	LAB ALKA-LINITY (MG/L AS CACO3)
JAN 15...	1122	6.4	48	6.5	9.0	7.5	48	1.3	130	13
FEB 10...	1115	252	--	6.7	3.0	11.4	32	1.7	150	16
MAR 10...	1430	1770	45	6.4	7.0	10.0	37	1.7	70	10
APR 28...	1235	143	70	6.8	18.0	7.4	34	1.3	720	37
MAY 14...	1145	30	120	7.3	18.0	6.2	18	.9	10	62
JUN 10...	1240	35	130	7.2	21.0	5.9	25	2.6	130	59
AUG 18...	1335	7.0	180	7.4	25.0	5.5	21	1.0	10	76
SEP 16...	1120	7.4	--	7.4	23.0	4.7	26	1.1	<10	47

02093229 HEWLETTS CREEK AT SECONDARY ROAD 1102 NEAR WILMINGTON, N. C.

LOCATION.--Lat 34°11'28", long 77°53'32", New Hanover County, Hydrologic Unit 03030005, on right bank 50 ft (15 m) upstream from culvert on Secondary Road 1102 and 3.8 mi (6.1 km) southeast of Wilmington.

DRAINAGE AREA.--1.2 mi² (3.1 km²).

PERIOD OF RECORD.--November 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 20 ft (6 m) from topographic map.

REMARKS.--Records good. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 314 ft³/s (8.89 m³/s) Sept. 5, 1979, gage height, 4.05 ft (1.234 m); no flow for part of July 26, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 100 ft³/s (2.83 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 26	0730	109	3.09	2.57	0.783	May 8	1715	*124	3.51	*2.68	0.817
Dec 6	1930	114	3.23	2.61	0.796	July 27	1145	*124	3.51	*2.68	0.817
Mar 18	0230	116	3.29	2.62	0.799	Sept 14	0730	107	3.03	2.56	0.780

Minimum discharge, 0.50 ft³/s (0.014 m³/s) June 19, 20-24, minimum gage height, 1.34 ft (0.408 m) Nov. 8, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	1.5	2.1	1.7	3.1	2.1	4.0	1.4	1.0	.57	1.7	.81
2	7.9	1.3	2.1	1.7	2.5	2.0	3.5	1.2	.96	.57	1.5	.77
3	6.7	1.5	2.0	1.8	2.2	2.2	3.5	1.2	.96	.57	1.4	.74
4	5.7	1.3	1.8	2.5	2.3	4.0	4.8	1.2	.93	4.7	1.3	.70
5	5.5	1.3	1.7	1.9	2.0	7.4	3.9	1.2	.89	2.2	1.1	1.1
6	4.8	1.3	16	1.8	3.9	8.8	3.5	1.1	.75	.83	1.1	.73
7	4.2	1.3	8.4	1.5	2.9	4.9	3.5	1.2	1.4	.77	1.1	.79
8	3.9	1.3	4.8	1.8	2.6	6.9	3.5	12	.82	.71	1.1	.92
9	3.7	1.3	3.7	2.2	2.6	5.1	3.5	3.2	.77	.69	1.1	.84
10	3.5	1.3	3.4	1.7	10	4.0	3.5	2.0	.75	.65	1.1	.73
11	3.5	1.6	2.7	3.8	3.6	3.5	3.1	1.7	.73	.70	1.1	.75
12	3.6	1.5	2.6	3.5	3.0	6.8	3.2	1.4	.70	.67	3.2	.73
13	3.6	1.5	2.8	3.2	2.6	35	3.2	1.3	.67	.71	2.3	.84
14	3.2	1.4	2.8	6.6	2.4	9.0	5.0	1.3	.65	.72	1.3	13
15	3.2	1.4	2.0	3.8	2.3	6.3	3.1	1.2	.62	.69	1.2	2.5
16	2.9	1.3	2.4	3.0	2.3	5.8	2.7	1.2	.61	.72	1.1	7.2
17	2.9	1.3	2.1	2.4	2.0	5.0	2.6	1.2	.61	.73	1.4	5.6
18	2.9	1.3	2.1	2.5	1.8	17	2.6	1.5	1.1	.73	1.0	2.2
19	2.9	1.3	2.1	2.2	1.8	6.1	2.6	1.3	.60	.73	5.0	11
20	2.9	1.3	2.2	2.0	1.8	5.5	2.6	1.4	.51	.81	1.4	6.5
21	3.3	1.3	2.2	1.9	1.8	12	2.6	1.4	.50	1.3	1.1	3.0
22	2.9	1.3	2.3	1.9	1.8	6.8	2.2	1.1	.50	.96	1.0	2.4
23	2.9	1.4	2.3	4.0	1.8	4.7	2.1	5.8	.50	1.3	.87	1.9
24	2.4	1.5	2.0	2.5	1.8	4.7	2.0	4.4	.53	2.5	.86	1.9
25	2.2	1.4	2.5	2.3	2.0	5.0	1.9	2.9	2.7	.97	.85	2.4
26	1.9	15	1.8	2.4	1.8	4.0	1.7	2.2	.74	8.6	.81	1.7
27	1.7	4.1	1.7	6.1	1.9	3.7	1.7	1.6	.69	27	.82	1.4
28	1.7	3.2	1.7	3.3	2.0	3.7	2.0	1.3	.63	13	.88	1.5
29	1.7	2.7	1.7	2.4	1.9	6.6	1.8	1.1	.61	4.3	.82	15
30	1.7	2.4	1.9	2.2	---	6.9	1.6	1.1	.59	2.9	.85	14
31	1.6	---	1.8	7.6	---	5.6	---	1.0	---	2.0	.82	---
TOTAL	111.5	61.6	91.7	88.2	74.5	211.1	87.5	63.1	24.02	84.30	41.18	103.65
MEAN	3.60	2.05	2.96	2.85	2.57	6.81	2.92	2.04	.80	2.72	1.33	3.46
MAX	10	15	16	7.6	10	35	5.0	12	2.7	27	5.0	15
MIN	1.6	1.3	1.7	1.5	1.8	2.0	1.6	1.0	.50	.57	.81	.70
CFSM	3.00	1.71	2.47	2.38	2.14	5.68	2.43	1.70	.67	2.27	1.11	2.88
IN.	3.45	1.91	2.84	2.73	2.31	6.54	2.71	1.95	.74	2.61	1.28	3.21

CAL YR 1979 TOTAL 1531.11 MEAN 4.19 MAX 75 MIN .41 CFSM 3.49 IN 47.42
WTR YR 1980 TOTAL 1042.35 MEAN 2.85 MAX 35 MIN .50 CFSM 2.38 IN 32.29

02093800 REEDY FORK NEAR OAK RIDGE, N. C.

LOCATION (REVISED).--Lat 36°10'22", long 79°57'12", Guilford County, Hydrologic Unit 03030002, on left bank at downstream side of bridge on Secondary Road 2128, 0.8 mi (1.3 km) downstream from Beaver Creek, and 2 mi (3 km) east of Oak Ridge.

DRAINAGE AREA.--20.5 mi² (53.1 km²), revised.

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 771.30 ft (235.092 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 13, 1955, nonrecording gage at same site and datum.

REMARKS.--Records fair. Some diurnal fluctuation at medium and low flows caused by mill upstream.

AVERAGE DISCHARGE.--25 years, 23.6 ft³/s (0.668 m³/s), 15.63 in/yr (397 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,950 ft³/s (112 m³/s) Oct. 10, 1959, gage height, 10.94 ft (3.335 m), from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of contracted-opening measurement of peak flow; maximum gage height, 12.41 ft (3.783 m) Sept. 22, 1979; minimum, 1.2 ft³/s (0.034 m³/s) Aug. 7, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s (9.9 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct 3	0200	376	10.6	7.41	2.259	Apr 9	1230	*670	19.0	*8.81	2.685

Minimum discharge, 5.7 ft³/s (0.16 m³/s) Sept. 22, 23; minimum gage height, 2.92 ft (0.890 m) Aug. 13, 14; minimum daily, 6.5 ft³/s (0.184 m³/s) Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	17	21	17	22	17	31	20	16	15	9.7	8.1
2	80	31	19	17	21	21	28	20	15	13	9.4	8.1
3	140	30	19	17	20	28	26	19	15	14	8.9	8.0
4	45	19	19	18	20	25	27	18	14	15	8.2	12
5	168	17	19	21	20	41	23	17	13	15	8.4	19
6	66	17	23	19	22	45	23	15	14	13	8.4	12
7	45	17	23	19	22	65	23	14	14	12	8.0	9.7
8	34	16	19	21	21	95	27	14	14	12	8.0	8.5
9	28	17	18	19	23	52	365	14	12	12	8.2	8.5
10	44	28	18	18	26	37	81	12	12	14	8.1	8.2
11	33	140	18	37	23	34	44	12	12	15	7.7	8.2
12	27	93	19	51	23	34	42	12	12	12	7.6	9.0
13	24	48	22	30	21	26	60	12	12	14	7.5	8.9
14	24	40	22	97	23	23	90	12	13	12	7.3	8.5
15	21	33	18	61	28	19	52	12	12	11	7.5	8.3
16	20	27	20	38	35	18	39	12	12	10	8.4	8.3
17	20	23	19	31	26	28	33	12	12	11	7.6	8.9
18	19	22	18	128	22	68	29	36	14	45	7.9	7.4
19	19	21	18	100	22	35	24	17	14	16	11	7.1
20	19	20	18	48	23	57	23	51	12	13	12	7.8
21	18	20	17	37	26	258	24	95	11	11	22	7.6
22	18	19	17	38	23	73	21	26	11	11	27	6.5
23	19	20	17	53	23	47	20	21	11	13	13	6.9
24	20	21	18	35	22	83	19	19	11	13	11	7.3
25	18	20	26	31	22	107	30	19	89	12	10	30
26	17	55	19	27	29	51	27	18	116	11	9.4	12
27	17	31	18	26	22	39	24	18	38	10	8.3	9.5
28	17	26	17	24	22	35	20	17	22	10	8.2	8.6
29	17	23	18	24	20	48	20	18	17	21	8.3	9.1
30	17	23	18	23	---	37	22	15	17	11	8.2	16
31	17	---	18	25	---	38	---	16	---	9.8	8.4	---
TOTAL	1119	934	593	1150	672	1584	1317	633	607	426.8	303.6	298.0
MEAN	36.1	31.1	19.1	37.1	23.2	51.1	43.9	20.4	20.2	13.8	9.79	9.93
MAX	168	140	26	128	35	258	365	95	116	45	27	30
MIN	17	16	17	17	20	17	19	12	11	9.8	7.3	6.5
CFSM	1.76	1.52	.93	1.81	1.13	2.49	2.14	1.00	.99	.67	.48	.48
IN.	2.03	1.69	1.08	2.09	1.22	2.87	2.39	1.15	1.10	.77	.55	.54

CAL YR 1979 TOTAL 14434.7 MEAN 39.5 MAX 1170 MIN 8.2 CFSM 1.93 IN 26.19
WTR YR 1980 TOTAL 9637.4 MEAN 26.3 MAX 365 MIN 6.5 CFSM 1.28 IN 17.49

02094500 REEDY FORK NEAR GIBSONVILLE, N. C.

LOCATION.--Lat 36°10'31", long 79°37'01" (revised), Guilford County, Hydrologic Unit 03030002, on right bank 0.2 mi (0.3 km) downstream from Huffines Mill on Secondary Road 2719 1.2 mi (1.9 km) upstream from Buffalo Creek, and 6 mi (10 km) northwest of Gibsonville.

DRAINAGE AREA.--129 mi² (334 km²), revised.

PERIOD OF RECORD.--September 1928 to current year.

REVISED RECORDS.--WSP 1303: 1929-40 (monthly and yearly runoff). WSP 1383: 1929-30, 1933(M), 1934, 1937(M), 1939-42(M), 1948.

GAGE.--Water-stage recorder and rock-masonry control. Datum of gage is 626.88 ft (191.073 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Flow regulated since 1923 by Lake Brandt 14 mi (23 km) upstream (see p. 333), since 1957 by Lake Higgins on Brush Creek, a tributary to Lake Brandt, (see p. 333), since 1943 by Richland Lake 12 mi (19 km) above station, and since 1968 by Lake Townsend 9 mi (14 km) above station. City of Greensboro diverted from Lake Brandt an average of 18.4 ft³/s (0.52 m³/s) and an average of 20.4 ft³/s (0.58 m³/s) from Lake Townsend for municipal water supply. Cone Mills diverted from Richland Lake an average of 1.4 ft³/s (0.040 m³/s) during the year. Suspended-sediment records for the current year are published on page 418 of this report.

AVERAGE DISCHARGE.--52 years, 102 ft³/s (2.889 m³/s), 10.74 in/yr (273 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft³/s (329 m³/s) Sept. 25, 1947, gage height, 20.77 ft (6.331 m); minimum daily, 0.4 ft³/s (0.011 m³/s) Oct. 14, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1916 reached a stage of 17.90 ft (5.456 m), from information by local resident, discharge, 8,640 ft³/s (245 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,210 ft³/s (34.3 m³/s) Apr. 10, gage height, 5.36 ft (1.634 m); minimum discharge, 5.3 ft³/s (0.15 m³/s) Sept. 14, 15, 16; minimum gage height, 0.71 ft (0.216 m) Aug. 14, 15, Sept. 1-4, 6, 10, 11; minimum daily, 5.4 ft³/s (0.15 m³/s) Sept. 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	178	204	308	18	34	24	154	71	35	49	8.8	5.9
2	195	171	298	17	141	28	136	62	31	34	8.6	5.8
3	271	162	221	17	175	28	127	58	28	30	8.4	5.9
4	335	192	205	18	142	29	112	54	22	33	7.9	5.9
5	618	166	201	129	34	71	108	52	14	41	7.6	6.1
6	537	89	201	155	28	89	82	50	11	32	7.3	6.2
7	441	127	199	135	157	58	75	47	101	23	7.1	6.6
8	307	37	191	37	163	173	77	37	37	17	6.8	6.5
9	153	100	186	24	53	178	428	29	27	22	6.6	6.3
10	56	146	154	21	34	56	1020	27	16	29	6.8	6.0
11	184	581	37	45	30	40	495	28	14	26	6.6	6.2
12	202	342	172	176	137	186	230	32	10	16	6.3	5.8
13	200	78	193	162	167	200	194	31	9.2	30	5.9	5.7
14	198	47	188	197	167	197	300	27	8.4	22	5.7	5.4
15	195	37	181	166	171	118	547	20	8.0	15	6.6	5.4
16	193	33	177	53	176	32	261	18	7.5	13	10	5.5
17	190	137	171	36	166	52	153	14	7.3	29	7.4	5.8
18	188	136	166	187	161	222	121	28	8.2	87	6.8	6.4
19	185	130	158	246	159	179	107	48	9.9	25	7.6	7.1
20	183	38	49	198	153	89	98	171	8.4	17	7.7	7.5
21	182	125	24	168	52	376	90	370	7.3	15	9.5	7.9
22	180	169	21	120	30	217	82	315	6.9	13	10	7.9
23	181	173	20	126	27	152	80	174	6.6	21	8.4	7.7
24	179	168	20	138	26	89	74	130	6.3	25	7.7	7.1
25	155	167	27	47	25	368	71	120	399	15	8.8	8.1
26	39	217	24	34	39	287	73	98	491	12	7.6	9.3
27	22	160	21	31	31	216	78	79	401	11	7.2	9.0
28	18	111	19	109	27	176	77	63	248	10	6.8	8.8
29	17	43	19	123	25	120	74	50	130	11	6.8	9.0
30	17	274	19	108	---	135	76	42	83	9.7	6.9	12
31	133	---	18	103	---	156	---	36	---	9.2	6.3	---
TOTAL	6132	4560	3888	3144	2730	4341	5600	2381	2192.0	741.9	232.5	208.8
MEAN	198	152	125	101	94.1	140	187	76.8	73.1	23.9	7.50	6.96
MAX	618	581	308	246	176	376	1020	370	491	87	10	12
MIN	17	33	18	17	25	24	71	14	6.3	9.2	5.7	5.4

CAL YR 1979 TOTAL 72493.3 MEAN 199 MAX 3450 MIN 5.6
WTR YR 1980 TOTAL 36151.2 MEAN 98.8 MAX 1020 MIN 5.4

02095500 NORTH BUFFALO CREEK NEAR GREENSBORO, N. C.

LOCATION.--Lat 36°07'13", long 79°42'30", Guilford County, Hydrologic Unit 03030002, on left bank 5 ft (2 m) downstream from bridge on Secondary Road 2832, 4.2 mi (6.8 km) upstream from mouth, and 5.8 mi (9.3 km) northeast of post office in Greensboro.

DRAINAGE AREA.--37.1 mi² (96.1 km²), revised.

PERIOD OF RECORD.--August 1928 to current year.

REVISED RECORDS.--WSP 1303: 1929, 1931-42, monthly and yearly runoff. WSP 1383: 1928(M), 1929, 1933-34(M), 1936(M), 1941(M), 1943(M), 1945(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 678.02 ft (206.660 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good except those for period of no gage-height record, Oct. 5 to Nov. 20, which are poor. Diurnal fluctuation at low flow caused by mills above station. Diversion into basin from Greensboro and Proximity Mills enter above station.

AVERAGE DISCHARGE.--52 years, 54.7 ft³/s (1.549 m³/s), 20.02 in/yr (509 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,140 ft³/s (259 m³/s) Sept. 22, 1979, gage height, 20.12 ft (6.133 m) from floodmarks, from rating curve extended above 2,900 ft³/s (82.1 m³/s) on basis of contracted-opening measurements at gage heights 14.15 ft (4.313 m), 15.96 ft (4.865 m), and 16.63 ft (5.069 m); minimum, 1.6 ft³/s (0.045 m³/s) Aug. 28, 1932.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 11	Unknown	1720	48.7	10.30	3.139	June 25	1500	1240	35.1	8.54	2.603
May 21	0100	*1740	49.3	*10.35	3.155						

Minimum discharge, 13 ft³/s (0.37 m³/s) Sept. 14, 28, gage height, 1.94 ft (0.591 m); minimum daily, 20 ft³/s (0.57 m³/s) Aug. 31, Sept. 14, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	28	39	32	49	41	64	43	29	32	96	21
2	102	53	37	33	42	48	58	41	31	30	53	24
3	171	40	36	34	41	61	57	39	31	31	25	67
4	60	30	37	46	41	123	56	38	31	62	26	68
5	300	28	38	62	42	223	48	37	30	56	25	26
6	160	27	59	39	49	125	46	36	30	27	25	24
7	110	26	54	38	46	76	49	32	31	30	25	32
8	85	25	37	44	44	192	93	32	26	28	25	24
9	70	25	34	40	59	106	221	32	27	29	23	24
10	78	24	36	39	88	69	68	31	27	38	22	24
11	65	560	36	180	66	59	54	29	28	40	23	23
12	58	260	37	130	61	53	77	32	28	27	23	23
13	56	100	60	54	53	69	122	32	27	70	24	22
14	52	65	59	223	53	58	227	32	26	29	24	20
15	48	58	46	81	61	49	84	47	24	27	24	23
16	47	55	48	60	68	47	61	30	31	27	24	24
17	46	50	40	54	52	163	54	28	53	28	21	25
18	44	48	36	466	47	239	51	126	70	110	31	37
19	41	44	32	139	46	72	50	36	32	30	39	24
20	39	40	28	77	50	225	47	458	28	28	48	24
21	37	39	27	66	68	497	48	407	25	27	98	22
22	35	37	26	123	49	97	46	53	23	27	42	23
23	44	39	26	158	47	71	43	47	26	130	26	23
24	42	37	45	71	52	305	47	44	27	35	22	35
25	34	35	44	63	46	161	42	57	632	29	26	115
26	27	294	43	58	129	81	45	42	471	26	25	28
27	25	61	42	59	50	69	37	36	87	22	25	22
28	24	51	36	54	46	80	34	36	48	24	25	20
29	22	43	35	51	42	160	33	35	40	99	26	23
30	22	40	33	45	---	91	48	34	42	28	22	124
31	24	---	34	62	---	94	---	33	---	25	20	---
TOTAL	2038	2262	1220	2681	1587	3804	2010	2035	2061	1251	983	1014
MEAN	65.7	75.4	39.4	86.5	54.7	123	67.0	65.6	68.7	40.4	31.7	33.8
MAX	300	560	60	466	129	497	227	458	632	130	98	124
MIN	22	24	26	32	41	41	33	28	23	22	20	20

CAL YR 1979 TOTAL 35974 MEAN 98.6 MAX 4400 MIN 22
WTR YR 1980 TOTAL 22946 MEAN 62.7 MAX 632 MIN 20

02096500 HAW RIVER AT HAW RIVER, N. C.

LOCATION.--Lat 36°05'13", long 79°22'02", Alamance County, Hydrologic Unit 03030002, on left bank at town of Haw River, 650 ft (198 m) downstream from Southern Railway bridge, 800 ft (244 m) downstream from bridge on U.S. Highway 70 and State Highway 49, and 3 mi (5 km) downstream from Stony Creek.

DRAINAGE AREA.--596 mi² (1,544 km²), revised.

PERIOD OF RECORD.--October 1928 to current year.

REVISED RECORDS.--WSP 757: 1929(M). WSP 782: 1934. WSP 1383: 1930, 1932(M), 1933(m), 1936, 1943, 1944(M), 1947(m).

GAGE.--Water-stage recorder. Datum of gage is 471.69 ft (143.771 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some diurnal fluctuation and occasional regulation. City of Burlington diverted from two reservoirs on Stony Creek (see pp. 333, 334) an average of 13.7 ft³/s (0.39 m³/s) for municipal water supply, about half of which was returned above station as sewage, the remainder was returned below station. Corps of Engineers gage-height telephone-telemeter at station.

AVERAGE DISCHARGE.--52 years, 577 ft³/s (16.34 m³/s), 13.15 in/yr (334 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,000 ft³/s (1,050 m³/s) Sept. 18, 1945, gage height, 31.10 ft (9.479 m), from floodmark; minimum 3 ft³/s (0.085 m³/s) Sept. 5, 1930, gage height, 0.92 ft (0.280 m); minimum daily, 5 ft³/s (0.14 m³/s) Sept. 6, 1930.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 26	1700	*7220	204	*15.16	4.621

Minimum discharge, 84 ft³/s (2.38 m³/s) Sept. 16, gage height, 1.61 ft (0.491 m); minimum daily, 88 ft³/s (2.49 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1330	410	706	271	480	362	859	369	264	408	167	99
2	986	437	680	265	433	380	696	335	234	327	274	93
3	1340	765	588	260	495	386	617	316	229	291	196	160
4	1230	570	527	269	488	439	565	303	224	289	144	345
5	2730	467	528	377	382	1040	536	290	209	465	135	222
6	2790	368	528	490	347	1920	458	284	201	354	133	128
7	1380	355	613	436	430	1100	422	277	371	284	113	112
8	1090	324	557	367	501	997	526	255	270	253	122	122
9	716	303	505	322	461	1480	1840	247	239	223	120	108
10	585	355	476	303	494	829	2390	246	196	298	116	109
11	823	2480	370	795	533	625	2010	245	179	522	113	105
12	683	4670	367	2040	558	604	1530	231	167	295	107	101
13	617	1570	493	994	607	653	1510	231	162	823	109	99
14	600	1100	569	1040	577	685	2320	228	162	550	108	98
15	547	820	513	1520	648	581	2510	224	163	269	111	94
16	521	648	484	805	817	419	1730	233	151	212	135	88
17	504	593	474	647	744	474	1380	192	158	187	124	105
18	486	569	440	1750	591	2410	993	236	217	980	117	109
19	475	551	431	3290	544	1220	565	393	271	499	113	131
20	457	453	378	1390	524	836	491	677	214	309	153	111
21	429	421	295	1110	504	3770	448	2900	203	247	170	100
22	414	436	287	924	441	2320	415	1320	185	196	225	90
23	425	482	285	1690	409	1400	495	780	173	230	181	93
24	507	460	282	1090	397	1420	401	650	172	558	152	126
25	444	454	382	747	378	3110	395	578	1520	247	137	360
26	333	1320	399	592	610	1700	369	493	5920	198	133	240
27	260	1320	320	535	513	1200	385	398	3300	171	127	160
28	249	697	299	529	418	996	366	341	1430	158	119	100
29	243	567	284	542	384	1420	350	297	920	296	116	100
30	241	577	281	513	---	1090	406	268	582	259	112	395
31	259	---	277	507	---	996	---	271	---	170	109	---
TOTAL	23694	24542	13618	26410	14708	36862	27978	14108	18686	10568	4291	4303
MEAN	764	818	439	852	507	1189	933	455	623	341	138	143
MAX	2790	4670	706	3290	817	3770	2510	2900	5920	980	274	395
MIN	241	303	277	260	347	362	350	192	151	158	107	88
CFSM	1.28	1.37	.74	1.43	.85	2.00	1.57	.76	1.05	.57	.23	.24
IN.	1.48	1.53	.85	1.65	.92	2.30	1.75	.88	1.17	.66	.27	.27

CAL YR 1979 TOTAL 375598 MEAN 1029 MAX 17100 MIN 114 CFSM 1.73 IN 23.44
WTR YR 1980 TOTAL 219768 MEAN 600 MAX 5920 MIN 88 CFSM 1.01 IN 13.72

02096700 BIG ALAMANCE CREEK NEAR ELON COLLEGE, N. C.

LOCATION.--Lat 36°02'21", long 79°31'29" (revised), Alamance County, Hydrologic Unit 03030002, on right bank at downstream side of bridge on Secondary Road 1149, 1.2 mi (1.9 km) upstream from Beaver Creek, and 4.5 mi (7.2 km) south of Elon College.

DRAINAGE AREA.--116 mi² (300 km²).

PERIOD OF RECORD.--August 1957 to September 1980 (discontinued). Prior to October 1971 published as "Alamance Creek".

GAGE.--Water-stage recorder. Altitude of gage is 495 ft or 151 m (by barometer). Aug. 21, 1957 to Nov. 14, 1957, nonrecording gage and Nov. 15, 1957, to Apr. 25, 1963, water-stage recorder at site 70 ft (21 m) upstream at same datum.

REMARKS.--Records fair except those for September, which are poor.

AVERAGE DISCHARGE.--23 years, 114 ft³/s (3.228 m³/s), 13.35 in/yr (339 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,250 ft³/s (177 m³/s) Jan. 6, 1962; maximum gage height, 23.74 ft (7.236 m) Sept. 8, 1977; minimum, 0.27 ft³/s (0.008 m³/s) Sept. 19, 20, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1945 reached a stage of 29.4 ft (8.96 m), from information by local resident, discharge, about 10,000 ft³/s (280 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 26	1700	*2310	65.4	*14.08	4.292

Minimum discharge observed, 5.2 ft³/s (0.15 m³/s) Sept. 19, gage height, 0.98 ft (0.299 m); minimum daily, 5.2 ft³/s (0.15 m³/s) Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	131	41	71	45	85	81	187	66	32	66	22	8.5
2	79	47	66	44	83	73	155	61	26	48	77	9.3
3	84	123	60	43	90	110	141	55	24	41	29	10
4	70	98	58	42	98	118	132	52	22	131	21	18
5	420	68	58	56	97	341	120	48	19	382	18	15
6	270	58	60	57	96	549	108	46	20	113	16	12
7	121	54	77	49	93	261	104	38	304	58	15	10
8	85	51	68	50	86	232	106	33	44	41	14	8.9
9	76	49	58	50	78	275	171	32	29	34	13	8.1
10	79	50	54	48	106	185	147	30	22	31	14	7.0
11	91	672	53	145	126	152	113	29	20	32	13	6.8
12	76	1000	52	470	131	126	102	28	18	27	12	6.8
13	68	258	54	162	115	118	157	26	17	58	11	6.6
14	67	160	71	233	107	133	399	25	17	39	10	6.6
15	62	117	62	262	133	110	376	42	16	27	10	6.4
16	57	98	56	140	159	100	186	30	16	23	13	6.2
17	54	86	55	113	131	125	140	20	18	21	11	5.8
18	51	78	50	640	96	819	123	37	20	37	10	5.5
19	48	73	49	718	84	276	112	50	27	38	11	5.2
20	47	68	49	230	83	211	106	36	21	31	12	6.9
21	46	62	47	160	105	1350	100	530	18	23	13	6.6
22	46	60	46	137	97	469	93	155	15	18	18	6.8
23	47	58	47	460	87	229	85	98	14	458	16	6.8
24	58	58	48	224	81	377	79	85	14	572	14	6.0
25	56	57	71	149	77	1300	74	85	1040	121	20	6.6
26	49	411	69	122	195	374	77	85	1660	64	20	8.1
27	45	222	55	109	142	231	76	58	578	43	14	7.5
28	43	119	50	101	111	190	72	44	173	33	11	6.6
29	43	95	47	93	93	435	67	39	87	32	9.8	6.4
30	44	80	46	85	---	262	74	35	97	28	9.3	7.9
31	43	---	46	87	---	246	---	30	---	23	8.5	---
TOTAL	2556	4471	1753	5324	3065	9858	3982	2028	4428	2693	505.6	238.9
MEAN	82.5	149	56.5	172	106	318	133	65.4	148	86.9	16.3	7.96
MAX	420	1000	77	718	195	1350	399	530	1660	572	77	18
MIN	43	41	46	42	77	73	67	20	14	18	8.5	5.2
CFSM	.71	1.28	.49	1.48	.91	2.74	1.15	.56	1.28	.75	.14	.07
IN.	.82	1.43	.56	1.71	.98	3.16	1.28	.65	1.42	.86	.16	.08

CAL YR 1979 TOTAL 60276.4 MEAN 165 MAX 3120 MIN 9.6 CFSM 1.42 IN 19.33
WTR YR 1980 TOTAL 40902.5 MEAN 112 MAX 1660 MIN 5.2 CFSM .97 IN 13.12

02096842 CANE CREEK 0.1 MILE UPSTREAM FROM SECONDARY ROAD 1126 NEAR BUCKHORN, N. C.

LOCATION.--Lat 36°01'33", long 79°10'30", Orange County, Hydrologic Unit 03030002, on right bank 0.1 mi (0.2 km) upstream from culvert on Secondary Road 1126, 2.5 mi (4.0 km) southeast of Buckhorn and 8.7 mi (14.0 km) from mouth.

DRAINAGE AREA.--0.64 mi² (1.66 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to September 1980.

GAGE.--Water-stage recorder. Altitude of gage is 595 ft (181 m) from topographic map.

REMARKS.--Water-discharge records good.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10 ft³/s (0.28 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 11	1415	*22	0.62	*3.68	1.122	Mar 21	0800	12	0.34	2.57	0.783
Jan 18	Unknown	13	0.37	2.71	0.826	Mar 25	0015	10	0.28	2.39	0.728
Mar 17	2330	11	0.31	2.51	0.765	May 20	2245	16	0.45	3.07	0.936

No flow Aug. 13, 26-31, Sept. 1, 2, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.06	.16	.13	.26	.13	.70	.29	.04	.05	.01	.00
2	.02	.23	.13	.11	.23	.30	.62	.26	.04	.03	.02	.00
3	.02	1.3	.13	.11	.23	.45	.57	.23	.04	.03	.01	.01
4	.02	.13	.13	.13	.23	.80	.57	.20	.03	.03	.01	.03
5	.25	.03	.13	.28	.20	2.5	.48	.20	.02	.03	.01	.01
6	.03	.02	.18	.20	.23	1.3	.43	.20	.04	.02	.01	.01
7	.02	.02	.20	.16	.23	.90	.45	.18	.20	.01	.01	.01
8	.01	.02	.16	.13	.23	.70	.45	.18	.06	.01	.01	.01
9	.01	.02	.13	.50	.29	.55	.49	.18	.04	.02	.01	.01
10	.08	.02	.13	.90	.42	.50	.41	.16	.03	.11	.01	.01
11	.02	11	.13	.40	.49	.80	.37	.16	.02	.04	.01	.01
12	.02	3.9	.13	.20	.53	.55	.38	.16	.02	.02	.01	.01
13	.02	.68	.18	.45	.45	.70	1.5	.16	.02	.18	.00	.01
14	.06	.19	.20	.25	.45	.60	3.8	.16	.02	.13	.01	.01
15	.02	.16	.16	.14	.37	.46	1.3	.16	.02	.02	.01	.01
16	.02	.20	.16	.20	.24	.42	.69	.13	.01	.01	.01	.00
17	.02	.18	.13	2.0	.19	1.3	.55	.11	.01	.01	.01	.01
18	.03	.16	.13	8.0	.17	5.0	.50	.38	.04	.07	.01	.01
19	.03	.13	.13	4.3	.16	1.5	.45	.16	.03	.02	.01	.01
20	.03	.13	.11	1.3	.15	1.4	.42	1.9	.02	.02	.01	.01
21	.06	.13	.11	.64	.15	7.3	.38	1.8	.01	.01	.01	.01
22	.08	.11	.13	.90	.14	2.7	.37	.30	.01	.01	.01	.01
23	.13	.11	.13	4.7	.17	1.3	.33	.20	.01	.04	.01	.01
24	.08	.11	.13	2.0	.21	2.1	.30	.20	.01	.03	.01	.01
25	.03	.11	.26	1.2	.26	4.9	.29	.18	2.6	.01	.01	.01
26	.03	2.9	.18	.58	.20	1.8	.48	.13	2.4	.01	.00	.01
27	.03	.73	.13	.42	.16	1.1	.33	.09	.26	.01	.00	.01
28	.08	.27	.13	.33	.15	.85	.28	.09	.11	.01	.00	.01
29	.08	.20	.13	.29	.14	2.5	.33	.09	.08	.01	.00	.01
30	.08	.18	.13	.26	---	1.1	.34	.06	.18	.01	.00	.01
31	.06	---	.13	.29	---	.94	---	.06	---	.01	.00	---
TOTAL	1.51	23.43	4.53	31.50	7.33	47.45	18.56	8.76	6.42	1.02	.25	.29
MEAN	.049	.78	.15	1.02	.25	1.53	.62	.28	.21	.033	.008	.010
MAX	.25	11	.26	8.0	.53	7.3	3.8	1.9	2.6	.18	.02	.03
MIN	.01	.02	.11	.11	.14	.13	.28	.06	.01	.01	.00	.00
CFSM	.08	1.22	.23	1.59	.39	2.39	.97	.44	.33	.05	.01	.02
IN.	.09	1.36	.26	1.83	.43	2.75	1.08	.51	.37	.06	.01	.02

WTR YR 1980 TOTAL 151.05 MEAN .41 MAX 11 MIN .00 CFSM .64 IN 8.77

02096842 CANE CREEK 0.1 MILE UPSTREAM FROM SECONDARY ROAD 1126 NEAR BUCKHORN, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974-75, 1977-78, October 1979 to September 1980.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1979 to September 1980.
WATER TEMPERATURES: October 1979 to September 1980.

INSTRUMENTATION.--Water-quality monitor since October 1979. ISCO sampler since June 1980.

REMARKS.--Zero flow Aug. 13, 26-31, Sept. 1, 2, 16. Basin above station is 95 percent forested. Station is part of district's Natural Quality Network for determining the quality of streams relatively unaffected by man. For water years 1974-75, 1977-78 samples were collected from culvert at Secondary Road 1126, 0.1 mi (.16 km) downstream from gaging station and published as Cane Creek near Buckhorn (station 02096845).

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 124 micromhos Sept. 23; minimum, 24 micromhos May 20.
WATER TEMPERATURES: Maximum, 26.0°C Aug. 12, 13; minimum, 0.5°C Dec. 4, Jan. 31, Feb. 1-6, 8, 11, 13, 18, 19, Mar. 1-4.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
NOV											
03...	0850	1.7	58	5.9	13.5	150	--	--	--	20	5
DEC											
11...	1220	.12	55	6.7	5.0	20	12.2	--	--	20	0
JAN											
18...	1440	12	35	5.9	8.0	100	11.2	--	--	15	7
19...	0900	1.6	39	6.3	--	60	--	--	--	13	2
21...	1200	.57	45	6.5	6.5	30	11.2	--	--	15	0
FEB											
14...	1030	.43	48	6.0	2.0	40	13.8	--	--	16	0
MAR											
13...	1000	.53	45	7.3	4.5	50	12.4	--	--	15	0
21...	0945	9.9	32	5.9	11.5	100	9.7	--	--	12	6
21...	1130	8.9	33	6.0	12.0	80	9.6	--	--	11	5
21...	1310	7.9	34	6.2	12.0	100	9.5	--	--	11	3
MAY											
14...	1530	.12	57	6.7	19.5	15	8.4	50	86	22	0
JUN											
24...	1430	.01	76	7.0	17.5	20	7.7	K4	80	28	0
25...	1200	2.2	31	--	--	130	--	--	--	10	1
25...	1300	2.3	28	--	--	90	--	--	--	9	0
25...	1400	5.6	27	--	--	100	--	--	--	9	6
25...	1500	8.6	27	--	--	100	--	--	--	--	--
25...	1600	7.1	28	--	--	90	--	--	--	10	2
25...	1700	7.7	27	--	--	90	--	--	--	10	5
25...	1800	8.8	29	--	--	120	--	--	--	10	2

K Results based on colony count outside the acceptable range (non-ideal colony count).

02096842 CANE CREEK 0.1 MILE UPSTREAM FROM SECONDARY ROAD 1126 NEAR BUCKHORN, N. C.--Continued

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)
NOV											
03...	5.1	1.8	4.1	30	.4	.9	18	0	15	36	6.5
DEC											
11...	5.1	1.8	3.9	40	.4	.2	32	0	26	10	1.3
JAN											
18...	3.5	1.4	2.9	40	.3	.7	9	0	7	18	9.2
19...	3.1	1.3	2.9	31	.3	.6	13	0	11	10	7.0
21...	3.7	1.5	3.5	32	.4	.5	20	0	16	10	3.9
FEB											
14...	3.9	1.5	3.9	35	.4	.1	21	0	17	34	4.2
MAR											
13...	3.7	1.5	3.6	34	.4	.1	34	0	28	2.7	2.7
21...	2.8	1.1	2.4	31	.3	.3	7	0	6	14	6.1
21...	2.8	1.0	2.4	31	.3	.3	8	0	7	13	5.9
21...	2.8	1.0	2.4	31	.3	.3	10	0	8	10	6.1
MAY											
14...	5.5	1.9	4.0	29	.4	.2	33	0	27	9.7	1.8
JUN											
24...	7.2	2.4	5.1	28	.4	.3	48	0	39	6.6	1.5
25...	2.7	.9	2.0	28	.3	.7	--	--	*9	--	3.8
25...	2.4	.8	1.9	29	.3	.6	--	--	*9	--	3.3
25...	2.4	.7	1.7	28	.2	.6	--	--	*3	--	3.6
25...	--	--	--	--	--	--	--	--	*8	--	--
25...	2.7	.8	1.9	28	.3	.5	--	--	*8	--	4.0
25...	2.6	.8	2.8	37	.4	.5	--	--	*5	--	3.9
25...	2.6	.9	1.8	27	.2	.4	--	--	*8	--	3.9

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
NOV											
03...	4.5	.1	12	80	45	.11	.37	.00	.01	.01	.01
DEC											
11...	2.4	.2	16	46	47	.06	.01	.01	.01	.02	.03
JAN											
18...	2.6	.1	7.7	77	33	.10	2.64	.03	.01	.04	.03
19...	2.7	.1	9.6	59	34	.08	.25	.01	.01	.02	.02
21...	3.2	.1	12	48	29	.07	.07	.15	.01	.16	.02
FEB											
14...	2.6	.2	13	49	40	.07	.06	.01	.01	.02	.03
MAR											
13...	2.3	.1	14	46	45	.06	.07	--	--	--	--
21...	2.0	.1	6.8	58	25	.08	1.55	.05	.01	.06	.07
21...	1.9	.1	7.3	60	26	.08	1.44	.04	.01	.05	.03
21...	2.1	.1	7.4	56	27	.08	1.19	.03	.01	.04	.06
MAY											
14...	2.6	.2	18	61	50	.08	.02	.03	.00	.03	.06
JUN											
24...	2.8	.1	24	65	68	.09	.00	.09	.01	.10	.14
25...	1.8	.1	7.0	70	25	.10	.42	.16	.02	.18	.10
25...	1.7	.1	6.3	55	23	.07	.34	.11	.02	.13	.12
25...	1.8	.1	5.5	54	20	.07	.82	.22	.02	.24	--
25...	2.2	.1	--	58	--	.08	1.35	.02	.01	.03	--
25...	1.9	.1	5.1	56	22	.08	1.07	.03	.01	.04	.05
25...	1.7	.1	4.9	57	21	.08	1.19	.00	.01	.01	.06
25...	1.7	.1	5.2	67	22	.09	1.59	.01	.01	.02	.05

* Lab alkalinity.

02096842 CANE CREEK 0.1 MILE UPSTREAM FROM SECONDARY ROAD 1126 NEAR BUCKHORN, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)
NOV											
03...	--	.00	.00	.00	.00	1.1	.67	1.1	.43	.67	--
DEC											
11...	--	.01	.01	.01	.01	.15	.11	.16	.04	.12	--
JAN											
18...	--	.03	.01	.04	.01	.89	--	.92	--	--	--
19...	--	.00	.00	.00	.00	.58	.21	.58	.37	.21	--
21...	--	--	.08	--	.10	--	.10	.13	.00	.18	--
FEB											
14...	--	.00	.05	.00	.06	.14	.09	.14	.00	.14	--
MAR											
13...	--	--	--	--	--	--	--	--	--	--	--
21...	--	.04	.00	.05	.00	.33	.40	.37	.00	.40	--
21...	--	.00	.00	.00	.00	.35	.37	.35	.00	.37	--
21...	--	.02	.02	.02	.03	.41	.27	.43	.14	.29	--
MAY											
14...	--	.01	.05	.01	.06	.17	.02	.18	.11	.07	--
JUN											
24...	3.3	.04	.07	.05	.09	.08	--	.12	--	--	1100
25...	--	.04	.08	.05	.10	.52	--	.56	--	--	--
25...	--	.03	.04	.04	.05	1.1	.43	1.1	.63	.47	--
25...	--	.04	--	.05	--	.96	--	1.0	--	--	--
25...	--	.02	--	.02	--	.62	--	.64	--	--	--
25...	--	.05	.10	.06	.13	.58	--	.63	--	--	--
25...	--	.00	.06	.00	.08	.69	.65	.69	.00	.71	--
25...	--	.02	.07	.02	.09	.77	--	.79	--	--	--

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	NITRO-GEN, TOT IN BOT-TOM MA-TERIAL (MG/KG AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS PO4)	PHOS-PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)
NOV											
03...	1.1	4.9	--	--	.06	--	.030	.02	.00	.00	--
DEC											
11...	.18	.80	--	.020	.00	.06	.010	.00	.00	.00	--
JAN											
18...	.96	4.3	--	.060	.00	.18	.020	.00	.00	.00	--
19...	.60	2.7	--	.020	.00	.06	.010	.00	.00	.00	--
21...	.29	1.3	--	.030	.12	.09	.010	.04	.01	.03	--
FEB											
14...	.16	.71	--	.010	.00	.03	.010	.00	.01	.03	--
MAR											
13...	--	--	--	--	--	--	--	--	--	--	--
21...	.43	1.9	--	.050	.00	.15	.020	.00	.02	.06	--
21...	.40	1.8	--	.050	.00	.15	.010	.00	.00	.00	--
21...	.47	2.1	--	.050	.00	.15	.010	.00	.00	.00	--
MAY											
14...	.21	.93	--	.020	.00	.06	.020	.00	.00	.00	--
JUN											
24...	.22	.97	1100	.030	.12	.09	.020	.04	.01	.03	400
25...	.74	3.3	--	.100	.12	.31	.040	.04	.01	.03	--
25...	1.2	5.4	--	.160	.09	.49	--	.03	.00	.00	--
25...	1.2	5.5	--	.160	.06	.49	.040	.02	.01	.03	--
25...	.67	3.0	--	.090	.00	.28	.020	.00	.00	.00	--
25...	.67	3.0	--	.080	.00	.25	.040	.00	.00	.00	--
25...	.70	3.1	--	.080	.00	.25	.030	.00	.00	.00	--
25...	.81	3.6	--	.060	.00	.18	.030	.00	.00	.00	--

02096842 CANE CREEK 0.1 MILE UPSTREAM FROM SECONDARY ROAD 1126 NEAR BUCKHORN, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)
NOV											
03...	2	0	2	--	0	0	2	--	40	24	16
DEC											
11...	1	0	1	--	0	0	0	--	10	10	0
JAN											
18...	1	0	3	--	0	0	0	--	<10	7	3
19...	2	0	2	--	0	0	0	--	20	0	20
21...	1	1	0	--	0	0	0	--	30	29	1
FEB											
14...	--	--	--	--	--	--	--	--	30	23	7
MAR											
13...	--	--	--	--	--	--	--	--	<10	9	1
21...	2	0	2	--	0	0	2	--	<10	9	1
21...	2	0	2	--	0	0	1	--	<10	8	2
21...	2	0	2	--	0	0	0	--	<10	8	2
MAY											
14...	1	1	0	--	0	0	2	--	20	11	9
JUN											
24...	2	0	2	0	0	0	0	<10	<10	10	0
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--

DATE	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)
NOV											
03...	--	1	0	5	--	5	1	4	--	1300	530
DEC											
11...	--	0	0	0	--	1	0	1	--	670	550
JAN											
18...	--	2	1	1	--	3	0	3	--	2000	1700
19...	--	1	1	0	--	2	0	3	--	720	560
21...	--	1	0	4	--	1	0	2	--	1200	1000
FEB											
14...	--	--	--	--	--	1	0	1	--	710	530
MAR											
13...	--	--	--	--	--	1	--	--	--	540	440
21...	--	0	0	0	--	3	1	2	--	1000	850
21...	--	0	0	0	--	3	1	2	--	1100	800
21...	--	0	0	0	--	3	0	3	--	790	530
MAY											
14...	--	0	0	0	--	3	2	1	--	790	570
JUN											
24...	10	3	3	0	<10	3	2	1	<10	12000	12000
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--

02096842 CANE CREEK 0.1 MILE UPSTREAM FROM SECONDARY ROAD 1126 NEAR BUCKHORN, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)
NOV										
03...	770	--	4	3	1	--	100	10	90	--
DEC										
11...	120	--	0	0	0	--	50	0	50	--
JAN										
18...	350	--	1	0	1	--	140	100	40	--
19...	160	--	1	0	1	--	40	10	30	--
21...	170	--	1	1	0	--	40	10	30	--
FEB										
14...	180	--	0	0	0	--	--	--	--	--
MAR										
13...	100	--	0	0	0	--	--	--	--	--
21...	150	--	2	2	0	--	60	40	20	--
21...	300	--	3	3	0	--	60	50	10	--
21...	260	--	2	2	0	--	50	30	20	--
MAY										
14...	220	--	0	0	0	--	50	20	30	--
JUN										
24...	310	8800	0	0	0	20	70	0	80	350
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)
NOV										
03...	<.1	.0	<.1	--	0	0	0	--	10	0
DEC										
11...	<.1	.0	<.1	--	0	0	0	--	10	0
JAN										
18...	.1	.0	.1	--	0	0	0	--	10	4
19...	<.1	.0	<.1	--	0	0	0	--	270	270
21...	.1	.0	.1	--	0	0	0	--	10	0
FEB										
14...	--	--	--	--	--	--	--	--	40	10
MAR										
13...	--	--	--	--	--	--	--	--	10	10
21...	.1	.0	.1	--	0	0	0	--	150	150
21...	.1	.0	.1	--	0	0	0	--	130	120
21...	.1	.0	.1	--	0	0	0	--	20	10
MAY										
14...	.2	.1	.1	--	0	0	0	--	40	40
JUN										
24...	.1	.0	.1	.00	0	0	0	0	10	10

02096842 CANE CREEK 0.1 MILE UPSTREAM FROM SECONDARY ROAD 1126 NEAR BUCKHORN, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	ZINC, DIS-SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
NOV									
03...	10	--	--	20	.9	--	--	--	.10
DEC									
11...	20	--	--	--	--	--	--	--	.00
JAN									
18...	6	--	--	14	2.8	--	--	--	.00
19...	0	--	--	3.3	.5	--	--	--	.00
21...	10	--	--	17	.7	--	--	--	.00
FEB									
14...	30	--	--	2.7	.2	--	--	--	.00
MAR									
13...	0	--	--	--	--	--	--	--	--
21...	1	--	17	--	--	--	--	--	.00
21...	6	--	13	--	--	--	--	--	.00
21...	10	--	12	--	--	--	--	--	.00
MAY									
14...	2	--	--	6.1	.3	--	--	--	.00
JUN									
24...	0	17	--	4.8	.4	3.6	.4	4.0	.00

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE	OCT 23,79	MAY 14,80	JUN 24,80
TIME	1100	1530	1430
TOTAL CELLS/ML	0	13	26
DIVERSITY: DIVISION	0.0	0.0	0.0
.CLASS	0.0	0.0	0.0
..ORDER	0.0	0.0	1.0
...FAMILY	0.0	0.0	1.0
....GENUS	0.0	0.0	1.0

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	--	-	--	-	13#	50
..PENNALES						
...NITZSCHIACEAE						
....NITZSCHIA	--	-	13#100		13#	50

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02096842 CANE CREEK 0.1 MILE UPSTREAM FROM SECONDARY ROAD 1126 NEAR BUCKHORN, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	65	54	59	71	69	70	53	51	52	60	59	59
2	67	61	65	71	61	68	54	52	53	60	58	59
3	69	67	68	63	55	57	53	51	52	60	58	60
4	70	63	68	60	57	58	54	52	53	60	59	60
5	70	51	57	66	59	62	54	52	53	59	57	58
6	64	54	58	66	60	63	53	47	51	62	57	59
7	66	60	63	66	64	65	65	47	56	60	58	59
8	66	63	65	66	62	65	63	58	61	60	58	59
9	67	64	66	69	64	67	61	55	58	60	60	60
10	68	57	63	70	64	66	58	55	56	60	59	60
11	61	58	59	66	29	49	57	51	55	61	44	55
12	65	57	61	34	29	32	53	50	52	48	43	46
13	67	60	64	40	35	37	53	44	49	51	49	50
14	67	58	61	45	41	43	54	45	51	51	48	50
15	66	60	64	47	44	46	54	53	54	54	48	50
16	65	60	63	55	47	50	56	53	55	55	53	54
17	66	62	63	52	49	50	56	55	55	56	54	55
18	65	62	64	54	49	51	55	54	55	56	38	47
19	67	62	65	54	51	52	55	54	55	46	40	45
20	70	63	66	54	50	52	55	54	54	49	46	47
21	72	67	70	59	52	55	56	54	55	51	49	50
22	74	68	71	57	52	54	57	55	56	52	47	51
23	74	71	73	63	54	56	57	55	57	46	45	45
24	77	70	74	63	56	59	58	52	56	48	46	47
25	77	74	76	62	57	60	57	53	56	50	48	49
26	75	71	73	60	38	45	57	55	56	52	50	50
27	71	68	69	52	43	47	58	55	57	52	49	51
28	69	66	68	54	49	51	58	56	57	53	51	52
29	68	66	67	54	51	52	58	56	57	54	53	53
30	69	67	68	54	52	53	59	58	58	55	53	53
31	71	69	70	---	---	---	60	58	59	52	50	51
MONTH	77	51	66	71	29	55	65	44	55	62	38	53
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	55	52	53	50	47	48	40	38	39	51	49	50
2	55	53	54	47	46	46	41	39	39	52	49	51
3	56	53	54	48	45	46	42	38	40	54	50	52
4	55	52	54	49	41	46	42	39	41	57	51	53
5	56	51	54	42	32	38	41	39	40	57	52	54
6	53	51	52	36	33	34	42	39	40	56	52	54
7	53	51	52	40	35	37	42	39	41	67	48	56
8	54	51	53	41	40	41	42	39	40	57	54	55
9	53	49	52	41	37	39	43	40	41	55	53	54
10	51	49	50	43	40	41	43	40	42	56	52	54
11	51	49	50	44	43	43	44	41	42	57	52	54
12	50	48	49	46	44	45	45	42	43	59	54	56
13	50	49	49	46	41	45	45	26	40	58	54	56
14	50	46	48	46	45	45	30	27	29	62	54	57
15	46	44	46	48	46	47	34	30	31	61	57	59
16	45	44	44	49	47	48	37	34	35	62	57	59
17	47	45	46	50	37	48	39	37	37	63	57	59
18	49	47	48	39	36	37	41	38	39	58	45	53
19	50	48	49	42	39	40	43	39	41	62	57	59
20	51	49	50	44	40	43	43	40	42	62	24	51
21	51	50	51	40	32	34	45	41	43	45	28	38
22	54	51	52	37	33	35	61	39	46	53	45	49
23	54	50	52	40	36	38	71	44	52	57	53	55
24	53	50	51	40	30	38	70	40	56	58	57	57
25	53	48	52	35	29	32	65	45	53	60	58	59
26	45	43	44	37	34	35	50	47	48	61	59	59
27	46	45	46	39	36	37	51	48	49	61	58	59
28	49	46	47	39	37	38	51	48	50	61	58	59
29	49	47	48	37	34	35	51	47	49	61	58	59
30	---	---	---	38	37	37	50	47	49	62	59	60
31	---	---	---	39	37	38	---	---	---	63	59	61
MONTH	56	43	50	50	29	40	71	26	43	67	24	55

02096842 CANE CREEK 0.1 MILE UPSTREAM FROM SECONDARY ROAD 1126 NEAR BUCKHORN, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	67	58	62	65	60	62	92	68	87	---	---	---
2	67	60	63	66	60	63	63	42	48	---	---	---
3	66	61	64	66	62	64	50	45	47	---	---	90
4	65	60	63	66	61	63	53	48	50	---	---	87
5	66	58	62	68	61	64	58	51	54	---	---	88
6	64	52	60	68	63	66	62	56	59	---	---	88
7	59	48	53	69	64	66	70	62	65	---	---	89
8	64	59	60	68	60	64	76	66	72	---	---	88
9	64	60	62	70	59	63	81	73	77	---	---	88
10	63	58	61	69	43	60	88	81	84	---	---	89
11	64	59	62	60	43	52	96	75	88	---	---	89
12	63	60	62	64	56	59	96	85	91	93	88	91
13	60	58	59	66	40	52	---	---	---	101	90	92
14	63	57	60	66	54	59	104	63	92	100	91	93
15	59	57	58	74	60	65	101	70	84	100	92	95
16	63	59	61	79	59	67	104	90	96	---	---	---
17	63	60	62	92	63	73	100	87	93	98	79	92
18	61	54	58	58	51	55	97	86	89	101	79	86
19	61	58	59	62	55	58	95	88	91	102	88	96
20	63	59	61	69	58	62	106	87	100	100	91	94
21	66	63	65	74	61	67	102	67	90	109	98	102
22	67	64	65	81	70	74	100	91	95	119	99	105
23	74	66	70	74	47	58	95	86	90	124	99	106
24	77	70	74	73	48	60	96	86	91	108	98	101
25	74	27	43	74	58	66	102	84	92	105	96	99
26	49	28	39	73	60	65	---	---	---	105	99	102
27	49	42	46	76	61	68	---	---	---	102	94	97
28	52	49	51	84	76	81	---	---	---	94	89	91
29	55	52	54	86	79	83	---	---	---	97	92	93
30	60	55	58	92	82	87	---	---	---	95	76	85
31	---	---	---	96	87	91	---	---	---	---	---	---
MONTH	77	27	59	96	40	66	106	42	80	124	76	93
YEAR	124	24	59									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	21.0	19.0	20.0	14.5	10.5	12.5	5.0	2.0	3.5	5.5	3.5	4.5
2	20.0	17.0	18.5	15.5	13.0	14.0	4.5	2.5	3.0	5.5	2.5	3.5
3	19.5	16.0	17.5	15.0	11.0	13.5	3.0	1.0	2.0	4.5	1.5	3.0
4	18.0	13.5	16.0	10.5	8.0	9.0	4.0	.5	2.0	4.0	3.0	3.5
5	16.5	14.0	16.0	9.5	6.0	7.5	5.0	1.5	3.0	4.5	3.0	3.5
6	14.5	10.5	13.0	9.5	5.5	7.5	6.5	3.5	5.0	4.0	2.0	3.0
7	15.5	12.5	14.0	10.0	6.5	8.0	9.0	6.5	7.5	4.5	1.5	3.0
8	14.5	10.0	12.5	9.0	5.5	7.0	7.5	5.0	6.0	6.0	4.5	5.5
9	17.0	13.0	14.5	11.0	7.5	9.0	5.5	3.5	4.5	6.0	4.5	5.5
10	15.0	10.0	12.5	14.5	10.5	12.5	6.0	2.5	4.0	4.5	2.0	3.5
11	11.0	9.5	10.0	13.5	12.0	13.0	7.0	3.0	5.0	8.0	4.5	6.0
12	13.5	8.5	11.0	12.0	11.0	11.5	9.0	5.0	7.0	8.0	6.5	7.0
13	13.0	11.5	12.5	11.5	10.0	10.5	11.0	8.0	9.5	6.0	5.0	5.5
14	11.5	8.0	10.0	9.5	7.5	8.5	10.5	6.0	8.5	7.0	4.5	5.5
15	11.0	7.0	9.0	7.5	5.5	7.0	6.5	4.0	5.5	9.0	7.0	7.5
16	12.0	8.0	10.0	9.5	7.5	8.0	8.5	6.5	7.5	7.5	5.5	7.0
17	13.5	9.0	11.0	9.0	5.5	7.5	7.5	3.0	5.5	8.0	6.0	7.0
18	14.0	10.0	12.0	10.0	6.5	8.0	4.0	1.5	2.5	8.0	7.5	8.0
19	15.0	11.0	12.5	10.0	6.5	8.0	5.0	1.5	3.0	8.0	7.0	7.5
20	16.0	12.5	14.0	11.0	7.0	9.0	4.0	2.0	3.0	9.0	6.5	7.5
21	17.0	13.5	14.5	12.0	8.0	9.5	5.5	4.0	4.5	7.5	6.0	7.0
22	16.5	13.0	14.5	12.0	7.5	9.5	7.0	5.0	6.0	8.5	7.0	7.5
23	15.5	13.5	14.5	13.5	9.0	11.5	9.0	7.0	8.0	8.5	6.5	8.0
24	14.0	10.5	12.0	15.5	12.0	13.5	11.0	7.5	9.5	6.5	4.0	5.5
25	11.5	7.5	9.5	15.0	12.0	13.5	10.5	7.5	9.0	8.0	5.5	7.0
26	11.0	7.0	8.5	15.5	11.5	14.5	8.5	5.5	7.0	8.0	7.0	7.5
27	9.5	5.5	7.0	11.5	8.5	10.0	7.0	4.0	5.0	7.5	6.0	7.0
28	11.5	6.0	8.0	12.0	9.0	10.5	6.5	3.5	4.5	7.5	5.0	6.5
29	11.5	8.5	10.0	10.0	6.0	7.5	6.0	2.5	4.0	7.5	5.5	6.5
30	14.0	10.0	11.5	6.0	3.5	4.5	7.0	4.5	5.5	5.0	2.5	4.0
31	14.0	11.0	12.0	---	---	---	7.5	4.5	6.0	3.0	.5	2.0
MONTH	21.0	5.5	12.5	15.5	3.5	10.0	11.0	.5	5.5	9.0	.5	5.5

02096842 CANE CREEK 0.1 MILE UPSTREAM FROM SECONDARY ROAD 1126 NEAR BUCKHORN, N. C.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2.0	.5	1.0	5.0	.5	2.0	14.5	9.0	11.5	14.0	10.0	12.0
2	1.5	.5	.5	.5	.5	.5	15.0	9.5	12.5	17.0	11.0	14.0
3	1.5	.5	.5	1.5	.5	.5	16.5	10.0	13.5	17.5	12.5	14.5
4	2.0	.5	.5	2.5	.5	1.0	18.0	13.0	15.0	18.0	11.5	14.5
5	1.5	.5	1.0	4.5	2.5	3.5	14.5	10.0	12.0	19.0	12.0	15.0
6	1.5	.5	1.0	7.5	4.0	5.5	14.5	7.5	11.0	18.0	13.0	15.5
7	3.0	1.0	2.0	8.0	4.5	6.5	12.5	9.5	11.0	19.5	13.5	16.0
8	3.5	.5	2.0	10.0	7.5	9.0	15.0	11.5	12.5	16.0	12.0	15.0
9	2.5	1.5	2.0	11.5	8.5	10.0	---	---	---	15.0	10.0	12.0
10	3.5	1.5	2.5	10.5	6.5	8.5	---	---	---	15.5	8.0	11.5
11	3.0	.5	2.0	10.5	7.5	8.5	---	---	---	17.5	11.5	14.0
12	4.0	1.5	3.0	7.0	5.0	6.5	---	---	---	20.0	13.5	16.0
13	4.0	.5	2.5	---	---	---	---	---	---	19.0	15.5	17.0
14	5.0	1.0	3.0	---	---	---	---	---	---	20.0	15.5	17.0
15	6.5	2.5	4.5	---	---	---	---	---	---	17.0	14.5	15.5
16	7.0	4.5	6.0	---	---	---	---	---	---	17.0	12.0	14.5
17	4.5	2.0	3.0	---	---	---	---	---	---	17.0	13.5	15.0
18	3.5	.5	2.0	---	---	---	---	---	---	18.5	15.5	16.5
19	4.5	.5	2.5	---	---	---	---	---	---	19.5	15.5	17.0
20	7.5	4.0	6.0	---	---	---	---	---	---	17.5	17.0	17.5
21	8.5	5.0	7.5	13.0	9.0	6.5	---	---	---	18.5	16.0	17.0
22	11.5	8.0	9.5	12.0	7.5	9.5	---	---	---	19.0	16.0	17.0
23	12.0	8.0	10.0	11.0	6.5	8.5	---	---	---	20.0	17.0	18.0
24	11.0	7.5	9.0	10.0	8.5	9.0	---	---	---	19.0	17.0	18.0
25	8.5	7.5	8.0	13.0	8.5	10.5	---	---	---	18.5	16.5	17.5
26	7.5	5.0	6.0	10.5	8.5	9.5	---	---	---	19.0	16.0	17.0
27	7.0	3.0	5.0	13.0	8.0	10.5	---	---	---	17.0	12.5	15.0
28	7.5	4.0	6.0	10.5	9.0	9.5	---	---	---	17.5	13.0	15.5
29	7.5	4.5	6.0	13.5	9.5	11.5	13.5	10.0	12.0	19.5	15.0	17.0
30	---	---	---	12.5	10.5	11.5	14.5	9.0	11.5	20.0	16.5	18.0
31	---	---	---	14.5	11.0	12.5	---	---	---	20.5	16.5	18.5
MONTH	12.0	.5	4.0	14.5	.5	7.5	18.0	7.5	12.5	20.5	8.0	16.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	20.5	17.0	18.5	20.5	18.0	19.0	24.5	21.0	22.5	---	---	---
2	21.0	17.0	19.0	20.5	16.5	18.5	23.0	20.5	21.5	---	---	---
3	---	---	---	20.5	19.0	19.5	23.5	21.0	22.5	---	---	---
4	---	---	---	21.0	19.5	20.0	25.0	21.0	23.0	---	---	---
5	---	---	---	22.5	19.5	20.5	25.5	21.5	23.5	---	---	---
6	---	---	---	23.0	20.0	21.0	25.0	21.5	23.5	---	---	---
7	---	---	---	21.0	19.0	20.0	25.5	21.5	23.5	---	---	---
8	---	---	---	20.5	17.5	19.0	25.5	22.0	23.5	---	---	---
9	---	---	---	21.5	19.0	20.0	25.0	22.0	23.5	---	---	---
10	---	---	---	21.5	19.5	20.5	25.5	22.0	24.0	---	---	---
11	---	---	---	22.0	19.5	20.5	25.5	22.5	24.5	---	---	---
12	---	---	---	22.0	19.0	20.5	26.0	23.5	24.5	21.0	18.0	20.5
13	---	---	---	22.0	20.5	21.0	---	---	---	21.5	17.5	19.5
14	---	---	---	21.5	19.5	20.5	24.5	20.5	22.5	22.0	18.5	20.5
15	---	---	---	21.5	19.0	20.5	25.0	21.5	23.5	22.0	20.0	21.0
16	---	---	---	22.5	20.0	21.0	25.0	22.0	23.5	---	---	---
17	---	---	---	24.0	21.0	22.0	23.0	20.5	21.5	22.0	21.0	21.0
18	---	---	---	22.0	21.0	21.5	21.5	18.5	20.5	22.0	21.0	21.5
19	---	---	---	22.5	20.0	21.5	23.5	21.0	22.0	22.0	21.5	21.5
20	---	---	---	23.5	20.5	22.0	24.5	21.5	23.0	21.0	20.5	21.0
21	---	---	---	24.0	20.5	22.0	23.0	21.5	22.5	22.5	20.5	21.5
22	---	---	---	24.0	21.0	22.5	22.0	21.0	21.5	23.0	21.0	22.0
23	---	---	---	22.0	21.0	21.5	22.5	18.0	20.0	24.0	22.0	23.0
24	18.0	17.5	17.5	22.5	20.5	21.5	22.0	18.5	20.0	23.0	21.0	22.0
25	19.0	17.0	18.0	22.0	19.5	21.0	22.5	20.0	21.0	22.5	21.5	22.0
26	18.5	18.0	18.0	22.0	19.0	20.5	---	---	---	23.0	19.0	21.5
27	19.0	16.0	17.0	21.0	19.0	20.5	---	---	---	18.5	16.0	17.0
28	---	---	---	22.5	20.5	21.0	---	---	---	16.5	14.5	15.5
29	---	---	---	22.5	21.0	21.5	---	---	---	17.0	15.5	16.0
30	---	---	---	24.0	19.5	21.5	---	---	---	17.5	16.5	17.0
31	---	---	---	24.5	20.5	22.5	---	---	---	---	---	---
MONTH	21.0	16.0	18.0	24.5	16.5	21.0	26.0	18.0	22.5	24.0	14.5	20.0
YEAR	26.0	.5	12.0									

02096842 CANE CREEK 0.1 MILE UPSTREAM FROM SECONDARY ROAD 1126 NEAR BUCKHORN, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
03...	0940	.03	3	.00
05...	0850	.45	41	.05
10...	1345	.10	9	.00
23...	1100	.12	4	.00
NOV				
03...	0850	1.7	22	.10
DEC				
11...	1220	.12	3	.00
JAN				
18...	1440	12	120	4.1
18...	1515	12	82	2.9
18...	1600	12	74	2.6
18...	1620	13	62	2.2
19...	0900	1.6	8	.03
19...	1200	1.2	7	.02
21...	1200	.57	8	.01
31...	1450	.28	6	.00
FEB				
05...	1535	.22	4	.00
14...	1030	.43	7	.01
MAR				
11...	0815	.75	9	.02
13...	1000	.53	6	.01
21...	0945	9.9	64	1.7
21...	1030	9.2	58	1.4
21...	1130	8.9	43	1.0
21...	1220	8.5	41	.94
21...	1310	7.9	43	.92
MAY				
14...	1530	.12	4	.00
JUN				
03...	1430	.06	4	.00
24...	1430	.01	4	.00
27...	1300	.22	9	.01
JUL				
01...	1330	.06	2	.00
28...	1340	.01	5	.00

02096960 HAW RIVER NEAR BYNUM, N. C.

LOCATION.--Lat 35°45'48", long 79°08'02", Chatham County, Hydrologic Unit 03030002, on right bank 500 ft (150 m) upstream from Pokeberry Creek, 0.9 mi (1.4 km) south-southeast of Bynum, and 1.1 mi (1.8 km) downstream from U.S. Highway 15 and 501.

DRAINAGE AREA.--1,275 mi² (3,302 km²), revised.

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 283.31 ft (86.353 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Considerable regulation for short periods at low flow caused by powerplant above station. Gage height telemeter at station. Suspended-sediment records for the current year are published on page 418 of this report.

AVERAGE DISCHARGE.--7 years, 1,403 ft³/s (39.73 m³/s), 14.94 in/yr (379 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,800 ft³/s (1,297 m³/s) Mar. 14, 1975, gage height, 17.67 ft (5.386 m); minimum, 1.6 ft³/s (0.045 m³/s) Sept. 19, 20, 1978, gage height, 2.00 ft (0.610 m); minimum daily, 29 ft³/s (0.82 m³/s) Aug. 5, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,500 ft³/s (411 m³/s) Nov. 12, gage height 11.18 ft (3.408 m), no peak above base of 15,000 ft³/s (425 m³/s); minimum, 0.40 ft³/s (0.011 m³/s) Aug. 19, gage height, 1.95 ft (0.594 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2060	404	1020	429	991	864	2130	778	453	741	156	124
2	1500	575	1010	427	861	847	1680	667	412	534	291	112
3	1350	1680	941	403	831	841	1450	622	369	445	446	122
4	1710	1470	808	391	882	928	1330	582	394	407	295	818
5	2140	918	771	450	835	2160	1230	553	285	638	138	611
6	5040	725	788	658	725	5610	1090	518	345	836	176	288
7	2290	580	861	678	733	3490	973	496	900	483	167	193
8	1560	566	949	611	880	2250	949	469	915	375	146	225
9	1170	490	794	531	929	3890	1730	422	483	333	143	79
10	918	508	723	496	1100	2600	3380	422	355	333	136	125
11	960	4580	664	783	1380	1790	2890	417	301	612	190	128
12	1050	11500	530	5190	1420	1410	2230	431	272	590	122	125
13	897	4410	607	2870	1400	1480	2080	407	302	488	56	120
14	845	2290	778	1740	1270	1650	3860	388	193	1450	111	118
15	813	1670	853	2930	1310	1430	5220	393	238	570	195	115
16	743	1300	727	1910	1610	1130	3220	398	302	367	61	109
17	709	1070	696	1350	1670	974	2340	375	146	295	148	113
18	681	1030	646	3320	1280	5920	1880	791	321	819	211	175
19	650	940	598	8780	1090	4060	1330	853	308	1110	34	203
20	631	884	584	3690	1020	2170	1070	704	349	533	148	196
21	598	728	500	2280	1070	8880	986	6010	300	401	185	178
22	563	728	427	1840	1040	6970	900	3420	272	329	230	145
23	563	727	429	4090	932	3130	826	1470	312	598	174	189
24	609	741	429	3440	939	2530	910	1150	155	1990	202	54
25	687	726	504	2000	879	7750	736	1030	1350	846	231	229
26	590	1920	721	1490	1410	4690	769	1070	12800	431	92	88
27	441	3190	587	1250	1670	2700	738	821	8560	314	152	250
28	375	1600	499	1140	1140	2140	732	636	2770	310	146	166
29	362	1150	457	1110	978	3480	698	535	1610	251	134	210
30	355	911	434	1040	---	3210	704	479	1080	325	127	87
31	354	---	436	991	---	2440	---	432	---	341	118	---
TOTAL	33214	50011	20771	58308	32275	93414	50061	27739	36852	18095	5161	5695
MEAN	1071	1667	670	1881	1113	3013	1669	895	1228	584	166	190
MAX	5040	11500	1020	8780	1670	8880	5220	6010	12800	1990	446	818
MIN	354	404	427	391	725	841	698	375	146	251	34	54
CFSM	.84	1.31	.53	1.48	.87	2.36	1.31	.70	.96	.46	.13	.15
IN.	.97	1.46	.61	1.70	.94	2.73	1.46	.81	1.08	.53	.15	.17

CAL YR 1979 TOTAL 707171 MEAN 1937 MAX 36900 MIN 146 CFSM 1.52 IN 20.63
WTR YR 1980 TOTAL 431596 MEAN 1179 MAX 12800 MIN 34 CFSM .93 IN 12.59

02098198 HAW RIVER BELOW B. EVERETT JORDAN DAM NEAR MONCURE, N. C.

LOCATION.--Lat 35°39'11", long 79°04'03", Chatham County, Hydrologic Unit 03030002, on right bank 300 ft (91.4 m) downstream from B. Everett Jordan Dam, 2.5 mi (4.0 km) north of Moncure, and 4.2 (6.8 km) upstream from mouth.

DRAINAGE AREA.--1,700 mi² (4,400 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1965 to current year. Published as Haw River near Haywood, N. C. (02098200) October 1965 to September 1978.

GAGE.--Water-stage recorder. Datum of gage is 155.00 ft (47.244 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Oct. 1, 1978, water-stage recorder at site 0.3 mi (0.5 km) downstream at same datum. Since June 22, 1966, auxiliary water-stage recorder 2.9 mi (4.7 km) downstream.

REMARKS.--Water-discharge records good except those for period of no gage height record, Mar. 19 to Apr. 1, which are fair. Some regulation for short periods at low flow caused by powerplants above station and since Dec. 16, 1972 by B. Everett Jordan Reservoir.

AVERAGE DISCHARGE.--15 years, 1,611 ft³/s (45.62 m³/s), 12.87 in/yr (327 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,800 ft³/s (731 m³/s) Oct. 25, 1971, gage height, 22.41 ft (6.831 m) at former site; no flow for part of Aug. 1, 1980; minimum daily discharge, 35 ft³/s (0.99 m³/s) Sept. 12, 1966, at former site.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,000 ft³/s (227 m³/s) Mar. 22; maximum gage height, 12.41 ft (3.783 m) Mar. 22; no flow part of Aug. 1; minimum gage height, 2.88 ft (0.878 m) Aug. 1; minimum daily discharge, 90 ft³/s (2.55 m³/s) Aug. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1530	450	1590	536	1240	1240	3900	958	482	4760	231	142
2	1710	1200	1410	527	1170	1060	2900	898	484	2870	336	145
3	1500	1300	1290	518	1020	978	2200	791	428	1150	524	139
4	1480	1200	1160	492	1030	1160	1800	745	428	693	431	564
5	2370	1000	1060	543	1010	1750	1510	794	391	689	234	692
6	3580	800	1060	707	927	4750	1410	803	349	1060	234	452
7	3790	700	1120	876	905	5860	1230	689	692	934	216	201
8	2990	680	1250	819	994	5340	1150	560	1490	678	205	234
9	1710	580	1170	764	1130	5270	1350	514	1050	566	185	158
10	940	640	996	760	1630	5260	2930	476	571	489	185	129
11	821	4800	898	753	2390	4000	3240	473	404	482	271	152
12	1010	5600	784	3890	2490	2690	2660	493	387	821	185	145
13	922	7000	711	5230	2330	2270	2190	462	394	694	158	142
14	841	6840	863	3940	2000	3470	3090	440	303	1250	90	139
15	801	6180	980	3450	1790	3180	5650	433	288	1220	216	132
16	757	5600	940	3200	1860	2290	5460	436	325	708	142	129
17	670	4840	829	2070	1980	1640	4380	452	263	459	142	129
18	660	3560	770	2340	1930	3500	2970	711	311	475	222	158
19	650	1860	690	5580	1510	4600	1980	1360	378	1190	181	216
20	650	1190	672	6120	1310	4800	1450	1510	443	945	126	216
21	640	1090	644	5800	1260	5900	1230	4000	411	602	185	222
22	630	941	545	5210	1320	7700	1100	5410	351	436	268	169
23	640	933	518	5180	1270	7100	1030	4020	362	426	205	181
24	680	932	527	5480	1240	5600	1030	2670	266	1210	268	129
25	760	925	562	5250	1220	5900	949	1610	431	1550	274	162
26	700	2200	731	4500	1350	6300	890	1470	5490	799	152	145
27	600	5520	886	3130	2080	5400	881	1340	6890	442	173	193
28	440	5080	741	1950	1950	4800	915	1030	7070	370	177	193
29	400	4260	617	1540	1510	4700	908	719	6750	356	158	197
30	430	2750	562	1390	---	5100	894	586	6080	413	155	145
31	430	---	536	1270	---	4400	---	518	---	522	152	---
TOTAL	35732	80651	27112	83815	43846	128008	63277	37371	43962	29259	6681	6150
MEAN	1153	2688	875	2704	1512	4129	2109	1206	1465	944	216	205
MAX	3790	7000	1590	6120	2490	7700	5650	5410	7070	4760	524	692
MIN	400	450	518	492	905	978	881	433	263	356	90	129
CFSM	.68	1.58	.52	1.59	.89	2.43	1.24	.71	.86	.56	.13	.12
IN.	.78	1.76	.59	1.83	.96	2.80	1.38	.82	.96	.64	.15	.13

CAL YR 1979 TOTAL 945941 MEAN 2592 MAX 12500 MIN 153 CFSM 1.53 IN 20.70
WTR YR 1980 TOTAL 585864 MEAN 1601 MAX 7700 MIN 90 CFSM .94 IN 12.82

02098198 HAW RIVER BELOW B. EVERETT JORDAN DAM NEAR MONCURE, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973-75, April to September 1980.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1973 to September 1975, April to September 1980.
WATER TEMPERATURES: July 1973 to September 1975, April to September 1980.

REMARKS.--Station is part of district's Primary Accounting Network used to define stream-quality characteristics of the State's major streams. For water years 1973-75, data were published as Haw River near Haywood (station 02098200).

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 572 micromhos Nov. 11, 1973; minimum daily, 44 micromhos June 4, 1975.
WATER TEMPERATURES: Maximum daily, 33.0°C Aug. 8, 1980; minimum daily, 2.0°C Dec. 19, 1973, Jan. 3, 1975.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 382 micromhos Aug. 27; minimum daily, 74 micromhos June 27.
WATER TEMPERATURES: Maximum daily, 33.0°C Aug. 8; minimum daily, 15.5°C Apr. 30.

WATER QUALITY DATA, PERIOD APRIL TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
APR											
01...	1230	2230	87	6.6	13.0	60	10.1	24	2	5.6	2.4
JUN											
04...	1400	65	174	7.0	28.0	11	7.3	36	0	8.5	3.6
JUL											
28...	1030	65	129	6.5	26.0	80	6.2	29	1	7.1	2.8

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
APR											
01...	6.9	37	.6	1.7	27	0	22	11	11	6.0	.1
JUN											
04...	20	52	1.5	2.9	55	0	45	7.6	17	12	.2
JUL											
28...	13	45	1.0	3.7	39	0	*28	17	13	8.8	.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
APR											
01...	11	42	47	.06	253	.51	.02	.53	.49	--	.06
JUN											
04...	14	123	112	.17	21.6	1.2	.02	1.2	1.2	25	.06
JUL											
28...	12	91	82	.12	16.0	1.2	.04	1.2	.90	--	.04

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO-GEN, TOTAL (MG/L AS N)
APR										
01...	.04	.07	.05	.40	.40	.46	.02	.44	--	.99
JUN										
04...	.07	.07	.09	.85	.68	.91	.16	.75	9800	2.1
JUL										
28...	.12	.05	.15	.60	.46	.64	.06	.58	--	1.8

* Lab alkalinity.

02098198 HAW RIVER BELOW B. EVERETT JORDAN DAM NEAR MONCURE, N. C.--Continued

WATER QUALITY DATA, PERIOD APRIL TO SEPTEMBER 1980

DATE	NITRO-GEN, TOTAL (MG/L AS NO3)	NITRO-GEN, TOT IN BOT-TOM MA-TERIAL (MG/KG AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS PO4)	PHOS-PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)
APR										
01...	4.4	--	.120	.25	.37	.070	.08	.04	.12	--
JUN										
04...	9.3	9830	.060	.67	.18	--	.22	.23	.71	1200
JUL										
28...	8.1	--	.300	.61	.92	.140	.20	.15	.46	--

DATE	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)
APR										
01...	--	--	30	28	2	--	--	7	1	6
JUN										
04...	0	<10	20	19	1	50	<10	8	3	5
JUL										
28...	--	--	10	8	2	--	--	9	0	9

DATE	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)
APR										
01...	--	2400	2100	280	--	2	2	0	--	--
JUN										
04...	30	1500	1300	230	16000	3	3	0	40	550
JUL										
28...	--	4500	4300	160	--	8	7	1	--	--

DATE	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)
APR								
01...	--	--	20	20	0	--	7.9	1.8
JUN								
04...	.00	0	10	9	1	90	6.5	.5
JUL								
28...	--	--	20	20	5	--	13	2.0
AUG								
19...	@1100 --	--	--	--	--	--	--	--

DATE	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	LENGTH OF EXPO-SURE (DAYS)
APR							
01...	--	--	--	.10	--	--	--
JUN							
04...	27	.0	27	.10	--	--	--
JUL							
28...	--	--	--	.10	--	--	--
AUG							
19...	@1100 --	--	--	--	32.0	29.3	21

02098198 HAW RIVER BELOW B. EVERETT JORDAN DAM NEAR MONCURE, N. C.--Continued

PHYTOPLANKTON ANALYSES, APRIL TO SEPTEMBER 1980

DATE	APR 1,80	JUN 4,80
TIME	1230	1400
TOTAL CELLS/ML	920	160000
DIVERSITY: DIVISION	1.0	1.2
.CLASS	1.0	1.2
..ORDER	1.6	1.4
...FAMILY	2.9	2.1
....GENUS	3.3	3.0

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)				
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...COELASTRACEAE				
....COELASTRUM	--	-	3800	2
...HYDRODICTYACEAE				
....PEDIASTRUM	--	-	6300	4
...MICRACTINIACEAE				
....MICRACTINIUM	--	-	8200	5
...OOCYSTACEAE				
....ANKISTRODESMUS	180#	20	6900	4
....DICTYOSPHAERIUM	--	-	5600	4
....KIRCHNERIELLA	--	-	5000	3
....OOCYSTIS	--	-	1900	1
....TREUBARIA	--	-	*	0
...SCENEDESMACEAE				
....CRUCIGENIA	--	-	5300	3
....SCENEDESMUS	95	10	10000	6
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS	20	2	--	-
CHRYSOPHYTA				
.BACILLARIOPHYCEAE				
..CENTRALES				
...COSCINODISCACEAE				
....CYCLOTELLA	20	2	6000	4
....MELOSIRA	110	12	--	-
..PENNALES				
...ACHNANTHACEAE				
....COCCONEIS	7	1	--	-
...CYMBELLACEAE				
....CYMBELLA	20	2	--	-
...EUNOTIACEAE				
....EUNOTIA	7	1	--	-
...FRAGILARIACEAE				
....ASTERIONELLA	120	13	--	-
....SYNEDRA	74	8	--	-
...GOMPHONEMATACEAE				
....GOMPHONEMA	7	1	--	-
...NAVICULACEAE				
....NAVICULA	68	7	940	1
....STAURONEIS	14	1	--	-
...NITZSCHIACEAE				
....NITZSCHIA	160#	18	*	0
...SURIRELLACEAE				
....SURIRELLA	7	1	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)				
.CYANOPHYCEAE				
..CHROOCOCCALES				
...CHROOCOCCACEAE				
....AGMENELLUM	--	-	58000#	36
....ANACYSTIS	--	-	35000#	22
..HORMOGONALES				
...OSCILLATORIACEAE				
....OSCILLATORIA	--	-	7800	5
EUGLENOPHYTA (EUGLENOIDS)				
.EUGLENOPHYCEAE				
..EUGLENALES				
...EUGLENACEAE				
....EUGLENA	7	1	--	-
....TRACHELOMONAS	--	-	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02098198 HAW RIVER BELOW B. EVERETT JORDAN DAM NEAR MONCURE, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), PERIOD APRIL TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	147	155	86	151	368
2							---	157	161	98	149	355
3							---	167	166	110	154	340
4							---	160	176	120	178	283
5							---	167	197	129	182	268
6							---	177	196	149	190	308
7							---	167	167	118	195	303
8							---	157	147	149	207	297
9							---	157	186	122	199	293
10							---	174	151	139	195	278
11							---	186	147	149	183	257
12							---	196	149	151	168	239
13							---	204	159	155	194	227
14							---	206	166	147	198	227
15							---	206	173	143	238	230
16							---	191	164	118	250	242
17							---	186	183	118	263	237
18							---	174	193	120	260	258
19							---	137	216	151	280	263
20							---	118	235	187	287	278
21							---	113	255	149	280	296
22							---	108	251	141	298	299
23							---	84	264	143	330	301
24							---	88	274	100	370	340
25							---	103	273	149	380	355
26							---	103	91	125	380	350
27							---	110	74	129	382	355
28							157	108	86	135	378	366
29							155	118	75	165	360	376
30							160	120	77	181	350	348
31							---	133	---	165	354	---
MEAN							157	149	174	137	258	298

WTR YR 1980 MEAN 202 MAX 382 MIN 74

TEMPERATURE, WATER (DEG. C), PERIOD APRIL TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	16.0	25.0	26.0	28.0	29.0
2							---	18.0	25.0	26.0	28.0	30.0
3							---	19.0	25.5	26.0	28.5	29.0
4							---	19.0	26.0	26.5	28.0	27.0
5							---	20.0	24.5	27.5	30.0	27.0
6							---	20.5	24.5	28.0	32.0	27.0
7							---	21.0	24.5	26.5	32.5	29.0
8							---	20.0	25.0	28.0	33.0	28.0
9							---	18.0	23.0	27.0	32.5	28.0
10							---	17.0	23.0	27.0	31.5	27.5
11							---	19.0	23.0	28.0	32.0	26.0
12							---	21.0	23.0	28.0	30.0	27.5
13							---	22.0	22.5	28.0	31.0	26.0
14							---	22.0	24.5	28.0	31.0	28.0
15							---	21.0	26.0	27.0	31.0	28.0
16							---	20.0	26.0	28.0	31.0	26.0
17							---	20.5	26.5	28.5	27.0	26.0
18							---	21.5	24.5	27.0	26.0	26.0
19							---	22.5	24.5	27.5	28.0	26.0
20							---	21.0	23.5	29.0	30.0	25.0
21							---	21.0	23.5	29.0	29.0	26.0
22							---	22.0	25.0	28.5	27.0	27.0
23							---	23.5	25.0	27.5	26.0	30.0
24							---	24.0	25.0	26.0	25.0	29.5
25							---	22.0	22.0	26.5	25.0	27.0
26							---	22.0	20.0	26.5	28.0	26.0
27							---	21.0	21.0	26.0	28.0	24.0
28							18.0	21.5	22.5	26.0	28.0	21.0
29							17.0	23.0	24.0	27.0	28.0	19.5
30							15.5	24.0	26.0	27.5	28.0	19.0
31							---	24.0	---	28.0	28.5	---
MEAN							17.0	21.0	24.0	27.5	29.0	26.5

WTR YR 1980 MEAN 25.5 MAX 33.0 MIN 15.5

02098198 HAW RIVER BELOW B. EVERETT JORDAN DAM NEAR MONCURE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
03...	1145	1560	62	261	--
APR					
01...	1230	2230	49	295	98
JUN					
04...	1400	65	54	9.5	88
JUL					
28...	1030	65	57	10	99
SEP					
04...	1000	111	53	16	99

02099000 EAST FORK DEEP RIVER NEAR HIGH POINT, N. C.

LOCATION.--Lat 36°02'15", long 79°56'46", Guilford County, Hydrologic Unit 03030003, on left bank 5 ft (1.5 m) upstream from bridge on Secondary Road 1541, 3.3 mi (5.3 km) upstream from High Point Dam, and 5.2 mi (8.4 km) northeast of High Point College, High Point.

DRAINAGE AREA.--14.8 mi² (38.3 km²), revised.

PERIOD OF RECORD.--July 1928 to current year.

REVISED RECORDS.--WSP 1723: 1929(M).

GAGE.--Water-stage recorder. Datum of gage is 764.02 ft (232.873 m) National Geodetic Vertical Datum of 1929. Intake pipe extended to downstream side of bridge since Mar. 1, 1934.

REMARKS.--Records good, except those for period of no gage-height record, May 20-27, which are poor. Slight diurnal fluctuation at low flow during growing season.

AVERAGE DISCHARGE.--52 years, 16.4 ft³/s (0.464 m³/s), 15.05 in/yr (382 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,300 ft³/s (178 m³/s) Sept. 24, 1947, gage height, 10.87 ft (3.313 m), from floodmark, from rating curve extended above 1,600 ft³/s (45.3 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 0.7 ft³/s (0.020 m³/s) Sept. 22, 1941 (result of temporary regulation); minimum unregulated, 1.0 ft³/s (0.028 m³/s) Aug. 8, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (23 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 11	1515	1490	42.2	3.67	1.119	May 20	2200	*1960	55.5	a*4.42	1.347

a From floodmark.

Minimum discharge, 2.9 ft³/s (0.082 m³/s) Sept. 11, 12, 13, 14, 15, 16, 23, gage height, 0.30 ft (0.091 m); minimum daily, 3.1 ft³/s (0.088 m³/s) Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	7.4	11	8.9	12	9.5	18	10	7.1	6.4	14	3.6
2	21	35	10	8.5	11	13	16	9.7	6.7	5.6	11	3.4
3	20	19	9.9	8.1	10	13	15	9.4	6.4	6.1	5.8	3.6
4	13	11	9.9	9.8	10	19	15	9.0	6.3	7.0	4.9	3.8
5	145	8.9	9.9	13	10	64	13	8.7	6.1	6.0	4.7	5.4
6	27	8.6	14	11	11	40	12	8.6	6.3	5.5	4.2	5.8
7	16	8.3	14	9.9	11	25	12	8.2	6.3	5.1	4.1	3.9
8	12	8.0	11	11	11	72	16	8.2	6.0	5.5	3.9	3.5
9	11	7.9	10	9.7	13	42	52	8.2	5.8	6.0	3.8	3.5
10	44	49	9.8	9.1	17	22	20	7.8	6.0	14	4.4	3.4
11	19	599	9.7	56	17	17	15	7.6	5.9	11	4.0	3.3
12	13	66	9.8	38	16	15	23	7.5	5.7	7.1	3.7	3.3
13	12	29	14	19	15	16	84	7.4	5.6	7.4	3.5	3.2
14	11	21	14	107	17	14	98	9.0	5.5	5.8	3.5	3.5
15	11	16	11	32	22	13	33	8.6	5.4	5.2	3.5	3.2
16	9.7	14	11	19	24	12	20	7.5	6.0	5.0	3.7	3.2
17	8.9	12	11	16	15	52	17	7.3	7.1	4.8	3.4	3.4
18	8.3	11	9.5	171	13	64	15	24	7.8	17	3.6	3.8
19	8.0	11	9.5	46	12	23	14	9.9	6.3	6.5	3.7	3.5
20	8.0	10	9.2	24	13	111	13	234	5.7	5.8	3.8	3.7
21	7.7	9.8	9.1	18	17	193	12	141	5.3	5.2	12	3.7
22	7.7	9.5	9.0	39	14	34	12	21	5.2	5.0	16	3.3
23	10	10	9.0	45	13	22	11	18	5.0	20	5.8	3.1
24	8.8	10	11	21	12	127	11	14	5.2	9.8	4.8	3.7
25	7.7	10	19	17	14	57	12	11	88	6.0	5.1	18
26	7.4	106	11	15	19	28	13	9.8	37	5.8	4.1	5.2
27	7.4	25	9.8	14	13	22	11	8.4	16	5.8	3.8	4.0
28	7.4	17	9.2	13	12	23	10	8.7	8.7	5.0	3.7	3.9
29	7.4	14	9.0	12	11	38	12	7.4	8.8	23	3.6	4.3
30	7.4	12	9.1	12	---	24	12	7.2	7.9	6.7	3.6	16
31	7.5	---	9.1	14	---	24	---	7.1	---	5.3	3.7	---
TOTAL	529.3	1175.4	332.5	847.0	405	1248.5	637	664.2	311.1	240.4	163.4	139.2
MEAN	17.1	39.2	10.7	27.3	14.0	40.3	21.2	21.4	10.4	7.75	5.27	4.64
MAX	145	599	19	171	24	193	98	234	88	23	16	18
MIN	7.4	7.4	9.0	8.1	10	9.5	10	7.1	5.0	4.8	3.4	3.1
CFSM	1.16	2.65	.72	1.85	.95	2.72	1.43	1.45	.70	.52	.36	.31
IN.	1.33	2.95	.84	2.13	1.02	3.14	1.60	1.67	.78	.60	.41	.35

CAL YR 1979 TOTAL 12369.5 MEAN 33.9 MAX 1550 MIN 3.9 CFSM 2.29 IN 31.09
WTR YR 1980 TOTAL 6693.0 MEAN 18.3 MAX 599 MIN 3.1 CFSM 1.24 IN 16.82

02099500 DEEP RIVER NEAR RANDLEMAN, N. C.

LOCATION.--Lat 35°54'06", long 79°51'05", Randolph County, Hydrologic Unit 03030003, on left bank 500 ft (152 m) downstream from bridge on Secondary Road 1929, 0.2 mi (0.3 km) downstream from inactive Coltrane's mill, 0.5 mi (0.8 km) south of Guilford County line, 4.8 mi (7.7 km) upstream from Muddy Creek, and 7 mi (11 km) north of Randleman.

DRAINAGE AREA.--124 mi² (321 km²).

PERIOD OF RECORD.--October 1928 to current year.

REVISED RECORDS.--WSP 782: 1929-30. WSP 1383: 1934-35, 1941. WSP 1723: 1929(M).

GAGE.--Water-stage recorder. Datum of gage is 638.11 ft (194.496 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good. Some regulation by High Point Lake and Oak Hollow Reservoir (see p. 334). City of High Point diverted an average of 19.1 ft³/s (0.54 m³/s) for municipal water supply during water year; 12.8 ft³/s (0.36 m³/s) was discharged as sewage effluent into Richland Creek above station and 4.3 ft³/s (0.12 m³/s) into Rich Fork Creek in Pee Dee River basin.

AVERAGE DISCHARGE.--52 years, 125 ft³/s (3.540 m³/s), 13.69 in/yr (348 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft³/s (566 m³/s) Sept. 25, 1947, gage height, 32.2 ft (9.81 m), from floodmark, from rating curve extended above 7,100 ft³/s (201 m³/s) on basis of contracted-opening measurement of peak flow at bridge 1.5 mi (2.4 km) upstream; minimum, 0.5 ft³/s (0.014 m³/s) Nov. 28, 1931, gage height, 1.41 ft (0.430 m); minimum daily, 1.2 ft³/s (0.034 m³/s) Nov. 12, 1933.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,600 ft³/s (74 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 11	2000	*3500	99.1	*15.59	4.752	Mar 21	0800	2600	73.6	12.83	3.911

Minimum discharge, 11 ft³/s (0.31 m³/s) Sept. 1, gage height, 1.86 ft (0.567 m); minimum daily, 13 ft³/s (0.37 m³/s) Sept. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	325	36	75	52	100	73	183	141	28	42	24	13
2	165	93	69	51	79	95	148	126	28	33	33	13
3	207	220	63	49	70	105	133	121	29	30	20	79
4	123	97	58	49	72	140	133	42	28	31	19	74
5	845	63	57	91	68	395	122	36	30	26	21	25
6	415	51	66	75	71	420	93	34	29	29	19	22
7	183	47	109	60	78	255	90	32	25	25	18	19
8	115	40	82	67	77	326	127	30	22	26	18	18
9	81	40	64	61	85	413	284	30	20	25	18	17
10	157	77	58	55	152	240	181	28	22	53	18	16
11	173	1770	56	230	148	173	124	26	21	29	15	15
12	104	1260	55	440	143	125	135	27	22	23	17	16
13	79	359	68	199	119	125	301	27	22	25	17	15
14	73	208	113	693	114	129	749	29	21	26	20	14
15	61	140	72	435	140	99	382	37	19	26	21	11
16	51	114	64	225	185	86	217	27	18	24	20	15
17	48	93	69	156	139	177	149	26	28	21	19	20
18	45	81	56	1010	105	775	123	123	42	72	18	48
19	43	75	52	728	90	278	109	36	29	28	22	22
20	41	71	51	304	87	458	98	305	23	24	34	18
21	38	66	48	201	130	1870	96	941	20	23	31	24
22	38	60	47	195	113	495	89	217	18	22	54	18
23	57	60	48	496	102	255	79	136	18	284	23	18
24	73	66	53	239	90	776	72	96	21	120	18	24
25	52	66	146	169	91	1200	76	81	118	54	18	62
26	45	623	96	132	234	367	122	76	374	39	18	26
27	40	290	68	118	121	237	81	52	194	36	17	18
28	36	163	57	111	97	215	97	44	81	34	17	15
29	36	116	52	98	85	453	106	41	51	34	16	16
30	39	90	52	88	---	267	110	36	51	33	14	38
31	38	---	57	101	---	251	---	33	---	28	14	---
TOTAL	3826	6535	2081	6978	3185	11273	4809	3036	1452	1325	651	749
MEAN	123	218	67.1	225	110	364	160	97.9	48.4	42.7	21.0	25.0
MAX	845	1770	146	1010	234	1870	749	941	374	284	54	79
MIN	36	36	47	49	68	73	72	26	18	21	14	11

CAL YR 1979 TOTAL 80685 MEAN 221 MAX 3750 MIN 15
WTR YR 1980 TOTAL 45900 MEAN 125 MAX 1870 MIN 11

02100500 DEEP RIVER AT RAMSEUR, N. C.

LOCATION.--Lat 34°43'40", long 79°39'10", Randolph County, Hydrologic Unit 03030003, on right bank 0.2 mi (0.3 km) downstream from Main Street bridge in Ramseur, 0.5 mi (0.8 km) downstream from mill dam, and 1.5 mi (2.4 km) downstream from Sandy Creek.

DRAINAGE AREA.--346 mi² (896 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1922 to current year.

REVISED RECORDS.--WSP 822: Drainage area. WSP 1032: 1923-24, 1925(M), 1926, 1927-28(M), 1929, 1930(M), 1932-33, 1934(M), 1935, 1936-37(M), 1944(M). WSP 1383: 1923(m), 1925, 1927, 1930, 1936.

GAGE.--Water-stage recorder. Datum of gage is 419.50 ft (127.864 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good. Flow slightly regulated by High Point Municipal Lake, Oak Hollow Reservoir (see p.334) and small powerplant reservoirs. Prior to January 1963 large diurnal fluctuation caused by powerplant immediately above station. Town of Asheboro diverted an average of 5.7 ft³/s (0.16 m³/s) for water supply from Pee Dee River basin and discharged an average of 5.2 ft³/s (0.15 m³/s) of sewage into the Deep River above the station.

AVERAGE DISCHARGE.--57 years, (1923-80) 329 ft³/s (10.00 m³/s), 13.85 in/yr (352 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,000 ft³/s (1,220 m³/s) Sept. 18, 1945, gage height, 34.04 ft (10.375 m), from floodmark, from rating curve extended above 18,000 ft³/s (510 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.4 ft³/s (0.011 m³/s) May 27, Nov. 28, 29, 1941, minimum daily, 0.7 ft³/s (0.020 m³/s) Nov. 29, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1901 reached a stage of 28.75 ft (8.763 m), from floodmarks, 0.2 mi (0.3 km) upstream, discharge, 30,000 ft³/s (850 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 12	0200	6780	192	11.62	3.542	Mar 21	1100	*6910	196	*11.80	3.597

Minimum discharge, 19 ft³/s (0.54 m³/s) Sept. 16, 17, gage height 0.63 ft (0.19 m); minimum daily, 20 ft³/s (0.57 m³/s) Sept. 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	579	75	212	154	277	248	546	272	106	105	53	23
2	304	84	191	149	231	238	432	233	97	98	70	22
3	307	515	175	144	211	279	390	239	91	89	79	22
4	245	323	165	143	212	334	372	195	86	83	69	65
5	1000	190	162	161	201	1140	345	155	78	93	55	108
6	923	149	167	193	214	1700	298	157	73	93	46	78
7	379	133	235	184	221	854	282	142	73	86	40	56
8	239	123	229	177	225	629	319	115	73	73	35	40
9	191	118	188	194	236	2050	672	91	68	64	32	31
10	175	120	171	160	388	864	528	95	62	59	31	27
11	313	2400	221	481	452	538	369	97	58	83	35	25
12	230	4130	157	1540	448	403	321	97	56	86	35	24
13	180	993	158	601	385	423	599	97	54	74	32	23
14	165	535	240	1390	340	497	1560	97	52	66	31	22
15	158	380	226	1280	360	356	1230	99	51	59	31	21
16	144	304	178	587	418	298	580	115	50	55	34	20
17	132	259	149	412	388	338	414	113	47	52	33	20
18	118	236	143	2310	288	2620	347	451	89	54	31	25
19	109	218	147	2560	261	951	313	264	179	79	30	41
20	106	200	146	863	249	647	288	466	111	80	30	42
21	100	185	142	542	280	5010	271	3070	91	69	35	41
22	92	175	140	448	301	1720	257	679	74	55	43	39
23	91	164	139	1720	287	748	237	357	62	237	62	37
24	120	168	143	806	329	1220	216	314	52	484	65	31
25	142	170	259	495	269	3460	199	259	52	144	50	31
26	116	1060	274	391	528	1120	261	240	565	102	41	41
27	163	948	200	340	392	672	244	181	686	90	35	48
28	100	422	169	316	305	536	205	148	234	77	31	44
29	94	313	160	291	270	1520	225	141	137	69	28	40
30	96	250	158	262	---	846	233	132	112	63	26	39
31	82	---	157	263	---	735	---	118	---	56	24	---
TOTAL	7193	15340	5601	19557	8966	32994	12553	9229	3619	2977	1272	1126
MEAN	232	511	181	631	309	1064	418	298	121	96.0	41.0	37.5
MAX	1000	4130	274	2560	528	5010	1560	3070	686	484	79	108
MIN	82	75	139	143	201	238	199	91	47	52	24	20
CFSM	.67	1.48	.52	1.82	.89	3.08	1.21	.86	.35	.28	.12	.11
IN.	.77	1.65	.60	2.10	.96	3.55	1.35	.99	.39	.32	.14	.12

CAL YR 1979 TOTAL 202437 MEAN 555 MAX 10800 MIN 46 CFSM 1.60 IN 21.76
WTR YR 1980 TOTAL 120427 MEAN 329 MAX 5010 MIN 20 CFSM .95 IN 12.95

02100500 DEEP RIVER AT RAMSEUR, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947, 1957, 1979 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1978 to current year.
WATER TEMPERATURES: October 1946 to September 1947, October 1978 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1978.

REMARKS.--Station is part of district's Primary Accounting Network used to define stream-quality characteristics of the State's major streams.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 391 micromhos Nov. 14, 1978; minimum, 42 micromhos Feb. 24, 1979.
WATER TEMPERATURES: Maximum, 30.0°C July 17, 21, 22, Aug. 8, 9, 11, 1980; minimum daily, 0.5°C Feb. 10, 28, 1947.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 390 micromhos Sept. 5; minimum, 66 micromhos Mar. 25.
WATER TEMPERATURES: Maximum, 30.0°C July 17, 21, 22, Aug. 8, 9, 11; minimum, 3.0°C Feb. 5-9, Mar. 2, 3.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
DEC											
11...	0945	191	155	6.4	6.0	40	13.2	40	0	9.7	3.8
FEB											
05...	1200	200	160	7.3	4.0	5	14.7	35	0	8.4	3.5
APR											
24...	1100	216	150	7.1	20.0	5	9.1	36	0	8.3	3.6
JUN											
11...	1300	57	199	7.0	24.0	30	7.8	37	0	9.0	3.5
AUG											
27...	1200	34	294	7.0	25.5	35	7.3	47	0	12	4.2

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
DEC											
11...	14	52	1.0	3.0	52	0	43	33	13	14	.2
FEB											
05...	17	49	1.2	2.3	54	0	44	4.3	14	16	--
APR											
24...	14	44	1.0	2.0	48	0	39	6.1	10	13	.1
JUN											
11...	23	55	1.6	3.2	50	0	41	8.0	12	22	.3
AUG											
27...	40	61	2.5	6.2	69	0	*55	11	21	41	.4

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
DEC											
11...	18	109	102	.15	56.2	1.2	.02	1.2	1.2	--	1.0
FEB											
05...	17	112	109	.15	60.5	.94	.03	.97	.96	--	.82
APR											
24...	16	108	96	.15	63.0	.95	.05	1.0	1.1	3.1	.07
JUN											
11...	15	140	121	.19	21.5	1.6	.02	1.6	1.6	--	.07
AUG											
27...	17	197	175	.27	18.1	1.5	.06	1.6	1.6	--	.11

* Lab alkalinity.

02100500 DEEP RIVER AT RAMSEUR, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO-GEN, TOTAL (MG/L AS N)
DEC										
11...	.96	1.2	1.2	.60	.84	1.6	.00	1.8	--	2.8
FEB										
05...	.84	.99	1.1	.38	.26	1.2	.10	1.1	--	2.2
APR										
24...	.15	.08	.19	.30	.26	.37	.00	.41	800	1.4
JUN										
11...	.08	.08	.10	.53	.65	.60	.00	.73	--	2.2
AUG										
27...	.10	.13	.13	.82	.76	.93	.07	.86	--	2.5

DATE	NITRO-GEN, TOTAL (MG/L AS NO3)	NITRO-GEN,TOT IN BOT-TOM MA-TERIAL (MG/KG AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS PO4)	PHOS-PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)
DEC										
11...	12	--	.470	1.1	1.4	.400	.36	.33	1.0	--
FEB										
05...	9.6	--	.430	1.1	1.3	.380	.35	.39	1.2	--
APR										
24...	6.1	803	.350	.77	1.1	.280	.25	.24	.74	230
JUN										
11...	9.7	--	.540	1.3	1.7	.410	.41	.34	1.0	--
AUG										
27...	11	--	.960	2.5	2.9	.830	.80	.78	2.4	--

DATE	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)
DEC										
11...	--	--	20	0	22	--	--	8	1	7
FEB										
05...	--	--	10	8	2	--	--	4	0	5
APR										
24...	0	<10	20	19	1	<10	<10	5	2	3
JUN										
11...	--	--	<10	<9	1	--	--	7	4	3
AUG										
27...	--	--	--	--	--	--	--	--	--	--

02100500 DEEP RIVER AT RAMSEUR, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
DEC 11...	--	1100	830	270	--	2	2	0	--	--
FEB 05...	--	960	850	110	--	2	2	0	--	--
APR 24...	<10	760	470	290	2100	1	1	0	<10	40
JUN 11...	--	1200	990	210	--	--	--	1	--	--
AUG 27...	--	--	--	--	--	--	--	--	--	--

DATE	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
DEC 11...	--	--	20	10	10	--	5.5
FEB 05...	--	--	40	20	20	--	4.7
APR 24...	.00	0	10	8	2	20	5.6
JUN 11...	--	--	20	20	0	--	15
AUG 27...	--	--	--	--	--	--	15

DATE	CARBON, ORGANIC SUSPENDED (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)	LENGTH OF EXPOSURE (DAYS)
DEC 11...	.6	--	--	--	.10	--
FEB 05...	1.9	--	--	--	.00	--
APR 24...	.7	.5	.1	.6	.00	--
JUN 11...	--	--	--	--	.10	--
AUG 27...	.3	--	--	--	.10	--

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 03...	1015	301	48	39	98
DEC 11...	0945	191	19	9.8	96
FEB 05...	1200	200	10	5.4	97
APR 24...	1100	216	12	7.0	--
JUN 11...	1300	57	23	3.5	92
AUG 27...	1200	34	16	1.5	95

02100500 DEEP RIVER AT RAMSEUR, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE / TIME	DEC 11,79 0945		FEB 5,80 1200		APR 24,80 1100		JUN 11,80 1300		AUG 27,80 1200	
TOTAL CELLS/ML	800		840		3300		57000		34000	
DIVERSITY: DIVISION	1.3		0.8		1.4		1.2		1.4	
.CLASS	1.3		0.8		1.4		1.2		1.4	
..ORDER	1.4		1.2		2.0		1.2		1.8	
...FAMILY	1.7		1.9		2.4		1.4		2.7	
....GENUS	1.9		2.6		3.3		2.7		3.5	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...HYDRODICTYACEAE										
....PEDIASTRUM	--	-	--	-	--	-	--	-	810	2
...MICRACTINIACEAE										
....GOLENKINIA	5	1	--	-	39	1	--	-	300	1
....MICRACTINIUM	--	-	--	-	--	-	--	-	2400	7
...OOCYSTACEAE										
....ANKISTRODESMUS	100	13	61	7	320	10	2100	4	710	2
....CHLORELLA	30	4	410#	49	100	3	--	-	--	-
....CHODATELLA	--	-	6	1	--	-	*	0	*	0
....DICTYOSPHAERIUM	--	-	--	-	51	2	8900#	15	4500	13
....KIRCHNERIELLA	15	2	18	2	77	2	21000#	37	300	1
....OOCYSTIS	--	-	--	-	150	5	*	0	--	-
....SELENASTRUM	--	-	--	-	77	2	840	1	3400	10
....TETRAEDRON	--	-	--	-	*	0	--	-	--	-
....WESTELLA	--	-	--	-	--	-	--	-	1600	5
...SCENEDESMACEAE										
....ACTINASTRUM	--	-	24	3	--	-	--	-	--	-
....CRUCIGENIA	--	-	92	11	--	-	--	-	810	2
....SCENEDESMUS	10	1	24	3	330	10	1900	3	4100	12
..TETRASPORALES										
...PALMELLACEAE										
....GLOEOCYSTIS	--	-	--	-	51	2	--	-	--	-
....SPHAEROCYSTIS	--	-	--	-	700#	21	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	24	3	--	-	--	-	1700	5
..ZYGNEMATALES										
...DESMIDIACEAE										
....CLOSTERIUM	5	1	--	-	--	-	--	-	--	-
....STAURASTRUM	--	-	12	1	--	-	--	-	--	-
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	20	3	100	12	39	1	1300	2	1200	4
....MELOSIRA	--	-	--	-	26	1	420	1	--	-
....SKELETONEMA	10	1	--	-	--	-	--	-	--	-
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	--	-	--	-	*	0	--	-	--	-
...EUNOTIACEAE										
....EUNOTIA	--	-	6	1	--	-	--	-	--	-
...FRAGILARIACEAE										
....SYNEDRA	5	1	18	2	*	0	--	-	--	-
...GOMPHONEMATACEAE										
....GOMPHONEMA	5	1	--	-	--	-	--	-	--	-
...NAVICULACEAE										
....NAVICULA	20	3	6	1	--	-	--	-	--	-
...NITZSCHIACEAE										
....NITZSCHIA	40	5	24	3	51	2	840	1	200	1
CRYPTOPHYTA (CRYPTOMONADS)										
.CRYPTOPHYCEAE										
..CRYPTOMONADALES										
...CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	--	-	*	0	--	-	510	1

02100500 DEEP RIVER AT RAMSEUR, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	DEC 11,79 0945		FEB 5,80 1200		APR 24,80 1100		JUN 11,80 1300		AUG 27,80 1200	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....AGMENELLUM	--	-	--	-	--	-	8400	15	--	-
....ANACYSTIS	--	-	--	-	950#	29	8900#	15	8900#	26
....COCCOCHLORIS	--	-	--	-	130	4	2100	4	--	-
..HORMOGONALES										
...OSCILLATORIACEAE										
....OSCILLATORIA	530#	66	--	-	--	-	--	-	1800	5
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	5	1	6	1	--	-	--	-	400	1
....TRACHELOMONAS	--	-	--	-	140	4	*	0	300	1

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02100500 DEEP RIVER AT RAMSEUR, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	76	70	217	205	119	113	142	127	146	132	142	131
2	80	76	208	194	121	113	127	122	134	124	133	127
3	88	80	237	195	129	120	123	121	136	123	141	128
4	104	88	236	169	134	129	129	123	150	133	144	137
5	151	99	168	163	135	131	140	127	162	151	146	112
6	136	85	184	167	139	135	174	142	164	154	116	102
7	89	84	194	182	155	139	193	173	202	155	106	102
8	93	90	192	175	172	157	194	166	216	202	106	98
9	96	93	175	162	178	171	172	160	203	187	119	85
10	100	96	165	151	169	146	186	173	185	151	92	85
11	135	98	164	91	166	147	197	146	178	159	101	92
12	142	129	87	77	176	166	152	127	167	158	105	99
13	128	120	87	83	181	176	142	110	170	163	106	99
14	138	123	95	87	184	168	111	98	162	148	121	106
15	175	138	102	95	169	165	106	90	157	144	119	116
16	181	162	109	102	176	164	100	90	153	146	122	116
17	161	141	115	108	163	144	105	101	162	152	127	122
18	142	131	122	115	156	146	108	97	153	148	123	89
19	138	129	125	120	179	157	97	75	153	141	93	89
20	157	139	126	122	181	178	86	79	142	137	97	92
21	169	157	132	124	177	172	89	86	139	135	110	72
22	182	169	152	132	174	166	94	89	148	137	83	72
23	186	179	162	152	169	162	111	94	150	136	88	83
24	196	185	167	155	166	162	97	93	161	138	99	88
25	184	167	170	164	167	148	92	90	161	155	90	66
26	194	167	175	127	177	149	105	93	160	140	83	70
27	214	194	140	99	181	168	112	105	160	143	95	83
28	211	208	100	98	169	166	114	108	147	134	99	96
29	220	203	111	99	172	166	118	114	139	134	111	97
30	236	215	117	111	164	155	125	117	---	---	99	95
31	237	217	---	---	155	143	139	127	---	---	95	92
MONTH	237	70	237	77	184	113	197	75	216	123	146	66

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	103	94	175	171	161	147	125	119	146	142	296	289
2	112	104	177	157	167	160	126	120	157	144	295	289
3	111	105	163	146	172	164	126	122	175	157	295	280
4	120	107	162	153	166	155	124	119	177	173	366	281
5	131	120	177	162	157	153	125	120	175	172	390	370
6	134	131	172	157	169	158	123	117	177	167	381	373
7	138	128	161	153	193	170	128	120	172	163	375	341
8	136	127	155	148	206	193	133	127	170	166	341	292
9	138	131	153	139	208	191	137	130	175	166	292	271
10	135	123	151	142	203	197	138	131	175	169	273	266
11	124	118	164	148	211	205	140	131	192	175	278	272
12	128	123	168	160	218	208	158	139	205	194	276	273
13	138	122	166	160	215	204	172	158	210	204	278	276
14	137	115	164	158	209	204	170	165	216	205	281	276
15	111	93	159	150	214	207	165	156	217	210	289	279
16	101	94	174	155	226	214	155	153	218	213	287	283
17	105	101	183	174	230	219	157	153	219	213	287	278
18	113	105	194	147	233	198	156	150	213	206	284	279
19	123	114	196	163	206	194	173	156	216	209	313	283
20	125	121	174	148	236	199	194	172	216	211	327	314
21	129	126	178	76	249	227	217	194	247	218	330	323
22	133	131	90	77	238	214	219	210	261	248	331	323
23	143	134	96	90	225	210	218	186	267	259	326	312
24	148	142	113	96	226	215	250	207	281	267	312	286
25	156	146	118	112	223	218	205	144	295	282	287	274
26	155	141	124	118	226	201	162	140	295	283	274	268
27	157	146	125	120	234	160	183	163	293	284	299	274
28	168	157	127	123	162	154	182	164	294	287	299	295
29	179	155	133	127	154	145	167	148	297	286	310	298
30	180	173	137	132	143	125	146	142	295	289	312	303
31	---	---	147	137	---	---	144	141	296	291	---	---
MONTH	180	93	196	76	249	125	250	117	297	142	390	266
YEAR	390	66										

02100500 DEEP RIVER AT RAMSEUR, N. C.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	23.0	22.0	16.5	15.5	10.5	9.0	8.0	7.5	6.0	5.0	8.5	6.0
2	23.0	22.5	17.0	15.5	9.0	8.5	7.5	7.0	5.0	4.5	6.0	3.0
3	22.5	22.0	17.0	15.5	8.0	7.5	7.0	6.0	4.5	3.5	4.0	3.0
4	22.5	21.5	15.5	14.5	7.5	6.5	6.5	6.0	4.5	3.5	5.5	4.0
5	21.5	19.5	15.0	14.0	7.0	6.0	6.5	5.5	4.5	3.0	5.0	4.0
6	19.0	18.5	14.0	13.0	7.0	6.0	6.0	5.5	3.5	3.0	7.0	5.0
7	19.0	18.5	13.5	12.5	7.5	7.0	5.5	5.0	4.0	3.0	7.5	6.0
8	19.0	18.0	13.0	12.0	8.0	7.0	5.5	5.5	4.0	3.0	8.5	7.5
9	19.0	18.0	13.0	12.0	7.5	6.5	6.0	6.0	4.0	3.0	11.5	9.0
10	18.5	18.0	14.0	13.0	7.5	6.0	6.0	5.5	4.5	3.5	11.5	10.5
11	18.0	15.5	14.5	14.0	7.5	6.0	7.0	5.5	4.5	3.5	11.5	11.0
12	17.0	16.0	14.5	13.5	8.0	7.0	7.5	7.0	4.5	4.5	11.0	10.0
13	17.5	16.0	13.5	13.5	8.5	7.5	7.5	6.5	4.5	4.5	10.0	9.0
14	16.5	15.5	13.5	12.5	9.0	8.5	6.5	6.0	5.0	4.5	9.5	8.5
15	15.5	14.0	12.5	11.0	8.5	8.0	7.5	6.0	5.5	5.0	9.5	8.5
16	15.5	14.0	12.0	11.0	8.5	8.0	7.5	7.0	6.0	5.5	10.5	9.0
17	16.0	14.5	12.0	11.0	8.5	8.0	8.0	7.5	6.0	5.5	11.0	10.0
18	16.5	15.5	11.5	10.5	8.0	7.5	8.5	7.5	6.0	5.0	13.0	11.0
19	17.0	16.0	12.0	10.5	7.5	6.5	8.5	8.0	6.0	5.0	12.5	11.5
20	18.0	17.0	12.0	11.0	7.0	6.0	8.5	7.5	7.0	5.5	12.5	12.0
21	18.5	17.5	12.5	11.0	7.0	6.5	8.5	7.5	7.5	6.5	13.5	12.5
22	19.0	18.0	12.5	11.0	7.5	6.5	8.5	8.0	8.0	7.5	13.0	12.0
23	19.0	18.5	12.5	11.5	8.0	7.0	9.0	8.5	10.0	8.0	12.5	11.0
24	18.5	17.0	13.5	12.5	9.0	7.5	8.5	8.0	10.5	9.0	12.5	11.0
25	17.0	15.5	14.0	13.0	9.0	8.5	8.5	8.0	11.0	10.5	12.0	11.0
26	15.5	15.0	15.5	14.5	8.5	8.0	8.0	8.0	10.5	9.0	12.5	11.5
27	15.0	14.0	15.5	15.0	8.5	8.0	8.0	8.0	10.5	9.0	14.0	12.0
28	15.0	13.5	15.0	14.0	8.5	7.5	8.0	7.5	9.0	8.5	14.0	12.5
29	15.0	14.0	14.0	12.0	8.0	7.5	8.5	8.0	9.0	8.5	13.5	12.5
30	15.5	14.5	12.0	10.0	8.0	7.5	8.0	7.0	---	---	13.5	12.5
31	16.0	15.0	---	---	8.0	7.5	7.0	6.0	---	---	14.5	13.5
MONTH	23.0	13.5	17.0	10.0	10.5	6.0	9.0	5.0	11.0	3.0	14.5	3.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	15.5	14.0	18.0	17.0	24.5	23.5	25.5	24.5	28.5	26.5	27.5	25.0
2	15.5	15.0	19.0	17.5	25.5	23.5	26.0	24.5	27.5	25.5	28.0	25.5
3	16.5	15.5	18.5	17.5	26.0	24.5	26.5	25.0	28.0	26.0	28.5	26.0
4	17.5	16.5	19.5	18.0	26.5	25.5	26.0	25.5	28.5	26.5	26.5	26.0
5	17.5	16.0	20.0	18.5	25.5	24.5	27.0	25.5	29.0	27.0	26.5	25.5
6	17.0	16.0	21.0	19.5	25.0	24.0	27.5	26.5	29.0	27.0	26.5	25.5
7	17.0	15.5	21.5	20.0	25.0	24.0	27.5	26.5	29.0	27.0	26.5	25.5
8	16.5	15.5	21.0	19.5	26.0	24.5	27.5	26.5	30.0	27.0	26.0	25.0
9	18.0	16.5	19.5	18.5	25.0	23.5	27.5	26.5	30.0	27.5	26.0	24.0
10	18.0	16.5	19.5	17.0	25.0	22.5	27.0	26.0	29.5	27.0	26.0	24.5
11	18.0	17.5	20.5	18.0	24.0	22.5	26.5	25.5	30.0	27.5	25.5	24.0
12	18.5	17.0	22.0	19.5	24.0	23.0	27.5	26.0	29.5	27.5	25.5	23.0
13	17.5	17.0	23.0	21.0	23.5	22.0	28.0	26.5	29.0	27.0	25.5	23.5
14	17.5	17.0	23.0	21.5	24.5	22.0	28.0	27.0	29.0	26.5	26.0	23.5
15	17.0	15.5	22.0	21.0	25.5	22.5	28.0	26.5	29.0	27.0	26.5	24.0
16	16.0	15.0	21.5	20.5	25.5	24.0	29.0	27.0	28.5	27.0	25.0	24.0
17	16.0	15.0	21.5	20.5	24.5	23.5	30.0	28.0	28.0	25.0	25.0	24.0
18	15.5	15.0	22.0	20.0	24.5	22.0	28.0	27.5	26.5	24.5	25.5	24.0
19	17.5	15.5	22.0	21.5	23.0	22.0	29.0	27.0	27.0	25.5	25.5	24.5
20	17.5	16.5	22.0	20.5	23.5	22.0	29.0	27.5	27.0	25.5	25.0	24.5
21	18.5	17.0	20.5	19.0	23.5	22.5	30.0	28.0	26.5	26.0	26.0	24.5
22	19.0	17.5	21.5	19.5	23.5	22.5	30.0	28.0	26.0	25.0	26.5	25.0
23	20.0	18.0	22.0	21.5	24.5	23.0	28.5	26.5	25.5	24.5	27.0	25.5
24	21.5	19.5	22.5	22.0	24.0	23.0	26.5	25.5	25.5	24.5	27.0	25.5
25	22.0	20.0	22.5	22.0	23.0	22.0	26.0	25.0	25.5	24.0	26.0	25.5
26	21.5	20.5	22.5	21.5	22.5	22.0	26.0	25.0	26.0	24.0	26.0	24.0
27	21.0	20.0	22.5	21.5	22.5	21.0	26.5	25.5	26.0	24.0	24.0	23.0
28	21.0	19.5	22.5	21.0	24.0	22.5	26.5	25.5	26.0	24.0	23.0	22.0
29	20.0	18.5	23.0	21.5	25.5	23.5	26.5	26.0	26.0	24.5	21.5	20.5
30	18.5	17.5	24.0	22.5	25.5	24.5	27.5	26.0	26.0	24.5	20.5	19.5
31	---	---	24.0	23.0	---	---	28.0	26.0	26.5	25.0	---	---
MONTH	22.0	14.0	24.0	17.0	26.5	21.0	30.0	24.5	30.0	24.0	28.5	19.5
YEAR	30.0	3.0										

02101800 TICK CREEK NEAR MOUNT VERNON SPRINGS, N. C.

LOCATION.--Lat 35°39'37", long 79°20'08", Chatham County, Hydrologic Unit 03030003, on right bank 200 ft (61 m) upstream from bridge on U.S. Highway 421, 1.5 mi (2.4 km) east of Mount Vernon Springs, and 4 mi (6.4 km) upstream from mouth.

DRAINAGE AREA.--15.3 mi² (39.6 km²).

PERIOD OF RECORD.--June 1958 to current year.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Altitude of gage is 455 ft (139 m), by barometer.

REMARKS.--Records good.

AVERAGE DISCHARGE.--22 years, 15.3 ft³/s (0.433 m³/s), 13.58 in/yr (345 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,120 ft³/s (88.4 m³/s) July 13, 1975, gage height, 9.43 ft (2.874 m); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s (9.91 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 11	2000	*712	20.2	*5.75	1.753	Mar 21	0815	622	17.6	5.52	1.682
Jan 18	1645	489	13.8	5.14	1.567						

No flow Aug. 14 to Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	1.9	6.9	4.5	12	16	40	5.6	1.7	1.1	1.6	
2	2.3	20	6.1	4.1	10	17	30	4.9	1.5	.83	2.4	
3	6.1	148	5.3	4.0	9.6	20	20	4.3	1.4	.68	.81	
4	3.4	24	5.2	4.7	9.4	29	16	3.9	1.2	1.2	.50	
5	27	12	5.0	7.9	8.7	99	13	3.5	1.0	1.6	.65	
6	13	8.9	5.9	6.9	10	75	11	3.2	.96	.99	.65	
7	6.2	7.0	7.7	6.0	11	37	10	2.8	1.0	.65	.46	
8	4.0	5.9	5.7	6.6	11	49	15	2.6	1.0	.46	.39	
9	3.1	5.2	4.7	8.9	14	77	43	2.7	.76	.37	.26	
10	2.7	4.9	4.6	8.0	54	32	18	2.5	.60	.36	.17	
11	3.1	352	4.4	75	36	24	13	2.4	.51	.64	.10	
12	2.9	127	4.3	62	29	19	11	2.4	.43	.69	.06	
13	2.4	34	4.8	22	22	70	17	2.2	.40	.79	.02	
14	2.9	21	7.0	34	18	50	57	2.3	.38	.74	.00	
15	2.5	13	4.9	28	17	27	32	4.0	.36	.62	.00	
16	2.3	11	4.9	16	17	22	19	2.6	.28	.54	.00	
17	2.1	8.8	4.2	13	14	25	14	2.2	.33	.55	.00	
18	2.1	7.8	3.7	213	11	119	12	24	2.5	.71	.00	
19	2.0	7.0	3.7	90	10	35	10	6.4	1.8	.50	.00	
20	2.0	6.3	3.6	31	11	46	9.1	26	.98	.23	.00	
21	2.6	5.8	3.6	20	11	350	8.3	68	.59	.16	.00	
22	2.3	5.5	3.6	20	11	140	7.6	11	.45	.13	.00	
23	2.3	5.3	3.8	126	12	70	7.0	7.3	.41	8.2	.00	
24	6.9	5.1	4.1	41	21	40	6.2	6.2	.37	3.0	.00	
25	4.1	5.2	11	26	17	70	5.6	8.4	4.5	1.0	.00	
26	2.8	82	6.8	21	29	50	5.6	10	21	.58	.00	
27	2.3	24	5.1	19	21	35	5.6	4.7	5.9	.44	.00	
28	2.1	14	4.5	17	18	30	5.0	3.4	2.4	.61	.00	
29	2.1	10	4.2	14	17	20	6.0	2.8	1.5	.55	.00	
30	2.1	7.8	4.4	12	---	80	8.2	2.3	1.4	.46	.00	
31	2.0	---	5.0	13	---	50	---	2.0	---	.34	.00	---
TOTAL	126.5	990.4	158.7	974.6	491.7	1823	475.2	236.6	57.61	29.72	8.07	.00
MEAN	4.08	33.0	5.12	31.4	17.0	58.8	15.8	7.63	1.92	.96	.26	.000
MAX	27	352	11	213	54	350	57	68	21	8.2	2.4	.00
MIN	2.0	1.9	3.6	4.0	8.7	16	5.0	2.0	.28	.13	.00	.00
CFSM	.27	2.16	.34	2.05	1.11	3.84	1.03	.50	.13	.06	.02	.000
IN.	.31	2.41	.39	2.37	1.20	4.43	1.16	.58	.14	.07	.02	.00

CAL YR 1979 TOTAL 8882.38 MEAN 24.3 MAX 1030 MIN .18 CFSM 1.59 IN 21.59
WTR YR 1980 TOTAL 5372.10 MEAN 14.7 MAX 352 MIN .00 CFSM .96 IN 13.06

02102000 DEEP RIVER AT MONCURE, N. C.

LOCATION.--Lat 35°37'41", long 79°06'48", Lee County, Hydrologic Unit 03030003, on right bank 1.0 mi (1.6 km) upstream from Lockville Dam, 1.2 mi (1.9 km) upstream from bridge on U.S. Highway 1, 1.5 mi (2.4 km) northwest of Moncure, 2.2 mi (3.5 km) downstream from Rocky River, and 4.5 mi (7.2 km) upstream from confluence with Haw River.

DRAINAGE AREA.--1,410 mi² (3,650 km²), approximately.

PERIOD OF RECORD.--July 1930 to current year. Records for May 1898 to December 1899 published in 21st Annual Report, Part 4, and in Bulletins 34 and 39 of North Carolina Department of Conservation and Development have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 822: Drainage area. WSP 1082: (1930-46 not previously published).

GAGE.--Water-stage recorder. Datum of gage is 185.06 ft (56.406 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Diurnal fluctuation and some regulation at low flow caused by small powerplants above station.

AVERAGE DISCHARGE.--50 years, 1,461 ft³/s (41.38 m³/s), 14.07 in/yr (357 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,300 ft³/s (2,270 m³/s) Sept. 18, 1945, gage height, 17.20 ft (5.243 m); minimum, 5.5 ft³/s (0.16 m³/s) Oct. 10, 1954, gage height, 0.35 ft (0.107 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15,000 ft³/s (425 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 12	0400	15200	430	7.52	2.292	Mar 21	1600	*17300	490	*8.03	2.448

Minimum discharge, 42 ft³/s (1.19 m³/s) Sept. 23, gage height, 0.87 ft (0.265 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1300	208	881	507	1170	862	3460	662	299	301	108	58
2	1300	264	749	502	1160	830	2340	631	268	229	133	56
3	755	5940	662	473	1040	831	1830	609	242	199	126	55
4	580	4760	599	446	942	889	1610	544	219	201	107	295
5	807	1840	566	497	895	2500	1470	528	198	305	112	86
6	1560	973	560	637	904	8180	1310	473	182	429	116	131
7	1940	702	633	671	901	6290	1150	411	232	342	100	118
8	937	566	700	624	964	3380	1090	388	175	250	87	120
9	581	493	712	794	1060	3840	1350	365	156	202	76	116
10	426	452	613	1420	2760	4310	1910	327	148	177	65	94
11	356	3930	537	1510	4290	2530	1580	296	140	154	60	77
12	345	13700	535	8050	3050	1750	1200	286	127	133	63	66
13	451	11700	522	5450	2270	3040	1060	279	117	141	69	56
14	402	4020	520	2820	1770	6750	2850	273	111	155	65	52
15	346	1810	585	5680	1500	3520	5970	266	105	139	54	50
16	324	1300	659	3990	1410	2000	3650	256	90	125	51	48
17	310	1050	588	2180	1420	1540	1960	259	71	101	53	48
18	284	896	560	4190	1300	5200	1430	590	109	155	55	51
19	265	777	500	11800	1080	7230	1200	1520	196	269	54	56
20	247	707	454	9070	971	3410	1060	1430	219	188	55	56
21	232	643	451	3260	939	12600	963	4490	289	172	56	51
22	221	594	437	2100	925	14100	891	5720	213	147	59	48
23	216	558	428	5890	957	10000	812	1820	164	144	60	44
24	207	534	432	7400	1080	3330	751	1190	136	438	62	48
25	202	513	533	3600	1140	7760	689	1400	144	290	65	67
26	205	3940	731	2200	1180	7840	638	1910	3000	220	63	76
27	253	4650	850	1710	1240	3530	612	1150	2350	170	76	75
28	237	2720	684	1620	1250	2330	699	682	1460	160	82	67
29	253	1490	556	1500	990	5700	639	480	812	141	73	74
30	230	1100	497	1290	---	6290	611	382	453	126	65	105
31	208	---	489	1180	---	4670	---	333	---	114	61	---
TOTAL	15980	72830	18223	93061	40558	147032	46785	29950	12425	6317	2331	2344
MEAN	515	2428	588	3002	1399	4743	1560	966	414	204	75.2	78.1
MAX	1940	13700	881	11800	4290	14100	5970	5720	3000	438	133	295
MIN	202	208	428	446	895	830	611	256	71	101	51	44
CFSM	.37	1.72	.42	2.13	.99	3.36	1.11	.69	.29	.15	.05	.06
IN.	.42	1.92	.48	2.46	1.07	3.88	1.23	.79	.33	.17	.06	.06

CAL YR 1979 TOTAL 792507 MEAN 2171 MAX 31300 MIN 100 CFSM 1.54 IN 20.91
WTR YR 1980 TOTAL 487836 MEAN 1333 MAX 14100 MIN 44 CFSM .95 IN 12.87

02102192 BUCKHORN CREEK NEAR CORINTH, N. C.

LOCATION.--Lat 35°34'18", long 78°58'09", Chatham County, Hydrologic Unit 03030004, on left bank at upstream side of bridge on State Highway 42, 0.2 mi (0.3 km) downstream from White Oak Creek, and 2 mi (3.2 km) east of Corinth.

DRAINAGE AREA.--74.2 mi² (192 km²).

PERIOD OF RECORD.--June 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 154.63 ft (47.131 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, Jan. 7 to Feb. 14, which are poor.

AVERAGE DISCHARGE.--8 years, 84.1 ft³/s (2.382 m³/s), 15.39 in/yr (391 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,920 ft³/s (196 m³/s) Feb. 2, 1973, gage height, 20.02 ft (6.102 m); minimum, 0.01 ft³/s (<0.001 m³/s) Sept. 2, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (19.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 3	1330	*1420	40.2	*9.27	2.825	Mar 6	0545	775	21.9	6.55	1.996
Nov 12	1315	1110	31.4	8.03	2.448	Mar 13	2215	731	20.7	6.33	1.929
Nov 26	1815	1350	38.2	9.01	2.746	Mar 18	1030	815	23.1	6.75	2.057
Jan 19	--	Unknown	--	Unknown	--	Mar 21	1630	1240	35.1	8.58	2.615
Jan 24	--	Unknown	--	Unknown	--	Apr 14	2115	891	25.2	7.13	2.173

Minimum discharge, 0.50 ft³/s (0.014 m³/s) Sept. 1, gage height, 1.34 ft (0.408 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	15	64	32	56	46	120	28	9.8	15	2.8	.81
2	51	32	55	29	50	42	88	26	9.1	13	5.7	.74
3	40	1250	46	27	47	59	77	23	8.3	11	5.1	1.1
4	33	604	43	26	42	80	71	22	7.5	12	4.9	3.5
5	72	123	42	48	40	344	60	20	6.8	12	4.1	4.4
6	107	77	46	53	48	648	50	18	6.3	12	3.4	6.6
7	46	55	88	44	54	304	47	17	38	11	2.6	3.5
8	30	41	67	30	50	171	48	16	36	9.5	2.2	2.8
9	25	38	49	40	70	197	52	15	19	9.2	1.6	2.3
10	22	38	42	100	120	126	46	15	11	8.4	1.4	1.7
11	22	327	40	400	200	100	39	15	9.3	8.7	1.3	1.6
12	21	1020	37	140	140	79	35	14	8.1	9.0	1.6	1.5
13	20	349	37	80	100	415	44	14	7.2	10	1.8	1.2
14	23	161	42	170	95	444	387	13	6.3	25	1.5	1.3
15	23	100	38	140	91	154	546	13	5.8	14	1.6	.99
16	20	80	35	90	93	101	145	12	5.4	9.4	1.8	1.0
17	18	66	34	210	82	87	84	12	5.4	8.0	1.8	1.5
18	17	58	30	300	60	650	67	27	7.1	9.5	1.5	2.4
19	16	50	29	800	54	266	56	39	7.5	8.6	1.6	1.5
20	16	44	29	300	53	147	48	30	7.3	7.8	1.8	1.6
21	16	40	28	180	53	951	43	52	6.5	6.4	1.8	1.6
22	15	37	27	90	51	667	39	34	5.9	5.4	1.8	1.0
23	16	36	27	200	49	178	34	24	5.4	4.9	1.6	.84
24	17	35	28	500	69	143	31	23	5.1	4.3	1.5	.76
25	17	34	52	250	58	290	27	19	9.9	4.0	1.5	1.5
26	16	873	56	150	119	162	27	27	228	3.6	1.3	2.1
27	16	795	39	110	86	109	31	23	59	3.3	1.2	1.3
28	15	167	32	90	66	89	57	16	30	2.8	.88	1.1
29	15	105	29	80	55	309	37	13	21	2.7	.81	1.6
30	15	77	29	70	---	200	32	11	17	2.6	.69	5.9
31	15	---	33	64	---	195	---	10	---	2.3	.64	---
TOTAL	891	6727	1273	4843	2151	7753	2468	641	609.0	265.4	63.82	59.74
MEAN	28.7	224	41.1	156	74.2	250	82.3	20.7	20.3	8.56	2.06	1.99
MAX	107	1250	88	800	200	951	546	52	228	25	5.7	6.6
MIN	15	15	27	26	40	42	27	10	5.1	2.3	.64	.74
CFSM	.39	3.02	.55	2.10	1.00	3.37	1.11	.28	.27	.12	.03	.03
IN.	.45	3.37	.64	2.43	1.08	3.89	1.24	.32	.31	.13	.03	.03

CAL YR 1979 TOTAL 42120.80 MEAN 115 MAX 1740 MIN 2.7 CFSM 1.55 IN 21.12
WTR YR 1980 TOTAL 27744.96 MEAN 75.8 MAX 1250 MIN .64 CFSM 1.02 IN 13.91

02102500 CAPE FEAR RIVER AT LILLINGTON, N. C.

LOCATION.--Lat 35°24'30", long 78°48'48", Harnett County, Hydrologic Unit 03030004, on right bank 60 ft (18 m) downstream from downstream bridge on U.S. Highway 401, 1,860 ft (567 m) downstream from Southern Railway bridge (revised), 0.5 mi (0.8 km) north of Lillington, 1 mi (1.6 km) downstream from Neal Creek, and at mile 178 (286 km).

DRAINAGE AREA.--3,440 mi² (8,910 km²), approximately.

PERIOD OF RECORD.--December 1923 to current year.

REVISED RECORDS.--WSP 822: Drainage area. WSP 1002: 1930(M). WSP 1032: 1942(m). WSP 1303: 1944(M). WSP 1333: 1945. WSP 1383: 1924-29, 1936. WSP 1703: 1929.

GAGE.--Water-stage recorder. Datum of gage is 104.62 ft (31.888 m) National Geodetic Vertical Datum of 1929. Dec. 6, 1923 to Oct. 7, 1927, nonrecording gage and Oct. 8, 1927 to Dec. 2, 1975, water-stage recorder at site 60 ft (18 m) upstream in bridge pier at same datum. Gage height telemeters at station.

REMARKS.--Records good. Some regulation at high flows, beginning December 1972, caused by temporary storage in B. Everett Jordan Reservoir. Diurnal fluctuation and slight regulation at low flow caused by powerplants above station. Fluctuation and regulation by Buckhorn Reservoir 13 mi (21 km) above station ended in December 1962.

AVERAGE DISCHARGE.--56 years (water years 1924-80), 3,388 ft³/s (95.95 m³/s), 13.38 in/yr (340 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150,000 ft³/s (4,250 m³/s) Sept. 19, 1945, gage height, 33.19 ft (10.116 m), from floodmark, from rating curve extended above 76,000 ft³/s (2,150 m³/s); maximum daily, 140,000 ft³/s (3,960 m³/s) Sept. 19, 1945; minimum discharge, 11 ft³/s (0.31 m³/s) Oct. 14, 15, 1954, gage height, -0.17 ft (-0.052 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 27,500 ft³/s (779 m³/s) Mar. 22, gage height, 13.33 ft (4.063 m), no peak above base of 30,000 ft³/s (850 m³/s); minimum, 138 ft³/s (3.91 m³/s) Aug. 17, 18, 21, gage height, 0.64 ft³/s (0.195 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3110	682	3060	1320	2890	2550	8440	1740	1020	5950	570	214
2	3760	399	2530	1330	2810	2290	6240	1800	946	4040	512	196
3	2940	10400	2250	1260	2530	2110	4760	1580	859	1980	619	207
4	2370	12600	2050	1180	2380	2340	4060	1470	776	1120	716	605
5	3290	6070	1870	1290	2260	4040	3670	1330	758	1100	561	1000
6	5150	3670	1860	1530	2240	13400	3290	1270	618	1370	369	839
7	6470	2510	2080	1770	2170	14200	2870	1180	972	1460	383	543
8	4870	1750	2220	1820	2260	9890	2620	1110	1660	1110	344	360
9	3230	1510	2220	2020	2570	9270	2800	1050	1650	879	314	412
10	1860	1350	1970	2590	4480	10100	4580	981	1080	765	285	261
11	1490	3470	1750	2750	7700	7630	5470	956	731	781	268	238
12	1530	22700	1620	10500	6770	5390	4600	897	606	932	313	240
13	1620	22000	1520	12800	5520	5420	3870	918	598	1050	267	230
14	1560	14200	1610	8070	4640	11400	5910	870	593	1140	224	224
15	1420	9120	1790	8350	3970	8310	12800	855	441	1640	161	217
16	1320	7810	1930	8740	3800	5410	10700	837	445	1170	300	206
17	1250	6640	1790	5420	3970	3920	7520	833	482	802	195	258
18	1180	5300	1650	4870	3870	7890	5480	1080	415	698	197	500
19	1120	3390	1560	18000	3200	14600	3960	2670	679	1270	310	340
20	1070	2230	1450	17900	2740	10300	3090	3380	697	1490	236	396
21	1030	2000	1400	10900	2580	16900	2570	6020	809	1040	204	352
22	976	1770	1310	8310	2630	25800	2340	11800	730	802	281	326
23	946	1700	1220	11200	2620	21900	2140	7060	615	655	350	272
24	973	1660	1210	15100	2650	12600	1980	4710	595	1110	290	314
25	995	1630	1460	10500	2720	14200	1900	3360	475	2190	321	309
26	1130	7500	1720	7770	2900	17100	1690	3890	7990	1760	349	395
27	1010	13400	2060	6130	3620	11900	1680	3070	10800	1030	201	277
28	853	9210	1820	4530	3780	8710	2000	2220	9380	706	234	388
29	771	6870	1470	3750	3070	10300	1840	1590	8520	630	253	365
30	767	4940	1370	3280	---	13000	1730	1230	7490	535	231	559
31	729	---	1320	3030	---	10500	---	1060	---	604	219	---
TOTAL	60790	188481	55140	198010	99340	313370	126600	72817	63430	41809	10077	11043
MEAN	1961	6283	1779	6387	3426	10110	4220	2349	2114	1349	325	368
MAX	6470	22700	3060	18000	7700	25800	12800	11800	10800	5950	716	1000
MIN	729	399	1210	1180	2170	2110	1680	833	415	535	161	196
CFSM	.57	1.83	.52	1.86	1.00	2.94	1.23	.68	.62	.39	.09	.11
IN.	.66	2.04	.60	2.14	1.07	3.39	1.37	.79	.69	.45	.11	.12

CAL YR 1979 TOTAL 1904033 MEAN 5217 MAX 46600 MIN 298 CFSM 1.52 IN 20.59
WTR YR 1980 TOTAL 1240907 MEAN 3390 MAX 25800 MIN 161 CFSM .99 IN 13.42

02102908 FLAT CREEK NEAR INVERNESS, N. C.

LOCATION.--Lat 35°10'54", long 79°10'40", Hoke County, Hydrologic Unit 03030004, Fort Bragg military reservation, on left bank 15 ft (5 m) downstream from culvert on Manchester Road, 0.4 mi (0.6 km) upstream from mouth, and 3.6 mi (5.8 km) east of Inverness.

DRAINAGE AREA.--7.65 mi² (19.81 km²).

PERIOD OF RECORD.--June 1968 to current year.

REVISED RECORDS.--WRD N. C. 1972: 1968-70 (M).

GAGE.--Water-stage recorder. Datum of gage is 191.18 ft (58.272 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some diurnal fluctuation at low flow during growing season.

AVERAGE DISCHARGE.--12 years, 13.1 ft³/s (0.371 m³/s), 23.25 in/yr (591 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 394 ft³/s (11.2 m³/s) Apr. 1, 1973, gage height, 7.30 ft (2.225 m); minimum, 2.4 ft³/s (0.068 m³/s) Feb. 12, 1969, gage height, 0.85 ft (0.259 m) due to regulation from unknown source; minimum unregulated, 3.3 ft³/s (0.09 m³/s) July 20, 21, 22, 25, 26, Sept. 4, 1977, gage height, 0.86 ft (0.262 m).

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 60 ft³/s (1.70 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 3	1215	89	2.52	2.44	0.744	May 25	1015	99	2.80	2.60	0.792
Nov 12	0545	62	1.76	2.02	0.616	June 26	1015	73	2.07	2.18	0.664
Nov 26	1615	122	3.46	2.98	0.908	Sept 25	1930	62	1.76	2.00	0.610
Apr 28	0600	*196	5.55	*4.21	1.283						

Minimum discharge, 4.4 ft³/s (0.125 m³/s) Sept. 10, 15, 16; minimum gage height, 0.82 ft (0.250 m) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	8.9	15	12	14	12	20	15	8.9	7.2	7.1	6.3
2	19	13	14	12	13	12	18	14	8.5	7.1	14	5.7
3	12	63	14	12	13	13	17	14	8.1	6.9	7.7	7.1
4	11	34	14	12	13	15	17	13	7.8	8.8	8.5	7.4
5	18	16	14	14	12	22	16	12	7.5	15	7.0	6.4
6	14	13	16	12	13	24	15	12	7.7	12	6.4	5.8
7	11	12	19	12	14	16	15	11	7.9	8.4	6.3	5.4
8	9.9	12	15	18	15	14	16	11	7.7	7.6	6.2	5.3
9	9.5	12	14	25	16	13	16	11	7.0	8.2	6.2	5.3
10	9.6	12	13	16	35	12	15	11	6.8	10	11	5.2
11	10	31	13	17	20	12	14	11	6.7	8.9	6.8	5.4
12	10	51	13	21	16	12	14	11	6.8	7.8	6.2	5.4
13	9.3	24	13	15	15	27	21	10	6.8	7.9	6.6	5.2
14	11	17	13	20	14	17	39	10	6.8	7.7	6.3	5.3
15	10	15	12	17	14	13	28	10	6.6	7.1	6.1	5.1
16	9.6	14	15	14	14	12	18	9.8	6.3	7.0	6.1	5.4
17	9.3	14	14	13	13	12	16	9.6	7.4	6.8	6.3	6.1
18	9.3	13	13	20	13	37	16	13	16	10	6.6	8.9
19	9.1	13	12	21	13	18	15	11	16	8.0	6.9	7.6
20	9.0	13	12	14	13	16	15	15	8.6	7.0	16	10
21	9.0	12	12	13	13	37	14	25	7.4	6.6	8.3	8.7
22	8.8	12	12	14	12	21	14	12	6.9	6.4	8.2	7.3
23	9.3	12	12	29	12	15	13	11	6.8	7.6	7.7	6.6
24	10	12	12	17	12	17	13	15	7.1	8.6	6.6	16
25	9.3	12	17	14	12	21	12	56	14	7.4	6.6	41
26	9.4	76	13	14	12	15	12	18	47	7.1	6.0	20
27	9.2	30	12	16	12	14	22	13	17	7.1	5.7	9.3
28	9.3	17	12	15	12	15	100	11	9.8	8.0	5.6	8.6
29	9.1	16	12	14	11	47	21	10	8.1	7.6	5.5	12
30	9.1	15	13	13	---	30	18	9.8	7.3	7.0	5.4	29
31	9.0	---	15	15	---	31	---	9.2	---	6.6	5.5	---
TOTAL	326.1	614.9	420	491	411	592	600	424.4	297.3	249.4	225.4	282.8
MEAN	10.5	20.5	13.5	15.8	14.2	19.1	20.0	13.7	9.91	8.05	7.27	9.43
MAX	19	76	19	29	35	47	100	56	47	15	16	41
MIN	8.8	8.9	12	12	11	12	12	9.2	6.3	6.4	5.4	5.1
CFSM	1.37	2.68	1.77	2.07	1.86	2.50	2.61	1.79	1.30	1.05	.95	1.23
IN.	1.59	2.99	2.04	2.39	2.00	2.88	2.92	2.06	1.45	1.21	1.10	1.38

CAL YR 1979 TOTAL 4884.1 MEAN 13.4 MAX 195 MIN 4.6 CFSM 1.75 IN 23.75
WTR YR 1980 TOTAL 4934.3 MEAN 13.5 MAX 100 MIN 5.1 CFSM 1.77 IN 23.99

02104387 BUCKHEAD CREEK NEAR OWENS, N. C.

LOCATION.--Lat 35°00'37", long 78°57'08", Cumberland County, Hydrologic Unit 03030004, on left bank at upstream side of culvert on Secondary Road 1222, 1.3 mi (2.1 km) south-southeast of Owens and 3.5 mi (5.6 km) upstream from mouth.

DRAINAGE AREA.--2.76 mi^2 (7.15 km^2).

PERIOD OF RECORD.--November 1976 to February 1980 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 147.92 ft (45.086 m) National Geodetic Vertical datum of 1929 (North Carolina Geodetic Survey bench mark).

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 184 ft^3/s (5.21 m^3/s) Aug. 18, 1977, gage height, 5.62 ft (1.713 m); minimum daily discharge, 0.76 ft^3/s (0.022 m^3/s) July 17, 1979.

EXTREMES FOR CURRENT PERIOD.--Peak discharges above base of 70 ft^3/s (1.98 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov 26, 1979	0530	96	2.72	4.38	1.335

Minimum discharge, 0.93 ft^3/s (0.026 m^3/s) Oct. 4, 1979; minimum gage height, 1.32 ft (0.402 m) Feb. 18-19, 1980.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	1.2	2.4	1.8	6.1							
2	1.3	1.3	2.3	1.6	2.8							
3	1.2	13	2.2	1.5	2.4							
4	1.0	5.2	2.1	1.5	2.3							
5	4.0	1.9	2.1	1.7	2.2							
6	3.3	1.5	6.2	1.7	3.7							
7	1.6	1.4	8.1	1.6	7.0							
8	1.3	1.4	2.7	8.3	4.9							
9	1.2	1.5	2.0	12	7.3							
10	1.2	1.6	1.8	4.5	16							
11	1.3	14	1.7	7.0	5.6							
12	1.2	14	1.7	7.9	3.4							
13	1.3	10	3.3	2.7	2.7							
14	2.1	3.8	4.1	4.4	2.3							
15	1.4	1.9	1.8	4.1	2.3							
16	1.2	1.6	2.0	2.1	2.6							
17	1.2	1.5	2.0	1.8	2.4							
18	1.2	1.4	1.6	7.4	2.0							
19	1.2	1.3	1.5	7.4	2.0							
20	1.2	1.3	1.5	2.5	2.0							
21	1.2	1.3	1.5	2.0	2.0							
22	1.2	1.3	1.7	2.7	2.1							
23	3.7	1.3	1.6	11	2.1							
24	3.1	1.4	2.2	4.1	2.1							
25	1.6	1.4	7.3	2.3	2.1							
26	1.3	40	2.1	2.0	2.1							
27	1.2	7.8	1.6	3.4	2.1							
28	1.3	3.5	1.4	3.5	2.1							
29	1.3	2.9	1.4	2.1	2.1							
30	1.2	2.5	2.5	1.8	---							
31	1.2	---	3.7	8.3	---							
TOTAL	52.4	144.2	80.1	126.7	100.8							
MEAN	1.69	4.81	2.58	4.09	3.48							
MAX	4.7	40	8.1	12	16							
MIN	1.0	1.2	1.4	1.5	2.0							
CFSM	.61	1.74	.94	1.48	1.26							
IN.	.71	1.94	1.08	1.71	1.36							

CAL YR 1979 TOTAL 1513.01 MEAN 4.15 MAX 96 MIN .76 CFSM 1.50 IN 20.39

02105500 CAPE FEAR RIVER AT WILLIAM O. HUSKE LOCK NEAR TARHEEL, N. C.

LOCATION.--Lat 34°50'05", long 78°49'27", Bladen County, Hydrologic Unit 03030005, on right bank 100 ft (30 m) upstream from William O. Huske Lock, 1 mi (1.6 km) downstream from Cumberland-Bladen County line, 7 mi (11 km) north of Tarheel, 9 mi (14 km) upstream from Phillips Creek, and at mile 123 (198 km).

DRAINAGE AREA.--4,810 mi² (12,460 km²), approximately.

PERIOD OF RECORD.--October 1937 to current year. Prior to October 1964, published as Cape Fear River at Lock 3 near Tarheel, N. C.

GAGE.--Water-stage recorder and concrete lock and dam control. Datum of gage is 28.968 ft (8.829 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 8, 1939, nonrecording gage on upper lock wall 100 ft (30 m) downstream at same datum. Auxiliary water-stage recorder 1.8 mi (2.9 km) downstream from base gage; prior to Jan. 14, 1943, auxiliary nonrecording gage 400 ft (122 m) downstream on lower end of lock wall; Jan. 14, 1943 to Sept. 30, 1953, auxiliary water-stage recorder at site 600 ft (183 m) downstream.

REMARKS.--Records good except those for period of no gage-height record, Feb. 21 to May 6, which are fair. Slight regulation at high flows, beginning December 1972, caused by storage in B. Everett Jordan Reservoir. Slight diurnal fluctuation and some regulation for short periods at low flow caused by powerplants above station.

AVERAGE DISCHARGE.--43 years, 5,005 ft³/s (141.7 m³/s), 14.13 in/yr (359 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined; maximum gage height, 43.44 ft (13.24 m) Sept. 22, 1945; maximum daily discharge, 112,000 ft³/s (3,170 m³/s) Sept. 21, 1945; minimum discharge, 170 ft³/s (4.81 m³/s) Sept. 20, 1954; minimum daily, 208 ft³/s (5.89 m³/s) Sept. 13, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 31,000 ft³/s (878 m³/s) Mar. 23, gage height, 17.0 ft (5.182 m) from graph based on gage readings, minimum, 424 ft³/s (12.0 m³/s) Aug. 27, gage height, 0.73 ft (0.223 m); minimum daily, 509 ft³/s (14.4 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7570	1300	7960	2570	5120	4200	15600	4300	1660	7880	923	534
2	6520	1230	5660	2590	4870	3700	12600	3600	1550	6000	973	515
3	6010	3640	4760	2690	4610	3700	10000	3200	1460	3980	1010	528
4	4890	13800	4190	2480	4270	3500	7500	2800	1340	2360	1480	668
5	4180	12400	3830	2390	4070	4200	6500	2500	1220	2190	1540	1010
6	5330	10400	3630	2550	3960	8200	5900	2390	1140	2430	1150	1530
7	6990	8310	4090	2820	3990	15400	5100	2250	1100	2460	897	1320
8	7170	5700	4210	3140	4040	14000	5000	2110	1470	2270	836	1020
9	5450	4060	4290	3790	4330	10200	5700	1960	2080	1890	765	799
10	3900	3290	4100	4660	6260	6000	6000	1880	1880	1650	750	750
11	2780	3240	3680	5350	9700	6900	6700	1770	1420	1660	707	653
12	2400	11400	3380	6970	10900	8500	6600	1710	1080	1530	697	553
13	2450	21300	3200	14400	9360	7700	7500	1640	939	1550	777	544
14	2430	23000	3170	13700	7870	9900	8000	1600	907	1530	742	530
15	2330	18600	3190	10900	6760	10900	15200	1540	904	1720	633	516
16	2200	14400	3300	12100	6080	9100	16200	1490	790	1920	547	509
17	2090	11000	3380	10100	5900	6700	13600	1420	820	1480	722	511
18	2090	9020	3210	7230	5840	8800	11500	1490	957	1160	686	809
19	2010	6850	3040	10500	5380	15200	7600	2160	1260	1100	700	1200
20	1900	4920	2890	17300	4720	16100	5700	3880	1490	1770	1040	1220
21	1820	3920	2700	18200	4300	13900	4800	4810	1510	1860	881	1140
22	1740	3550	2590	13700	4100	16100	3900	9890	1510	1440	772	1040
23	1660	3270	2470	11500	4100	23700	3800	11500	1290	1240	775	935
24	1700	3140	2380	14800	4200	22300	3500	7510	1100	1410	787	1160
25	1660	3070	2570	15800	4300	18900	3300	5800	1330	1880	729	1210
26	1710	5460	3000	13200	4300	18300	3200	5070	5960	2470	697	1520
27	1740	15000	3330	10700	4500	16700	3000	4980	13500	1970	535	1440
28	1590	15800	3520	8170	5000	13700	4000	3950	12700	1380	582	1280
29	1450	13200	3120	6560	4900	11100	5100	3030	11800	1090	517	1270
30	1370	11100	2720	5770	---	13900	4700	2310	9700	979	549	1410
31	1340	---	2680	5350	---	16900	---	1890	---	895	555	---
TOTAL	98470	265370	110240	261980	157730	358400	217800	106430	85867	65144	24954	28124
MEAN	3176	8846	3556	8451	5439	11560	7260	3433	2862	2101	805	937
MAX	7570	23000	7960	18200	10900	23700	16200	11500	13500	7880	1540	1530
MIN	1340	1230	2380	2390	3960	3500	3000	1420	790	895	517	509
CFSM	.66	1.84	.74	1.76	1.13	2.40	1.51	.71	.60	.44	.17	.20
IN.	.76	2.05	.85	2.03	1.22	2.77	1.68	.82	.66	.50	.19	.22

CAL YR 1979 TOTAL 2515879 MEAN 6893 MAX 45100 MIN 621 CFSM 1.43 IN 19.46
WTR YR 1980 TOTAL 1780509 MEAN 4865 MAX 23700 MIN 509 CFSM 1.01 IN 13.77

02105524 ELLIS CREEK TRIBUTARY AT SECONDARY ROAD 1325 NEAR WHITE OAK, N. C.

LOCATION.--Lat 34°46'02", long 78°41'24", Bladen County, Hydrologic Unit 03030005, on right bank 15 ft (5 m) upstream from culvert on Secondary Road 1325, 0.2 mi (0.3 km) upstream from mouth, and 3.0 mi (4.8 km) northeast of White Oak.

DRAINAGE AREA.--1.6 mi² (4.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1979 to September 1980.

GAGE.--Water-stage recorder with concrete control. Altitude of gage is 70 ft (21 m) from topographic map.

REMARKS.--Water-discharge records fair.

EXTREMES FOR CURRENT PERIOD.--Maximum discharge, 4.3 ft³/s (0.12 m³/s) Mar. 29, gage height, 2.42 ft (0.738 m); no flow many days during period.

DISCHARGE, IN CUBIC FEET PER SECOND, NOVEMBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		.02	1.5	.62	1.1	.14	3.4	.01		.00	.00	.00
2		.03	1.2	.60	1.0	.14	3.1	.01		.00	.00	.00
3		.03	.96	.55	.86	.15	2.7	.01		.00	.00	.02
4		.06	.83	.56	.76	.37	2.5	.00		.00	.00	.04
5		.06	.74	.67	.65	1.3	2.1	.00		.02	.00	.00
6		.05	1.0	.68	.62	2.6	1.7	.00		.02	.00	.00
7		.04	1.6	.68	.60	2.6	1.3	.00		.00	.00	.00
8		.04	1.6	1.3	.79	2.5	.97	.00		.00	.00	.00
9		.03	1.4	2.4	1.3	2.2	.86	.00		.0	.00	.00
10		.03	1.2	2.3	3.1	1.8	.63	.00		.00	.00	.00
11		.45	1.0	2.3	3.0	1.5	.41	.00		.00	.00	.00
12		1.8	.87	2.4	2.7	1.2	.26	.00		.00	.00	.00
13		2.3	.80	2.1	2.4	3.1	.85	.00		.00	.00	.00
14		2.2	.79	2.1	2.2	2.9	3.2	.00		.00	.00	.00
15		1.9	.73	2.0	1.9	2.6	3.5	.00		.00	.00	.00
16		1.5	.75	1.8	1.8	2.2	3.3	.00		.00	.00	.00
17		1.1	.72	1.5	1.7	1.8	2.9	.00		.00	.00	.00
18		.81	.68	1.7	1.3	3.4	2.6	.00		.00	.00	.00
19		.65	.65	1.9	.99	3.2	2.2	.00		.00	.00	.00
20		.54	.62	1.7	.78	3.0	1.9	1.1		.00	.01	.00
21		.47	.55	1.5	.63	3.0	1.2	2.2		.00	.00	.00
22		.44	.55	1.2	.49	2.7	.62	1.8		.00	.00	.00
23		.40	.52	2.1	.44	2.3	.28	.89		.04	.00	.00
24		.30	.50	2.1	.55	2.0	.16	.67		.08	.00	.00
25		.27	.74	1.9	.52	2.0	.08	.77		.00	.00	.00
26		2.1	.72	1.6	.41	1.7	.04	.62		.00	.00	.00
27		2.5	.68	1.6	.34	1.4	.02	.42		.00	.00	.00
28		2.4	.68	1.5	.32	1.3	.02	.23		.00	.00	.00
29		2.1	.62	1.3	.25	3.8	.02	.04		.00	.00	.00
30		1.9	.61	1.0	---	3.8	.02	.02		.00	.00	.06
31		---	.62	1.1	---	3.7	---	.00	---	.00	.00	---
TOTAL		26.52	26.43	46.76	33.50	66.40	42.84	8.79	.00	.16	.01	.12
MEAN		.88	.85	1.51	1.16	2.14	1.43	.28	.000	.005	.000	.004
MAX		2.5	1.6	2.4	3.1	3.8	3.5	2.2	.00	.08	.01	.06
MIN		.02	.50	.55	.25	.14	.02	.00	.00	.00	.00	.00
CFSM		.55	.53	.94	.73	1.34	.89	.18	.000	.003	.000	.003
IN.		.62	.61	1.09	.78	1.54	1.00	.20	.00	.00	.00	.00

02105524 ELLIS CREEK TRIBUTARY AT SECONDARY ROAD 1325 NEAR WHITE OAK, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1978, November 1979 to September 1980.

REMARKS.--Basin above station is 100 percent forested. Station is part of district's Natural Quality Network for determining the quality of streams relatively unaffected by man.

WATER QUALITY DATA, PERIOD NOVEMBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
NOV												
06...	1300	.07	26	4.8	12.0	70	1.6	--	--	--	3	1
13...	1300	2.4	36	3.8	13.0	200	7.1	--	--	--	5	3
DEC												
04...	1330	.80	30	4.7	5.0	100	--	--	--	--	4	2
JAN												
28...	1500	1.3	32	--	7.5	30	--	--	--	--	4	2
MAR												
06...	1145	2.7	33	4.5	6.0	50	8.4	110	60	200	5	4
10...	1200	1.7	31	4.5	11.0	50	5.0	40	K6	K20	5	4
18...	1430	3.3	36	4.2	15.5	50	3.6	200	K24	52	17	17
24...	1200	1.7	32	4.5	12.0	100	4.9	--	--	--	4	4
MAY												
02...	1115	.10	28	4.4	16.0	150	2.4	--	--	--	2	0
29...	1030	.10	27	4.5	20.5	120	2.3	--	K12	140	2	2

DATE	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)
NOV												
06...	--	--	.6	.3	2.6	64	.7	.4	2	0	2	51
13...	.0	.0	1.1	.6	2.5	60	.5	.7	--	0	*2	--
DEC												
04...	--	--	.8	.4	2.4	70	.5	.2	2	0	2	64
JAN												
28...	--	--	.9	.4	2.7	56	.6	.6	--	0	*2	--
MAR												
06...	.0	.0	1.0	.5	2.2	47	.4	.6	--	0	*1	62
10...	.0	.0	1.1	.5	2.6	52	.5	.3	--	0	*1	--
18...	.5	25	3.1	2.2	2.1	20	.2	1.3	--	0	*0	--
24...	--	--	.9	.4	2.7	58	.6	.3	--	0	*0	--
MAY												
02...	.6	30	.6	.2	2.2	64	.6	.3	--	0	*2	--
29...	.4	20	.6	.2	2.9	70	.8	.3	--	0	*0	--

K Results based on colony count outside the acceptable range (non-ideal colony count).
* Lab alkalinity

02105524 ELLIS CREEK TRIBUTARY AT SECONDARY ROAD 1325 NEAR WHITE OAK, N. C.--Continued

WATER QUALITY DATA, PERIOD NOVEMBER 1979 TO SEPTEMBER 1980

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
NOV											
06...	2.5	4.6	.0	11	55	24	.07	.01	.00	.00	.00
13...	5.8	4.5	.0	9.8	22	28	.03	.14	.00	.01	.01
DEC											
04...	2.8	4.5	.0	11	51	24	.07	.11	.00	.10	.06
JAN											
28...	3.9	3.9	.0	9.5	46	24	.06	.16	.00	.02	.01
MAR											
06...	5.2	3.3	.0	8.1	61	22	.08	.44	.00	.01	.01
10...	5.1	3.3	.0	7.2	24	22	.03	.11	.00	.01	.01
18...	6.7	3.7	.0	--	80	--	.11	.71	.00	.02	.00
24...	4.4	3.5	.0	7.0	58	20	.08	.27	.00	.01	.00
MAY											
02...	3.9	4.2	.0	9.2	54	24	.07	.01	.03	.01	.04
29...	3.8	3.7	.0	11	50	24	.07	.01	.00	.00	.00

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC DIS. (MG/L AS N)
NOV											
06...	.02	1.9	.01	.06	.01	.08	.36	.34	.37	.00	.40
13...	.04	--	.02	.00	.02	.00	.43	.49	.45	.00	.49
DEC											
04...	.05	--	.06	.08	.07	.10	.48	.48	.54	.00	.56
JAN											
28...	.01	--	.05	.00	.06	.00	1.2	1.4	1.2	.00	1.4
MAR											
06...	.05	--	.00	.05	.00	.06	.48	--	.48	--	--
10...	.05	--	.02	.02	.02	.03	.50	.54	.52	.00	.56
18...	.04	--	.02	.06	.02	.08	1.1	.55	1.1	.49	.61
24...	.03	--	.00	.04	.00	.05	.74	.36	.74	.34	.40
MAY											
02...	.03	--	.09	.02	.11	.03	.67	.71	.76	.03	.73
29...	.08	--	.01	.00	.01	.00	.94	.57	.95	.38	.57

DATE	NITRO-GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	NITRO-GEN, TOT IN BOT-TOM MA-TERIAL (MG/KG AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS PO4)
NOV											
06...	31400	.37	1.6	31400	.010	.00	.03	.000	.00	.01	.03
13...	--	.46	2.0	--	.020	.12	.06	.010	.04	.01	.03
DEC											
04...	--	.60	2.7	--	.010	.00	.03	.020	.00	.00	.00
JAN											
28...	--	1.2	5.4	--	.020	.12	.06	.030	.04	.00	.00
MAR											
06...	--	.49	2.2	--	.030	.00	.09	.030	.00	.01	.03
10...	--	.53	2.3	--	.030	.03	.09	.030	.01	.00	.00
18...	--	1.1	4.9	--	.070	.00	.21	.020	.00	.00	.00
24...	--	.74	3.3	--	.110	.09	.34	.010	.03	.00	.00
MAY											
02...	--	.80	3.5	--	.040	.25	.12	.010	.08	.01	.03
29...	--	.95	4.2	--	.030	.03	.09	.020	.01	.09	.28

02105524 ELLIS CREEK TRIBUTARY AT SECONDARY ROAD 1325 NEAR WHITE OAK, N. C.-Continued

WATER QUALITY DATA, PERIOD NOVEMBER 1979 TO SEPTEMBER 1980

DATE	PHOS-PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)
NOV											
06...	200	1	0	1	2	0	0	1	<10	10	5
13...	--	1	1	0	--	1	1	0	--	20	--
DEC											
04...	--	1	1	0	--	0	0	6	--	<10	<10
JAN											
28...	--	0	0	0	--	0	0	2	--	10	7
MAR											
06...	--	1	1	0	--	0	0	4	--	10	5
10...	--	0	0	0	--	0	0	6	--	10	7
18...	--	--	--	--	--	--	--	--	--	10	0
24...	--	2	1	1	--	0	0	4	--	10	3
MAY											
02...	--	--	--	--	--	--	--	--	--	10	8
29...	--	--	--	--	--	--	--	--	--	--	--

DATE	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
NOV											
06...	5	<10	0	0	0	<10	1	0	5	<10	1700
13...	--	--	3	0	4	--	2	0	6	--	1900
DEC											
04...	0	--	0	0	6	--	2	0	6	--	1100
JAN											
28...	3	--	2	0	2	--	0	0	5	--	840
MAR											
06...	5	--	0	0	0	--	1	0	6	--	660
10...	3	--	0	0	2	--	2	0	4	--	1200
18...	20	--	--	--	--	--	3	0	5	--	1300
24...	7	--	0	0	2	--	2	0	5	--	1300
MAY											
02...	2	--	--	--	--	--	4	0	4	--	4300
29...	--	--	--	--	--	--	--	--	--	--	--

DATE	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)
NOV											
06...	700	1000	4100	1	0	1	20	50	10	40	20
13...	400	1500	--	8	6	2	--	60	0	60	--
DEC											
04...	290	810	--	1	0	1	--	40	0	40	--
JAN											
28...	170	670	--	1	0	2	--	30	0	40	--
MAR											
06...	50	610	--	3	3	0	--	70	10	60	--
10...	300	900	--	2	0	4	--	60	10	50	--
18...	1300	0	--	0	0	0	--	--	--	--	--
24...	470	830	--	3	0	4	--	60	20	40	--
MAY											
02...	3000	1300	--	2	2	0	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--

02105524 ELLIS CREEK TRIBUTARY AT SECONDARY ROAD 1325 NEAR WHITE OAK, N. C.--Continued

WATER QUALITY DATA, PERIOD NOVEMBER 1979 TO SEPTEMBER 1980

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
NOV									
06...	.2	.1	<.1	.00	0	0	0	0	20
13...	.2	.1	.1	--	0	0	0	--	--
DEC									
04...	.1	.0	<.1	--	0	0	0	--	20
JAN									
28...	.2	.1	.1	--	0	0	0	--	10
MAR									
06...	.1	.0	.1	--	0	0	0	--	20
10...	.1	.0	.1	--	0	0	0	--	10
18...	--	--	--	--	--	--	--	--	20
24...	.2	.0	.2	--	0	0	0	--	10
MAY									
02...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--

DATE	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
NOV									
06...	20	1	20	--	--	80	.1	80	.00
13...	--	7	--	--	--	--	--	--	.00
DEC									
04...	20	0	--	--	--	--	--	--	.00
JAN									
28...	0	20	--	--	--	--	--	--	.00
MAR									
06...	10	10	--	--	--	--	--	--	.10
10...	4	6	--	--	--	--	--	--	.10
18...	20	0	--	29	1.0	--	--	--	.00
24...	2	8	--	--	--	--	--	--	.10
MAY									
02...	--	10	--	18	4.2	--	--	--	.10
29...	--	--	--	20	2.7	--	--	--	.10

02105524 ELLIS CREEK TRIBUTARY AT SECONDARY ROAD 1325 NEAR WHITE OAK, N. C.--Continued

PHYTOPLANKTON ANALYSES, NOVEMBER 1979 TO SEPTEMBER 1980

DATE TIME	NOV 6,79 1300		NOV 13,79 1300		DEC 4,79 1330		JAN 28,80 1500	
TOTAL CELLS/ML	480		13		30		30	
DIVERSITY: DIVISION	0.5		0.0		1.3		1.3	
.CLASS	0.5		0.0		1.3		1.3	
..ORDER	0.5		0.0		1.3		1.3	
...FAMILY	0.5		0.0		1.3		1.3	
....GENUS	0.5		0.0		1.3		1.3	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...OOCYSTACEAE								
....ANKISTRODESMUS	--	-	--	-	--	-	--	-
....CHLORELLA	--	-	--	-	--	-	20#	67
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	26	5	13#	100	14#	46	5#	17
..PENNALES								
...NAVICULACEAE								
....NAVICULA	--	-	--	-	--	-	--	-
....PINNULARIA	--	-	--	-	--	-	--	-
...NITZSCHIACEAE								
....NITZSCHIA	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
.CRYPTOPHYCEAE								
..CRYPTOMONADALES								
...CRYPTOMONADACEAE								
....CRYPTOMONAS	13	3	--	-	14#	46	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	440#	92	--	-	--	-	--	-
..HORMOGONALES								
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	--	-	--	-	--	-
....SCHIZOTHRIX	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	--	-	2	8	5#	17
....TRACHELOMONAS	--	-	--	-	--	-	--	-

02105524 ELLIS CREEK TRIBUTARY AT SECONDARY ROAD 1325 NEAR WHITE OAK, N. C.--Continued

PHYTOPLANKTON ANALYSES, NOVEMBER 1979 TO SEPTEMBER 1980

DATE	MAR 6,80	MAR 24,80	MAY 2,80	MAY 29,80
TIME	1145	1200	1115	1030
TOTAL CELLS/ML	240	65	500	13
DIVERSITY: DIVISION	1.6	0.7	0.8	0.0
.CLASS	1.6	0.7	0.8	0.0
..ORDER	2.1	0.7	0.8	0.0
...FAMILY	2.1	0.7	0.8	0.0
....GENUS	2.3	0.7	0.8	0.0

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...OOCYSTACEAE								
....ANKISTRODESMUS	20	9	--	-	--	-	--	-
....CHLORELLA	35	15	--	-	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	35	15	--	-	29	6	13#	100
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	25	11	13#	20	--	-	--	-
..PENNALES								
...NAVICULACEAE								
....NAVICULA	5	2	--	-	--	-	--	-
....PINNULARIA	--	-	--	-	14	3	--	-
...NITZSCHIACEAE								
....NITZSCHIA	5	2	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
.CRYPTOPHYCEAE								
..CRYPTOMONADALES								
...CRYPTOMONADACEAE								
....CRYPTOMONAS	5	2	52#	80	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	--	-	--	-	--	-	--	-
..HORMOGONALES								
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	--	-	430#	86	--	-
....SCHIZOTHRIX	110#	45	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	29	6	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02105524 ELLIS CREEK TRIBUTARY AT SECONDARY ROAD 1325 NEAR WHITE OAK, N. C.--Continued

WATER QUALITY DATA, PERIOD NOVEMBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
NOV				
06...	1300	.07	15	.00
13...	1300	2.4	4	.03
DEC				
04...	1330	.80	6	.01
MAR				
06...	1145	2.7	17	.12
10...	1200	1.7	14	.06
18...	1430	3.3	50	.45
24...	1200	1.7	15	.07
MAY				
02...	1115	.10	28	.01
29...	1030	.10	15	.00
AUG				
20...	1445	.01	96	.00

02105769 CAPE FEAR RIVER AT LOCK 1 NEAR KELLY, N. C.

LOCATION.--Lat 34°24'15", long 78°17'38", Bladen County, Hydrologic Unit 03030005, on right bank near upstream end of Lock No. 1, 1.3 mi (2.1 km) upstream from Natmore Creek, 2.0 mi (3.2 km) upstream from bridge on State Highway 11, 4.6 mi (7.4 km) southeast of Kelly, and at mile 67 (108 km).

DRAINAGE AREA.--5,220 mi² (13,520 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1969 to current year.

GAGE.--Water-stage recorder with concrete lock and dam control. Datum of gage is 2.90 ft (0.884 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Water-discharge record fair. Slight regulation at high flow, beginning December 1972, caused by storage in B. Everett Jordan Reservoir. Slight diurnal fluctuation and some regulation for short periods at low flow caused by powerplants above station. The city of Wilmington diverted an average of 14.8 ft³/s (0.42 m³/s) for municipal water supply, most of which is returned as sewage below station. Gage height telemeter at station.

AVERAGE DISCHARGE.--11 years, 6,039 ft³/s (171.0 m³/s), 15.71 in/yr (399 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,700 ft³/s (1,630 m³/s) Mar. 3, 1979, gage height, 24.92 ft (7.596 m) from floodmarks; minimum, 412 ft³/s (11.7 m³/s) Aug. 1, 1977, gage height, 14.45 ft (4.404 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 23,600 ft³/s (668 m³/s) Mar. 25, gage height, 21.03 ft (6.410 m); minimum, 447 ft³/s (12.7 m³/s) Sept. 16, gage height, 14.60 ft (4.450 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10800	1270	13100	2880	6040	5000	18400	5000	1860	10500	892	501
2	9450	1250	9560	2780	5640	4800	18100	4260	1640	8430	904	495
3	8290	1300	6640	2800	5290	4500	16500	3820	1510	6120	916	492
4	7050	5970	5290	2790	4970	4000	13600	3400	1380	3980	1050	548
5	5780	11800	4610	2680	4640	4300	10500	3010	1230	2740	1480	632
6	5300	12400	4300	2640	4450	6000	8290	2800	1110	2520	1350	1070
7	6310	11100	4620	2800	4400	11000	7000	2530	1030	2570	1060	1360
8	7540	8750	4890	3090	4430	14500	6080	2270	1150	2510	881	1170
9	7310	5930	4890	3600	4580	15500	5490	2110	1520	2200	795	900
10	5750	4240	4800	4390	5570	15000	5300	1910	1900	1830	784	732
11	4050	3660	4470	5240	7920	14500	5980	1810	1670	1670	692	683
12	3050	5200	4020	6050	10500	13000	7120	1730	1260	1600	658	591
13	2700	12300	3740	9160	11300	11500	7010	1660	987	1480	677	538
14	2630	16700	3600	13300	10500	11000	6790	1590	871	1520	670	516
15	2540	18700	3540	13900	9070	12500	9780	1530	847	1480	631	497
16	2430	19300	3580	12800	7760	13500	13800	1450	818	1780	573	472
17	2280	17500	3690	12500	6990	12000	15800	1400	780	1760	814	476
18	2180	14500	3630	10900	6610	10500	15700	1540	818	1380	874	523
19	2140	11100	3430	9100	6380	11500	13500	1750	1080	1110	736	769
20	2020	7790	3280	12500	5840	14500	9880	2990	1260	1210	905	1110
21	1920	5440	3040	15900	5200	16500	6920	5120	1390	1750	963	1120
22	1820	4340	2870	17000	4860	17000	5500	6540	1420	1690	841	1010
23	1720	3820	2760	16000	4700	19000	4690	10300	1330	1370	769	921
24	1700	3520	2620	14600	4710	21000	4150	10600	1140	1420	734	970
25	1700	3350	2690	15400	4730	23100	3830	8370	1040	1470	710	1090
26	1680	3960	2940	16000	4800	22700	3560	6360	2490	2150	650	1220
27	1710	8220	3310	15000	4800	21200	3290	5630	7440	2400	665	1360
28	1670	13400	3630	12600	5000	20200	3330	4990	11700	1860	586	1300
29	1550	15300	3630	9850	5400	19400	4640	3950	12700	1340	522	1210
30	1420	15000	3220	7660	---	18100	5270	3020	12100	1100	510	1240
31	1330	---	2960	6520	---	18000	---	2290	---	960	510	---
TOTAL	117820	267110	133350	282430	177080	425300	259800	115730	77471	75900	24802	25516
MEAN	3801	8904	4302	9111	6106	13720	8660	3733	2582	2448	800	851
MAX	10800	19300	13100	17000	11300	23100	18400	10600	12700	10500	1480	1360
MIN	1330	1250	2620	2640	4400	4000	3290	1400	780	960	510	472
CFSM	.73	1.71	.82	1.75	1.17	2.63	1.66	.72	.50	.47	.15	.16
IN.	.84	1.90	.95	2.01	1.26	3.03	1.85	.82	.55	.54	.18	.18

CAL YR 1979 TOTAL 2854432 MEAN 7820 MAX 57100 MIN 668 CFSM 1.50 IN 20.34
WTR YR 1980 TOTAL 1982309 MEAN 5416 MAX 23100 MIN 472 CFSM 1.04 IN 14.13

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C. --Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1973 to current year.
WATER TEMPERATURES: January 1973 to current year.

INSTRUMENTATION.--Water-quality monitor since May 1973.

REMARKS.--Station operated as part of NASQAN network from January 1973 to present. Daily records of specific conductance for period October 1956 to September 1961 are available in the district office in Raleigh, N. C. During period 1956-73, data were collected at bridge on State Highway 11 located 2 mi (3.2 km) downstream and published as Cape Fear River near Acme (station 02105771).

COOPERATION.--Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 317 micromhos Oct. 19, 20, 1976; minimum, 40 micromhos June 26, 1973.
WATER TEMPERATURES: Maximum, 32.0°C July 9, 19, 20, 21, 1977, Aug. 10, 1979; minimum, 0.5°C Jan. 24, 1976.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 174 micromhos Sept. 27; minimum, 56 micromhos Apr. 2, 3, 4.
WATER TEMPERATURES: Maximum, 31.0°C Aug. 12, 14, 15, 16; minimum, 3.0°C Feb. 6-12, 14.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT												
01...	1030	10500	60	5.7	21.5	60	8.0	K4400	K5700	15	2	3.8
DEC												
12...	1330	3860	78	6.5	7.0	8.0	13.3	400	190	17	3	4.1
JAN												
28...	0900	13000	62	6.5	8.0	15	10.8	170	180	16	5	3.8
MAR												
18...	1030	10100	62	7.1	9.5	19	11.0	120	260	16	4	3.7
APR												
29...	1230	4760	78	6.3	20.0	4.2	7.6	100	K12	16	1	3.8
MAY												
13...	1045	1670	90	5.8	21.5	3.3	7.0	92	K16	17	1	3.6
JUN												
17...	1350	773	90	6.1	26.5	7.5	--	80	520	17	6	3.6
JUL												
23...	1130	1350	103	6.6	29.0	6.2	6.3	430	K28	16	0	3.2
AUG												
20...	1120	920	100	6.5	28.0	9.0	6.6	K28	K24	14	0	2.3
SEP												
09...	1025	920	80	6.3	27.0	3.5	5.6	K18	--	9	2	1.0

K Results based on colony count outside the acceptable range (non-ideal colony count).

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT												
01...	1.4	4.6	35	.5	2.5	16	0	13	51	6.1	4.6	.3
DEC												
12...	1.6	7.4	56	.8	1.9	17	0	14	8.6	7.5	7.4	.1
JAN												
28...	1.6	5.6	52	.6	1.5	14	0	11	7.1	9.1	6.8	.1
MAR												
18...	1.6	5.3	40	.6	1.2	14	0	11	1.8	7.5	5.8	.1
APR												
29...	1.7	6.9	44	.7	1.9	19	0	16	15	10	6.9	.1
MAY												
13...	1.9	9.4	52	1.0	1.6	23	0	19	49	9.1	9.1	.1
JUN												
17...	1.9	8.7	49	.9	2.1	18	0	15	17	9.5	8.1	.1
JUL												
23...	2.0	12	58	1.3	2.4	21	0	17	9.3	13	9.4	.1
AUG												
20...	2.0	11	57	1.3	3.1	24	0	*15	9.3	13	9.7	.3
SEP												
09...	1.6	10	64	1.4	2.5	12	0	* 7	6.8	11	10	.2

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)
OCT												
01...	7.7	66	41	.09	1870	.44	.40	.08	.06	.10	.08	.74
DEC												
12...	9.9	64	51	.09	667	.42	.53	.14	.02	.17	.03	.46
JAN												
28...	9.1	69	46	.09	2420	.33	.34	.07	.08	.08	.10	.48
MAR												
18...	7.6	64	42	.09	1750	.42	.43	.08	.09	.10	.12	.45
APR												
29...	8.3	90	52	.12	1160	.53	.59	.11	.03	.13	.04	.30
MAY												
13...	8.4	78	57	.11	352	.69	.69	.19	.21	.23	.27	.37
JUN												
17...	9.4	76	58	.10	159	1.1	1.2	.19	.21	.23	.27	.56
JUL												
23...	9.3	81	67	.11	295	1.0	1.1	.12	.14	.15	.18	.46
AUG												
20...	6.7	72	61	.10	179	.95	.95	.07	.06	.08	.08	.42
SEP												
09...	6.1	70	51	.10	174	.80	.81	.17	.17	.21	.22	.21

* Lab alkalinity.

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)
OCT 01...	.40	.82	.36	.46	1.3	5.6	.190	.58	.080	--	--	--
DEC 12...	.45	.60	.13	.47	1.0	4.5	.110	.34	.090	2	0	2
JAN 28...	.19	.55	.28	.27	.88	3.9	.110	.34	.080	--	--	--
MAR 18...	.15	.53	.29	.24	.95	4.2	.140	.43	.060	2	0	2
APR 29...	.35	.41	.03	.38	.94	4.2	.110	.34	.110	--	--	--
MAY 13...	.34	.56	.01	.55	1.3	5.5	.160	.49	.140	3	0	4
JUN 17...	.32	.75	.22	.53	1.9	8.2	.190	.58	.160	--	--	--
JUL 23...	.38	.58	.06	.52	1.6	7.0	.180	.55	.160	--	--	--
AUG 20...	.47	.49	.00	.53	1.4	6.4	.240	.74	.160	--	--	--
SEP 09...	.23	.38	.00	.40	1.2	5.2	.200	.61	.180	2	1	1

DATE	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)
OCT 01...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	<50	<20	30	0	0	3	30	10	20	1	0	2
JAN 28...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	100	70	30	0	0	8	10	0	<10	0	0	1
APR 29...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<50	<20	30	0	0	3	10	0	<10	0	0	0
JUN 17...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 23...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 20...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 09...	<50	<50	0	0	0	0	20	10	10	4	4	0

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 01...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	2	0	4	870	470	400	2	1	1	50	10	40
JAN 28...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	5	0	7	1000	830	170	0	0	0	80	60	20
APR 29...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	2	0	4	1300	750	550	2	2	0	390	290	100
JUN 17...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 23...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 20...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 09...	3	0	4	1000	580	420	6	5	1	470	310	160

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG)
OCT 01...	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	<.1	.0	<.1	3	2	1	0	0	0	0	0
JAN 28...	--	--	--	--	--	--	--	--	--	0	--
MAR 18...	<.1	.0	<.1	5	2	3	0	0	0	0	0
APR 29...	--	--	--	--	--	--	--	--	--	0	--
MAY 13...	.1	.0	.1	3	2	1	0	0	0	0	0
JUN 17...	--	--	--	--	--	--	--	--	--	--	--
JUL 23...	--	--	--	--	--	--	--	--	--	0	--
AUG 20...	--	--	--	--	--	--	--	--	--	--	--
SEP 09...	<.1	.0	<.1	3	3	0	0	0	0	0	0

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)
OCT 01...	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	0	10	0	10	--	--	--	--	--	--	--
JAN 28...	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	0	120	100	20	--	--	--	--	--	--	--
APR 29...	--	--	--	--	.6	.9	2.1	.6	2.1	.5	.06
MAY 13...	0	10	10	0	--	--	--	--	--	--	--
JUN 17...	--	--	--	--	<.7	.9	2.8	.7	2.7	.6	.05
JUL 23...	--	--	--	--	--	--	--	--	--	--	--
AUG 20...	--	--	--	--	--	--	--	--	--	--	--
SEP 09...	0	20	10	10	--	--	--	--	--	--	--

DATE	URANIUM DIS-SOLVED, EXTRAC-TION (UG/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	BIOMASS CHLORO-PHYLL RATIO PERI-PHYTON (UNITS)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPO-SURE (DAYS)
OCT 01...	--	8.7	--	--	.080	.080	.00	.010	.000	19
DEC 12...	--	--	8.5	.6	--	--	--	--	--	--
JAN 28...	--	12	--	--	.320	.240	95.2	.840	.730	46
MAR 18...	--	--	6.6	2.3	--	--	--	--	--	--
APR 29...	1.1	6.3	--	--	2.84	1.42	217	6.55	4.05	41
MAY 13...	--	--	7.5	.4	--	--	--	--	--	--
JUN 17...	.09	6.6	--	--	--	--	--	--	--	--
JUL 23...	--	13	--	--	--	--	--	--	--	--
AUG 20...	--	3.7	--	--	19.6	14.3	414	12.8	6.89	27
SEP 09...	--	--	5.0	.6	--	--	--	--	--	--

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

PHYTOPLANKTON ANALYSES, AUGUST TO SEPTEMBER 1979

DATE	AUG 1,79
TIME	1130
TOTAL CELLS/ML	190
DIVERSITY: DIVISION	0.0
.CLASS	0.0
..ORDER	0.0
...FAMILY	0.4
....GENUS	0.4

ORGANISM	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)		
.CHLOROPHYCEAE		
..CHLOROCOCCALES		
...OOCYSTACEAE		
....ANKISTRODESMUS	13	7
...SCENEDESMACEAE		
....SCENEDESMUS	180#	93

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO AUGUST 1980

DATE	DEC 12,79	MAR 18,80	MAY 13,80	JUN 17,80	JUL 23,80	AUG 20,80
TIME	1330	1030	1045	1350	1130	1120
TOTAL CELLS/ML	35	730	52	310	760	520
DIVERSITY: DIVISION	1.4	1.7	0.0	1.5	1.4	1.5
.CLASS	1.4	1.8	0.0	1.5	1.4	1.5
..ORDER	2.0	2.5	0.0	2.3	1.8	2.1
...FAMILY	2.0	3.3	0.0	2.4	2.0	2.1
....GENUS	2.2	3.4	0.0	2.4	2.5	2.1

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)												
.CHLOROPHYCEAE												
..CHLOROCOCCALES												
...MICRACTINIACEAE												
....GOLENKINIA	--	-	--	-	--	-	65#	21	--	-	--	-
...OOCYSTACEAE												
....ANKISTRODESMUS	5	14	14	2	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	55	8	--	-	--	-	--	-	--	-
...SCENEDESMACEAE												
....CRUCIGENIA	--	-	--	-	--	-	--	-	--	-	130#	25
....SCENEDESMUS	--	-	--	-	--	-	--	-	52	7	--	-
..VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	--	-	83	11	--	-	77#	25	26	3	130#	25
...VOLVOCACEAE												
....PANDORINA	--	-	170#	23	--	-	--	-	210#	27	--	-
CHRYSOPHYTA												
.BACILLARIOPHYCEAE												
..CENTRALES												
...COSCINODISCACEAE												
....CYCLOTELLA	10#	29	--	-	--	-	100#	33	52	7	190#	38
....MELOSIRA	--	-	110#	15	--	-	--	-	--	-	--	-
..PENNALES												
...ACHNANTHACEAE												
....ACHNANTHES	--	-	41	6	--	-	--	-	--	-	--	-
...GOMPHONEMATACEAE												
....GOMPHONEMA	--	-	28	4	--	-	--	-	--	-	13	2
...NAVICULACEAE												
....NAVICULA	5	14	41	6	--	-	13	4	26	3	--	-
....PLEUROSIGMA	5	14	--	-	--	-	--	-	--	-	--	-
...NITZSCHIACEAE												
....NITZSCHIA	--	-	41	6	--	-	13	4	13	2	--	-
...SURIRELLACEAE												
....SURIRELLA	--	-	14	2	--	-	--	-	--	-	--	-
.CHRYSOPHYCEAE												
..CHRYSOMONADALES												
...MALLOMONADACEAE												
....MALLOMONAS	--	-	14	2	--	-	--	-	--	-	--	-

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO AUGUST 1980

DATE TIME	DEC 12,79 1330		MAR 18,80 1030		MAY 13,80 1045		JUN 17,80 1350		JUL 23,80 1130		AUG 20,80 1120	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CRYPTOPHYTA (CRYPTOMONADS)												
.CRYPTOPHYCEAE												
..CRYPTOMONADALES												
...CRYPTOCHRYSIDACEAE												
....CHROOMONAS	--	-	14	2	--	-	--	-	--	-	--	-
...CRYPTOMONADACEAE												
....CRYPTOMONAS	--	-	--	-	--	-	26	8	--	-	13	2
CYANOPHYTA (BLUE-GREEN ALGAE)												
.CYANOPHYCEAE												
..CHROOCOCCALES												
...CHROOCOCCACEAE												
....AGMENELLUM	--	-	--	-	--	-	--	-	210#	27	--	-
....ANACYSTIS	10#	29	69	9	52#	100	--	-	180#	24	26	5
EUGLENOPHYTA (EUGLENOIDS)												
.EUGLENOPHYCEAE												
..EUGLENALES												
...EUGLENACEAE												
....EUGLENA	--	-	--	-	--	-	--	-	--	-	13	2
....TRACHELOMONAS	--	-	41	6	--	-	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)												
.DINOPHYCEAE												
..PERIDINIALES												
...GLENODINIACEAE												
....GLENODINIUM	--	-	--	-	--	-	13	4	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	66	58	94	93	67	65	85	80	68	67	88	85
2	62	57	92	87	66	65	85	82	69	68	88	86
3	64	60	93	87	67	65	88	84	70	68	89	86
4	65	60	106	94	67	65	89	86	69	67	89	86
5	64	63	114	92	68	66	88	86	68	66	87	85
6	68	64	103	78	68	65	88	84	71	68	88	85
7	74	69	78	76	73	65	87	84	75	71	85	82
8	73	71	77	76	76	73	84	77	76	74	89	80
9	86	72	76	71	77	76	81	74	76	74	79	73
10	95	84	72	68	77	76	85	82	79	76	78	73
11	98	91	68	66	78	75	84	78	80	77	76	72
12	91	82	67	65	79	73	82	79	87	77	73	72
13	81	79	71	62	73	69	83	80	87	80	75	73
14	82	80	89	73	71	68	90	81	83	76	75	72
15	82	82	77	73	75	71	89	83	76	75	75	70
16	83	81	75	71	78	76	88	76	77	75	73	70
17	81	79	71	70	79	77	82	77	79	77	70	64
18	80	78	70	67	78	76	82	76	79	76	63	61
19	83	80	68	67	79	76	80	78	81	77	62	60
20	82	81	68	67	81	78	77	72	86	81	63	58
21	88	82	69	68	83	81	82	70	91	86	67	62
22	85	82	70	68	83	83	73	69	93	91	69	66
23	89	85	71	69	83	82	72	69	91	88	71	62
24	94	89	73	71	85	83	71	69	89	84	61	59
25	94	91	73	72	84	83	71	67	85	83	62	58
26	99	93	77	72	90	85	68	67	83	79	58	57
27	100	97	77	73	92	89	70	67	81	79	59	57
28	103	97	76	71	89	84	68	64	83	81	64	59
29	108	104	77	59	85	83	67	64	84	83	63	59
30	109	99	64	58	87	82	67	66	---	---	62	57
31	98	94	---	---	81	78	68	66	---	---	59	57
MONTH	109	57	114	58	92	65	90	64	93	66	89	57
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	59	57	76	74	78	70	65	57	110	100	83	80
2	58	56	77	71	81	73	73	61	100	90	86	81
3	56	56	70	59	81	74	72	68	90	84	87	82
4	59	56	60	59	81	73	70	66	93	84	85	80
5	58	58	66	59	78	71	70	65	104	92	82	78
6	59	58	69	66	77	68	71	66	128	105	85	78
7	61	58	69	67	76	69	71	67	137	129	88	83
8	64	61	78	70	83	74	71	67	135	123	92	82
9	65	63	81	78	87	81	73	69	126	115	83	75
10	67	64	85	82	89	82	73	69	115	107	91	74
11	70	66	86	84	90	80	74	70	109	104	106	90
12	71	68	87	85	86	78	76	60	104	99	111	102
13	76	71	90	87	86	79	74	69	100	97	108	103
14	79	76	91	88	88	80	76	67	100	94	106	102
15	89	78	91	87	86	78	78	72	100	95	105	100
16	83	59	92	86	87	77	75	69	102	97	102	94
17	67	59	98	91	88	80	72	69	106	99	101	93
18	67	63	99	95	86	84	80	72	108	102	102	94
19	68	64	99	98	97	86	88	79	102	93	104	96
20	68	65	105	95	100	90	91	87	99	92	109	103
21	67	65	105	95	97	90	89	85	105	99	119	106
22	67	66	104	97	102	95	92	85	99	87	137	117
23	69	66	136	103	109	101	99	91	90	85	136	124
24	70	68	137	113	108	105	102	97	84	77	144	127
25	71	69	115	94	109	106	105	99	76	64	160	143
26	73	70	107	90	105	101	112	101	68	62	171	157
27	74	71	96	87	108	86	117	109	77	66	174	166
28	75	74	99	84	83	68	131	113	83	74	167	160
29	75	72	88	73	131	70	127	118	84	78	161	158
30	76	73	79	70	69	59	120	116	82	77	158	145
31	---	---	77	69	---	---	117	110	83	79	---	---
MONTH	89	56	137	59	131	59	131	57	137	62	174	74
YEAR	174	56										

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.5	21.5	17.5	16.5	13.0	12.0	8.5	8.0	7.0	6.5	10.0	8.0
2	22.0	21.5	17.5	17.5	12.0	10.5	8.5	7.5	6.5	5.5	8.5	6.0
3	22.5	21.5	17.5	17.5	10.5	9.5	8.0	7.0	6.0	5.0	6.0	5.5
4	22.5	21.5	17.5	15.5	9.5	8.5	7.5	7.0	5.0	4.5	6.0	5.5
5	22.0	21.5	16.0	15.0	8.5	8.0	7.5	7.0	4.5	3.5	5.5	5.5
6	21.5	21.0	15.5	14.5	8.0	7.5	7.0	7.0	4.0	3.0	5.5	5.0
7	21.5	21.0	14.5	14.0	7.5	7.5	7.0	6.5	3.5	3.0	5.0	4.5
8	21.0	20.0	14.0	13.0	7.5	7.5	7.0	6.5	3.5	3.0	5.5	5.0
9	20.0	19.5	13.5	13.0	7.5	7.0	7.0	7.0	3.0	3.0	6.5	5.5
10	19.5	19.0	13.5	13.0	7.5	6.5	7.0	6.5	3.5	3.0	7.5	6.5
11	18.5	18.0	14.0	13.5	7.5	7.0	7.0	6.5	3.5	3.0	9.0	7.5
12	18.0	17.5	13.5	13.5	8.0	7.0	7.0	7.0	4.0	3.0	9.5	9.0
13	18.0	17.5	14.0	13.0	8.0	7.5	7.5	7.0	3.5	3.5	10.0	9.0
14	18.0	17.5	14.0	12.5	8.5	8.0	8.0	7.0	4.0	3.0	10.0	9.5
15	17.5	17.0	12.5	12.0	8.0	7.5	7.0	7.0	4.5	3.5	10.0	9.5
16	17.5	17.0	12.0	11.5	8.0	7.5	7.5	7.0	5.0	4.0	9.5	9.0
17	17.5	17.0	11.5	11.0	8.5	8.0	7.5	7.0	5.5	4.5	9.0	8.5
18	17.0	16.5	11.0	11.0	8.0	8.0	7.5	7.0	5.5	4.5	9.5	9.0
19	17.0	16.5	11.0	10.5	8.5	7.5	8.0	7.5	6.0	5.0	10.5	9.5
20	17.5	16.5	11.0	10.5	8.0	7.5	8.0	7.5	6.0	5.5	12.0	10.5
21	18.0	17.0	11.0	10.5	8.0	7.5	8.5	7.5	6.5	6.0	12.0	11.5
22	18.0	17.5	11.5	11.0	8.0	7.5	8.5	7.5	7.0	6.5	12.0	11.5
23	18.5	18.0	12.0	11.0	8.0	7.5	8.5	8.5	8.0	7.0	12.5	11.5
24	18.0	18.0	12.0	11.5	8.5	8.0	8.5	8.0	9.5	8.5	12.0	11.5
25	18.0	17.5	12.5	12.0	8.5	8.0	8.5	8.0	10.0	9.5	12.5	11.5
26	17.5	17.5	13.5	12.5	8.5	8.0	8.5	8.0	10.0	9.5	12.0	12.0
27	17.5	16.5	14.0	13.0	8.5	7.5	8.5	8.0	10.0	9.5	12.5	11.5
28	17.0	16.0	15.0	14.0	8.0	7.5	8.5	8.0	10.5	10.0	12.5	11.5
29	17.0	16.0	15.0	14.0	8.5	7.5	8.0	7.5	10.5	10.0	12.0	11.5
30	17.0	16.0	14.5	12.5	8.5	8.0	8.0	7.5	---	---	12.5	12.0
31	17.0	16.5	---	---	8.5	8.0	7.5	7.0	---	---	13.0	12.5
MONTH	22.5	16.0	17.5	10.5	13.0	6.5	8.5	6.5	10.5	3.0	13.0	4.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.5	13.0	20.5	19.5	25.5	23.5	23.5	22.0	29.5	28.5	28.0	26.5
2	13.5	13.0	19.5	19.5	26.0	23.5	24.0	23.0	29.5	28.0	28.5	27.0
3	14.5	13.5	19.5	19.0	27.0	24.5	25.0	24.0	30.0	29.0	27.5	27.0
4	15.0	14.0	19.5	19.0	27.0	25.0	25.0	24.5	29.5	28.5	27.5	27.0
5	15.0	15.0	19.5	19.0	27.5	25.0	25.5	24.5	30.0	29.0	28.0	27.0
6	15.5	15.0	19.5	19.0	27.5	25.0	26.5	25.5	30.5	29.0	27.5	27.0
7	15.5	15.5	20.5	19.5	27.5	25.5	27.0	26.0	30.5	29.5	28.0	27.0
8	15.5	15.5	20.5	20.0	28.0	26.0	27.5	26.5	30.5	29.0	27.5	27.0
9	17.0	15.5	20.5	20.0	27.5	25.5	27.5	26.5	30.5	29.5	27.5	26.5
10	17.0	16.0	20.5	19.5	27.5	25.5	28.0	27.0	30.0	29.0	27.0	26.5
11	17.0	16.5	21.0	20.0	28.0	26.0	28.5	27.0	30.0	29.0	27.0	26.5
12	17.0	16.5	21.5	20.5	27.5	26.0	28.5	27.0	31.0	29.0	27.0	26.5
13	17.5	17.0	23.0	21.0	27.0	25.5	29.0	27.5	30.5	29.5	27.0	26.0
14	18.0	17.5	23.0	22.0	27.5	25.5	29.0	27.5	31.0	30.0	27.0	26.0
15	18.0	17.5	23.0	22.5	28.5	25.5	29.0	27.5	31.0	30.0	27.5	26.0
16	17.5	17.0	23.5	23.0	28.5	26.0	29.0	27.5	31.0	29.5	26.5	26.0
17	17.5	16.0	23.5	23.0	27.0	26.0	29.0	27.5	30.0	29.5	26.5	26.0
18	16.0	15.0	23.5	23.0	27.0	26.5	29.0	27.5	30.0	29.0	27.0	25.5
19	15.5	15.0	24.0	23.0	27.0	26.0	29.0	28.0	29.0	28.5	27.0	26.5
20	15.5	15.0	23.5	23.0	27.0	25.0	29.0	28.0	29.0	28.0	26.5	25.5
21	16.0	15.5	23.5	22.0	25.0	24.5	29.0	28.0	28.5	28.0	27.0	25.5
22	17.0	15.5	23.5	22.5	25.0	24.5	29.0	28.0	28.0	27.5	27.0	26.0
23	18.0	17.0	23.5	22.5	25.0	24.5	29.0	28.0	28.0	26.5	27.0	26.0
24	18.5	17.5	23.5	22.0	25.0	24.5	28.5	27.5	27.5	27.0	27.0	26.5
25	19.5	18.5	22.0	21.0	25.0	24.5	28.5	27.5	27.5	27.0	27.0	26.0
26	19.5	19.5	22.0	21.0	24.5	24.0	28.5	27.5	27.5	26.5	27.0	26.5
27	20.5	19.0	23.0	21.0	24.5	24.0	28.0	27.5	27.5	26.0	26.5	25.5
28	20.5	19.5	23.5	21.0	24.0	23.0	28.5	27.5	27.5	26.5	25.5	24.5
29	20.5	19.5	24.5	22.0	23.0	22.0	29.0	27.5	27.5	26.5	24.5	24.0
30	20.5	20.0	25.0	23.0	23.0	22.0	29.0	27.5	27.5	26.5	24.0	22.5
31	---	---	25.0	23.0	---	---	29.5	28.0	27.5	26.5	---	---
MONTH	20.5	13.0	25.0	19.0	28.5	22.0	29.5	22.0	31.0	26.0	28.5	22.5
YEAR	31.0	3.0										

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
01...	1030	10500	52	1470	99
DEC					
12...	1330	3860	10	104	77
JAN					
28...	0900	13000	25	877	95
MAR					
18...	1030	10100	27	736	98
APR					
29...	1230	4760	14	180	94
MAY					
13...	1045	1670	16	72	61
JUN					
17...	1350	773	8	17	81
JUL					
23...	1130	1350	8	29	83
AUG					
20...	1120	920	12	30	81
SEP					
09...	1025	920	8	20	87

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	PH LAB (UNITS)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	FIELD ALKA-LINITY (MG/L AS CACO3)	LAB ALKA-LINITY (MG/L AS CACO3)
OCT												
04...	1400	6850	70	6.1	--	23.0	6.1	36	1.4	180	--	14
NOV												
07...	1330	11100	70	5.9	--	16.0	6.3	45	1.7	320	19	--
DEC												
04...	1225	5290	50	6.2	--	10.0	7.6	30	.7	150	13	--
JAN												
10...	1300	4460	60	6.1	--	8.0	10.4	14	.6	260	23	--
FEB												
14...	1230	10600	50	6.8	--	6.0	9.8	25	1.8	50	28	--
MAR												
27...	1200	21100	50	5.4	--	10.0	12.1	26	2.2	90	11	--
APR												
22...	1400	5260	60	5.9	--	11.0	5.6	22	1.2	660	20	--
MAY												
14...	1430	1600	100	6.3	--	15.0	9.1	16	.6	10	21	--
JUN												
30...	1300	12100	80	5.9	--	23.0	7.8	27	1.7	320	18	--
JUL												
29...	1335	1280	140	6.7	--	29.0	7.2	40	1.0	2500	28	--
AUG												
20...	1200	957	110	--	--	27.0	5.8	16	1.5	<10	--	--
SEP												
24...	1428	995	120	--	6.3	30.0	7.3	18	2.3	160	--	16

02106000 LITTLE COHARIE CREEK NEAR ROSEBORO, N. C.

LOCATION.--Lat 34°57'13", long 78°29'17", Sampson County, Hydrologic Unit 03030006, on downstream end of center pier of bridge on State Highway 24, 1.2 mi (1.9 km) east of Roseboro, and 1.5 mi (2.4 km) upstream from Bear-skin Swamp.

DRAINAGE AREA.--96.4 mi² (250 km²).

PERIOD OF RECORD.--January 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 80.52 ft (24.542 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Jan. 12, 1951, nonrecording gage at same site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--30 years, 117 ft³/s (3.313 m³/s), 16.48 in/yr (419 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,400 ft³/s (96.3 m³/s) Oct. 7, 1964, gage height, 9.97 ft (3.039 m); minimum, 0.1 ft³/s (0.003 m³/s) Sept. 13, 14, 27, Oct. 1-11, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD..--Flood in 1924 reached a stage of 11.6 ft (3.54 m), from information by North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 854 ft³/s (24.2 m³/s) Oct. 2, gage height, 7.49 ft (2.283 m); minimum, 0.69 ft³/s (0.020 m³/s) Sept. 3, gage height, 0.91 ft (0.27 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	674	45	291	94	159	117	407	183	20	42	34	4.5
2	806	44	260	92	150	121	396	200	19	25	22	5.7
3	716	52	229	89	142	119	369	158	16	19	17	.88
4	520	75	199	85	131	125	319	94	14	18	14	1.7
5	409	90	177	100	118	145	269	62	13	42	12	4.4
6	335	95	167	94	129	188	231	51	11	54	9.7	17
7	278	83	183	93	145	225	200	44	14	44	8.4	24
8	244	69	182	100	158	248	176	40	18	32	8.8	20
9	203	64	180	140	169	278	156	38	16	24	7.2	13
10	173	61	182	157	222	289	139	36	15	24	6.4	9.5
11	133	84	179	167	258	272	124	34	12	40	6.1	8.1
12	106	183	165	194	258	244	107	32	10	52	5.8	7.3
13	92	245	151	207	271	267	100	30	9.1	66	9.0	6.3
14	86	377	158	209	269	301	149	28	8.2	46	9.7	5.6
15	85	448	155	212	239	293	198	27	7.7	28	7.4	5.4
16	84	403	161	207	221	304	219	26	7.1	20	5.9	5.1
17	78	340	166	191	215	297	227	24	7.7	16	5.0	5.1
18	70	289	165	178	202	384	230	24	11	13	4.3	6.6
19	64	254	156	181	184	424	199	26	29	11	4.3	10
20	59	222	144	175	173	400	161	48	34	10	4.8	15
21	56	195	132	170	160	485	125	102	30	8.8	4.9	15
22	53	173	120	174	148	424	99	75	21	7.6	4.7	14
23	52	155	112	188	142	362	84	52	15	33	4.9	11
24	64	141	107	196	135	320	72	56	12	100	5.2	18
25	55	129	116	190	125	298	61	52	14	68	4.0	19
26	53	181	121	188	129	263	52	58	37	77	3.3	17
27	54	226	120	191	134	233	47	43	65	69	2.7	16
28	48	244	118	192	131	214	82	34	85	37	2.3	13
29	48	275	109	179	127	273	120	29	106	50	2.0	14
30	48	308	99	165	---	302	144	25	125	69	1.6	31
31	47	---	104	161	---	369	---	22	---	57	1.4	---
TOTAL	5793	5550	4908	4959	5044	8584	5262	1753	801.8	1202.4	238.8	343.18
MEAN	187	185	158	160	174	277	175	56.5	26.7	38.8	7.70	11.4
MAX	806	448	291	212	271	485	407	200	125	100	34	31
MIN	47	44	99	85	118	117	47	22	7.1	7.6	1.4	.88
CFSM	1.94	1.92	1.64	1.66	1.81	2.87	1.82	.59	.28	.40	.08	.12
IN.	2.24	2.14	1.89	1.91	1.95	3.31	2.03	.68	.31	.46	.09	.13

CAL YR 1979 TOTAL 56316.90 MEAN 154 MAX 1400 MIN 2.9 CFSM 1.60 IN 21.73
WTR YR 1980 TOTAL 44439.18 MEAN 121 MAX 806 MIN .88 CFSM 1.26 IN 17.15

02106500 BLACK RIVER NEAR TOMAHAWK, N. C.

LOCATION.--Lat 34°45'17", long 78°17'21", Sampson County, Hydrologic Unit 03030006, on left bank 30 ft (9 m) upstream from bridge on State Highway 411, 0.2 mi (0.3 km) downstream from Clear Run Swamp, and 3.8 mi (6.1 km) northeast of Tomahawk.

DRAINAGE AREA.--680 mi² (1,760 km²).

PERIOD OF RECORD.--October 1951 to current year.

REVISED RECORDS.--WSP 1723: 1955(M).

GAGE.--Water-stage recorder. Datum of gage is 24.61 ft (7.501 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1951, to June 29, 1961, nonrecording gage on downstream side of bridge. June 30, 1961, to Sept. 30, 1964, water-stage recorder at present site at datum 25.00 ft (7.620 m) lower.

REMARKS.--Records good. Suspended sediment records for the current year are published on page 418 of this report.

AVERAGE DISCHARGE.--29 years, 792 ft³/s (22.43 m³/s), 15.82 in/yr (402 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft³/s (317 m³/s) Oct. 9, 1964, gage height, 21.14 ft (6.443 m); minimum, 8.5 ft³/s (0.24 m³/s) Oct. 13, 1954, gage height, 0.59 ft (0.180 m), present site and datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1928 reached a stage of 22.0 ft (6.71 m), present datum, discharge, 14,500 ft³/s (411 m³/s) and floods in 1945 and 1948 reached a stage of 17.6 ft (5.36 m), present datum, discharge, 5,420 ft³/s (153 m³/s), from information furnished by North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,520 ft³/s (99.7 m³/s) Apr. 2, gage height, 15.01 ft (4.575 m); minimum, 28 ft³/s (0.79 m³/s) Sept. 3, 4; minimum gage height, 1.19 ft (0.363 m), Sept. 2-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1880	297	1060	581	1060	789	3060	887	264	402	292	30
2	2700	289	1010	559	1050	789	3450	892	229	397	318	29
3	3150	291	974	526	997	753	3450	817	201	349	297	28
4	3080	320	952	501	916	746	3160	751	177	276	188	30
5	2850	338	922	545	840	847	2800	670	158	416	135	113
6	2560	345	886	651	799	1060	2440	593	145	432	113	240
7	2260	355	970	648	797	1320	2130	478	144	489	95	306
8	1960	363	1060	619	825	1510	1870	393	357	555	90	278
9	1690	364	1030	779	876	1660	1670	346	524	511	94	204
10	1410	366	948	984	1050	1760	1490	314	475	385	86	133
11	1120	399	873	1070	1320	1830	1300	292	407	344	87	113
12	927	807	817	1150	1490	1800	1110	272	292	550	90	92
13	779	1070	778	1220	1610	1800	971	255	206	654	80	73
14	637	1120	756	1290	1700	1850	963	235	158	691	84	64
15	555	1090	740	1330	1750	1920	1180	218	138	648	72	58
16	515	1040	727	1340	1720	1990	1350	204	127	435	66	52
17	494	1010	725	1300	1630	2030	1430	191	120	302	60	49
18	475	1020	709	1220	1520	2060	1460	239	138	208	54	47
19	453	1070	690	1200	1420	2050	1450	373	222	162	51	62
20	425	1110	677	1240	1310	2080	1380	412	305	138	60	121
21	406	1080	657	1250	1190	2250	1280	784	314	122	106	170
22	377	995	627	1180	1080	2440	1170	972	294	109	90	116
23	357	879	602	1150	993	2530	990	946	216	97	68	87
24	394	764	577	1250	949	2470	796	822	156	103	57	85
25	452	666	611	1340	909	2330	672	942	142	359	50	137
26	410	709	698	1360	859	2130	588	1070	232	471	46	117
27	369	993	677	1330	829	1940	525	1090	373	378	41	108
28	349	1130	633	1270	817	1750	521	971	404	375	38	97
29	335	1150	593	1200	805	1820	702	631	390	411	35	107
30	319	1110	567	1130	---	2100	829	415	389	441	34	147
31	309	---	569	1070	---	2550	---	317	---	339	33	---
TOTAL	33997	22540	24115	32283	33111	54954	46187	17792	7697	11549	3010	3293
MEAN	1097	751	778	1041	1142	1773	1540	574	257	373	97.1	110
MAX	3150	1150	1060	1360	1750	2550	3450	1090	524	691	318	306
MIN	309	289	567	501	797	746	521	191	120	97	33	28
CFSM	1.61	1.10	1.14	1.53	1.68	2.61	2.27	.84	.38	.55	.14	.16
IN.	1.86	1.23	1.32	1.77	1.81	3.01	2.53	.97	.42	.63	.16	.18

CAL YR 1979 TOTAL 348998 MEAN 956 MAX 6110 MIN 55 CFSM 1.41 IN 19.09
WTR YR 1980 TOTAL 290528 MEAN 794 MAX 3450 MIN 28 CFSM 1.17 IN 15.89

02106648 BLACK RIVER AT SECONDARY ROAD 1722 NEAR DUNN, N. C.

LOCATION.--Lat 35°20'52", long 78°37'28", Harnett County, Hydrologic Unit 03030006, at bridge on Secondary Road 1722 and 3.0 mi (4.8 km) north-northwest of Dunn.

DRAINAGE AREA.--38 mi² (98 km²).

PERIOD OF RECORD.--Water years 1977 to current year.

REMARKS.--Station operated to define the effects of channelization on stream quantity and quality in the Black River basin.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)
OCT											
10...	1100	17	58	5.6	16.0	6.7	130	52	110	.0	.0
24...	0920	9.8	62	5.6	14.0	5.4	270	180	230	.0	.0
31...	1055	6.5	61	6.2	14.0	6.7	--	--	--	.0	.0
NOV											
29...	1215	220	49	5.7	11.0	7.5	--	--	--	.0	.0
DEC											
12...	0915	50	54	6.1	6.0	9.3	270	88	K150	.0	.0
JAN											
21...	1230	86	54	6.6	12.5	11.3	80	K52	130	.0	.0
FEB											
13...	1100	98	57	7.2	2.0	12.7	100	K52	120	.0	.0
MAR											
11...	0830	80	53	6.8	11.0	8.4	150	K60	80	.0	.0
27...	1230	92	54	6.6	13.0	12.0	--	84	K48	.0	.0
APR											
15...	1030	120	50	6.0	15.0	7.1	K1500	K1400	890	.0	.0
30...	1050	65	55	5.7	13.0	6.4	--	390	350	.0	.0
JUN											
05...	1200	.00	80	5.6	22.5	.6	--	--	--	.0	.0

DATE	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
OCT											
10...	6	0	5	24	76	.10	3.49	.02	.01	.03	.05
24...	11	0	9	44	66	.09	1.75	.00	.01	.00	.00
31...	11	0	9	11	74	.10	1.30	.01	.00	.01	.01
NOV											
29...	6	0	5	19	57	.08	33.9	.00	.00	.00	.11
DEC											
12...	5	0	4	6.4	52	.07	7.02	.02	.00	.02	.03
JAN											
21...	--	0	*14	--	47	.06	10.9	.10	.01	.11	.02
FEB											
13...	5	0	4	.5	46	.06	12.2	.33	.01	.34	--
MAR											
11...	6	0	5	1.5	50	.07	10.8	.15	.01	.16	.03
27...	9	0	7	3.6	46	.06	11.4	.12	.00	.12	.02
APR											
15...	9	0	7	14	64	.09	20.7	.12	.01	.13	.09
30...	7	0	6	22	64	.09	11.2	.01	.01	.02	.01
JUN											
05...	22	0	18	39	71	.10	.00	--	--	--	--

K Results based on colony count outside the acceptable range (non-ideal colony count).
* Lab alkalinity.

02106648 BLACK RIVER AT SECONDARY ROAD 1722 NEAR DUNN, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHOPHOSPHATE TOTAL (MG/L AS PO4)	PHOSPHORUS, TOTAL (MG/L AS PO4)	PHOSPHORUS, ORTHOPHOSPHATE TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT										
10...	.06	.67	.72	.75	3.3	.050	.03	.15	.01	16
24...	.00	1.0	1.0	1.0	4.4	.050	.00	.15	.00	--
31...	.01	1.4	1.4	1.4	6.2	.030	.03	.09	.01	16
NOV										
29...	.13	.70	.81	.81	3.6	.050	.09	.15	.03	15
DEC										
12...	.04	.73	.76	.78	3.5	.030	.00	.09	.00	7.3
JAN										
21...	.02	.81	.83	.94	4.2	.070	.12	.21	.04	9.0
FEB										
13...	--	--	.31	.65	2.9	.020	.00	.06	.00	4.7
MAR										
11...	.04	.25	.28	.44	1.9	.020	.06	.06	.02	8.8
27...	.02	.50	.52	.64	2.8	.050	.03	.15	.01	6.8
APR										
15...	.11	.65	.74	.87	3.9	.080	.12	.25	.04	14
30...	.01	.71	.72	.74	3.3	.100	.03	.31	.01	16
JUN										
05...	--	--	--	--	--	.110	.12	.34	.04	15

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)
OCT				
10...	1100	17	11	.50
24...	0920	9.8	6	.16
31...	1055	6.5	34	.60
NOV				
29...	1215	220	7	4.2
DEC				
12...	0915	50	3	.40
JAN				
21...	1230	86	5	1.2
FEB				
13...	1100	98	2	.53
MAR				
11...	0830	80	3	.65
27...	1230	92	8	2.0
APR				
15...	1030	120	4	1.3
30...	1050	65	11	1.9
JUN				
05...	1200	.00	12	.00

02106651 BLACK RIVER NEAR ERWIN, N. C.

LOCATION.--Lat 35°18'44", long 78°38'44", Harnett County, Hydrologic Unit 03030006, at bridge on Secondary Road 1735, 1.5 mi (2.4 km) below Southern Railway and 2.0 mi (3.2 km) southeast of Erwin.

DRAINAGE AREA.--41 mi² (106 km²).

PERIOD OF RECORD.--Water years 1977 to current year.

REMARKS.--Station operated to define the effects of channelization on stream quantity and quality in the Black River basin. During period 1977-78, water-quality data was published as Black River near Dunn (station 02106681).

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)
OCT										
10...	1145	53	5.3	16.0	7.3	400	150	320	.0	.0
24...	1020	61	5.7	15.0	7.3	K920	K690	1400	.0	.0
31...	1155	61	6.2	16.0	8.6	--	--	--	.0	.0
NOV										
29...	1300	65	5.9	12.0	9.1	--	--	--	.0	.0
DEC										
12...	1000	55	6.2	7.5	10.4	170	92	190	.0	.0
JAN										
21...	1430	47	6.9	10.5	11.4	160	K40	K44	.0	.0
FEB										
13...	1145	55	7.0	3.0	13.2	140	K44	120	.0	.0
MAR										
11...	0915	55	6.8	11.0	9.5	K100	80	K32	.0	.0
27...	1430	55	6.6	14.5	10.4	--	K36	K24	.0	.0
APR										
15...	1115	53	6.0	16.0	8.0	K1400	K1200	760	.0	.0
30...	1145	52	5.9	14.0	8.3	--	550	570	.0	.0
JUN										
05...	1400	75	6.1	--	8.7	--	--	--	.0	.0

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)
OCT										
10...	4	0	3	32	76	.10	.00	.05	.04	.13
24...	9	0	7	29	62	.08	.00	.03	.01	.57
31...	8	0	7	8.1	72	.10	.01	.01	.02	.01
NOV										
29...	7	0	6	14	58	.08	.01	.00	.01	.06
DEC										
12...	5	0	4	5.0	50	.07	.01	.00	.01	.02
JAN										
21...	--	0	*6	--	47	.06	.11	.02	.13	.01
FEB										
13...	5	0	4	.8	43	.06	.35	.02	.37	.01
MAR										
11...	6	0	5	1.5	50	.07	.15	.00	.15	.05
27...	8	0	7	3.2	54	.07	.14	.00	.14	.05
APR										
15...	9	0	7	14	62	.08	.16	.01	.17	.07
30...	4	0	3	8.1	62	.08	.04	.01	.05	.05
JUN										
05...	6	0	5	9.3	70	.10	.04	.00	.04	.04

K Results based on colony count outside the acceptable range (non-ideal colony count).
* Lab alkalinity.

02106651 BLACK RIVER NEAR ERWIN, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT										
10...	.16	1.7	1.8	1.8	8.1	.110	1.3	.34	.41	31
24...	.69	1.3	1.9	1.9	8.5	.090	.09	.28	.03	--
31...	.01	1.9	1.9	1.9	8.5	.040	.03	.12	.01	15
NOV										
29...	.07	.88	.94	.95	4.2	.050	.06	.15	.02	16
DEC										
12...	.02	.71	.73	.74	3.3	.030	.00	.09	.00	11
JAN										
21...	.01	.54	.55	.68	3.0	.030	.00	.09	.00	7.9
FEB										
13...	.01	.38	.39	.76	3.4	.020	.00	.06	.00	5.0
MAR										
11...	.06	.34	.39	.54	2.4	.020	.06	.06	.02	9.4
27...	.06	.35	.40	.54	2.4	.050	.03	.15	.01	9.1
APR										
15...	.08	.69	.76	.93	4.1	.090	.09	.28	.03	15
30...	.06	.67	.72	.77	3.4	.110	.06	.34	.02	16
JUN										
05...	.05	.57	.61	.65	2.9	.050	.06	.15	.02	14

DATE	TIME	SEDIMENT, SUSPENDED (MG/L)
OCT		
10...	1145	924
24...	1020	323
31...	1155	29
NOV		
29...	1300	206
DEC		
12...	1000	61
JAN		
21...	1430	14
FEB		
13...	1145	131
MAR		
11...	0915	53
27...	1430	13
APR		
15...	1115	74
30...	1145	45
JUN		
05...	1400	30

02106681 BLACK RIVER NEAR DUNN, N. C.

LOCATION.--Lat 35°17'03", long 78°38'21", Harnett County, Hydrologic Unit 03030006, at bridge 1.5 mi (2.4 km) below Popes Pond and 2.3 mi (3.7 km) southwest of Dunn.

DRAINAGE AREA.--49 mi² (127 km²).

PERIOD OF RECORD.--Water years 1977 to current year.

REMARKS.--Station operated to define the effects of channelization on stream quantity and quality in the Black River basin.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
10...	1230	26	21	1.5
24...	1115	13	30	1.1
31...	1315	7.2	36	.70
NOV				
29...	1415	217	288	169
DEC				
12...	1100	56	25	3.8
FEB				
13...	1230	115	51	16
MAR				
11...	1005	96	28	7.3
27...	1545	200	16	8.6
APR				
15...	1200	145	132	52
17...	1515	174	109	51
30...	1230	72	46	8.9
JUN				
05...	1500	1.4	23	.09

02107000 SOUTH RIVER NEAR PARKERSBURG, N. C.

LOCATION.--Lat 34°48'45", long 78°27'26", Bladen County, Hydrologic Unit 03030006, near center of span on downstream side of bridge on Secondary Road 1503, 1.9 mi (3.1 km) southwest of Parkersburg, and 2.1 mi (3.4 km) upstream from Cypress Creek.

DRAINAGE AREA.--376 mi² (974 km²), revised.

PERIOD OF RECORD.--October 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 50.38 ft (15.356 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 13, 1961, nonrecording gage at present site at datum 50.00 ft (15.240 m) lower.

REMARKS.--Records good.

AVERAGE DISCHARGE.--29 years, 426 ft³/s (12.06 m³/s), 15.39 in/yr (391 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,900 ft³/s (167 m³/s) Oct. 10, 1964, gage height, 14.32 ft (4.365 m); minimum, 0.1 ft³/s (0.003 m³/s) Oct. 3-6, 11-14, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1918 or 1928 reached a stage of 15.88 ft (4.84 m), present datum, from highwater mark witnessed by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,460 ft³/s (41.3 m³/s) Oct. 1, gage height, 10.59 ft (3.228 m); minimum, 1.1 ft³/s (0.031 m³/s) Sept. 4; minimum gage height, 1.93 ft (0.588 m) Sept. 3, 4, 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1390	125	708	332	647	424	1270	375	112	100	30	1.4
2	1330	121	742	324	630	426	1270	441	90	85	25	1.3
3	1100	121	766	320	610	414	1250	480	74	77	21	1.2
4	992	126	781	320	590	415	1200	469	63	73	18	1.1
5	997	133	771	333	569	449	1140	434	53	84	15	1.2
6	1020	145	755	341	542	495	1070	402	45	97	13	1.7
7	1020	161	760	339	513	546	989	364	40	124	12	1.6
8	988	174	752	346	496	597	909	322	36	144	10	1.6
9	917	187	724	389	493	652	829	283	31	131	8.5	2.8
10	816	199	680	420	549	700	737	244	27	116	7.6	9.1
11	700	231	646	439	608	756	653	204	24	115	6.6	10
12	614	301	608	479	664	798	586	168	21	115	5.9	8.9
13	537	383	570	513	732	902	534	141	19	103	5.4	7.5
14	459	498	539	545	804	979	528	119	17	91	5.4	6.6
15	384	629	514	575	856	1040	544	104	15	86	5.0	5.5
16	319	737	501	602	881	1090	571	90	14	84	4.5	4.7
17	273	787	498	626	883	1110	608	78	14	80	4.3	4.0
18	241	801	497	646	852	1150	672	75	15	75	3.9	3.8
19	218	809	491	669	802	1180	794	81	26	68	4.0	5.6
20	199	802	481	676	742	1260	930	101	26	59	4.5	5.6
21	183	772	466	670	682	1340	982	171	24	50	4.0	5.3
22	172	724	447	663	636	1380	932	208	23	41	3.5	5.1
23	163	675	427	676	596	1390	830	215	22	36	3.5	6.8
24	168	634	405	680	564	1400	716	213	22	70	4.1	12
25	163	591	400	677	532	1390	625	202	25	149	3.8	11
26	156	592	392	675	505	1310	538	187	33	146	3.1	12
27	148	615	378	676	475	1200	445	201	58	83	2.6	15
28	141	624	364	671	451	1090	367	214	97	53	2.3	15
29	137	637	352	666	431	1180	316	209	122	44	2.0	15
30	133	663	344	659	---	1230	329	181	120	40	1.7	16
31	129	---	339	657	---	1270	---	143	---	37	1.5	---
TOTAL	16207	13997	17098	16604	18335	29563	23164	7119	1308	2656	241.7	198.4
MEAN	523	467	552	536	632	954	772	230	43.6	85.7	7.80	6.61
MAX	1390	809	781	680	883	1400	1270	480	122	149	30	16
MIN	129	121	339	320	431	414	316	75	14	36	1.5	1.1
CFSM	1.39	1.24	1.47	1.43	1.68	2.54	2.05	.61	.12	.23	.02	.02
IN.	1.60	1.38	1.69	1.64	1.81	2.92	2.29	.70	.13	.26	.02	.02

CAL YR 1979 TOTAL 177114.0 MEAN 485 MAX 2150 MIN 5.6 CFSM 1.29 IN 17.52
WTR YR 1980 TOTAL 146491.1 MEAN 400 MAX 1400 MIN 1.1 CFSM 1.06 IN 14.49

02108000 NORTHEAST CAPE FEAR RIVER NEAR CHINQUAPIN, N. C.

LOCATION (REVISED).--Lat 34°49'40", long 77°50'00", Duplin County, Hydrologic Unit 03030007, on right bank 540 ft (165 m) downstream from bridge on State Highway 41, 0.5 mi (0.8 km) downstream from Muddy Creek, and 1.2 mi (1.9 km) west of Chinquapin.

DRAINAGE AREA.--592 mi² (1,533 km²), revised.

PERIOD OF RECORD.--July 1940 to current year.

GAGE.--Water-stage recorder. Datum of gage is 17.28 ft (5.267 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good.

AVERAGE DISCHARGE.--40 years, 734 ft³/s (20.79 m³/s), 16.84 in/yr (428 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,400 ft³/s (578 m³/s) July 6, 1962, gage height, 20.16 ft (6.145 m); minimum, 5.3 ft³/s (0.15 m³/s) Oct. 10, 11, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1908 reached a stage of 22.6 ft (6.89 m) at old bridge site 1,000 ft (305 m) upstream from gage. Flood in 1928 reached a stage of 0.8 ft (0.2 m) lower than that in 1908, from information by North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,240 ft³/s (148 m³/s) Apr. 1, gage height, 13.56 ft (4.133 m); minimum, 22 ft³/s (0.62 m³/s) Sept. 3, gage height, 1.39 ft (0.424 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3280	154	876	414	941	649	5160	804	808	338	248	28
2	2960	144	800	396	914	647	5090	836	452	226	232	25
3	2380	140	702	378	828	591	4580	815	301	165	249	23
4	1880	147	620	363	744	559	3840	753	234	155	195	47
5	1450	150	552	403	690	669	2950	609	195	376	151	65
6	1180	149	533	465	659	997	2180	439	170	716	129	124
7	976	148	864	488	642	1590	1680	331	159	843	169	143
8	769	150	1070	496	668	2300	1350	268	191	741	161	153
9	582	156	1100	601	712	3170	1100	234	211	476	145	151
10	457	154	1010	756	1030	3790	929	213	186	319	109	146
11	380	165	904	865	1450	3890	810	193	142	715	93	124
12	334	333	797	1090	1720	3540	712	177	129	992	97	96
13	303	510	700	1270	1810	3170	651	164	118	932	211	78
14	275	594	627	1380	1780	3140	796	151	109	636	216	67
15	247	586	578	1420	1640	3310	1170	138	101	430	129	61
16	232	567	554	1420	1490	3170	1440	128	93	302	95	53
17	215	564	545	1330	1360	2770	1540	118	97	210	78	46
18	202	545	526	1210	1220	2460	1480	124	103	156	67	42
19	190	515	508	1170	1080	2440	1290	176	169	130	64	45
20	179	465	486	1190	942	2560	1100	283	230	114	65	56
21	174	398	460	1160	862	2680	915	467	210	102	65	63
22	166	344	434	1080	824	2720	760	591	172	94	81	61
23	159	310	415	1080	779	2570	619	657	146	110	96	55
24	179	286	402	1260	735	2270	507	1100	123	568	108	55
25	241	268	422	1400	699	1960	428	2060	139	657	96	68
26	264	447	472	1380	676	1730	367	3570	531	427	66	129
27	250	832	488	1290	662	1540	341	4260	919	274	54	203
28	222	1020	477	1190	646	1380	459	3990	798	350	46	220
29	200	995	457	1100	638	1810	585	3140	606	485	39	241
30	184	930	440	991	---	3190	715	2130	482	496	35	294
31	169	---	429	923	---	4570	---	1400	---	378	31	---
TOTAL	20679	12166	19248	29959	28841	71832	45544	30319	8324	12913	3620	2962
MEAN	667	406	621	966	995	2317	1518	978	277	417	117	98.7
MAX	3280	1020	1100	1420	1810	4570	5160	4260	919	992	249	294
MIN	159	140	402	363	638	559	341	118	93	94	31	23
CFSM	1.13	.69	1.05	1.63	1.68	3.91	2.56	1.65	.47	.70	.20	.17
IN.	1.30	.76	1.21	1.88	1.81	4.51	2.86	1.91	.52	.81	.23	.19

CAL YR 1979 TOTAL 323850 MEAN 887 MAX 5750 MIN 50 CFSM 1.50 IN 20.35
WTR YR 1980 TOTAL 286407 MEAN 783 MAX 5160 MIN 23 CFSM 1.32 IN 18.00

02108500 ROCKFISH CREEK NEAR WALLACE, N. C.

LOCATION.--Lat 34°44'32", long 78°02'22", Duplin County, Hydrologic Unit 03030007, on right bank at downstream side of bridge on State Highway 41, 1.5 mi (2.4 km) upstream from Doctors Creek, and 2.5 mi (4.0 km) west of Wallace.

DRAINAGE AREA.--69.3 mi² (179.5 km²), revised.

PERIOD OF RECORD.--July 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 29.36 ft (8.949 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1958, nonrecording gage at site 1.0 mi (1.6 km) downstream at different datum. Oct. 1, 1958, to June 1, 1960, nonrecording gage at present site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--25 years, 96.7 ft³/s (2.739 m³/s), 18.95 in/yr (481 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,540 ft³/s (157 m³/s) Nov. 7, 1977 gage height, 13.17 ft (4.014 m) from floodmarks; minimum daily, 0.4 ft³/s (0.011 m³/s) July 27-30, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1948 reached a stage of about 15.5 ft (4.72 m) at former site and datum, from information by local resident, discharge, 2,800 ft³/s (79.3 m³/s). A discharge of 0.04 ft³/s (0.001 m³/s) was measured on Sept. 8, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (19.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar 31	0100	*1140	32.3	*9.82	2.993

Minimum discharge, 1.9 ft³/s (0.054 m³/s) Aug. 30, gage height, 0.94 ft (0.287 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	11	38	30	112	40	735	53	14	11	8.8	2.7
2	87	11	29	28	106	40	477	46	12	9.4	7.6	3.0
3	61	11	25	25	90	40	316	32	11	8.6	6.3	2.5
4	37	13	22	24	71	54	227	23	11	26	5.9	2.6
5	30	12	20	39	60	95	178	18	9.5	80	5.5	3.6
6	27	12	56	46	57	228	136	16	9.2	69	5.5	3.4
7	25	10	238	41	61	484	102	16	47	45	7.0	2.7
8	21	11	223	38	71	510	78	13	89	17	7.5	3.1
9	18	9.8	185	56	86	467	72	12	65	13	5.6	2.5
10	17	10	146	75	193	386	67	12	31	15	4.3	2.3
11	16	15	93	85	312	304	62	12	18	88	3.9	2.8
12	17	60	65	116	343	230	52	11	15	116	4.7	3.7
13	16	77	53	134	278	369	44	10	12	60	8.9	3.5
14	15	76	48	144	207	533	50	11	11	20	11	2.5
15	14	60	43	143	162	483	80	12	10	14	6.7	2.4
16	14	37	41	126	127	351	77	11	9.8	10	4.8	3.9
17	14	25	42	106	109	247	73	11	12	9.1	4.6	3.0
18	14	21	40	88	93	387	53	12	20	8.0	4.0	2.7
19	13	18	35	114	79	419	41	27	36	7.8	4.4	4.0
20	13	18	32	132	69	356	36	47	32	7.0	5.5	6.9
21	12	16	30	134	64	329	33	81	20	6.6	6.1	7.9
22	12	15	30	110	64	292	29	94	15	6.5	5.6	5.8
23	13	14	29	110	61	243	26	130	12	8.4	4.8	4.8
24	17	13	28	156	71	202	22	159	11	23	3.8	5.1
25	21	14	36	177	67	191	20	204	14	13	2.8	11
26	20	51	42	175	60	189	18	132	31	9.7	2.7	9.3
27	16	101	42	139	53	174	17	89	28	7.7	3.4	6.0
28	14	98	34	121	47	147	26	44	19	9.1	2.8	4.2
29	13	95	29	114	42	692	39	27	13	12	2.6	5.3
30	12	64	28	101	---	995	54	21	11	15	2.2	10
31	12	---	30	92	---	1030	---	18	---	14	2.5	---
TOTAL	710	998.8	1832	3019	3215	10507	3240	1404	648.5	758.9	161.8	133.2
MEAN	22.9	33.3	59.1	97.4	111	339	108	45.3	21.6	24.5	5.22	4.44
MAX	87	101	238	177	343	1030	735	204	89	116	11	11
MIN	12	9.8	20	24	42	40	17	10	9.2	6.5	2.2	2.3
CFSM	.33	.48	.85	1.41	1.60	4.89	1.56	.65	.31	.35	.08	.06
IN.	.38	.54	.98	1.62	1.73	5.64	1.74	.75	.35	.41	.09	.07

CAL YR 1979 TOTAL 30788.6 MEAN 84.4 MAX 1100 MIN 4.5 CFSM 1.22 IN 16.53
WTR YR 1980 TOTAL 26628.2 MEAN 72.8 MAX 1030 MIN 2.2 CFSM 1.05 IN 14.29

02108548 LITTLE ROCKFISH CREEK AT WALLACE, N. C.

LOCATION.--Lat 34°44'02", long 77°59'03", Duplin County, Hydrologic Unit 03030007, on right bank, 0.4 mi (0.6 km) downstream from bridge on State Highway 41, 0.6 mi (1.0 km) east-southeast of Wallace, and 1.2 mi (1.9 km) upstream from mouth.

DRAINAGE AREA.--7.8 mi² (20.2 km²), approximately.

PERIOD OF RECORD.--September 1976 to current year.

REVISED RECORDS.--WRD NC-78-1: Drainage area.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 27.58 ft (8.406 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent.

EXTREMES FOR PERIOD OF PERIOD.--Maximum discharge, 336 ft³/s (9.52 m³/s) Nov. 6, 1977, gage height, 7.55 ft (2.301 m); no flow June 19, 22, Sept. 27-30, Oct. 10-28, Nov. 1-3, 7, 20-22, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 130 ft³/s (3.68 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar 7	0315	131	3.71	4.49	1.369	Mar 29	1115	*308	8.72	*7.15	2.179
Mar 13	1745	155	4.39	4.73	1.442	May 24	1545	217	6.15	5.73	1.747
Mar 18	0215	138	3.91	4.56	1.390						

Minimum discharge, 0.02 ft³/s (<0.001 m³/s) Aug. 26, 27, Sept. 9, 10, 12, gage height, 2.13 ft (0.649 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	.39	9.3	4.9	21	6.6	55	3.3	2.1	.46	1.0	.28
2	16	2.7	7.8	4.6	16	7.2	32	2.4	1.6	.46	.68	.14
3	10	1.7	6.7	4.2	12	7.3	22	1.9	1.2	4.3	.41	.05
4	7.1	1.3	6.1	5.4	9.9	11	17	1.6	.81	17	.75	.12
5	5.7	1.1	5.5	7.3	9.1	23	14	1.1	.55	29	.47	.09
6	4.6	.97	17	7.9	9.3	58	11	.90	.43	7.7	3.3	.90
7	3.5	.85	47	7.0	10	104	9.4	.78	20	3.1	.80	.10
8	2.7	.77	38	7.7	11	78	8.3	.99	14	1.4	.41	.12
9	2.0	.69	25	9.4	13	68	8.1	.60	6.1	1.1	.28	.03
10	1.6	.63	18	11	53	48	7.1	.42	3.1	7.0	.16	.13
11	1.4	19	14	14	54	36	5.7	.88	1.6	21	.14	.16
12	1.3	40	11	22	35	29	4.9	.32	.86	8.8	1.1	.04
13	1.1	29	10	21	26	106	4.5	.39	.53	3.6	.32	4.5
14	.92	18	9.7	20	20	89	8.4	.20	.33	2.0	.15	.29
15	.79	12	8.8	20	17	46	10	.21	.31	1.4	.12	.17
16	.70	9.5	8.4	17	14	31	6.8	.24	.89	1.0	.54	.06
17	.63	8.0	8.0	13	13	24	4.8	.22	5.1	.82	.30	.10
18	.57	6.9	7.1	15	11	80	3.8	5.2	9.8	.74	.16	.07
19	.53	5.8	6.4	22	9.6	62	3.2	3.2	9.9	.97	.17	.49
20	.47	5.1	5.9	21	9.3	37	2.7	11	3.1	.71	.14	.28
21	.41	4.5	5.3	16	9.0	37	2.3	19	1.5	.58	.09	.29
22	.37	4.1	5.1	13	8.5	35	2.0	7.6	.85	.49	.08	.16
23	1.2	3.7	4.8	24	9.6	22	1.7	21	.47	11	.12	.15
24	.73	3.3	5.7	29	11	18	1.4	69	.26	22	.21	.53
25	.75	3.4	8.3	23	11	24	1.1	79	2.7	6.2	.12	.25
26	.71	31	8.5	17	9.1	21	.84	31	8.5	2.5	.03	.08
27	.63	39	7.5	18	8.0	15	7.4	16	4.7	3.6	.03	.05
28	.58	24	6.4	18	7.3	16	10	9.2	2.0	2.8	.04	.26
29	.55	15	5.5	16	6.7	227	6.3	6.1	1.2	1.6	.04	2.5
30	.48	11	5.3	13	---	141	4.7	4.1	.53	1.0	.04	5.7
31	.43	---	5.1	18	---	127	---	2.9	---	.64	.15	---
TOTAL	91.45	303.40	337.2	459.4	453.4	1634.1	276.44	300.75	105.02	164.97	12.35	18.09
MEAN	2.95	10.1	10.9	14.8	15.6	52.7	9.21	9.70	3.50	5.32	.40	.60
MAX	23	40	47	29	54	227	55	79	20	29	3.3	5.7
MIN	.37	.39	4.8	4.2	6.7	6.6	.84	.20	.26	.46	.03	.03
CFSM	.38	1.30	1.40	1.90	2.00	6.76	1.18	1.24	.45	.68	.05	.08
IN.	.44	1.45	1.61	2.19	2.16	7.79	1.32	1.43	.50	.79	.06	.09

CAL YR 1979 TOTAL 4661.09 MEAN 12.8 MAX 224 MIN .07 CFSM 1.64 IN 22.23
WTR YR 1980 TOTAL 4156.57 MEAN 11.4 MAX 227 MIN .03 CFSM 1.46 IN 19.82

02109500 WACCAMAW RIVER AT FREELAND, N. C.

LOCATION.--Lat 34°05'43", long 78°32'55" (revised), Brunswick County, Hydrologic Unit 03040206, on left bank 150 ft downstream from New Britton Bridge on State Highway 130, 1 mi (2 km) southwest of Freeland, 7 mi (11 km) downstream from Juniper Creek, and 117 mi (188 km) upstream from mouth in Winyah Bay.

DRAINAGE AREA.--680 mi² (1,761 km²), revised.

PERIOD OF RECORD.--July 1939 to current year.

REVISED RECORDS.--WSP 1172: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 15.52 ft (4.730 m) National Geodetic Vertical Datum of 1929. Prior to July 15, 1943, nonrecording gage 150 ft (46 m) upstream at same datum. Auxiliary nonrecording gage 3.3 mi (5.3 km) downstream from base gage Oct. 7, 1949 to July 14, 1952. Since July 15, 1952 auxiliary water-stage recorder at same site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 418 of this report.

AVERAGE DISCHARGE.--41 years, 710 ft³/s (20.11 m³/s), 14.18 in/yr (360 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft³/s (289 m³/s) Sept. 25, 1955; maximum gage height, 16.63 ft (5.069 m) Sept. 26, 1955; minimum discharge, 0.1 ft³/s (0.003 m³/s) Aug. 30, Sept. 9, 10, 28, Oct. 4-14, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,140 ft³/s (146 m³/s) Apr. 4, gage height, 15.13 ft (4.612 m); minimum 11 ft³/s (0.31 m³/s) July 24, 25; minimum gage height, 1.17 ft (0.357 m) Aug. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1500	180	629	496	1520	770	3340	435	680	18	16	31
2	1790	162	624	487	1540	726	4080	409	612	15	16	27
3	1990	147	615	474	1540	675	4780	381	520	15	15	24
4	1950	135	599	462	1520	635	5100	354	420	24	15	23
5	1840	122	580	458	1480	632	5020	328	330	70	16	23
6	1700	114	585	457	1440	708	4640	294	261	67	17	21
7	1580	107	657	455	1400	851	4090	271	208	61	17	20
8	1470	100	771	451	1370	999	3540	241	165	52	20	19
9	1370	92	868	457	1350	1180	3060	222	129	40	25	19
10	1190	86	951	480	1380	1450	2650	204	101	33	23	19
11	1100	81	997	506	1440	1660	2320	188	78	29	21	18
12	1020	107	1020	549	1510	1860	2060	174	63	26	18	18
13	938	168	1020	604	1560	2300	1840	160	50	24	16	19
14	852	194	1020	656	1590	2810	1680	147	41	22	14	20
15	786	217	1010	724	1620	3280	1530	134	34	19	13	21
16	721	232	985	794	1650	3540	1400	118	29	17	13	22
17	657	234	960	856	1680	3670	1170	104	25	16	24	21
18	607	236	928	916	1680	3950	1060	100	24	15	39	20
19	553	233	887	991	1650	4300	955	144	25	14	47	21
20	503	231	841	1060	1600	4490	863	204	25	14	72	30
21	459	225	801	1130	1530	4630	790	285	36	13	99	36
22	418	214	760	1170	1450	4540	717	378	34	13	104	37
23	379	205	715	1260	1390	4230	666	369	28	12	97	41
24	350	198	672	1350	1280	3870	616	327	23	12	84	46
25	329	191	643	1370	1140	3570	567	329	23	12	73	61
26	314	258	617	1380	1070	3290	524	335	26	12	62	74
27	296	417	597	1400	998	3050	487	405	28	13	55	78
28	273	499	576	1420	912	2840	458	553	27	14	47	81
29	248	577	553	1440	830	2820	444	694	24	16	41	84
30	227	621	529	1460	---	2830	440	733	21	18	36	104
31	200	---	511	1500	---	2980	---	725	---	16	34	---
TOTAL	27610	6583	23521	27213	41120	79136	60887	9745	4090	742	1189	1078
MEAN	891	219	759	878	1418	2553	2030	314	136	23.9	38.4	35.9
MAX	1990	621	1020	1500	1680	4630	5100	733	680	70	104	104
MIN	200	81	511	451	830	632	440	100	21	12	13	18
CFSM	1.31	.32	1.12	1.29	2.09	3.75	2.99	.46	.20	.04	.06	.05
IN.	1.51	.36	1.29	1.49	2.25	4.33	3.33	.53	.22	.04	.07	.06

CAL YR 1979 TOTAL 360850 MEAN 989 MAX 6670 MIN 14 CFSM 1.45 IN 19.74
WTR YR 1980 TOTAL 282914 MEAN 773 MAX 5100 MIN 12 CFSM 1.14 IN 15.48

02111000 YADKIN RIVER AT PATTERSON, N. C.

LOCATION.--Lat 35°59'29", long 81°33'30", Caldwell County, Hydrologic Unit 03040101, on left bank 200 ft (61 m) upstream from bridge on State Highway 268, 0.4 mi (0.6 km) upstream from Warrior Creek, 0.5 mi (0.8 km) south of Patterson, 2 mi (3 km) downstream from Walnut Branch, and at mile 416 (670 km).

DRAINAGE AREA.--28.8 mi² (74.6 km²), revised.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1303.

REVISED RECORDS.--WSP 1303: 1940(m), 1947-48(M). WSP 1553: 1948(P).

GAGE.--Water-stage recorder. Datum of gage is 1,211.47 ft (369.256 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 9, 1940 nonrecording gage at present site, at datum 1.00 ft (0.305 m) higher. Prior to Oct. 20, 1970 at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good. Corps of Engineers rainfall and stage radio telemeter at station. Suspended-sediment records for the current year are published on page 418 of this report.

AVERAGE DISCHARGE.--41 years, 50.4 ft³/s (1.427 m³/s), 23.76 in/yr (604 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,200 ft³/s (459 m³/s) Aug. 13, 1940, gage height, 12.70 ft (3.871 m), datum then in use, from rating curve extended above 1,400 ft³/s (39.6 m³/s) on basis of computation of peak flow over dam 1 mi (1.6 km) upstream at gage heights 4.58 ft (1.396 m), 6.60 ft (2.012 m), 7.70 ft (2.347 m), 12.70 ft (3.871 m); minimum observed, 3.0 ft³/s (0.085 m³/s) May 15, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	1200	1100	31.2	4.78	1.457	Apr 9	0200	1120	31.7	4.83	1.472
Mar 21	0630	489	13.8	3.19	0.972	Apr 14	1030	870	24.6	4.29	1.308
Apr 8	1730	*1200	34.0	*4.98	1.518						

Minimum discharge, 16 ft³/s (0.45 m³/s) Sept. 15-17, 19-21, 24; minimum gage height, 0.85 ft (0.259 m) Sept. 16, 24; minimum daily, 16 ft³/s (0.45 m³/s) Sept. 16, 20, 24.

REVISIONS.--The peak discharge of May 31, 1975 (2300 hours) has been revised to 1,230 cfs (34.8 m³/s), gage height, 5.05 ft (1.539 m), and June 12, 1975 (0530 hours) has been revised to 625 cfs (17.7 m³/s), gage height, 3.75 ft (1.143 m), and July 23, 1975 (2400 hours) has been revised to 752 cfs (21.3 m³/s), gage height, 4.68 ft (1.426 m), superseding figures published in the report for 1975.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	264	48	81	52	53	44	104	73	64	44	28	31
2	175	407	75	51	54	45	95	71	59	43	26	24
3	131	211	70	50	55	49	89	69	56	49	26	21
4	114	128	69	50	51	46	89	67	53	49	25	20
5	112	102	68	49	52	61	80	66	51	43	26	22
6	94	89	68	47	51	54	75	65	50	41	24	27
7	85	81	64	47	50	50	74	63	50	38	23	21
8	77	75	61	47	48	60	435	62	48	37	23	19
9	73	72	59	46	51	63	537	60	46	38	22	19
10	80	183	58	45	50	56	228	58	46	40	23	19
11	70	160	57	60	49	53	158	58	44	42	22	19
12	66	144	56	62	48	50	165	58	44	36	22	18
13	63	119	56	59	47	59	201	55	44	37	21	17
14	59	103	54	138	47	56	622	54	43	35	20	17
15	57	93	52	96	49	52	326	53	42	35	20	17
16	56	86	53	79	53	50	216	52	42	33	20	16
17	54	80	51	73	50	174	165	55	45	30	20	17
18	53	76	50	117	48	200	139	107	46	29	20	17
19	52	72	50	109	47	119	123	60	43	29	20	17
20	54	68	49	90	48	118	112	156	41	28	19	16
21	52	66	48	80	48	324	105	128	39	27	19	18
22	50	64	48	77	49	178	98	88	38	27	25	19
23	63	65	48	74	47	129	93	113	38	27	26	17
24	53	94	87	68	46	156	90	103	68	28	22	16
25	50	106	98	65	46	151	86	89	205	26	21	27
26	49	201	68	62	45	123	86	79	88	26	20	24
27	48	139	61	59	45	106	90	71	65	37	19	18
28	48	112	57	58	45	138	81	67	56	83	18	18
29	47	98	55	56	44	165	81	64	51	46	17	25
30	51	88	55	55	---	137	77	65	47	33	19	28
31	48	---	54	57	---	119	---	65	---	30	29	---
TOTAL	2348	3430	1880	2078	1416	3185	4920	2294	1652	1146	685	604
MEAN	75.7	114	60.6	67.0	48.8	103	164	74.0	55.1	37.0	22.1	20.1
MAX	264	407	98	138	55	324	622	156	205	83	29	31
MIN	47	48	48	45	44	44	74	52	38	26	17	16
CFSM	2.63	3.96	2.10	2.33	1.69	3.58	5.69	2.57	1.91	1.29	.77	.70
IN.	3.03	4.43	2.43	2.68	1.83	4.11	6.35	2.96	2.13	1.48	.88	.78

CAL YR 1979 TOTAL 29074 MEAN 79.7 MAX 596 MIN 26 CFSM 2.77 IN 37.55
WTR YR 1980 TOTAL 25638 MEAN 70.0 MAX 622 MIN 16 CFSM 2.43 IN 33.11

02111180 ELK CREEK AT ELKVILLE, N. C.

LOCATION.--Lat 36°04'16", long 81°24'13", Wilkes County, Hydrologic Unit 03040101, on left bank 700 ft (213 m) upstream from bridge on State Highway 268, in community of Elkville, and 3,400 ft (1,040 m) upstream from mouth.

DRAINAGE AREA.--48.1 mi² (124.6 km²), revised.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,082.40 ft (329.916 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Corps of Engineers rainfall and gage-height radio telemeter at station.

AVERAGE DISCHARGE.--15 years, 110 ft³/s (3.115 m³/s), 31.06 in/yr (789 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft³/s (329 m³/s) Nov. 6, 1977, gage height, 9.58 ft (2.920 m) from floodmarks, from rating curve extended above 2,400 ft³/s (68.0 m³/s) on basis of contracted-opening measurement at gage height, 7.28 ft (2.219 m); minimum, 16 ft³/s (0.45 m³/s) Oct. 3, 1968, gage height, 0.83 ft (0.253 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 13, 1940 reached a stage of about 22 ft (6.7 m), discharge, about 70,000 ft³/s (1,980 m³/s), on basis of several contracted-opening and slope-area measurements. A discharge of 6.0 ft³/s (0.17 m³/s) was measured Sept. 19, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (20 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	1215	3240	91.8	5.25	1.600	Apr 9	0200	*3830	108	*5.69	1.734
Mar 21	0700	1230	34.8	3.20	0.975	Apr 14	1015	2970	84.1	5.03	1.533
Apr 8	1845	3690	105	5.59	1.704	June 25	Unknown	920	26.1	a2.80	0.853

a From floodmark.

Minimum discharge, 24 ft³/s (0.68 m³/s) Sept. 16, 17, 24, gage height, 0.88 ft (0.268 m); minimum daily, 24 ft³/s (0.68 m³/s) Sept. 15, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	340	81	141	87	91	68	186	123	101	68	47	39
2	255	1110	132	85	94	69	163	118	92	68	45	34
3	201	471	122	82	99	78	150	116	87	68	44	33
4	173	239	118	82	87	72	147	114	82	75	44	32
5	176	179	117	82	81	112	135	111	80	68	48	39
6	149	153	114	80	84	104	126	109	80	66	40	59
7	137	138	111	78	81	92	123	103	80	64	38	39
8	125	126	104	77	77	118	1160	100	78	61	36	29
9	119	121	99	77	77	169	1550	99	73	66	36	33
10	140	374	98	75	77	140	477	97	73	68	36	29
11	121	318	98	92	75	121	293	95	70	80	36	27
12	115	280	96	118	77	107	311	95	68	59	36	26
13	109	225	95	101	73	111	394	92	68	56	35	26
14	102	188	93	271	72	108	2050	92	65	54	33	25
15	99	164	90	215	73	99	1030	89	64	53	33	24
16	97	152	90	167	84	95	500	87	63	53	33	25
17	95	139	86	147	82	285	350	88	65	51	33	24
18	92	131	85	201	73	383	280	175	67	49	33	26
19	92	124	85	212	75	218	230	104	66	49	33	26
20	90	118	83	175	75	194	210	227	64	47	31	26
21	90	115	81	153	77	717	190	205	62	47	31	30
22	89	110	80	143	77	349	170	131	60	46	37	30
23	104	109	80	138	77	231	155	211	60	45	44	26
24	93	159	122	125	75	299	149	204	100	50	38	25
25	88	180	209	122	74	309	143	164	460	44	34	60
26	86	504	129	113	71	237	139	136	170	45	31	40
27	83	293	111	109	69	196	148	119	120	55	29	29
28	82	210	103	104	68	238	135	108	90	218	29	27
29	82	173	98	101	68	327	133	101	80	82	28	42
30	88	156	95	93	---	253	129	98	66	59	28	47
31	85	---	95	99	---	214	---	99	---	51	33	---
TOTAL	3797	6840	3260	3804	2263	6113	11356	3810	2754	1965	1112	977
MEAN	122	228	105	123	78.0	197	379	123	91.8	63.4	35.9	32.6
MAX	340	1110	209	271	99	717	2050	227	460	218	48	60
MIN	82	81	80	75	68	68	123	87	60	44	28	24
CFSM	2.54	4.74	2.18	2.56	1.62	4.10	7.88	2.56	1.91	1.32	.75	.68
IN.	2.94	5.29	2.52	2.94	1.75	4.73	8.78	2.95	2.13	1.52	.86	.76

CAL YR 1979 TOTAL 59157 MEAN 162 MAX 1770 MIN 48 CFSM 3.37 IN 45.75
WTR YR 1980 TOTAL 48051 MEAN 131 MAX 2050 MIN 24 CFSM 2.72 IN 37.16

02111500 REDDIES RIVER AT NORTH WILKESBORO, N. C.

LOCATION.--Lat 36°10'29", long 81°10'09", Wilkes County, Hydrologic Unit 03040101, on left bank 550 ft (168 m) upstream from bridge on Secondary Road 1517, 1.2 mi (1.9 km) northwest of North Wilkesboro, 1.4 mi (2.3 km) upstream from North Wilkesboro municipal dam, and 2.3 mi (3.7 km) upstream from mouth.

DRAINAGE AREA.--89.2 mi² (231.0 km²), revised.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1303.

REVISED RECORDS.--WSP 1433: 1944.

GAGE.--Water-stage recorder. Datum of gage is 978.62 ft (298.283 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Slight diurnal fluctuation at low flow during growing season. Suspended-sediment records for the current year are published on page 418 of this report.

AVERAGE DISCHARGE.--41 years, 147 ft³/s (4.163 m³/s), 22.38 in/yr (568 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft³/s (765 m³/s) Aug. 14, 1940, gage height, 22.02 ft (6.712 m), from rating curve extended above 2,200 ft³/s (62.3 m³/s) on basis of computation of peak flow over dam; minimum, 22 ft³/s (0.62 m³/s) Aug. 17, 1954, gage height, 0.63 ft (0.193 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	1330	2370	67.1	6.70	2.042	Apr 9	0430	*5360	152	*10.61	3.234
Apr 8	2000	3040	86.1	7.71	2.350	Apr 14	1530	4950	140	10.12	3.085

Minimum discharge, 65 ft³/s (1.84 m³/s) Sept. 24, gage height, 0.98 ft (0.299 m); minimum daily, 67 ft³/s (1.90 m³/s) Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	412	141	229	165	154	133	249	279	183	138	104	78
2	344	903	216	162	152	136	233	269	176	135	100	77
3	283	445	204	158	169	132	222	261	173	144	98	79
4	249	297	202	161	153	140	226	254	168	204	95	108
5	261	245	199	160	150	184	204	246	163	149	96	88
6	218	218	200	153	156	170	197	241	162	143	92	111
7	204	203	195	153	152	155	196	237	162	129	91	81
8	190	193	187	153	147	186	1070	231	157	125	88	77
9	183	185	180	152	153	231	1980	223	149	167	87	90
10	244	509	180	149	152	183	600	216	148	149	87	80
11	202	400	178	184	147	167	428	212	147	165	85	76
12	190	353	176	209	146	156	472	208	145	134	83	74
13	182	295	180	177	142	176	510	207	145	130	82	73
14	171	256	174	453	142	170	2820	204	143	125	81	72
15	166	235	169	287	148	156	974	198	140	123	80	70
16	164	221	169	229	162	152	639	193	138	119	79	69
17	160	208	164	208	149	379	521	194	140	114	80	74
18	156	201	162	326	140	433	462	337	140	110	79	77
19	154	196	164	294	142	262	421	214	141	108	80	72
20	154	190	164	241	143	263	396	284	135	106	77	74
21	151	184	162	215	158	866	377	306	127	104	80	77
22	149	180	161	207	149	388	355	227	126	110	111	74
23	169	185	160	207	145	291	340	254	124	106	95	70
24	153	253	194	189	141	403	331	258	130	105	100	67
25	146	263	313	184	139	383	319	245	733	100	85	120
26	143	651	202	177	135	302	313	214	318	99	80	95
27	140	369	187	172	134	262	327	198	201	105	78	75
28	140	301	177	169	135	296	302	189	170	278	76	75
29	141	266	173	166	133	340	308	206	157	156	75	98
30	154	242	171	163	---	290	294	207	146	118	74	98
31	143	---	168	171	---	280	---	189	---	109	75	---
TOTAL	5916	8788	5760	6194	4268	8065	16086	7201	5287	4107	2673	2449
MEAN	191	293	186	200	147	260	536	232	176	132	86.2	81.6
MAX	412	903	313	453	169	866	2820	337	733	278	111	120
MIN	140	141	160	149	133	132	196	189	124	99	74	67
CFSM	2.14	3.29	2.09	2.24	1.65	2.92	6.01	2.60	1.97	1.48	.97	.92
IN.	2.47	3.66	2.40	2.58	1.78	3.36	6.71	3.00	2.20	1.71	1.11	1.02

CAL YR 1979 TOTAL 80713 MEAN 221 MAX 1600 MIN 65 CFSM 2.48 IN 33.66
WTR YR 1980 TOTAL 76794 MEAN 210 MAX 2820 MIN 67 CFSM 2.35 IN 32.03

PEE DEE RIVER BASIN

02112000 YADKIN RIVER AT WILKESBORO, N. C.

LOCATION.--Lat 36°09'09", long 81°08'45", Wilkes County, Hydrologic Unit 03040101, on right bank 150 ft (46 m) upstream from bridge on State Highway 18,and 268 between North Wilkesboro and Wilkesboro, 150 ft (46 m) downstream from Reddies River, 0.5 mi (0.8 km) northeast of Wilkesboro, and 382 mi (615 km) upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--504 mi² (1,305 km²), revised.

PERIOD OF RECORD.--April 1903 to June 1909, October 1920 to current year. Prior to October 1928, published as "at North Wilkesboro".

REVISED RECORDS.--WSP 1433; 1903-9, 1922, 1925-26(M), 1930, 1932, 1934, 1946-48(M), drainage area at former site.

GAGE.--Water-stage recorder. Datum of gage is 942.35 ft (287.228 m) National Geodetic Vertical Datum of 1929. Apr. 10, 1903 to June 30, 1909 and Oct. 17, 1920 to Apr. 10, 1929, nonrecording gage at site 1.2 mi (1.9 km) downstream at different datum. Apr. 11, 1929 to Jan. 9, 1930, nonrecording gage at present site and datum. Datum used 1920-29 was about 1.2 ft (0.366 m) lower than that used 1903-09.

REMARKS.--Records fair. Flow regulated by W. Kerr Scott Reservoir 5.5 mi (8.8 km) upstream since 1962 (see p. 331). Corps of Engineers gage-height radio telemeter at station. Suspended-sediment records for the current year are published on page 418 of this report.

AVERAGE DISCHARGE.--65 years (1903-8, 1920-80), 833 ft³/s (23.59 m³/s), 22.44 in/yr (570 mm/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 160,000 ft³/s (4,530 m³/s) Aug. 14, 1940, gage height, 37.6 ft (11.46 m), from floodmarks, from rating curve extended above 20,000 ft³/s (566 m³/s) on basis of slope-area measurement of peak flow; minimum, 86 ft³/s (2.44 m³/s) Dec. 4, 1965; minimum daily, 110 ft³/s (3.12 m³/s) Sept. 18, 19, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1916 reached a stage of 34.5 ft (10.52 m) present site and datum, from floodmark, discharge, 116,000 ft³/s (3,290 m³/s), from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,030 ft³/s (199 m³/s) Apr. 15, gage height, 9.30 ft (2.835 m); minimum, 395 ft³/s (11.2 m³/s) Sept. 4, gage height, 2.26 ft (0.689 m); minimum daily, 430 ft³/s (12.2 m³/s) Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3270	798	1110	836	891	697	1860	1280	1010	752	541	458
2	2420	2120	1340	851	792	751	1250	1220	945	711	506	460
3	2070	2890	990	828	780	718	1070	1260	806	735	577	463
4	1480	4180	985	821	809	747	1070	1210	831	960	523	523
5	1620	2470	1030	849	802	906	1000	1200	859	895	506	460
6	1470	1100	1060	837	822	1070	915	1130	756	729	523	490
7	1240	1400	1050	784	854	879	886	1110	857	728	490	455
8	1160	1040	995	784	813	951	2270	1100	799	623	470	445
9	1060	1090	919	780	813	1290	4240	1040	740	762	450	460
10	1320	1860	895	772	835	1330	5880	1030	671	760	442	445
11	1170	2410	890	884	816	1040	6170	1030	669	917	440	435
12	1040	2920	947	1260	799	840	4290	985	690	867	448	430
13	1020	2240	914	1130	774	895	2180	984	692	565	450	434
14	937	1660	891	2000	735	991	5290	983	733	624	468	435
15	818	1380	885	2550	740	849	5380	974	644	623	470	439
16	835	1190	903	1900	837	836	6710	896	585	612	472	440
17	907	1040	876	1250	874	1370	6640	910	704	590	480	450
18	860	1330	817	1760	779	2440	6200	1870	793	519	475	455
19	834	1070	783	2150	772	3260	4120	1690	762	521	470	445
20	836	1070	798	1950	786	1990	2590	1370	704	506	468	480
21	818	1010	817	1190	800	2290	1870	2030	646	501	475	465
22	835	1010	826	1270	782	4730	1850	2100	640	506	518	460
23	938	1030	825	1330	776	3010	1640	1330	562	501	450	450
24	954	1120	895	1030	770	2140	1560	1760	575	505	480	445
25	838	1380	1330	957	749	2390	1550	2050	2880	501	455	501
26	788	2480	1450	1060	751	1950	1520	1420	3290	495	450	442
27	781	2850	1230	989	712	1530	1560	1100	2120	520	445	440
28	773	1930	990	925	684	1480	1520	1040	991	1650	440	445
29	777	1450	841	890	675	1560	1500	1040	803	2080	435	460
30	801	1150	956	877	---	1680	1470	990	805	718	440	455
31	811	---	913	911	---	2550	---	999	---	638	456	---
TOTAL	35481	50668	30151	36405	22822	49160	86051	39131	28562	22614	14713	13665
MEAN	1145	1689	973	1174	787	1586	2868	1262	952	729	475	456
MAX	3270	4180	1450	2550	891	4730	6710	2100	3290	2080	577	523
MIN	773	798	783	772	675	697	886	896	562	495	435	430
(†)	-29	+5	-5	0	0	+19	-20	0	0	0	-15	-28
MEAN‡	1116	1694	968	1174	787	1605	2848	1262	952	729	460	428
CFSM‡	2.21	3.36	1.92	2.33	1.56	3.18	5.65	2.50	1.89	1.45	.91	.85
IN‡	2.55	3.75	2.21	2.69	1.68	3.67	6.30	2.88	2.11	1.67	1.05	.95

CAL YR 1979 TOTAL 481114 MEAN 1318 MAX 6110 MIN 489 MEAN‡ 1330 CFSM‡ 2.64 IN‡ 36.44
WTR YR 1980 TOTAL 429423 MEAN 1173 MAX 6710 MIN 430 MEAN‡ 1167 CFSM‡ 2.32 IN‡ 31.51

† Change in contents, equivalent in cubic feet per second, in W. Kerr Scott Reservoir; furnished by Corps of Engineers.
‡ Adjusted for change in W. Kerr Scott Reservoir.

02112120 ROARING RIVER NEAR ROARING RIVER, N. C.

LOCATION.--Lat 36°14'59", long 81°02'39" (revised), Wilkes County, Hydrologic Unit 03040101, on left bank at downstream end of old bridge pier, 800 ft (244 m) upstream from bridge on Secondary Road 1990, 3.8 mi (6.1 km) northwest of village of Roaring River, and 4.1 mi (6.6 km) upstream from mouth.

DRAINAGE AREA.--128 mi² (332 km²), revised.

PERIOD OF RECORD.--Occasional low-flow measurements water years 1925, 1947, 1949-56, 1963. April 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 964.85 ft (294.086 m) National Geodetic Vertical Datum of 1929. Prior to May 1, 1964, nonrecording gage on downstream side of bridge at same site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 418 of this report.

AVERAGE DISCHARGE.--16 years, 201 ft³/s (5.692 m³/s), 21.32 in/yr (542 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,600 ft³/s (753 m³/s) Oct. 17, 1975, gage height, 22.54 ft (6.870 m), from floodmark in gage well, from rating curve extended above 2,400 ft³/s (68.0 m³/s) on basis of slope-area measurement of peak flow, and at gage heights 14.40 ft (4.389 m), and 10.83 ft (3.301 m); minimum, 53 ft³/s (1.50 m³/s) July 7, 8, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1916 reached a stage of about 28 ft (8.5 m), estimated discharge, 45,000 ft³/s (1,270 m³/s) and the flood of August 1940 about 24 ft, (7.3 m), estimated discharge, 31,000 ft³/s (878 m³/s), from stage information by local residents and rating curve extended as explained above. A discharge of 24.2 ft³/s (0.69 m³/s) was measured Sept. 18, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	1400	3250	92.0	6.76	2.060	Apr 9	0330	*10200	289	*13.89	4.234
Mar 21	0700	2550	72.2	5.85	1.783	Apr 14	0730	4860	138	8.74	2.664
Apr 8	2000	5290	150	9.22	2.810						

Minimum discharge, 81 ft³/s (2.29 m³/s) Sept. 16, gage height, 1.35 ft (0.411 m); minimum daily, 83 ft³/s (2.35 m³/s) Sept. 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	499	166	280	176	186	151	314	302	234	157	114	99
2	477	1170	263	173	211	166	295	295	215	154	112	90
3	365	556	246	169	211	183	284	287	204	157	110	86
4	318	357	242	173	200	183	287	280	200	183	107	138
5	345	302	234	173	211	215	259	271	197	160	105	101
6	287	276	234	163	179	193	250	263	197	157	103	135
7	263	254	226	163	176	176	250	254	197	143	103	101
8	242	234	211	163	169	234	1600	250	190	140	99	92
9	230	226	204	163	176	295	3080	242	179	208	99	96
10	318	527	204	160	176	215	786	238	179	173	96	94
11	263	476	200	208	169	193	565	234	179	173	94	88
12	242	439	197	246	169	176	620	230	176	149	94	86
13	226	361	204	197	163	208	651	238	176	154	92	86
14	208	314	197	590	163	204	2610	230	173	146	90	84
15	200	287	186	357	173	179	1010	219	169	143	88	83
16	197	271	190	280	186	176	703	215	166	138	90	83
17	190	254	179	254	169	580	585	215	166	132	90	88
18	186	242	176	466	160	687	518	417	169	130	88	101
19	183	230	179	404	160	365	476	242	179	127	90	101
20	183	223	176	310	163	357	439	610	166	124	86	112
21	179	215	173	276	186	1350	412	462	151	122	88	122
22	176	211	173	263	173	532	382	306	149	127	135	110
23	219	215	173	271	166	386	365	378	149	127	110	94
24	186	276	200	234	160	518	353	462	151	122	103	90
25	176	298	341	226	160	513	345	382	736	117	99	135
26	173	879	219	215	154	395	341	306	370	117	92	140
27	169	462	204	204	151	345	345	271	219	117	90	99
28	169	374	190	197	154	353	325	246	186	173	86	99
29	169	325	186	193	151	408	337	234	173	146	84	117
30	183	295	186	190	---	353	321	234	166	124	84	117
31	169	---	179	193	---	345	---	234	---	119	84	---
TOTAL	7390	10715	6452	7450	5025	10634	19108	9047	6161	4459	3005	3067
MEAN	238	357	208	240	173	343	637	292	205	144	96.9	102
MAX	499	1170	341	590	211	1350	3080	610	736	208	135	140
MIN	169	166	173	160	151	151	250	215	149	117	84	83
CFSM	1.86	2.79	1.63	1.88	1.35	2.68	4.98	2.28	1.60	1.13	.76	.80
IN.	2.15	3.11	1.88	2.17	1.46	3.09	5.55	2.63	1.79	1.30	.87	.89

CAL YR 1979 TOTAL 100978 MEAN 277 MAX 3600 MIN 98 CFSM 2.16 IN 29.35
WTR YR 1980 TOTAL 92513 MEAN 253 MAX 3080 MIN 83 CFSM 1.98 IN 26.89

02112250 YADKIN RIVER AT ELKIN, N. C.

LOCATION.--Lat 36°14'30" (revised), long 80°50'49", Yadkin County, Hydrologic Unit 03040101, on right bank at downstream side of bridge on U.S. Highway 21 at Elkin, 0.3 mi (0.5 km) downstream from Elkin River and 362 mi (582 km) upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--869 mi² (2,251 km²), revised.

PERIOD OF RECORD.--April 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 866.03 ft (263.966 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 28, 1964, nonrecording gage on upstream side of bridge at same datum.

REMARKS.--Records good. Considerable regulation by W. Kerr Scott Reservoir (see p. 331). The Corps of Engineers has a stage radio-telemeter and the National Weather Service, a telephone-telemeter, at station. Suspended-sediment records for the current year are published on page 419 of this report.

AVERAGE DISCHARGE.--16 years, 1,502 ft³/s (42.54 m³/s), 23.47 in/yr (596 mm/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,700 ft³/s (700 m³/s) Aug. 10, 1970, gage height, 23.52 ft (7.169 m); minimum, 338 ft³/s (9.57 m³/s) July 28, 29, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 36.0 ft (10.97 m), from information by North Carolina State Highway Commission. Flood of August 1940 reached a stage of 37.5 ft (11.43 m). A discharge of 172 ft³/s (4.87 m³/s) was measured on Sept. 19, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,500 ft³/s (411 m³/s) Apr. 9, gage height, 16.13 ft (4.916 m); minimum, 612 ft³/s (17.3 m³/s) Aug. 30, gage height, 1.56 ft (0.475 m); minimum daily, 615 ft³/s (17.4 m³/s) Aug. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4740	1230	1570	1210	1460	1170	3330	2180	1710	1210	948	675
2	3850	3550	1810	1210	1360	1240	2300	2010	1670	1200	846	709
3	3350	3910	1650	1220	1330	1170	2090	2060	1540	1130	862	718
4	2500	5030	1540	1190	1360	1280	2030	2000	1440	1440	873	1130
5	2380	3840	1540	1230	1340	1430	1930	1960	1520	1400	807	779
6	2370	1950	1590	1230	1420	1630	1830	1880	1390	1190	793	899
7	1930	1990	1580	1180	1410	1510	1760	1840	1420	1170	786	791
8	1820	1610	1530	1160	1400	1490	3420	1800	1470	1100	752	706
9	1690	1610	1420	1150	1380	2070	10800	1760	1360	1270	743	713
10	2000	2760	1400	1140	1430	1960	7050	1710	1290	1230	712	708
11	1960	3390	1330	1220	1400	1700	7380	1710	1220	1360	681	690
12	1690	4060	1400	1700	1380	1440	6220	1680	1280	1310	676	669
13	1640	3490	1390	1650	1340	1430	4400	1650	1250	1140	673	663
14	1560	2440	1370	3900	1270	1570	10300	1680	1290	1020	677	660
15	1410	2000	1330	3360	1280	1450	7160	1650	1230	1060	688	654
16	1360	1910	1330	3020	1350	1380	9300	1580	1200	1030	697	650
17	1380	1560	1320	1960	1420	2290	8750	1550	1220	1000	716	666
18	1400	1760	1260	3160	1310	4260	8100	2870	1330	951	691	710
19	1350	1710	1230	3380	1290	4500	5900	2520	1310	908	728	702
20	1320	1550	1200	3020	1300	3270	4300	2570	1280	906	691	781
21	1320	1530	1190	2090	1360	7280	3500	3340	1180	881	680	826
22	1320	1490	1200	1840	1330	5660	3400	2940	1160	874	903	750
23	1400	1490	1210	2160	1310	4880	3100	2420	1110	893	777	719
24	1480	1560	1220	1820	1280	3670	2480	3020	1050	887	741	672
25	1370	1780	1780	1630	1260	4000	2510	3310	3630	860	727	866
26	1280	3870	1750	1650	1240	3500	2390	2460	4640	854	696	796
27	1240	3850	1640	1660	1220	2950	2510	1940	3240	859	667	686
28	1230	3100	1470	1570	1180	2700	2400	1810	1690	1230	653	677
29	1230	2120	1250	1500	1170	2950	2350	1750	1420	2820	637	769
30	1240	1910	1260	1470	---	2850	2300	1730	1370	1240	615	784
31	1250	---	1320	1490	---	3200	---	1710	---	1060	631	---
TOTAL	56060	74050	44080	57170	38580	81880	135290	65090	47910	35483	22767	22218
MEAN	1808	2468	1422	1844	1330	2641	4510	2100	1597	1145	734	741
MAX	4740	5030	1810	3900	1460	7280	10800	3340	4640	2820	948	1130
MIN	1230	1230	1190	1140	1170	1170	1760	1550	1050	854	615	650
(†)	-29	+5	-5	0	0	+19	-20	0	0	0	-15	-28
MEAN‡	1779	2473	1417	1844	1330	2660	4490	2100	1597	1145	719	713
CFSM‡	2.05	2.85	1.63	2.12	1.53	3.06	5.17	2.42	1.84	1.32	.83	.82
IN‡	2.36	3.18	1.88	2.44	1.65	3.53	5.77	2.79	2.05	1.52	.96	.92

CAL YR 1979 TOTAL 755173 MEAN 2069 MAX 13400 MIN 831 MEAN‡ 2081 CFSM‡ 2.39 IN‡ 32.97
WTR YR 1980 TOTAL 680578 MEAN 1860 MAX 10800 MIN 615 MEAN‡ 1854 CFSM‡ 2.13 IN‡ 29.05

† Change in contents, equivalent in cubic feet per second, in W. Kerr Scott Reservoir; furnished by Corps of Engineers.
‡ Adjusted for change in W. Kerr Scott Reservoir.

02112360 MITCHELL RIVER NEAR STATE ROAD, N. C.

LOCATION (REVISED).--Lat 36°18'42", long 80°48'26", Surry County, Hydrologic Unit 03040101, on right bank 280 ft (85 m) upstream from bridge (relocated) on Secondary Road 1001, 1.8 mi (2.9 km) upstream from Grass Creek, and 3.3 mi (5.3 km) east of State Road.

DRAINAGE AREA.--78.8 mi² (204.1 km²), revised.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1952-58, 1963. April 1964 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 927.12 ft (282.586 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 29, 1964, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 419 of this report.

AVERAGE DISCHARGE.--16 years, 133 ft³/s (3.767 m³/s), 22.92 in/yr (582 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,470 ft³/s (212 m³/s) Sept. 22, 1979, gage height, 16.42 ft (5.005 m); minimum, 34 ft³/s (0.96 m³/s) Feb. 18, 1979, result of freezeup; minimum unregulated, 35 ft³/s (0.96 m³/s) Aug. 17, 19, 1967; minimum gage height, 1.73 ft (0.527 m) July 28, 29, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1900, about 18 ft (5.49 m) in August 1940, from information by local resident, estimated discharge, 9,000 ft³/s (255 m³/s). A discharge of 16.5 ft³/s (0.47 m³/s) was measured on Sept. 19, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar 21	0700	1680	47.6	4.82	1.469	Apr 14	1000	1600	45.3	4.70	1.433
Apr 9	0430	*4610	131	*9.91	3.021						

Minimum discharge, 49 ft³/s (1.39 m³/s) Sept. 16, 17; minimum gage height, 1.79 ft (0.546 m) Aug. 18; minimum daily, 50 ft³/s (1.42 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	282	132	169	127	122	106	182	197	165	105	73	61
2	360	570	166	125	135	111	173	187	157	100	69	63
3	267	325	157	122	140	127	169	183	154	98	68	73
4	231	223	154	122	132	118	166	178	143	102	66	76
5	243	190	154	122	127	163	157	175	137	106	66	84
6	208	176	154	120	125	151	151	172	135	100	63	78
7	190	166	154	118	125	132	148	166	135	92	63	63
8	176	160	148	118	122	145	723	163	132	91	61	57
9	173	157	143	115	120	173	1750	160	125	115	60	58
10	239	282	137	113	120	140	495	157	122	104	59	60
11	200	267	135	137	120	130	350	157	122	110	59	57
12	186	264	135	173	120	120	360	154	122	98	59	54
13	176	227	137	137	118	130	365	154	122	98	57	54
14	166	200	137	365	118	137	976	163	120	94	54	52
15	160	186	132	215	118	125	532	150	119	92	52	52
16	157	176	132	173	120	120	395	145	118	88	52	50
17	151	166	132	160	120	365	330	145	118	83	54	51
18	148	163	127	303	115	390	298	351	118	80	55	56
19	145	157	127	251	113	219	279	185	125	79	71	58
20	145	151	125	197	113	231	270	473	120	78	60	82
21	143	151	125	176	120	855	261	370	115	75	56	75
22	140	148	125	166	120	316	251	231	107	77	88	67
23	173	151	125	166	118	243	231	257	105	78	76	61
24	154	157	130	148	115	294	223	429	110	77	69	56
25	145	157	197	143	113	282	217	305	210	73	65	72
26	140	405	151	140	111	231	211	236	240	71	61	77
27	135	243	140	135	109	208	209	203	145	71	58	62
28	135	208	132	132	109	200	203	188	130	76	55	60
29	135	186	132	127	109	223	211	182	118	83	54	63
30	135	179	132	125	---	197	209	180	110	77	51	71
31	135	---	130	127	---	197	---	166	---	73	52	---
TOTAL	5573	6323	4374	4898	3467	6579	10495	6562	3999	2744	1906	1903
MEAN	180	211	141	158	120	212	350	212	133	88.5	61.5	63.4
MAX	360	570	197	365	140	855	1750	473	240	115	88	84
MIN	135	132	125	113	109	106	148	145	105	71	51	50
CFSM	2.28	2.68	1.79	2.01	1.52	2.69	4.44	2.69	1.69	1.12	.78	.81
IN.	2.63	2.98	2.06	2.31	1.64	3.11	4.95	3.10	1.89	1.30	.90	.90

CAL YR 1979 TOTAL 71091 MEAN 195 MAX 2560 MIN 70 CFSM 2.48 IN 33.56
WTR YR 1980 TOTAL 58823 MEAN 161 MAX 1750 MIN 50 CFSM 2.04 IN 27.77

02113000 FISHER RIVER NEAR COPELAND, N. C.

LOCATION.--Lat 36°21'26" (revised), long 80°41'10", Surry County, Hydrologic Unit 03040101, on left bank 500 ft (152 m) upstream from bridge on State Highway 268, 1 mi (2 km) upstream from Cody Creek, and 2 mi (3 km) northwest of Copeland.

DRAINAGE AREA.--128 mi² (332 km²), revised.

PERIOD OR RECORD.--October 1931 to current year.

REVISED RECORDS.--WSP 1303: 1933(M).

GAGE.--Water-stage recorder. Altitude of gage is 913 ft (278 m), by barometer. Prior to Sept. 5, 1936, nonrecording gage at same site and datum.

REMARKS.--Records good. Some irrigation diversions at times in the growing season.

AVERAGE DISCHARGE.--49 years, 185 ft³/s (5.239 m³/s), 19.63 in/yr (499 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,200 ft³/s (969 m³/s) Sept. 22, 1979, gage height, 19.61 ft (5.977 m) from rating curve extended above 6,200 ft³/s (176 m³/s) on basis of slope-area measurement of peak flow at gage height, 18.4 ft (5.61 m); minimum, 14 ft³/s (0.40 m³/s) Aug. 28, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft³/s (62 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	1730	2550	72.2	6.57	2.003	Apr 14	1100	3450	97.7	7.70	2.347
Mar 21	0830	3730	106	8.05	2.454	May 20	0400	2470	70.0	6.48	1.975
Apr 9	1030	*8980	254	*12.88	3.926						

Minimum discharge, 52 ft³/s (1.47 m³/s) Aug. 13, 14, gage height, 2.14 ft (0.652 m); minimum daily, 54 ft³/s (1.53 m³/s) Aug. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	366	191	228	156	162	140	243	256	273	134	79	64
2	675	923	217	153	169	151	229	249	223	131	74	63
3	406	553	205	150	217	145	223	243	213	129	72	74
4	317	328	204	152	202	164	223	239	207	132	69	158
5	339	279	203	157	213	200	207	233	191	133	67	112
6	283	259	202	149	166	197	200	226	191	126	65	147
7	265	247	201	147	161	176	200	220	191	122	62	85
8	247	236	190	148	156	179	966	216	185	120	61	73
9	240	233	179	146	163	213	4810	213	170	154	62	71
10	429	480	178	144	165	179	753	207	170	264	59	71
11	313	483	177	176	157	167	530	207	170	169	58	66
12	270	454	176	247	158	159	510	204	167	133	56	62
13	257	338	179	181	153	179	551	204	164	128	54	62
14	238	295	176	780	150	200	2090	213	163	119	63	61
15	228	269	167	325	156	170	786	194	159	114	78	59
16	224	257	168	239	166	162	530	191	153	109	78	56
17	219	244	160	216	156	530	432	188	153	103	76	62
18	214	238	155	668	146	682	387	583	151	98	69	69
19	211	227	158	421	150	294	357	266	160	97	140	69
20	209	221	156	271	151	341	337	1080	153	94	77	114
21	205	213	154	237	159	1930	321	803	147	92	67	98
22	202	210	153	225	153	485	302	337	133	99	122	88
23	242	208	154	234	151	325	294	525	130	97	103	75
24	228	222	156	206	147	414	283	510	130	94	88	68
25	206	219	278	200	148	423	280	485	280	88	81	93
26	201	743	188	191	145	306	276	321	319	86	74	97
27	197	358	172	184	140	270	276	276	188	101	69	77
28	197	283	164	179	142	259	273	256	162	95	65	72
29	196	254	161	174	140	294	266	273	150	104	62	79
30	195	237	161	170	---	259	283	291	143	88	60	91
31	193	---	159	178	---	270	---	239	---	83	61	---
TOTAL	8212	9702	5579	7204	4642	9863	17418	9948	5389	3636	2271	2436
MEAN	265	323	180	232	160	318	581	321	180	117	73.3	81.2
MAX	675	923	278	780	217	1930	4810	1080	319	264	140	158
MIN	193	191	153	144	140	140	200	188	130	83	54	56
CFSM	2.07	2.52	1.41	1.81	1.25	2.48	4.54	2.51	1.41	.91	.57	.63
IN.	2.39	2.82	1.62	2.09	1.35	2.87	5.06	2.89	1.57	1.06	.66	.71

CAL YR 1979 TOTAL 116299 MEAN 319 MAX 12100 MIN 108 CFSM 2.49 IN 33.80
WTR YR 1980 TOTAL 86300 MEAN 236 MAX 4810 MIN 54 CFSM 1.84 IN 25.08

02113500 YADKIN RIVER AT SILOAM, N. C.

LOCATION (REVISED).--Lat 35°16'55", long 80°33'46", Yadkin County, Hydrologic Unit 03040101, on right bank at upstream side of bridge on Secondary Road 1003, at Siloam, 70 ft (21 m) upstream from Hagan Creek, and 339 mi (545 km) upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--1,226 mi² (3,175 km²), revised.

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 782.02 ft (238.360 m) National Geodetic Vertical Datum of 1929 (North Carolina Department of Transportation bench mark). Prior to February 22, 1977, nonrecording gage at same site and datum.

REMARKS.--Records good. Some regulation by W. Kerr Scott Reservoir (see p. 331).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,600 ft³/s (1,150 m³/s) Sept. 22, 1979 gage height, 26.72 ft (8.144 m); minimum discharge, 715 ft³/s (20.2 m³/s) Oct. 19, 1978; minimum gage height, 3.32 ft (1.012 m) Sept. 6, 1977; minimum daily, 764 ft³/s (21.6 m³/s) Sept. 6, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 14 or 15, 1940 reached a stage of 816.7 ft (248.93 m) National Geodetic Vertical Datum of 1929, 34.7 ft (10.58 m) gage datum, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26,600 ft³/s (753 m³/s) Apr. 9, gage height, 21.20 ft (6.462 m); minimum, 867 ft³/s (24.6 m³/s) Sept. 16, 17, gage height, 3.62 ft (1.103 m); minimum daily, 867 ft³/s (24.6 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5060	1850	2300	1920	2010	1600	4360	2900	2460	1660	1230	942
2	5100	3390	2440	1880	1870	1670	3240	2800	2240	1670	1090	1000
3	4460	5780	2400	1840	1860	1610	2900	2700	2100	1560	1060	1000
4	3290	4970	2160	1800	1910	1750	2850	2700	1950	1810	1090	1420
5	3100	4500	2160	1840	1850	1880	2800	2600	1980	1990	1040	1200
6	3060	3100	2220	1820	1930	2200	2700	2500	1920	1750	1020	1290
7	2650	2490	2260	1780	1920	2090	2600	2440	1900	1590	1020	1170
8	2470	2390	2180	1760	1900	1940	3500	2390	1940	1560	1010	983
9	2340	2250	2060	1760	1840	2650	20600	2360	1840	1690	997	949
10	2690	2840	2030	1730	1920	2510	9600	2290	1760	2070	983	969
11	2910	4190	1980	1810	1880	2300	8400	2280	1710	1990	949	949
12	2440	4740	2030	2530	1850	2010	8000	2230	1720	1830	928	908
13	2320	4190	2060	2410	1810	1920	7700	2200	1710	1740	928	901
14	2230	3150	2060	5660	1770	2130	15000	2250	1730	1450	908	908
15	2080	2800	1980	4220	1770	2040	9800	2190	1700	1460	935	894
16	1990	2650	1980	3890	1850	1900	9200	2120	1630	1430	942	867
17	1990	2320	1980	2760	1900	2260	8700	2070	1630	1400	942	874
18	2030	2330	1900	4430	1820	6150	7400	3760	1750	1350	942	921
19	1980	2330	1870	4870	1760	4670	5800	3250	1780	1290	1030	942
20	1950	2200	1850	3740	1770	4330	4700	4000	1750	1250	976	1040
21	1950	2170	1850	2920	1850	10700	4100	5230	1640	1240	934	1210
22	1930	2120	1860	2470	1840	6280	3600	3450	1600	1230	1140	1080
23	1980	2150	1870	2770	1810	5880	3400	3610	1570	1250	1220	983
24	2240	2200	1880	2470	1770	4670	3200	4070	1500	1240	1070	928
25	2040	2300	2470	2240	1740	5110	3200	4720	2950	1210	1040	1110
26	1920	5200	2480	2190	1720	4400	3000	3390	5360	1180	983	1180
27	1860	4400	2400	2230	1670	3620	3100	3150	3900	1170	949	997
28	1840	3950	2210	2130	1640	3340	3200	3150	2500	1210	928	928
29	1850	2900	1980	2050	1630	3920	3000	2770	1940	2790	914	962
30	1870	2690	1920	2010	---	3450	3200	2520	1850	1950	901	983
31	1890	---	2010	2040	---	3710	---	2540	---	1400	908	---
TOTAL	77510	94540	64830	79970	52860	104690	172850	90630	62010	48410	31007	30488
MEAN	2500	3151	2091	2580	1823	3377	5762	2924	2067	1562	1000	1016
MAX	5100	5780	2480	5660	2010	10700	20600	5230	5360	2790	1230	1420
MIN	1840	1850	1850	1730	1630	1600	2600	2070	1500	1170	901	867
(†)	-29	+5	-5	0	0	+19	-20	0	0	0	-15	-28

CAL YR 1979 TOTAL 1043600 MEAN 2859 MAX 30500 MIN 1230 MEAN‡ 2871 CFSM‡ 2.33 IN‡ 31.63
WTR YR 1980 TOTAL 909795 MEAN 2486 MAX 20600 MIN 867 MEAN‡ 2480 CFSM‡ 2.02 IN‡ 27.50

† Change in contents, equivalent in cubic feet per second, in W. Kerr Scott Reservoir; furnished by Corps of Engineers.
‡ Adjusted for change in W. Kerr Scott Reservoir.

02113850 ARARAT RIVER AT ARARAT, N. C.

LOCATION.--Lat 36°24'16", long 80°33'43", Surry County, Hydrologic Unit 03040101, on right bank at upstream side of bridge pier on Secondary Road 2019, at Ararat, and 300 ft (91 m) downstream from Flat Shoal Creek.

DRAINAGE AREA.--231 mi² (598 km²).

PERIOD OF RECORD.--April 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 880.97 ft (268.520 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for periods of no gage-height record, Nov. 16 to Dec. 17 and Aug. 5-18, which are fair.

AVERAGE DISCHARGE.--16 years, 321 ft³/s (9.091 m³/s), 18.87 in/yr (479 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft³/s (991 m³/s) Sept. 22, 1979, gage height, 24.46 ft (7.455 m); minimum, 20 ft³/s (0.57 m³/s) Aug. 17, 18, Oct. 7, 8, 1966, gage height, 0.65 ft (0.198 m), result of regulation; minimum daily, 55 ft³/s (1.56 m³/s) Aug. 2, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 14, 1947 reached a stage of 21.4 ft (6.52 m), result of failure of dams upstream, discharge about 26,000 ft³/s (736 m³/s) revised, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar 21	1000	5290	150	8.84	2.694	Apr 14	1200	5250	149	8.78	2.676
Apr 9	1000	*16000	453	*17.63	5.374						

Minimum discharge, 117 ft³/s (3.31 m³/s) Sept. 16, gage height, 1.04 ft (0.317 m); minimum daily, 124 ft³/s (3.51 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	462	281	360	283	301	255	433	475	433	311	184	149
2	670	947	340	281	298	265	414	461	380	306	180	173
3	565	858	330	276	317	257	406	455	366	302	174	227
4	426	450	320	280	306	283	420	444	354	315	167	498
5	468	388	315	287	291	333	389	431	336	311	155	286
6	399	368	320	272	307	325	376	425	333	297	148	233
7	375	355	316	272	298	304	373	417	337	284	143	175
8	355	342	305	275	292	318	1580	411	329	279	140	161
9	344	333	300	273	301	353	8410	405	313	470	140	154
10	674	620	300	268	302	306	1550	394	310	658	150	152
11	482	682	300	323	289	291	974	389	309	478	135	143
12	402	712	305	438	290	278	929	385	305	276	132	132
13	383	491	315	328	283	319	1010	384	301	310	129	129
14	356	416	340	1340	281	349	3450	400	299	263	127	125
15	344	384	320	620	291	301	1450	370	290	242	126	125
16	344	380	320	436	307	288	992	363	285	231	125	124
17	326	375	292	393	290	827	824	357	283	221	125	140
18	315	370	289	1110	273	1280	740	975	280	225	125	158
19	301	355	293	832	278	529	685	468	289	214	157	152
20	297	350	291	510	280	667	645	1470	281	206	140	158
21	295	350	288	440	289	3420	613	1280	263	204	155	177
22	293	350	288	417	284	982	580	559	261	208	294	169
23	349	352	288	461	280	626	557	810	267	213	191	161
24	342	355	292	392	273	771	541	949	268	206	166	138
25	298	360	392	376	274	821	532	1030	391	191	161	197
26	290	800	317	360	268	572	520	575	565	193	151	192
27	285	600	297	346	259	506	516	484	378	193	145	157
28	284	490	291	334	262	486	509	446	344	196	138	147
29	288	420	287	327	259	529	497	446	325	262	130	159
30	285	380	287	319	---	469	511	439	329	194	128	176
31	282	---	287	333	---	474	---	418	---	184	130	---
TOTAL	11579	13914	9585	13202	8323	17784	31426	17315	9804	8443	4691	5267
MEAN	374	464	309	426	287	574	1048	559	327	272	151	176
MAX	674	947	392	1340	317	3420	8410	1470	565	658	294	498
MIN	282	281	287	268	259	255	373	357	261	184	125	124
CFSM	1.62	2.01	1.34	1.84	1.24	2.49	4.54	2.42	1.42	1.18	.65	.76
IN.	1.86	2.24	1.54	2.13	1.34	2.86	5.06	2.79	1.58	1.36	.76	.85

CAL YR 1979 TOTAL 186134 MEAN 510 MAX 13600 MIN 184 CFSM 2.21 IN 29.97
WTR YR 1980 TOTAL 151333 MEAN 413 MAX 8410 MIN 124 CFSM 1.79 IN 24.37

02114450 LITTLE YADKIN RIVER AT DALTON, N. C.

LOCATION.--Lat 36°17'56", long 80°24'53", Stokes County, Hydrologic Unit 03040101, on left bank 1,200 ft (370 m) downstream from bridge on U.S. Highway 52, 1.0 mi (1.6 km) southwest of Dalton, 1.3 mi (2.1 km) downstream from Southern Railway bridge, and 2.0 mi (3.2 km) downstream from Danbury Creek.

DRAINAGE AREA.--42.8 mi² (110.9 km²).

PERIOD OF RECORD.--August 1960 to current year.

REVISED RECORDS.--WSP 2104: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 813.7 ft (248.02 m) National Geodetic Vertical Datum of 1929 (North Carolina State Highway Commission bench mark).

REMARKS.--Records good. A Soil Conservation Service flood-control dam on upstream tributary, drainage area 4.7 mi² (12.2 km²) with flood storage of 695 acre-ft (857,000 m³) was completed on June 21, 1977.

AVERAGE DISCHARGE.--20 years, 48.2 ft³/s (1.365 m³/s), 15.29 in/yr (388 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,400 ft³/s (266 m³/s) Sept. 22, 1979, gage height, 20.29 ft (6.184 m), from rating curve extended above 2,700 ft³/s (76.5 m³/s) on basis of slope-area measurement at gage height, 17.86 ft (5.444 m); minimum, 1.3 ft³/s (0.037 m³/s) Aug. 2, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft³/s (48 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct 2	1900	*3180	90.1	*9.03	2.752	July 18	0130	2010	56.9	6.14	1.871
Mar 21	0700	3150	89.2	8.96	2.731	July 23	0930	1760	49.8	5.48	1.670
Apr 9	0500	2760	78.2	8.03	2.448						

Minimum discharge, 9.9 ft³/s (0.28 m³/s) Sept. 16, gage height, 0.58 ft (0.18 m); minimum daily, 10 ft³/s (0.28 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	28	38	30	38	29	55	38	38	23	20	13
2	562	73	36	29	38	42	50	36	31	22	21	13
3	219	56	34	29	37	40	47	34	29	22	19	13
4	92	38	34	30	34	38	51	33	27	24	18	31
5	404	33	33	32	34	51	44	32	25	28	17	17
6	105	31	35	29	36	55	41	31	25	22	16	15
7	65	30	35	28	34	44	40	30	27	20	16	14
8	50	29	32	28	32	51	178	30	26	19	15	12
9	44	29	31	27	35	71	696	30	23	40	15	12
10	90	42	31	27	37	50	128	29	24	292	17	12
11	58	62	31	51	35	42	77	29	23	110	14	11
12	47	62	31	96	35	38	95	28	23	42	14	11
13	42	46	42	49	33	46	116	28	22	77	13	11
14	38	38	43	256	33	50	587	29	22	34	13	11
15	35	35	35	152	36	43	156	30	22	27	76	11
16	34	34	36	76	42	40	88	30	21	24	34	10
17	33	34	33	58	36	90	67	30	21	35	18	12
18	32	32	32	432	33	177	59	69	22	377	17	14
19	31	31	32	172	33	72	54	36	24	48	18	17
20	31	30	31	86	34	215	50	130	21	32	16	20
21	31	29	31	63	36	1070	48	129	19	27	17	15
22	30	29	31	63	34	161	45	50	19	23	65	14
23	31	30	31	73	33	86	43	112	18	323	24	12
24	31	30	33	56	31	175	41	421	18	46	20	12
25	29	31	43	52	32	159	41	153	95	30	18	49
26	29	174	34	48	32	84	40	67	87	26	16	19
27	28	71	32	45	30	65	41	46	30	24	15	15
28	29	52	31	44	31	60	40	39	23	23	15	14
29	29	44	31	41	30	74	39	35	28	39	14	15
30	29	39	31	38	---	63	41	34	28	23	14	20
31	28	---	31	42	---	64	---	35	---	21	14	---
TOTAL	2440	1322	1044	2282	994	3345	3098	1883	861	1923	639	465
MEAN	78.7	44.1	33.7	73.6	34.3	108	103	60.7	28.7	62.0	20.6	15.5
MAX	562	174	43	432	42	1070	696	421	95	377	76	49
MIN	28	28	31	27	30	29	39	28	18	19	13	10
CFSM	1.84	1.03	.79	1.72	.80	2.52	2.41	1.42	.67	1.45	.48	.36
IN.	2.12	1.15	.91	1.98	.86	2.91	2.69	1.64	.75	1.67	.56	.40

CAL YR 1979 TOTAL 28814 MEAN 78.9 MAX 3020 MIN 13 CFSM 1.84 IN 25.04
WTR YR 1980 TOTAL 20296 MEAN 55.5 MAX 1070 MIN 10 CFSM 1.30 IN 17.64

02115360 YADKIN RIVER AT ENON, N. C.

LOCATION.--Lat 36°07'55", long 80°26'39", Forsyth County, Hydrologic Unit 03040101, on left bank 100 ft (30 m) upstream from bridge on Secondary Road 1525, 1.5 mi (2.4 km) east of Enon, 4 mi (6.4 km) upstream from Forbush Creek, and 324 mi (521 km) upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--1,694 mi² (4,390 km²), revised.

PERIOD OF RECORD.--July 1964 to current year.

REVISED RECORDS.--WRD N. C. 1972: 1970(M).

GAGE.--Water-stage recorder. Datum of gage is 701.71 ft (213.881 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 6, 1968, nonrecording gage on downstream side of bridge at same site and datum.

REMARKS.--Records good. Some regulation by W. Kerr Scott Reservoir (see p. 331). Corps of Engineers stage-radio telemeter at station.

AVERAGE DISCHARGE.--16 years, 2,669 ft³/s (75.59 m³/s), 21.40 in/yr (544 mm/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,300 ft³/s (2,080 m³/s) June 21, 1972; maximum gage height, 29.52 ft (8.998 m) Sept. 22, 1979; minimum observed, 625 ft³/s (17.7 m³/s) Aug. 17, 1967; minimum gage height observed, 2.29 ft (0.698 m) July 28, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 15, 1940 reached a stage of 737.5 ft (224.79 m) National Geodetic Vertical Datum of 1929 (35.8 ft or 10.91 m, gage datum), from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharge, 39,500 ft³/s (1,120 m³/s) Apr. 9, gage height, 23.88 ft (7.279 m); minimum, 1,010 ft³/s (28.6 m³/s) Aug. 31, gage height, 3.25 ft (0.991 m); minimum daily, 1,020 ft³/s (28.9 m³/s) Aug. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6610	2150	2840	2210	2370	1900	4930	3520	3090	2060	1520	1050
2	6820	2860	2820	2110	2160	1950	3870	3290	2750	1930	1410	1130
3	7410	8990	2860	2100	2150	1920	3410	3240	2590	1880	1310	1190
4	4250	5760	2560	2090	2220	2050	3280	3190	2420	1970	1340	1740
5	5100	5600	2550	2140	2120	2190	3230	3100	2360	2230	1290	1710
6	3960	3910	2600	2110	2230	2730	3130	3020	2340	2090	1260	1570
7	3360	2900	2690	2070	2230	2590	3030	2930	2280	1880	1210	1450
8	3010	2950	2570	2040	2210	2490	3390	2870	2330	1850	1150	1230
9	2830	2640	2450	2030	2200	3300	32000	2850	2200	1980	1130	1150
10	3130	2900	2350	2010	2280	3120	13800	2760	2110	3220	1130	1170
11	3950	5500	2330	2130	2230	2880	10600	2730	2050	3460	1080	1150
12	3060	6080	2330	3290	2180	2510	8940	2700	2020	2320	1060	1100
13	2840	5190	2430	2960	2130	2330	8780	2650	2030	2270	1060	1080
14	2710	4000	2490	8710	2080	2680	17800	2720	2020	1930	1030	1070
15	2520	3440	2320	6640	2090	2530	15500	2650	2030	1810	1110	1110
16	2380	3160	2290	4910	2200	2330	11000	2570	1930	1800	1220	1070
17	2370	2880	2290	3660	2260	2430	10200	2500	1900	1740	1090	1060
18	2400	2740	2200	6150	2170	9110	9640	4690	1970	2120	1080	1130
19	2330	2880	2160	8170	2070	5830	8170	4200	2080	1640	1170	1170
20	2300	2640	2130	4760	2070	5490	6170	5250	2030	1570	1220	1280
21	2280	2610	2110	3860	2170	22000	4690	8310	1920	1530	1120	1410
22	2250	2540	2120	3150	2190	9760	4220	4570	1830	1500	1430	1320
23	2250	2530	2130	3430	2150	7770	4070	4400	1810	2150	1640	1220
24	2670	2630	2150	3170	2100	5820	3850	6690	1750	1640	1280	1170
25	2380	2760	2710	2800	2060	7410	3860	6760	2410	1530	1230	1440
26	2230	5720	2940	2710	2050	5280	3680	4390	7150	1470	1180	1500
27	2150	5990	2770	2720	1980	4280	3720	3480	4660	1440	1130	1300
28	2130	4860	2540	2580	1960	3830	3800	3060	3220	1460	1090	1150
29	2140	3660	2310	2460	1940	4520	3590	2910	2400	2780	1060	1170
30	2150	3240	2180	2380	---	4090	3760	3030	2250	2710	1040	1330
31	2170	---	2260	2410	---	4150	---	2870	---	1650	1020	---
TOTAL	98140	115710	75480	103960	62250	141270	220110	113900	73930	61610	37090	37620
MEAN	3166	3857	2435	3354	2147	4557	7337	3674	2464	1987	1196	1254
MAX	7410	8990	2940	8710	2370	22000	32000	8310	7150	3460	1640	1740
MIN	2130	2150	2110	2010	1940	1900	3030	2500	1750	1440	1020	1050
(†)	-29	+5	-5	0	0	+19	-20	0	0	0	-15	-28

CAL YR 1979 TOTAL 1361290 MEAN 3730 MAX 48400 MIN 1480 MEAN‡ 3742 CFSM‡ 2.21 IN‡ 30.00
WTR YR 1980 TOTAL 1141070 MEAN 3118 MAX 32000 MIN 1020 MEAN‡ 3112 CFSM‡ 1.84 IN‡ 25.05

† Change in contents, equivalent in cubic feet per second, in W. Kerr Scott Reservoir; furnished by Corps of Engineers.
‡ Adjusted for change in W. Kerr Scott Reservoir.

02115856 SALEM CREEK NEAR ATWOOD, N. C.

LOCATION (REVISED).--Lat 36°02'10", long 80°18'35", Forsyth County, Hydrologic Unit 03040101, on left bank 5 ft (1.5 m) upstream from bridge at Winston-Salem Elledge Wastewater Treatment Plant, 2,700 ft (820 m) upstream from effluent outfall, 4,100 ft (1,250 m) upstream from bridge on Secondary Road 1120, 1.4 mi (2.3 km) southeast of Atwood, and 3.4 mi (5.5 km) upstream from mouth.

DRAINAGE AREA.--65.6 mi^2 (169.9 km^2), revised.

PERIOD OF RECORD.--May 1971 to current year.

GAGE.--Water-stage recorder and concrete control since Dec. 1, 1972. Datum of gage is 693.97 ft (211.522 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Salem Lake in the headwaters. The city of Winston-Salem diverted an average of 24.8 ft^3/s (0.70 m^3/s) from Salem Lake for water supply. Diurnal fluctuation at low flow caused by filtration plant and industry. Creek channel improved by dredging in 1916, 1934-35, 1961, 1967. Recording rain gage at station.

AVERAGE DISCHARGE.--9 years, 76.0 ft^3/s (2.152 m^3/s), 15.73 in/yr (400 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,620 ft^3/s (103 m^3/s) May 13, 1971, gage height, 16.30 ft (4.968 m); minimum, 11 ft^3/s (0.31 m^3/s) Sept. 13, 1976, Sept. 4, 1977; minimum daily, 12 ft^3/s (0.34 m^3/s) Sept. 4, 1977; minimum gage height, 0.59 ft (0.180 m) Oct. 15, 16, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,400 ft^3/s (68.0 m^3/s) Apr. 9, gage height, 11.60 ft (3.536 m); minimum, 14 ft^3/s (0.40 m^3/s) Sept. 14, gage height, 1.47 ft (0.448 m); minimum daily, 16 ft^3/s (0.45 m^3/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	32	35	29	44	34	67	47	43	32	51	24
2	77	154	33	29	39	39	62	44	34	30	32	19
3	62	61	33	29	38	57	59	42	34	37	24	19
4	55	41	33	35	39	68	60	39	33	33	22	24
5	355	35	32	39	37	80	53	40	33	37	22	30
6	106	33	46	30	45	72	50	41	33	44	21	19
7	69	31	37	30	42	61	50	37	32	27	21	17
8	58	30	32	33	38	270	97	36	30	26	22	17
9	46	29	31	29	54	190	906	37	28	55	20	17
10	128	112	31	30	68	88	227	34	29	187	19	17
11	60	227	31	146	52	68	92	33	28	56	19	17
12	48	134	31	79	46	58	154	34	28	36	20	17
13	53	68	57	55	42	67	176	35	28	57	20	16
14	44	54	40	355	41	53	311	36	27	32	24	17
15	41	43	32	99	44	46	112	37	26	29	60	18
16	39	37	40	72	46	44	78	35	31	27	35	18
17	36	34	31	59	43	190	68	36	27	30	21	19
18	34	31	31	481	41	197	63	160	33	120	21	21
19	33	31	31	267	40	86	57	41	29	34	24	18
20	33	31	31	97	48	410	54	400	27	27	22	29
21	33	31	31	72	55	792	54	250	25	26	68	24
22	33	31	31	110	43	222	50	80	23	25	94	18
23	43	31	29	105	39	98	48	77	23	40	28	20
24	34	31	42	70	36	371	55	100	29	28	23	116
25	33	33	59	61	44	303	73	183	211	26	22	500
26	33	285	31	53	48	115	88	71	93	24	22	38
27	33	72	29	49	37	84	55	50	61	22	21	26
28	32	52	29	48	38	105	49	43	44	25	20	24
29	34	44	28	46	36	112	62	40	46	32	18	28
30	35	38	29	43	---	84	50	38	44	23	17	80
31	36	---	29	58	---	79	---	60	---	23	28	---
TOTAL	1812	1896	1065	2738	1263	4543	3380	2236	1212	1250	881	1267
MEAN	58.5	63.2	34.4	88.3	43.6	147	113	72.1	40.4	40.3	28.4	42.2
MAX	355	285	59	481	68	792	906	400	211	187	94	500
MIN	32	29	28	29	36	34	48	33	23	22	17	16

CAL YR 1979 TOTAL 33744 MEAN 92.4 MAX 1600 MIN 21
WTR YR 1980 TOTAL 23543 MEAN 64.3 MAX 906 MIN 16

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.

LOCATION.--Lat 35°51'24", long 80°23'10", Davidson County, Hydrologic Unit 03040101, near left bank on downstream side of pier of bridge on U.S. Highway 64, 1.5 mi (2.4 km) south of Yadkin College, 6.2 mi (10.0 km) downstream from Reedy Creek, and 295 mi (475 km) upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--2,280 mi² (5,900 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1928 to current year.

REVISED RECORDS.--WSP 822: Drainage area. WSP 852: 1935-37(m).

GAGE.--Water-stage recorder. Datum of gage is 638.65 ft (194.661 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to July 26, 1957 at site on left bank 80 ft (24 m) downstream at same datum.

REMARKS.--Water-discharge record good. Diurnal fluctuation and occasionally some regulation during low flow caused by small hydroelectric plant with little storage capacity 10 mi (16 km) upstream. Since August 1962, some regulation by W. Kerr Scott Reservoir. (See p. 331). Corps of Engineers have a stage radio and satellite telemeter, and the National Weather Service, a telephone telemeter, at station.

AVERAGE DISCHARGE.--52 years, 3,009 ft³/s (85.21 m³/s), 17.92 in/yr (455 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,200 ft³/s (2,270 m³/s) Aug. 15, 1940, gage height, 33.75 ft (10.287 m); minimum observed, 177 ft³/s (5.01 m³/s) Oct. 12, 1954, gage height, -0.42 ft (-0.128 m); minimum daily, 330 ft³/s (9.35 m³/s) Oct. 9, 1954, Sept. 23, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916, reached a stage of 36.3 ft (11.06 m), from floodmarks, discharge, 94,300 ft³/s (2,670 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 34,900 ft³/s (988 m³/s) Apr. 10, gage height, 22.67 ft (6.910 m); minimum, (result of regulation), 884 ft³/s (25.0 m³/s) Sept. 6, gage height, 0.77 ft (0.235 m); minimum daily, 1,200 ft³/s (34.0 m³/s) Aug. 31, Sept. 14, 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9560	2720	3640	2660	2920	2350	5500	4210	3790	2530	1880	1240
2	7060	2880	3270	2520	2740	2380	5030	3930	3440	2310	2070	1250
3	10100	8460	3400	2520	2610	2440	4140	3760	3260	2280	1530	1320
4	6210	6090	3190	2480	2670	2480	3930	3760	3010	2340	1510	1390
5	8040	6390	3060	2560	2650	2820	3820	3660	2840	2550	1510	2290
6	6460	5050	3090	2560	2630	3330	3570	3570	2850	2520	1450	1560
7	4910	3830	3230	2490	2710	3270	3430	3480	2770	2270	1400	1750
8	4210	3530	3120	2470	2690	3530	3440	3410	2770	2110	1350	1480
9	3830	3220	2980	2440	2700	5000	15200	3370	2710	2290	1350	1320
10	3810	3420	2840	2400	2810	4220	31500	3300	2560	3790	1350	1400
11	4980	6210	2830	2610	2820	3630	15800	3230	2480	3690	1350	1230
12	4110	7230	2760	4100	2760	3180	10400	3210	2420	2670	1310	1260
13	3640	6390	2870	3770	2690	2890	10700	3150	2440	2680	1270	1220
14	3520	5310	3090	7950	2620	3080	12200	3150	2410	2220	1270	1200
15	3300	4310	2880	12200	2620	3090	22800	3280	2420	2060	1250	1210
16	3110	3870	2790	6160	2760	2850	13400	3100	2370	2090	1510	1200
17	3030	3710	2800	4960	2810	2890	11000	3000	2320	2360	1310	1200
18	3030	3320	2700	6650	2730	8810	10200	4100	2300	2270	1310	1240
19	3010	3420	2630	12900	2600	7500	9390	5620	2470	1900	1310	1290
20	2940	3310	2590	6630	2550	6700	7410	5400	2450	1850	1510	1360
21	2910	3150	2560	5250	2700	17400	6050	11000	2360	1800	1440	1560
22	2880	3110	2550	4140	2730	23400	5080	6280	2200	1840	1690	1530
23	2860	3060	2540	4250	2670	10100	4880	5100	2160	2030	1970	1390
24	3090	3100	2580	4170	2600	8210	4590	8270	2080	2540	1550	1370
25	3110	3210	2890	3570	2540	11000	4670	7640	2390	1750	1450	2350
26	2900	5280	3470	3300	2580	7310	4540	6190	6400	1680	1410	1830
27	2760	8050	3180	3220	2470	5700	4380	4580	5920	1640	1340	1580
28	2700	5810	3010	3150	2420	4860	4450	3860	4240	1640	1300	1400
29	2710	4730	2800	3030	2380	5610	4270	3580	2900	2120	1260	1380
30	2710	3930	2600	2900	---	5520	4340	3560	2890	3470	1240	1490
31	2730	---	2630	2900	---	5050	---	3430	---	2070	1200	---
TOTAL	130220	136100	90570	132910	77180	180600	250110	137180	87620	71360	44650	43290
MEAN	4201	4537	2922	4287	2661	5826	8337	4425	2921	2302	1440	1443
MAX	10100	8460	3640	12900	2920	23400	31500	11000	6400	3790	2070	2350
MIN	2700	2720	2540	2400	2380	2350	3430	3000	2080	1640	1200	1200
(†)	-29	+5	-5	0	0	+19	-20	0	0	0	-15	-28

CAL YR 1979 TOTAL 1714410 MEAN 4697 MAX 50900 MIN 1710 MEAN‡ 4709 CFSM‡ 2.07 IN‡ 28.10
WTR YR 1980 TOTAL 1381790 MEAN 3775 MAX 31500 MIN 1200 MEAN‡ 3769 CFSM‡ 1.65 IN‡ 22.46

† Change in contents, equivalent in cubic feet per second, in W. Kerr Scott Reservoir; furnished by Corps of Engineers.
‡ Adjusted for change in W. Kerr Scott Reservoir.

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1944, 1951 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1964 to September 1967, October 1970 to September 1978, February 1979 to current year.
WATER TEMPERATURES: October 1943 to September 1944, October 1950 to September 1951, October 1955 to September 1967, October 1970 to current year.
SUSPENDED-SEDIMENT DISCHARGE: January 1951 to current year.

INSTRUMENTATION.--Water-quality monitor from October 1970 to September 1975.

REMARKS.--Station operated as part of NASQAN network from March 1979 to present. Miscellaneous chemical data published for water years 1947-49, 1955. Daily records of specific conductance for water years 1956-64 are available in files of district office in Raleigh, N. C.

COOPERATION.--Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 815 micromhos Aug. 26, 1971; minimum recorded, 20 micromhos Nov. 2, 16, 28, Dec. 1, 6, 7, 1971.
WATER TEMPERATURES: Maximum daily, 31.0°C Aug. 24, 1959; minimum daily, 0.0°C on many days during most winter months.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,970 mg/L May 26, 1952; minimum daily mean, 1 mg/L Dec. 3, 1953.
SEDIMENT LOADS: Maximum daily, 182,000 tons (165,000 tonnes) June 22, 1972; minimum daily, 3 tons (2.7 tonnes) Dec. 3, 1953.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 130 micromhos Sept. 25; minimum daily, 37 micromhos Apr. 10.
WATER TEMPERATURES: Maximum daily, 28.0°C July 17-22, Aug. 10, 12; minimum daily, 1.0°C Feb. 4.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,190 mg/L Apr. 9; minimum daily mean, 10 mg/L Jan. 10.
SEDIMENT LOADS: Maximum daily, 92,600 tons (84,000 tonnes) Apr. 10; minimum daily, 65 tons (59 tonnes) Jan. 10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT												
19...	0920	3030	61	6.3	12.0	15	9.6	520	450	15	1	4.0
NOV												
19...	1030	3450	54	6.3	9.0	10	5.1	640	520	13	0	3.5
DEC												
14...	0900	3160	63	6.7	7.5	6.0	12.3	530	420	15	0	3.9
JAN												
16...	0910	5820	50	5.5	5.5	25	13.1	580	460	13	3	3.1
FEB												
19...	1000	2650	58	6.3	3.0	1.5	13.2	540	400	13	0	3.4
MAR												
26...	1130	7170	44	5.7	10.0	100	11.1	540	380	13	0	3.3
APR												
10...	1330	34600	39	6.4	13.0	32	10.3	420	330	10	2	2.5
MAY												
20...	1045	4580	57	6.4	18.0	110	9.6	460	360	13	0	3.4
JUN												
26...	1035	6800	54	6.2	19.5	2.3	9.1	460	390	13	0	3.4
JUL												
21...	1000	1840	69	6.0	28.0	20	7.7	96	130	16	0	4.2
AUG												
18...	1040	1310	76	5.9	25.0	26	8.1	160	64	16	0	4.0
SEP												
15...	1000	1210	80	6.0	23.0	1.3	7.1	220	80	16	0	4.1

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT												
19...	1.3	5.8	42	.6	1.6	18	0	15	14	3.8	3.6	.1
NOV												
19...	1.1	4.5	48	.5	1.4	20	0	16	16	3.2	3.2	.1
DEC												
14...	1.3	5.4	49	.6	1.8	22	0	18	7.0	4.0	5.5	.1
JAN												
16...	1.3	3.4	41	.4	2.4	12	0	10	61	7.5	4.2	.1
FEB												
19...	1.2	4.8	41	.6	1.2	20	0	16	16	5.2	3.9	.1
MAR												
26...	1.2	3.1	30	.4	1.8	16	0	13	51	5.7	3.4	.1
APR												
10...	.8	4.1	42	.6	2.2	9	0	7	5.7	5.9	2.3	.1
MAY												
20...	1.2	4.2	36	.5	2.0	18	0	15	11	4.0	3.4	.1
JUN												
26...	1.2	4.6	39	.5	1.5	20	0	16	20	3.3	3.9	.1
JUL												
21...	1.3	5.8	40	.6	2.2	26	0	21	42	3.0	4.6	.1
AUG												
18...	1.4	7.0	45	.8	2.5	26	0	*24	59	4.2	5.8	.2
SEP												
15...	1.4	8.0	47	.9	2.6	36	0	*22	43	4.0	6.2	.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)
OCT												
19...	14	44	45	.06	360	.48	.48	.02	.00	.02	.00	.94
NOV												
19...	13	41	42	.06	382	.40	.41	.01	.04	.01	.05	.23
DEC												
14...	13	56	48	.08	478	.42	.41	.10	.06	.12	.08	.11
JAN												
16...	9.3	59	40	.08	927	.76	.70	.09	.12	.11	.15	.89
FEB												
19...	11	42	43	.06	301	.39	.39	.12	.12	.15	.15	.52
MAR												
26...	9.5	55	31	.07	1070	.52	.74	.06	.02	.07	.03	.69
APR												
10...	5.3	46	31	.06	4300	.58	.59	.16	.09	.19	.12	.79
MAY												
20...	11	47	42	.06	581	.63	.64	.40	.39	.48	.50	.54
JUN												
26...	12	54	42	.07	991	.48	.51	.06	.06	.07	.08	.85
JUL												
21...	13	51	50	.07	253	.51	.67	.03	.15	.04	.19	.42
AUG												
18...	12	68	55	.09	241	.38	.70	.12	--	.15	--	.16
SEP												
15...	15	58	57	.08	189	.43	.45	.19	.22	.23	.28	.40

* Lab alkalinity.

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)
OCT												
19...	.46	.96	.50	.46	1.4	6.4	.120	.37	.100	--	--	--
NOV												
19...	.25	.24	.00	.29	.64	2.8	.090	.28	.090	--	--	--
DEC												
14...	.04	.21	.11	.10	.63	2.8	.130	.40	.090	3	1	2
JAN												
16...	.29	.98	.57	.41	1.7	7.7	.240	.74	.090	--	--	--
FEB												
19...	.24	.64	.28	.36	1.0	4.6	.110	.34	.090	--	--	--
MAR												
26...	.77	.75	.00	.79	1.3	5.6	.190	.58	.080	2	0	4
APR												
10...	.27	.95	.59	.36	1.5	6.8	.580	1.8	.030	1	0	1
MAY												
20...	.35	.94	.20	.74	1.6	7.0	.230	.71	.120	--	--	--
JUN												
26...	.32	.91	.53	.38	1.4	6.2	.270	.83	.050	2	0	2
JUL												
21...	.35	.45	.00	.50	.96	4.3	.160	.49	.130	--	--	--
AUG												
18...	--	.28	--	--	.66	2.9	.220	.67	.160	--	--	--
SEP												
15...	.00	.59	.40	.19	1.0	4.5	.190	.58	.130	1	0	1

DATE	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)
OCT												
19...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
19...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
14...	<50	<20	20	0	0	2	20	10	10	1	0	4
JAN												
16...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
19...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
26...	100	70	30	0	0	1	10	0	10	0	0	0
APR												
10...	100	70	30	0	0	2	30	20	10	9	9	0
MAY												
20...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
26...	100	80	20	0	0	0	<10	0	<10	6	6	0
JUL												
21...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
18...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
15...	<50	--	--	0	0	0	10	0	10	0	0	0

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 19...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 19...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 14...	3	0	4	1000	780	220	6	4	2	60	40	20
JAN 16...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 19...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 26...	46	34	12	4300	4200	60	15	15	0	120	110	10
APR 10...	30	22	8	29000	29000	300	24	24	0	450	420	30
MAY 20...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 26...	22	16	6	21000	21000	110	15	15	0	200	190	7
JUL 21...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 18...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 15...	10	2	8	1600	1300	310	2	0	2	60	50	10

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)
OCT 19...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 19...	--	--	--	--	--	--	--	--	--	0	--	--
DEC 14...	.1	.0	.1	4	2	2	0	0	0	0	0	0
JAN 16...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 19...	--	--	--	--	--	--	--	--	--	0	--	--
MAR 26...	<.1	.0	<.1	5	1	4	0	0	0	0	0	0
APR 10...	.1	.0	.1	60	59	1	1	1	0	0	0	0
MAY 20...	--	--	--	--	--	--	--	--	--	0	--	--
JUN 26...	.1	.0	.4	8	8	0	0	0	0	0	0	0
JUL 21...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 18...	--	--	--	--	--	--	--	--	--	0	--	--
SEP 15...	.1	.0	.1	4	4	0	0	0	0	0	0	0

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	BIOMASS CHLORO-PHYLL RATIO PERI-PHYTON (UNITS)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPO-SURE (DAYS)
OCT												
19...	--	--	--	1.5	--	--	--	--	--	--	--	--
NOV												
19...	--	--	--	1.7	--	--	--	--	--	--	--	--
DEC												
14...	130	100	30	--	3.5	.7	.160	.080	1333	.060	.000	24
JAN												
16...	--	--	--	9.5	--	--	--	--	--	--	--	--
FEB												
19...	--	--	--	2.0	--	--	--	--	--	--	--	--
MAR												
26...	150	140	10	--	8.5	1.4	.000	.000	--	.000	.000	35
APR												
10...	100	--	--	--	10	4.4	--	--	--	--	--	--
MAY												
20...	--	--	--	7.3	--	--	--	--	--	--	--	--
JUN												
26...	40	40	1	--	3.7	3.2	.394	.236	929	.170	.040	36
JUL												
21...	--	--	--	1.8	--	--	--	--	--	--	--	--
AUG												
18...	--	--	--	4.4	--	--	--	--	--	--	--	--
SEP												
15...	10	0	10	--	5.2	.3	--	--	--	--	--	--

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

PHYTOPLANKTON ANALYSES, JULY TO SEPTEMBER 1979

DATE	JUL 23,79	AUG 27,79
TIME	1045	1030
TOTAL CELLS/ML	7400	930
DIVERSITY: DIVISION	0.9	0.0
.CLASS	0.9	0.0
..ORDER	1.1	0.8
...FAMILY	1.5	0.8
....GENUS	1.5	0.8

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)				
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...OOCYSTACEAE				
....DICTYOSPHAERIUM	200	3	--	-
CHRYSOPHYTA				
.BACILLARIOPHYCEAE				
..CENTRALES				
...COSCINODISCACEAE				
....CYCLOTELLA	50	1	--	-
....MELOSIRA	250	3	700#	75
..PENNALES				
...ACHNANTHACEAE				
....ACHNANTHES	100	1	--	-
...CYMBELLACEAE				
....CYMBELLA	150	2	--	-
...DIATOMACEAE				
....DIATOMA	50	1	--	-
...FRAGILARIACEAE				
....SYNEDRA	100	1	--	-
...NAVICULACEAE				
....NAVICULA	150	2	--	-
...NITZSCHIACEAE				
....NITZSCHIA	300	4	230#	25
...TABELLARIACEAE				
....TABELLARIA	250	3	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)				
.CYANOPHYCEAE				
..HORMOGONALES				
...OSCILLATORIACEAE				
....OSCILLATORIA	5700#	77	--	-
PYRRHOPHYTA (FIRE ALGAE)				
.DINOPHYCEAE				
..PERIDINIALES				
...CERATIACEAE				
....CERATIUM	50	1	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE	NOV 19,79	APR 10,80	MAY 20,80	JUN 26,80
TIME	1030	1330	1045	1035
TOTAL CELLS/ML	1600	430	3400	3600
DIVERSITY: DIVISION	1.1	0.7	0.8	1.3
.CLASS	1.1	0.7	0.8	1.3
..ORDER	1.9	0.7	1.1	1.5
...FAMILY	2.5	1.5	1.4	1.9
....GENUS	3.0	1.5	2.1	2.0

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	--	-	--	-
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	51	1
...HYDRODICTYACEAE								
....PEDIASTRUM	--	-	--	-	--	-	--	-
...MICRACTINIACEAE								
....MICRACTINIUM	57	4	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	--	-	--	-	*	0	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	170	5
....KIRCHNERIELLA	14	1	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	--	-
....SELENASTRUM	--	-	--	-	*	0	--	-
....TREUBARIA	14	1	--	-	--	-	--	-
...SCENEDESMACEAE								
....CRUCIGENIA	--	-	--	-	--	-	210	6
....SCENEDESMUS	--	-	--	-	100	3	39	1
....TETRASTRUM	--	-	--	-	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	43	3	72#	17	*	0	*	0
....CHLOROGONIUM	14	1	--	-	--	-	--	-
..ZYGNEMATALES								
...DESMIDIACEAE								
....COSMARIUM	29	2	--	-	39	1	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....COSCINODISCUS	--	-	--	-	*	0	--	-
....CYCLOTELLA	--	-	--	-	26	1	51	1
....MELOSIRA	29	2	--	-	90	3	170	5
..PENNALES								
...CYMBELLACEAE								
....CYMBELLA	--	-	--	-	26	1	*	0
...FRAGILARIACEAE								
....ASTERIONELLA	240#	15	--	-	51	2	51	1
....FRAGILARIA	14	1	--	-	*	0	--	-
....SYNEDRA	--	-	--	-	100	3	100	3
...GOMPHONEMATACEAE								
....GOMPHONEMA	--	-	--	-	39	1	*	0
...NAVICULACEAE								
....NAVICULA	14	1	220#	50	39	1	77	2
...NITZSCHIACEAE								
....NITZSCHIA	--	-	140#	33	39	1	210	6
...SURIRELLACEAE								
....SURIRELLA	--	-	--	-	--	-	*	0
CRYPTOPHYTA (CRYPTOMONADS)								
.CRYPTOPHYCEAE								
..CRYPTOMONADALES								
...CRYPTOMONADACEAE								
....CRYPTOMONAS	--	-	--	-	--	-	*	0

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE / TIME	NOV 19,79 1030		APR 10,80 1330		MAY 20,80 1045		JUN 26,80 1035	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	--	-	--	-	--	-	--	-
....ANACYSTIS	260#	16	--	-	26	1	*	0
....COCCOCHLORIS	--	-	--	-	--	-	--	-
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	51	2	--	-
....APHANIZOMENON	320#	19	--	-	--	-	--	-
...OSCILLATORIACEAE								
....LYNGBYA	360#	22	--	-	--	-	--	-
....OSCILLATORIA	220	13	--	-	620#	18	2400#	67
....PHORMIDIUM	--	-	--	-	2100#	61	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	--	-	--	-	--	-

DATE / TIME	JUL 21,80 1000	AUG 18,80 1040	SEP 15,80 1000
TOTAL CELLS/ML	6700	7600	10000
DIVERSITY: DIVISION	1.3	1.3	1.5
.CLASS	1.3	1.3	1.5
..ORDER	1.7	1.7	2.1
...FAMILY	2.7	2.2	2.4
....GENUS	3.3	2.6	2.8

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...CHARACIACEAE						
....SCHROEDERIA	*	0	--	-	--	-
...COELASTRACEAE						
....COELASTRUM	280	4	200	3	--	-
...HYDRODICTYACEAE						
....PEDIASTRUM	--	-	320	4	--	-
...MICRACTINIACEAE						
....MICRACTINIUM	1300#	19	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	80	1	100	1	83	1
....DICTYOSPHAERIUM	--	-	260	3	2200#	22
....KIRCHNERIELLA	80	1	--	-	--	-
....OOCYSTIS	100	1	40	1	170	2
....SELENASTRUM	240	4	*	0	*	0
....TREUBARIA	40	1	--	-	--	-
...SCENEDESMACEAE						
....CRUCIGENIA	--	-	--	-	--	-
....SCENEDESMUS	1300#	19	970	13	420	4
....TETRASTRUM	80	1	--	-	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	240	4	81	1	500	5
....CHLOROGONIUM	--	-	--	-	--	-
..ZYGNEMATALES						
...DESMIDIACEAE						
....COSMARIUM	--	-	--	-	--	-

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	JUL 21,80 1000		AUG 18,80 1040		SEP 15,80 1000	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....COSCINODISCUS	--	-	--	-	--	-
....CYCLOTELLA	220	3	440	6	500	5
....MELOSIRA	--	-	180	2	250	2
..PENNALES						
...CYMBELLACEAE						
....CYMBELLA	--	-	--	-	--	-
...FRAGILARIACEAE						
....ASTERIONELLA	--	-	--	-	--	-
....FRAGILARIA	--	-	40	1	--	-
....SYNEDRA	--	-	--	-	--	-
...GOMPHONEMATACEAE						
....GOMPHONEMA	--	-	--	-	*	0
...NAVICULACEAE						
....NAVICULA	*	0	40	1	120	1
...NITZSCHIACEAE						
....NITZSCHIA	240	4	280	4	710	7
...SURIRELLACEAE						
....SURIRELLA	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
.CRYPTOPHYCEAE						
..CRYPTOMONADALES						
...CRYPTOMONADACEAE						
....CRYPTOMONAS	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	1100#	17	440	6	330	3
....ANACYSTIS	950	14	3900#	52	3900#	39
....COCCOCHLORIS	120	2	--	-	--	-
..HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	-	--	-	--	-
....APHANIZOMENON	--	-	--	-	--	-
...OSCILLATORIACEAE						
....LYNGBYA	--	-	--	-	--	-
....OSCILLATORIA	280	4	240	3	710	7
....PHORMIDIUM	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....EUGLENA	--	-	--	-	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	57	49	46	59	62	53	55	63	57	65	77
2	43	58	49	48	61	63	53	56	57	60	78	76
3	42	51	49	50	62	64	55	57	55	63	70	76
4	48	47	46	51	61	63	56	57	57	66	72	76
5	55	40	50	50	61	60	56	58	68	61	69	70
6	51	40	51	50	61	58	57	57	65	61	74	79
7	53	59	53	55	60	57	58	58	64	55	74	67
8	50	51	56	60	60	56	57	58	67	60	79	74
9	49	57	53	62	61	52	43	58	57	65	84	76
10	51	51	50	62	60	54	37	59	57	64	80	77
11	53	54	49	62	59	57	40	58	62	65	75	80
12	52	49	51	55	60	59	44	59	67	57	70	82
13	53	51	53	56	61	60	43	58	73	63	78	89
14	54	51	58	47	61	59	42	58	69	63	79	89
15	51	48	55	42	61	58	39	57	69	65	81	84
16	55	49	55	50	60	60	42	59	63	73	92	76
17	54	50	53	53	60	61	44	60	63	73	78	80
18	58	51	50	49	61	50	45	55	67	70	78	80
19	59	50	52	42	58	48	46	52	69	67	78	83
20	59	46	55	49	60	49	48	57	69	72	89	88
21	57	49	56	52	61	39	50	44	74	69	78	85
22	57	53	58	54	60	38	52	50	70	70	85	72
23	54	51	53	54	58	44	53	52	66	71	77	74
24	59	50	55	55	59	47	54	47	71	61	85	73
25	59	46	57	56	62	46	54	49	69	69	72	130
26	59	46	43	58	60	44	55	48	59	76	74	74
27	62	45	41	58	62	51	56	49	51	72	76	74
28	59	44	41	58	63	53	55	54	52	69	80	78
29	58	45	44	60	62	50	55	58	55	72	85	75
30	53	49	46	60	---	51	56	61	60	56	90	76
31	54	---	46	61	---	52	---	60	---	63	82	---
MEAN	54	50	51	54	60	54	50	55	64	65	78	80

WTR YR 1980 MEAN 60 MAX 130 MIN 37

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	14.0	8.0	6.0	3.0	4.0	13.0	12.0	21.0	24.0	27.0	25.0
2	20.0	16.0	6.0	6.0	4.0	3.0	13.0	13.0	21.0	24.0	25.0	25.0
3	21.0	15.0	5.0	7.0	3.0	3.0	14.0	14.0	22.0	25.0	27.0	26.0
4	19.0	14.0	4.0	6.0	1.0	4.0	15.0	15.0	23.0	24.0	26.0	26.0
5	18.0	13.0	5.0	5.0	6.0	4.0	15.0	16.0	23.0	25.0	27.0	26.0
6	15.0	12.0	5.0	4.0	2.0	4.0	13.0	17.0	22.0	25.0	27.0	24.0
7	15.0	13.0	7.0	4.0	3.0	7.0	14.0	17.0	22.0	25.0	27.0	25.0
8	15.0	11.0	7.0	5.0	3.0	7.0	13.0	18.0	25.0	25.0	27.0	24.0
9	16.0	10.0	6.0	5.0	3.0	10.0	14.0	16.0	24.0	26.0	27.0	24.0
10	17.0	13.0	5.0	5.0	3.0	10.0	13.0	15.0	24.0	25.0	28.0	24.0
11	15.0	13.0	5.0	6.0	4.0	10.0	14.0	15.0	24.0	24.0	27.0	23.0
12	14.0	13.0	5.0	6.0	4.0	9.0	14.0	17.0	24.0	24.0	28.0	23.0
13	15.0	12.0	8.0	6.0	3.0	8.0	14.0	20.0	20.0	25.0	27.0	22.0
14	13.0	12.0	9.0	5.0	4.0	7.0	14.0	20.0	20.0	25.0	26.0	23.0
15	15.0	10.0	7.0	6.0	4.0	8.0	13.0	20.0	21.0	25.0	27.0	26.0
16	15.0	10.0	7.0	7.0	7.0	8.0	12.0	18.0	23.0	27.0	27.0	24.0
17	13.0	9.0	6.0	7.0	5.0	10.0	12.0	18.0	23.0	28.0	25.0	23.0
18	16.0	10.0	5.0	8.0	4.0	11.0	13.0	18.0	23.0	28.0	24.0	23.0
19	15.0	10.0	4.0	8.0	4.0	10.0	18.0	20.0	20.0	28.0	25.0	23.0
20	16.0	10.0	5.0	7.0	4.0	11.0	14.0	18.0	21.0	28.0	25.0	24.0
21	16.0	10.0	5.0	7.0	5.0	12.0	15.0	18.0	21.0	28.0	26.0	24.0
22	18.0	11.0	5.0	8.0	8.0	10.0	15.0	18.0	21.0	28.0	25.0	24.0
23	18.0	13.0	7.0	8.0	9.0	10.0	19.0	19.0	22.0	27.0	25.0	26.0
24	17.0	18.0	8.0	7.0	10.0	10.0	17.0	19.0	23.0	25.0	24.0	25.0
25	17.0	15.0	10.0	6.0	8.0	10.0	18.0	19.0	22.0	25.0	24.0	24.0
26	14.0	15.0	8.0	7.0	7.0	10.0	18.0	19.0	20.0	26.0	24.0	23.0
27	13.0	14.0	8.0	7.0	7.0	10.0	15.0	18.0	19.0	26.0	24.0	21.0
28	12.0	13.0	7.0	7.0	7.0	11.0	15.0	18.0	22.0	26.0	24.0	19.0
29	13.0	10.0	5.0	8.0	7.0	10.0	13.0	19.0	24.0	25.0	24.0	18.0
30	14.0	8.0	6.0	6.0	---	12.0	12.0	20.0	24.0	25.0	24.0	17.0
31	14.0	---	5.0	5.0	---	12.0	---	21.0	---	25.0	24.0	---
MEAN	16.0	12.0	6.5	6.5	5.0	8.5	14.5	17.5	22.0	25.5	25.5	23.5

WTR YR 1980 MEAN 15.5 MAX 28.0 MIN 1.0

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	360	9290	21	154	80	786	21	151	95	749	20	127
2	285	5430	30	233	60	530	22	150	90	666	16	103
3	725	19800	381	9710	36	330	30	204	50	352	18	119
4	242	4060	320	5260	40	345	20	134	30	216	15	100
5	499	11900	206	3550	25	207	19	131	30	215	30	228
6	210	3660	115	1570	25	209	16	111	36	256	60	539
7	102	1350	69	714	41	358	20	134	37	271	32	283
8	78	887	58	553	40	337	41	273	22	160	140	1650
9	65	672	78	678	29	233	19	125	20	146	286	3860
10	90	926	77	711	23	176	10	65	21	159	160	1820
11	180	2420	310	6020	21	160	51	359	20	152	129	1260
12	116	1290	254	4960	25	186	190	2100	20	149	99	850
13	120	1180	130	2240	29	225	155	1580	21	153	57	445
14	65	618	120	1720	41	342	690	20200	20	141	57	474
15	50	445	81	943	26	202	435	15100	15	106	66	551
16	41	344	60	627	21	158	282	4690	20	149	33	254
17	48	393	44	441	22	166	200	2680	39	296	58	453
18	48	393	38	341	20	146	483	12000	21	155	507	13700
19	30	244	47	434	30	213	435	15600	16	112	425	8610
20	37	294	40	357	25	175	220	3940	20	138	535	9680
21	30	236	40	340	22	152	130	1840	21	153	1110	58200
22	28	218	42	353	20	138	185	2070	25	184	620	39200
23	25	193	52	430	25	171	109	1250	22	159	403	11000
24	50	417	30	251	20	139	85	957	21	147	475	10500
25	40	336	39	338	30	234	70	675	25	171	378	11200
26	41	321	335	5870	62	581	59	526	35	244	261	5150
27	38	283	271	5890	50	429	44	383	21	140	170	2620
28	25	182	215	3370	45	366	57	485	15	98	165	2170
29	28	205	206	2630	27	204	44	360	12	77	187	2830
30	38	278	100	1060	20	140	41	321	---	---	178	2650
31	25	184	---	---	21	149	61	478	---	---	130	1770
TOTAL	---	68449	---	61748	---	8187	---	89072	---	6114	---	192396
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	165	2450	160	1820	205	2100	111	758	49	249	25	84
2	119	1620	134	1420	155	1440	69	430	72	402	29	98
3	100	1120	105	1070	119	1050	70	431	41	169	38	135
4	85	902	75	761	99	805	68	430	43	175	65	244
5	87	897	87	860	77	590	71	489	41	167	110	680
6	95	916	72	694	80	616	61	415	37	145	110	463
7	67	620	92	864	70	524	45	276	30	113	81	383
8	61	567	70	644	71	531	56	319	38	139	70	280
9	1190	62800	66	601	73	534	63	390	48	175	60	214
10	1110	92600	58	517	68	470	210	2150	48	175	50	189
11	310	13200	58	506	66	442	198	1970	35	128	45	149
12	236	6630	49	425	62	405	150	1080	28	99	35	119
13	220	6360	57	485	55	362	195	1410	30	103	35	115
14	938	36200	66	561	54	351	124	743	29	99	35	113
15	760	46800	111	983	46	301	109	606	30	101	30	98
16	405	14700	53	444	40	256	84	474	39	159	34	110
17	300	8910	40	324	45	282	100	637	40	141	39	126
18	295	8120	278	3710	43	267	93	570	38	134	34	114
19	230	5830	391	5930	65	433	83	426	40	141	35	122
20	215	4300	360	5250	40	265	74	370	68	277	38	140
21	157	2560	885	26300	41	261	55	267	70	272	45	190
22	154	2110	488	8270	37	220	50	248	60	274	50	207
23	162	2130	282	3880	39	227	147	957	79	420	38	143
24	109	1350	516	12400	40	225	230	1580	60	251	39	144
25	110	1390	575	11900	60	387	150	709	50	196	254	1760
26	124	1520	330	5520	498	9800	65	295	42	160	132	652
27	119	1410	220	2720	368	5880	45	199	35	127	112	478
28	126	1510	170	1770	169	1930	42	186	33	116	59	223
29	110	1270	115	1110	110	861	48	275	30	102	45	168
30	151	1770	129	1240	129	1010	174	1630	30	100	43	173
31	---	---	159	1470	---	---	84	469	28	91	---	---
TOTAL	---	332562	---	104449	---	32825	---	21189	---	5400	---	8114

TOTAL LOAD FOR YEAR: 930505 TONS.

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	PH LAB (UNITS)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	FIELD ALKA-LINITY (MG/L AS CACO3)	LAB ALKA-LINITY (MG/L AS CACO3)
OCT												
15...	1400	3190	--	6.7	--	11.0	10.2	<10	1.0	110	--	14
NOV												
20...	1400	3220	--	--	6.7	9.0	11.5	<10	.7	30	--	15
DEC												
17...	1419	2810	--	--	6.7	2.0	12.2	<10	1.1	80	--	15
JAN												
17...	1424	4850	--	--	6.8	3.0	11.9	10	1.5	450	--	10
FEB												
21...	1316	2700	--	--	6.8	5.0	12.3	10	1.6	60	--	17
MAR												
25...	1402	11500	--	--	6.6	7.0	10.6	18	--	1600	--	11
APR												
21...	1331	6150	--	--	6.7	13.0	10.2	<10	.9	140	--	12
MAY												
15...	1302	3240	--	--	7.0	15.0	8.8	10	1.6	7200	--	16
JUN												
11...	1510	2460	--	--	7.2	21.0	8.6	13	.7	10	--	17
JUL												
10...	1340	4350	--	7.2	7.0	25.0	6.9	29	1.4	1200	--	20
AUG												
18...	1100	1320	--	7.2	--	22.0	7.7	<10	1.0	80	26	--
SEP												
04...	1446	1340	77	6.7	--	24.0	7.7	<10	1.3	150	27	--

02117030 HUMPY CREEK NEAR FORK, N. C.

LOCATION.--Lat 35°51'17", long 80°26'24", Davie County, Hydrologic Unit 03040101, on left bank 9 ft (3 m) upstream from culvert on Secondary Road 1813, 1.9 mi (3.0 km) south of Fork, and 2.3 mi (3.7 km) upstream from mouth.

DRAINAGE AREA.--1.05 mi² (2.72 km²).

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Altitude of gage is 695 ft (212 m), from topographic map.

REMARKS.--Records good except for period of no gage-height record, July 12-25, which are poor. Diurnal fluctuation at low flow during growing season. A one-acre farm pond with a drainage area of 0.05 mi² (0.13 km²) in the basin was completed in June 1976.

AVERAGE DISCHARGE.--12 years, 1.13 ft³/s (0.032 m³/s), 14.61 in/yr (371 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 365 ft³/s (10.3 m³/s) May 30, 1975, from rating curve extended above 65 ft³/s (1.84 m³/s) on basis of computed culvert rating and computation of peak flow through culvert with flow-over-road; maximum gage height, 6.71 ft (2.045 m) June 16, 1979; minimum, 0.02 ft³/s (0.001 m³/s) July 31, Aug. 6, 7, 1977, gage height, 0.27 ft (0.082 m); minimum daily, 0.09 ft³/s (0.003 m³/s) July 25, 31, Aug. 1, 6, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of 0.08 ft³/s (0.002 m³/s) was measured on Sept. 23, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 40 ft³/s (1.1 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
July 18	Unknown	*50	1.42	a*2.15	0.655

a From floodmarks.

Minimum discharge, 0.10 ft³/s (0.003 m³/s) Sept. 1, 14, 15; minimum gage height, 0.37 ft (0.113 m) Sept. 15; minimum daily, 0.16 ft³/s (0.005 m³/s) Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	.52	.71	.60	.77	.70	1.4	.78	.59	.35	.29	.20
2	1.1	1.5	.69	.58	.75	.81	1.2	.75	.53	.34	.27	.20
3	.82	.86	.66	.57	.73	.78	1.2	.72	.50	.38	.26	.42
4	.79	.64	.64	.65	.72	.96	1.1	.70	.48	.90	.25	.39
5	4.9	.60	.65	.69	.71	1.5	1.0	.69	.47	.44	.24	.25
6	1.5	.60	.79	.62	.77	1.4	.96	.68	.49	.37	.23	.23
7	.96	.57	.74	.63	.76	1.2	.97	.67	.49	.34	.23	.22
8	.77	.57	.66	.65	.74	1.9	1.2	.65	.46	.33	.22	.21
9	.68	.57	.62	.62	.84	3.2	1.3	.63	.42	.52	.22	.21
10	1.2	1.2	.62	.60	.92	1.6	1.0	.60	.41	.71	.21	.20
11	.86	4.5	.62	1.6	.91	1.2	.95	.60	.41	.46	.20	.17
12	.73	2.3	.62	1.5	.91	1.0	1.4	.59	.42	.40	.20	.18
13	.70	1.4	.72	1.1	.86	1.0	1.5	.61	.41	.60	.19	.17
14	.65	1.0	.68	6.3	.86	.92	1.9	.65	.41	.43	.20	.17
15	.61	.89	.62	2.1	.90	.85	1.5	.59	.39	.40	.20	.16
16	.59	.81	.65	1.4	.93	.83	1.2	.57	.42	.36	.20	.18
17	.57	.76	.61	1.2	.82	4.5	1.1	.65	.43	1.0	.19	.21
18	.55	.72	.60	11	.77	4.5	1.0	1.9	.69	12	.19	.20
19	.55	.70	.60	3.3	.76	1.8	.97	.77	.47	1.0	.21	.62
20	.54	.68	.57	1.8	.79	8.3	.92	4.9	.42	.40	.19	.63
21	.53	.67	.57	1.4	.78	9.5	.86	2.1	.38	.35	.23	.30
22	.52	.65	.57	1.4	.79	2.4	.85	1.0	.38	.60	.35	.25
23	.58	.66	.59	1.4	.80	1.6	.81	.91	.36	3.0	.27	.24
24	.53	.67	.72	1.1	.76	7.7	.80	1.2	.43	.70	.24	.28
25	.51	.66	.81	1.0	.86	5.0	.80	1.0	.81	.40	.22	.94
26	.50	1.8	.67	.97	.84	2.1	.91	.78	.62	.35	.20	.34
27	.49	.96	.62	.97	.77	1.6	.82	.67	.48	.33	.19	.27
28	.51	.86	.60	.89	.75	2.2	.77	.67	.42	.33	.18	.32
29	.51	.79	.60	.85	.71	2.7	.92	.64	.41	.42	.17	.58
30	.52	.74	.63	.81	---	1.9	.85	.60	.38	.31	.17	.70
31	.50	---	.62	.86	---	1.6	---	.57	---	.29	.18	---
TOTAL	26.87	29.85	20.07	49.16	23.28	77.25	32.16	28.84	13.98	28.81	6.79	9.44
MEAN	.87	1.00	.65	1.59	.80	2.49	1.07	.93	.47	.93	.22	.31
MAX	4.9	4.5	.81	11	.93	9.5	1.9	4.9	.81	12	.35	.94
MIN	.49	.52	.57	.57	.71	.70	.77	.57	.36	.29	.17	.16
CFSM	.83	.95	.62	1.51	.76	2.37	1.02	.89	.45	.89	.21	.30
IN.	.95	1.06	.71	1.74	.82	2.73	1.14	1.02	.49	1.02	.24	.33

CAL YR 1979 TOTAL 487.65 MEAN 1.34 MAX 35 MIN .28 CFSM 1.28 IN 17.26
WTR YR 1980 TOTAL 346.50 MEAN .95 MAX 12 MIN .16 CFSM .91 IN 12.26

02118000 SOUTH YADKIN RIVER NEAR MOCKSVILLE, N. C.

LOCATION (REVISED).--Lat 35°50'41", long 80°39'34", Rowan County, Hydrologic Unit 03040102, on right bank at downstream side of bridge on Secondary Road 1972, 1 mi (2 km) upstream from Little Creek, 4 mi (6.4 km) downstream from Fifth Creek, 4.5 mi (7.2 km) upstream from Hunting Creek, and 6.5 mi (10.5 km) southwest of Mocksville.

DRAINAGE AREA.--306 mi² (793 km²), revised.

PERIOD OF RECORD.--October 1938 to current year.

GAGE.--Water-stage recorder. Datum of gage is 663.6 ft (202.265 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. The city of Statesville diverted an average of 8.0 ft³/s (0.23 m³/s) for water supply and waste-treatment dilution. The Alexander Water Corporation withdraws an average of 1.5 ft³/s (0.042 m³/s) for water supply.

AVERAGE DISCHARGE.--42 years, 346 ft³/s (9.799 m³/s), 15.36 in/yr (390 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,800 ft³/s (334 m³/s) Oct. 17, 1964; maximum gage height, 18.59 ft (5.666 m) Sept. 23, 1979; minimum, 30 ft³/s (0.85 m³/s) Aug. 14, 16, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Oct. 3, 1929 reached a stage of 22.6 ft (6.89 m), from floodmark established by local resident (discharge, about 22,000 ft³/s or about 620 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft³/s (76 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct 1	0030	*3360	95.2	a*10.67	3.252	Mar 22	1800	3330	94.3	10.62	3.237

a Stage falling, peak occurred Sept. 30, 1979.

Minimum discharge, 121 ft³/s (3.43 m³/s) Sept. 16, 17, gage height, 1.92 ft (0.585 m); minimum daily, 122 ft³/s (3.46 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1750	252	341	257	343	258	652	417	387	319	181	143
2	780	357	329	250	298	273	587	400	369	296	176	148
3	703	940	314	244	294	263	544	389	348	284	170	138
4	558	542	298	242	303	312	524	380	330	366	166	185
5	1120	397	299	262	284	372	489	378	311	346	161	299
6	641	349	300	258	290	406	452	360	300	290	156	206
7	484	327	316	245	300	354	445	350	300	269	148	184
8	417	309	298	245	291	364	466	350	300	252	143	156
9	380	299	280	242	292	605	1110	345	282	257	149	148
10	403	336	272	241	320	520	2100	343	268	353	158	147
11	474	599	273	298	325	425	919	339	264	406	149	143
12	377	732	271	555	318	370	675	322	261	308	140	135
13	347	555	271	416	308	350	890	321	259	277	135	132
14	337	456	299	1740	297	350	1590	314	259	270	131	134
15	319	391	286	2230	298	326	2280	323	256	253	134	131
16	303	360	269	858	315	309	1260	322	254	239	215	122
17	294	340	265	577	318	480	758	309	277	232	218	124
18	287	328	256	1170	299	1050	660	567	286	378	174	183
19	280	316	252	1750	281	804	610	653	296	239	236	170
20	277	306	251	888	279	729	569	580	279	224	238	188
21	274	295	249	618	279	2230	542	1260	254	216	170	170
22	271	289	246	525	281	3070	505	730	241	210	174	210
23	270	284	246	576	286	1540	482	541	237	226	223	174
24	275	291	258	488	302	1120	459	1790	236	255	193	185
25	271	297	336	434	296	1660	447	1650	746	219	171	327
26	260	777	322	405	295	926	459	870	1780	204	158	251
27	253	840	280	389	268	721	457	598	766	201	147	206
28	251	513	260	364	265	683	449	494	465	197	147	181
29	259	426	254	342	263	1100	421	440	377	211	140	209
30	261	369	256	334	---	875	452	467	334	209	136	253
31	269	---	261	331	---	767	---	402	---	190	136	---
TOTAL	13445	12872	8708	17774	8588	23612	22253	17004	11322	8196	5173	5382
MEAN	434	429	281	573	296	762	742	549	377	264	167	179
MAX	1750	940	341	2230	343	3070	2280	1790	1780	406	238	327
MIN	251	252	246	241	263	258	421	309	236	190	131	122
CFSM	1.42	1.40	.92	1.87	.97	2.49	2.43	1.79	1.23	.86	.55	.59
IN.	1.63	1.56	1.06	2.16	1.04	2.87	2.71	2.07	1.38	1.00	.63	.65

CAL YR 1979 TOTAL 202521 MEAN 555 MAX 8960 MIN 182 CFSM 1.81 IN 24.62
WTR YR 1980 TOTAL 154329 MEAN 422 MAX 3070 MIN 122 CFSM 1.38 IN 18.76

02118500 HUNTING CREEK NEAR HARMONY, N. C.

LOCATION.--Lat 36°00'01", long 80°44'44" (revised), Iredell County, Hydrologic Unit 03040102, on right bank 52 ft (16 m) downstream from bridge on Secondary Road 2115, 0.8 mi (1.3 km) downstream from Kennedy Creek, 1 mi (2 km) east of Houstonville, 2 mi (3 km) downstream from U.S. Highway 21, and 3.5 mi (5.6 km) northeast of Harmony.

DRAINAGE AREA.--155 mi² (401 km²), revised.

PERIOD OF RECORD.--October 1950 to current year. Monthly discharge only for some periods, published in WSP 1723.

GAGE.--Water-stage recorder. Datum of gage is 734.78 ft (223.961 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 5, 1951, nonrecording gage on upstream side of bridge at same datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--30 years, 210 ft³/s (5.947 m³/s), 18.40 in/yr (467 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,800 ft³/s (419 m³/s) Sept. 22, 1979, gage height, 25.05 ft (7.635 m), from high-water mark in gage house; minimum, 18 ft³/s (0.51 m³/s) Oct. 8, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar 21	1330	*4630	131	*14.39	4.386	Apr 14	1200	2620	74.2	10.30	3.139
Apr 9	0930	4030	114	13.26	4.042						

Minimum discharge, 80 ft³/s (2.27 m³/s) Sept. 16, gage height, 0.88 ft (0.268 m); minimum daily, 81 ft³/s (2.29 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	426	168	218	168	223	164	330	286	278	172	119	108
2	341	426	211	165	200	176	305	272	229	166	113	98
3	363	470	203	162	200	177	291	266	214	179	110	97
4	282	274	202	164	207	200	292	260	205	336	108	201
5	353	227	203	172	187	213	271	253	194	228	106	136
6	272	205	207	165	204	232	256	250	194	180	104	116
7	239	196	215	160	196	203	252	241	198	160	101	127
8	217	187	198	161	192	322	347	238	192	157	100	106
9	208	186	189	161	200	531	2190	237	178	210	98	96
10	268	259	188	158	208	336	665	231	177	319	100	95
11	245	365	187	194	199	269	450	228	175	245	109	90
12	215	439	187	298	200	230	424	225	174	190	100	86
13	211	320	196	216	189	221	577	221	174	203	95	85
14	202	269	205	1210	187	223	1650	220	174	174	91	84
15	193	236	185	609	197	197	812	218	172	167	91	83
16	192	224	183	366	214	190	520	212	166	159	97	81
17	184	212	181	299	200	288	433	213	180	157	112	101
18	178	206	175	500	183	822	398	562	185	156	105	104
19	178	199	174	980	183	397	368	286	190	154	116	96
20	178	195	173	630	181	364	350	422	178	152	110	118
21	176	192	172	400	196	2750	336	681	163	144	99	154
22	176	191	172	355	190	761	321	326	159	135	126	110
23	181	193	174	370	185	454	308	399	157	185	130	105
24	192	199	180	328	179	659	304	875	160	151	110	101
25	174	201	244	285	178	696	338	791	675	138	104	131
26	170	589	193	268	174	450	310	391	444	133	98	124
27	167	381	179	260	167	363	308	298	257	131	93	103
28	168	288	173	248	168	357	303	265	203	131	89	96
29	168	251	170	237	167	574	299	249	184	153	86	120
30	178	228	171	220	---	424	313	246	211	131	84	134
31	173	---	174	221	---	389	---	234	---	122	85	---
TOTAL	6868	7976	5882	10130	5554	13632	14321	10096	6440	5418	3189	3286
MEAN	222	266	190	327	192	440	477	326	215	175	103	110
MAX	426	589	244	1210	223	2750	2190	875	675	336	130	201
MIN	167	168	170	158	167	164	252	212	157	122	84	81
CFSM	1.43	1.72	1.23	2.11	1.24	2.84	3.08	2.10	1.39	1.13	.67	.71
IN.	1.65	1.91	1.41	2.43	1.33	3.27	3.44	2.42	1.55	1.30	.77	.79

CAL YR 1979 TOTAL 120933 MEAN 331 MAX 10400 MIN 122 CFSM 2.14 IN 29.02
WTR YR 1980 TOTAL 92792 MEAN 254 MAX 2750 MIN 81 CFSM 1.64 IN 22.27

02120780 SECOND CREEK NEAR BARBER, N. C.

LOCATION.--Lat 35°43'05", long 80°35'45", Rowan County, Hydrologic Unit 03040102, on right bank 70 ft (21 m) upstream from bridge on U. S. Highway 70, 1.3 mi (2.1 km) downstream from Withrow Creek, and 2.7 mi (4.3 km) east of Barber.

DRAINAGE AREA.--118 mi² (306 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949-57, 1961-63. April 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 642.31 ft (195.776 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR THE CURRENT PERIOD.--April to September 1979; peak discharge above base of 1300 ft³/s (36.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 17	1300	*2260	64.0	*14.03	4.276	Sept 22	1400	1620	45.9	11.43	3.484
Sept 5	1630	1690	47.9	11.73	3.575	Sept 30	2200	2090	59.2	13.37	4.075

Minimum discharge, 29 ft³/s (0.82 m³/s) Aug. 21, gage height, 1.79 ft (0.546 m); minimum daily, 31 ft³/s (0.88 m³/s) Aug. 21.

WATER YEAR 1980

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct 5	1230	1760	49.8	12.06	3.676	Mar 21	1300	1920	54.4	12.23	3.728
Nov 11	1900	1360	38.5	10.29	3.136	Mar 29	0200	1530	43.3	10.64	3.243
Jan 14	1300	1580	44.7	11.25	3.429	May 20	2300	1470	41.6	10.40	3.170
Jan 18	2330	*2130	60.3	*13.01	3.965						

Minimum discharge, 9.8 ft³/s (0.28 m³/s) Aug. 24, Sept. 2, gage height, 1.37 ft (0.418 m); minimum daily, 13 ft³/s (0.37 m³/s) Sept. 2, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, APRIL TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							100	98	92	94	57	42
2							99	91	73	79	55	49
3							129	89	92	77	60	39
4							311	89	409	75	52	53
5							223	89	114	74	50	999
6							148	87	114	73	49	336
7							126	85	125	72	47	164
8							118	83	86	73	46	94
9							132	80	77	70	45	74
10							113	82	72	75	44	65
11							104	78	75	71	43	59
12							102	89	66	69	57	55
13							146	427	61	68	48	58
14							166	591	59	68	38	88
15							129	165	57	67	36	58
16							112	120	312	66	35	54
17							104	102	2070	67	35	53
18							98	91	439	65	34	51
19							94	87	186	81	33	50
20							90	83	150	74	32	47
21							88	81	128	130	31	59
22							85	83	117	76	35	934
23							83	82	106	70	67	226
24							81	96	239	86	57	129
25							80	128	116	127	59	111
26							270	84	98	87	42	98
27							388	77	91	87	41	94
28							152	76	86	171	43	110
29							119	74	83	75	51	136
30							106	70	83	65	44	1500
31							---	86	---	61	56	---
TOTAL							4096	3643	5876	2493	1422	5885
MEAN							137	118	196	80.4	45.9	196
MAX							388	591	2070	171	67	1500
MIN							80	70	57	61	31	39
CFSM							1.17	1.01	1.68	.69	.39	1.68
IN.							1.30	1.16	1.87	.79	.45	1.87

02120780 SECOND CREEK NEAR BARBER, N. C.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1020	79	96	78	114	86	193	91	76	46	25	15
2	242	231	93	76	107	99	170	88	71	39	27	13
3	197	176	89	75	105	109	158	87	69	40	24	16
4	145	106	88	77	105	111	155	85	67	56	22	38
5	1330	94	88	89	101	167	138	82	62	44	22	24
6	378	90	93	79	107	151	129	81	63	39	22	43
7	192	87	98	77	106	119	126	80	63	35	21	24
8	149	85	87	80	102	134	149	81	61	34	30	20
9	130	84	83	78	110	137	166	80	57	37	24	19
10	188	143	83	75	130	117	129	78	56	42	25	18
11	145	756	83	168	127	108	119	78	55	43	22	17
12	123	458	84	243	131	100	131	77	54	36	21	16
13	113	203	89	126	121	103	196	76	55	34	19	16
14	107	156	96	933	115	99	357	77	54	34	18	15
15	101	133	83	325	117	93	199	82	53	39	20	14
16	98	123	85	182	124	92	153	72	51	37	22	13
17	94	115	83	161	110	169	135	71	52	34	23	18
18	90	109	80	1220	101	477	128	301	64	234	20	22
19	89	104	80	1100	100	174	122	102	59	56	20	22
20	88	100	78	274	102	444	116	367	54	41	21	105
21	87	97	77	207	100	1670	113	451	50	37	18	33
22	86	95	77	196	106	393	108	135	49	34	29	24
23	88	95	78	216	101	226	104	126	48	35	28	21
24	86	94	81	170	98	677	99	196	49	37	24	23
25	82	94	122	156	96	504	95	136	105	34	21	158
26	81	353	89	144	94	245	104	104	75	33	19	57
27	80	154	82	138	90	194	97	90	57	31	17	33
28	80	124	79	132	90	367	93	84	49	31	16	31
29	80	111	78	126	89	829	99	82	46	31	15	49
30	80	101	80	119	---	300	101	92	48	28	14	60
31	79	---	81	125	---	254	---	78	---	26	15	---
TOTAL	5928	4750	2663	7245	3099	8748	4182	3710	1772	1357	664	977
MEAN	191	158	85.9	234	107	282	139	120	59.1	43.8	21.4	32.6
MAX	1330	756	122	1220	131	1670	357	451	105	234	30	158
MIN	79	79	77	75	89	86	93	71	46	26	14	13
CFSM	1.62	1.34	.73	1.98	.91	2.39	1.18	1.02	.50	.37	.18	.28
IN.	1.87	1.50	.84	2.28	.98	2.76	1.32	1.17	.56	.43	.21	.31

WTR YR 1980 TOTAL 45095 MEAN 123 MAX 1670 MIN 13 CFSM 1.04 IN 14.22

02121180 NORTH POTTS CREEK AT LINWOOD, N. C.

LOCATION.--Lat 35°45'28", long 80°19'24", Davidson County, Hydrologic Unit 03040103, near center of span on downstream side of bridge on Secondary Road 1134, 0.3 mi (0.5 km) upstream from mouth, and 0.5 mi (0.8 km) northeast of Linwood.

DRAINAGE AREA.--9.62 mi² (24.92 km²).

PERIOD OF RECORD.--May 1979 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 630 ft (192.0 m), from topographic map.

REMARKS.--Records good.

EXTREMES FOR CURRENT PERIOD.--May to September 1979; peak discharges above base of 190 ft³/s (5.38 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 17	0100	*992	28.1	*7.97	2.429	Sept 22	1000	246	6.97	4.18	1.274
Sept 5	1500	449	12.7	5.57	1.698						

Minimum discharge, 2.9 ft³/s (0.082 m³/s) Aug. 21, gage height, 1.17 ft (0.357 m); minimum daily, 3.6 ft³/s (0.10 m³/s) Aug. 19.

WATER YEAR 1980

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct 5	0730	191	5.41	3.68	1.122	Jan 18	1230	377	10.7	5.16	1.573
Nov 11	1600	221	6.26	3.96	1.207	Mar 20	2130	*410	11.6	*5.35	1.631
Jan 14	0900	237	6.71	4.10	1.250						

Minimum discharge, 1.6 ft³/s (0.045 m³/s) Sept. 15, 16; minimum daily, 1.8 ft³/s (0.051 m³/s) Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, MAY TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								6.3	6.4	5.9	4.9	4.2
2								6.0	5.6	5.0	4.9	4.3
3								6.1	5.3	4.7	4.6	4.2
4								6.3	5.2	4.8	4.4	4.2
5								5.9	4.8	4.7	4.2	147
6								5.9	4.6	4.5	4.2	25
7								5.7	4.6	4.8	4.3	11
8								5.7	4.5	4.9	4.2	8.3
9								5.9	4.3	4.7	4.2	6.9
10								6.0	5.5	5.9	4.1	6.1
11								5.8	5.4	5.1	4.0	5.4
12								7.3	4.4	5.8	8.4	5.1
13								19	4.0	5.4	5.0	5.2
14								32	3.9	4.9	4.2	5.6
15								10	3.8	4.7	3.9	4.7
16								8.0	108	4.6	3.7	4.6
17								7.1	266	4.5	3.7	4.7
18								6.5	23	4.5	3.7	5.6
19								6.2	12	12	3.6	5.4
20								5.8	10	25	4.8	5.0
21								5.9	9.6	15	3.8	5.6
22								5.8	8.7	8.5	3.8	72
23								6.0	8.9	41	3.9	13
24								7.0	12	13	3.9	9.6
25								8.0	7.5	11	5.8	8.8
26								5.6	6.3	8.4	5.0	7.9
27								5.3	5.9	7.1	22	7.6
28								5.2	5.6	6.2	9.1	11
29								5.2	5.4	5.7	6.0	19
30								9.6	5.4	5.3	4.9	43
31								7.8	---	5.0	4.4	---
TOTAL								238.9	566.6	252.6	161.6	470.0
MEAN								7.71	18.9	8.15	5.21	15.7
MAX								32	266	41	22	147
MIN								5.2	3.8	4.5	3.6	4.2
CFSM								.80	1.97	.85	.54	1.63
IN.								.92	2.19	.98	.62	1.82

02121180 NORTH POTTS CREEK AT LINWOOD, N. C.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	6.5	8.8	7.2	8.6	7.6	14	8.0	6.8	3.7	3.4	2.2
2	10	20	8.2	7.0	8.0	8.6	12	7.5	6.2	3.6	3.4	2.2
3	8.6	12	8.0	6.8	8.0	8.9	12	7.4	5.7	3.8	3.3	2.8
4	8.0	8.8	7.9	7.7	7.9	14	12	7.1	5.3	11	3.2	2.9
5	71	7.6	7.9	8.8	7.8	24	10	6.9	4.9	5.2	3.0	2.8
6	18	7.1	9.4	7.4	8.4	17	9.7	6.8	5.1	4.2	2.9	2.6
7	11	6.8	9.4	7.4	8.5	12	9.6	6.5	5.3	3.9	2.9	2.3
8	9.2	6.6	8.1	7.9	8.1	26	11	6.5	5.1	3.9	2.8	2.3
9	8.2	6.7	7.7	7.4	9.3	33	11	6.5	5.3	4.9	2.9	2.3
10	15	20	7.7	7.2	12	15	9.4	6.2	4.9	9.8	2.9	2.3
11	10	113	7.5	18	12	12	8.9	6.2	4.9	5.1	2.8	2.0
12	8.8	37	7.5	17	12	10	14	6.0	4.9	4.2	2.8	2.0
13	8.1	19	8.8	11	10	10	25	5.9	4.7	6.1	2.4	2.0
14	7.7	13	8.8	74	9.9	9.6	32	6.1	4.5	4.4	2.4	2.0
15	7.3	11	7.8	24	10	8.8	16	6.3	4.4	4.0	2.5	1.8
16	7.2	9.8	7.8	15	10	8.5	12	5.9	4.6	3.8	2.5	2.0
17	7.0	9.1	7.6	13	8.9	24	11	5.9	4.5	3.7	2.5	3.0
18	6.8	8.7	7.2	131	8.3	37	10	25	5.2	12	2.6	2.8
19	6.8	8.3	7.2	35	8.3	15	9.6	9.0	4.5	5.1	2.7	3.2
20	6.7	8.0	7.1	20	8.4	94	9.2	33	4.2	4.2	2.7	3.9
21	6.6	7.8	7.0	14	8.3	120	8.9	20	3.8	3.9	2.8	2.9
22	6.5	7.7	7.0	18	8.5	26	8.6	10	3.8	5.3	3.3	2.7
23	7.6	7.7	7.1	22	12	17	8.3	10	3.8	19	2.9	2.6
24	7.2	7.9	7.8	13	11	77	7.9	11	4.0	5.9	2.7	3.4
25	6.7	7.9	10	12	10	54	7.9	10	6.4	4.5	2.6	7.0
26	6.6	46	7.9	11	10	22	8.5	7.9	6.2	4.1	2.5	15
27	6.4	16	7.4	10	8.9	16	8.1	6.9	4.9	3.9	2.4	6.0
28	6.4	12	7.1	9.6	8.6	25	8.0	6.7	4.3	3.8	2.4	3.0
29	6.5	10	7.1	9.2	8.0	33	10	19	4.1	3.9	2.3	2.5
30	6.5	9.2	7.6	8.9	---	23	9.0	14	3.9	3.6	2.2	4.7
31	6.4	---	7.5	9.5	---	19	---	7.9	---	3.4	2.3	---
TOTAL	323.8	471.2	243.9	570.0	269.7	827.0	343.6	302.1	146.2	167.9	85.0	99.2
MEAN	10.4	15.7	7.87	18.4	9.30	26.7	11.5	9.75	4.87	5.42	2.74	3.31
MAX	71	113	10	131	12	120	32	33	6.8	19	3.4	15
MIN	6.4	6.5	7.0	6.8	7.8	7.6	7.9	5.9	3.8	3.4	2.2	1.8
CFSM	1.08	1.63	.82	1.91	.97	2.78	1.20	1.01	.51	.56	.29	.34
IN.	1.25	1.82	.94	2.20	1.04	3.20	1.33	1.17	.57	.65	.33	.38

WTR YR 1980 TOTAL 3849.6 MEAN 10.5 MAX 131 MIN 1.8 CFSM 1.09 IN 14.88

02121493 LEONARD CREEK NEAR BETHESDA, N. C.

LOCATION.--Lat 35°53'14", long 80°12'30", Davidson County, Hydrologic Unit 03040103, on left downstream wingwall of bridge on Secondary Road 1837, 1.6 mi (2.6 km) upstream from Lexington City Lake, 2.0 mi (3.2 km) downstream from Cain Creek, 2.2 mi (3.5 km) east of Bethesda and 3.0 mi (4.8 km) southeast of Welcome.

DRAINAGE AREA.--5.16 mi² (13.36 km²).

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder and concrete, rock-ledge control. Altitude of gage is 718 ft (218.8 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, Jan. 24 to Feb. 26, which are poor. Slight diurnal fluctuation at low flow during growing season. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 531 ft³/s (15.0 m³/s) Sept. 22, 1979, gage height, 4.59 ft (1.399 m); minimum, 0.50 ft³/s (0.014 m³/s) Sept. 3, 4, 6, 8, 10, 14, 15, 16, 1980, gage height, 1.20 ft (0.366 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 201 ft³/s (5.69 m³/s) Mar. 20, gage height, 3.23 ft (0.984 m), no peak above base of 260 ft³/s (7.4 m³/s); minimum, 0.50 ft³/s (0.014 m³/s) Sept. 3, 4, 6, 8, 10, 14, 15, 16, gage height, 1.20 ft (0.366 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	2.8	3.7	3.1	4.6	2.9	5.7	3.2	2.2	1.5	11	.75
2	4.6	13	3.5	2.9	4.3	3.9	5.2	3.1	2.2	1.5	15	.74
3	4.2	7.2	3.4	2.9	4.2	4.3	5.0	2.9	2.1	1.5	2.1	.74
4	3.5	3.5	3.4	3.2	4.2	5.5	5.2	2.8	2.1	2.4	1.6	.77
5	44	3.2	3.4	3.9	4.1	12	4.5	2.8	2.0	1.7	1.3	.78
6	8.7	3.1	4.3	3.2	4.5	9.3	4.3	2.6	2.0	2.9	1.3	.73
7	5.1	2.9	4.5	3.2	4.6	6.0	4.3	2.6	2.0	1.5	1.1	.68
8	4.0	2.9	3.5	3.5	4.4	10	5.7	2.6	1.9	1.4	1.1	.63
9	3.5	2.9	3.4	3.1	5.0	14	6.0	2.5	1.6	1.4	1.0	.65
10	16	13	3.4	2.9	5.8	6.6	4.5	2.4	1.7	2.7	1.0	.64
11	6.2	88	3.4	8.6	6.1	5.2	4.1	2.4	1.6	4.2	.98	.64
12	4.3	27	3.5	11	6.0	4.5	7.5	2.4	1.7	1.8	.94	.63
13	3.7	9.0	4.3	5.2	5.3	5.2	15	2.4	1.6	2.1	.85	.61
14	3.5	6.0	4.1	48	5.2	4.8	17	2.5	1.5	1.6	.93	.61
15	3.4	5.0	3.4	12	5.3	3.9	7.2	2.6	1.5	1.4	.88	.60
16	3.2	4.3	3.5	6.6	5.4	3.9	5.5	2.4	1.5	1.3	.86	.61
17	3.1	4.1	3.4	5.0	4.8	17	4.8	2.2	2.0	1.2	.78	.75
18	3.1	3.9	3.2	65	4.3	43	4.5	8.2	2.1	5.7	.94	.83
19	3.1	3.7	3.2	20	4.4	8.2	4.1	3.1	1.9	1.7	1.3	.75
20	3.1	3.5	3.1	8.2	4.4	46	4.1	14	1.6	1.5	1.0	.88
21	3.1	3.4	2.9	6.0	4.3	81	3.9	15	1.5	1.3	1.3	.89
22	3.1	3.4	2.9	7.5	4.4	11	3.7	3.5	1.4	1.3	2.3	.77
23	3.7	3.7	2.9	12	5.8	6.9	3.5	3.4	1.4	8.3	1.2	.75
24	3.2	3.5	3.4	7.5	5.2	46	3.2	7.5	1.5	2.6	1.1	1.1
25	2.9	3.5	5.2	6.2	4.0	47	3.2	4.5	4.0	1.8	1.1	4.6
26	2.9	22	3.4	5.8	5.5	9.7	3.7	3.5	3.3	1.5	.99	1.5
27	2.9	6.6	3.2	5.4	3.7	6.9	3.4	2.8	2.3	1.4	.92	1.1
28	2.9	5.0	2.9	5.0	3.7	8.2	3.2	2.6	1.9	1.4	.85	1.1
29	2.9	4.3	2.9	4.8	3.4	16	3.5	2.5	1.7	1.4	.81	1.6
30	2.9	3.7	3.1	4.7	---	8.2	3.5	2.5	2.1	1.2	.77	2.5
31	2.8	---	3.2	5.4	---	7.5	---	2.4	---	1.1	.80	---
TOTAL	169.9	268.1	107.6	291.8	136.9	464.6	159.0	119.9	57.9	64.3	58.10	29.93
MEAN	5.48	8.94	3.47	9.41	4.72	15.0	5.30	3.87	1.93	2.07	1.87	1.00
MAX	44	88	5.2	65	6.1	81	17	15	4.0	8.3	15	4.6
MIN	2.8	2.8	2.9	2.9	3.4	2.9	3.2	2.2	1.4	1.1	.77	.60
CFSM	1.06	1.73	.67	1.82	.92	2.91	1.03	.75	.37	.40	.36	.19
IN.	1.22	1.93	.78	2.10	.99	3.35	1.15	.86	.42	.46	.42	.22

CAL YR 1979 TOTAL 3094.10 MEAN 8.48 MAX 210 MIN 1.5 CFSM 1.64 IN 22.30
WTR YR 1980 TOTAL 1928.03 MEAN 5.27 MAX 88 MIN .60 CFSM 1.02 IN 13.90

02125000 BIG BEAR CREEK NEAR RICHFIELD, N. C.

LOCATION.--Lat 35°20'02", long 80°20'09", Stanly County, Hydrologic Unit 03040105, on left bank 300 ft (91 m) downstream from Little Creek, 400 ft (122 m) upstream from bridge on Secondary Road 1134, and 10 mi (16 km) southwest of Richfield.

DRAINAGE AREA.--55.6 mi² (144 km²), revised.

PERIOD OF RECORD.--May 1954 to current year.

REVISED RECORDS.--WSP 1503: 1955, 1956(M).

GAGE.--Water-stage recorder. Datum of gage is 426.62 ft (130.034 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those below 1 ft³/s (0.03 m³/s), which are fair.

AVERAGE DISCHARGE.--26 years, 57.7 ft³/s (1.634 m³/s), 14.09 in/yr (358 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,100 ft³/s (314 m³/s) Aug. 22, 1967, gage height, 15.95 ft (4.862 m); no flow at times 1954, 1961-64, 1966-69, 1972, 1976-77, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1921 reached a stage of about 19 ft (5.8 m), from information by North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,400 ft³/s (68 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 11	1500	2820	79.9	8.46	2.579	Mar 24	1800	2960	83.8	8.66	2.640
Mar 21	0800	*3440	97.4	*9.34	2.847	May 20	2130	3070	86.9	8.82	2.688

No flow Aug. 2 to Sept. 3, Sept. 9-18, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	2.9	30	18	46	16	119	9.8	6.9	.81	.06	.00
2	9.7	15	25	15	34	17	83	9.2	6.2	.73	.00	.00
3	9.5	62	21	13	30	17	68	8.6	5.6	.66	.00	.00
4	8.4	26	19	13	28	39	63	8.1	5.0	.96	.00	.73
5	198	14	19	33	25	246	49	7.5	4.4	.84	.00	.56
6	64	11	19	27	27	210	40	7.0	4.2	.55	.00	.26
7	28	9.0	23	22	29	95	36	6.5	4.2	.39	.00	.10
8	15	8.0	19	23	28	267	110	6.2	3.8	.30	.00	.01
9	11	7.4	15	24	33	197	243	6.0	3.2	.34	.00	.00
10	10	6.9	14	23	270	98	86	5.6	3.0	.33	.00	.00
11	13	1200	13	97	186	67	58	5.4	2.7	.41	.00	.00
12	9.8	464	13	257	137	50	48	5.0	2.5	.37	.00	.00
13	7.8	141	13	97	93	187	60	4.6	2.4	.30	.00	.00
14	6.6	78	20	463	70	130	144	4.2	2.3	.30	.00	.00
15	5.8	52	16	224	60	75	104	4.0	2.1	.20	.00	.00
16	5.3	41	16	111	57	57	61	3.6	1.9	.20	.00	.00
17	4.8	32	16	81	46	69	44	3.6	1.7	.16	.00	.00
18	4.3	27	13	831	36	401	37	29	2.6	25	.00	.00
19	3.9	23	13	376	32	128	32	11	2.6	3.2	.00	.18
20	3.6	20	12	151	31	428	27	948	2.2	1.4	.00	.16
21	3.3	18	11	99	30	1580	24	398	1.7	.82	.00	.02
22	2.9	15	11	86	29	276	21	72	1.5	.52	.00	.00
23	3.3	14	11	410	27	134	19	41	1.3	.51	.00	.18
24	5.9	14	11	151	24	935	16	42	1.2	.58	.00	1.4
25	6.7	15	37	96	22	502	14	30	1.6	.38	.00	47
26	5.1	577	28	69	20	175	13	19	2.0	.30	.00	6.3
27	4.1	153	20	59	18	110	13	14	2.1	.30	.00	2.0
28	3.5	78	16	54	17	473	12	11	1.5	.25	.00	1.1
29	2.9	53	14	45	16	787	11	9.4	1.2	.22	.00	1.9
30	2.9	38	15	38	---	285	11	8.4	.98	.20	.00	33
31	3.0	---	21	48	---	219	---	7.6	---	.13	.00	---
TOTAL	479.1	3215.2	544	4054	1501	8270	1666	1745.3	84.58	41.66	.06	94.90
MEAN	15.5	107	17.5	131	51.8	267	55.5	56.3	2.82	1.34	.002	3.16
MAX	198	1200	37	831	270	1580	243	948	6.9	25	.06	47
MIN	2.9	2.9	11	13	16	16	11	3.6	.98	.13	.00	.00
CFSM	.28	1.92	.32	2.36	.93	4.80	1.00	1.01	.05	.02	.000	.06
IN.	.32	2.15	.36	2.71	1.00	5.53	1.11	1.17	.06	.03	.00	.06

CAL YR 1979 TOTAL 31177.67 MEAN 85.4 MAX 2150 MIN .10 CFSM 1.54 IN 20.86
WTR YR 1980 TOTAL 21695.80 MEAN 59.3 MAX 1580 MIN .00 CFSM 1.07 IN 14.52

02125557 GOURDVINE CREEK AT SECONDARY ROAD 1715 NEAR OLIVE BRANCH, N. C.

LOCATION.--Lat 35°06'02", long 80°20'11", Union County, Hydrologic Unit 03040105, on right bank 3 ft (1 m) downstream from bridge on Secondary Road 1715, 0.8 mi (1.3 km) downstream from Secondary Road 1006, 0.9 mi (1.4 km) southwest of Olive Branch, and 1.0 mi (1.6 km) upstream from mouth.

DRAINAGE AREA.--8.75 mi² (22.66 km²).

PERIOD OF RECORD.--July 1978 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 372 ft (113 m), from topographic map.

REMARKS.--Records good except those below 0.10 ft³/s (0.003 m³/s), which are fair. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,300 ft³/s (65.1 m³/s) June 16, 1979, gage height 7.15 ft (2.179 m); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 610 ft³/s (17.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 11	1245	1180	33.4	6.60	2.012	May 20	1930	*1300	36.8	*6.68	2.036
Mar 28	1845	722	20.4	6.15	1.874						

No flow July 14-17, Aug. 3, 4, 6-Sept. 4, 10-17, 21-23, 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	.11	3.1	2.4	6.9	2.0	15	.81	.18	.02	.01	.00
2	4.0	14	2.7	2.0	4.8	2.1	12	.68	.13	.01	.01	.00
3	3.6	34	2.3	1.7	4.1	2.3	9.6	.60	.10	.01	.00	.00
4	1.7	6.7	2.3	1.7	4.0	12	8.2	.54	.08	.02	.00	.00
5	22	3.6	2.3	4.5	3.6	40	5.9	.43	.06	.01	.01	2.8
6	4.3	2.8	2.5	2.9	4.0	17	4.9	.33	.05	.01	.00	1.4
7	2.5	2.3	2.9	2.3	5.0	8.1	4.2	.24	.05	.01	.00	.06
8	1.3	2.0	2.2	5.1	5.4	96	5.2	.20	.04	.01	.00	.02
9	.83	1.8	1.9	59	14	34	6.8	.23	.03	.01	.00	.01
10	.77	1.9	1.8	16	92	14	3.9	.18	.02	.01	.00	.00
11	.93	308	1.7	61	23	9.8	3.1	.14	.02	.01	.00	.00
12	.75	47	1.7	31	13	11	3.0	.13	.02	.01	.00	.00
13	.63	18	1.7	19	8.8	121	8.6	.12	.02	.01	.00	.00
14	1.0	11	1.8	74	7.0	26	12	.10	.01	.00	.00	.00
15	.57	7.4	1.6	25	6.2	14	6.9	.09	.01	.00	.00	.00
16	.44	5.8	2.3	14	6.0	10	4.6	.08	.01	.00	.00	.00
17	.35	4.6	2.1	11	4.5	22	3.5	.07	.01	.00	.00	.00
18	.28	3.9	1.7	106	3.4	65	3.1	17	.02	.91	.00	.01
19	.23	3.4	1.6	33	3.2	17	2.8	1.4	.02	.13	.00	.01
20	.22	3.0	1.6	15	3.2	99	2.6	89	.01	.04	.00	.01
21	.21	2.8	1.4	11	3.1	131	2.2	16	.01	.02	.00	.00
22	.17	2.5	1.4	14	3.0	25	2.0	3.3	.01	.01	.00	.00
23	.40	2.5	1.5	51	2.8	15	1.8	2.0	.01	2.5	.00	.00
24	.82	2.4	1.6	15	2.8	100	1.6	4.3	.01	.46	.00	.01
25	.32	2.4	4.3	10	2.5	43	1.3	2.8	.01	.06	.00	.01
26	.18	39	2.4	7.3	2.2	17	1.2	2.9	.02	.02	.00	.01
27	.14	10	1.8	7.1	2.1	12	1.1	1.3	.06	.01	.00	.00
28	.14	6.3	1.6	6.4	2.1	164	.87	.85	.06	.01	.00	.00
29	.12	4.6	1.5	5.3	1.9	72	.87	.59	.04	.01	.00	.02
30	.13	3.5	2.0	3.5	---	56	1.1	.38	.03	.01	.00	6.7
31	.12	---	3.2	11	---	31	---	.24	---	.01	.00	---
TOTAL	53.85	557.31	64.5	628.2	244.6	1288.3	139.94	147.03	1.15	4.35	.03	11.07
MEAN	1.74	18.6	2.08	20.3	8.43	41.6	4.66	4.74	.038	.14	.001	.37
MAX	22	308	4.3	106	92	164	15	89	.18	2.5	.01	6.7
MIN	.12	.11	1.4	1.7	1.9	2.0	.87	.07	.01	.00	.00	.00
CFSM	.20	2.13	.24	2.32	.96	4.75	.53	.54	.004	.02	.000	.04
IN.	.23	2.37	.27	2.67	1.04	5.48	.59	.63	.00	.02	.00	.05

CAL YR 1979 TOTAL 4839.34 MEAN 13.3 MAX 512 MIN .00 CFSM 1.52 IN 20.57
WTR YR 1980 TOTAL 3140.33 MEAN 8.58 MAX 308 MIN .00 CFSM .98 IN 13.35

02125696 LANE CREEK AT SECONDARY ROAD 2115 NEAR TRINITY, N. C.

LOCATION.--Lat 34°50'39", long 80°28'49", Union County, Hydrologic Unit 03040105, on left bank downstream of culvert on Secondary Road 2115 and 3.0 miles (4.8 km) southeast of Trinity.

DRAINAGE AREA.--3.98 mi² (10.31 km²).

PERIOD OF RECORD.--July 1978 to current year.

GAGE.--Water-stage recorder and V-notch weir. Altitude of gage is 538 ft (164 m), from topographic map.

REMARKS.--Records good except those below 0.10 ft³/s (0.003 m³/s), which are fair. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 970 ft³/s (27.5 m³/s) May 10, 1979, gage height 6.25 ft (1.905 m); no flow at times in most years.

EXTREMES FOR THE CURRENT YEAR.--Peak discharges above base of 360 ft³/s (10.2 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar 20	1815	390	11.0	4.91	1.497	Mar 28	1845	*506	14.3	*5.29	1.612

No flow May 9-20, 23-June 15, 23, July 1-Aug. 9, 11-Sept. 2, 5-23, 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	.30	.77	2.0	2.7	.48	5.5	.07	.00		.00	.00
2	45	.14	.59	1.2	1.6	.47	3.2	.06	.00		.00	.00
3	22	.85	.45	.81	1.3	.72	2.4	.04	.00		.00	.20
4	5.3	.21	.45	.77	1.2	6.2	2.4	.03	.00		.00	.04
5	50	.12	.46	1.8	1.0	28	1.6	.02	.00		.00	.00
6	6.8	.10	.62	1.1	1.5	10	1.0	.02	.00		.00	.00
7	2.9	.09	.89	.82	3.3	4.0	.86	.01	.00		.00	.00
8	1.4	.08	.61	13	4.5	120	6.4	.01	.00		.00	.00
9	.75	.11	.45	56	24	17	8.0	.00	.00		.00	.00
10	.54	.13	.40	11	57	6.2	2.2	.00	.00		.01	.00
11	.47	104	.34	30	12	3.2	1.1	.00	.00		.00	.00
12	.38	20	.34	14	5.8	26	.84	.00	.00		.00	.00
13	.29	6.4	.35	6.5	3.4	86	8.6	.00	.00		.00	.00
14	.30	2.8	.34	40	2.5	11	14	.00	.00		.00	.00
15	.21	1.7	.45	12	2.2	4.5	4.3	.00	.00		.00	.00
16	.17	1.2	3.3	4.8	2.3	3.0	1.8	.00	.01		.00	.00
17	.15	.87	2.1	12	1.8	20	1.0	.00	3.4		.00	.00
18	.14	.72	1.3	72	1.2	49	.74	.00	26		.00	.00
19	.13	.58	1.1	16	1.1	7.4	.64	.00	.91		.00	.00
20	.12	.50	.94	6.5	1.2	102	.46	.00	.16		.00	.00
21	.11	.48	.80	4.0	1.1	97	.35	.01	.04		.00	.00
22	.10	.37	.78	18	1.2	9.4	.23	.01	.01		.00	.00
23	.30	.36	.81	50	1.1	4.2	.17	.00	.00		.00	.00
24	.50	.35	1.5	8.3	.95	55	.12	.00	2.2		.00	.83
25	.35	.53	5.0	4.3	1.1	23	.09	.00	1.5		.00	1.6
26	.20	33	1.7	2.8	.69	6.3	.09	.00	.36		.00	.02
27	.10	5.4	1.1	3.0	.55	3.6	.09	.00	.22		.00	.00
28	.08	2.5	.74	2.7	.54	170	.07	.00	.07		.00	.00
29	.06	1.6	.60	2.1	.48	45	.06	.00	.02		.00	.23
30	.10	.97	.92	1.7	---	42	.09	.00	.01		.00	4.6
31	.14	---	4.3	4.9	---	16	---	.00	---		.00	---
TOTAL	168.09	186.46	34.50	404.10	139.31	976.67	68.40	.28	34.91	.00	.01	7.52
MEAN	5.42	6.22	1.11	13.0	4.80	31.5	2.28	.009	1.16	.000	.000	.25
MAX	50	104	5.0	72	57	170	14	.07	26	.00	.01	4.6
MIN	.06	.08	.34	.77	.48	.47	.06	.00	.00	.00	.00	.00
CFSM	1.36	1.56	.28	3.27	1.21	7.92	.57	.002	.29	.000	.000	.06
IN.	1.57	1.74	.32	3.78	1.30	9.13	.64	.00	.33	.00	.00	.07

CAL YR 1979 TOTAL 2534.02 MEAN 6.94 MAX 230 MIN .00 CFSM 1.74 IN 23.68
WTR YR 1980 TOTAL 2020.25 MEAN 5.52 MAX 170 MIN .00 CFSM 1.39 IN 18.88

02125699 WICKER BRANCH AT SECONDARY ROAD 1940 NEAR TRINITY, N. C.

LOCATION.--Lat 34°52'53", long 80°26'24", Union County, Hydrologic Unit 03040105, on left bank at upstream side of bridge on Secondary Road 1940, 2.8 miles (4.5 km) southwest of Allens crossroads, and 4.0 miles (6.4 km) northeast of Trinity.

DRAINAGE AREA.--5.83 mi² (15.1 km²).

PERIOD OF RECORD.--July 1978 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 520 ft (158 m), from topographic map.

REMARKS.--Records good except those below 0.10 ft³/s (0.009 m³/s), which are fair. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,260 ft³/s (35.7 m³/s) Jan. 21, 1979, gage height, 6.98 ft (2.128 m); minimum, 0.01 ft³/s (<0.001 m³/s) many days in August and September 1980.

EXTREMES FOR THE CURRENT YEAR.--Peak discharges above base of 450 ft³/s (12.7 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar 8	1445	538	15.2	4.26	1.298	Mar 28	1430	*754	21.4	*5.11	1.558
Mar 21	0700	512	14.5	4.15	1.265						

Minimum discharge, 0.01 ft³/s (<0.001 m³/s) many days in August and September, gage height, 0.19 ft (0.058 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	.16	1.2	4.4	4.0	.70	5.2	.39	.12	.06	.07	.01
2	8.9	1.7	.95	2.7	2.4	.69	4.3	.35	.13	.06	.06	.01
3	9.6	3.8	.76	1.9	2.0	1.4	3.9	.32	.16	.06	.06	.06
4	2.6	1.1	.75	2.4	1.9	7.0	4.1	.28	.17	.05	.06	.04
5	45	.60	.74	3.6	1.6	28	2.8	.25	.17	.05	.06	.03
6	5.2	.42	.94	1.9	2.3	10	1.9	.22	.17	.05	.06	.33
7	2.1	.35	1.2	3.7	4.9	6.9	1.8	.20	.15	.05	.06	.11
8	1.2	.30	.80	86	5.5	174	4.4	.19	.17	.04	.05	.05
9	.84	.28	.60	22	26	25	7.1	.19	.14	.05	.03	.03
10	.66	.35	.48	27	89	8.3	2.7	.18	.11	.07	.05	.02
11	.65	200	.40	40	15	5.0	1.7	.17	.08	.06	.10	.01
12	.56	7.0	.40	30	7.9	33	1.4	.17	.08	.06	.09	.03
13	.50	3.7	.43	20	5.1	120	15	.17	.07	.06	.05	.06
14	.60	3.2	.50	45	3.9	14	18	.15	.07	.06	.02	.06
15	.49	2.4	.98	25	3.5	6.0	6.5	.16	.07	.05	.03	.06
16	.39	1.8	1.2	10	3.5	4.1	3.2	.15	.08	.04	.01	.03
17	.35	1.4	3.0	20	2.7	18	2.1	.16	.11	.05	.01	.03
18	.29	1.1	1.0	60	1.9	62	1.7	.18	.30	.07	.01	.04
19	.25	1.0	.84	15	1.7	8.9	1.5	.17	.28	.05	.02	.04
20	.23	.90	.74	7.6	1.8	125	1.3	.22	.12	.07	.02	.01
21	.21	.88	.67	5.3	1.7	133	1.1	.44	.09	.07	.02	.02
22	.21	.78	.67	46	1.8	12	.87	.25	.08	.07	.04	.01
23	.19	.78	.67	43	1.7	5.7	.72	.18	.07	.07	.02	.01
24	.18	.75	2.2	8.7	1.4	80	.63	.17	.15	.08	.02	23
25	.19	.75	4.3	5.5	1.6	31	.52	.15	.56	.08	.04	8.7
26	.20	20	1.8	4.0	1.3	7.8	.45	.14	.18	.08	.02	.35
27	.17	10	1.4	4.1	1.0	4.8	.44	.12	.13	.07	.03	.11
28	.15	2.9	1.1	3.8	.90	238	.40	.12	.11	.07	.03	.09
29	.15	2.1	.90	3.1	.85	45	.38	.12	.09	.07	.03	4.0
30	.15	1.5	12	2.5	---	38	.43	.12	.08	.08	.01	31
31	.15	---	9.4	7.3	---	8.5	---	.12	---	.07	.01	---
TOTAL	115.36	272.00	53.02	561.5	198.85	1261.79	96.54	6.20	4.29	1.92	1.19	68.35
MEAN	3.72	9.07	1.71	18.1	6.86	40.7	3.22	.20	.14	.062	.038	2.28
MAX	45	200	12	86	89	238	18	.44	.56	.08	.10	31
MIN	.15	.16	.40	1.9	.85	.69	.38	.12	.07	.04	.01	.01
CFSM	.64	1.56	.29	3.11	1.18	6.98	.55	.03	.02	.01	.007	.39
IN.	.74	1.74	.34	3.58	1.27	8.05	.62	.04	.03	.01	.01	.44

CAL YR 1979 TOTAL 2822.18 MEAN 7.73 MAX 297 MIN .01 CFSM 1.33 IN 18.00
WTR YR 1980 TOTAL 2641.01 MEAN 7.22 MAX 238 MIN .01 CFSM 1.24 IN 16.85

02126000 ROCKY RIVER NEAR NORWOOD, N. C.

LOCATION.--Lat 35°08'54", long 80°10'33", Stanly County, Hydrologic Unit 03040105, on left bank 1,000 ft (300 m) downstream from Lanes Creek, 1.5 mi (2.4 km) upstream from bridge on Secondary Road 1935, 6 mi (10 km) southwest of Norwood, and 11.2 mi (18.0 km) upstream from mouth. Water-quality samples at medium and high stages collected at bridge on Secondary Road 1935, 1.5 mi (2.4 km) downstream.

DRAINAGE AREA.--1,372 mi² (3,553 km²), revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1929 to current year.

REVISED RECORDS.--WSP 852: 1937. WSP 1052: 1936(M). WSP 1503: 1935, 1945.

GAGE.--Water-stage recorder. Datum of gage is 212.91 ft (64.895 m) National Geodetic Vertical Datum of 1929, (levels by Corps of Engineers).

REMARKS.--Water-discharge record good.

AVERAGE DISCHARGE.--51 years, 1,342 ft³/s (38.01 m³/s), 13.28 in/yr (337 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 105,000 ft³/s (2,970 m³/s) Sept. 18, 1945, gage height, 46.37 ft (14.134 m), from floodmark; minimum, 17 ft³/s (0.48 m³/s) Oct. 8, 1954, gage height, 0.00 ft (0.000 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1908 reached a stage of 35 ft (10.7 m), from information by local residents, discharge, 67,600 ft³/s (1,910 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 16,000 ft³/s (450 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 11	2400	29200	827	20.01	6.099	Mar 25	0200	23800	674	17.44	5.316
Jan 18	2100	21300	603	16.15	4.923	Mar 29	0800	30100	852	20.43	6.227
Mar 21	1600	*32200	912	*21.41	6.526						

Minimum discharge, 57 ft³/s (1.61 m³/s) Sept. 16, gage height, 0.29 ft (0.088 m); minimum daily, 60 ft³/s (1.70 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4770	241	729	689	1470	499	4050	450	317	161	106	71
2	2430	303	645	571	1110	526	2660	423	291	166	123	64
3	1230	3100	568	486	862	497	2010	392	267	124	121	63
4	808	1580	525	439	782	645	1730	365	254	137	120	113
5	3390	720	517	542	735	3300	1500	343	240	158	116	121
6	5790	524	514	728	715	5400	1160	328	219	220	100	139
7	2210	447	559	596	774	2580	984	314	203	151	97	184
8	932	390	585	577	850	5690	1020	304	200	125	93	135
9	636	361	505	3520	903	10500	7730	291	189	121	89	104
10	519	337	449	2980	5540	3700	3280	285	184	121	84	104
11	490	10600	434	2690	7030	2200	1650	263	174	126	78	90
12	483	21100	427	5960	3560	1480	1190	250	174	131	78	80
13	410	6490	424	3350	2160	8210	1300	244	169	132	85	79
14	382	2620	455	6020	1570	6710	3670	241	167	118	84	74
15	332	1530	485	8190	1310	2830	4230	245	160	108	79	66
16	309	1110	461	3430	1230	1770	2300	336	154	108	78	60
17	298	888	485	2240	1090	1400	1440	251	154	109	118	69
18	284	757	470	8320	896	7450	1120	3650	165	259	175	85
19	271	672	431	16500	797	5120	966	2570	195	425	109	104
20	258	612	403	7180	768	3590	850	3040	241	265	91	105
21	249	564	381	3020	751	27300	772	10500	207	161	87	93
22	237	529	360	2150	728	16600	714	3550	170	128	88	89
23	238	499	346	5910	706	4630	655	1180	150	627	93	88
24	272	486	346	5090	744	6930	604	970	146	613	117	134
25	338	484	494	2970	757	18100	553	1090	157	268	117	387
26	282	3790	778	1790	647	6510	504	774	222	177	100	720
27	250	4600	610	1430	569	3270	493	627	261	142	90	284
28	233	1930	480	1330	536	4400	486	471	210	119	91	193
29	226	1210	421	1180	523	25600	453	400	177	145	79	162
30	225	894	402	1020	---	11600	466	362	150	123	76	396
31	230	---	523	1060	---	7530	---	335	---	109	73	---
TOTAL	29012	69368	15212	101958	40113	206567	50540	34844	5967	5877	3035	4456
MEAN	936	2312	491	3289	1383	6663	1685	1124	199	190	97.9	149
MAX	5790	21100	778	16500	7030	27300	7730	10500	317	627	175	720
MIN	225	241	346	439	523	497	453	241	146	108	73	60
CFSM	.68	1.69	.36	2.40	1.01	4.86	1.23	.82	.15	.14	.07	.11
IN.	.79	1.88	.41	2.76	1.09	5.60	1.37	.94	.16	.16	.08	.12

CAL YR 1979 TOTAL 732134 MEAN 2006 MAX 37400 MIN 100 CFSM 1.46 IN 19.85
WTR YR 1980 TOTAL 566949 MEAN 1549 MAX 27300 MIN 60 CFSM 1.13 IN 15.37

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948, 1956-73, 1977 to September 1980 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1955 to September 1967, October 1976 to September 1980.
WATER TEMPERATURES: October 1947 to September 1948, October 1955 to September 1967, October 1976 to September 1980.

REMARKS.--Station is part of district's Primary Accounting Network used to define stream-quality characteristics of the State's major streams. Samples collected at bridge on Secondary Road 1935, 1.5 mi (2.4 km) downstream from gaging station. At various times prior to 1976 samples were collected at bridge on Secondary Road 1943, 2.5 mi (4.0 km) upstream from gaging station. There is no change in water quality between sites. Miscellaneous chemical data published for water years 1945, 1955-56, 1958, 1960, 1963-64, 1966. Daily records of specific conductance for water years 1956-64 are available in files of district office in Raleigh, N. C. For water years 1958-67, data were published as Rocky River at Gaddy, near Norwood (station 02125681).

COOPERATION.--Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,050 micromhos Sept. 9, 10, 11, 1966; minimum daily, 38 micromhos Jan. 31, 1960.
WATER TEMPERATURES: Maximum daily, 35.0°C July 18, 1977, Aug. 6, 1980; minimum daily, 0.0°C on several days during most winters.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 714 micromhos Sept. 19; minimum daily, 68 micromhos Mar. 29.
WATER TEMPERATURES: Maximum daily, 35.0°C Aug. 6; minimum daily, 1.0°C Mar. 2.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)
OCT 18...	0900	280	270	6.3	13.5	30	9.7	43	0	.0	.0
MAR 10...	0915	3950	125	6.3	11.0	100	11.4	29	9	--	--

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT 18...	10	4.3	28	67	1.9	3.7	54	0	44	43	27
MAR 10...	6.4	3.1	6.7	32	.5	2.0	24	0	20	19	12

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
OCT 18...	33	.2	17	155	154	.21	117	.66	.01	.67	.66
MAR 10...	9.8	.1	10	90	67	.12	960	.85	.02	.87	.88

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)
OCT 18...	--	.00	--	.00	--	.52	.68	.16	.52	1.4
MAR 10...	.08	.05	.10	.06	.71	.44	.79	.30	.49	1.7

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS PO4)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)
OCT										
18...	6.0	.340	.77	1.0	.330	.25	.27	.83	20	17
MAR										
10...	7.3	.180	.25	.55	.060	.08	.06	.18	10	5

DATE	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT										
18...	3	1	0	7	580	250	330	0	0	0
MAR										
10...	5	5	2	3	2500	2000	490	2	1	1

DATE	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	LENGTH OF EXPO-SURE (DAYS)
OCT									
18...	20	10	10	6.0	--	.10	--	--	--
MAR									
10...	30	20	10	11	.6	.10	.080	.000	44

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

PHYTOPLANKTON ANALYSES, SEPTEMBER 1979

DATE	SEP 4,79
TIME	1300
TOTAL CELLS/ML	500
DIVERSITY: DIVISION	0.3
.CLASS	0.3
..ORDER	0.7
...FAMILY	2.6
....GENUS	2.8

ORGANISM	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)		
.CHLOROPHYCEAE		
..CHLOROCOCCALES		
...OOCYSTACEAE		
....ANKISTRODESMUS	5	1
...SCENEDESMACEAE		
....SCENEDESMUS	10	2
CHRYSOPHYTA		
.BACILLARIOPHYCEAE		
..CENTRALES		
...COSCINODISCACEAE		
....CYCLOTELLA	10	2
....MELOSIRA	30	6
..PENNALES		
...ACHNANTHACEAE		
....ACHNANTHES	10	2
....COCCONEIS	40	8
...CYMBELLACEAE		
....CYMBELLA	5	1
...FRAGILARIACEAE		
....SYNEDRA	50	10
...GOMPHONEMATACEAE		
....GOMPHONEMA	25	5
...NAVICULACEAE		
....NAVICULA	96#	19
...NITZSCHIACEAE		
....NITZSCHIA	200#	39
...SURIRELLACEAE		
....SURIRELLA	10	2
CYANOPHYTA (BLUE-GREEN ALGAE)		
.CYANOPHYCEAE		
..CHROOCOCCALES		
...CHROOCOCCACEAE		
....ANACYSTIS	10	2

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE	OCT 18,79	MAR 10,80
TIME	0900	0915
TOTAL CELLS/ML	490	2300
DIVERSITY: DIVISION	1.1	1.7
.CLASS	1.1	1.7
..ORDER	0.0	2.4
...FAMILY	0.0	3.6
....GENUS	0.0	3.8

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)				
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...CHARACIACEAE				
....SCHROEDERIA	--	-	27	1
...CHLOROCOCCACEAE				
....CHLOROCOCCUM	5	1	--	-
...MICRACTINIACEAE				
....MICRACTINIUM	--	-	27	1
...OOCYSTACEAE				
....ANKISTRODESMUS	15	3	82	4
....CHODATELLA	--	-	27	1
....KIRCHNERIELLA	10	2	--	-
...SCENEDESMACEAE				
....CRUCIGENIA	60	12	110	5
....SCENEDESMUS	50	10	110	5
..TETRASPORALES				
...PALMELLACEAE				
....SPHAEROCYSTIS	--	-	220	10
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS	5	1	27	1
CHRYSOPHYTA				
.BACILLARIOPHYCEAE				
..CENTRALES				
...COSCINODISCACEAE				
....CYCLOTELLA	15	3	--	-
....MELOSIRA	10	2	110	5
..PENNALES				
...ACHNANTHACEAE				
....ACHNANTHES	--	-	110	5
....COCCONEIS	5	1	--	-
....RHOICOSPHENIA	--	-	27	1
...CYMBELLACEAE				
....CYMBELLA	--	-	55	2
...FRAGILARIACEAE				
....SYNEDRA	--	-	27	1
...GOMPHONEMATACEAE				
....GOMPHONEMA	5	1	110	5
...NAVICULACEAE				
....NAVICULA	55	11	190	8
...NITZSCHIACEAE				
....NITZSCHIA	230#	46	190	8
...SURIRELLACEAE				
....SURIRELLA	5	1	82	4
CRYPTOPHYTA (CRYPTOMONADS)				
.CRYPTOPHYCEAE	15	3	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)				
.CYANOPHYCEAE				
..CHROOCOCCALES				
...CHROOCOCCACEAE				
....ANACYSTIS	--	-	110	5
..HORMOGONALES				
...OSCILLATORIACEAE				
....OSCILLATORIA	--	-	600#	26
EUGLENOPHYTA (EUGLENOIDS)				
.EUGLENOPHYCEAE				
..EUGLENALES				
...EUGLENACEAE				
....EUGLENA	5	1	27	1
PYRRHOPHYTA (FIRE ALGAE)				
.DINOPHYCEAE				
..PERIDINIALES				
...PERIDINIACEAE				
....PERIDINIUM	--	-	27	1

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
*. - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	319	171	133	138	216	98	206	250	314	425	480
2	114	308	171	133	143	216	107	225	245	304	410	505
3	125	262	182	150	143	201	118	224	230	304	420	506
4	154	148	163	163	135	186	127	245	235	284	535	555
5	194	160	168	171	140	167	129	235	255	245	340	677
6	100	171	184	184	157	126	132	213	274	196	415	687
7	103	182	197	161	176	127	127	211	314	216	430	530
8	114	217	184	166	176	122	129	232	314	206	415	444
9	137	239	182	134	175	98	82	265	318	196	395	520
10	143	251	174	123	132	108	96	274	314	186	385	424
11	188	171	176	119	110	117	116	284	314	196	410	566
12	200	93	184	122	118	127	127	284	304	196	445	561
13	217	103	194	107	127	103	139	289	333	274	485	525
14	217	114	203	105	137	98	108	274	333	333	455	500
15	217	137	204	85	142	118	108	265	353	365	600	505
16	217	148	194	93	155	123	113	279	363	360	585	515
17	228	160	193	104	147	129	127	328	382	360	530	505
18	217	171	194	102	147	108	145	176	402	410	505	584
19	262	171	194	78	156	106	152	103	353	234	530	714
20	308	171	202	77	162	110	147	196	353	440	479	602
21	319	182	209	88	171	73	147	98	363	350	414	592
22	308	194	206	100	176	73	155	105	353	311	444	672
23	296	205	214	102	186	86	112	122	372	255	413	576
24	319	217	212	93	181	118	176	137	372	240	405	546
25	274	205	168	102	167	74	191	152	402	168	480	590
26	308	137	153	112	171	84	206	152	392	200	555	408
27	296	114	140	114	177	98	207	157	353	245	586	212
28	296	125	138	114	205	108	196	167	386	285	646	181
29	331	148	133	122	220	88	191	191	323	445	601	209
30	331	160	133	128	---	74	216	216	314	675	550	192
31	319	---	133	141	---	86	---	240	---	435	505	---
MEAN	224	179	179	120	158	118	141	211	329	298	477	503

WTR YR 1980 MEAN 245 MAX 714 MIN 68

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	16.0	7.0	7.0	4.5	7.5	14.0	17.5	25.5	27.0	29.0	24.0
2	21.0	17.0	5.0	7.0	3.5	1.0	15.0	19.0	28.0	27.0	25.5	29.5
3	20.5	16.0	5.0	6.5	2.5	1.5	15.0	18.5	29.0	29.0	27.0	30.0
4	20.0	14.0	4.5	5.0	3.0	5.0	18.0	20.0	29.5	27.0	31.5	28.5
5	18.5	14.0	5.0	5.5	3.0	5.0	16.0	22.0	28.5	28.0	25.0	29.0
6	16.0	12.0	5.0	4.5	2.0	7.0	16.0	23.0	27.0	31.5	35.0	24.0
7	16.0	11.5	8.0	4.0	4.5	8.0	15.0	23.5	26.5	31.5	33.5	26.0
8	16.5	10.5	7.0	5.0	4.5	10.0	15.5	22.0	28.5	32.0	33.0	29.0
9	18.0	11.0	6.5	6.0	3.5	12.0	17.0	21.5	28.0	32.0	28.0	29.0
10	16.0	10.0	6.5	7.0	3.5	11.5	17.0	20.0	27.0	31.0	27.5	27.0
11	15.0	14.0	7.0	7.0	4.5	12.0	19.0	21.0	28.0	31.5	27.0	28.0
12	15.0	12.0	8.5	7.5	5.0	9.5	17.0	25.0	27.0	31.5	28.0	28.0
13	16.0	11.5	10.0	6.0	5.0	6.5	16.0	24.5	27.0	29.0	26.5	22.5
14	15.0	11.5	6.0	9.5	5.5	8.0	17.0	25.0	25.0	32.0	27.0	22.5
15	15.0	10.0	8.5	7.0	6.0	9.5	15.0	24.0	27.5	32.0	27.5	29.5
16	15.0	10.0	8.5	7.5	7.5	10.0	15.0	24.5	30.0	25.0	27.5	25.0
17	16.0	10.5	5.0	7.5	5.5	12.0	15.0	22.0	28.0	33.0	26.5	27.0
18	16.5	11.0	6.5	9.0	5.5	12.5	17.0	20.0	24.0	29.0	29.5	27.0
19	18.0	11.0	6.0	8.5	6.0	12.0	17.0	21.0	25.5	29.5	30.0	27.0
20	19.0	11.0	6.0	7.5	6.0	12.0	18.0	20.5	27.0	27.0	31.5	24.5
21	19.0	11.5	6.0	8.0	8.5	13.0	19.0	20.0	25.0	28.0	29.5	24.0
22	21.0	11.5	6.0	8.5	10.5	12.5	20.0	20.5	26.5	21.5	26.0	30.0
23	20.0	13.5	7.5	9.5	12.0	11.0	21.0	21.0	28.0	30.0	24.0	30.0
24	18.0	15.0	10.0	8.0	11.5	10.5	22.5	21.0	25.0	27.0	23.5	27.0
25	16.0	15.0	10.0	8.0	12.0	11.5	23.5	22.0	23.0	25.5	29.5	25.0
26	15.0	16.0	8.5	8.0	10.0	12.0	22.0	23.0	23.0	25.0	29.0	24.0
27	13.0	14.0	8.0	7.5	9.0	13.0	22.0	22.0	26.5	25.0	29.5	21.0
28	15.0	13.0	6.5	8.0	9.5	12.0	21.0	23.5	27.0	29.0	30.0	19.5
29	15.0	10.5	6.0	8.0	10.5	11.5	18.0	25.0	29.0	33.0	29.5	18.0
30	16.5	9.0	5.5	6.5	---	12.0	18.0	25.0	27.0	31.0	23.5	18.0
31	16.5	---	7.0	5.0	---	12.0	---	25.0	---	31.0	25.0	---
MEAN	17.0	12.5	7.0	7.0	6.5	10.0	17.5	22.0	27.0	29.0	28.0	26.0

WTR YR 1980 MEAN 17.5 MAX 35.0 MIN 1.0

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
18...	0900	280	7	5.3	85
MAR					
10...	0915	3950	93	992	--

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	PH LAB (UNITS)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	FIELD ALKA-LINITY (MG/L AS CACO3)	LAB ALKA-LINITY (MG/L AS CACO3)
OCT												
29...	1130	226	270	7.6	--	16.0	7.8	24	2.0	<10	--	67
NOV												
29...	1400	1160	--	--	7.3	11.0	8.8	18	1.9	840	--	26
DEC												
13...	1100	420	170	--	7.6	10.0	10.8	17	.9	40	--	46
JAN												
30...	1135	1040	85	7.4	--	6.0	12.6	13	.9	160	46	--
FEB												
25...	1300	750	128	6.9	--	11.0	9.6	15	1.2	30	47	--
MAR												
25...	1400	16400	42	7.2	--	10.0	10.5	31	3.2	3400	35	--
APR												
30...	1130	470	165	--	7.5	13.0	8.6	11	2.0	140	--	43
MAY												
28...	1100	470	148	6.9	--	17.0	8.7	14	1.0	290	50	--
JUN												
25...	1000	158	395	6.7	--	17.0	7.8	24	2.5	10	85	--
JUL												
31...	1100	104	200	7.2	--	21.0	8.2	21	1.1	30	63	--
AUG												
28...	1420	84	700	8.1	--	28.0	7.8	31	1.4	<10	105	--
SEP												
16...	1200	57	575	7.7	--	25.0	5.8	27	1.4	30	83	--

02128000 LITTLE RIVER NEAR STAR, N. C.

LOCATION.--Lat 35°23'11", long 79°49'56", Montgomery County, Hydrologic Unit 03040104, on left bank 9 ft (3 m) downstream from bridge on Secondary Road 1340, 50 ft (15 m) upstream from Black Rock Branch, 0.2 mi (0.3 km) upstream from Norfolk Southern Railway bridge, 0.3 mi (0.5 km) downstream from West Fork Little River, and 3 mi (5 km) west of Star.

DRAINAGE AREA.--106 mi² (275 km²), revised.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949-54. April 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 409.00 ft (124.663 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those below 10 cfs, which are poor.

AVERAGE DISCHARGE.--26 years, 112 ft³/s (3.172 m³/s), 14.35 in/yr (364 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,400 ft³/s (295 m³/s) Oct. 15, 1954, gage height, 16.46 ft (5.017 m); minimum, 0.24 ft³/s (0.007 m³/s) Oct. 4, 5, 1968, gage height, 0.68 ft (0.207 m), may be affected by upstream storage releases for water supply.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1945 reached a stage of about 20 ft (6.0 m), from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,300 ft³/s (65 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan 18	2200	*2390	67.7	*7.48	2.280

Minimum discharge, 1.5 ft³/s (0.042 m³/s) Sept. 16, 17, gage height, 1.10 ft (0.335 m); minimum daily, 1.6 ft³/s (0.045 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	31	55	52	104	80	188	105	59	35	14	3.4
2	35	63	52	48	96	85	153	97	55	24	13	3.2
3	45	315	48	46	90	100	142	95	52	20	11	3.1
4	45	123	47	46	88	120	137	93	49	306	11	4.5
5	85	65	49	58	89	257	128	91	45	179	11	9.1
6	109	47	53	69	89	446	118	86	43	84	9.3	8.4
7	49	42	61	56	90	192	114	86	43	54	8.2	6.6
8	36	40	58	56	93	165	119	86	42	32	7.6	5.5
9	33	39	50	69	97	215	403	81	39	27	7.0	5.0
10	32	40	47	70	230	147	185	78	36	26	6.8	4.2
11	35	785	47	205	215	118	137	78	34	29	6.8	3.7
12	38	790	47	487	161	105	125	77	32	29	6.5	3.3
13	35	188	49	165	131	255	159	75	31	26	5.9	2.8
14	37	121	65	584	115	334	617	74	30	23	5.6	2.4
15	33	95	72	457	109	161	404	81	29	21	5.2	2.0
16	32	81	55	173	109	125	176	80	27	19	6.1	1.6
17	32	72	51	124	105	120	151	71	25	16	5.4	2.0
18	31	65	47	919	96	677	137	394	48	82	8.0	2.9
19	31	60	46	874	91	249	130	159	61	61	8.6	3.9
20	30	56	46	235	93	194	124	397	42	29	6.9	7.2
21	30	54	44	153	92	1680	121	1040	32	21	6.0	10
22	29	54	44	134	92	463	116	183	28	18	9.1	7.6
23	31	52	45	609	93	214	113	250	26	24	8.6	6.7
24	35	52	47	278	91	507	107	186	25	32	8.1	6.9
25	37	51	82	162	93	886	103	196	31	23	9.2	12
26	35	161	92	130	87	267	112	147	52	20	7.3	16
27	32	167	62	118	85	184	105	99	47	16	6.1	11
28	31	92	51	113	82	180	103	80	37	14	5.2	8.5
29	31	73	48	107	81	547	104	72	30	36	4.6	8.1
30	31	61	49	100	---	281	116	66	25	26	4.1	14
31	31	---	53	103	---	271	---	63	---	17	3.7	---
TOTAL	1196	3935	1662	6800	3087	9625	4947	4766	1155	1369	235.9	185.6
MEAN	38.6	131	53.6	219	106	310	165	154	38.5	44.2	7.61	6.19
MAX	109	790	92	919	230	1680	617	1040	61	306	14	16
MIN	29	31	44	46	81	80	103	63	25	14	3.7	1.6
CFSM	.36	1.24	.51	2.07	1.00	2.93	1.56	1.45	.36	.42	.07	.06
IN.	.42	1.38	.58	2.39	1.08	3.38	1.74	1.67	.41	.48	.08	.07

CAL YR 1979 TOTAL 64743.0 MEAN 177 MAX 4090 MIN 14 CFSM 1.67 IN 22.72
WTR YR 1980 TOTAL 38963.5 MEAN 106 MAX 1680 MIN 1.6 CFSM 1.00 IN 13.67

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.

LOCATION.--Lat 34°56'46", long 79°52'11", Richmond County, Hydrologic Unit 03040201, on left bank at bridge on U.S. Highway 74, 2.5 mi (4.0 km) upstream from Falling Creek, 3.3 mi (5.3 km) downstream from Blewett Falls hydroelectric plant, 6 mi (10 km) west of Rockingham, and 192 mi (309 km) upstream from mouth in Winyah Bay.

DRAINAGE AREA.--6,863 mi² (17,780 km²), revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1906 to January 1912, October 1927 to current year. Published as Yadkin River near Pee Dee, N. C., August 1906 to January 1912.

REVISED RECORDS.--WSP 1203: 1928-37. WSP 1303: 1928-42 (monthly and yearly runoff), 1943-46 (adjusted monthly runoff). WSP 1503: 1906-12, 1928-32(m).

GAGE.--Water-stage recorder. Datum of gage is 120.68 ft (36.783 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). August 1906 to January 1912 nonrecording gage at site 3.3 mi (5.3 km) upstream at different datum. September 1927 to Sept. 30, 1931, water-stage recorder at present site at datum 1.00 ft (0.305 m) higher.

REMARKS.--Water-discharge record good. Flow regulated since 1928 by Blewett Falls Lake and five other reservoirs upstream. (See p. 332).

AVERAGE DISCHARGE.--58 years (1906-11, 1927-80), 8,089 ft³/s (229.1 m³/s), 16.01 in/yr (407 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 276,000 ft³/s (7,820 m³/s) Aug. 27, 1908, gage height, 31.28 ft (9.534 m), present site and datum, from records of State Highway Commission; minimum, 50 ft³/s (1.42 m³/s) Dec. 2, 3, 1951; minimum daily, 58 ft³/s (1.64 m³/s) Dec. 2, 1951, result of abnormally low shutdown of Blewett Falls hydroelectric plant to produce steady flow for current-meter measurements at this gaging station; minimum discharge from normal regulations, 96 ft³/s (2.72 m³/s) Oct. 25, 1943; minimum daily, 120 ft³/s (3.40 m³/s) Oct. 8, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 66,100 ft³/s (1,870 m³/s) Mar. 21, gage height, 11.61 ft (3.539 m); minimum, 158 ft³/s (4.47 m³/s) June 23, gage height, 0.72 ft (0.219 m); minimum daily, 223 ft³/s (6.32 m³/s) Aug. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17600	6690	10100	4530	12800	9260	19800	10400	8240	3340	4470	244
2	24400	7720	9920	5820	11000	4740	15300	9210	8830	8200	4960	3550
3	16700	18600	9890	7070	11600	5980	16600	8990	8680	7400	548	3960
4	16900	15300	9970	5570	12600	7970	15000	6670	6840	2570	3140	3970
5	15200	11600	10000	8640	11400	10300	11600	8310	4170	2630	4730	3730
6	24300	11300	10100	3900	10700	11900	10500	6570	5840	4150	6080	1720
7	17100	10200	10200	4350	10600	15500	11200	6510	2630	2470	4260	325
8	11700	9350	10100	8720	10700	14700	12500	7880	415	2810	4470	3080
9	10300	9340	3370	9010	13200	19300	19800	7030	3610	5850	1920	3330
10	9600	9600	5210	10100	15600	14100	20700	7290	5290	4050	274	5400
11	9690	9800	7580	12000	19400	13900	30700	2440	5980	6240	2480	2660
12	9920	33900	7500	19400	16200	15300	27100	2780	2360	4620	2020	3650
13	10400	28000	7410	19300	14800	19600	23200	5980	3170	2920	2270	2140
14	10300	18000	7460	14000	13200	21900	25200	8000	2560	2810	2080	264
15	9640	13600	5210	26900	12600	15100	29200	8130	327	3520	2580	3700
16	9760	11100	464	19400	12300	10800	35400	7660	6200	4310	453	3750
17	10200	10300	6360	15100	11700	13500	25500	7950	2020	4800	226	5020
18	10100	10100	8840	15700	9700	21100	20200	9700	5140	5940	3110	3170
19	9840	9290	8730	40800	4640	20000	17300	14900	4660	7190	5690	3000
20	4310	10300	5960	30200	2620	17100	15300	12800	3820	1750	3310	673
21	2920	10200	7580	16700	7620	48100	14400	22100	4390	3920	2100	253
22	6450	10200	5230	15900	7480	53200	12000	21600	429	4390	3430	4040
23	6000	10200	3940	18300	7550	33600	10200	12900	2950	5270	1940	4100
24	5880	10200	5040	23400	882	27800	9860	11300	2760	5660	267	3370
25	9210	10100	4590	17500	4870	54700	10300	11900	4610	6300	3320	5580
26	9230	10900	7480	15400	9480	43100	9910	11000	10800	3270	3180	4030
27	9210	15900	6040	14400	9470	28000	10300	9100	9040	373	2460	2800
28	1150	13300	8120	13000	8410	25600	9890	9230	8030	3320	5670	237
29	5430	11100	8090	12100	8720	41700	9700	8770	3840	3450	4040	3800
30	6680	10300	4620	10700	---	42600	9790	8580	4650	4590	574	5910
31	6650	---	2590	11700	---	22800	---	8130	---	4510	223	---
TOTAL	326770	376490	217694	449610	301842	703250	508450	295810	142281	132623	86275	91456
MEAN	10540	12550	7022	14500	10410	22690	16950	9542	4743	4278	2783	3049
MAX	24400	33900	10200	40800	19400	54700	35400	22100	10800	8200	6080	5910
MIN	1150	6690	464	3900	882	4740	9700	2440	327	373	223	237
(†)	-1718	+410	-822	+1454	-2029	+2617	-510	+6	-158	-204	-568	-715

CAL YR 1979 TOTAL 4725911 MEAN 12950 MAX 124000 MIN 282 MEAN‡ 12930 CFSM‡ 1.88 IN‡ 25.52
WTR YR 1980 TOTAL 3632551 MEAN 9925 MAX 54700 MIN 223 MEAN‡ 9749 CFSM‡ 1.42 IN‡ 19.33

† Change in contents, equivalent in cubic feet per second, in W. Kerr Scott Reservoir, furnished by Corps of Engineers; High Rock Lake, Tuckertown Reservoir, and Badin Lake, furnished by Yadkin, Inc.; and Lake Tillery and Blewett Falls Lake, furnished by Carolina Power and Light Co.

‡ Adjusted for change in contents.

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued
(National stream-quality accounting network and pesticide station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947-48, 1958 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1964 to September 1967, July to September 1973, March 1974 to current year.
WATER TEMPERATURES: October 1946 to September 1948, October 1957 to September 1967, July to September 1973, March 1974 to current year.

REMARKS.--Station operated as part of NASQAN network from October 1974 to present. Miscellaneous chemical data published for water years 1945, 1955-56. Daily records of specific conductance for water years 1958-64 are available in files of district office in Raleigh, N. C. Flow regulated by Blewett Falls Lake and five other reservoirs upstream.

COOPERATION.--Pesticide samples were collected by the U.S. Geological Survey and were analyzed by the Environmental Protection Agency. Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 140 micromhos May 25, 1967; minimum daily, 48 micromhos July 15, 1975, Feb. 25, 1979.
WATER TEMPERATURES: Maximum daily, 33.0°C July 11, 1977; minimum daily, 0.0°C on many days in 1961-62.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 111 micromhos Sept. 11; minimum daily, 60 micromhos Nov. 3.
WATER TEMPERATURES: Maximum daily, 31.5°C Aug. 3; minimum daily, 4.5°C Feb. 9.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT												
03...	1230	14400	65	6.6	22.0	60	9.0	K98	52	17	0	4.0
NOV												
07...	1150	9940	71	5.3	14.0	30	8.6	60	K15	21	5	4.9
DEC												
11...	1300	8680	85	5.7	11.0	10	10.4	22	K7	19	0	4.6
FEB												
20...	1415	748	73	7.2	7.0	15	12.8	K10	K4	21	0	5.1
MAR												
25...	1230	60500	60	6.9	10.5	3.5	11.8	500	250	19	1	4.3
APR												
23...	1145	9830	68	7.2	17.0	--	9.0	21	K10	17	0	3.9
MAY												
14...	1020	7700	68	6.2	20.5	52	6.8	K8	K12	18	0	4.0
JUN												
16...	1050	6930	79	6.5	24.5	6.0	5.7	22	93	18	0	4.1
JUL												
28...	1330	5700	82	6.7	28.0	15	5.8	K3	K5	18	0	4.0
AUG												
19...	1300	7610	78	6.5	28.0	15	5.5	K1	K340	16	0	3.3
SEP												
09...	1200	3050	78	6.0	26.0	.80	4.7	K2	31	17	0	3.5

K Results based on colony count outside the acceptable range (non-ideal colony count).

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT												
03...	1.6	5.4	37	.6	2.6	22	0	18	8.8	5.1	4.5	.1
NOV												
07...	2.1	6.5	47	.6	2.9	20	0	16	160	7.6	5.7	.1
DEC												
11...	1.8	6.3	39	.6	2.2	28	0	23	89	5.6	6.2	.0
FEB												
20...	2.1	6.3	37	.6	1.7	26	0	21	2.6	7.4	6.8	.1
MAR												
25...	2.0	6.1	39	.6	1.5	22	0	18	4.4	6.3	5.1	.1
APR												
23...	1.7	5.0	36	.5	1.8	22	0	18	2.2	7.3	4.6	.1
MAY												
14...	1.9	5.6	38	.6	1.7	24	0	20	24	6.1	5.0	.1
JUN												
16...	1.9	6.7	42	.7	1.9	26	0	21	12	5.8	5.6	.1
JUL												
28...	2.0	8.2	46	.8	2.4	27	0	*21	8.2	6.9	6.4	.1
AUG												
19...	1.9	8.1	48	.9	2.2	30	0	*21	13	5.9	6.2	.2
SEP												
09...	2.0	8.0	47	.8	2.2	25	0	*18	35	5.7	6.6	.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)
OCT												
03...	10	58	47	.08	2260	.54	.54	--	.10	.00	.12	.00
NOV												
07...	11	60	53	.08	1610	.46	.44	--	.08	.02	.10	.03
DEC												
11...	11	64	53	.09	1500	.47	.42	--	.04	.11	.05	.14
FEB												
20...	11	--	55	.07	111	.39	.43	.1	.06	.10	.07	.13
MAR												
25...	11	67	39	.09	10900	.54	.51	--	.05	.06	.06	.08
APR												
23...	9.5	59	47	.08	1570	.53	.55	--	.06	.09	.07	.12
MAY												
14...	10	64	48	.09	1330	.50	.49	--	.07	.08	.08	.10
JUN												
16...	10	58	51	.08	1090	.45	.45	--	.11	.11	.13	.14
JUL												
28...	9.6	60	53	.08	923	.35	.28	--	.07	.10	.08	.13
AUG												
19...	9.0	56	50	.08	1150	.13	.12	--	.11	.12	.13	.15
SEP												
09...	10	63	50	.09	519	.20	.20	--	.09	.14	.11	.18

* Lab alkalinity.

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	NITRO-GEN, TOT IN BOT-TOM MA-TERIAL (MG/KG AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)
OCT												
03...	.46	.48	.56	.08	.48	--	1.1	4.9	--	.120	.37	.030
NOV												
07...	.26	.35	.34	.00	.37	--	.80	3.5	--	.080	.25	.050
DEC												
11...	.20	--	.24	--	--	--	.71	3.1	--	.060	.18	.060
FEB												
20...	.28	.36	.34	.00	.46	4000	.73	3.2	4000	.080	.25	.060
MAR												
25...	.27	.25	.32	.01	.31	--	.86	3.8	--	.090	.28	.040
APR												
23...	.23	.02	.29	.18	.11	--	.82	3.6	--	.110	.34	.030
MAY												
14...	.38	.34	.45	.03	.42	--	.95	4.2	--	.120	.37	.060
JUN												
16...	.39	.17	.50	.22	.28	--	.95	4.2	--	.070	.21	.030
JUL												
28...	.30	.09	.37	.18	.19	--	.72	3.2	--	.060	.18	.030
AUG												
19...	.35	.23	.46	.11	.35	--	.59	2.6	--	.040	.12	.050
SEP												
09...	.23	.14	.32	.04	.28	--	.52	2.3	--	.000	.00	.030

DATE	PHOS-PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CADMIUM RECOV, FM BOT-TOM MA-TERIAL (UG/G AS CD)
OCT												
03...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
07...	--	2	0	2	--	100	70	30	0	0	5	--
DEC												
11...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
20...	680	2	1	1	0	100	70	30	0	0	3	<10
MAR												
25...	--	3	0	3	--	<50	<20	30	0	0	2	--
APR												
23...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
14...	--	3	0	3	--	<50	<20	30	0	0	4	--
JUN												
16...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
28...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
19...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
09...	--	1	1	0	--	<50	<50	0	0	0	0	--

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)
OCT 03...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 07...	30	0	40	--	0	0	1	--	3	1	2	--
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	20	10	10	20	0	0	1	10	3	1	2	<10
MAR 25...	20	0	20	--	0	0	0	--	4	0	4	--
APR 23...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 14...	10	0	<10	--	0	0	0	--	2	0	2	--
JUN 16...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 28...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 09...	50	40	<10	--	0	0	0	--	1	0	2	--

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 03...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 07...	1800	1500	340	--	1	0	1	--	50	20	30	--
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	830	680	150	10	1	1	0	10	50	10	40	380
MAR 25...	1800	1700	100	--	0	0	0	--	110	90	20	--
APR 23...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 14...	720	630	90	--	2	2	0	--	120	60	60	--
JUN 16...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 28...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 09...	400	350	50	--	0	0	0	--	110	40	70	--

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)
OCT 03...	--	--	--	--	--	--	--	--	--	--
NOV 07...	<.1	.0	<.1	--	7	6	1	0	0	0
DEC 11...	--	--	--	--	--	--	--	--	--	--
FEB 20...	.1	.0	<.1	.00	2	2	0	0	0	0
MAR 25...	<.1	.0	<.1	--	4	2	2	0	0	0
APR 23...	--	--	--	--	--	--	--	--	--	--
MAY 14...	<.1	.0	<.1	--	1	1	0	0	0	0
JUN 16...	--	--	--	--	--	--	--	--	--	--
JUL 28...	--	--	--	--	--	--	--	--	--	--
AUG 19...	--	--	--	--	--	--	--	--	--	--
SEP 09...	.1	.0	<.1	--	2	2	0	0	0	0

DATE	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
OCT 03...	--	--	--	--	--	--	--	--	5.6	--
NOV 07...	--	0	0	0	10	10	0	--	--	7.4
DEC 11...	--	0	--	--	--	--	--	--	5.9	--
FEB 20...	0	1	1	0	80	60	20	30	--	3.2
MAR 25...	--	0	0	0	110	110	1	--	--	8.3
APR 23...	--	0	--	--	--	--	--	--	2.9	--
MAY 14...	--	0	0	0	0	0	3	--	--	5.3
JUN 16...	--	--	--	--	--	--	--	--	4.4	--
JUL 28...	--	0	--	--	--	--	--	--	3.7	--
AUG 19...	--	--	--	--	--	--	--	--	3.0	--
SEP 09...	--	1	1	0	10	0	10	--	--	6.7

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	BIOMASS CHLORO-PHYLL RATIO PERI-PHYTON (UNITS)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPO-SURE (DAYS)
OCT 03...	--	--	--	--	1.97	1.65	33.8	9.47	2.10	28
NOV 07...	.6	--	--	--	--	--	--	--	--	--
DEC 11...	--	--	--	--	--	--	--	--	--	--
FEB 20...	.7	15	.1	15	--	--	--	--	--	--
MAR 25...	1.1	--	--	--	--	--	--	--	--	--
APR 23...	--	--	--	--	--	--	--	--	--	--
MAY 14...	.6	--	--	--	2.05	1.58	142	3.30	1.25	20
JUN 16...	--	--	--	--	--	--	--	--	--	--
JUL 28...	--	--	--	--	--	--	--	--	--	--
AUG 19...	--	--	--	--	65.6	58.3	422	17.3	1.57	21
SEP 09...	.4	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, PERIOD MAY TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL (UG/L)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
MAY 16...	1230	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 08...	1500	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-AZINON, TOTAL (UG/L)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-ELDRIN TOTAL (UG/L)	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
MAY 16...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 08...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	MALA-THION, TOTAL (UG/L)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METH-OXY-CHLOR, TOTAL (UG/L)	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)
MAY 16...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 08...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	METHYL PARA-THION, TOTAL (UG/L)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI-THION, TOTAL (UG/L)	METHYL TRI-THION, TOT. IN BOTTOM MATL. (UG/KG)	PARA-THION, TOTAL (UG/L)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TOX-APHENE, TOTAL (UG/L)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TOTAL TRI-THION (UG/L)	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
MAY 16...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 08...	ND	--	ND	--	ND	--	ND	--	ND	--

ND Not detected.

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

WATER QUALITY DATA, PERIOD OCTOBER 1979 TO FEBRUARY 1980

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)	P,P' DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL (UG/L)	O,P' DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 07...	1150	ND	ND	ND	ND	ND	ND	ND	2.2	ND	ND	5.0
FEB 20...	1415	ND	--	ND	--	ND	--	ND	--	ND	--	--

DATE	DDT, TOTAL (UG/L)	O,P' DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL (UG/L)
NOV 07...	ND	ND	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 20...	ND	--	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)
NOV 07...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 20...	--	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL (UG/L)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 07...	ND	ND	ND	ND	ND	63	ND	ND	ND	ND	ND
FEB 20...	ND	--	ND	--	ND	--	ND	--	--	--	--

ND Not detected.

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

PHYTOPLANKTON ANALYSES, AUGUST 1979 TO SEPTEMBER 1979

DATE	AUG 8,79	SEP 4,79
TIME	1500	1130
TOTAL CELLS/ML	660	12000
DIVERSITY: DIVISION	1.5	0.8
.CLASS	1.5	0.8
..ORDER	1.9	1.5
...FAMILY	2.2	1.8
....GENUS	2.5	2.4

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)				
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...CHLOROCOCCACEAE				
....CHLOROCOCCUM	--	-	*	0
...MICRACTINIACEAE				
....MICRACTINIUM	--	-	*	0
...OOCYSTACEAE				
....ANKISTRODESMUS	13	2	--	-
....CHLORELLA	--	-	*	0
....GLOEOACTINIUM	77	12	*	0
....KIRCHNERIELLA	--	-	*	0
....TETRAEDRON	--	-	*	0
...SCENEDESMACEAE				
....ACTINASTRUM	--	-	180	1
....CRUCIGENIA	52	8	--	-
....SCENEDESMUS	77	12	560	5
....TETRASTRUM	--	-	*	0
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS	26	4	--	-
CHRYSOPHYTA				
.BACILLARIOPHYCEAE				
..CENTRALES				
...COSCINODISCACEAE				
....CYCLOTELLA	77	12	230	2
....MELOSIRA	--	-	*	0
....SKELETONEMA	--	-	88	1
..PENNALES				
...FRAGILARIACEAE				
....ASTERIONELLA	--	-	300	2
....SYNEDRA	--	-	*	0
...NAVICULACEAE				
....NAVICULA	--	-	88	1
...NITZSCHIACEAE				
....NITZSCHIA	52	8	110	1
CYANOPHYTA (BLUE-GREEN ALGAE)				
.CYANOPHYCEAE				
..CHROOCOCCALES				
...CHROOCOCCACEAE				
....AGMENELLUM	--	-	1200	10
....ANACYSTIS	280#	43	6700#	56
..HORMOGONALES				
...NOSTOCACEAE				
....ANABAENOPSIS	--	-	820	7
...OSCILLATORIACEAE				
....SCHIZOTHRIX	--	-	1300	11
PYRRHOPHYTA (FIRE ALGAE)				
.DINOPHYCEAE				
..PERIDINIALES				
...PERIDINIACEAE				
....PERIDINIUM	--	-	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO AUGUST 1980

DATE	NOV 7,79		MAR 25,80		MAY 14,80		JUN 16,80		JUL 28,80		AUG 19,80	
TIME	1150		1230		1020		1050		1330		1300	
TOTAL CELLS/ML	77		720		150		570		9200		3600	
DIVERSITY: DIVISION	1.0		1.1		1.2		1.4		1.2		1.4	
.CLASS	1.0		1.1		1.2		1.4		1.2		1.4	
..ORDER	1.0		1.7		2.0		1.9		2.0		2.2	
...FAMILY	1.0		2.2		2.0		2.4		2.5		3.0	
....GENUS	1.0		2.8		2.5		2.8		3.0		3.3	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)												
.CHLOROPHYCEAE												
..CHLOROCOCCALES												
...CHARACIACEAE												
....SCHROEDERIA	--	-	--	-	--	-	--	-	*	0	--	-
...COELASTRACEAE												
....COELASTRUM	--	-	--	-	--	-	--	-	--	-	310	9
...MICRACTINIACEAE												
....GOLENKINIA	--	-	--	-	--	-	--	-	50	1	52	1
...OOCYSTACEAE												
....ANKISTRODESMUS	--	-	220#	31	--	-	13	2	150	2	*	0
....CHLORELLA	--	-	--	-	--	-	26	5	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	52	9	--	-	--	-
....KIRCHNERIELLA	--	-	6	1	--	-	--	-	--	-	--	-
....SELENASTRUM	--	-	23	3	--	-	--	-	--	-	220	6
....TETRAEDRON	--	-	--	-	--	-	--	-	--	-	*	0
....TREUBARIA	--	-	--	-	--	-	--	-	--	-	*	0
...SCENEDESMACEAE												
....CRUCIGENIA	--	-	--	-	--	-	--	-	700	8	52	1
....SCENEDESMUS	--	-	11	2	26#	17	180#	32	100	1	390	11
..VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	--	-	--	-	13	8	13	2	50	1	*	0
..ZYGNEMATALES												
...DESMIDIACEAE												
....EUASTRUM	39#	50	--	-	--	-	--	-	--	-	--	-
CHRYSOPHYTA												
.BACILLARIOPHYCEAE												
..CENTRALES												
...COSCINODISCACEAE												
....CYCLOTELLA	--	-	63	9	39#	25	52	9	1400#	15	260	7
....MELOSIRA	--	-	170#	24	39#	25	100#	18	300	3	100	3
..PENNALES												
...FRAGILARIACEAE												
....ASTERIONELLA	--	-	23	3	--	-	--	-	--	-	140	4
....FRAGILARIA	39#	50	--	-	--	-	--	-	--	-	--	-
....SYNEDRA	--	-	74	10	--	-	--	-	*	0	--	-
...NAVICULACEAE												
....NAVICULA	--	-	40	6	--	-	--	-	*	0	--	-
...NITZSCHIACEAE												
....NITZSCHIA	--	-	80	11	26#	17	77	14	180	2	100	3
CYANOPHYTA (BLUE-GREEN ALGAE)												
.CYANOPHYCEAE												
..CHROOCOCCALES												
...CHROOCOCCACEAE												
....AGMENELLUM	--	-	--	-	--	-	--	-	1300	14	100	3
....ANACYSTIS	--	-	--	-	13	8	39	7	780	8	920#	25
....COCCOCHLORIS	--	-	--	-	--	-	--	-	50	1	--	-
..HORMOGONALES												
...OSCILLATORIACEAE												
....OSCILLATORIA	--	-	--	-	--	-	--	-	2500#	27	310	9
...RIVULARIACEAE												
....RAPHIDIOPSIS	--	-	--	-	--	-	--	-	1500#	16	590#	16
EUGLENOPHYTA (EUGLENOIDS)												
.EUGLENOPHYCEAE												
..EUGLENALES												
...EUGLENACEAE												
....EUGLENA	--	-	11	2	--	-	13	2	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	78	80	73	78	84	70	66	73	83	82	98
2	77	75	83	74	72	84	69	64	74	77	77	93
3	76	60	80	77	75	84	70	73	72	79	75	93
4	71	75	80	79	71	90	73	69	69	75	78	90
5	64	90	76	82	71	91	73	68	76	88	75	96
6	71	79	77	78	70	81	72	68	74	83	84	96
7	74	72	78	75	70	102	72	71	78	77	83	94
8	69	75	70	69	70	82	72	66	76	74	78	93
9	77	71	75	84	69	83	72	69	74	74	77	100
10	65	73	73	80	68	92	73	65	76	78	82	90
11	69	78	78	78	73	92	68	71	82	74	83	111
12	64	87	86	78	82	85	67	69	79	82	83	107
13	64	78	80	78	79	75	67	69	77	94	80	100
14	69	76	77	69	82	74	68	71	74	74	80	92
15	69	71	74	71	81	76	73	71	76	79	100	96
16	69	75	79	74	77	78	72	65	78	83	86	92
17	69	76	74	73	78	76	70	67	80	77	84	92
18	64	78	74	72	79	74	69	69	84	89	84	98
19	68	79	89	71	82	74	68	73	84	83	86	86
20	69	76	82	70	87	75	68	74	81	84	86	87
21	66	78	74	66	90	70	69	73	80	73	86	95
22	56	80	79	65	84	69	65	78	82	83	84	95
23	69	73	73	65	93	72	66	71	84	91	87	89
24	78	78	78	67	92	73	67	71	80	88	91	95
25	76	79	82	66	92	74	68	70	87	81	89	103
26	71	76	72	66	84	72	64	71	88	88	87	106
27	71	71	82	69	97	74	66	70	85	90	86	90
28	78	80	84	64	88	72	65	69	72	88	88	94
29	73	85	82	70	86	72	71	71	83	86	90	101
30	71	80	71	71	---	64	65	71	86	84	88	109
31	75	---	73	69	---	63	---	72	---	83	92	---
MEAN	71	77	78	72	80	78	69	70	78	82	84	96

WTR YR 1980 MEAN 78 MAX 111 MIN 60

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.5	17.5	11.0	9.0	7.0	5.0	14.0	17.5	24.5	28.0	30.0	27.5
2	22.0	17.5	10.0	9.0	5.0	5.0	14.5	18.5	25.0	27.0	30.5	27.0
3	22.0	17.0	10.0	9.0	5.0	5.0	14.5	18.5	25.5	27.0	31.5	26.5
4	21.5	16.0	10.0	8.0	5.0	6.0	14.5	20.0	26.0	27.5	29.5	26.5
5	20.5	15.5	10.0	8.0	5.0	5.0	15.0	19.5	25.5	27.5	30.0	27.0
6	20.5	15.5	10.0	8.0	5.0	7.5	15.0	20.5	25.0	27.5	31.0	27.0
7	20.0	15.0	11.0	7.0	5.5	7.0	14.0	20.5	25.0	28.0	30.0	27.5
8	20.0	14.0	11.0	7.5	5.0	6.0	15.5	20.0	25.0	28.0	31.0	27.0
9	20.0	14.5	11.0	7.5	4.5	9.0	16.0	19.0	25.0	29.0	30.5	26.5
10	19.0	15.0	11.0	7.5	5.5	11.5	16.0	19.5	25.5	28.0	30.0	26.0
11	19.0	14.5	10.5	7.5	5.5	---	15.0	20.5	25.0	28.0	30.0	25.0
12	19.0	14.0	10.5	7.5	5.5	---	15.0	20.5	26.0	29.0	28.0	24.0
13	19.0	13.5	10.5	7.5	6.0	---	15.0	21.0	25.5	29.0	30.0	26.0
14	19.0	12.5	10.5	7.0	6.0	---	15.5	21.0	25.0	27.5	29.0	28.5
15	18.0	13.0	10.5	7.5	6.0	---	14.5	21.0	25.0	28.5	28.0	28.5
16	18.0	13.0	10.0	7.0	---	---	15.0	21.5	25.0	28.5	28.5	27.5
17	18.5	13.0	10.0	7.0	---	---	15.5	20.5	26.0	29.5	29.0	27.5
18	18.5	13.0	9.0	7.5	---	---	15.0	21.0	24.5	29.5	28.0	28.0
19	19.0	14.0	9.0	8.0	---	---	16.0	21.5	25.5	29.0	25.5	26.0
20	20.0	13.5	8.5	8.0	7.5	---	16.5	20.5	24.5	30.5	---	26.0
21	20.0	13.0	8.5	8.5	7.0	---	17.0	21.5	25.0	28.5	---	29.0
22	19.5	13.5	8.5	8.0	8.5	---	18.0	20.5	25.0	29.0	---	28.0
23	19.5	14.0	9.0	8.5	9.5	---	18.5	21.5	25.0	29.0	---	27.5
24	19.5	14.0	10.0	8.5	11.5	---	19.0	23.0	24.0	29.0	27.0	28.0
25	19.0	15.0	10.0	8.5	9.5	11.0	20.0	22.5	24.5	28.5	26.5	28.0
26	17.5	15.0	10.0	8.0	8.5	11.0	19.0	22.0	24.0	28.5	26.5	28.0
27	17.0	14.5	10.0	7.0	9.0	11.5	19.0	22.5	25.0	28.0	26.5	28.0
28	17.5	14.5	9.5	7.5	8.5	11.5	19.0	23.0	25.5	28.5	26.0	28.0
29	17.5	12.5	9.5	8.0	8.0	12.5	17.5	23.5	26.0	29.5	26.5	24.0
30	18.0	12.0	9.0	7.0	---	12.5	17.5	25.0	27.0	29.5	28.5	23.0
31	17.5	---	9.0	7.0	---	13.0	---	23.5	---	29.0	28.0	---
MEAN	19.5	14.5	10.0	8.0	7.0	9.0	16.0	21.0	25.0	28.5	28.5	27.0

WTR YR 1980 MEAN 18.0 MAX 31.5 MIN 4.5

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 03...	1230	14400	47	1830	97
NOV 07...	1150	9940	19	510	97
DEC 11...	1300	8680	12	281	94
FEB 20...	1415	748	11	22	92
MAR 25...	1230	60500	49	8000	97
APR 23...	1145	9830	33	876	97
MAY 14...	1020	7700	37	769	97
JUN 16...	1050	6930	34	636	90
JUL 28...	1330	5700	24	369	94
AUG 19...	1300	7610	26	534	99
SEP 09...	1200	3050	15	124	85

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH LAB (UNITS)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	FIELD ALKA-LINITY (MG/L AS CACO3)	LAB ALKA-LINITY (MG/L AS CACO3)
OCT 18...	1208	9570	70	6.9	19.0	5.4	11	.8	10	--	40
NOV 29...	1345	9780	70	6.1	14.0	8.6	19	1.3	140	33	--
DEC 18...	1220	8440	60	6.6	10.0	9.3	<10	.6	10	20	--
JAN 24...	1130	23600	50	6.3	7.0	8.9	12	.9	80	20	--
FEB 20...	1140	4330	50	6.1	9.0	10.2	12	1.3	<10	19	--
MAR 18...	1243	20800	40	6.3	8.0	9.6	13	1.1	90	18	--
APR 24...	1137	9520	70	5.7	12.0	7.8	12	1.0	20	8	--
MAY 08...	1200	7930	60	6.1	11.0	7.6	<10	.7	10	21	--
JUN 25...	1305	6180	70	6.4	23.0	7.2	10	.8	300	27	--
JUL 23...	1330	6930	90	6.8	27.0	5.3	34	1.7	30	30	--
AUG 14...	1100	280	80	5.8	28.0	5.0	<10	1.0	<10	31	--
SEP 18...	1235	4920	80	6.8	27.0	6.3	10	.7	140	19	--

02133500 DROWNING CREEK NEAR HOFFMAN, N. C.

LOCATION.--Lat 35°03'38", long 79°29'39", Richmond County, Hydrologic Unit 03040203, on right bank 10 ft (3 m) downstream from bridge on U.S. Highway 1, 0.8 mi (1.3 km) downstream from Deep Creek, 1 mi (2 km) upstream from Seaboard Coast Line Railroad bridge, and 4 mi (6 km) northeast of Hoffman.

DRAINAGE AREA.--183 mi² (474 km²), revised.

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 972: 1941(M).

GAGE.--Water-stage recorder. Altitude of gage is 270 ft (82 m), from topographic map.

REMARKS.--Records good.

AVERAGE DISCHARGE.--41 years, 262 ft³/s (7.420 m³/s), 19.44 in/yr (494 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,900 ft³/s (309 m³/s) Sept. 18, 1945, gage height, 10.29 ft (3.136 m); minimum, 22 ft³/s (0.62 m³/s) Oct. 5, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 850 ft³/s (24 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 4	1100	*1740	49.3	*7.03	2.143	Mar 31	0300	894	25.3	6.13	1.868
Mar 23	1500	894	25.3	6.13	1.868						

Minimum discharge, 43 ft³/s (1.22 m³/s) Sept. 2, 3, 16, gage height, 1.53 ft (0.466 m); minimum daily, 44 ft³/s (1.25 m³/s) Sept. 2, 3, 15, 16.

CORRECTIONS.--Peak discharges above base of 850 ft³/s (24 m³/s) for water year 1975, not previously published, are given in the following table.

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan 27, 1975	1200	1100	31.2	6.39	1.948
Feb 7, 1975	0400	863	24.4	6.09	1.856
Mar 16, 1975	1300	1010	28.6	6.27	1.911
July 16, 1975	0730	*1990	56.4	*7.24	2.207
July 19, 1975	2130	1750	49.6	7.04	2.146

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	464	140	354	265	372	242	755	274	129	99	65	45
2	400	150	308	253	368	243	638	260	124	92	187	44
3	332	431	290	229	355	254	546	236	116	86	158	44
4	256	1550	277	219	329	280	480	219	107	88	89	48
5	260	1300	268	231	312	329	443	202	101	103	74	81
6	329	864	274	257	308	403	417	189	97	99	67	94
7	371	602	302	264	316	446	398	177	95	86	62	67
8	341	460	333	254	334	535	379	167	94	77	68	56
9	254	388	321	321	354	498	377	166	91	74	61	52
10	181	348	285	399	427	431	380	163	85	74	60	49
11	170	369	256	461	501	383	373	158	81	97	62	50
12	177	500	247	517	535	350	353	154	80	95	61	49
13	172	662	244	558	501	383	347	148	80	81	56	47
14	171	777	245	676	425	459	460	142	79	74	53	45
15	182	655	248	681	373	493	582	143	78	70	51	44
16	173	509	263	607	347	468	649	138	76	65	49	44
17	159	418	304	554	333	395	542	132	74	63	65	47
18	152	372	347	518	321	408	426	157	90	100	86	63
19	150	341	314	507	307	481	361	221	170	166	71	74
20	146	319	263	537	295	546	330	243	180	114	74	98
21	144	305	246	553	292	628	314	270	116	85	69	163
22	142	293	237	505	290	732	301	315	95	74	68	217
23	142	283	234	501	287	859	285	291	88	72	77	242
24	152	277	235	555	290	746	266	226	85	84	75	125
25	151	271	262	636	282	626	251	257	103	98	64	157
26	144	350	309	589	268	599	235	364	200	79	56	223
27	141	476	320	495	259	605	243	351	332	71	51	304
28	141	562	286	437	250	569	318	228	305	70	48	305
29	142	557	243	411	246	650	329	169	189	74	47	190
30	142	449	230	394	---	742	283	147	117	75	46	250
31	141	---	248	382	---	873	---	135	---	67	45	---
TOTAL	6422	14978	8593	13766	9877	15746	12061	6442	3657	2652	2165	3317
MEAN	207	499	277	444	341	508	402	208	122	85.5	69.8	111
MAX	464	1550	354	681	535	873	755	364	332	166	187	305
MIN	141	140	230	219	246	242	235	132	74	63	45	44
CFSM	1.13	2.73	1.51	2.43	1.86	2.78	2.20	1.14	.67	.47	.38	.61
IN.	1.31	3.04	1.75	2.80	2.01	3.20	2.45	1.31	.74	.54	.44	.67

CAL YR 1979 TOTAL 116424 MEAN 319 MAX 2290 MIN 69 CFSM 1.74 IN 23.67
WTR YR 1980 TOTAL 99676 MEAN 272 MAX 1550 MIN 44 CFSM 1.49 IN 20.26

02134500 LUMBER RIVER AT BOARDMAN, N. C.

LOCATION.--Lat 34°26'32", long 78°57'38", Robeson County, Hydrologic Unit 03040203, on right bank 50 ft (15 m) downstream from bridge on U.S. Highway 74, 1 mi (1.6 km) downstream from Seaboard Coast Line Railroad bridge at Boardman, 1.5 mi (2.4 km) downstream from Big Swamp, and 40.5 mi (65.2 km) upstream from mouth.

DRAINAGE AREA.--1,228 mi² (3,181 km²), revised.

PERIOD OF RECORD.--September 1929 to current year.

REVISED RECORDS.--WSP 892: Drainage area. WSP 1303: 1932(M).

GAGE.--Water-stage recorder. Datum of gage is 72.05 ft (21.961 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Sept. 30, 1936, nonrecording gage at site 100 ft (30 m) downstream at same datum. Sept. 30, 1936, to June 8, 1943, nonrecording gage at present site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--51 years, 1,343 ft³/s (38.03 m³/s), 14.85 in/yr (377 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,400 ft³/s (379 m³/s) Sept. 24, 1945, gage height, 10.64 ft (3.243 m); minimum, 66 ft³/s (1.87 m³/s) Oct. 9, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1928 reached a stage of 11.8 ft (3.60 m), from floodmark witnessed by local resident, discharge, 25,000 ft³/s (708 m³/s). Flood of July 22, 1901, the highest during the period 1896-1913, reached a stage of 10.8 ft (3.29 m), from observations by Butters Lumber Co., discharge, 14,800 ft³/s (419 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,010 ft³/s (142 m³/s) Apr. 1, gage height, 8.35 ft (2.545 m); minimum, 121 ft³/s (3.43 m³/s) Sept. 17, gage height, 1.11 ft (0.338 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1360	557	2680	1300	2510	1570	4990	1260	1450	504	284	137
2	1450	550	2820	1290	2470	1550	4990	1150	1290	527	253	132
3	1560	549	2880	1300	2420	1520	4840	1060	1160	555	229	124
4	1780	548	2880	1320	2330	1490	4630	1030	1030	570	216	125
5	2010	550	2830	1350	2200	1490	4400	1080	814	585	200	139
6	2120	563	2770	1330	2110	1570	4160	1140	653	624	189	133
7	2160	593	2830	1300	2030	1730	3890	1120	545	616	195	132
8	2130	632	2730	1260	1960	1980	3580	1050	496	561	216	127
9	2050	679	2610	1270	1920	2240	3270	998	450	524	229	133
10	1940	737	2460	1300	2060	2410	2960	904	410	508	222	146
11	1800	1080	2310	1380	2210	2510	2670	826	380	485	214	159
12	1630	1680	2170	1510	2430	2570	2440	760	350	446	199	165
13	1480	2000	2060	1620	2610	2940	2240	707	320	406	190	158
14	1370	2120	1980	1770	2680	3240	2190	665	300	367	200	146
15	1290	2080	1910	1910	2700	3550	2280	624	270	341	183	137
16	1210	2020	1870	2020	2720	3680	2480	590	250	325	171	129
17	1120	1970	1820	2150	2770	3650	2950	559	240	310	163	122
18	1010	1970	1770	2290	2770	3740	3260	579	259	285	164	125
19	897	1990	1710	2420	2700	3790	3250	599	317	256	160	137
20	817	2010	1630	2500	2600	3950	3110	689	354	240	156	136
21	763	2030	1560	2580	2460	4170	2980	920	371	222	155	134
22	732	2020	1500	2650	2310	4190	2870	1190	361	215	156	140
23	707	1990	1440	2750	2170	4180	2760	1310	343	227	165	154
24	687	1930	1400	2770	2030	4140	2580	1360	349	292	171	176
25	664	1820	1390	2760	1930	4060	2350	1380	380	382	169	192
26	643	1960	1380	2740	1840	3880	2090	1480	480	394	169	219
27	622	2040	1370	2750	1780	3690	1850	1630	508	383	163	248
28	611	2130	1360	2700	1700	3560	1680	1820	506	375	160	260
29	602	2290	1340	2630	1620	4060	1520	1870	488	353	158	274
30	584	2480	1330	2580	---	4510	1390	1760	487	345	154	294
31	568	---	1320	2550	---	4890	---	1600	---	319	144	---
TOTAL	38367	45568	62110	62050	66040	96500	90650	33710	15611	12542	5797	4833
MEAN	1238	1519	2004	2002	2277	3113	3022	1087	520	405	187	161
MAX	2160	2480	2880	2770	2770	4890	4990	1870	1450	624	284	294
MIN	568	548	1320	1260	1620	1490	1390	559	240	215	144	122
CFSM	1.01	1.24	1.63	1.63	1.85	2.54	2.46	.89	.42	.33	.15	.13
IN.	1.16	1.38	1.88	1.88	2.00	2.92	2.75	1.02	.47	.38	.18	.15

CAL YR 1979 TOTAL 611539 MEAN 1675 MAX 9460 MIN 232 CFSM 1.36 IN 18.53
WTR YR 1980 TOTAL 533778 MEAN 1458 MAX 4990 MIN 122 CFSM 1.19 IN 16.17

02138000 CATAWBA RIVER NEAR MARION, N. C.

LOCATION.--Lat 35°42'26", long 82°02'00", McDowell County, Hydrologic Unit 03050101, on right bank 15 ft (5 m) downstream from bridge on U.S. Highway 221, 0.2 mi (0.3 km) downstream from Tom Creek, 2.2 mi (3.5 km) northwest of Marion, and at mile 294 (473 km). Records include flow of small tributary on right bank 250 ft (76 m) downstream.

DRAINAGE AREA.--172 mi² (445 km²), revised, including area of small downstream tributary.

PERIOD OF RECORD.--October 1941 to current year.

REVISED RECORDS.--WSP 1032: 1942, 1943(P).

GAGE.--Water-stage recorder. Datum of gage is 1,208 ft (368.2 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Some diurnal fluctuation and regulation for short periods of low flow caused by Lake Tahoma hydroelectric plant above station. About 4 ft³/s (0.11 m³/s) is diverted by the town of Marion for water supply. Suspended-sediment records for the current year are published on page 419 of this report.

AVERAGE DISCHARGE.--39 years, 351 ft³/s (9.940 m³/s), 27.71 in/yr (704 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s (708 m³/s) Nov. 6, 1977, gage height, 17.04 ft (5.194 m), from rating curve extended as explained below; minimum, 28 ft³/s (0.79 m³/s) Sept. 30, Oct. 1, 5, 1954, gage height, 0.50 ft (0.152 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 13, 1940 reached a stage of 19.34 ft (5.895 m), discharge, 71,400 ft³/s (2,020 m³/s), from rating curve extended above 10,000 ft³/s (283 m³/s), on basis of contracted opening measurements at gage height, 15.02 ft (4.578 m) and 19.34 ft (5.895 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,400 ft³/s (96 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct 1	0330	4070	115	7.29	2.222	Apr 8	1830	5430	154	8.93	2.722
Nov 2	1530	*7870	223	*11.34	3.456	Apr 14	1400	7440	211	11.03	3.362
Nov 26	0630	4230	120	7.49	2.283	June 25	0530	3420	96.9	6.44	1.963
Mar 21	0830	3990	113	7.19	2.192						

Minimum discharge, 124 ft³/s (3.51 m³/s) Sept. 16, gage height, 1.05 ft (0.320 m); minimum daily, 126 ft³/s (3.57 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2700	415	614	339	330	287	659	444	397	379	206	174
2	1520	3740	572	332	321	295	595	431	355	357	203	159
3	1200	1530	526	317	323	292	552	423	338	375	196	171
4	1060	930	511	326	318	293	531	415	322	396	201	163
5	1060	737	495	323	306	356	482	404	308	345	192	151
6	883	636	494	307	326	320	456	396	304	322	184	155
7	781	578	473	305	315	301	444	383	302	299	194	146
8	689	533	451	313	304	329	2270	379	296	291	176	137
9	640	511	434	304	320	320	1620	367	276	281	169	134
10	610	868	425	293	324	300	958	360	272	284	169	191
11	563	885	420	397	311	293	760	357	276	304	165	165
12	540	896	412	470	308	286	845	348	270	267	169	144
13	515	761	419	402	296	324	923	341	274	254	162	137
14	487	661	409	855	295	331	4570	335	271	248	157	134
15	468	596	392	584	310	298	1710	329	265	246	153	130
16	457	560	389	473	375	295	1170	323	271	238	157	126
17	441	523	377	438	350	762	944	445	347	230	195	128
18	428	496	359	805	313	1040	828	851	323	222	161	134
19	419	471	359	726	307	603	750	439	306	218	204	134
20	411	451	351	567	310	697	693	540	268	214	178	137
21	401	437	343	494	309	2550	649	557	248	208	154	139
22	387	429	343	470	322	1080	609	440	244	206	270	137
23	443	427	342	465	310	746	575	624	240	210	197	135
24	392	678	422	415	304	945	547	818	1040	229	168	142
25	372	867	507	401	298	870	522	603	2540	208	156	173
26	358	2740	386	381	297	705	557	506	1270	205	148	172
27	350	1210	362	372	280	612	525	444	766	283	143	140
28	351	911	348	362	286	1130	488	409	567	557	138	137
29	340	762	341	352	287	1340	474	422	479	293	135	279
30	388	666	352	347	---	940	460	435	426	240	137	391
31	420	---	346	366	---	777	---	404	---	224	190	---
TOTAL	20074	25905	12974	13301	9055	19717	27166	13972	13861	8633	5427	4795
MEAN	648	864	419	429	312	636	906	451	462	278	175	160
MAX	2700	3740	614	855	375	2550	4570	851	2540	557	270	391
MIN	340	415	341	293	280	286	444	323	240	205	135	126
CFSM	3.77	5.02	2.44	2.49	1.81	3.70	5.27	2.62	2.69	1.62	1.02	.93
IN.	4.34	5.60	2.81	2.88	1.96	4.26	5.88	3.02	3.00	1.87	1.17	1.04

CAL YR 1979 TOTAL 240775 MEAN 660 MAX 7250 MIN 200 CFSM 3.84 IN 52.07
WTR YR 1980 TOTAL 174880 MEAN 478 MAX 4570 MIN 126 CFSM 2.78 IN 37.82

02138500 LINVILLE RIVER NEAR NEBO, N. C.

LOCATION (REVISED).--Lat 35°47'41", long 81°53'25", Burke County, Hydrologic Unit 03050101, in Pisgah National Forest, on right bank 370 ft (113 m) upstream from bridge on State Highway 126, 0.2 mi (0.3 km) downstream from Shooks Creek, 0.5 mi (0.8 km) upstream from Lake James, 2.0 mi (3.2 km) northeast of Longtown, and 6.0 mi (9.7 km) northeast of Nebo.

DRAINAGE AREA.--66.7 mi² (172.8 km²), revised.

PERIOD OF RECORD.--May 1907 to August 1908 (fragmentary). June 1922 to current year. Published as "at Fonta Flora" prior to 1908 and as "at Branch" 1923-70. Records for October to December 1908, "at Fonta Flora", published in WSP 242 have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 892: 1929, 1935, 1937. WSP 1503: 1923(M), 1924-28, 1930, 1932-33(M), 1938(M), 1939(P). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,204.87 ft (367.244 m) National Geodetic Vertical Datum of 1929. May 1907 to August 1908 nonrecording gage about 1.2 mi (1.9 km) downstream at different datum. June 1922 to Aug. 27, 1937, nonrecording gage, and Aug. 28, 1937 to Sept. 30, 1970, water-stage recorder at site on right bank 20 ft (6.1 m) downstream from bridge on State Highway 126 at datum 1.00 ft (0.305 m) higher. Oct. 1, 1970 to Sept. 30, 1973 at present site at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--58 years, (1922-80), 150 ft³/s (4.248 m³/s), 30.54 in/yr (776 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,500 ft³/s (1,120 m³/s) Aug. 13, 1940, gage height, 11.4 ft (3.47 m), site and datum then in use, from rating curve extended above 6,400 ft³/s (181 m³/s) on basis of slope-area measurement of peak flow; minimum, 2 ft³/s (0.057 m³/s) Jan. 9, 1956 (result of freezeup); minimum daily, 8 ft³/s (0.23 m³/s) Sept. 7-9, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of about 11 ft (3.4 m) former site and datum, discharge, 34,600 ft³/s (980 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s (45 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	1200	*3950	112	*5.30	1.615	Apr 8	1600	3030	85.8	4.59	1.399
Nov 26	0600	3440	97.4	4.89	1.490	Apr 14	1300	2740	77.6	4.36	1.329

Minimum discharge, 30 ft³/s (0.85 m³/s) Sept. 16-18, 24, gage height, 0.14 ft (0.043 m); minimum daily, 30 ft³/s (0.85 m³/s) Sept. 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	940	120	238	112	102	94	272	137	127	106	61	38
2	593	1630	212	107	91	86	238	130	119	97	57	39
3	452	817	185	103	95	88	213	126	112	108	54	64
4	371	450	176	101	100	98	210	122	104	167	50	47
5	349	338	170	101	93	105	192	117	98	122	83	41
6	294	280	170	96	100	128	168	115	93	98	60	40
7	260	240	170	96	95	117	160	112	90	90	54	36
8	229	218	165	98	90	121	1150	109	85	82	50	34
9	210	199	145	98	90	161	1220	103	80	77	45	31
10	204	399	135	98	90	137	574	99	77	106	44	42
11	200	454	130	109	83	122	400	98	74	204	44	55
12	179	438	122	200	85	113	381	96	71	111	45	42
13	166	364	141	157	75	112	456	94	70	90	43	38
14	153	305	126	281	75	126	1810	91	70	82	40	34
15	144	239	116	271	90	113	951	89	67	77	35	32
16	138	210	113	210	103	105	581	88	66	73	33	30
17	133	190	110	187	100	257	437	92	98	68	33	30
18	129	176	101	247	81	560	350	230	96	63	32	31
19	124	164	102	307	90	305	295	157	90	59	32	31
20	121	151	102	236	96	264	258	207	77	58	34	31
21	119	140	100	204	93	1080	230	329	69	56	34	35
22	115	133	99	186	117	580	207	196	65	63	76	34
23	138	130	98	186	125	375	190	347	63	60	62	31
24	155	277	110	163	112	441	176	484	112	60	55	32
25	142	404	252	151	103	493	166	309	889	57	60	66
26	136	1870	164	144	97	360	161	242	478	59	49	52
27	133	660	133	136	94	292	171	198	266	70	42	42
28	130	438	125	130	96	362	174	170	181	163	38	40
29	128	335	119	124	95	589	145	155	145	140	35	45
30	128	273	116	119	---	403	146	157	124	88	35	95
31	121	---	115	118	---	334	---	138	---	68	36	---
TOTAL	6834	12042	4360	4876	2756	8521	12082	5137	4156	2822	1451	1238
MEAN	220	401	141	157	95.0	275	403	166	139	91.0	46.8	41.3
MAX	940	1870	252	307	125	1080	1810	484	889	204	83	95
MIN	115	120	98	96	75	86	145	88	63	56	32	30
CFSM	3.30	6.01	2.11	2.35	1.42	4.12	6.04	2.49	2.08	1.36	.70	.62
IN.	3.81	6.72	2.43	2.72	1.54	4.75	6.74	2.86	2.32	1.57	.81	.69

CAL YR 1979 TOTAL 106627 MEAN 292 MAX 4250 MIN 49 CFSM 4.38 IN 59.47
WTR YR 1980 TOTAL 66275 MEAN 181 MAX 1870 MIN 30 CFSM 2.71 IN 36.96

02142000 LOWER LITTLE RIVER NEAR ALL HEALING SPRINGS, N. C.

LOCATION.--Lat 35°56'44", long 81°14'13", Alexander County, Hydrologic Unit 03050101, on left bank at upstream side of bridge on Secondary Road 1313, 0.3 mi (0.5 km) downstream from Grassy Creek, 0.4 mi (0.6 km) upstream from Lambert Creek, 2.2 mi (3.5 km) northeast of All Healing Springs, and 4 mi (6.4 km) northwest of Taylorsville.

DRAINAGE AREA.--28.2 mi² (73.0 km²).

PERIOD OF RECORD.--October to December 1952 (monthly discharge only), January 1953 to current year.

REVISED RECORDS.--WRD N. C. 1979: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 1,070 ft (326 m), by barometer. Prior to June 13, 1953, nonrecording gage at same site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--28 years, 38.8 ft³/s (1.099 m³/s), 18.68 in/yr (474 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,850 ft³/s (137 m³/s) Aug. 10, 1970, gage height, 15.68 ft (4.779 m); minimum, 2.9 ft³/s (0.082 m³/s) Sept. 20, 21, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 550 ft³/s (16 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar 17	1730	644	18.2	5.76	1.756	Apr 14	0530	869	24.6	6.57	2.003
Mar 21	0630	*1450	41.1	*8.55	2.606	May 24	1900	1430	40.5	8.48	2.585
Apr 8	1830	1110	31.4	7.44	2.268	June 25	0900	1380	39.1	8.34	2.542
Apr 9	0230	892	25.3	6.66	2.030						

Minimum discharge, 11 ft³/s (0.31 m³/s) Sept. 15, 16, gage height, 1.19 ft (0.363 m); minimum daily, 12 ft³/s (0.34 m³/s) Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	32	43	32	36	29	70	49	47	37	21	19
2	122	125	41	31	36	30	66	46	44	35	21	17
3	93	85	39	30	35	34	61	46	41	40	20	16
4	78	60	39	31	34	32	58	44	39	41	21	21
5	84	51	38	31	35	41	52	43	37	36	21	18
6	66	47	40	30	35	40	49	41	37	32	20	17
7	56	44	39	30	34	36	48	41	37	31	19	15
8	50	42	36	30	33	50	288	41	35	30	19	15
9	47	41	35	29	36	63	357	39	33	37	19	15
10	53	59	35	28	36	51	132	38	33	49	18	15
11	46	68	35	43	35	44	95	37	33	39	18	14
12	43	70	35	47	35	39	131	37	33	33	18	14
13	41	60	38	43	34	40	132	36	33	31	17	13
14	38	53	36	225	34	37	451	37	32	30	17	13
15	37	48	34	96	36	34	164	36	31	29	18	12
16	37	46	34	67	39	33	115	34	32	28	20	13
17	35	43	33	57	35	217	95	38	34	26	20	15
18	35	42	32	135	33	178	84	121	37	25	18	18
19	34	40	32	104	33	88	77	50	35	25	18	15
20	34	39	32	75	33	91	71	101	32	24	18	17
21	34	38	31	62	33	545	68	96	30	24	19	18
22	33	37	31	59	33	143	63	60	30	23	24	15
23	42	38	31	56	32	94	60	62	29	24	20	15
24	36	38	37	50	31	134	59	327	35	23	18	15
25	34	42	47	47	31	116	58	191	427	21	18	22
26	33	102	37	44	29	87	59	93	106	21	18	19
27	32	66	35	43	29	74	57	69	64	21	17	16
28	32	56	33	41	29	111	54	58	50	43	16	17
29	32	49	33	39	28	138	57	52	45	33	16	23
30	35	46	34	38	---	100	52	49	40	24	16	22
31	32	---	33	39	---	84	---	49	---	23	18	---
TOTAL	1500	1607	1108	1712	972	2833	3183	2061	1571	938	581	494
MEAN	48.4	53.6	35.7	55.2	33.5	91.4	106	66.5	52.4	30.3	18.7	16.5
MAX	122	125	47	225	39	545	451	327	427	49	24	23
MIN	32	32	31	28	28	29	48	34	29	21	16	12
CFSM	1.72	1.90	1.27	1.96	1.19	3.24	3.76	2.36	1.86	1.07	.66	.59
IN.	1.98	2.12	1.46	2.26	1.28	3.74	4.20	2.72	2.07	1.24	.77	.65

CAL YR 1979 TOTAL 21763 MEAN 59.6 MAX 1500 MIN 21 CFSM 2.11 IN 28.71
WTR YR 1980 TOTAL 18560 MEAN 50.7 MAX 545 MIN 12 CFSM 1.80 IN 24.48

02142900 LONG CREEK NEAR PAW CREEK, N. C.

LOCATION.--Lat 35°19'42", long 80°54'35", Mecklenburg County, Hydrologic Unit 03050101, on left bank at upstream side of bridge on Secondary Road 2042, 600 ft (183 m) downstream from McIntyre Creek, 1.2 mi (1.9 km) upstream from Gutter Branch, and 3.6 mi (5.8 km) north of community of Paw Creek.

DRAINAGE AREA.--16.4 mi² (42.5 km²), revised.

PERIOD OF RECORD.--June 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 648.7 ft (197.72 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Occasional diversions for irrigation by upstream golf course.

AVERAGE DISCHARGE.--15 years, 18.3 ft³/s (0.518 m³/s), 15.15 in/yr (385 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,720 ft³/s (105 m³/s) May 30, 1975, gage height, 11.46 ft (3.493 m); minimum, 0.48 ft³/s (0.014 m³/s) Aug. 13, 1976, result of upstream diversions.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct 5	0500	*1200	34.0	*9.22	2.810	Mar 20	2100	532	15.1	6.22	1.896
Nov 11	1100	574	16.3	6.51	1.984	Mar 28	1945	814	23.1	7.83	2.387
Jan 18	1445	929	26.3	8.31	2.533						

Minimum discharge, 0.85 ft³/s (0.024 m³/s) Sept. 12, 16, 17, 23, 24, gage height, 1.10 ft (0.335 m); minimum daily, 0.78 ft³/s (0.022 m³/s) Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	4.8	9.9	8.6	15	8.6	28	7.8	5.4	7.2	6.4	1.1
2	23	42	8.7	8.0	12	9.4	23	7.4	5.1	5.0	5.9	1.1
3	14	21	10	7.5	12	11	21	7.2	4.7	4.8	2.4	1.2
4	13	9.9	10	8.9	11	23	21	6.8	4.3	7.0	2.0	1.1
5	449	7.5	10	15	10	42	17	6.4	4.1	4.7	1.8	1.0
6	32	6.7	15	9.6	12	27	15	6.4	4.1	4.1	1.7	1.0
7	17	7.4	12	8.8	12	18	15	6.4	4.2	3.5	1.6	.99
8	11	6.3	11	9.2	12	134	30	6.8	4.2	3.4	1.5	.91
9	8.6	6.0	11	8.9	17	45	33	6.2	4.4	3.9	1.5	.90
10	9.8	38	10	8.4	55	25	20	5.8	4.6	3.5	1.4	.90
11	8.1	328	9.9	42	36	19	16	5.5	3.7	4.9	1.4	.89
12	7.2	62	10	44	29	17	20	5.3	3.6	3.3	1.3	.85
13	6.3	27	15	20	21	44	36	5.0	3.3	3.1	1.3	.86
14	5.8	18	11	148	18	25	67	5.2	3.1	2.9	1.2	.81
15	5.5	15	11	39	18	18	30	6.6	3.1	2.7	1.2	.78
16	5.2	13	11	24	20	15	21	5.0	3.0	2.6	1.6	.81
17	5.0	12	9.7	31	16	38	17	5.2	4.5	2.5	1.7	.94
18	4.8	11	9.6	430	12	98	16	78	4.2	46	1.2	1.2
19	4.8	9.9	9.5	65	12	28	14	14	3.9	5.7	1.3	1.5
20	4.7	9.3	9.1	31	12	154	13	84	3.3	3.9	1.3	1.7
21	4.6	8.6	9.1	23	12	248	12	43	2.9	3.0	1.2	1.2
22	4.5	8.3	9.6	23	11	42	11	15	2.8	2.7	13	1.0
23	11	8.1	9.7	51	11	26	10	12	2.8	2.8	2.3	.89
24	7.2	8.7	27	25	11	209	9.7	49	4.8	3.0	1.8	1.4
25	5.5	57	13	20	10	74	9.0	16	19	2.4	1.6	6.7
26	5.1	66	9.7	17	9.0	32	9.1	11	7.7	2.3	1.7	2.2
27	4.9	21	8.8	16	8.9	24	9.0	8.1	5.0	2.2	1.6	1.2
28	4.8	16	8.4	15	8.9	279	8.2	7.2	4.2	2.1	1.4	2.5
29	4.7	12	9.0	14	8.5	165	8.2	6.5	11	2.1	1.1	15
30	5.5	11	10	12	---	59	8.5	6.1	44	1.9	1.1	31
31	5.0	---	9.1	19	---	43	---	5.8	---	1.9	1.3	---
TOTAL	773.6	871.5	336.8	1201.9	452.3	2000.0	567.7	460.7	185.0	151.1	67.8	83.63
MEAN	25.0	29.1	10.9	38.8	15.6	64.5	18.9	14.9	6.17	4.87	2.19	2.79
MAX	449	328	27	430	55	279	67	84	44	46	13	31
MIN	4.5	4.8	8.4	7.5	8.5	8.6	8.2	5.0	2.8	1.9	1.1	.78
CFSM	1.52	1.77	.67	2.37	.95	3.93	1.15	.91	.38	.30	.13	.17
IN.	1.75	1.98	.76	2.73	1.03	4.54	1.29	1.04	.42	.34	.15	.19

CAL YR 1979 TOTAL 8924.30 MEAN 24.5 MAX 703 MIN 1.8 CFSM 1.49 IN 20.24
WTR YR 1980 TOTAL 7152.03 MEAN 19.5 MAX 449 MIN .78 CFSM 1.19 IN 16.22

02143000 HENRY FORK NEAR HENRY RIVER, N. C.

LOCATION (REVISED).--Lat 35°41'03", long 81°24'10", Catawba County, Hydrologic Unit 03050102, on left bank 325 ft (99 m) downstream from bridge on Secondary Road 1124, at site of Old Link Ford, 1.2 mi (1.9 km) downstream from Burke-Catawba County line, and 2 mi (3 km) southeast of village of Henry River.

DRAINAGE AREA.--83.2 mi² (215 km²), revised.

PERIOD OF RECORD.--July 1925 to November 1931, December 1941 to current year.

REVISED RECORDS.--WSP 952: 1928, 1930.

GAGE.--Water-stage recorder. Datum of gage is 891.0 ft (271.6 m) National Geodetic Vertical Datum of 1929. July 1925 to November 1931, at site 450 ft (137 m) upstream at same datum.

REMARKS.--Records good. The inactive mill above the station at times in September caused some slight diurnal fluctuation. An average of 2.0 ft³/s (0.057 m³/s) was diverted for water supply by City of Morganton and wasted into Catawba River. Suspended-sediment records for the current year are published on page 419 of this report.

AVERAGE DISCHARGE.--44 years (1925-31, 1942-80), 134 ft³/s (3.795 m³/s), 21.87 in/yr (555 mm/yr).

EXTREMES FOR PERIOD OF RECORD: Maximum discharge, 15,300 ft³/s (433 m³/s) Oct. 2, 1929 gage height, 18.40 ft (5.608 m), site then in use, from rating curve extended above 2,300 ft³/s (65.1 m³/s) on basis of computation of peak flow over dam at Henry River, at gage height 29.2 ft (8.90 m); minimum, 3 ft³/s (0.085 m³/s) Dec. 20, 1942; minimum daily, 4 ft³/s (0.11 m³/s) Nov. 15, Dec. 20, 1942.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 29.2 ft (8.90 m) Aug. 13, 1940 at former site, from floodmarks, discharge, 31,300 ft³/s (886 m³/s). The flood of July 16, 1916 reached a stage of about 23 ft (7.0 m) at former site, discharge, 20,700 ft³/s (586 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,800 ft³/s (79 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct 1	0600	3030	85.8	7.46	2.274	Apr 14	0900	*4360	123	*9.60	2.926
Mar 21	0900	2840	80.4	7.14	2.176						

Minimum discharge, 48 ft³/s (1.36 m³/s) Sept. 17, gage height, 1.09 ft (0.332 m); minimum daily, 52 ft³/s (1.47 m³/s) Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1470	118	149	117	132	114	269	187	169	137	94	81
2	477	843	143	114	127	117	236	182	157	126	89	70
3	303	523	137	112	127	115	219	177	147	141	85	70
4	241	259	136	115	127	118	213	174	139	165	82	66
5	254	198	136	116	122	134	194	169	133	138	79	70
6	195	173	138	111	129	144	183	167	131	119	76	71
7	185	159	139	110	126	130	178	164	131	110	74	68
8	167	150	131	114	122	136	591	164	127	107	72	60
9	157	146	126	111	128	131	800	160	119	122	71	61
10	174	244	125	108	134	125	374	154	120	138	69	60
11	157	320	124	134	127	120	280	152	117	139	68	60
12	147	328	124	197	127	115	391	149	116	108	67	56
13	142	253	127	163	122	120	522	146	115	101	65	55
14	136	206	130	1020	120	118	2650	144	114	101	66	53
15	131	180	121	421	123	110	806	142	111	99	68	52
16	128	169	120	254	135	108	449	140	109	95	67	53
17	126	159	120	208	133	238	349	155	127	91	69	57
18	124	155	117	421	123	530	309	455	134	88	68	57
19	121	150	117	421	121	255	283	204	125	85	66	55
20	121	145	116	269	120	247	264	347	113	82	65	58
21	119	141	114	218	120	1540	252	454	105	80	86	57
22	118	139	113	197	122	469	239	239	103	77	163	57
23	125	141	113	194	118	283	229	266	101	85	94	57
24	125	144	125	171	115	377	222	320	160	108	78	103
25	116	151	187	164	115	446	214	297	849	85	73	249
26	113	307	143	155	114	298	225	227	471	79	70	101
27	111	233	131	150	110	239	214	189	234	78	67	71
28	111	187	124	145	111	490	202	171	172	418	66	70
29	111	167	119	141	111	819	201	253	162	163	63	101
30	147	155	121	138	---	408	195	326	194	114	107	134
31	127	---	121	142	---	326	---	189	---	101	79	---
TOTAL	6279	6643	3987	6451	3561	8920	11753	6663	5105	3680	2406	2233
MEAN	203	221	129	208	123	288	392	215	170	119	77.6	74.4
MAX	1470	843	187	1020	135	1540	2650	455	849	418	163	249
MIN	111	118	113	108	110	108	178	140	101	77	63	52
CFSM	2.44	2.66	1.55	2.50	1.48	3.46	4.71	2.58	2.04	1.43	.93	.89
IN.	2.81	2.97	1.78	2.88	1.59	3.99	5.25	2.98	2.28	1.65	1.08	1.00

CAL YR 1979 TOTAL 74198 MEAN 203 MAX 1840 MIN 62 CFSM 2.44 IN 33.17
WTR YR 1980 TOTAL 67681 MEAN 185 MAX 2650 MIN 52 CFSM 2.22 IN 30.26

02143040 JACOB FORK AT RAMSEY, N. C.

LOCATION.--Lat 35°35'26", long 81°34'02", Burke County, Hydrologic Unit 03050102, on left bank 16 ft (5 m) downstream from bridge on Secondary Road 1924, 0.6 mi (1.0 km) downstream from Queens Creek, and 0.6 mi (1.0 km) north of Ramsey.

DRAINAGE AREA.--24.1 mi² (62.4 km²), revised.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1960-61. October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,103.00 ft (336.194 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--19 years, 51.5 ft³/s (1.458 m³/s), 29.02 in/yr (737 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,220 ft³/s (204 m³/s) Oct. 17, 1975, gage height, 19.74 ft (6.017 m), from rating curve extended above 3,400 ft³/s (96.3 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 7.3 ft³/s (0.21 m³/s) July 28, 29, 1966; minimum gage height, 1.58 ft (0.482 m) Sept. 3, 4, 5, 6, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1940 reached a stage of about 39 ft (11.9 m), from information by local resident. Flood of July 1916 reached a stage of about 19 ft (5.8 m), from information by North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct 1	0330	*2480	70.2	*10.76	3.280	Apr 8	2000	818	23.2	5.13	1.564
Nov 2	1330	1150	32.6	6.28	1.914	Apr 14	0630	2000	56.6	9.19	2.801
Jan 14	0730	692	19.6	4.70	1.433	May 29	2000	1420	40.2	7.21	2.198
Mar 21	0700	1310	37.1	6.83	2.082	June 25	1530	788	22.3	5.03	1.533
Mar 28	2230	605	17.1	4.39	1.338	July 28	0900	987	28.0	5.72	1.743

Minimum discharge, 15 ft³/s (0.42 m³/s) Sept. 15, 16, 23; minimum gage height, 1.82 ft (0.555 m) Sept. 23; minimum daily, 16 ft³/s (0.45 m³/s) Sept. 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	754	42	47	35	42	39	86	79	59	45	30	24
2	139	411	44	34	43	39	75	80	54	43	29	25
3	89	162	42	33	42	45	71	80	52	56	28	21
4	78	78	41	35	40	39	71	67	49	63	27	22
5	84	60	41	35	40	48	70	53	47	51	26	21
6	70	53	42	33	41	49	74	53	46	45	26	19
7	61	50	40	33	40	46	82	51	45	41	25	18
8	54	47	38	36	39	48	282	51	43	40	25	17
9	51	46	37	35	41	46	317	48	41	40	24	17
10	56	83	35	34	42	44	122	46	41	42	24	18
11	50	105	35	43	40	42	87	45	41	43	23	17
12	49	112	34	58	40	40	130	45	40	38	23	17
13	47	81	36	51	39	42	172	44	39	37	22	17
14	45	65	36	425	39	41	1080	44	38	37	22	17
15	44	57	34	140	41	38	262	44	37	36	22	16
16	43	55	34	77	48	37	129	43	38	35	22	16
17	41	51	33	64	46	139	98	59	40	34	23	17
18	41	49	32	160	42	204	86	165	43	33	22	17
19	41	47	33	137	41	79	80	62	40	32	26	17
20	40	46	33	81	40	92	77	162	37	32	33	19
21	41	45	32	66	41	598	77	160	35	31	45	18
22	41	44	32	63	42	139	77	74	35	31	50	17
23	47	46	32	64	40	83	70	87	34	33	29	17
24	43	46	41	57	39	133	71	187	88	35	26	18
25	42	51	60	55	39	145	75	167	550	32	25	111
26	40	180	45	51	38	89	71	85	242	31	24	29
27	39	80	39	48	38	72	68	66	91	31	22	23
28	39	62	36	46	38	218	69	59	63	205	22	25
29	40	55	36	45	38	302	74	193	54	48	21	44
30	56	49	37	44	---	131	77	126	49	36	28	120
31	44	---	36	45	---	106	---	68	---	31	28	---
TOTAL	2349	2358	1173	2163	1179	3213	4180	2593	2111	1367	822	794
MEAN	75.8	78.6	37.8	69.8	40.7	104	139	83.6	70.4	44.1	26.5	26.5
MAX	754	411	60	425	48	598	1080	193	550	205	50	120
MIN	39	42	32	33	38	37	68	43	34	31	21	16
CFSM	3.15	3.26	1.57	2.90	1.69	4.32	5.77	3.47	2.92	1.83	1.10	1.10
IN.	3.63	3.64	1.81	3.34	1.82	4.96	6.45	4.00	3.26	2.11	1.27	1.23

CAL YR 1979 TOTAL 25385 MEAN 69.5 MAX 754 MIN 18 CFSM 2.88 IN 39.18
WTR YR 1980 TOTAL 24302 MEAN 66.4 MAX 1080 MIN 16 CFSM 2.76 IN 37.51

02143500 INDIAN CREEK NEAR LABORATORY, N. C.

LOCATION.--Lat 35°25'20", long 81°15'52", Lincoln County, Hydrologic Unit 03050102, on left bank 250 ft (76 m) upstream from remains of Rudisill Mill dam, 0.5 mi (0.8 km) upstream from bridge on Secondary Road 1252, 1.5 mi (2.4 km) upstream from mouth, 1.5 mi (2.4 km) south of Laboratory, and 3.5 mi (5.6 km) south of Lincolnton.

DRAINAGE AREA.--69.2 mi² (179.2 km²), revised.

PERIOD OF RECORD.--August 1951 to current year.

REVISED RECORDS.--WRD N. C. 1971: 1970(M).

GAGE.--Water-stage recorder. Altitude of gage is 736 ft (224 m), by barometer.

REMARKS.--Records good.

AVERAGE DISCHARGE.--29 years, 92.5 ft³/s (2.620 m³/s), 18.15 in/yr (461 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,450 ft³/s (239 m³/s) Aug. 10, 1970, gage height, 10.61 ft (3.234 m); minimum, 4.6 ft³/s (0.13 m³/s) Oct. 8, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Peak discharge of flood in October 1929 was 9,920 ft³/s (281 m³/s); flood in July 1916, 7,840 ft³/s (222 m³/s); flood in August 1940, 6,000 ft³/s (170 m³/s). Discharge based on computation of peak flow over dam 1 mi (2 km) downstream, using floodmarks and information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar 21	1830	*1680	47.6	*4.96	1.512	June 26	1500	*1680	47.6	*4.96	1.512

Minimum discharge, 18 ft³/s (0.510 m³/s) Sept. 15, gage height, 0.80 ft (0.244 m); minimum daily, 19 ft³/s (0.538 m³/s) Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	243	44	62	53	75	56	160	72	74	85	37	25
2	113	258	59	50	71	60	133	69	68	74	36	23
3	80	305	56	49	70	62	120	68	62	77	34	25
4	66	119	57	52	69	67	116	66	59	88	31	36
5	126	88	59	56	67	73	99	63	55	80	33	29
6	80	74	60	51	71	68	92	62	55	63	31	27
7	66	67	62	51	69	62	90	61	57	57	29	32
8	54	61	57	56	69	79	130	66	53	55	28	26
9	50	58	54	53	73	78	157	61	48	61	27	27
10	58	93	54	50	84	68	107	59	47	63	27	26
11	55	188	53	70	81	60	91	60	46	83	27	22
12	49	167	54	111	81	58	107	58	46	60	26	21
13	47	108	57	72	76	59	164	56	46	53	25	20
14	46	87	63	751	74	59	778	57	46	47	24	20
15	46	74	55	293	74	57	297	67	46	46	25	19
16	44	68	54	148	78	57	170	53	48	44	26	20
17	43	64	53	127	73	162	130	55	66	42	27	22
18	42	62	51	756	70	320	114	543	66	213	26	36
19	43	59	51	401	69	137	105	131	62	71	26	28
20	43	58	50	180	69	233	99	378	51	57	27	31
21	43	56	49	134	69	1360	95	776	44	49	28	29
22	42	56	50	114	71	462	88	187	43	43	70	26
23	43	57	52	121	70	186	83	161	42	47	41	23
24	43	59	57	96	67	423	79	333	97	47	34	61
25	41	63	87	90	66	328	82	247	827	42	31	462
26	42	211	61	83	63	176	106	126	1490	40	28	94
27	42	105	55	80	57	137	90	99	294	39	24	46
28	42	85	52	78	58	485	79	86	150	94	23	42
29	42	72	51	75	56	750	78	79	113	73	23	134
30	52	64	53	72	---	298	81	107	100	48	22	167
31	48	---	54	82	---	240	---	84	---	42	27	---
TOTAL	1874	2930	1742	4455	2040	6720	4120	4390	4301	1983	923	1599
MEAN	60.5	97.7	56.2	144	70.3	217	137	142	143	64.0	29.8	53.3
MAX	243	305	87	756	84	1360	778	776	1490	213	70	462
MIN	41	44	49	49	56	56	78	53	42	39	22	19
CFSM	.87	1.41	.81	2.08	1.02	3.14	1.98	2.05	2.07	.93	.43	.77
IN.	1.01	1.58	.94	2.39	1.10	3.61	2.21	2.36	2.31	1.07	.50	.86

CAL YR 1979 TOTAL 38190 MEAN 105 MAX 1390 MIN 33 CFSM 1.52 IN 20.53
WTR YR 1980 TOTAL 37077 MEAN 101 MAX 1490 MIN 19 CFSM 1.46 IN 19.93

SANTEE RIVER BASIN

02144000 LONG CREEK NEAR BESSEMER CITY, N. C.

LOCATION (REVISED).--Lat 35°18'20", long 81°14'05", Gaston County, Hydrologic Unit 03050102, on right bank 700 ft (213 m) upstream from bridge on Secondary Road 1456, 2 mi (3 km) northeast of Bessemer City limits, and 8.2 mi (13.2 km) upstream from mouth.

DRAINAGE AREA.--31.8 mi² (82.4 km²), revised.

PERIOD OF RECORD.--October 1952 to current year. Monthly discharge only for some periods, published in WSP 1723.

REVISED RECORDS.--WSP 1723: 1959-60(M). WSP 1904: 1959-60.

GAGE.--Water-stage recorder. Datum of gage is 706.1 ft (215.22 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Bessemer City diverts water supply from above gaging station and returns waste water to South Fork Catawba River below mouth of Long Creek, causing some diurnal fluctuation; an average of 1.7 ft³/s (0.048 m³/s) was diverted during the year.

AVERAGE DISCHARGE.--28 years, 36.6 ft³/s (1.036 m³/s), 15.63 in/yr (397 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,500 ft³/s (184 m³/s) Oct. 16, 1971, gage height, 9.10 ft (2.774 m), from rating curve extended above 2,100 ft³/s (59.5 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 0.4 ft³/s (0.011 m³/s) Oct. 7, 1954; minimum daily, 0.8 ft³/s (0.023 m³/s) Oct. 7, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 26 ft (7.92 m) at site on left bank 1,500 ft (460 m) upstream, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (23 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan 18	1200	940	26.6	5.24	1.597	Mar 28	1930	*990	28.0	*5.37	1.637
Mar 21	0700	854	24.2	5.01	1.527	June 25	1630	947	26.8	5.26	1.603

Minimum discharge, 5.9 ft³/s (0.17 m³/s) Sept. 16, gage height, 1.11 ft (0.338 m); minimum daily, 6.3 ft³/s (0.18 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	17	24	22	36	26	60	28	25	22	12	11
2	43	128	23	21	31	26	53	28	24	19	11	10
3	33	66	24	21	31	29	49	27	22	19	11	8.2
4	32	37	23	23	32	35	49	26	21	26	11	12
5	70	30	23	26	30	42	43	26	19	22	12	9.2
6	36	27	24	24	31	35	41	25	20	18	9.8	9.4
7	29	24	25	22	31	31	40	26	19	17	9.4	11
8	24	24	22	23	31	74	50	31	19	15	8.4	9.0
9	22	22	22	22	35	55	52	25	16	20	8.1	7.9
10	28	48	21	22	55	41	40	24	17	19	9.9	8.1
11	24	190	21	47	50	35	38	24	16	25	9.3	7.5
12	22	86	22	57	45	33	40	23	15	16	9.6	7.2
13	20	52	25	36	40	40	51	22	15	14	7.6	7.0
14	18	41	26	160	37	34	200	23	15	14	7.4	6.9
15	18	35	22	61	37	30	69	24	14	14	7.8	6.5
16	18	32	22	44	36	30	52	23	22	13	9.0	6.3
17	17	30	23	66	33	81	45	25	33	12	13	6.9
18	17	29	20	513	31	136	42	148	27	178	8.6	8.8
19	19	28	21	124	30	56	40	41	21	29	11	10
20	18	27	21	69	31	146	38	199	17	20	8.9	9.5
21	21	26	21	56	31	454	37	120	14	16	7.9	8.6
22	19	25	21	50	32	88	36	47	15	15	59	8.1
23	22	25	21	52	30	56	34	57	14	15	14	7.3
24	18	25	26	42	29	244	33	130	29	15	11	12
25	19	25	42	40	30	117	31	54	444	13	9.8	136
26	18	60	28	37	27	64	31	42	117	13	8.7	33
27	16	33	23	36	27	53	31	34	46	12	8.1	14
28	18	29	23	36	26	387	29	32	32	12	7.7	19
29	16	26	22	34	25	318	31	29	27	27	7.7	106
30	23	25	22	32	---	108	30	27	30	14	11	90
31	18	---	24	41	---	88	---	25	---	12	20	---
TOTAL	789	1272	727	1859	970	2992	1415	1415	1165	696	359.7	606.4
MEAN	25.5	42.4	23.5	60.0	33.4	96.5	47.2	45.6	38.8	22.5	11.6	20.2
MAX	73	190	42	513	55	454	200	199	444	178	59	136
MIN	16	17	20	21	25	26	29	22	14	12	7.4	6.3
CFSM	.80	1.33	.74	1.89	1.05	3.04	1.48	1.43	1.22	.71	.37	.64
IN.	.92	1.49	.85	2.17	1.13	3.50	1.66	1.66	1.36	.81	.42	.71

CAL YR 1979 TOTAL 16287.7 MEAN 44.6 MAX 1330 MIN 9.0 CFSM 1.40 IN 19.05
WTR YR 1980 TOTAL 14266.1 MEAN 39.0 MAX 513 MIN 6.3 CFSM 1.23 IN 16.69

02146300 IRWIN CREEK NEAR CHARLOTTE, N. C.

LOCATION (REVISED).--Lat 35°11'50", long 80°54'18", Mecklenburg County, Hydrologic Unit 03050103, on left bank at sewage-disposal plant of city of Charlotte, 2,200 ft (671 m) upstream from Southern Railway bridge, 0.7 mi (1.1 km) upstream from Taggart Creek, 4.2 mi (6.8 km) southwest of city hall, Charlotte.

DRAINAGE AREA.--30.7 mi² (79.0 km²), revised.

PERIOD OF RECORD.--May 1962 to current year. Prior to October 1963, published as Sugar (Irwin) Creek at Charlotte.

GAGE.--Water-stage recorder. Datum of gage is 591.53 ft (180.298 m) National Geodetic Vertical Datum of 1929 (levels by city of Charlotte).

REMARKS.--Records good. Fluctuation at low flow caused by wash water, from city of Charlotte water filtration plants and industry, diverted into the basin from the Catawba River (city water supply). Wash water from city water plants averaged 1.02 ft³/s (0.029 m³/s). Creek channel improved by dredging in 1917 and maintained by Mecklenburg County Drainage Commission to present time. The drainage area is urbanized and has an impervious area of about 20 percent.

AVERAGE DISCHARGE.--18 years, 44.2 ft³/s (1.252 m³/s), 19.55 in/yr (497 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,880 ft³/s (251 m³/s) May 30, 1975, gage height, 18.04 ft (5.499 m); minimum, 3.9 ft³/s (0.11 m³/s) Aug. 7, 8, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 6, 1936 reached a stage of about 17.3 ft (5.27 m) at site 400 ft (122 m) downstream, from information by plant employee. Peak may have been affected by failure of Lakewood Dam 5 mi (8.0 km) upstream. Flood of Jan. 6, 1962 reached a stage of 14.32 ft (4.365 m), from floodmarks, discharge, 4,120 ft³/s (117 m³/s). Flood of Apr. 11, 1962 reached a stage of 15.18 ft (4.627 m), from floodmarks, discharge, 4,740 ft³/s (134 m³/s), on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct 5	0445	1430	40.5	7.01	2.137	Mar 28	2100	1980	56.1	8.17	2.490
Nov 2	1430	1360	38.5	6.84	2.085	Apr 8	1815	1800	51.0	7.81	2.380
Nov 11	0715	2200	62.3	8.58	2.615	May 18	0315	1470	41.6	7.10	2.164
Jan 18	1315	1990	56.4	8.20	2.499	May 20	1830	*2920	82.7	*9.77	2.978
Mar 21	0545	1590	45.0	7.37	2.246	July 18	0345	2300	65.1	8.77	2.673
Mar 24	1615	1460	41.3	7.08	2.158						

Minimum discharge, 4.8 ft³/s (0.14 m³/s) Sept. 15, 16, gage height, 0.43 ft (0.131 m); minimum daily, 6.4 ft³/s (0.18 m³/s) Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	15	20	19	28	23	55	21	14	15	26	7.2
2	41	205	18	17	24	25	50	20	14	12	10	10
3	33	44	18	15	26	54	48	20	15	17	8.4	13
4	93	22	18	41	24	71	50	20	14	45	7.9	30
5	433	18	20	33	23	86	38	18	13	11	9.5	35
6	49	16	37	19	32	44	36	20	14	11	8.7	16
7	35	16	25	18	27	55	35	19	11	11	13	8.3
8	29	15	19	24	25	301	291	20	13	10	10	7.0
9	28	15	17	26	89	69	82	17	12	27	10	7.8
10	37	80	17	17	155	43	44	16	12	51	8.7	6.8
11	22	664	18	156	59	35	38	16	11	19	15	7.3
12	20	93	19	72	44	51	55	15	11	10	11	7.8
13	19	48	27	34	35	151	89	16	11	9.1	18	8.5
14	18	35	22	219	29	49	133	21	11	9.4	18	8.8
15	17	30	17	56	28	36	51	18	10	11	18	7.2
16	17	27	21	37	28	33	39	15	54	10	17	7.2
17	17	26	17	62	24	121	34	46	32	10	20	9.3
18	18	25	16	386	23	146	32	231	35	293	19	11
19	16	24	15	90	24	45	29	25	14	17	13	17
20	15	22	16	51	24	424	28	449	13	13	10	7.7
21	15	21	15	43	25	496	28	71	11	14	13	8.9
22	15	20	15	68	25	76	27	39	11	13	90	6.4
23	64	20	16	101	24	53	25	53	9.9	16	13	7.1
24	19	27	65	41	23	464	24	144	131	11	8.5	7.2
25	18	26	44	35	23	115	23	35	79	8.9	8.2	128
26	16	219	21	33	22	61	22	25	22	10	10	12
27	14	36	18	35	22	52	22	21	16	8.8	8.4	7.6
28	16	29	15	30	22	706	23	20	15	9.3	8.3	86
29	14	25	16	29	20	224	23	18	13	11	8.8	136
30	29	22	34	26	---	114	22	19	56	9.4	7.4	199
31	15	---	24	68	---	74	---	14	---	9.3	9.5	---
TOTAL	1272	1885	680	1901	977	4307	1496	1502	697.9	732.2	456.3	831.1
MEAN	41.0	62.8	21.9	61.3	33.7	139	49.9	48.5	23.3	23.6	14.7	27.7
MAX	433	664	65	386	155	706	291	449	131	293	90	199
MIN	14	15	15	15	20	23	22	14	9.9	8.8	7.4	6.4
CFSM	1.34	2.05	.71	2.00	1.10	4.53	1.63	1.58	.76	.77	.48	.90
IN.	1.54	2.28	.82	2.30	1.18	5.22	1.81	1.82	.85	.89	.55	1.01

CAL YR 1979 TOTAL 21134.4 MEAN 57.9 MAX 1270 MIN 8.9 CFSM 1.89 IN 25.61
WTR YR 1980 TOTAL 16737.5 MEAN 45.7 MAX 706 MIN 6.4 CFSM 1.49 IN 20.28

02146507 LITTLE SUGAR CREEK AT ARCHDALE DRIVE AT CHARLOTTE, N. C.

LOCATION.--Lat 35°08'52", long 80°51'29", Mecklenburg County, Hydrologic Unit 03050103, on left bank at downstream side of bridge on Secondary Road 3657 (Archdale Drive) in Charlotte, 0.7 mi (1.1 km) downstream from Little Hope Creek, and 5.3 mi (8.5 km) south of City Hall, Charlotte.

DRAINAGE AREA.--42.6 mi² (110.3 km²).

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 564.46 ft (172.047 m) National Geodetic Vertical Datum of 1929 (levels by city of Charlotte).

REMARKS.--Records good. The city of Charlotte diverted an average of 69.9 ft³/s (1.98 m³/s) for municipal water supply from Catawba River at Mountain Island Lake. An average of 18.9 ft³/s (0.54 m³/s) of sewage effluent from Little Sugar Creek waste treatment plant was discharged into the stream 0.4 mi (0.6 km) upstream from gage. Since 1911 the creek channel has been dredged and improved. The drainage area is urbanized and has an impervious area of about 20 percent.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,900 ft³/s (195 m³/s) Mar. 23, 1979, gage height, 12.44 ft (3.792 m); minimum, 12 ft³/s (0.34 m³/s) Sept. 15, 1979, gage height, 1.81 ft (0.552 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 22, 1975 reached a stage of about 12.7 ft (3.87 m), from flood-marks, discharge, 7,360 ft³/s (208 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,100 ft³/s (59 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	1400	2940	83.3	8.99	2.740	Apr 8	1900	3750	106	9.85	3.002
Nov 11	0745	2550	72.2	8.52	2.597	May 18	0330	2250	63.7	8.14	2.481
Jan 18	1130	3400	96.3	9.49	2.893	May 20	1830	*3900	110	*10.00	3.048
Mar 21	0545	2340	66.3	8.25	2.515	July 18	0345	2520	71.4	8.48	2.585
Mar 28	2100	2960	83.8	9.01	2.746						

Minimum discharge, 14 ft³/s (0.40 m³/s) Sept. 15, 16, gage height, 1.85 ft (0.564 m); minimum daily, 20 ft³/s (0.57 m³/s) Sept. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	217	25	44	38	48	43	74	35	29	28	54	23
2	38	454	35	34	45	31	64	34	30	25	35	28
3	32	95	33	33	35	100	58	40	30	30	27	58
4	135	34	36	73	44	122	66	30	29	92	28	65
5	486	35	36	65	36	152	52	31	28	26	27	73
6	52	34	63	35	61	57	48	32	28	29	26	38
7	29	33	45	37	44	65	47	32	28	24	26	22
8	30	32	34	54	41	518	687	34	27	24	26	22
9	28	32	33	56	157	107	220	32	27	52	29	23
10	49	51	34	38	268	64	100	30	27	107	30	23
11	30	943	34	287	79	54	120	30	27	42	29	22
12	28	128	31	116	70	81	140	30	30	26	25	27
13	27	58	39	58	53	377	177	30	25	25	25	21
14	27	47	41	278	42	81	199	32	25	25	25	20
15	26	42	33	72	48	58	140	35	24	25	27	22
16	26	37	51	53	43	52	100	31	90	24	35	21
17	26	35	35	92	40	189	90	93	68	24	27	22
18	26	35	35	1040	43	252	80	399	59	388	25	24
19	26	37	35	132	41	72	75	37	30	32	25	41
20	26	28	37	70	35	571	70	812	28	26	25	25
21	25	29	32	59	38	735	50	135	26	25	25	21
22	26	32	32	111	39	112	45	48	25	29	167	22
23	122	32	32	192	40	72	40	53	26	138	34	22
24	29	35	106	62	37	749	38	255	244	30	26	122
25	26	36	91	56	36	174	37	50	138	26	27	253
26	25	442	36	43	40	81	36	40	44	24	26	29
27	24	54	34	53	33	66	35	35	29	23	26	23
28	28	47	33	50	37	987	38	32	26	23	25	195
29	23	40	33	41	35	341	40	32	25	24	25	274
30	54	30	72	47	---	182	41	32	40	27	24	386
31	27	---	46	119	---	110	---	31	---	26	24	---
TOTAL	1773	2992	1311	3494	1608	6655	3007	2602	1312	1469	1005	1967
MEAN	57.2	99.7	42.3	113	55.4	215	100	83.9	43.7	47.4	32.4	65.6
MAX	486	943	106	1040	268	987	687	812	244	388	167	386
MIN	23	25	31	33	33	31	35	30	24	23	24	20
CFSM	1.34	2.34	.99	2.65	1.30	5.05	2.35	1.97	1.03	1.11	.76	1.54
IN.	1.55	2.61	1.14	3.05	1.40	5.81	2.63	2.27	1.15	1.28	.88	1.72

CAL YR 1979 TOTAL 34156 MEAN 93.6 MAX 2020 MIN 22 CFSM 2.20 IN 29.83
WTR YR 1980 TOTAL 29195 MEAN 79.8 MAX 1040 MIN 20 CFSM 1.87 IN 25.49

02146600 McALPINE CREEK AT SARDIS ROAD NEAR CHARLOTTE, N. C.

LOCATION.--Lat 35°08'13", long 80°46'06", Mecklenburg County, Hydrologic Unit 03050103, near left bank on downstream end of bridge pier at Sardis Road (Secondary Road 3356), 1.7 mi (2.7 km) downstream from Irvins Creek, and 7 mi (11 km) southeast of city hall, Charlotte.

DRAINAGE AREA.--38.3 mi² (99.2 km²).

PERIOD OF RECORD.--April 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 553.39 ft (168.673 m) National Geodetic Vertical Datum of 1929 (levels by city of Charlotte).

REMARKS.--Records good. Occasional minor fluctuation and regulation of unknown origin. Creek channel improved by dredging in 1917 and maintained by the Mecklenburg County Drainage Commission to present time. This drainage basin is adjacent to the city of Charlotte. The drainage basin is urban and has an impervious area of about 15 percent, expected development by 1995, about 22 percent.

AVERAGE DISCHARGE.--18 years, 40.7 ft³/s (1.153 m³/s), 14.43 in/yr (366 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,690 ft³/s (189 m³/s) Mar. 24, 1979, gage height, 16.7 ft (5.090 m) from floodmark; no flow Nov. 15, 1972, result of upstream construction; minimum, not affected by construction, 0.60 ft³/s (0.017 m³/s) Sept. 26, Oct. 6, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 6, 1962 reached a stage of about 14.0 ft (4.27 m), from floodmarks, discharge, 4,150 ft³/s (118 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s (37 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 11	1230	1990	56.4	9.99	3.045	Mar 28	2015	2030	57.5	10.09	3.075
Jan 18	1215	2090	59.2	10.24	3.121	Apr 8	2300	*2440	69.1	*11.04	3.365
Mar 21	0800	2320	65.7	10.77	3.283	May 18	0445	1310	37.1	8.12	2.475
Mar 24	1715	1680	47.6	9.19	2.801	May 20	2000	1960	55.5	9.92	3.024

Minimum discharge, 0.64 ft³/s (0.018 m³/s) Sept. 17, gage height, 0.86 ft (0.262 m); minimum daily, 1.1 ft³/s (0.031 m³/s) Sept. 16

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	9.5	15	16	24	21	55	14	8.7	5.5	3.2	4.3
2	21	210	14	15	22	21	44	14	8.7	5.0	6.3	3.9
3	17	66	13	13	21	32	38	13	8.3	5.7	3.6	27
4	31	22	13	19	20	70	40	13	7.8	18	3.3	13
5	358	13	13	32	20	155	32	12	7.2	6.5	5.3	6.2
6	41	12	16	18	22	72	29	12	7.1	5.4	2.6	4.2
7	21	11	17	15	25	44	28	12	7.4	4.6	2.2	2.9
8	15	10	13	25	24	524	546	13	7.2	4.3	2.1	2.3
9	11	9.7	12	38	50	146	334	12	6.6	8.2	2.1	2.1
10	17	9.6	12	25	250	55	62	11	6.3	12	3.5	2.0
11	14	951	12	150	80	40	41	11	6.2	11	3.7	2.1
12	11	153	12	105	52	42	37	10	6.3	5.2	2.2	1.8
13	11	44	13	39	37	386	88	10	6.2	5.6	2.1	2.0
14	11	28	17	203	30	83	140	9.7	6.0	4.5	2.0	1.8
15	10	21	12	60	28	45	54	9.6	5.8	4.1	2.2	1.2
16	10	19	17	35	28	36	37	8.3	11	4.5	30	1.1
17	10	17	14	37	24	80	30	10	22	3.7	13	1.2
18	9.5	17	12	809	21	208	29	246	14	81	3.9	2.2
19	9.4	16	11	119	21	52	27	22	10	7.7	5.8	5.7
20	9.5	15	11	49	22	512	25	481	8.9	5.6	5.2	4.2
21	9.5	13	11	36	24	954	23	123	6.3	4.7	3.2	2.6
22	9.3	13	11	54	24	101	21	29	5.9	4.4	43	2.3
23	28	13	11	168	25	55	19	28	5.6	23	8.8	1.7
24	13	13	22	47	29	610	18	26	34	8.7	4.6	10
25	9.9	14	47	33	22	193	17	24	36	5.0	3.2	36
26	9.5	201	18	27	20	70	16	22	14	4.4	2.7	6.2
27	9.2	38	14	29	19	49	15	20	8.4	4.2	2.3	2.9
28	9.1	25	12	26	19	694	15	15	7.0	3.9	2.3	46
29	9.2	20	12	23	20	418	14	12	6.2	4.0	2.0	98
30	13	16	20	21	---	172	14	9.7	6.3	3.5	1.9	143
31	9.8	---	24	19	---	110	---	8.9	---	3.5	8.5	---
TOTAL	799.9	2019.8	471	2305	1023	6050	1888	1261.2	301.4	277.4	186.8	439.9
MEAN	25.8	67.3	15.2	74.4	35.3	195	62.9	40.7	10.0	8.95	6.03	14.7
MAX	358	951	47	809	250	954	546	481	36	81	43	143
MIN	9.1	9.5	11	13	19	21	14	8.3	5.6	3.5	1.9	1.1
CFSM	.67	1.76	.40	1.94	.92	5.09	1.64	1.06	.26	.23	.16	.38
IN.	.78	1.96	.46	2.24	.99	5.88	1.83	1.22	.29	.27	.18	.43

CAL YR 1979 TOTAL 23767.0 MEAN 65.1 MAX 2400 MIN 3.5 CFSM 1.70 IN 23.08
WTR YR 1980 TOTAL 17023.4 MEAN 46.5 MAX 954 MIN 1.1 CFSM 1.21 IN 16.53

02146700 McMULLEN CREEK AT SHARON VIEW ROAD NEAR CHARLOTTE, N. C.

LOCATION (REVISED).--Lat 35°08'27", long 80°49'13", Mecklenburg County, Hydrologic Unit 03050103, on left downstream side of culvert wingwall at Sharon View Road (Secondary Road 3673), 3.3 mi (5.3 km) south of Queens College, Charlotte, and 6.9 mi (11.1 km) upstream from mouth.

DRAINAGE AREA.--6.95 mi² (18.00 km²), revised.

PERIOD OF RECORD.--April 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 592.91 ft (180.719 m) National Geodetic Vertical Datum of 1929 (levels by city of Charlotte. Prior to Oct. 13, 1970, at site 73 ft (22.2 m) upstream at same datum. Oct. 13, 1970 to Dec. 30, 1971 at site 154 ft (47 m) downstream at datum 2.00 ft (0.610 m) lower.

REMARKS.--Records good. Creek channel improved by dredging in 1928. The drainage area is in the eastern part of the city and has an impervious area of about 15 percent.

AVERAGE DISCHARGE.--18 years, 7.82 ft³/s (0.222 m³/s), 15.28 in/yr (388 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,390 ft³/s (67.7 m³/s) Mar. 23, 1979, gage height, 9.91 ft (3.021 m); no flow Aug. 31, Sept. 1, 2, 1962, Sept. 19-23, 1963, Sept. 3, 4, Oct. 5, 1968, Oct. 8, 27, 28, 1970, Mar. 28, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 6, 1962 reached a stage of 7.5 ft (2.29 m), former site and datum, from floodmarks, discharge, 1,040 ft³/s (29.5 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	2215	602	17.0	5.70	1.737	Apr 8	1945	*1380	39.1	*8.43	2.570
Nov 11	0700	567	16.1	5.51	1.679	May 18	0315	557	15.8	4.69	1.430
Jan 18	1045	649	18.4	5.95	1.814	May 20	1815	807	22.9	6.07	1.850
Mar 21	0530	784	22.2	5.95	1.814	July 18	0245	888	25.1	6.49	1.978
Mar 28	1745	597	16.9	4.92	1.500	July 23	1345	745	21.1	5.74	1.750

Minimum discharge, 0.13 ft³/s (0.004 m³/s) Aug. 28-31, Sept. 11, gage height, 0.71 ft (0.216 m); minimum daily, 0.15 ft³/s (0.004 m³/s) Aug. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	.55	1.2	1.9	2.9	2.1	5.9	1.2	1.1	.61	2.9	1.0
2	1.5	56	1.1	1.6	2.3	1.9	4.5	1.1	.93	.56	1.3	2.8
3	1.0	32	1.1	1.4	2.1	12	4.3	1.2	.84	2.9	.41	6.6
4	22	2.0	1.1	6.9	2.1	18	5.9	.96	.79	5.5	.29	13
5	67	1.2	1.2	5.2	1.9	29	3.4	.98	.71	.69	.53	2.7
6	2.7	.92	3.7	1.8	3.9	6.6	2.9	.97	.71	.49	.24	1.9
7	1.8	1.1	2.4	1.7	2.8	17	3.2	.86	.74	.41	.19	.42
8	1.4	.77	1.3	4.7	2.3	112	244	1.6	.71	.40	.18	.29
9	1.3	.72	1.1	6.9	24	18	27	.94	.57	4.4	2.8	.24
10	3.0	.76	1.0	2.4	55	5.2	7.8	.82	.61	12	.51	.21
11	1.0	159	1.0	50	11	3.5	4.5	.76	.55	1.9	.28	.17
12	.69	10	1.0	14	6.1	12	7.4	.73	.56	.66	.27	.19
13	.69	3.1	3.0	5.3	4.0	77	21	.73	.51	.52	.23	.18
14	.61	1.9	2.2	39	3.3	7.2	26	.71	.51	.41	.20	.23
15	.53	1.5	1.1	5.6	3.0	3.8	6.1	.75	.43	.38	.40	.33
16	.50	1.4	3.6	3.4	3.3	3.0	4.2	.67	11	.37	13	.37
17	.52	1.2	1.6	11	2.5	30	3.1	7.2	5.2	.36	1.2	.51
18	.52	1.2	1.1	194	2.2	27	2.8	63	3.6	104	.37	1.3
19	.51	1.0	1.0	12	2.1	4.6	2.8	1.8	1.1	1.4	1.3	2.7
20	.56	1.0	1.0	5.2	2.2	133	2.4	138	.78	.90	.87	.62
21	.62	.90	.90	3.7	2.2	169	2.4	9.4	.57	.72	.33	.29
22	.67	.97	.93	19	2.2	10	1.9	2.6	.50	.67	19	.27
23	11	.91	1.0	31	4.3	5.3	1.7	2.1	.58	59	1.3	.22
24	1.5	1.5	15	4.9	3.4	141	1.5	4.6	46	1.9	.47	21
25	.65	1.3	6.6	3.6	2.2	19	1.4	2.1	13	.93	.39	21
26	.55	61	1.9	2.9	1.9	6.8	1.4	1.9	2.3	.77	.25	.99
27	.52	3.1	1.5	3.7	1.9	4.8	1.4	1.5	1.2	.73	.21	.38
28	.52	2.0	1.4	2.7	1.9	213	1.2	1.3	.89	.71	.19	34
29	.70	1.6	1.2	2.6	1.8	37	1.1	1.3	.82	.60	.18	45
30	2.7	1.3	5.9	2.7	---	30	1.2	1.2	.95	.50	.15	71
31	.89	---	2.3	12	---	12	---	1.2	---	.48	2.3	---
TOTAL	131.85	351.90	70.43	462.8	160.8	1170.8	404.4	254.18	98.76	205.87	52.24	229.91
MEAN	4.25	11.7	2.27	14.9	5.54	37.8	13.5	8.20	3.29	6.64	1.69	7.66
MAX	67	159	15	194	55	213	244	138	46	104	19	71
MIN	.50	.55	.90	1.4	1.8	1.9	1.1	.67	.43	.36	.15	.17
CFSM	.61	1.68	.33	2.14	.80	5.44	1.94	1.18	.47	.96	.24	1.10
IN.	.71	1.88	.38	2.48	.86	6.27	2.16	1.36	.53	1.10	.28	1.23

CAL YR 1979 TOTAL 3748.41 MEAN 10.3 MAX 331 MIN .17 CFSM 1.48 IN 20.06
WTR YR 1980 TOTAL 3593.94 MEAN 9.82 MAX 244 MIN .15 CFSM 1.41 IN 19.23

02146750 McALPINE CREEK BELOW McMULLEN CREEK NEAR PINEVILLE, N. C.

LOCATION.--Lat 35°03'59", long 80°52'12", Mecklenburg County, Hydrologic Unit, 03050103, on right bank at waste treatment plant of Charlotte, 150 ft (46 m) downstream from McMullen Creek, 735 ft (224 m) upstream from effluent outfall, and 2.1 mi (3.4 km) south of Pineville.

DRAINAGE AREA.--92.4 mi² (239.3 km²).

PERIOD OF RECORD.--April 1974 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 516.29 ft (157.365 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1977 at datum 1.0 ft (0.30 m) higher.

REMARKS.--Records good. The drainage area is the eastern side of the city of Charlotte and has an impervious area of about 12 percent.

AVERAGE DISCHARGE.--6 years, 137 ft³/s (3.880 m³/s), 20.13 in/yr (511 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,480 ft³/s (184 m³/s) Mar. 30, 1977, gage height, 12.16 ft (3.706 m), former datum; maximum gage height, 13.53 ft (4.124 m), former datum, Oct. 9, 1976 (affected by backwater from Sugar Creek); minimum, 1.1 ft³/s (0.031 m³/s) Sept. 16, 17, 1980; minimum daily, 1.2 ft³/s (0.034 m³/s) Sept. 16, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1964, about 12.9 ft (3.93 m), former datum, Apr. 1, 1973, from information by plant operator.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,380 ft³/s (39 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar 8	1900	1850	52.4	7.42	2.262	Mar 29	0400	3360	95.2	9.53	2.905
Mar 13	1515	1540	43.6	6.78	2.066	Apr 9	0645	2200	62.3	8.01	2.441
Mar 21	0845	*4230	120	*10.38	3.164	May 21	0415	2060	58.3	7.79	2.374
Mar 25	0015	2380	67.4	8.27	2.521						

Minimum discharge, 1.1 ft³/s (0.031 m³/s) Sept. 16, 17, gage height, 0.88 ft (0.268 m); minimum daily, 1.2 ft³/s (0.034 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	159	16	35	51	71	36	162	32	21	11	8.8	15
2	53	365	33	42	51	32	113	31	20	9.8	9.4	4.5
3	37	427	29	37	46	61	95	30	19	9.4	9.8	20
4	38	61	29	36	45	125	101	28	18	35	8.7	54
5	1050	36	29	89	43	374	78	27	17	14	8.3	33
6	177	31	34	48	50	272	65	26	16	10	8.1	10
7	55	27	42	42	54	102	61	25	16	8.7	6.5	6.3
8	39	23	31	62	51	1310	307	27	17	7.9	5.1	4.3
9	33	23	27	118	86	837	1370	25	14	20	5.8	3.4
10	27	22	27	81	876	140	191	23	13	23	5.4	2.9
11	33	1630	27	286	408	103	104	22	13	33	4.6	2.7
12	24	1140	26	515	153	94	83	22	13	11	4.2	2.4
13	20	111	27	123	99	1070	160	21	13	9.0	3.2	1.9
14	20	75	36	613	77	386	464	20	12	9.2	3.0	2.3
15	18	52	26	275	68	123	176	20	12	7.4	3.0	1.6
16	18	46	35	108	68	87	96	18	12	7.0	17	1.2
17	18	39	34	83	57	118	73	18	63	7.2	46	1.4
18	16	36	28	1610	49	776	64	646	37	360	8.7	2.4
19	16	35	28	940	47	161	59	74	28	25	5.1	8.4
20	16	34	26	172	47	522	55	642	17	13	10	10
21	16	31	24	120	48	3130	50	1280	14	10	4.8	4.7
22	15	30	24	300	46	556	47	106	11	8.9	76	3.1
23	42	29	24	500	45	150	43	68	11	89	19	2.4
24	37	30	35	150	58	803	41	61	54	43	9.7	9.0
25	18	31	121	100	44	1270	38	57	169	18	5.7	195
26	16	451	45	90	39	229	36	50	44	13	4.5	23
27	15	123	34	90	36	145	36	33	21	11	3.7	7.4
28	15	62	31	86	36	795	34	29	17	10	3.3	54
29	15	47	28	70	36	2090	33	27	13	9.7	3.1	468
30	21	39	42	50	---	523	34	25	13	9.2	2.7	497
31	19	---	82	100	---	443	---	23	---	9.0	2.6	---
TOTAL	2096	5102	1099	6987	2834	16863	4269	3536	758	861.4	315.8	1451.3
MEAN	67.6	170	35.5	225	97.7	544	142	114	25.3	27.8	10.2	48.4
MAX	1050	1630	121	1610	876	3130	1370	1280	169	360	76	497
MIN	15	16	24	36	36	32	33	18	11	7.0	2.6	1.2
CFSM	.73	1.84	.38	2.44	1.06	5.89	1.54	1.23	.27	.30	.11	.52
IN.	.84	2.05	.44	2.81	1.14	6.79	1.72	1.42	.31	.35	.13	.58

CAL YR 1979 TOTAL 59665.2 MEAN 163 MAX 4210 MIN 6.0 CFSM 1.76 IN 24.02
WTR YR 1980 TOTAL 46172.5 MEAN 126 MAX 3130 MIN 1.2 CFSM 1.36 IN 18.59

02146900 TWELVE MILE CREEK NEAR WAXHAW, N. C.

LOCATION (REVISED).--Lat 34°57'08", long 80°45'21", Union County, Hydrologic Unit 03050103, on left bank 90 ft (27 m) upstream from bridge on State Highway 16, 680 ft (207 m) downstream from West Fork Twelve Mile Creek, and 2.5 mi (4.0 km) north of Waxhaw.

DRAINAGE AREA.--76.5 mi² (198.1 km²), revised.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949-60, October 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 489.04 ft (149.059 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 13, 1962, water-stage recorder at site 70 ft (21 m) downstream at same datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--20 years, 72.1 ft³/s (2.042 m³/s), 12.80 in/yr (325 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,700 ft³/s (218 m³/s) Apr. 1, 1973, gage height, 19.92 ft (6.072 m); no flow Oct. 6, 1968, Oct. 7-15, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1900, 23.6 ft (7.19 m) Sept. 7, 1949, from floodmarks. No flow observed on Oct. 6, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 12	0130	1670	47.3	12.04	3.670	Mar 21	0930	2490	70.5	13.70	4.176
Jan 18	2300	1790	50.7	12.25	3.734	Mar 29	0530	*3000	85.0	*14.57	4.441
Mar 8	1800	1850	52.4	12.40	3.780						

Minimum discharge, 0.12 ft³/s (0.003 m³/s) Sept. 16, 17, gage height, 1.14 ft (0.347 m); minimum daily, 0.12 ft³/s (0.003 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	7.1	30	40	89	34	110	29	14	5.6	1.7	.43
2	24	155	27	31	56	38	95	27	13	4.8	1.3	.38
3	16	286	24	27	43	44	120	26	12	4.6	1.3	1.3
4	14	37	24	26	41	81	80	26	11	4.7	1.2	1.7
5	257	20	24	45	38	396	66	23	9.6	4.7	1.1	3.7
6	55	16	25	40	41	226	60	22	8.8	5.9	1.0	4.6
7	23	14	30	30	46	96	200	21	9.1	4.7	.99	3.1
8	15	13	26	41	54	1300	2000	23	9.0	4.5	.97	1.7
9	12	12	23	447	57	775	500	22	8.0	5.4	.91	1.0
10	9.5	11	22	138	656	167	120	20	7.4	6.0	34	.77
11	9.8	834	21	141	275	107	67	18	7.2	9.6	5.2	.48
12	8.9	755	21	292	127	111	58	18	6.8	8.9	2.4	.46
13	8.7	96	21	99	96	989	114	17	6.4	7.8	1.4	.38
14	8.1	56	22	362	78	261	244	16	6.2	7.0	1.1	.31
15	7.6	35	21	198	72	120	118	16	5.9	6.4	.91	.15
16	7.4	29	23	95	70	93	75	15	6.3	6.2	2.9	.12
17	7.4	26	27	78	63	93	58	14	24	5.9	3.5	.14
18	7.4	24	23	957	53	449	53	269	30	140	3.2	.61
19	7.4	23	21	713	51	133	50	61	24	15	2.1	1.0
20	7.1	21	21	150	49	503	46	176	11	7.7	1.8	1.1
21	6.8	20	19	102	42	2040	43	468	7.7	5.6	2.1	1.2
22	6.2	19	19	89	41	308	41	63	6.0	4.3	3.2	1.1
23	6.8	19	19	429	43	133	38	38	5.2	8.2	5.4	1.3
24	7.8	20	20	139	91	462	36	33	5.3	16	2.6	33
25	7.9	19	69	91	54	613	33	29	12	6.5	1.7	311
26	6.7	431	40	75	42	163	31	26	8.7	4.2	1.2	26
27	6.4	114	29	74	37	108	31	21	6.8	3.2	1.0	6.7
28	6.3	59	25	77	36	763	29	19	6.0	2.4	.89	3.8
29	6.9	43	22	66	35	1890	28	17	7.5	2.2	.79	80
30	7.2	34	25	58	---	454	32	16	6.5	2.1	.92	196
31	7.2	---	56	80	---	220	---	15	---	2.0	.47	---
TOTAL	672.5	3248.1	819	5230	2476	13170	4576	1604	301.4	322.1	89.25	683.53
MEAN	21.7	108	26.4	169	85.4	425	153	51.7	10.0	10.4	2.88	22.8
MAX	257	834	69	957	656	2040	2000	468	30	140	34	311
MIN	6.2	7.1	19	26	35	34	28	14	5.2	2.0	.47	.12
CFSM	.28	1.41	.35	2.21	1.12	5.56	2.00	.68	.13	.14	.04	.30
IN.	.33	1.58	.40	2.54	1.20	6.40	2.23	.78	.15	.16	.04	.33

CAL YR 1979 TOTAL 33265.50 MEAN 91.1 MAX 2140 MIN 3.0 CFSM 1.19 IN 16.18
WTR YR 1980 TOTAL 33191.88 MEAN 90.7 MAX 2040 MIN .12 CFSM 1.19 IN 16.14

02149000 COVE CREEK NEAR LAKE LURE, N. C.

LOCATION.--Lat 35°25'24", long 82°06'42", Rutherford County, Hydrologic Unit 03050105, on left bank 40 ft (12 m) upstream from bridge on U.S. Highways 64 and 74, 1.0 mi (1.6 km) upstream from mouth, and 5 mi (8 km) east of town of Lake Lure.

DRAINAGE AREA.--79.0 mi² (204.6 km²), revised.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949-50. October 1950 to current year. Monthly discharge only for some periods, published in WSP 1723.

GAGE.--Water-stage recorder. Datum of gage is 815.4 ft (248.53 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 20, 1954, nonrecording gage at same site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--30 years, 137 ft³/s (3.880 m³/s), 23.55 in/yr (598 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,050 ft³/s (200 m³/s) June 5, 1957, gage height, 18.53 ft (5.65 m); minimum, 21 ft³/s (0.59 m³/s) Sept. 8, 9, 28, 30, Oct. 1-3, 5-7, 11-13, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1916 reached a stage of about 23 ft (7.0 m), from records of North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,400 ft³/s (40 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	1200	1800	51.0	8.38	2.554	Apr 14	1300	2600	73.6	10.70	3.261
Mar 21	0700	1750	49.6	8.23	2.509	June 25	1400	1590	45.0	7.67	2.338
Apr 8	1900	*3490	98.8	*12.95	3.947						

Minimum discharge, 75 ft³/s (2.12 m³/s) Sept. 16, gage height, 2.19 ft (0.668 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	739	164	204	144	143	125	249	221	178	198	111	103
2	450	863	196	142	139	126	228	216	172	185	110	97
3	330	415	189	139	139	125	205	211	167	215	107	102
4	292	275	188	143	138	128	201	208	161	203	106	98
5	295	237	186	141	135	135	191	203	156	185	104	96
6	246	219	187	134	142	128	186	200	155	170	100	93
7	225	208	182	133	137	124	187	199	154	160	101	90
8	207	199	172	136	135	137	1240	201	149	156	99	86
9	196	195	168	133	140	129	814	192	143	151	97	85
10	192	310	167	132	145	124	427	186	142	155	94	104
11	181	314	167	157	140	121	331	184	140	162	94	91
12	177	304	165	219	142	118	385	182	138	146	93	86
13	171	262	168	171	138	126	434	179	138	141	91	83
14	164	235	165	416	136	122	1630	177	137	139	89	82
15	161	219	156	268	140	116	699	175	134	137	89	80
16	159	210	156	211	157	116	467	172	150	134	107	76
17	155	201	154	194	149	261	378	254	181	130	118	82
18	152	196	151	320	137	350	342	451	179	126	97	86
19	150	187	151	299	135	213	316	233	161	123	128	96
20	150	178	150	232	135	266	298	347	146	120	118	121
21	149	175	147	204	134	963	284	334	136	117	99	93
22	146	172	145	193	136	376	270	246	132	116	157	86
23	163	173	145	190	132	260	261	289	131	117	137	103
24	148	215	168	171	128	325	253	333	679	131	110	117
25	143	230	214	167	129	297	246	260	1290	116	101	130
26	140	548	166	160	126	240	258	227	607	114	95	109
27	140	308	157	156	125	212	256	207	364	136	93	92
28	144	255	151	152	126	454	237	196	265	179	92	112
29	146	230	148	148	125	530	235	191	249	136	90	266
30	166	212	148	148	---	349	227	194	225	119	108	216
31	168	---	148	154	---	298	---	181	---	114	111	---
TOTAL	6445	7909	5159	5707	3963	7394	11735	7049	7159	4531	3246	3161
MEAN	208	264	166	184	137	239	391	227	239	146	105	105
MAX	739	863	214	416	157	963	1630	451	1290	215	157	266
MIN	140	164	145	132	125	116	186	172	131	114	89	76
CFSM	2.63	3.34	2.10	2.33	1.73	3.03	4.95	2.87	3.03	1.85	1.33	1.33
IN.	3.03	3.72	2.43	2.69	1.87	3.48	5.53	3.32	3.37	2.13	1.53	1.49

CAL YR 1979 TOTAL 88488 MEAN 242 MAX 2870 MIN 96 CFSM 3.06 IN 41.67
WTR YR 1980 TOTAL 73458 MEAN 201 MAX 1630 MIN 76 CFSM 2.54 IN 34.59

02151000 SECOND BROAD RIVER AT CLIFFSIDE, N. C.

LOCATION.--Lat 35°14'08", long 81°45'57", Rutherford County, Hydrologic Unit 03050105, on left bank 0.2 mi (0.3 km) downstream from dam at Cliffside Mills, at Cliffside, and 1.3 mi (2.1 km) upstream from mouth.

DRAINAGE AREA.--211 mi² (546 km²).

PERIOD OF RECORD.--June 1925 to current year.

REVISED RECORDS.--WSP 892: 1928(M), drainage area. WSP 1553: 1935-39(m).

GAGE.--Water-stage recorder. Datum of gage is 670.5 ft (204.37 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).

REMARKS.--Records good. Considerable diurnal fluctuation and some low-flow regulation by mills above station.

AVERAGE DISCHARGE.--55 years, 315 ft³/s (8.921 m³/s), 20.27 in/yr (515 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s (425 m³/s) Aug. 14, 1940, gage height, 17.93 ft (5.465 m); minimum, 4 ft³/s (0.11 m³/s) Sept. 27, 1935, Aug. 3, 1937, July 24, 1943; minimum daily, 6 ft³/s (0.17 m³/s) June 9, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct 1	0230	*5590	158	*8.01	2.441	Apr 15	0530	4170	118	6.52	1.987
Mar 21	2230	3050	86.4	5.34	1.628						

Minimum discharge, 10 ft³/s (0.28 m³/s) July 4, gage height, 0.65 ft (0.198 m); minimum daily, 120 ft³/s (3.40 m³/s) Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2860	257	298	256	303	243	690	351	299	354	245	179
2	999	729	294	251	290	244	586	346	290	298	231	179
3	608	1350	286	246	285	239	516	325	273	333	221	171
4	459	573	277	250	283	252	480	325	262	402	247	185
5	492	442	281	263	269	255	440	315	246	345	171	213
6	402	387	282	247	277	259	411	306	242	293	208	161
7	345	345	292	250	279	244	400	306	237	278	188	183
8	307	319	273	246	272	305	463	325	231	261	217	186
9	285	307	264	244	283	293	1670	301	224	246	187	192
10	289	417	267	239	314	274	914	287	212	235	158	168
11	287	715	260	254	303	264	978	282	212	271	196	140
12	260	688	260	395	297	257	580	282	208	244	210	166
13	246	544	263	342	292	265	970	273	202	227	161	138
14	248	453	275	1260	288	269	3030	278	193	240	193	126
15	244	396	257	939	287	254	3040	283	191	233	157	147
16	237	366	254	586	298	245	1060	271	210	220	165	156
17	234	344	256	505	302	397	777	305	230	209	178	180
18	235	327	246	1110	285	1200	647	909	285	201	228	138
19	224	317	246	1160	274	674	573	478	265	221	175	172
20	227	301	246	697	274	633	510	740	229	190	198	120
21	233	295	242	553	266	2660	486	1250	185	238	185	169
22	235	288	240	469	269	1740	457	583	195	185	191	168
23	234	286	246	484	265	777	435	665	203	195	239	168
24	248	287	256	424	259	834	411	1140	244	332	202	163
25	230	302	366	383	252	985	400	613	1830	281	227	409
26	226	505	305	359	246	690	417	474	1330	236	170	342
27	213	441	279	345	239	566	411	401	605	310	173	208
28	226	371	263	325	242	1010	389	349	432	471	155	208
29	242	333	256	316	241	2190	383	330	357	462	144	508
30	302	314	255	313	---	1130	378	348	466	307	133	511
31	292	---	267	325	---	914	---	314	---	265	177	---
TOTAL	12169	12999	8352	14036	8034	20562	22902	13755	10588	8583	5930	6154
MEAN	393	433	269	453	277	663	763	444	353	277	191	205
MAX	2860	1350	366	1260	314	2660	3040	1250	1830	471	247	511
MIN	213	257	240	239	239	239	378	271	185	185	133	120
CFSM	1.86	2.05	1.28	2.15	1.31	3.14	3.62	2.10	1.67	1.31	.91	.97
IN.	2.15	2.29	1.47	2.47	1.42	3.63	4.04	2.43	1.87	1.51	1.05	1.08

CAL YR 1979 TOTAL 153928 MEAN 422 MAX 4100 MIN 140 CFSM 2.00 IN 27.14
WTR YR 1980 TOTAL 144064 MEAN 394 MAX 3040 MIN 120 CFSM 1.87 IN 25.40

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.

LOCATION.--Lat 35°12'39", long 81°41'52", Cleveland County, Hydrologic Unit 03050105, on right bank 0.5 mi (0.8 km) upstream from Sandy Run Creek, 3 mi (5 km) downstream from Second Broad River, and 3.5 mi (5.6 km) southwest of Boiling Springs. Water-quality samples collected at bridge on State Highway 150, 2.4 mi (3.9 km) downstream.

DRAINAGE AREA.--864 mi² (2,238 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1925 to current year.

REVISED RECORDS.--WSP 892: 1928, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 639.92 ft (195.048 m) National Geodetic Vertical Datum of 1929 (Duke Power Co. bench mark). Prior to July 20, 1934, at site 500 ft (152 m) upstream at datum 1 ft (0.305 m) higher. Duke Power Company stage telephone-telemeter at station.

REMARKS.--Records good. Considerable diurnal fluctuation and some regulation caused by powerplants above station.

AVERAGE DISCHARGE.--55 years, 1,522 ft³/s (43.10 m³/s), 23.92 in/yr (608 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,300 ft³/s (2,080 m³/s) Aug. 16, 1928, gage height, 24.3 ft (7.4 m), former site, present datum; minimum, 40 ft³/s (1.13 m³/s) Oct. 17, 1954, gage height, 1.02 ft (0.311 m); minimum daily, 105 ft³/s (2.97 m³/s) Oct. 10, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,000 ft³/s (250 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct 1	0230	*15300	433	*10.43	3.179	Mar 29	0200	10000	283	8.00	2.438
Nov 3	0230	9180	260	7.60	2.316	Apr 15	0730	15200	430	10.38	3.164
Mar 21	1100	12400	351	9.15	2.789	June 25	1330	14200	402	9.96	3.036

Minimum discharge, 456 ft³/s (12.9 m³/s) Aug. 30, gage height, 1.75 ft (0.533 m); minimum daily, 677 ft³/s (19.2 m³/s) Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10700	1590	2130	1450	1620	1180	3280	2160	1860	1980	1330	981
2	4630	3370	2020	1450	1520	1490	2420	1830	1820	1780	1250	899
3	3570	6020	1980	1400	1410	1190	2500	1810	1770	1640	833	850
4	3190	3320	1660	1410	1420	1370	2830	1790	1740	2000	836	962
5	2700	2310	1900	1470	1450	1400	1950	1970	1710	1880	922	931
6	3000	2080	1660	1420	1500	1280	1790	1980	1700	1740	994	857
7	2410	1960	1910	1350	1480	1280	1870	1760	1660	1670	1080	888
8	2250	2130	1560	1360	1430	1490	2330	2010	1440	1660	1170	887
9	1790	1790	1570	1400	1580	1440	6900	1780	1580	1640	819	839
10	2030	2170	1490	1390	1650	1410	4580	1600	1530	1400	677	820
11	2030	3100	1780	1390	1610	1500	3560	1610	1550	1490	808	990
12	1720	2910	1650	1760	1520	1420	3370	1600	1540	1440	956	829
13	1930	2450	1570	1650	1490	1690	3830	1590	1430	1340	835	750
14	1690	1980	1610	3920	1390	1440	11200	1590	1280	1300	828	906
15	1560	2230	1500	3190	1350	1170	11900	1600	1240	1430	786	774
16	1830	1850	1500	2210	1520	1250	5060	1830	1120	1470	822	853
17	1610	1810	1490	2060	1480	1700	4080	1870	1730	1330	968	973
18	1710	1780	1470	4080	1490	4570	3670	4120	1800	1310	800	940
19	1810	1710	1450	4340	1340	3160	3520	3140	2000	1110	865	1220
20	1460	1680	1450	2740	1370	2340	3270	4010	1590	879	1150	933
21	1680	1840	1430	2400	1450	9660	2690	5380	1440	911	1030	852
22	1620	1670	1420	2250	1460	6220	2920	3410	1140	1020	872	1010
23	1510	1500	1380	1940	1280	3950	2450	3050	1200	1130	1260	960
24	1790	1580	1390	1840	1270	3830	2460	4690	1730	1180	1100	995
25	1680	1950	2150	2160	1240	3840	2040	3720	10700	1260	867	1420
26	1350	2860	1610	1790	1340	2980	2400	3200	7140	1230	820	1580
27	1370	3520	1500	1750	1410	2490	2760	2520	3770	1080	805	1150
28	1280	2750	1450	1720	1370	4300	2310	2280	2790	1320	778	1170
29	1460	2590	1400	1750	1450	7730	2220	2270	1950	1980	754	2520
30	1740	1840	1410	1570	---	4670	2120	2240	2000	1560	768	3210
31	1940	---	1450	1600	---	4280	---	1970	---	1350	968	---
TOTAL	71040	70340	49940	62210	41890	87720	108280	76380	65950	44510	28751	32949
MEAN	2292	2345	1611	2007	1444	2830	3609	2464	2198	1436	927	1098
MAX	10700	6020	2150	4340	1650	9660	11900	5380	10700	2000	1330	3210
MIN	1280	1500	1380	1350	1240	1170	1790	1590	1120	879	677	750
CFSM	2.65	2.71	1.87	2.32	1.67	3.28	4.18	2.85	2.54	1.66	1.07	1.27
IN.	3.06	3.03	2.15	2.68	1.80	3.78	4.66	3.29	2.84	1.92	1.24	1.42

CAL YR 1979 TOTAL 828571 MEAN 2270 MAX 15300 MIN 674 CFSM 2.63 IN 35.67
WTR YR 1980 TOTAL 739960 MEAN 2022 MAX 11900 MIN 677 CFSM 2.34 IN 31.86

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946, 1957-67, 1979 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1956 to September 1967, October 1978 to current year.
WATER TEMPERATURES: October 1945 to September 1946, October 1956 to September 1967, October 1978 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1978.

REMARKS.--Station is part of district's Primary Accounting Network used to define stream-quality characteristics of the State's major streams. Daily records of specific conductance for period October 1956 to September 1964 are available in the district office in Raleigh, N. C. Once-daily observer readings used during several months when water-quality monitor malfunctioned.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,000 micromhos Apr. 12, 1962; minimum daily, 22 micromhos Mar. 30, 1960.
WATER TEMPERATURES: Maximum daily, 33.0°C July 22, 1980; minimum, 0.0°C on several days during winter months of most years.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 82 micromhos Aug. 29, 30; minimum recorded, 25 micromhos Apr. 9, 16.
WATER TEMPERATURES: Maximum, 33.0°C July 22; minimum, 2.0°C Feb. 3.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT											
17...	0930	1680	40	6.4	16.0	15	10.3	10	0	2.5	.9
MAR											
17...	1200	1580	39	6.0	12.0	5	10.7	10	0	2.4	1.0
17...	2400	3850	40	6.6	13.0	200	10.1	10	0	2.5	1.0
18...	0730	5400	42	6.9	10.0	200	10.1	10	0	2.4	1.0
18...	1630	4060	36	7.4	12.0	200	10.8	10	0	2.3	1.0
19...	1030	3240	35	7.2	11.0	50	11.3	9	0	2.1	.9
21...	1100	12400	31	6.8	12.5	--	11.0	9	2	2.1	.9
21...	1700	11100	30	6.2	11.0	300	11.0	9	2	2.0	.9
24...	1100	3610	31	5.4	10.0	300	11.3	9	0	2.2	.9
JUN											
16...	0930	1070	56	6.5	23.0	5	7.1	11	0	2.7	1.1
AUG											
05...	0900	1120	61	6.1	27.0	15	7.7	15	0	3.9	1.2

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT											
17...	3.8	53	.5	.9	14	0	11	8.9	2.0	2.5	.1
MAR											
17...	4.1	45	.6	.8	18	0	15	29	3.4	3.2	.1
17...	3.6	39	.5	1.6	12	0	10	4.8	5.9	3.5	.1
18...	3.5	38	.5	1.8	12	0	12	2.4	6.6	4.4	.1
18...	3.2	38	.4	1.3	12	0	12	.8	5.5	3.6	.1
19...	3.2	40	.5	1.2	12	0	10	1.2	3.9	4.1	.1
21...	2.3	31	.3	1.8	8	0	7	2.0	8.0	4.9	.1
21...	1.9	28	.3	1.4	8	0	7	8.1	6.3	2.3	.1
24...	2.8	37	.4	.9	12	0	10	76	2.9	1.7	.1
JUN											
16...	5.9	50	.8	1.2	18	0	15	9.1	3.4	5.0	.0
AUG											
05...	4.9	39	.6	1.4	22	0	*16	28	4.7	3.4	.1

* Lab alkalinity.

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
OCT											
17...	12	33	33	.04	150	.20	.04	.24	.28	.10	.01
MAR											
17...	13	36	38	.05	154	.21	.00	.21	.25	.01	.11
17...	10	56	36	.08	582	.30	.03	.33	.34	.06	.05
18...	8.7	66	37	.09	962	.36	.04	.40	.40	.10	.07
18...	9.9	58	35	.08	636	.28	.03	.31	.33	.09	.08
19...	11	45	34	.06	394	.24	.01	.25	.25	.00	.00
21...	6.1	88	33	.12	2950	.40	.04	.44	.45	.10	--
21...	6.5	58	27	.08	1740	.32	.03	.35	.35	.07	.12
24...	12	35	31	.05	341	.28	.01	.29	.31	.02	.05
JUN											
16...	14	51	44	.07	147	.24	.00	.24	.25	.02	.05
AUG											
05...	15	43	46	.06	130	.24	.01	.25	.30	.00	.01

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)
OCT										
17...	.12	.01	.01	.01	.11	.09	.02	.35	1.6	.030
MAR										
17...	.01	.14	.14	.16	.15	.00	.27	.36	1.6	.030
17...	.07	.06	1.1	.64	1.2	.51	.69	1.5	6.8	.240
18...	.12	.09	1.0	.49	1.1	.54	.56	1.5	6.6	.370
18...	.11	.10	.49	.39	.58	.11	.47	.89	3.9	.180
19...	.00	.00	.22	.10	.22	.12	.10	.47	2.1	.080
21...	.12	--	1.6	--	1.7	1.2	.51	2.1	9.5	.210
21...	.08	.15	1.4	.58	1.5	.80	.70	1.9	8.2	.190
24...	.02	.06	.17	.09	.19	.05	.14	.48	2.1	.030
JUN										
16...	.02	.06	.07	.15	.09	.00	.20	.33	1.5	.030
AUG										
05...	.00	.01	.17	.02	.17	.14	.03	.42	1.9	.030

DATE	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS PO4)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)
OCT										
17...	.55	.09	.010	.18	.03	.09	3	0	3	0
MAR										
17...	.06	.09	.030	.02	.00	.00	--	--	--	--
17...	.09	.74	.080	.03	.02	.06	6	4	2	0
18...	.15	1.1	.090	.05	.02	.06	3	1	2	0
18...	.06	.55	.060	.02	.00	.00	4	2	2	0
19...	.03	.25	.030	.01	.00	.00	3	1	2	0
21...	.09	.64	.060	.03	--	--	2	0	2	0
21...	.03	.58	.060	.01	.01	.03	2	0	2	0
24...	.00	.09	.010	.00	.00	.00	--	--	--	--
JUN										
16...	.09	.09	.020	.03	.04	.12	--	--	--	--
AUG										
05...	.03	.09	.030	.01	.01	.03	--	--	--	--

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)
OCT										
17...	0	1	30	30	0	0	0	1	3	1
MAR										
17...	--	--	10	9	1	--	--	--	2	1
17...	0	3	10	8	2	3	3	0	6	4
18...	0	1	10	8	2	7	7	0	15	12
18...	0	2	10	9	1	3	2	1	6	4
19...	0	3	10	--	--	1	0	2	3	2
21...	0	2	20	0	20	8	8	0	17	15
21...	0	3	10	--	--	9	9	0	17	14
24...	--	--	40	1	39	--	--	--	2	0
JUN										
16...	--	--	40	16	24	--	--	--	2	1
AUG										
05...	--	--	--	--	--	--	--	--	--	--

DATE	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT										
17...	2	1200	1100	150	2	0	2	50	40	9
MAR										
17...	1	380	230	150	0	0	0	--	--	--
17...	2	8000	7800	200	8	8	0	160	150	10
18...	3	18000	18000	170	14	14	0	380	370	10
18...	2	7000	6800	180	5	5	0	170	160	10
19...	1	2800	2600	200	2	2	0	70	60	10
21...	2	23000	23000	180	12	12	0	470	430	40
21...	3	19000	19000	100	6	6	0	510	500	10
24...	2	1200	990	210	0	0	0	--	--	--
JUN										
16...	1	700	570	130	2	2	0	--	--	--
AUG										
05...	--	--	--	--	--	--	--	--	--	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)
OCT								
17...	.1	.0	.2	0	0	0	10	0
MAR								
17...	--	--	--	--	--	--	20	10
17...	<.1	.0	<.1	0	0	0	130	130
18...	.1	.0	.1	0	0	0	50	40
18...	<.1	.0	.1	0	0	0	80	70
19...	<.1	.0	<.1	0	0	0	20	20
21...	<.1	.0	<.1	0	0	0	60	50
21...	<.1	.0	<.1	0	0	0	50	--
24...	--	--	--	--	--	--	10	4
JUN								
16...	--	--	--	--	--	--	10	4
AUG								
05...	--	--	--	--	--	--	--	--

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	LENGTH OF EXPO-SURE (DAYS)
OCT							
17...	10	2.0	.2	.00	--	--	--
MAR							
17...	10	3.5	.2	.00	1.34	.870	46
17...	5	4.7	3.1	.00	--	--	--
18...	10	5.0	.7	.00	--	--	--
18...	9	4.1	1.6	.00	--	--	--
19...	5	3.0	--	.00	--	--	--
21...	10	5.7	5.6	.00	--	--	--
21...	--	5.3	2.5	.00	--	--	--
24...	6	2.2	.3	.00	--	--	--
JUN							
16...	6	.4	.5	.00	--	--	--
AUG							
05...	--	3.3	.5	.00	6.46	5.51	98

PHYTOPLANKTON ANALYSES, AUGUST TO SEPTEMBER 1979

DATE	AUG 17,79
TIME	0930
TOTAL CELLS/ML	750
DIVERSITY: DIVISION	1.3
.CLASS	1.3
..ORDER	2.2
...FAMILY	2.5
....GENUS	2.6

ORGANISM	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)		
.CHLOROPHYCEAE		
..CHLOROCOCCALES		
...OOCYSTACEAE		
....ANKISTRODESMUS	78	10
...SCENEDESMACEAE		
....SCENEDESMUS	100	14
..VOLVOCALES		
...CHLAMYDOMONADACEAE		
....CHLAMYDOMONAS	13	2
..ZYGNEMATALES		
...DESMIDIACEAE		
....COSMARIUM	13	2
CHRYSOPHYTA		
.BACILLARIOPHYCEAE		
..CENTRALES		
...COSCINODISCACEAE		
....MELOSIRA	26	3
..PENNALES		
...NAVICULACEAE		
....GYROSIGMA	13	2
....NAVICULA	26	3
...TABELLARIACEAE		
....TABELLARIA	26	3
CYANOPHYTA (BLUE-GREEN ALGAE)		
.CYANOPHYCEAE		
..CHROOCOCCALES		
...CHROOCOCCACEAE		
....ANACYSTIS	220#	29
..HORMOGONALES		
...OSCILLATORIACEAE		
....OSCILLATORIA	230#	31

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO AUGUST 1980

DATE	OCT 17,79		MAR 17,80		MAR 17,80		MAR 18,80		MAR 18,80	
TIME	0930		1200		2400		0730		1630	
TOTAL CELLS/ML	140		77		3200		2200		1900	
DIVERSITY: DIVISION	0.0		0.0		1.1		0.7		1.1	
.CLASS	0.0		0.0		1.1		0.7		1.1	
..ORDER	0.9		0.9		1.2		0.8		1.1	
...FAMILY	1.6		1.6		2.5		3.1		2.6	
....GENUS	1.6		1.6		2.8		3.4		2.8	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...MICRACTINIACEAE										
....MICRACTINIUM	--	-	--	-	--	-	--	-	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	--	-	*	0	--	-	41	2
....KIRCHNERIELLA	--	-	--	-	--	-	--	-	--	-
....SELENASTRUM	--	-	--	-	--	-	--	-	--	-
...SCENEDESMACEAE										
....CRUCIGENIA	--	-	--	-	--	-	--	-	--	-
....SCENEDESMUS	--	-	--	-	--	-	--	-	--	-
....TETRASTRUM	--	-	--	-	--	-	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	--	-	--	-	27	1	--	-
..ZYGNEMATALES										
...DESMIDIACEAE										
....STAURASTRUM	--	-	--	-	--	-	--	-	--	-
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	--	-	--	-	*	0	--	-	--	-
....MELOSIRA	43#	30	26#	33	55	2	27	1	--	-
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	--	-	--	-	110	3	150	7	220	12
....COCCONEIS	--	-	--	-	--	-	--	-	--	-
...CYMBELLACEAE										
....CYMBELLA	--	-	26#	33	180	6	320	14	160	9
...EUNOTIACEAE										
....EUNOTIA	--	-	--	-	96	3	14	1	--	-
...FRAGILARIACEAE										
....ASTERIONELLA	43#	30	--	-	55	2	--	-	41	2
....FRAGILARIA	--	-	--	-	--	-	140	6	27	1
....SYNEDRA	--	-	--	-	180	6	160	7	120	7
...GOMPHONEMATACEAE										
....GOMPHONEMA	--	-	--	-	96	3	55	2	82	4
...MERIDIONACEAE										
....MERIDION	--	-	--	-	*	0	55	2	--	-
...NAVICULACEAE										
....FRUSTULIA	--	-	--	-	55	2	41	2	14	1
....NAVICULA	--	-	--	-	210	6	250	11	180	9
....NEIDIUM	--	-	--	-	41	1	14	1	14	1
....PINNULARIA	--	-	--	-	*	0	14	1	--	-
....STAURONEIS	--	-	--	-	*	0	--	-	--	-
...NITZSCHIACEAE										
....NITZSCHIA	--	-	26#	33	250	8	450#	20	160	9
...SURIRELLACEAE										
....SURIRELLA	--	-	--	-	82	3	180	8	41	2
...TABELLARIACEAE										
....TABELLARIA	57#	40	--	-	27	1	--	-	--	-
.CHRYSOPHYCEAE										
..CHRYSOMONADALES										
...OCHROMONADACEAE										
....DINOBRYON	--	-	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
.CRYPTOPHYCEAE										
..CRYPTOMONADALES										
...CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	--	-	--	-	--	-	--	-

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO AUGUST 1980

DATE / TIME	OCT 17,79 0930		MAR 17,80 1200		MAR 17,80 2400		MAR 18,80 0730		MAR 18,80 1630	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	--	-	--	-	--	-	--	-	--	-
..HORMOGONALES										
...NOSTOCACEAE										
....ANABAENA	--	-	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE										
....LYNGBYA	--	-	--	-	--	-	--	-	--	-
....OSCILLATORIA	--	-	--	-	1700#	52	320	14	780#	41
....PHORMIDIUM	--	-	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	--	-	*	0	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..PERIDINIALES										
...GLENODINIACEAE										
....GLENODINIUM	--	-	--	-	--	-	--	-	--	-

DATE / TIME	MAR 19,80 1030	MAR 21,80 1700	MAR 24,80 1100	JUN 16,80 0930	AUG 5,80 0900
TOTAL CELLS/ML	890	3300	6000	1600	980
DIVERSITY: DIVISION	1.4	1.2	0.8	1.3	1.2
.CLASS	1.4	1.2	1.0	1.3	1.2
..ORDER	2.1	1.6	1.1	2.1	1.4
...FAMILY	2.3	2.3	1.4	2.6	1.6
....GENUS	2.8	2.4	2.2	2.8	1.7

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...MICRACTINIACEAE										
....MICRACTINIUM	--	-	--	-	--	-	55	3	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	41	5	--	-	41	1	27	2	26	3
....KIRCHNERIELLA	--	-	--	-	--	-	--	-	26	3
....SELENASTRUM	--	-	--	-	--	-	14	1	--	-
...SCENEDESMACEAE										
....CRUCIGENIA	220#	25	--	-	--	-	--	-	--	-
....SCENEDESMUS	--	-	--	-	--	-	110	7	52	5
....TETRASTRUM	14	2	--	-	--	-	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	14	2	--	-	*	0	--	-	--	-
..ZYGNEMATALES										
...DESMIDIACEAE										
....STAURASTRUM	--	-	--	-	--	-	14	1	--	-

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO AUGUST 1980

DATE TIME	MAR 19,80 1030		MAR 21,80 1700		MAR 24,80 1100		JUN 16,80 0930		AUG 5,80 0900	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	14	2	410	13	82	1	--	-	13	1
....MELOSIRA	28	3	140	4	--	-	110	7	77	8
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	14	2	140	4	82	1	96	6	--	-
....COCCONEIS	--	-	--	-	--	-	14	1	--	-
...CYMBELLACEAE										
....CYMBELLA	--	-	140	4	*	0	14	1	--	-
...EUNOTIACEAE										
....EUNOTIA	--	-	--	-	*	0	--	-	--	-
...FRAGILARIACEAE										
....ASTERIONELLA	--	-	--	-	*	0	14	1	--	-
....FRAGILARIA	--	-	--	-	*	0	55	3	13	1
....SYNEDRA	--	-	--	-	41	1	55	3	--	-
...GOMPHONEMATACEAE										
....GOMPHONEMA	--	-	--	-	*	0	14	1	--	-
...MERIDIONACEAE										
....MERIDION	--	-	--	-	*	0	--	-	--	-
...NAVICULACEAE										
....FRUSTULIA	--	-	--	-	41	1	--	-	--	-
....NAVICULA	14	2	410	13	160	3	14	1	13	1
....NEIDIUM	--	-	--	-	--	-	--	-	--	-
....PINNULARIA	--	-	--	-	41	1	14	1	--	-
....STAURONEIS	--	-	--	-	--	-	--	-	--	-
...NITZSCHIACEAE										
....NITZSCHIA	28	3	140	4	160	3	14	1	52	5
...SURIRELLACEAE										
....SURIRELLA	--	-	140	4	41	1	--	-	--	-
...TABELLARIACEAE										
....TABELLARIA	--	-	--	-	--	-	--	-	--	-
.CHRYSOPHYCEAE										
..CHRYSOMONADALES										
...OCHROMONADACEAE										
....DINOBRYON	--	-	--	-	270	5	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
.CRYPTOPHYCEAE										
..CRYPTOMONADALES										
...CRYPTOMONADACEAE										
....CRYPTOMONAS	14	2	--	-	*	0	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	110	12	--	-	--	-	270#	17	--	-
..HORMOGONALES										
...NOSTOCACEAE										
....ANABAENA	--	-	--	-	--	-	--	-	700#	71
...OSCILLATORIACEAE										
....LYNGBYA	--	-	--	-	2100#	34	--	-	--	-
....OSCILLATORIA	290#	32	1600#	50	2700#	46	740#	45	--	-
....PHORMIDIUM	96	11	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	140	4	*	0	--	-	--	-
....TRACHELOMONAS	--	-	--	-	*	0	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..PERIDINIALES										
...GLENODINIACEAE										
....GLENODINIUM	--	-	--	-	--	-	--	-	13	1

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	26	48	45	46	38	33	35	34	30	31
2	---	---	32	48	34	44	35	33	34	35	31	33
3	---	---	35	33	32	33	36	34	35	37	31	33
4	---	---	36	34	33	33	39	35	36	41	33	36
5	---	---	37	38	33	36	41	34	37	41	33	37
6	---	---	36	38	35	36	39	34	36	41	32	35
7	---	---	38	40	36	37	41	33	35	40	33	37
8	---	---	39	40	37	37	39	34	35	40	33	36
9	---	---	41	41	37	39	40	34	36	43	34	38
10	---	---	39	40	37	38	40	35	37	43	35	38
11	---	---	39	38	37	37	40	33	36	43	35	39
12	---	---	41	38	38	38	39	32	34	42	34	38
13	---	---	40	40	38	38	41	33	36	41	32	36
14	---	---	41	40	39	39	41	33	36	40	30	33
15	---	---	42	40	35	37	41	33	37	35	29	31
16	---	---	40	43	35	38	43	33	36	36	30	32
17	49	39	43	43	36	38	40	34	37	36	31	34
18	50	38	41	39	33	35	41	35	37	36	35	35
19	40	36	38	38	34	35	43	35	38	35	31	32
20	48	37	41	40	34	36	41	34	37	35	31	32
21	49	36	39	41	34	36	42	33	36	33	32	32
22	39	37	38	40	33	35	40	31	35	36	33	34
23	46	37	40	41	34	37	37	29	32	42	36	38
24	47	38	40	39	33	35	34	29	31	44	37	39
25	43	40	41	38	32	34	33	27	28	42	37	39
26	51	42	45	33	31	32	31	27	28	40	37	39
27	53	42	46	31	30	31	34	30	32	43	37	39
28	53	43	46	32	31	32	35	30	32	41	36	38
29	52	43	46	33	32	32	36	31	33	41	36	39
30	50	42	45	38	33	36	39	30	33	42	37	38
31	51	44	46	---	---	---	36	31	32	40	33	36
MONTH	53	36	40	48	30	36	43	27	35	44	29	36
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	41	35	37	49	42	45	---	---	35	40	37	38
2	41	34	37	47	38	41	---	---	38	42	36	38
3	41	33	36	46	42	44	37	33	35	40	31	35
4	36	32	33	48	39	43	39	33	35	41	32	35
5	39	33	36	51	41	45	38	33	35	39	32	34
6	41	34	37	51	42	45	39	33	36	35	33	34
7	41	36	39	49	39	43	37	29	34	46	34	38
8	42	34	38	46	35	40	37	30	34	47	35	38
9	43	32	37	48	36	42	40	25	28	48	35	39
10	40	32	36	47	35	39	---	---	31	49	36	41
11	38	33	36	42	34	38	---	---	32	49	36	40
12	39	32	35	44	36	40	---	---	32	45	37	40
13	40	32	36	45	36	38	---	---	33	50	39	43
14	40	34	37	49	36	42	---	---	31	51	38	44
15	42	34	39	51	43	47	---	---	27	49	38	43
16	44	31	37	50	40	44	35	25	30	46	40	42
17	40	32	35	47	37	40	34	29	31	42	38	40
18	37	33	34	40	36	38	34	30	32	---	---	37
19	39	33	36	36	32	35	38	28	32	---	---	35
20	42	35	38	39	33	35	39	28	32	---	---	41
21	48	34	39	---	---	27	41	30	34	---	---	34
22	45	36	40	---	---	30	36	30	33	---	---	36
23	46	38	41	---	---	33	---	---	36	45	34	38
24	44	37	39	---	---	34	---	---	34	41	27	36
25	43	39	40	37	36	36	---	---	36	41	28	34
26	43	37	39	39	35	37	---	---	36	39	28	35
27	45	37	41	41	36	38	45	30	34	42	35	38
28	49	37	42	42	36	38	39	28	36	47	38	40
29	49	37	41	36	28	30	38	35	36	42	39	40
30	---	---	---	37	31	33	40	36	38	42	38	40
31	---	---	---	43	33	34	---	---	---	41	39	40
MONTH	49	31	38	51	28	39	45	25	34	51	27	38

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	46	35	39	42	39	40	---	---	45	61	40	48
2	42	37	38	43	39	41	---	---	44	69	61	65
3	42	37	39	43	41	42	---	---	62	74	59	63
4	44	38	40	45	36	39	---	---	60	63	52	56
5	46	36	38	44	37	40	70	53	62	69	55	61
6	52	46	48	42	35	39	68	43	54	68	54	59
7	46	39	42	46	37	41	73	37	49	63	46	53
8	49	45	47	46	38	41	65	36	46	70	54	59
9	45	35	37	49	37	41	71	58	63	65	53	57
10	41	37	38	56	49	53	71	57	62	67	48	58
11	43	37	39	53	47	50	71	61	67	68	45	51
12	48	34	43	47	44	46	60	46	51	69	40	52
13	41	37	38	49	47	48	64	47	54	76	56	67
14	44	39	41	47	44	45	68	56	60	66	48	53
15	42	38	40	44	42	43	80	65	73	77	56	66
16	50	41	47	43	40	42	73	54	60	60	45	52
17	41	34	36	44	43	43	63	43	51	54	44	49
18	45	31	41	58	36	43	66	57	61	55	45	52
19	43	36	39	61	58	59	57	50	52	56	44	51
20	51	36	41	61	58	59	55	43	48	---	---	42
21	56	37	41	62	56	58	60	46	52	---	---	52
22	52	42	47	65	48	57	79	68	72	---	---	46
23	55	42	47	65	45	52	61	46	52	---	---	47
24	52	35	41	67	43	52	55	48	51	---	---	46
25	56	28	35	63	40	49	69	51	60	---	---	54
26	35	31	33	58	36	45	77	56	65	---	---	42
27	36	35	36	59	41	49	80	52	68	---	---	42
28	36	35	36	57	49	52	79	53	66	---	---	43
29	41	36	38	57	30	41	82	50	60	---	---	41
30	41	38	40	---	---	42	82	53	62	---	---	49
31	---	---	---	---	---	44	70	47	54	---	---	---
MONTH	56	28	40	67	30	46	82	36	58	77	40	53
YEAR	82	25	41									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.0	19.5	19.5	15.5	14.0	15.0	10.0	7.5	8.5	8.0	7.5	7.5
2	20.5	19.5	20.0	15.5	14.0	15.0	7.5	7.0	7.5	7.0	6.5	7.0
3	20.5	19.5	20.0	15.5	13.5	14.5	9.0	6.5	8.0	7.5	6.0	7.0
4	20.0	19.0	19.5	13.5	11.5	12.5	9.0	7.0	8.0	7.5	7.0	7.5
5	19.5	18.5	19.0	12.5	11.0	11.5	8.5	7.0	7.5	9.5	7.0	8.5
6	18.5	17.0	17.5	11.5	9.5	10.5	7.5	6.5	7.0	9.0	6.5	7.5
7	17.5	16.5	17.0	11.5	9.5	10.5	8.5	7.5	8.0	9.0	6.5	7.5
8	18.5	16.5	17.5	12.0	10.0	11.5	8.0	7.0	7.5	9.5	7.5	8.5
9	21.5	17.5	19.5	13.5	11.5	12.5	7.5	6.5	7.0	10.5	8.5	9.5
10	21.0	18.0	19.0	13.5	12.5	13.0	7.5	5.5	6.5	10.5	9.0	9.5
11	18.0	17.0	17.5	13.5	13.0	13.5	7.5	6.5	7.0	10.5	9.0	9.5
12	17.5	15.5	16.5	14.0	13.0	13.5	9.0	7.0	8.0	9.5	7.5	8.5
13	17.5	16.0	16.5	15.0	14.0	14.0	11.5	9.5	10.5	8.5	7.0	7.5
14	16.5	14.0	14.5	14.0	13.5	13.5	12.0	10.5	11.0	7.5	6.5	7.0
15	17.0	14.0	15.5	12.5	11.0	11.5	10.5	9.0	9.5	9.5	7.5	8.0
16	17.0	14.5	16.0	13.0	11.0	12.0	9.0	7.0	7.5	11.5	8.5	9.5
17	18.5	15.0	17.0	13.0	10.0	11.5	11.0	8.0	10.0	11.0	8.5	9.5
18	17.5	15.0	17.0	11.0	9.5	10.0	11.0	8.0	9.0	9.0	8.0	9.0
19	17.5	16.0	17.0	13.0	10.0	11.5	9.5	7.0	8.5	9.0	7.5	8.0
20	18.0	16.0	17.0	12.5	11.5	12.0	9.0	7.0	8.0	7.5	7.0	7.0
21	17.5	16.0	17.0	12.0	10.0	11.0	9.5	6.5	8.0	8.0	7.0	7.5
22	21.5	17.0	19.5	12.0	10.5	11.5	7.5	6.5	7.0	8.5	8.0	8.0
23	22.0	18.5	20.0	13.0	11.5	12.5	8.5	7.5	8.0	8.5	7.5	8.0
24	20.0	17.0	17.5	14.0	13.0	13.5	10.0	8.5	9.5	8.5	6.5	7.5
25	17.0	15.0	16.0	14.5	13.5	14.0	9.5	8.0	8.5	9.0	7.5	8.5
26	17.0	14.5	15.5	14.5	13.5	14.5	8.0	7.0	7.5	7.5	7.0	7.5
27	14.5	11.0	12.0	13.5	12.0	12.5	9.5	7.0	8.0	8.0	7.5	8.0
28	12.5	10.5	11.5	12.5	11.5	12.0	9.0	7.5	8.0	8.5	7.5	8.0
29	16.5	12.0	14.5	11.5	9.5	10.5	8.0	6.5	7.5	8.5	7.5	8.0
30	16.5	15.0	15.5	11.0	9.5	10.5	7.5	6.5	7.0	7.5	6.5	7.0
31	15.5	14.0	15.0	---	---	---	7.5	7.5	7.5	8.5	7.0	8.0
MONTH	22.0	10.5	17.0	15.5	9.5	12.5	12.0	5.5	8.0	11.5	6.0	8.0

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.5	6.0	7.0	12.0	7.5	9.5	13.5	12.5	13.0	19.5	17.0	18.0
2	7.0	2.5	3.5	8.0	5.5	7.0	17.0	13.0	15.0	19.0	17.0	18.0
3	4.0	2.0	3.0	8.0	4.5	6.5	16.0	14.0	15.0	17.5	15.0	16.5
4	8.0	4.0	6.5	10.5	6.5	8.5	16.5	14.5	15.0	18.0	15.5	17.0
5	8.0	6.0	7.0	11.5	8.5	10.0	15.0	10.0	14.0	19.0	16.5	18.0
6	8.0	5.5	7.0	12.0	8.5	10.5	14.5	12.0	13.5	21.0	18.0	19.5
7	8.5	6.5	7.5	13.5	10.5	12.0	14.0	12.5	13.5	22.0	18.5	20.5
8	8.5	6.5	7.5	13.0	10.5	11.5	16.0	13.5	14.5	21.0	18.5	19.5
9	7.0	4.5	5.5	13.0	10.5	11.5	14.5	13.5	14.0	20.0	17.0	18.5
10	7.5	4.0	6.0	13.0	11.0	12.0	15.5	13.5	14.5	17.5	14.5	16.5
11	8.5	6.5	7.5	13.0	10.5	12.0	15.0	13.5	14.5	18.5	15.0	17.0
12	9.0	7.0	8.0	11.5	8.5	10.0	14.5	13.5	14.0	23.0	17.0	20.0
13	9.5	6.5	7.5	9.5	7.5	8.5	13.5	13.0	13.5	23.0	20.5	22.0
14	8.0	6.0	7.5	12.0	8.0	10.0	14.5	13.5	14.0	23.0	20.0	22.0
15	8.0	7.5	7.5	11.5	8.0	10.0	14.5	13.0	13.5	22.5	20.0	21.5
16	8.5	7.5	8.0	11.0	8.5	9.5	15.0	12.5	13.5	21.5	19.5	20.5
17	7.5	6.5	7.0	13.5	11.5	12.5	15.5	13.5	14.5	20.0	16.0	17.5
18	9.0	6.0	7.5	12.5	11.5	11.5	16.5	14.0	15.0	17.0	15.5	16.0
19	9.0	7.0	8.5	11.0	10.0	10.5	16.0	14.0	15.0	20.0	17.0	19.0
20	11.0	8.5	9.5	11.5	10.5	11.0	16.0	14.0	15.0	20.0	17.5	19.0
21	11.0	8.5	9.5	10.5	10.5	10.5	18.5	15.0	17.0	19.0	17.0	18.0
22	13.5	10.0	11.5	10.5	10.0	10.5	18.5	15.5	17.0	18.5	17.5	18.0
23	15.0	13.5	14.0	10.5	10.0	10.0	20.5	17.0	19.0	19.0	17.0	18.0
24	14.0	12.0	13.5	10.0	10.0	10.0	21.0	17.5	19.5	19.0	17.5	18.0
25	14.5	12.5	13.5	12.5	9.5	11.0	23.0	19.0	21.0	18.5	17.5	18.0
26	13.0	10.0	11.5	13.0	11.5	12.0	22.5	18.5	19.5	19.5	17.5	18.5
27	12.0	8.5	11.0	13.5	11.5	12.5	18.5	16.5	17.5	23.0	18.0	20.5
28	13.0	9.5	11.5	13.0	10.0	11.5	20.0	17.5	19.0	23.0	19.5	21.5
29	13.5	10.5	12.0	11.0	10.0	10.0	19.0	17.0	18.0	24.5	20.5	22.5
30	---	---	---	11.5	11.0	11.5	19.0	16.0	17.5	25.0	21.5	23.5
31	---	---	---	12.5	11.5	12.0	---	---	---	23.5	20.5	22.0
MONTH	15.0	2.0	8.5	13.5	4.5	10.5	23.0	10.0	15.5	25.0	14.5	19.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	23.5	20.5	22.0	26.5	23.0	25.0	30.5	27.0	29.0	25.5	23.0	24.0
2	26.0	21.5	24.0	26.5	23.0	25.0	30.0	26.5	28.5	29.0	24.0	26.5
3	26.5	22.5	25.0	26.5	24.0	25.5	29.5	24.5	26.0	30.5	26.5	28.5
4	26.5	23.0	25.5	25.5	22.5	24.0	31.0	26.0	28.5	29.0	27.5	28.5
5	26.5	23.0	25.0	25.5	22.0	24.0	31.0	28.0	29.5	29.5	26.5	28.0
6	25.5	22.5	24.5	27.0	22.5	24.5	31.0	27.5	29.5	27.5	25.0	26.0
7	27.0	23.0	25.0	29.5	24.5	27.0	31.0	27.5	30.0	27.5	23.5	25.5
8	27.0	24.5	26.0	29.5	25.0	27.5	32.0	28.0	30.5	29.0	25.5	27.0
9	26.0	23.0	24.0	30.0	25.5	28.5	32.5	29.5	31.0	28.5	26.0	27.5
10	23.5	20.5	22.0	30.0	27.0	28.5	32.5	29.5	31.0	27.5	26.0	27.0
11	23.0	21.0	22.0	30.0	26.0	28.5	31.5	28.5	30.0	26.0	24.0	25.0
12	23.0	21.0	22.0	30.0	26.5	28.5	31.0	28.5	30.0	24.5	22.5	23.5
13	23.0	21.0	22.0	31.0	27.5	29.5	30.0	26.5	29.0	24.0	22.0	23.0
14	23.5	21.5	22.5	30.5	28.5	30.0	30.5	27.0	29.5	24.5	22.0	23.5
15	25.0	22.0	23.5	31.0	27.0	29.5	31.5	28.5	30.0	26.0	22.5	24.5
16	27.0	23.5	25.5	31.5	27.5	30.0	30.5	28.0	29.5	25.5	24.0	24.5
17	26.0	23.5	24.0	31.0	27.5	30.0	28.0	24.5	25.5	26.5	23.5	25.0
18	25.0	22.5	23.5	31.5	27.5	29.5	29.0	24.0	26.5	26.0	23.5	24.5
19	25.5	22.0	24.0	31.5	28.5	30.0	30.5	27.0	29.0	25.0	24.0	24.5
20	27.0	23.0	25.0	30.5	28.5	30.0	31.0	27.0	29.5	27.0	24.0	25.5
21	26.5	21.5	23.0	32.0	28.0	30.0	31.5	28.0	30.0	26.0	23.0	24.0
22	24.0	21.5	22.5	33.0	28.0	29.5	31.0	28.5	30.0	27.0	23.5	25.5
23	26.0	21.5	23.5	29.5	26.5	28.0	28.5	26.0	27.5	29.0	25.0	27.5
24	25.5	22.0	24.5	26.5	24.5	25.5	27.5	24.0	25.0	28.5	26.0	27.5
25	21.0	19.0	19.5	27.5	24.5	26.0	30.0	24.0	27.0	28.0	23.0	25.5
26	21.5	19.0	20.0	25.5	23.5	24.5	31.0	26.0	27.5	23.5	22.0	22.5
27	24.0	21.0	22.5	24.0	23.5	23.5	29.0	26.0	27.5	22.5	20.0	21.5
28	26.0	22.5	24.0	28.0	23.5	25.0	29.5	26.0	27.5	20.0	17.5	19.0
29	27.0	23.5	25.5	29.0	24.0	26.5	29.5	26.0	28.0	19.0	17.0	18.0
30	27.0	24.0	25.5	30.0	25.5	28.0	28.5	26.0	27.0	20.0	18.0	19.0
31	---	---	---	30.5	26.0	29.0	26.5	23.0	24.5	---	---	---
MONTH	27.0	19.0	23.5	33.0	22.0	27.5	32.5	23.0	28.5	30.5	17.0	24.5
YEAR	33.0	2.0	17.0									

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM
OCT							
17...	0930	1680	27	122	--	--	--
MAR							
17...	1200	1580	13	55	--	--	--
17...	2400	3850	361	3750	--	--	--
18...	0730	5400	766	11200	--	--	--
18...	1630	4060	264	2890	--	--	--
19...	1030	3240	107	936	--	--	--
21...	1100	12400	1260	42200	34	40	45
21...	1700	11100	1150	34500	24	29	34
24...	1100	3610	157	1530	--	--	--
JUN							
16...	0930	1070	10	29	--	--	--
AUG							
05...	0900	1120	17	51	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT							
17...	--	--	--	--	--	--	73
MAR							
17...	--	--	--	--	--	--	83
17...	--	--	--	--	--	--	60
18...	--	--	--	--	--	--	43
18...	--	--	--	--	--	--	52
19...	--	--	--	--	--	--	47
21...	51	57	66	85	96	100	--
21...	41	48	56	72	89	100	--
24...	--	--	--	--	--	--	27
JUN							
16...	--	--	--	--	--	--	85
AUG							
05...	--	--	--	--	--	--	74

02152100 FIRST BROAD RIVER NEAR CASAR, N. C.

LOCATION.--Lat 35°29'35", long 81°40'56", Cleveland County, Hydrologic Unit 03050105, on right bank 570 ft (174 m) upstream from bridge on Secondary Road 1530, 0.5 mi (0.8 km) upstream from No Business Creek, and 4.0 mi (6.4 km) southwest of Casar.

DRAINAGE AREA.--59.5 mi² (154.1 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949-56, March 1959 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 890 ft (271 m), from topographic map.

REMARKS.--Records good.

AVERAGE DISCHARGE.--21 years, 96.9 ft³/s (2.744 m³/s), 22.12 in/yr (562 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,760 ft³/s (220 m³/s) Oct. 17, 1975, gage height, 16.70 ft (5.090 m); minimum, 17 ft³/s (0.48 m³/s) July 20, 1970, gage height, 0.97 ft (0.296 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1916 and August 1940 reached a stage of about 25 ft (7.6 m), from information by local resident. A discharge of 14.5 ft³/s (0.41 m³/s) was measured on Sept. 21, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct 1	0100	*2760	78.2	*9.54	2.908	Apr 14	1230	1950	55.2	7.65	2.332
Mar 21	0730	1540	43.6	6.58	2.006						

Minimum discharge, 39 ft³/s (1.10 m³/s) Sept. 16, gage height, 0.79 ft (0.241 m).

CORRECTIONS.--The maximum discharge for water year 1979 is 2,600 ft³/s (73.6 m³/s) Sept. 30, stage rising, peak occurred Oct. 1, 1979, published in WRD N.C. 1979 as peak discharge; maximum peak discharge for water year 1979, 1,790 ft³/s (50.7 m³/s) Feb. 25, gage height, 7.24 ft (2.207 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1030	68	84	70	80	70	168	114	112	103	64	55
2	270	332	81	69	80	70	147	112	109	95	62	69
3	152	218	77	68	78	74	135	110	103	122	60	51
4	122	125	77	69	77	73	129	107	100	124	59	84
5	149	101	76	69	74	81	118	106	95	106	58	58
6	116	90	77	68	75	78	112	103	94	94	56	54
7	102	84	78	67	75	75	108	106	94	88	55	52
8	91	80	73	68	74	84	215	106	92	85	52	47
9	86	79	71	68	75	81	373	101	88	83	52	46
10	90	147	71	67	80	78	210	98	89	85	51	47
11	82	182	71	75	78	75	161	97	87	91	52	46
12	79	175	70	117	78	73	225	92	86	80	51	44
13	76	134	74	95	77	74	283	91	86	78	49	43
14	74	111	76	575	75	74	1280	92	85	82	48	43
15	72	99	70	239	77	70	451	95	84	78	49	42
16	71	92	70	151	86	69	262	89	84	76	48	40
17	70	87	68	126	84	145	203	110	100	74	49	43
18	69	83	68	278	78	289	180	282	96	83	47	45
19	69	80	68	258	75	150	166	131	92	73	48	43
20	69	78	68	164	75	177	156	262	87	71	49	45
21	68	77	67	129	74	857	149	262	81	70	52	45
22	67	75	67	122	75	284	140	150	81	69	84	42
23	72	77	67	123	74	180	135	164	79	76	57	45
24	69	78	75	107	73	251	131	273	125	92	51	54
25	66	81	111	103	72	252	129	248	488	73	49	197
26	65	195	84	95	69	183	134	162	205	82	48	88
27	64	129	77	91	68	148	126	135	132	73	46	67
28	64	106	74	88	68	341	120	123	109	266	46	69
29	65	95	72	85	68	492	119	119	140	97	44	131
30	89	88	72	82	---	264	119	148	134	73	63	163
31	72	---	72	84	---	208	---	117	---	67	65	---
TOTAL	3700	3446	2306	3870	2192	5420	6384	4305	3437	2809	1664	1898
MEAN	119	115	74.4	125	75.6	175	213	139	115	90.6	53.7	63.3
MAX	1030	332	111	575	86	857	1280	282	488	266	84	197
MIN	64	68	67	67	68	69	108	89	79	67	44	40
CFSM	2.00	1.93	1.25	2.10	1.27	2.94	3.58	2.34	1.93	1.52	.90	1.06
IN.	2.31	2.15	1.44	2.42	1.37	3.39	3.99	2.69	2.15	1.76	1.04	1.19

CAL YR 1979 TOTAL 41350 MEAN 113 MAX 1030 MIN 45 CFSM 1.90 IN 25.85
WTR YR 1980 TOTAL 41431 MEAN 113 MAX 1280 MIN 40 CFSM 1.90 IN 25.90

02152610 SUGAR BRANCH NEAR BOILING SPRINGS, N. C.

LOCATION.--Lat 35°15'00", long 81°37'20", Cleveland County, Hydrologic Unit 03050105, on left downstream wingwall of culvert on State Higwhay 150, 0.5 mi (0.8 km) upstream from mouth, and 2.8 mi (4.5 km) east of Boiling Springs.

DRAINAGE AREA.--1.49 mi² (3.86 km²).

PERIOD OF RECORD.--Annual maximum, water years 1954-68, June 1968 to current year.

REVISED RECORDS.--WRD N. C. 1970: 1968(M).

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 696.83 ft (212.394 m) National Geodetic Vertical Datum of 1929. June 10, 1953 to May 31, 1968, crest-stage gage on left bank 31 ft (9 m) upstream from culvert entrance at datum 16.37 ft (4.990 m) higher.

REMARKS.--Records fair except those for September, which are poor. Suspended-sediment records for the current year are published on page 419 of this report.

AVERAGE DISCHARGE.--12 years, 2.35 ft³/s (0.067 m³/s), 21.42 in/yr (544 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,110 ft³/s (31.4 m³/s) Oct. 16, 1971, gage height, 6.58 ft (2.01 m), from rating curve extended above 120 ft³/s (3.40 m³/s) on basis of computation of peak flow through culvert; minimum, 0.13 ft³/s (0.004 m³/s) Aug. 13, 14, 1977, gage height, 0.91 ft (0.277 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.2 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	1130	155	4.39	2.91	0.887	June 25	2115	*238	6.74	*3.55	1.082
Mar 21	0245	179	5.07	3.08	0.939	Aug 31	1745	224	6.34	3.44	1.048
May 20	1600	220	6.23	3.41	1.039						

Minimum discharge, 0.32 ft³/s (0.009 m³/s) Aug. 7, 13, 20, 28; minimum gage height, 1.05 ft (0.320 m) Aug. 7, 13, 20; minimum daily, 0.41 ft³/s (0.012 m³/s) Aug. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	1.0	1.5	1.2	1.4	1.2	3.0	1.6	1.6	1.6	.58	1.8
2	2.0	18	1.5	1.2	1.3	1.2	2.6	1.6	1.5	1.5	.58	.86
3	1.7	5.0	1.5	1.2	1.3	1.5	2.4	1.5	1.4	1.5	.53	.73
4	2.4	3.0	1.4	1.3	1.3	1.7	2.3	1.4	1.3	1.7	.51	.73
5	2.2	2.7	1.4	1.3	1.3	1.9	2.1	1.4	1.2	1.5	.51	.64
6	1.8	2.6	1.5	1.2	1.4	1.6	2.1	1.3	1.2	1.3	.50	.56
7	1.5	2.6	1.4	1.2	1.3	1.4	2.0	1.3	1.2	1.3	.47	.50
8	1.3	2.5	1.3	1.2	1.3	3.4	4.2	1.3	1.1	1.3	.47	.45
9	1.2	2.8	1.3	1.1	1.7	2.4	2.6	1.3	1.1	1.4	.46	.47
10	1.9	6.9	1.4	1.1	2.7	1.9	2.3	1.2	1.0	2.2	.55	.53
11	1.4	9.7	1.3	2.1	2.0	1.6	2.2	1.2	1.0	1.3	.52	.47
12	1.2	3.7	1.3	1.7	1.8	1.5	2.7	1.2	.99	1.2	.49	.45
13	1.2	2.4	1.4	1.6	1.6	1.8	5.5	1.1	.99	1.2	.45	.43
14	1.1	1.9	1.3	14	1.6	1.5	27	1.2	.98	1.2	.43	.43
15	1.1	1.7	1.3	2.8	1.6	1.4	4.0	1.2	.93	1.1	.44	.50
16	1.1	1.6	1.3	2.2	1.6	1.4	3.0	1.1	1.1	1.1	.50	.70
17	1.0	1.5	1.4	3.9	1.4	15	2.7	2.3	1.0	1.0	.49	1.0
18	1.0	1.5	1.3	28	1.4	10	2.5	5.6	4.2	.98	.45	2.0
19	1.0	1.4	1.3	4.1	1.4	5.0	2.4	1.7	1.1	.96	.46	.70
20	1.0	1.3	1.3	2.7	1.3	2.8	2.3	25	1.0	.95	.49	1.0
21	.98	1.3	1.3	2.3	1.4	32	2.2	4.5	.96	.92	.62	.80
22	.97	1.3	1.3	2.2	1.3	4.1	2.2	3.1	.95	.87	5.2	.90
23	1.0	1.3	1.3	2.0	1.3	2.9	2.0	8.2	.92	.78	.58	1.0
24	.95	1.3	1.8	1.9	1.3	12	2.0	5.0	17	.76	.53	4.0
25	.91	1.4	1.6	1.7	1.2	4.5	1.9	2.9	52	.72	.48	5.0
26	.91	8.7	1.3	1.6	1.2	3.0	1.9	2.4	8.6	.69	.45	3.0
27	.91	2.2	1.3	1.6	1.2	2.6	1.9	2.1	2.3	.70	.43	2.0
28	.90	1.9	1.2	1.5	1.2	32	1.7	2.0	3.0	.71	.42	6.0
29	1.1	1.8	1.3	1.5	1.2	6.9	1.7	5.4	3.7	.65	.41	10
30	1.6	1.6	1.3	1.5	---	7.1	1.7	2.4	2.0	.62	6.2	8.0
31	1.0	---	1.2	1.6	---	4.1	---	1.8	---	.60	14	---
TOTAL	41.43	96.6	42.3	94.5	42.0	171.4	99.1	95.3	117.32	34.31	39.20	55.65
MEAN	1.34	3.22	1.36	3.05	1.45	5.53	3.30	3.07	3.91	1.11	1.26	1.86
MAX	3.1	18	1.8	28	2.7	32	27	25	52	2.2	14	10
MIN	.90	1.0	1.2	1.1	1.2	1.2	1.7	1.1	.92	.60	.41	.43
CFSM	.90	2.16	.91	2.05	.97	3.71	2.22	2.06	2.62	.75	.85	1.25
IN.	1.03	2.41	1.06	2.36	1.05	4.28	2.47	2.38	2.93	.86	.98	1.39

CAL YR 1979 TOTAL 883.46 MEAN 2.42 MAX 38 MIN .76 CFSM 1.62 IN 22.04
WTR YR 1980 TOTAL 929.11 MEAN 2.54 MAX 52 MIN .41 CFSM 1.71 IN 23.18

Lakes and Reservoirs in South Atlantic Slope basin

02067800; 02067820 TALBOTT AND TOWNES RESERVOIRS 1/.--on Dan River. The two reservoirs are operated as a unit for storage of water for Pinnacles hydroelectric plant. Talbott Dam (drainage area, 20.2 mi² or 52.3 km²), lat 36°40'36", long 80°23'51", Patrick County, VA, Hydrologic Unit 03010103, 4.5 mi (7.2 km) northeast of Kibler. Townes Dam (drainage area, 32.9 mi² or 85.2 km²), lat 36°41'11", long 80°25'49", Patrick County, Va., Hydrologic Unit 03010103, 4 mi (6.4 km) north of Kibler. PERIOD OF RECORD, February 1939 to December 1945 and January 1948 to September 1960 (combined monthend contents only published in WSP 1723), October 1960 to current year.

Total capacity of Talbott Reservoir, 350,000,000 ft³ (9,900,000 m³) and Townes Reservoir, 60,000,000 ft³ (1,700,000 m³). Storage was started in Talbott Reservoir on Feb. 13, 1939, and in Townes Reservoir several months earlier. Records furnished by City of Danville, VA. (See sta 02068500)

02077280 HYCO LAKE.--Lat 36°30'28", long 79°02'48", Person County, Hydrologic Unit 03010104, at outlet control structure 0.4 mi (0.6 km) northwest of dam on Hyco River, 1.1 mi (1.8 km) southwest of McGehees Mill and 8 mi (13 km) northwest of Roxboro. DRAINAGE AREA, 189 mi² (499 km²). PERIOD OF RECORD, October 1964 to current year. Prior to October 1970 published as "Roxboro Steam-Electric Generating Plant Lake". GAGE, water-stage recorder and tape gage. Prior to Feb. 11, 1965 staff gage at upstream end of outlet control structure. Datum of gage is 399.79 ft (121.856 m), National Geodetic Vertical Datum of 1929 (levels by Carolina Power and Light Co.).

Lake, used for cooling water at the Roxboro Steam-electric Generating Plant of Carolina Power and Light Co. first began to fill Sept. 19, 1964 and first reached spillway elevation (9.97 ft or 3.039 m gage height) Mar. 19, 1965. Total capacity at top of spillway is 3,288,000,000 ft³ (93,120,000 m³). Lake cannot be drawn below -0.03 ft or -0.009 m (bottom of gated flume).

02079964 LAKE GASTON.--Lat 36°30'04", long 77°48'43", Halifax County, Hydrologic Unit 03010106, at Gaston Dam on Roanoke River, 0.2 mi (0.3 km) upstream from Black Gut Creek, and 2.7 mi (4.3 km) northwest of Thelma. DRAINAGE AREA, 8,339 mi² (21,598 km²). PERIOD OF RECORD, October 1962 to current year. GAGE, water-stage recorder and staff gage. Datum of gage is National Geodetic Vertical Datum of 1929.

Lake, used mainly for hydroelectric power development, was first filled Oct. 13-15, 1962, and has a total capacity of 22,434,000,000 ft³ (635,330,000 m³). Usable capacity is 20,127,000,000 ft³ (570,000,000 m³) between elevations 165 ft or 50.3 m and 203 ft or 61.9 m (top of spillway gates) of which 2,788,000,000 ft³ (78,960,000 m³) between elevations 200 ft (61.0 m) and 203 ft (61.9 m) is reserved for flood control. Storage for power generation is 10,673,000,000 ft³ (302,260,000 m³) between elevations 185 ft (56.4 m) and 200 ft (61.0 m). Records furnished by Virginia Electric and Power Co. (See sta 02080500)

02080100 ROANOKE RAPIDS LAKE.--Lat 36°29'10", long 77°39'31", Halifax County, Hydrologic Unit 03010107, at Roanoke Rapids Dam on Roanoke River, 1.5 mi (2.4 km) upstream from bridge on State Highway 48, and 2.2 mi (3.5 km) north of Roanoke Rapids. DRAINAGE AREA, 8,395 mi² (21,743 km²). PERIOD OF RECORD, June 1955 to September 1960 (monthend contents only published in WSP 1723), October 1960 to current year. GAGE, water-stage recorder and staff gage. Datum of gage is National Geodetic Vertical Datum of 1929.

Lake, used for hydroelectric power development, was put in operation June 25, 1955, and has a total capacity of 3,360,220,000 ft³ (95,161,400 m³) at normal highwater elevation of 132.0 ft (40.23 m) and 3,515,290,000 ft³ (99,553,000 m³) at elevation 132.75 ft or 40.462 m (top of gates). Records furnished by Virginia Electric and Power Co. (See sta 02080500)

02111391 W. KERR SCOTT RESERVOIR.--Lat 36°08'04", long 81°13'30", Wilkes County, Hydrologic Unit 03040101, at W. Kerr Scott Dam on Yadkin River, 0.1 mi (0.3 km) upstream from Fish Trap Creek, 2.0 mi (3.2 km) upstream from Millers Creek, and 4.0 mi (6.4 km) west of Wilkesboro. DRAINAGE AREA, 350 mi² (910 km²), approximately. PERIOD OF RECORD, August 1962 to current year. Gage, water-stage recorder and staff gage at dam. Datum of gage is National Geodetic Vertical Datum of 1929.

Lake, used for flood control, low-flow augmentation and recreation. Some storage was affected during construction in July 1962, but gates were closed Aug. 22, 1962, and reservoir reached minimum pool elevation on Sept. 11, 1962. Total capacity is 6,664,680,000 ft³ (188,744,000 m³) of which 6,316,200,000 ft³ (178,870,000 m³) is controlled storage. Records furnished by Corps of Engineers. (See sta 02129000)

02122400 HIGH ROCK LAKE.--Lat 35°36'02", long 80°14'06", Davidson County, Hydrologic Unit 03040103, at High Rock Dam on Yadkin River, 0.8 mi (1.3 km) northwest of High Rock, 2 mi (3 km) upstream from Lick Creek, and 256 mi (412 km) upstream from mouth of Pee Dee River in Winyah Bay. DRAINAGE AREA, 4,000 mi² (10,400 km²), approximately. PERIOD OF RECORD, November 1927 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year. GAGE, water-stage recorder and staff gage at dam. Datum of gage is 30.9 ft (9.42 m) National Geodetic Vertical Datum of 1929.

Lake, used for hydroelectric power development, was first put in operation Nov. 7, 1927. Total capacity is 11,090,000,000 ft³ (314,100,000 m³) and usable capacity is 10,230,000,000 ft³ (289,700,000 m³) between elevations 625 ft (190 m) and 655 ft (200 m) gage datum (top of gates). Records furnished by Yadkin, Inc. (See sta 02129000)

02122699 TUCKERTOWN RESERVOIR.--Lat 35°29'03", long 80°10'30", Stanly County, Hydrologic Unit 03040103, at Tuckertown Dam on Yadkin River, 2.5 mi (4.0 km) upstream from Garr Creek, 3.8 mi (6.1 km) northeast of New London and 250 mi (400 km) upstream from mouth of Pee Dee River in Winyah Bay. DRAINAGE AREA, 4,120 mi² (10,670 km²), approximately. PERIOD OF RECORD, April 1962 to current year. GAGE, remote water-stage recorder in powerhouse. Datum of gage is 30.9 ft (9.42 m) National Geodetic Vertical Datum of 1929.

Lake, used for hydroelectric power development, was first filled Apr. 6, 1962. Total capacity is 1,852,400,000 ft³ (52,460,000 m³) and usable capacity is 293,800,000 ft³ (8,320,000 m³) between elevations 593 ft (181 m) and 596 ft (182 m) gage datum. Records furnished by Yadkin, Inc. (See sta 02129000)

02122844 BADIN LAKE.--Lat 35°35'10", long 80°05'34", Stanly County, Hydrologic Unit 03040103, at Badin Dam on Yadkin River, 1.5 mi (2.4 km) northeast of Badin, 2.5 mi (4.0 km) upstream from Falls Dam, and 242 mi (389 km) upstream from mouth of Pee Dee River in Winyah Bay. DRAINAGE AREA, 4,180 mi² (10,800 km²), approximately. PERIOD OF RECORD, December 1917 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year. GAGE, water-stage recorder and staff gage at dam. Datum of gage is 30.9 ft (9.42 m) National Geodetic Vertical Datum of 1929.

Lake (generally known as Narrows Reservoir), used for hydroelectric power development, was first put in operation July 12, 1917. Total capacity is 10,497,960,000 ft³ (297,302,200 m³) and usable capacity is 5,616,584,000 ft³ (159,061,600 m³) between elevations 510.00 ft (155.448 m) and 541.10 ft (164.927 m). Records furnished by Yadkin, Inc. (See sta 02129000)

1/ Included in this report because they materially affect runoff at Dan River near Francisco.

Lakes and Reservoirs in South Atlantic Slope basin--Continued

02123736 LAKE TILLERY.--Lat 35°12'24", long 80°03'57", Stanly County, Hydrologic Unit 03040104, at Norwood Dam on Pee Dee River, 700 ft (213 m) upstream from Norfolk Southern Railroad bridge, 3.5 mi (5.6 km) southeast of Norwood, 5 mi (8 km) upstream from Rocky River, and 224 mi (360 km) upstream from mouth in Winyah Bay. DRAINAGE AREA, 4,600 mi² (12,000 km²), approximately. PERIOD OF RECORD, February 1928 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year. GAGE, water-stage recorder and float-tape gage at dam. Datum of gage is 38.67 ft (11.787 m) National Geodetic Vertical Datum of 1929 (levels by Carolina Power and Light Co.).

Lake, used for hydroelectric power development, was first put in operation during January 1928. Total capacity is 7,274,520,000 ft³ (206,014,000 m³) and usable capacity is 5,927,040,000 ft³ (167,854,000 m³) between elevations 200.5 ft (61.11 m) and 239.5 ft (73.00 m) gage datum (top of gates). Records furnished by Carolina Power and Light Co. (see sta 02129000)

02128800 BLEWETT FALLS LAKE.--Lat 34°58'58", long 79°52'40", Richmond County, Hydrologic Unit 03040104, at Blewett Falls Dam on Pee Dee River, 1.2 mi (1.9 km) upstream from Cartledge Creek, 6.5 mi (10.5 km) northwest of Rockingham, and 195 mi (314 km) upstream from mouth in Winyah Bay. DRAINAGE AREA, 6,830 mi² (18,000 km²), approximately. PERIOD OF RECORD, December 1929 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year. GAGE, self-synchronous motor, dial indicator and staff gage at dam. Datum of gage is 39.08 ft (11.912 m) National Geodetic Vertical Datum of 1929 (levels by Carolina Power and Light Co.).

Lake, used for hydroelectric power development, was first put in use during 1911. Total capacity is 4,225,320,000 ft³ (119,661,000 m³) and usable capacity is 1,850,000,000 ft³ (52,400,000 m³) between elevations 120.0 ft (36.58 m) and 139.0 ft (42.37 m) gage datum (top of 4-foot flashboards). Records furnished by Carolina Power and Light Co. (See sta 02129000)

02138519 LAKE JAMES.--Lat 35°44'36", long 81°50'22", Burke County, Hydrologic Unit 03050101, at Linville Dam at intake tower on Catawba River, 2.1 mi (3.4 km) northeast of Bridgewater and 279 mi (449 km) upstream from mouth of Wateree River. DRAINAGE AREA, 380 mi² (980 km²), approximately. PERIOD OF RECORD, March 1920 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year. GAGE, float gage with self-sychronous motor to indicator in power house. Staff gage at Catawba River Dam is also read when lake elevation drops below 1,160 ft or 353.6 m (60 ft or 18.3 m, gage datum) and lake becomes two separate reservoirs. Datum of gage is 1,100.00 ft (335.280 m) National Geodetic Vertical Datum of 1929 (levels by Duke Power Co.).

Lake (generally known as Bridgewater Reservoir), used for hydroelectric power development, was first put in operation May 5, 1919. The total capacity at elevation 100.0 ft (30.48 m) gage datum (crest of spillway) is 12,581,800,000 ft³ (356,317,000 m³) and usable capacity is 7,943,700,000 ft³ (224,970,000 m³) between elevations (gage datum) 65 ft (19.8 m) and 100 ft (30.5 m). Records furnished by Duke Power Co.

02141490 RHODHISS LAKE.--Lat 35°46'54", long 81°26'42", Caldwell County, Hydrologic Unit 03030101, at Rhodhiss Dam on Catawba River, 0.8 mi (1.3 km) west of Rhodhiss, 1.8 mi (2.9 km) south of Granite Falls, and 243 mi (391 km) upstream from mouth of Wateree River. DRAINAGE AREA, 1,090 mi² (2,820 km²), approximately. PERIOD OF RECORD, September 1935 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year. Gage, float gage, indicator and reference point at dam. Datum of gage is 895.1 ft (272.83 m) National Geodetic Vertical Datum of 1929 (levels by Duke Power Co.).

Lake, used for hydroelectric power development, was first put in operation Feb. 18, 1925. Total capacity is 3,188,592,000 ft³ (90,300,900 m³) and usable capacity is 1,717,000,000 ft³ (48,630,000 m³) between elevations (gage datum) 85.0 ft (25.91 m) and 100.0 ft or 30.48 m (crest of spillway). Records furnished by Duke Power Co.

02141961 LAKE HICKORY.--Lat 35°49'28", long 81°11'28", Alexander County, Hydrologic Unit 03050101, at Oxford Dam on Catawba River, 2 mi (3 km) upstream from Lower Little River, 7 mi (11 km) south of Taylorsville, and 226 mi (364 km) upstream from mouth of Wateree River. DRAINAGE AREA, 1,310 mi² (3,390 km²), approximately. PERIOD OF RECORD, September 1935 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year. GAGE, float gage and indicator at dam. Datum of gage is 835.0 ft (254.51 m) National Geodetic Vertical Datum of 1929 (levels by Duke Power Co.).

Lake, (generally known as Oxford Reservoir) used for hydroelectric power development, was first put in operation Apr. 5, 1928. Total capacity is 5,552,985,000 ft³ (157,260,500 m³). Sept. 30, 1935 to Sept. 30, 1957, the usable capacity considered as 2,277,970,200 ft³ (64,512,120 m³) between elevations (gage datum) 85.0 ft (25.91 m) and 100.0 ft (30.48 m) (top of flood gates). From Apr. 30, 1928 to Aug. 31, 1935, and Oct. 31, 1957 to Sept. 30, 1964, usable capacity considered as 3,378,400,000 ft³ (95,676,300 m³) between elevations 75.0 ft (22.86 m) and 100.0 ft or 30.48 m (top of flood gates) from Oct. 1, 1964 to present, usable capacity considered as 2,277,800,000 ft³ (64,507,000 m³) between elevations (gage datum) 85.0 ft (25.91 m) and 100.0 ft or 30.48 m (top of flood gates). Records furnished by Duke Power Co.

02142441 LOOKOUT SHOALS LAKE.--Lat 35°45'57", long 81°05'36", Catawba County, Hydrologic Unit 03050101, at Lookout Shoals Dam on Catawba River, 4 mi (6 km) upstream from bridge on U.S. Highways 64 and 70, 4.2 mi (6.8 km) north of Catawba, and 216 mi (348 km) upstream from mouth of Wateree River. DRAINAGE AREA, 1,450 mi² (3,760 km²), approximately. PERIOD OF RECORD, December 1915 to September 1960 (monthend contents only published in WSP 1723), October 1960 to current year. GAGE, float gage, indicator and staff gage at dam. Datum of gage is 738.1 ft (224.97 m) National Geodetic Vertical Datum of 1929 (levels by Duke Power Co.).

Lake, used for hydroelectric power development, was first put in operation Dec. 2, 1915. Total capacity was originally 1,355,190,000 ft³ (38,379,000 m³). Capacity has been reduced by silting. Prior to October 1957 the usable capacity considered as 473,980,000 ft³ (13,423,000 m³) and October 1957 to Sept. 30, 1964, as 388,300,000 ft³ (11,000,000 m³) between elevations (gage datum) 90.0 ft (27.43 m) and 100.0 ft (30.48 m) (crest of spillway). From Oct. 1, 1964 to present, usable capacity considered as 208,200,000 ft³ (5,896,000 m³) between elevations (gage datum) 95.0 ft (28.96 m) and 100.0 ft or 30.48 m (crest of spillway). Flood of July 16, 1916, washed out an earth dike. Records furnished by Duke Power Co.

02142647 LAKE NORMAN.--Lat 35°26'05", long 80°57'28", Mecklenburg County, Hydrolgic Unit 03050101, at Cowans Ford Dam on Catawba River, 0.8 mi (1.3 km) upstream from Derr Creek, 7.8 mi (12.6 km) southwest of Davidson, and 182 mi (293 km) upstream from mouth of Wateree River. DRAINAGE AREA, 1,790 mi² (4,640 km²), approximately. PERIOD OF RECORD, March 1962 to current year. GAGE, float gage with transmitter to dial meter in control room. Datum of gage is 660 ft (201.2 m) National Geodetic Vertical Datum of 1929 (levels by Duke Power Co.).

Lake, used for hydroelectric power development began filling in March 1962. Total capacity is 47,586,200,000 ft³ (1,347,640,000 m³) and usable capacity is 26,910,400,000 ft³ (762,102,500 m³) between elevations (gage datum) 75.0 ft (22.86 m) and 100 ft or 30.5 m (top of flood gates). Records furnished by Duke Power Co.

Lakes and Reservoirs in South Atlantic Slope basin--Continued

02142676 MOUNTAIN ISLAND LAKE.--Lat 35°20'03", long 80°59'12", Gaston County, Hydrologic Unit 0305010, at Mountain Island Dam on Catawba River, 1.5 mi (2.4 km) downstream from bridge on State Highway 16, 3 mi (5 km) northeast of Mount Holly, and 167 mi (269 km) upstream from mouth of Wateree River. DRAINAGE AREA, 1,860 mi² (4,820 km²), approximately. PERIOD OF RECORD, December 1923 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year. GAGE, float gage, indicator and stage gage at dam. Datum of gage is 547.5 ft (166.88 m) National Geodetic Vertical Datum of 1929 (levels by Duke Power Co.).

Lake, used for hydroelectric power development, was first put in operation Dec. 16, 1923. Total capacity is 2,495,988,000 ft³ (70,686,380 m³). Prior to October 1964 usable capacity is considered 1,132,000,000 ft³ (32,060,000 m³) between elevations (gage datum) 90.0 ft (27.43 m) and 100.0 ft or 30.48 m (crest of spillway) October 1964 to present considered as 845,000,000 ft³ (23,900,000 m³) between elevations (gage datum), 93.0 ft (28.35 m) and 100.0 ft or 30.48 m (crest of spillway). Records furnished by Duke Power Co.

OTHER RESERVOIRS.--The following smaller reservoirs in the South Atlantic Slope basins are described below, but records of contents are not published herein:

02077229 LAKE ROXBORO.--Lat 79°08'26", long 36°20'55", Caswell County, Hydrologic Unit 03010104, part of Roxboro's municipal water supply on South Hyco Creek near Roseville. DRAINAGE AREA, 23.2 mi² (60.1 km²). Total capacity 380,991,000 ft³ (10,790,000 m³). Dam completed and filled April 1978. (See station 02077250)

02077303 ROXBORO STEAM-ELECTRIC GENERATING PLANT AFTERBAY RESERVOIR.--Lat 36°31'51", long 78°59'50", Person County, Hydrologic Unit 03010104, cooling water reservoir for Carolina Power and Light Company plant, on Hyco River near McGehees Mill. DRAINAGE AREA, 196 mi² (508 km²). Total capacity is approximately 522,720,000 ft³ (14,480,300 m³) with a surface area of about 650 acres (260 hm²) at a normal elevation of 385 ft (117 m), National Geodetic Vertical Datum of 1929. Dam completed May 30, 1974, and storage began Apr. 26, 1974; water in reservoir first reached normal water level elevation of 385 ft (117 m) on Aug. 22, 1974. (See sta 02077303)

02077665 MAYO LAKE.--Lat 36°32'15", long 78°52'30", Person County, Hydrologic Unit 03010104, cooling water reservoir for Carolina Power and Light Company plant, on Mayo Creek near Bethel Hill. DRAINAGE AREA, 52.2 mi² (135.2 km²). Total capacity is 3,831,000,000 ft³ (108,504,000 m³) with a surface area of 2800 acres (1130 km²) at a normal elevation of 434 ft (132 m) National Geodetic Vertical Datum of 1929. Dam completed and storage began Aug. 1, 1980. (See sta 02077660)

02086490 LAKE MICHIE.--Lat 36°09'02", long 79°49'49", Durham County, Hydrologic Unit 03020201, at Durham municipal dam on Flat River, 3 mi (5 km) southeast of Bahama, and 5 mi (8 km) upstream from confluence with Eno River. DRAINAGE AREA, 170 mi² (440 km²) approximately. PERIOD OF RECORD, October 1962 to April 1975.

Lake, used for municipal water supply, began filling in May 1926 and reached spillway elevation Dec. 26, 1926. Total capacity is 618,000,000 ft³ (17,500,000 m³) between elevations (gage datum) 300.0 ft (91.44 m) and 341 ft or 103.9 m (crest of spillway). (See sta 02087000)

02087339 LAKE JOHNSON.--Lat 35°45'44", long 78°42'17", Wake County, Hydrologic Unit 03020201, part of Raleigh's municipal water supply, on Walnut Creek near Raleigh. DRAINAGE AREA, 7.05 mi² (18.26 km²). Total capacity is 98,900,000 ft³ (2,800,000 m³). Dam was completed in 1923 and spillway raised to its present elevation in 1951. (See sta 02087500)

02087344 LAKE RALEIGH.--Lat 35°45'56", long 78°40'38", Wake County, Hydrologic Unit 03020201, part of Raleigh's municipal water supply, on Walnut Creek near Raleigh. DRAINAGE AREA, 12.3 mi² (31.9 km²). Total capacity is 13,400,000 ft³ (379,000 m²). Dam completed in 1914 and raised to its present elevation in 1919. (See sta 02087500)

02087588 LAKE WHEELER.--Lat 35°41'30", long 78°41'31", Wake County, Hydrologic Unit 03020201, part of Raleigh's municipal water supply on Swift Creek near Raleigh. DRAINAGE AREA, 38 mi² (98 km²), approximately. Total capacity is 267,400,000 ft³ (7,573,000 m³). Dam completed and storage began in 1956. (See sta 02087500)

02087701 LAKE BENSON.--Lat 35°39'44", long 78°36'42", Wake County, Hydrologic Unit 03020201, part of Raleigh's municipal water supply on Swift Creek near Garner. DRAINAGE AREA, 67 mi² (170 km²), approximately. Total capacity is 133,700,000 ft³ (3,786,000 m³). Lake, formerly known as Rand's Mill, acquired by city of Raleigh in 1927 and spillway raised to its present elevation in 1954. (See sta 02087500)

02090370 BUCKHORN RESERVOIR.--Lat 35°41'22", long 78°07'33", Wilson County, Hydrologic Unit 03020203, part of Wilson's municipal water supply on Contentnea Creek near Lucama. DRAINAGE AREA, 155 mi² (401 km²). Total capacity 133,680,000 ft³ (3,786,000 m³). Dam completed Nov. 12, 1976 and reservoir filled Dec. 1, 1976. (See sta 02090380)

02093981 LAKE HIGGINS.--Lat 36°10'11", long 79°52'49", Guilford County, Hydrologic Unit 03030002, part of Greensboro's municipal water supply, on Brush Creek near Greensboro. DRAINAGE AREA, 12 mi² (31 km²), approximately. Total capacity is 107,000,000 ft³ (3,030,000 m³). Reservoir first filled Mar. 1, 1957. (Sec sta 02094500)

02094117 LAKE BRANDT.--Lat 36°10'20", long 79°50'20", Guilford County, Hydrologic Unit 03030002, part of Greensboro's municipal water supply, on Reedy Fork and Horsepen Creek near Greensboro. DRAINAGE AREA, 70.0 mi² (181.3 km²), approximately. Total capacity is 294,000,000 ft³ (8,326,000 m³). Dam completed February 1923 and raised to present level 1959-60. Reservoir first filled at present level on Oct. 8, 1960. (See sta 02094500)

02094305 LAKE TOWNSEND.--Lat 36°11'25", long 79°43'57", Guilford County, Hydrologic Unit 03030002, part of Greensboro's municipal water supply, on Reedy Fork near Greensboro. DRAINAGE AREA, 105 mi² (272 km²). Total capacity is 869,000,000 ft³ (24,600,000 m³). Dam completed Oct. 18, 1968, and reservoir first filled Aug. 17, 1969. (See sta 02094500)

02096003 LAKE BURLINGTON.--Lat 36°10'25", long 79°24'53", Alamance County, Hydrologic Unit 03030002, part of Burlington's municipal water supply, on Stony Creek near Burlington. DRAINAGE AREA, 44 mi² (114 km²), approximately. Prior to October 1971 published as "Stony Creek Reservoir". Total capacity is 427,800,000 ft³ (12,120,000 m³). Dam completed August 1960 and reservoir first filled Jan. 28, 1961. (See sta 02096500)

Lakes and Reservoirs in South Atlantic Slope basin--Continued

02096432 STONY CREEK RESERVOIR.--Lat 36°07'37", long 79°24'20", Alamance County, Hydrologic Unit 03030002, part of Burlington's water supply on Stony Creek near Burlington. DRAINAGE AREA, 95.0 mi² (246.0 km²), approximately. Prior to October 1971 published as "Lake Burlington". Total capacity is 64,900,000 ft³ (1,840,000 m³). Dam completed and reservoir filled in 1928. (See sta 02096500)

02098495 OAK HOLLOW RESERVOIR.--Lat 36°00'42", long 79°59'11", Guilford County, Hydrologic Unit 03030003, part of High Point's municipal water supply, on West Fork Deep River, 1.8 mi (2.9 km) southwest of Deep River. DRAINAGE AREA, 32 mi² (83 km²), approximately. Total capacity is 468,000,000 ft³ (13,300,000 m³). Dead storage (non-withdrawal) is minor. Total surface area, about 725 acres (293 ha). Dam completed and storage began in May 1970. Reservoir first filled Dec. 24, 1970. (See sta 02099500)

02099096 HIGH POINT MUNICIPAL LAKE.--Lat 35°59'43", long 79°56'42", Guilford County, Hydrologic Unit 03030003, High Point's municipal water supply, on Deep River near High Point. DRAINAGE AREA, 61.4 mi² (159 m²). Total capacity is 220,588,000 ft³ (6,247,050 m³). Dam completed in 1926 and reservoir first filled in 1927. (See sta 02099500)

02102178 BUCKHORN RESERVOIR.--Lat 35°31'35", long 78°59'22", Chatham County, Hydrologic Unit 03030004, on Cape Fear River near Corinth. DRAINAGE AREA, 3,200 mi² (8,290 km²), approximately. Usable capacity is 69,700,000 ft³ (19,700,000 m³). Completed and filled in 1908. Hydroelectric power operation stopped Dec. 31, 1962.

02121461 LEXINGTON-THOMASVILLE RESERVOIR.--Lat 35°51'54", long 80°11'41", Davidson County, Hydrologic Unit 03050103, Lexington and Thomasville's municipal water supply on Abbotts Creek near Lexington. Drainage area, 70.3 mi² (182 km²). Total capacity is 284,100,000 ft³ (8,046,000 m³) of which 281,400,000 ft³ (7,969,000 m³) is usable. Dam completed Aug. 8, 1957, and reservoir first filled Nov. 23, 1957.

02184122 LAKE TOXAWAY.--Lat 35°07'27", long 82°55'56", Transylvania County, Hydrologic Unit 03060101, recreation lake on Toxaway River at town of Lake Toxaway. DRAINAGE AREA, 7.79 mi² (20.18 km²). Total surface area, about 640 acres (359 ha). Lake reached spillway elevation September 1961.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

Date	Elevation (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Elevation (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Elevation (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)
	02067800 & 02067820 Talbott & Townes Reservoirs			02077280 Hyco Lake			02079964 Lake Gaston			02080100 Roanoke Rapids Lake		
Sept. 30		387.5	-	10.68	3399	-	200.00	19602	-	131.2	3198	-
Oct. 31		358.9	-28.6	10.49	3368	-31	200.23	19802	+200	131.2	3198	0
Nov. 30		357.9	-1.0	10.56	3380	+12	200.16	19741	-61	132.2	3403	+205
Dec. 31		349.1	-8.8	10.54	3376	-4	199.61	19263	-478	130.4	3044	-359
CAL YR 1979		-	-44.4		-	-7		-	+844		-	+254
Jan. 31		338.6	-10.5	10.63	3391	+15	199.62	19271	+8	130.6	3082	+38
Feb. 29		341.3	+2.7	10.57	3381	-10	199.54	19201	-70	130.0	2972	-110
Mar. 31		343.0	+1.7	10.78	3414	+33	200.27	19837	+636	131.7	3295	+323
Apr. 30		341.5	-1.5	10.55	3378	-36	199.71	19350	-487	130.9	3142	-153
May 31		343.2	+1.7	10.50	3370	-8	200.00	19602	+252	132.3	3425	+283
June 30		351.1	+7.9	10.62	3389	+19	199.68	19324	-278	130.0	2972	+453
July 31		327.1	-24.0	10.37	3350	-39	199.39	19070	-254	129.8	2935	-37
Aug. 31		294.0	-33.1	9.63	3233	-117	199.34	19027	-43	127.4	2531	-404
Sept. 30		280.6	-13.4	8.75	3088	-145	199.52	19184	+157	127.9	2613	+82
WTR YR 1980		-	-106.9		-	-311		-	-418		-	-585

Date	Elevation (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)
	02111391 W. Kerr Scott Reservoir			02122400 High Rock Lake			02122699 Tuckertown Reservoir			02122844 Badin Lake		
Sept. 30	1030.90	1864	-	655.00	11090	-	595.92	1844	-	541.07	10498	-
Oct. 31	1030.00	1786	-78	648.11	7110	-3980	595.71	1822	-22	537.10	9574	-924
Nov. 30	1030.15	1799	+13	648.93	7514	+404	595.35	1785	-37	540.32	10311	+737
Dec. 31	1030.00	1786	-13	644.55	5502	-2012	595.53	1804	+19	539.08	10031	-280
CAL YR 1979		-	+405		-	-794		-	+27		-	-163
Jan. 31	1030.00	1786	0	651.65	8981	-3479	595.34	1784	-20	540.48	10357	+326
Feb. 29	1030.00	1786	0	642.51	4678	-4303	595.19	1768	-16	538.51	9891	-466
Mar. 31	1030.60	1838	+52	655.00	11090	-6412	595.38	1788	+20	541.10	10498	+607
Apr. 30	1030.00	1786	-52	653.09	9880	-1210	595.60	1811	+23	539.98	10241	-257
May 31	1030.00	1786	0	652.74	9638	-242	595.69	1820	+9	540.59	10381	+140
June 30	1030.00	1786	0	652.70	9638	0	595.58	1809	-11	540.20	10287	-94
July 31	1030.00	1786	0	651.92	9155	-483	595.66	1817	+8	539.22	10054	-233
Aug. 31	1029.05	1724	-62	650.10	8148	-1007	594.84	1732	-85	537.03	9552	-502
Sept. 30	1027.80	1644	-80	646.63	6389	-1759	594.46	1696	-36	538.57	9914	+362
WTR YR 1980		-	-220		-	-4701		-	-148		-	-584

Lakes and Reservoirs in South Atlantic Slope basin--Continued

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

Date	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)
	02123736 Lake Tillery			02128800 Blewett Falls Lake			02138519 Lake James			02141490 Rhodhiss Lake		
Sept. 30	237.3	5450	-	136.3	1570	-	101.5	13012	-	100.9	1855	-
Oct. 31	238.6	5729	+279	137.5	1692	+122	96.8	11700	-1312	96.2	1176	-679
Nov. 30	238.4	5686	-43	137.4	1682	-10	100.3	12668	+968	97.1	1298	+122
Dec. 31	238.6	5729	+43	137.8	1724	+42	95.2	11277	-1391	96.1	1163	-135
CAL YR 1979		-	-43		-	-32		-	+1787		-	-190
Jan. 31	238.2	5643	-86	139.7	1920	+196	91.0	10220	-1057	96.1	1163	0
Feb. 29	238.2	5643	0	136.8	1620	-300	87.6	9421	-799	95.8	1124	-39
Mar. 31	237.0	5385	-258	138.5	1798	+178	96.9	11727	+2306	98.0	1423	+299
Apr. 30	238.6	5729	+344	137.1	1650	-148	99.8	12525	+798	95.9	1137	-286
May 31	239.0	5815	+86	137.1	1650	0	98.1	12053	-472	97.5	1353	+216
June 30	238.7	5750	-65	134.7	1410	-240	98.6	12190	+137	98.4	1480	+127
July 31	239.3	5881	+131	135.0	1440	+30	95.6	11386	-804	97.5	1353	-127
Aug. 31	239.4	5903	+22	135.9	1530	+90	94.6	11121	-265	97.9	1409	+56
Sept. 30	238.4	5686	-217	134.6	1400	-130	95.6	11386	+265	97.4	1339	-70
WTR YR 1980		-	+236		-	-170		-	-1626		-	-516

Date	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)
	02141961 Lake Hickory			02142441 Lookout Shoals Lake			02142647 Lake Norman			02142676 Mountain Island Lake		
Sept. 30	99.2	2136	-	102.0	300	-	99.3	46610	-	96.5	390	-
Oct. 31	97.8	1893	-243	97.2	88	-212	96.7	43080	-3530	95.7	296	-94
Nov. 30	99.1	2118	+225	100.4	226	+138	96.5	42820	-260	96.3	366	+70
Dec. 31	97.8	1893	-225	97.8	113	-113	93.5	39020	-3800	95.7	296	-70
CAL YR 1979		-	+169		-	-13		-	+2160		-	-11
Jan. 31	96.4	1658	+235	97.5	100	-13	92.5	37800	-1220	97.4	500	+204
Feb. 29	97.4	1825	+167	97.7	109	+9	92.6	37920	+120	95.9	318	-182
Mar. 31	98.9	2083	+258	99.9	204	+95	98.7	45780	+7860	96.9	438	+120
Apr. 30	97.2	1791	-292	97.5	100	-104	98.6	45640	-140	97.7	538	+100
May 31	97.9	1910	+119	98.0	121	+21	98.1	44960	-680	95.7	296	-242
June 30	98.9	2083	+173	98.9	160	+39	98.4	45370	+410	96.4	378	+82
July 31	96.6	1691	-392	98.4	138	-22	96.8	43210	-2160	96.0	330	-48
Aug. 31	96.5	1674	-17	98.0	121	-17	95.7	41780	-1430	96.0	330	0
Sept. 30	95.9	1576	-98	97.8	113	-8	96.2	42420	+640	95.8	307	-23
WTR YR 1980		-	-560		-	-187		-	-4190		-	-83

OHIO RIVER BASIN

KANAWHA RIVER BASIN

03161000 SOUTH FORK NEW RIVER NEAR JEFFERSON, N. C.

LOCATION.--Lat 36°23'40", long 81°24'27", Ashe County, Hydrologic Unit 05050001, on right bank 600 ft (183 m) upstream from bridge on State Highways 16 and 88, 0.2 mi (0.3 km) downstream from Bear Creek, and 4 mi (6.4 km) southeast of Jefferson.

DRAINAGE AREA.--207 mi² (536 km²).

PERIOD OF RECORD.--October 1924 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 1275: 1925-26(M), 1928-30(M), 1931-32, 1933-35(M), 1941-42(m), 1944(m).

GAGE.--Water-stage recorder. Datum of gage is 2,657.04 ft (809.866 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 14, 1934, nonrecording gage on bridge 400 ft (122 m) downstream at same datum. Oct. 14, 1934, to Mar. 25, 1935, nonrecording gage at present site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--56 years, 433 ft³/s (12.26 m³/s), 28.41 in/yr (722 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,800 ft³/s (1,500 m³/s) Aug. 14, 1940, gage height, 22.50 ft (6.858 m) from rating curve extended above 5,100 ft³/s (144 m³/s) on basis of slope-area measurement of peak flow; minimum, 52 ft³/s (1.47 m³/s) Dec. 24, 1943, result of freezeup; minimum daily, 65 ft³/s (1.84 m³/s) Sept. 9, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 15, 1916 reached a stage of 18.0 ft (5.49 m), from floodmarks witnessed by local resident, discharge, 35,200 ft³/s (997 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,600 ft³/s (74 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	1630	4080	116	6.50	1.981	Apr 9	0600	*5820	165	*7.60	2.316
Nov 26	1530	3620	103	6.17	1.881	Apr 14	1530	4910	139	7.04	2.146

Minimum discharge, 152 ft³/s (4.30 m³/s) Sept. 15, 16, gage height, 1.81 ft (0.552 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1930	498	777	463	378	371	706	631	444	333	270	208
2	1360	2270	729	449	335	353	649	600	431	322	258	200
3	1130	2420	674	436	430	323	614	580	413	322	250	189
4	993	1150	659	435	430	374	624	565	398	463	247	199
5	992	906	639	439	430	485	607	546	379	408	286	196
6	876	800	626	429	430	544	542	535	375	367	249	196
7	814	736	616	418	435	439	530	541	381	330	230	191
8	754	684	584	436	437	474	1530	517	371	298	227	178
9	720	659	557	443	440	753	4100	498	351	344	219	176
10	882	1050	548	428	434	570	1610	483	340	402	214	176
11	870	1280	542	455	425	492	1130	479	339	781	208	177
12	734	1210	533	680	425	442	1040	468	334	419	208	172
13	704	986	536	568	423	439	1210	457	335	355	204	165
14	663	872	543	944	433	497	3490	458	336	345	198	161
15	629	785	505	848	433	435	2820	443	327	311	197	156
16	603	722	496	664	468	405	1630	433	319	293	193	153
17	589	661	490	597	531	549	1300	432	333	302	194	160
18	576	631	463	666	397	1100	1120	772	335	265	194	164
19	563	602	466	774	397	730	1010	572	332	261	193	161
20	555	581	460	635	389	659	938	581	317	254	190	169
21	550	563	449	581	466	1850	875	922	299	266	194	187
22	533	548	446	557	506	1280	817	611	290	279	290	182
23	551	545	449	584	482	895	768	754	287	263	299	167
24	589	925	520	524	444	1010	735	899	309	259	264	159
25	517	1160	995	520	416	1230	714	709	1540	245	246	439
26	493	2980	648	500	408	899	698	614	1040	238	208	372
27	476	1640	549	483	397	772	738	537	586	283	197	236
28	471	1140	510	471	396	787	722	503	448	858	189	197
29	471	955	488	457	388	1150	671	486	391	624	184	237
30	506	845	480	445	---	864	679	477	359	357	182	339
31	504	---	479	462	---	798	---	458	---	293	195	---
TOTAL	22598	30804	17456	16791	12403	21969	34617	17561	12739	11140	6877	6062
MEAN	729	1027	563	542	428	709	1154	566	425	359	222	202
MAX	1930	2980	995	944	531	1850	4100	922	1540	858	299	439
MIN	471	498	446	418	335	323	530	432	287	238	182	153
CFSM	3.52	4.96	2.72	2.62	2.07	3.43	5.58	2.73	2.05	1.73	1.07	.98
IN.	4.06	5.54	3.14	3.02	2.23	3.95	6.22	3.16	2.29	2.00	1.24	1.09

CAL YR 1979 TOTAL 265203 MEAN 727 MAX 7390 MIN 259 CFSM 3.51 IN 47.66
WTR YR 1980 TOTAL 211017 MEAN 577 MAX 4100 MIN 153 CFSM 2.79 IN 37.92

03439000 FRENCH BROAD RIVER AT ROSMAN, N. C.

LOCATION.--Lat 35°08'32", long 82°49'28", Transylvania County, Hydrologic Unit 06010105, on left bank at upstream side of bridge on U.S. Highway 178 at Rosman, 1.0 mi (1.6 km) upstream from East Fork, and at mile 216.4 (348.2 km).

DRAINAGE AREA.--67.9 mi² (175.9 km²).

PERIOD OF RECORD.--May 1907 to June 1909, October 1935 to current year. Monthly discharge only for some periods published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1306: 1908(M). WSP 1910: 1936(M), 1938(M), 1939-40, 1942-43.

GAGE.--Water-stage recorder. Datum of gage is 2,173.83 ft (662.583 m) National Geodetic Vertical Datum of 1929. Prior to June 30, 1909, nonrecording gage at site 500 ft (152 m) downstream at different datum. Jan. 1, 1936, to July 6, 1937, nonrecording gage at present site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--46 years (1907-8, 1935-80), 243 ft³/s (6.882 m³/s), 48.60 in/yr (1,234 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,500 ft³/s (382 m³/s) Oct. 4, 1964, gage height, 14.95 ft (4.557 m); minimum, 23 ft³/s (0.65 m³/s) Jan. 3, 1940, gage height, 1.51 ft (0.460 m), result of freezeup; minimum daily, 37 ft³/s (1.05 m³/s) Sept. 25-28, Oct. 5, 6, 25, 26, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 13.9 ft (4.24 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	0830	*6340	180	*11.58	3.530	Apr 8	1515	2900	82.1	8.14	2.481
Nov 25	2345	3620	103	9.25	2.819	Apr 14	0715	2980	84.4	8.28	2.524
Mar 21	0430	2550	72.2	7.55	2.301	May 18	0115	2080	58.9	6.68	2.036

Minimum discharge, 63 ft³/s (1.78 m³/s) Sept. 16, 17, 23, gage height, 1.68 ft (0.512 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	587	266	482	230	224	169	445	332	318	172	96	97
2	495	2260	448	219	227	163	412	319	297	167	93	82
3	441	758	419	213	213	166	388	313	281	164	90	96
4	453	541	405	224	208	164	378	303	267	159	103	89
5	431	459	388	213	203	244	348	300	255	152	110	89
6	384	412	376	204	206	206	334	289	248	146	93	89
7	357	380	357	207	198	209	323	284	242	141	96	78
8	335	357	339	229	194	424	1040	282	231	138	106	74
9	319	345	327	233	202	311	735	266	221	136	94	72
10	311	567	319	221	204	258	547	258	216	138	92	85
11	298	482	309	355	194	230	477	251	209	146	88	77
12	287	438	301	351	189	225	589	244	204	129	87	71
13	278	397	305	296	184	288	706	237	202	124	84	70
14	267	364	291	397	184	263	2010	232	198	121	88	68
15	260	343	281	318	188	236	1010	228	190	121	84	67
16	254	327	278	285	223	223	781	223	186	129	97	64
17	246	312	266	290	201	728	673	644	202	134	112	68
18	241	301	260	436	188	647	612	877	238	147	94	76
19	235	292	256	366	184	427	563	437	207	117	116	69
20	236	284	249	318	183	549	525	453	186	113	111	73
21	228	276	242	292	186	1360	495	400	176	109	86	72
22	224	269	239	318	203	676	466	366	172	107	110	67
23	285	290	235	317	192	526	442	772	171	133	88	68
24	231	952	319	282	184	634	419	608	502	127	93	79
25	221	1350	304	268	177	532	401	501	390	147	93	110
26	215	1710	257	255	172	460	423	430	269	113	81	86
27	210	841	244	248	169	414	405	382	227	112	77	71
28	206	672	234	239	168	671	373	379	205	118	75	105
29	224	580	229	231	165	615	359	382	193	108	74	344
30	259	520	238	229	---	562	346	364	184	102	91	221
31	248	---	229	259	---	497	---	339	---	99	115	---
TOTAL	9266	17345	9426	8543	5613	13077	17025	11695	7087	4069	2917	2777
MEAN	299	578	304	276	194	422	568	377	236	131	94.1	92.6
MAX	587	2260	482	436	227	1360	2010	877	502	172	116	344
MIN	206	266	229	204	165	163	323	223	171	99	74	64
CFSM	4.40	8.51	4.48	4.07	2.86	6.22	8.37	5.55	3.48	1.93	1.39	1.36
IN.	5.08	9.50	5.16	4.68	3.08	7.16	9.33	6.41	3.88	2.23	1.60	1.52

CAL YR 1979 TOTAL 146991 MEAN 403 MAX 4550 MIN 125 CFSM 5.94 IN 80.53
WTR YR 1980 TOTAL 108840 MEAN 297 MAX 2260 MIN 64 CFSM 4.37 IN 59.63

03441000 DAVIDSON RIVER NEAR BREVARD, N. C.

LOCATION.--Lat 35°16'23", long 82°42'21", Transylvania County, Hydrologic Unit 06010105, on right bank 150 ft (46 m) upstream from bridge on State Highway 280, 2.1 mi (3.4 km) downstream from Avery Creek, 3.3 mi (5.3 km) northeast of Brevard, and at mile 2.2 (3.5 km).

DRAINAGE AREA.--40.4 mi² (104.6 km²).

PERIOD OF RECORD--October 1920 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1336: 1921, 1922(M), 1923, 1924-25(M), 1926, 1927(M), 1929-32(M).

GAGE.--Water-stage recorder. Datum of gage is 2,115.13 ft (644.692 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to May 17, 1934, nonrecording gage, at site 50 ft (15 m) downstream at same datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--60 years, 131 ft³/s (3.710 m³/s), 44.03 in/yr (1,118 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,400 ft³/s (238 m³/s) Aug. 15, 1928, gage height, 11.8 ft (3.597 m); minimum, 13 ft³/s (0.37 m³/s) Oct. 11, 1954, gage height, 0.31 ft (0.094 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1869, 11.9 ft (3.63 m) June 1876 (from studies by Tennessee Valley Authority).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	0715	*4970	141	*8.77	2.673	Apr 14	0700	1940	54.9	4.90	1.494
Nov 25	2245	2780	78.7	6.03	1.838	May 18	0045	1100	31.2	3.54	1.079
Mar 21	0415	1910	54.1	4.86	1.481	May 29	1830	1170	33.1	3.67	1.119
Apr 8	1445	2160	61.2	5.22	1.591						

Minimum discharge, 29 ft³/s (0.82 m³/s) Sept. 23, 24, gage height, 0.46 ft (0.140 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	475	144	280	127	124	92	275	183	199	95	70	41
2	368	1710	257	118	120	88	253	177	181	90	61	62
3	301	483	240	115	115	97	236	173	167	90	52	53
4	303	343	230	119	112	92	224	167	155	100	50	42
5	276	287	221	114	118	170	207	165	147	91	50	42
6	240	255	214	109	112	127	196	159	142	82	51	42
7	217	232	202	113	108	121	189	155	137	78	57	37
8	199	216	190	129	105	234	633	153	130	77	55	35
9	186	205	182	124	109	198	442	144	123	76	48	34
10	179	345	177	117	107	158	334	140	120	83	52	49
11	169	306	171	192	102	136	290	137	116	83	47	38
12	161	281	167	197	101	131	337	132	113	72	49	35
13	154	251	168	165	97	170	419	129	112	68	56	33
14	145	227	158	241	98	157	1230	125	109	66	45	32
15	140	212	151	187	102	139	580	124	104	68	44	32
16	136	200	150	163	130	130	447	123	100	65	44	31
17	130	189	142	163	109	399	384	297	110	63	58	32
18	127	182	139	256	102	374	347	422	135	87	62	36
19	124	174	136	212	99	254	318	221	107	64	65	32
20	122	167	133	183	99	360	296	241	99	61	64	34
21	118	162	129	166	105	891	277	214	93	59	46	35
22	115	157	128	192	118	422	259	197	91	57	57	31
23	148	167	125	194	109	327	245	367	90	85	46	30
24	118	473	178	167	103	377	234	312	283	77	47	30
25	113	873	165	156	99	322	222	267	170	82	50	51
26	109	1080	137	146	94	278	239	224	150	64	43	40
27	107	498	130	141	93	249	228	197	135	61	40	32
28	105	397	125	134	92	416	207	182	120	63	38	61
29	113	341	122	129	91	389	201	321	115	62	37	238
30	134	304	129	128	---	353	191	289	105	57	42	171
31	136	---	123	152	---	311	---	224	---	54	45	---
TOTAL	5468	10861	5199	4849	3073	7962	9940	6361	3958	2280	1571	1491
MEAN	176	362	168	156	106	257	331	205	132	73.5	50.7	49.7
MAX	475	1710	280	256	130	891	1230	422	283	100	70	238
MIN	105	144	122	109	91	88	189	123	90	54	37	30
CFSM	4.36	8.96	4.16	3.86	2.62	6.36	8.19	5.07	3.27	1.82	1.26	1.23
IN.	5.03	10.00	4.79	4.46	2.83	7.33	9.15	5.86	3.64	2.10	1.45	1.37

CAL YR 1979 TOTAL 82507 MEAN 226 MAX 2190 MIN 60 CFSM 5.59 IN 75.97
WTR YR 1980 TOTAL 63013 MEAN 172 MAX 1710 MIN 30 CFSM 4.26 IN 58.02

03441440 LITTLE RIVER ABOVE HIGH FALLS, NEAR CEDAR MOUNTAIN, N. C.

LOCATION.--Lat 35°11'32", long 82°36'49", Transylvania County, Hydrologic Unit 06010105, on left bank 100 ft (30.5 m) upstream from High Falls, 0.2 mi (0.3 km) upstream from Grassy Creek, 1.0 mi (1.6 km) downstream from Reasonover Creek, 3.8 mi (6.1 km) northeast of Cedar Mountain, and at mile 7.8 (12.6 km).

DRAINAGE AREA.--26.8 mi² (69.4 km²).

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,513.27 ft (766.045 m) National Geodetic Vertical Datum of 1929 (Tennessee Valley Authority bench mark).

REMARKS.--Records good. E. I. du Pont de Nemours and Company plant 0.5 mi (0.8 km) above gage diverted about 1.05 ft³/s (0.030 m³/s) for industrial use. Since 1969, more than 7.82 mi² (20.25 km²) of total drainage affected by occasional filling and/or draining of recreational lakes on tributaries upstream.

AVERAGE DISCHARGE.--18 years, 113 ft³/s (3.200 m³/s), 57.26 in/yr (1,454 mm/yr) unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,600 ft³/s (159 m³/s) Oct. 4, 1964, gage height, 7.30 ft (2.225 m); minimum, 13 ft³/s (0.37 m³/s) Oct. 7, 1970, gage height, 1.23 ft (0.375 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (20 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	1545	1540	43.6	4.17	1.271	Apr 8	2045	782	22.1	3.18	0.969
Nov 26	0630	*1960	55.5	*4.60	1.402	Apr 14	1215	1340	37.9	3.92	1.195
Mar 21	0915	897	25.4	3.34	1.018	May 18	0200	754	21.4	3.14	0.957

Minimum discharge, 19 ft³/s (0.54 m³/s) Sept. 23, gage height, 1.25 ft (0.381 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	345	100	198	84	79	57	198	117	111	70	35	32
2	271	1030	181	80	76	55	176	115	104	64	37	40
3	223	485	173	78	75	60	162	110	98	71	32	44
4	213	270	169	84	74	57	157	107	92	80	30	32
5	213	206	159	82	70	89	138	107	87	96	29	30
6	179	181	151	80	74	79	130	106	86	68	28	30
7	163	161	137	80	71	74	125	100	93	54	27	29
8	148	154	123	78	69	161	443	96	79	57	27	28
9	141	145	118	87	73	125	480	92	73	57	28	28
10	136	206	114	89	74	100	287	88	70	57	35	34
11	126	202	111	130	68	87	232	86	67	55	30	29
12	121	195	108	238	67	83	275	82	66	50	27	25
13	116	161	112	188	64	96	307	80	66	49	29	24
14	106	141	105	181	64	95	951	74	65	44	26	23
15	92	134	98	174	68	87	501	72	62	43	26	22
16	91	130	96	136	79	82	333	69	59	41	25	20
17	90	121	90	136	71	275	281	233	63	41	27	21
18	87	111	87	226	65	334	253	497	87	41	31	23
19	84	106	85	191	64	202	230	217	105	38	39	23
20	80	102	82	153	65	219	212	247	71	36	28	22
21	78	101	78	134	65	703	194	242	63	34	25	22
22	77	99	79	134	70	320	176	185	60	34	55	21
23	112	128	78	139	67	233	161	284	57	41	33	20
24	86	406	105	119	63	283	154	260	174	55	28	27
25	78	490	116	112	60	254	161	206	174	130	28	44
26	72	1230	90	105	55	208	158	170	118	51	26	32
27	71	430	84	101	56	178	153	146	93	42	24	25
28	70	329	80	96	57	311	135	139	78	48	22	36
29	81	258	76	90	55	334	128	153	89	45	21	143
30	132	226	87	86	---	278	123	139	87	39	21	173
31	111	---	91	91	---	237	---	121	---	37	27	---
TOTAL	3993	8038	3461	3782	1958	5756	7414	4740	2597	1668	906	1102
MEAN	129	268	112	122	67.5	186	247	153	86.6	53.8	29.2	36.7
MAX	345	1230	198	238	79	703	951	497	174	130	55	173
MIN	70	99	76	78	55	55	123	69	57	34	21	20
CFSM	4.81	10.0	4.18	4.55	2.52	6.94	9.22	5.71	3.23	2.01	1.09	1.37
IN.	5.54	11.16	4.80	5.25	2.72	7.99	10.29	6.58	3.60	2.32	1.26	1.53

CAL YR 1979 TOTAL 67065 MEAN 184 MAX 2010 MIN 41 CFSM 6.87 IN 93.09
WTR YR 1980 TOTAL 45415 MEAN 124 MAX 1230 MIN 20 CFSM 4.63 IN 63.04

03443000 FRENCH BROAD RIVER AT BLANTYRE, N. C.

LOCATION.--Lat 35°17'56", long 82°37'27", Transylvania County, Hydrologic Unit 06010105, on left bank 40 ft (12 m) upstream from bridge on Secondary Road 1503, 700 ft (213 m) east of railroad at Blantyre, 3.5 mi (5.6 km) downstream from Little River, and at mile 183.7 (295.6 km).

DRAINAGE AREA.--296 mi² (767 km²).

PERIOD OF RECORD.--October 1920 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 923: 1921-23, 1929, 1933, 1935-36(M), 1938, 1940.

GAGE.--Water-stage recorder. Datum of gage is 2,060.32 ft (627.986 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to July 5, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good, except those above 2,600 ft³/s (73.6 m³/s), which are fair. Considerable diurnal fluctuation at low flow caused by powerplant about 8 mi (13 km) above station.

AVERAGE DISCHARGE.--60 years, 1,003 ft³/s (28.40 m³/s), 46.02 in/yr (1,169 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s (850 m³/s) Oct. 5, 1964, gage height, 25.50 ft (7.772 m), from floodmarks; minimum, 119 ft³/s (3.37 m³/s) Oct. 1, 1954, gage height, 2.36 ft (0.719 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1791, 27.1 ft (8.26 m) July 16, 1916, from floodmarks (from studies by Tennessee Valley Authority).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,300 ft³/s (120 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct 1	0445	4320	122	16.36	4.987	Mar 21	2145	5270	149	17.47	5.325
Nov 3	1815	6290	178	18.42	5.614	Apr 15	0730	6840	194	18.82	5.736
Nov 27	0045	*8150	231	*19.61	5.977						

Minimum discharge, 264 ft³/s (7.48 m³/s) Sept. 23, gage height, 4.24 ft (1.292 m); minimum daily, 268 ft³/s (7.59 m³/s) Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4070	1060	2000	981	1000	709	2000	1330	1320	741	503	420
2	2900	3710	1830	959	929	725	1780	1290	1230	751	576	563
3	2090	5990	1690	928	931	671	1650	1260	1160	719	484	705
4	1870	4730	1620	932	908	728	1590	1240	1100	775	433	642
5	2080	2350	1570	941	879	920	1480	1210	1050	850	481	459
6	1700	1740	1510	899	895	1020	1390	1210	1020	729	468	418
7	1540	1570	1460	887	872	899	1340	1170	1010	695	458	392
8	1420	1450	1380	948	799	1420	2340	1160	977	671	466	363
9	1340	1390	1320	933	810	1490	4120	1110	920	610	448	351
10	1300	2100	1290	886	849	1170	3420	1080	905	622	403	394
11	1240	2140	1260	1030	826	1030	2250	1050	853	680	414	421
12	1190	1900	1230	1710	855	966	2230	1030	804	629	406	359
13	1140	1670	1220	1280	831	1050	2870	985	808	598	471	341
14	1100	1520	1230	1830	822	1130	5520	955	837	577	442	328
15	1060	1410	1160	1580	834	1000	6440	953	815	579	439	324
16	1030	1340	1140	1320	924	961	5000	965	788	567	396	281
17	1010	1280	1110	1240	923	1800	3670	1490	769	567	440	273
18	989	1230	1070	1830	775	3560	2790	3830	879	615	408	303
19	972	1190	1050	1910	766	2340	2380	2680	942	551	489	293
20	968	1150	1030	1490	759	2140	2160	1930	857	509	578	291
21	957	1120	1010	1320	759	4830	2010	2180	776	494	465	296
22	940	1090	997	1280	814	5120	1870	1640	753	511	541	283
23	1060	1110	989	1480	798	3430	1750	2420	727	593	503	268
24	1050	2460	1040	1270	828	2690	1680	2860	1240	923	443	363
25	946	3890	1360	1180	803	2800	1610	2230	1860	875	476	428
26	909	7130	1110	1120	788	2100	1640	1790	1260	720	437	458
27	866	6900	1030	1080	724	1800	1600	1550	999	642	388	344
28	878	4670	994	1050	719	2490	1510	1420	894	661	362	380
29	896	3010	971	1010	713	3600	1440	1630	846	726	327	1380
30	1130	2290	975	988	---	2880	1390	1820	809	573	322	1440
31	1090	---	997	1070	---	2410	---	1410	---	514	373	---
TOTAL	41731	74590	38643	37362	24133	59879	72920	48878	29208	20267	13840	13561
MEAN	1346	2486	1247	1205	832	1932	2431	1577	974	654	446	452
MAX	4070	7130	2000	1910	1000	5120	6440	3830	1860	923	578	1440
MIN	866	1060	971	886	713	671	1340	953	727	494	322	268
CFSM	4.55	8.40	4.21	4.07	2.81	6.53	8.21	5.33	3.29	2.21	1.51	1.53
IN.	5.24	9.37	4.86	4.70	3.03	7.53	9.16	6.14	3.67	2.55	1.74	1.70

CAL YR 1979 TOTAL 639142 MEAN 1751 MAX 13300 MIN 477 CFSM 5.92 IN 80.32
WTR YR 1980 TOTAL 475012 MEAN 1298 MAX 7130 MIN 268 CFSM 4.39 IN 59.70

03446000 MILLS RIVER NEAR MILLS RIVER, N. C.

LOCATION.--Lat 35°23'56", long 82°35'46", Henderson County, Hydrologic Unit 06010105, on right bank 1.5 mi (2.4 km) downstream from confluence of North and South Forks, 1.8 mi (2.9 km) northwest of Mills River, 4.2 mi (6.8 km) northwest of Horseshoe, and at mile 4.6 (7.4 km).

DRAINAGE AREA.--66.7 mi² (172.8 km²).

PERIOD OF RECORD.--September 1924 to September 1926, October 1933 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 923: 1935, 1937, 1939. WSP 1003: 1938, 1940-42. WSP 1143: 1940(P). WSP 1276: 1926.

GAGE.--Water-stage recorder. Datum of gage is 2,088.47 ft (636.566 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to Oct. 1, 1926, nonrecording gage at site 500 ft (152 m) upstream at datum 2.97 ft (0.905 m) higher.

REMARKS.--Records good. City of Hendersonville diverted an average of 5.23 ft³/s (0.15 m³/s) from North Fork and Bradley Creek for municipal water supply.

AVERAGE DISCHARGE.--49 years, 171 ft³/s (4.843 m³/s), 34.82 in/yr (884 mm/yr) unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,400 ft³/s (379 m³/s) Aug. 30, 1940, gage height, 13.62 ft (4.151 m), from rating curve extended above 6,200 ft³/s (176 m³/s) on basis of slope-area measurement of peak flow; minimum, 16 ft³/s (0.45 m³/s) Dec. 24, 1943, gage height, 1.33 ft (0.405 m), result of freezeup; minimum daily, 18 ft³/s (0.51 m³/s) Sept. 30, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--The greatest flood since 1876 is probably that of Aug. 30, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	1100	*4480	127	*10.16	3.097	Apr 8	1815	1230	34.8	4.22	1.286
Nov 26	0230	3630	103	8.68	2.646	Apr 14	0900	2380	67.4	6.30	1.920
Mar 21	0730	1360	38.5	4.42	1.347						

Minimum daily discharge, 42 ft³/s (1.19 m³/s) Sept. 16; minimum gage height, 1.59 ft (0.485 m) Sept. 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	734	203	390	175	128	101	340	241	207	127	65	89
2	569	2300	358	165	120	97	308	233	193	121	66	70
3	464	789	333	159	115	101	285	227	182	128	62	80
4	437	528	320	165	120	105	268	222	171	131	59	60
5	418	430	306	159	131	149	247	214	164	139	58	57
6	361	379	295	150	131	128	234	208	160	114	60	58
7	327	341	281	152	126	118	226	204	157	105	63	54
8	300	316	266	159	121	158	577	201	150	102	55	47
9	280	302	254	158	127	139	541	191	142	98	56	46
10	267	455	246	155	125	127	399	184	139	100	57	59
11	252	421	239	196	116	118	344	180	135	111	57	56
12	241	395	233	234	119	117	391	177	129	96	61	49
13	229	358	230	196	112	137	473	176	129	90	73	48
14	216	327	220	255	114	141	1650	173	128	86	60	46
15	209	309	211	220	117	126	870	170	124	86	66	43
16	203	291	209	200	131	121	627	166	127	82	87	42
17	196	275	200	193	118	372	522	307	151	79	78	44
18	190	263	194	236	108	429	462	529	158	79	71	48
19	184	252	191	217	112	276	424	288	137	76	105	46
20	180	242	187	200	110	312	398	294	123	73	91	50
21	177	235	185	189	110	918	369	274	116	69	64	52
22	172	228	182	190	119	483	344	246	111	67	119	46
23	220	233	179	194	114	357	325	388	111	101	81	43
24	182	497	217	174	110	401	308	363	391	130	68	43
25	170	830	239	169	107	352	294	322	351	92	63	59
26	163	1890	193	162	104	304	307	281	233	82	57	66
27	159	741	182	158	101	273	295	250	184	79	54	49
28	155	568	175	154	103	468	272	232	160	92	50	66
29	160	481	171	149	100	492	264	236	147	91	49	241
30	191	426	176	147	---	435	253	241	135	72	54	191
31	194	---	174	148	---	389	---	219	---	68	67	---
TOTAL	8200	15305	7236	5578	3369	8244	12617	7637	4945	2966	2076	1948
MEAN	265	510	233	180	116	266	421	246	165	95.7	67.0	64.9
MAX	734	2300	390	255	131	918	1650	529	391	139	119	241
MIN	155	203	171	147	100	97	226	166	111	67	49	42
CFSM	3.97	7.65	3.49	2.70	1.74	3.99	6.31	3.69	2.47	1.44	1.00	.97
IN.	4.57	8.54	4.04	3.11	1.88	4.60	7.04	4.26	2.76	1.65	1.16	1.09

CAL YR 1979 TOTAL 110208 MEAN 302 MAX 2300 MIN 73 CFSM 4.53 IN 61.46
WTR YR 1980 TOTAL 80121 MEAN 219 MAX 2300 MIN 42 CFSM 3.28 IN 44.68

03448000 FRENCH BROAD RIVER AT BENT CREEK, N. C.

LOCATION.--Lat 35°30'07", long 82°35'35", Buncombe County, Hydrologic Unit 06010105, on left bank 50 ft (15 m) downstream from Bent Creek, 6.2 mi (10 km) upstream from Hominy Creek, 6.7 mi (10.8 km) south of Asheville, and at mile 157.7 (253.7 km).

DRAINAGE AREA.--676 mi² (1,751 km²).

PERIOD OF RECORD.--October 1933 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,995.91 ft (608.353 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority).

REMARKS.--Records good except those for period of questionable gage-height record, Apr. 12 to Aug. 20 and period of no gage-height record Aug. 22 to Sept. 17, which are fair. Suspended-sediment records for the current year are published on page 419 of this report. Some diurnal fluctuation at low flow caused by powerplant about 34 mi (55 km) above station.

AVERAGE DISCHARGE.--47 years, 1,717 ft³/s (48.63 m³/s), 34.49 in/yr (876 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,600 ft³/s (867 m³/s) Oct. 5, 1964, gage height, 15.80 ft (4.816 m); minimum, 230 ft³/s (6.5 m³/s) Oct. 4, 5, 10, 11, 12, 1954, gage height, 2.05 ft (0.625 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1791, 27.3 ft (8.32 m) July 15, 1916 (from floodmarks and studies by Tennessee Valley Authority). Flood in August 1928 reached a stage of about 16.1 ft (4.91 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct 1	0430	6870	195	6.61	2.015	Mar 21	1300	8900	252	7.67	2.338
Nov 2	1945	9280	263	7.85	2.393	Apr 15	0545	10300	292	8.33	2.539
Nov 26	1115	*10600	300	*8.44	2.573						

Minimum discharge, 494 ft³/s (14.0 m³/s) Sept. 23, gage height, 2.43 ft (0.741 m); minimum daily, 508 ft³/s (14.4 m³/s) Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6510	1690	3410	1650	1700	1320	3550	2230	2200	1550	960	830
2	5600	6690	3120	1640	1620	1350	3130	2150	2040	1470	950	800
3	4020	6800	2890	1630	1630	1330	2870	2110	1910	1590	981	980
4	3140	6500	2750	1630	1630	1350	2730	2070	1810	1530	881	920
5	3440	5850	2650	1630	1570	1500	2570	2010	1740	1700	858	840
6	2870	3430	2530	1620	1600	1690	2400	1990	1690	1450	850	750
7	2510	2670	2450	1600	1600	1590	2300	1930	1650	1320	860	670
8	2270	2420	2300	1610	1520	1860	3290	1900	1630	1250	820	620
9	2130	2320	2160	1620	1510	2320	5470	1830	1600	1200	800	610
10	2060	3270	2100	1600	1560	1930	5370	1780	1590	1150	787	700
11	1970	3810	2060	1690	1520	1710	4510	1740	1580	1400	759	680
12	1880	3430	2010	2710	1550	1630	3750	1710	1510	1250	765	640
13	1800	2950	1980	2190	1510	1660	4750	1700	1500	1150	790	600
14	1740	2620	2000	3050	1500	1810	9230	1650	1530	1090	780	570
15	1670	2400	1890	2880	1520	1680	10200	1770	1540	1050	800	550
16	1640	2260	1840	2330	1600	1630	9280	1660	1490	1040	1100	530
17	1630	2140	1810	2150	1630	2540	6910	2010	1570	1030	922	520
18	1630	2060	1740	2880	1510	4980	5190	5210	1660	1020	857	531
19	1630	1970	1720	3390	1430	4370	4070	5050	1700	1040	992	553
20	1630	1900	1690	2680	1430	3470	3610	3790	1690	970	1100	569
21	1630	1850	1670	2340	1430	7990	3350	4080	1550	920	976	578
22	1630	1820	1650	2170	1470	7380	3130	3060	1460	900	1100	538
23	1650	1820	1650	2410	1480	6450	2960	3420	1450	920	940	508
24	1670	2860	1680	2200	1470	5270	2810	4210	2670	1300	850	571
25	1630	4830	2200	2020	1460	4550	2700	3830	3490	1200	780	842
26	1610	9640	1910	1920	1420	3740	2730	3100	2770	1250	760	913
27	1560	9780	1710	1850	1380	3130	2710	2660	2000	1150	700	733
28	1560	8900	1660	1790	1340	4070	2550	2420	1700	1560	650	686
29	1570	6360	1640	1730	1340	5570	2420	2330	1630	1510	620	2030
30	1680	4400	1640	1690	---	5130	2330	2900	1620	1150	610	2350
31	1720	---	1670	1730	---	4300	---	2370	---	1020	660	---
TOTAL	69680	119440	64180	64030	43930	99300	122870	80670	53970	38130	26258	23212
MEAN	2248	3981	2070	2065	1515	3203	4096	2602	1799	1230	847	774
MAX	6510	9780	3410	3390	1700	7990	10200	5210	3490	1700	1100	2350
MIN	1560	1690	1640	1600	1340	1320	2300	1650	1450	900	610	508
CFSM	3.33	5.89	3.06	3.06	2.24	4.74	6.06	3.85	2.66	1.82	1.25	1.15
IN.	3.83	6.57	3.53	3.52	2.42	5.46	6.76	4.44	2.97	2.10	1.44	1.28

CAL YR 1979 TOTAL 1017930 MEAN 2789 MAX 18300 MIN 860 CFSM 4.13 IN 56.02
WTR YR 1980 TOTAL 805670 MEAN 2201 MAX 10200 MIN 508 CFSM 3.26 IN 44.34

03450000 BEETREE CREEK NEAR SWANNANOA, N. C.

LOCATION.--Lat 35°39'11", long 82°24'20", Buncombe County, Hydrologic Unit 06010105, on left bank 0.5 mi (0.8 km) downstream from Wolfe Branch, 0.8 mi (1.3 km) upstream from Beetree Reservoir dam, 3.8 mi (6.1 km) north of Swannanoa, and 4.8 mi (7.7 km) above mouth.

DRAINAGE AREA.--5.46 mi² (14.14 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1926 to September 1975, October 1979 to September 1980.

REVISED RECORDS.--WSP 823: Drainage area. WSP 893: 1928, 1936-37(M). WSP 953: 1929(M). WSP 1276: 1932.

GAGE.--Water-stage recorder and masonry control. Datum of gage is 2,728.39 ft (831.613 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--50 years (water years 1927-75, 1980), 10.7 ft³/s (0.303 m³/s), 26.61 in/yr (676 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,370 ft³/s (38.8 m³/s) Aug. 13, 1940, gage height, 6.20 ft (1.890 m), from rating curve extended above 240 ft³/s (6.80 m³/s) on basis of computation of peak flow over weir; minimum, 0.3 ft³/s (0.008 m³/s) Sept. 29, 30, Oct. 1, 1954, gage height, 0.26 ft (0.079 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.2 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	0745	298	8.44	3.98	1.213	Mar 21	0345	191	5.41	3.84	1.170
Nov 25	2400	*347	9.83	*4.12	1.256						

Minimum daily discharge, 1.0 ft³/s (0.028 m³/s) several days in September; minimum gage height, 1.52 ft (0.463 m) Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	9.7	32	12	8.0	8.8	28	11	12	6.4	2.8	1.5
2	35	152	27	10	7.5	9.4	24	10	9.4	6.0	3.3	1.5
3	31	83	23	10	6.9	8.0	21	9.8	8.1	10	3.6	1.5
4	28	44	22	9.8	7.2	7.2	20	9.3	7.2	9.6	2.7	1.8
5	27	27	20	8.6	12	8.3	16	8.9	6.5	7.6	2.4	1.5
6	24	20	18	8.1	8.5	7.3	14	8.6	6.1	7.4	2.0	1.3
7	21	16	16	8.3	8.0	7.0	13	8.7	6.0	6.1	1.8	1.1
8	19	14	14	8.9	7.5	11	25	8.1	5.7	5.6	1.6	1.0
9	17	13	13	8.9	7.5	9.2	35	7.6	5.3	5.4	1.6	1.0
10	16	59	12	8.6	7.0	8.2	28	7.5	5.1	6.7	1.6	2.6
11	15	61	11	18	7.0	7.4	23	7.4	4.9	18	2.0	1.1
12	14	51	11	23	6.5	6.9	30	7.2	4.8	7.3	1.9	1.0
13	13	36	10	18	6.5	8.8	40	6.9	4.7	6.3	1.5	1.0
14	12	27	9.8	27	6.5	8.4	93	6.7	4.5	6.1	1.4	1.0
15	11	22	9.0	21	6.7	7.4	62	6.6	4.1	5.7	1.4	1.0
16	10	20	8.9	16	15	6.8	48	6.5	11	5.2	1.4	1.0
17	9.6	18	8.5	16	9.3	28	41	11	15	4.7	1.5	1.0
18	8.8	16	8.3	35	8.5	46	36	26	8.8	4.4	1.5	1.4
19	8.4	15	8.0	33	8.1	35	31	13	6.5	4.1	1.8	1.0
20	8.1	14	7.8	27	8.3	44	27	27	5.8	3.9	1.8	1.2
21	7.6	13	7.6	22	11	124	23	27	5.3	3.6	2.6	1.5
22	7.1	12	7.5	21	15	67	20	21	5.0	3.4	5.0	1.0
23	10	12	7.4	18	13	51	18	31	4.7	3.4	2.2	1.0
24	7.9	61	12	15	12	55	15	30	39	3.3	1.9	1.4
25	7.3	106	11	14	11	50	14	31	44	3.1	1.8	2.1
26	7.0	167	9.5	12	10	43	15	25	24	3.5	1.7	2.1
27	7.0	97	9.6	11	10	37	17	20	16	3.9	1.5	1.5
28	6.9	78	9.5	9.9	11	42	13	16	11	9.7	1.5	2.2
29	7.2	54	9.1	8.8	10	43	13	14	8.7	4.4	1.5	3.7
30	8.2	40	12	8.5	---	38	12	11	7.4	3.6	1.5	3.1
31	8.7	---	12	8.0	---	32	---	14	---	3.0	1.6	---
TOTAL	453.8	1357.7	396.5	475.4	265.5	865.1	815	447.8	306.6	181.4	62.4	45.1
MEAN	14.6	45.3	12.8	15.3	9.16	27.9	27.2	14.4	10.2	5.85	2.01	1.50
MAX	41	167	32	35	15	124	93	31	44	18	5.0	3.7
MIN	6.9	9.7	7.4	8.0	6.5	6.8	12	6.5	4.1	3.0	1.4	1.0
CFSM	2.67	8.30	2.34	2.80	1.68	5.11	4.98	2.64	1.87	1.07	.37	.28
IN.	3.09	9.25	2.70	3.24	1.81	5.89	5.55	3.05	2.09	1.24	.43	.31

WTR YR 1980 TOTAL 5672.3 MEAN 15.5 MAX 167 MIN 1.0 CFSM 2.84 IN 38.64

03450000 BEETREE CREEK NEAR SWANNANOA, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974, 1976-78, October 1979 to September 1980.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1979 to September 1980.
WATER TEMPERATURES: October 1979 to September 1980.

INSTRUMENTATION.--Water-quality monitor since October 1979. ISCO sampler since August 1980.

REMARKS.--Basin above station is 100 percent forested. Station is part of district's Natural Quality Network for determining the quality of streams relatively unaffected by man.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 24 micromhos May 15, Aug. 2, 3; minimum, 15 micromhos Nov. 8, 17, Dec. 5-12, 14-21, 24-28, July 11.
WATER TEMPERATURES: Maximum, 22.5°C July 17-21, Aug. 16; minimum, 0.0°C on several days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
OCT											
17...	1000	9.5	16	7.3	10.0	5	8.8	--	--	--	4
NOV											
02...	1000	249	20	7.3	11.5	10	9.2	--	--	--	7
02...	1445	142	20	7.2	13.5	5	7.7	--	--	--	5
MAR											
11...	1030	12	17	7.3	4.5	5	11.5	10	1	33	4
JUN											
24...	1130	51	17	7.1	15.0	5	7.8	980	30	12000	4
JUL											
01...	1030	6.5	18	6.9	14.0	0	7.8	110	5	1900	4
21...	1230	3.8	18	6.8	19.5	0	7.1	120	1	8000	5
AUG											
22...	0400	4.0	22	--	--	4	--	--	--	--	6
22...	0500	7.0	22	--	--	3	--	--	--	--	8
22...	0530	8.5	22	--	--	--	--	--	--	--	--
22...	0600	9.0	21	--	--	5	--	--	--	--	7
22...	0930	6.3	22	--	--	3	--	--	--	--	6

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)
OCT											
17...	0	.9	.4	1.2	48	.3	.5	14	0	11	1.1
NOV											
02...	2	1.4	.8	.9	20	.2	1.0	6	0	6	.5
02...	1	1.2	.6	1.0	35	.2	.8	6	0	5	.6
MAR											
11...	0	.9	.4	1.1	35	.2	.4	9	0	7	.7
JUN											
24...	3	.9	.4	1.0	30	.2	.9	6	0	5	.2
JUL											
01...	3	1.0	.4	1.2	35	.3	.5	5	0	4	.2
21...	0	1.1	.6	1.4	34	.3	.6	7	0	6	1.9
AUG											
22...	0	1.6	.6	1.5	30	.3	.8	--	--	*10	--
22...	1	1.9	.7	1.4	26	.2	.8	--	--	* 7	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	0	1.6	.7	1.8	32	.3	1.0	--	--	* 8	--
22...	0	1.3	.6	1.2	28	.2	.8	--	--	* 8	--

* Lab alkalinity.

03450000 BEETREE CREEK NEAR SWANNANOA, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT											
17...	1.1	.8	.0	8.3	16	21	.02	.41	.13	.00	.13
NOV											
02...	3.9	.8	.0	5.4	22	19	.03	14.8	.39	.00	.39
02...	3.5	.6	.0	6.2	19	18	.03	7.28	.30	.00	.30
MAR											
11...	2.3	1.3	.0	7.2	20	19	.03	.65	.25	.00	.25
JUN											
24...	3.0	1.1	.0	6.3	30	16	.04	4.13	.25	.00	.25
JUL											
01...	2.5	.7	.0	8.1	28	16	.04	.49	.21	.00	.21
21...	2.9	.7	.0	9.6	38	22	.05	.39	.29	.00	.29
AUG											
22...	2.1	1.5	.1	--	--	--	--	--	.36	.00	.36
22...	2.0	.8	.1	9.7	12	22	.02	.23	.35	.00	.35
22...	--	--	--	--	--	--	--	--	.36	.00	.36
22...	2.0	.7	.1	11	13	24	.02	.32	.36	.00	.36
22...	2.2	.7	.1	9.5	15	21	.02	.26	.36	.01	.37

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT											
17...	.14	--	.00	.02	.00	.03	.46	.00	.46	.45	.01
NOV											
02...	.39	--	.01	.03	.01	.04	.38	.10	.39	.26	.13
02...	.30	--	.00	.04	.00	.05	.24	.14	.24	.06	.18
MAR											
11...	.28	--	.02	.01	.02	.01	.03	.07	.05	.00	.08
JUN											
24...	.28	--	.00	.11	.00	.14	.18	.10	.18	.00	.21
JUL											
01...	.22	--	.00	.03	.00	.04	.26	.08	.26	.15	.11
21...	.32	1.0	.00	.07	.00	.09	.20	.08	.20	.05	.15
AUG											
22...	.42	--	.01	--	.01	--	.07	--	.08	--	--
22...	.38	--	.01	.05	.01	.06	.03	--	.04	--	--
22...	.38	--	.00	.05	.00	.06	.23	.09	.23	.09	.14
22...	.37	--	.02	--	.02	--	.41	--	.43	.14	.29
22...	.37	--	.01	.00	.01	.00	.11	--	.12	--	--

DATE	NITRO-GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	NITRO-GEN, TOT IN BOT-TOM MA-TERIAL (MG/KG AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS PO4)
OCT											
17...	--	.59	2.6	--	.000	.03	.00	.000	.01	.01	.03
NOV											
02...	--	.78	3.5	--	.030	.00	.09	.010	.00	.00	.00
02...	--	.54	2.4	--	.030	.00	.09	.000	.00	.00	.00
MAR											
11...	--	.30	1.3	--	.000	.00	.00	.010	.00	.05	.15
JUN											
24...	--	.43	1.9	--	.020	.00	.06	--	.00	--	--
JUL											
01...	--	.47	2.1	--	.080	.06	.25	.020	.02	.06	.18
21...	500	.49	2.2	501	.010	.00	.03	--	.00	--	--
AUG											
22...	--	.44	1.9	--	.020	.03	.06	.050	.01	.03	.09
22...	--	.39	1.7	--	.020	.00	.06	.010	.00	.01	.03
22...	--	.59	2.6	--	.050	.00	.15	.010	.00	.01	.03
22...	--	.79	3.5	--	.050	.00	.15	.020	.00	.01	.03
22...	--	.49	2.2	--	.020	.03	.06	.020	.01	.01	.03

03450000 BEETREE CREEK NEAR SWANNANOA, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)
OCT											
17...	--	3	2	1	--	0	0	0	--	10	10
NOV											
02...	--	2	0	2	--	0	0	1	--	30	8
02...	--	0	--	--	--	0	--	--	--	40	9
MAR											
11...	--	2	0	2	--	0	0	0	--	20	20
JUN											
24...	--	--	--	--	--	--	--	--	--	40	6
JUL											
01...	--	--	--	--	--	--	--	--	--	--	--
21...	150	--	--	--	0	--	--	--	<10	50	15
AUG											
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--

DATE	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)
OCT											
17...	0	--	0	0	0	--	1	0	1	--	80
NOV											
02...	22	--	1	1	0	--	3	0	3	--	1600
02...	31	--	0	--	--	--	1	0	3	--	720
MAR											
11...	0	--	0	0	0	--	1	0	1	--	20
JUN											
24...	34	--	--	--	--	--	2	2	0	--	700
JUL											
01...	--	--	--	--	--	--	--	--	--	--	--
21...	35	10	--	--	--	<10	7	4	3	<10	170
AUG											
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--

03450000 BEETREE CREEK NEAR SWANNANOA, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT											
17...	50	30	--	0	0	0	--	10	8	2	--
NOV											
02...	1600	50	--	0	0	1	--	20	20	5	--
02...	690	30	--	0	0	0	--	20	--	--	--
MAR											
11...	10	10	--	0	0	0	--	10	9	1	--
JUN											
24...	680	20	--	0	0	0	--	--	--	--	--
JUL											
01...	--	--	--	--	--	--	--	--	--	--	--
21...	160	10	14000	2	1	1	20	--	--	--	220
AUG											
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)
OCT											
17...	.5	.3	.2	--	0	0	0	--	10	10	0
NOV											
02...	<.1	.0	<.1	--	0	0	0	--	10	10	0
02...	.0	--	--	--	0	--	--	--	10	10	0
MAR											
11...	<.1	.0	<.1	--	0	0	0	--	10	10	0
JUN											
24...	--	--	--	--	--	--	--	--	10	10	0
JUL											
01...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	.00	--	--	--	0	--	--	4

DATE	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)	PERIPHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERIPHYTON BIOMASS ASH WEIGHT G/SQ M	LENGTH OF EXPOSURE (DAYS)
OCT										
17...	--	9.8	.1	--	--	--	.00	--	--	--
NOV										
02...	--	4.5	2.5	--	--	--	.00	--	--	--
02...	--	2.4	.6	--	--	--	.00	--	--	--
MAR										
11...	--	1.0	.2	--	--	--	.00	.470	.240	24
JUN										
24...	--	1.7	1.1	--	--	--	.00	--	--	--
JUL										
01...	--	.9	.1	--	--	--	.00	--	--	--
21...	33	.8	.0	2.9	.0	2.9	.00	--	--	--

03450000 BEETREE CREEK NEAR SWANNANOA, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE	OCT 17,79	NOV 2,79	MAR 11,80	JUL 21,80
TIME	1000	1000	1030	1230
TOTAL CELLS/ML	21	670	0	26
DIVERSITY: DIVISION	0.3	0.3	0.0	0.0
.CLASS	0.3	0.3	0.0	0.0
..ORDER	0.3	0.4	0.0	0.0
...FAMILY	1.5	0.4	0.0	0.0
....GENUS	1.5	0.4	0.0	0.0

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...OOCYSTACEAE								
....ANKISTRODESMUS	1	6	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	--	-	13	2	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	13#	61	--	-	--	-	26#	100
...FRAGILARIACEAE								
....FRAGILARIA	--	-	13	2	--	-	--	-
...GOMPHONEMATACEAE								
....GOMPHONEMA	2	11	13	2	--	-	--	-
...TABELLARIACEAE								
....TABELLARIA	5#	22	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..HORMOGONALES								
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	630#	94	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

03450000 BEETREE CREEK NEAR SWANNANOA, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	16	19	18	18	16	16	16	16	16	16
2	---	---	16	21	18	20	16	16	16	16	16	16
3	---	---	16	18	17	18	16	16	16	17	16	16
4	---	---	17	17	17	17	16	16	16	16	16	16
5	---	---	17	18	16	17	16	15	16	16	16	16
6	---	---	17	16	16	16	15	15	15	16	16	16
7	---	---	17	16	16	16	15	15	15	16	16	16
8	---	---	17	16	15	16	15	15	15	16	16	16
9	---	---	17	16	16	16	15	15	15	17	16	16
10	---	---	18	17	16	17	15	15	15	16	16	16
11	---	---	18	17	17	17	15	15	15	17	16	16
12	---	---	18	17	17	17	16	15	15	18	18	18
13	---	---	18	17	16	16	16	16	16	18	17	18
14	---	---	18	16	16	16	16	15	16	18	17	17
15	---	---	18	16	16	16	16	15	15	18	17	18
16	---	---	18	16	16	16	16	15	15	18	17	18
17	---	---	18	16	15	16	16	15	15	18	18	18
18	---	---	18	16	16	16	15	15	15	18	17	18
19	17	16	17	16	16	16	16	15	15	18	18	18
20	18	16	17	16	16	16	16	15	16	18	17	18
21	18	17	17	16	16	16	16	15	16	18	17	17
22	19	17	18	17	16	16	16	16	16	17	17	17
23	20	18	19	17	16	16	17	16	16	17	17	17
24	19	18	18	19	17	18	17	15	16	17	17	17
25	18	17	17	19	17	18	15	15	15	18	17	17
26	18	17	17	18	17	18	15	15	15	18	17	17
27	17	16	17	17	17	17	16	15	16	18	17	18
28	17	16	17	17	16	17	16	15	16	18	17	18
29	19	17	17	16	16	16	16	16	16	17	16	17
30	19	18	18	16	16	16	16	16	16	17	16	16
31	18	18	18	---	---	---	16	16	16	17	16	16
MONTH	20	16	17	21	15	17	17	15	16	18	16	17
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	17	16	17	18	18	18	19	17	18	20	18	19
2	17	16	17	18	17	18	20	17	18	21	18	19
3	17	16	16	19	17	18	20	17	19	21	18	20
4	17	16	17	18	17	18	20	18	19	22	18	20
5	17	16	17	19	18	18	19	17	19	22	19	20
6	17	16	16	19	18	18	19	17	18	22	19	20
7	17	16	17	19	18	19	19	17	18	22	19	21
8	17	16	17	19	18	19	19	17	18	21	19	20
9	17	16	17	20	19	19	19	18	19	21	19	20
10	17	16	17	20	19	19	19	18	19	21	19	20
11	17	16	17	19	18	19	19	18	19	22	19	21
12	17	17	17	19	18	19	19	18	19	23	19	21
13	17	17	17	19	17	18	19	18	19	23	19	22
14	17	17	17	19	18	19	19	19	19	23	19	22
15	17	17	17	19	18	19	19	18	18	24	19	22
16	18	17	18	19	18	19	19	18	18	23	19	21
17	18	18	18	21	18	19	19	17	18	22	19	21
18	19	17	18	21	19	20	19	17	18	22	20	21
19	18	17	18	19	19	19	19	17	18	22	20	22
20	18	17	18	19	18	19	20	17	19	22	20	21
21	18	17	18	19	18	19	20	18	19	21	20	21
22	19	18	18	18	18	18	20	17	19	22	19	21
23	19	18	19	18	17	18	20	18	19	22	20	21
24	19	18	19	18	17	18	21	18	19	21	20	21
25	19	18	19	18	17	18	20	18	19	21	20	21
26	19	18	19	19	17	18	21	19	20	21	20	21
27	19	17	19	19	17	18	21	19	20	20	18	19
28	19	18	19	18	17	18	21	18	19	20	18	18
29	18	18	18	19	17	18	21	18	19	21	19	20
30	---	---	---	19	17	19	20	18	19	20	20	20
31	---	---	---	19	17	18	---	---	---	20	19	20
MONTH	19	16	18	21	17	19	21	17	19	24	18	21

03450000 BEETREE CREEK NEAR SWANNANOA, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	20	19	20	19	19	19	22	21	22	22	22	22
2	20	19	20	20	19	20	24	21	22	22	22	22
3	20	19	20	20	19	20	24	21	23	22	22	22
4	19	19	19	20	19	19	22	21	22	22	22	22
5	20	19	19	20	19	19	22	22	22	22	22	22
6	19	18	18	20	19	20	22	22	22	22	22	22
7	20	18	19	20	19	20	22	22	22	22	22	22
8	20	19	20	21	19	20	22	22	22	22	22	22
9	20	19	19	22	20	21	22	22	22	22	22	22
10	19	19	19	22	20	21	22	22	22	22	22	22
11	19	18	18	17	15	17	22	22	22	22	21	22
12	20	18	19	18	17	18	22	22	22	22	21	22
13	21	18	20	19	18	18	22	22	22	22	22	22
14	21	19	20	19	18	19	22	22	22	22	22	22
15	21	19	20	19	18	18	22	22	22	22	22	22
16	22	19	21	19	18	19	22	22	22	22	22	22
17	21	21	21	19	19	19	22	21	22	23	22	22
18	21	19	20	19	19	19	22	21	22	23	22	22
19	21	20	20	20	19	19	22	22	22	22	22	22
20	20	19	20	21	19	20	22	22	22	23	22	22
21	20	19	20	20	19	19	22	22	22	22	22	22
22	21	19	20	22	19	20	22	22	22	23	22	22
23	21	20	20	21	20	21	22	22	22	23	22	23
24	21	18	19	21	19	20	22	22	22	23	22	23
25	19	18	18	22	21	21	22	21	21	23	22	23
26	19	18	18	22	21	22	21	21	21	22	22	22
27	19	18	19	22	22	22	21	21	21	22	22	22
28	19	19	19	22	22	22	22	21	21	22	20	21
29	19	19	19	22	20	21	22	21	21	20	19	20
30	19	19	19	21	20	21	22	21	22	20	19	20
31	---	---	---	22	21	21	22	22	22	---	---	---
MONTH	22	18	19	22	15	20	24	21	22	23	19	22
YEAR	24	15	19									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	13.5	12.0	13.0	6.0	.0	3.0	7.0	5.5	6.0
2	---	---	---	14.5	12.5	13.5	.5	.0	.0	6.0	4.0	5.0
3	---	---	---	12.5	9.0	10.5	1.5	.0	.5	6.0	4.5	5.5
4	---	---	---	10.5	8.0	9.0	5.5	.0	3.0	5.5	4.5	5.0
5	---	---	---	10.0	8.0	9.0	7.0	.0	3.5	4.5	1.5	3.0
6	---	---	---	10.5	8.0	9.0	8.0	2.5	6.5	3.0	1.0	2.0
7	---	---	---	10.0	8.0	9.0	8.0	6.0	7.0	3.5	2.0	2.5
8	---	---	---	10.5	8.0	9.0	6.5	3.0	5.5	5.0	3.5	4.5
9	---	---	---	11.0	9.5	10.0	6.0	1.5	4.5	7.5	5.0	6.0
10	---	---	---	12.5	11.0	12.0	7.5	3.5	5.5	5.5	4.5	5.0
11	---	---	---	12.0	11.5	11.5	8.0	5.5	6.5	8.0	5.5	7.0
12	---	---	---	11.5	10.5	11.0	10.0	7.5	8.5	6.5	4.5	5.0
13	---	---	---	11.0	9.0	10.5	10.5	9.5	10.0	5.5	3.5	4.5
14	---	---	---	9.0	7.5	8.0	10.0	7.0	8.5	7.5	5.5	6.5
15	---	---	---	8.0	6.0	7.5	6.5	5.0	6.0	7.5	5.5	6.5
16	---	---	---	9.0	7.5	8.0	8.5	6.0	7.5	8.0	6.5	7.5
17	---	---	---	9.5	7.5	8.5	7.5	.0	3.0	8.5	8.0	8.0
18	---	---	---	10.5	8.0	9.0	4.0	.0	2.0	9.0	7.5	8.5
19	14.0	13.0	14.0	10.5	8.0	9.0	5.5	.5	3.5	8.0	6.0	7.0
20	15.5	13.5	14.5	11.5	8.5	10.0	6.0	3.5	5.0	8.0	6.0	7.0
21	16.0	14.5	15.5	12.0	10.0	11.0	5.5	3.5	4.5	7.0	5.5	6.5
22	17.0	15.0	15.5	12.0	10.0	11.0	7.0	5.0	6.0	8.0	7.0	7.5
23	16.5	12.5	15.0	12.5	11.5	12.0	8.0	6.5	7.5	7.5	2.5	5.0
24	12.5	10.5	11.5	13.5	13.0	13.0	9.5	8.0	8.5	5.0	2.0	3.5
25	11.0	9.0	10.0	13.5	12.5	13.0	8.5	4.5	6.5	6.5	4.5	5.5
26	11.0	9.0	9.5	12.5	10.0	11.5	6.0	4.0	5.0	7.0	6.0	6.5
27	10.5	8.0	9.0	11.0	9.0	10.0	6.5	4.5	5.5	7.0	6.0	6.5
28	12.0	8.5	10.5	10.5	7.5	9.5	6.0	4.5	5.5	7.0	5.5	6.0
29	12.0	11.0	11.5	7.5	.0	4.5	7.0	4.5	6.0	5.5	3.5	5.0
30	13.0	12.0	12.5	5.5	.0	2.5	7.0	5.5	6.5	3.0	2.5	3.0
31	13.0	12.5	12.5	---	---	---	7.5	6.0	7.0	3.0	.5	2.0
MONTH	17.0	8.0	12.5	14.5	.0	10.0	10.5	.0	5.5	9.0	.5	5.5

03450000 BEETREE CREEK NEAR SWANNANOA, N. C.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.5	.0	.5	4.5	.5	2.5	11.5	7.5	9.5	13.0	8.5	10.5
2	1.0	.0	.5	1.0	.0	.5	12.0	8.5	10.0	12.0	10.0	11.0
3	1.0	.0	.5	1.0	.0	.5	12.0	9.0	10.5	13.5	10.5	12.0
4	1.0	.0	.5	3.0	.5	1.5	14.0	9.0	11.5	14.0	10.5	12.5
5	1.0	.0	.5	5.0	3.0	4.0	11.0	7.5	8.5	13.0	11.0	12.5
6	1.0	.5	1.0	7.5	3.0	5.5	11.0	6.5	8.5	15.0	11.5	13.0
7	2.5	.0	1.0	7.5	5.0	6.5	10.0	8.5	9.5	14.5	12.5	13.5
8	2.0	.0	1.5	10.5	7.5	9.0	11.5	10.0	11.0	13.5	11.5	13.0
9	2.0	1.5	1.5	10.5	7.5	8.5	12.5	9.0	10.5	13.0	10.0	11.5
10	3.0	1.0	2.0	9.5	6.0	7.5	12.0	8.5	10.0	13.5	10.0	11.5
11	3.0	.0	1.0	8.0	5.0	6.5	13.0	8.5	10.5	15.0	11.0	13.0
12	2.5	.0	1.0	5.0	4.5	4.5	11.0	10.5	10.5	16.0	13.5	14.5
13	3.0	.0	1.5	7.5	5.0	6.0	11.5	10.5	11.0	16.0	14.5	15.0
14	4.0	.0	2.0	7.0	4.0	5.0	12.5	8.5	11.0	16.0	14.5	15.0
15	5.0	1.0	3.5	8.0	3.0	5.5	8.5	7.5	8.0	15.5	14.0	14.5
16	5.0	.5	3.5	8.0	5.0	6.5	10.5	7.5	8.5	14.5	14.0	14.0
17	2.5	.0	1.0	8.5	7.5	8.0	11.0	6.5	8.5	14.0	13.0	13.5
18	1.5	.0	1.0	8.5	6.0	7.0	12.5	8.0	10.0	15.5	13.0	14.0
19	3.5	.0	2.0	8.5	5.5	7.0	11.5	9.0	10.5	15.0	14.0	14.5
20	4.5	3.0	3.5	8.5	7.5	8.0	12.0	9.0	10.5	14.5	14.0	14.0
21	7.5	4.0	6.0	9.0	5.5	7.5	13.0	9.5	11.0	15.0	13.5	14.0
22	9.0	7.0	8.0	8.0	5.0	6.5	14.0	9.0	11.5	15.0	13.5	14.0
23	10.0	7.5	8.5	8.5	5.5	7.0	16.0	11.0	13.0	15.0	14.0	14.5
24	9.5	7.5	8.0	8.5	7.5	8.0	16.0	12.0	14.0	15.0	14.0	14.5
25	8.5	4.5	7.0	10.0	7.5	8.5	16.0	13.0	14.5	14.5	14.0	14.0
26	4.0	1.0	2.5	9.0	7.5	8.0	14.5	13.5	14.0	15.0	14.0	14.5
27	5.0	1.0	2.5	10.5	7.0	8.5	15.5	12.0	14.0	14.5	13.5	14.0
28	7.0	3.0	5.0	8.5	7.5	8.0	11.5	10.0	10.5	16.0	13.5	14.5
29	7.0	4.5	5.5	11.5	8.0	9.5	10.5	9.0	10.0	15.0	13.0	14.0
30	---	---	---	11.0	9.0	10.0	10.0	8.5	9.0	16.0	13.5	14.5
31	---	---	---	11.0	8.5	9.5	---	---	---	15.5	13.0	14.5
MONTH	10.0	.0	3.0	11.5	.0	6.5	16.0	6.5	10.5	16.0	8.5	13.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	16.0	14.0	15.0	17.5	15.5	16.5	21.0	19.0	20.0	20.0	18.0	19.0
2	16.5	14.0	15.0	18.5	16.0	17.5	21.5	19.0	20.0	20.5	18.5	19.5
3	16.0	14.5	15.5	19.0	17.5	18.0	21.5	19.0	20.0	21.0	18.5	20.0
4	16.5	14.5	15.5	19.0	17.5	18.0	21.5	19.0	20.0	20.5	19.0	19.5
5	16.0	14.5	15.5	20.0	17.5	19.0	21.5	18.5	20.0	20.5	18.5	19.5
6	17.0	15.0	16.0	20.5	18.5	19.5	21.5	18.5	20.0	21.0	18.5	20.0
7	18.0	16.0	17.0	19.5	17.5	18.5	21.5	19.0	20.5	20.5	18.5	19.5
8	18.5	16.5	17.5	20.0	17.0	18.5	22.0	19.0	20.5	20.0	17.5	18.5
9	17.0	15.0	16.0	21.0	18.5	19.5	21.5	19.0	20.5	20.0	17.5	19.0
10	16.0	14.5	15.0	21.5	19.0	20.0	21.5	19.5	20.5	20.0	18.0	19.0
11	16.0	15.0	15.5	21.0	18.5	19.5	22.0	19.5	21.0	19.0	16.0	17.5
12	16.0	14.0	15.5	21.0	18.5	20.0	22.0	19.5	20.5	19.0	17.0	18.0
13	16.0	15.0	15.5	21.5	19.0	20.0	21.0	18.5	19.5	19.5	17.0	18.5
14	16.5	15.0	15.5	21.0	19.5	20.5	21.5	19.0	20.0	19.5	17.0	18.5
15	18.0	15.5	16.5	22.0	19.5	21.0	21.5	19.0	20.5	21.0	17.5	19.0
16	18.5	16.5	17.5	22.0	19.5	21.0	22.5	19.5	20.5	19.5	17.5	18.5
17	16.5	16.0	16.5	22.5	19.0	21.0	21.0	19.5	20.5	19.5	17.5	18.5
18	17.0	15.5	16.5	22.5	20.0	21.0	20.5	18.5	19.5	19.5	17.5	18.5
19	17.0	15.5	16.5	22.5	19.5	21.0	21.5	19.0	20.0	19.5	17.5	18.5
20	17.5	15.5	16.0	22.5	19.5	21.0	21.5	19.0	20.5	20.0	18.5	19.0
21	16.0	15.0	15.5	22.5	20.0	20.5	21.0	19.0	20.0	20.5	18.5	19.5
22	17.0	15.0	16.0	21.5	19.5	20.5	22.0	19.5	20.5	20.5	18.5	19.5
23	17.0	16.0	16.5	20.5	19.0	20.0	21.0	19.0	20.0	21.0	19.0	20.0
24	17.0	15.5	16.0	21.5	19.0	19.5	20.5	18.5	19.5	21.0	19.0	19.5
25	15.5	15.0	15.5	21.5	19.0	20.0	20.0	18.5	19.0	20.5	19.0	19.5
26	17.0	15.0	15.5	21.0	19.0	19.5	19.5	17.0	18.0	19.5	17.5	18.5
27	18.0	15.5	16.5	20.0	18.5	19.0	19.5	17.0	18.5	17.0	15.0	16.0
28	18.5	16.0	17.0	20.5	18.5	19.5	19.0	17.0	18.5	15.5	14.0	15.0
29	18.5	17.0	18.0	20.0	18.0	19.0	19.0	17.5	18.5	15.0	14.0	14.5
30	18.5	17.0	17.5	20.5	18.0	19.0	19.5	18.0	18.5	15.5	14.0	15.0
31	---	---	---	21.0	18.5	19.5	20.0	18.0	19.0	---	---	---
MONTH	18.5	14.0	16.0	22.5	15.5	19.5	22.5	17.0	20.0	21.0	14.0	18.5
YEAR	22.5	.0	11.5									

03450000 BEETREE CREEK NEAR SWANNANOA, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
01...	1245	46	3	.37
04...	1400	28	2	.15
17...	1000	9.5	2	.05
NOV				
02...	1000	249	88	59
02...	1215	225	52	32
02...	1445	142	19	7.3
19...	1100	15	2	.08
DEC				
19...	1400	8.1	1	.02
JAN				
18...	1215	46	23	2.9
MAR				
11...	1030	12	2	.06
17...	1030	8.5	2	.05
17...	1210	15	9	.36
17...	1415	40	37	4.0
19...	1100	30	2	.16
21...	0950	122	20	6.6
21...	1100	122	10	3.3
28...	0910	37	2	.20
APR				
07...	1515	13	30	1.1
08...	1425	38	28	2.9
08...	1500	45	11	1.3
30...	1100	12	2	.06
MAY				
16...	1030	6.4	1	.02
JUN				
11...	1415	5.0	2	.03
24...	1130	51	14	1.9
JUL				
01...	1030	6.5	1	.02
21...	1230	3.8	3	.03
29...	1600	4.2	1	.01
AUG				
08...	1325	1.9	1	.01
22...	0930	6.3	6	.10
SEP				
03...	1040	1.5	1	.00

03451000 SWANNANOA RIVER AT BILTMORE, N. C.

LOCATION.--Lat 35°34'06", long 82°32'42", Buncombe County, Hydrologic Unit 06010105, on left bank at Biltmore, 100 ft (30.5 m) downstream from Biltmore Avenue Bridge, 200 ft (61 m) upstream from Southern Railway bridge, and 1.6 mi (2.6 km) upstream from mouth.

DRAINAGE AREA.--130 mi² (337 km²).

PERIOD OF RECORD.--October 1920 to September 1926, May 1934 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 803: 1921(M), 1923(M), 1925(M). WSP 823: Drainage area. WSP 1306: 1921(M), 1924(M), 1926(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,976.58 ft (602.462 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Dec. 1, 1920, to Sept. 30, 1926, nonrecording gage at site 100 ft (30.5 m) upstream at same datum.

REMARKS.--Records good. Considerable regulation by Lake Craig 3.6 mi (5.8 km) above station from 1925 to 1950 (reservoir silted). No diversion from Beetree Reservoir above station by city of Asheville for water supply since June 1963. City of Asheville diverted an average of 33.2 ft³/s (0.94 m³/s) for water supply from Burnett Lake on North Fork Swannanoa River 20 mi (32 km) above station (see p. 401); an average of 36.4 ft³/s (1.03 m³/s) was discharged as sewage effluent into the French Broad River below station. Textile mills, the town of Black Mountain, and recreational camps diverted about 8 ft³/s (0.23 m³/s) above station, of which about half was discharged into the French Broad River below station. Complete record of diversions and return water not available. Suspended-sediment records for the current year are published on page 419 of this report.

AVERAGE DISCHARGE.--53 years (1920-26, 1933-80) 164 ft³/s (4.644 m³/s) unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft³/s (521 m³/s) Aug. 13, 1940, gage height, 19.00 ft (5.791 m), from rating curve extended above 9,100 ft³/s (258 m³/s) on basis of computation of peak flow over dam 3.6 mi (5.8 km) above station; minimum, 1.1 ft³/s (0.031 m³/s) Oct. 9, 14, 15, 1941; minimum daily, 1.2 ft³/s (0.034 m³/s) Oct. 14, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed, 26 ft (7.9 m), discharge, 40,000 ft³/s (1,130 m³/s) in April 1791, from studies by Tennessee Valley Authority. Flood of July 1916 reached a stage of 20.7 ft (6.31 m), discharge, 23,000 ft³/s (651 m³/s), from flood profile by Tennessee Valley Authority. Flood of Aug. 16, 1928, reached a stage of 18.74 ft (5.712 m), from floodmarks, discharge, 17,800 ft³/s (504 m³/s). High stages are subject to backwater from French Broad River.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,560 ft³/s (129 m³/s) Nov. 2, gage height, 10.44 ft (3.182 m); minimum daily discharge, 29 ft³/s (0.82 m³/s) Sept. 16; minimum gage height, 1.28 ft (0.390 m) Sept. 16, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1060	117	377	174	157	116	362	207	183	97	57	43
2	632	2870	335	165	149	123	323	195	156	91	61	38
3	473	1200	300	152	147	118	296	193	141	130	64	63
4	427	612	276	152	138	117	278	192	125	131	60	50
5	446	433	260	151	131	136	261	179	117	112	52	43
6	341	345	246	144	138	123	241	175	114	102	49	46
7	295	293	229	139	134	119	240	174	118	86	48	43
8	248	257	215	137	127	142	426	179	113	85	46	33
9	225	237	205	135	134	156	523	158	98	86	47	33
10	214	592	194	131	139	147	411	154	96	93	55	69
11	195	630	183	183	127	138	348	155	97	141	49	50
12	181	543	181	272	126	129	414	143	93	90	44	38
13	166	442	179	241	120	148	561	139	94	84	40	37
14	159	368	173	340	122	166	1770	134	89	76	39	39
15	146	317	166	294	128	158	1060	133	91	71	36	33
16	139	283	166	260	168	151	701	130	85	67	54	29
17	129	260	158	255	158	405	542	216	186	64	54	38
18	127	244	149	445	135	737	464	403	175	62	42	39
19	119	222	145	470	133	475	405	192	127	65	45	37
20	117	207	140	379	133	537	361	302	95	66	44	47
21	118	198	136	312	134	2020	320	286	91	58	48	45
22	110	189	140	286	143	978	296	231	90	56	93	36
23	158	185	142	284	142	631	275	335	83	57	50	65
24	121	410	174	243	137	705	255	396	300	60	52	52
25	113	881	220	223	133	597	242	354	248	55	49	60
26	107	3010	183	208	132	489	264	293	189	56	39	48
27	108	1110	162	203	126	411	275	249	162	74	40	39
28	110	695	155	188	123	565	234	215	136	159	37	97
29	107	532	153	175	116	593	226	209	120	110	36	132
30	127	436	170	172	---	504	219	181	108	69	38	91
31	116	---	171	180	---	424	---	163	---	60	56	---
TOTAL	7134	18118	6083	7093	3930	12258	12593	6665	3920	2613	1524	1513
MEAN	230	604	196	229	136	395	420	215	131	84.3	49.2	50.4
MAX	1060	3010	377	470	168	2020	1770	403	300	159	93	132
MIN	107	117	136	131	116	116	219	130	83	55	36	29

CAL YR 1979 TOTAL 114616 MEAN 314 MAX 3010 MIN 52
WTR YR 1980 TOTAL 83444 MEAN 228 MAX 3010 MIN 29

03451500 FRENCH BROAD RIVER AT ASHEVILLE, N. C.

LOCATION.--Lat 35°36'32", long 82°34'41", Buncombe County, Hydrologic Unit 06010105, on right bank 27 ft (8.2 m) upstream from Pearson Bridge (Secondary Road 1348) at Asheville, 1.4 mi (2.3 km) downstream from bridge on U.S. Highways 19 and 23, 3.2 mi (5.1 km) downstream from Swannanoa River, and at mile 145.8 (234.6 km).

DRAINAGE AREA.--945 mi² (2,448 km²).

PERIOD OF RECORD.--October 1895 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1306: 1895-1909, 1901(M), 1914-15(M), 1917(M), 1920-22(M), 1927(M).

GAGE.--Water-stage recorder. Datum of gage is 1,950.28 ft (594.445 m) National Geodetic Vertical Datum of 1929. Sept. 17, 1895, to Dec. 31, 1901, nonrecording gage at present site at different datum. Mar. 19, 1903, to July 15, 1916, and Jan. 1, 1917, to Sept. 30, 1922, nonrecording gage at Smith Bridge 1.5 mi (2.4 km) upstream at datum 11.52 ft (3.511 m) higher. Oct. 1, 1922, to Aug. 9, 1930, nonrecording gage at present site and datum.

REMARKS.--Records good. Many small diversions from tributaries above station for water supply. Diversions by city of Asheville and others from upstream tributaries in the Swannanoa River basin totaled about 41 ft³/s (1.16 m³/s), see sta 03451000, of which 36.4 ft³/s (1.03 m³/s) was discharged as sewage effluent 4 mi (6.4 km) below station. Slight diurnal fluctuation and occasional slight regulation at low flow caused by powerplant 46 mi (74 km) upstream and small reservoirs above station.

AVERAGE DISCHARGE.--85 years, 2,108 ft³/s (59.70 m³/s), 30.29 in/yr (769 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 110,000 ft³/s (3,115 m³/s) July 16, 1916, gage height, 23.1 ft (7.04 m), present site and datum, from floodmarks, from rating curve extended above 43,000 ft³/s (1,218 m³/s); minimum, 239 ft³/s (6.77 m³/s) at times in August and September 1925, gage height, 0.16 ft (0.049 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed since at least 1791, that of July 16, 1916, and flood of June 17, 1876, reached a stage of 18 ft (5.5 m), from studies by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,000 ft³/s (250 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct 1	0400	9060	257	5.63	1.716	Mar 21	0745	13000	368	7.15	2.179
Nov 2	1330	15500	439	7.96	2.426	Apr 14	1230	13100	371	7.17	2.185
Nov 26	0600	*18100	513	*8.74	2.664						

Minimum discharge, 532 ft³/s (15.1 m³/s) Sept. 17, gage height, 1.07 ft (0.326 m); minimum daily, 576 ft³/s (16.3 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8340	1960	4090	2030	2010	1470	4220	2640	2540	1560	970	888
2	6790	10200	3680	1980	1860	1510	3670	2540	2380	1500	976	871
3	4930	9430	3370	1900	1870	1420	3370	2490	2230	1650	993	1070
4	3820	7660	3180	1880	1840	1520	3170	2450	2100	1570	905	1060
5	4200	7010	3060	1910	1740	1650	2980	2360	2000	1760	878	982
6	3510	4360	2960	1840	1800	1910	2790	2330	1950	1540	880	829
7	3100	3230	2870	1790	1790	1770	2690	2280	1890	1390	888	759
8	2800	2890	2730	1840	1700	2000	3680	2270	1850	1340	831	692
9	2640	2740	2600	1870	1700	2550	6430	2180	1760	1300	822	659
10	2520	4080	2520	1810	1750	2230	6180	2090	1690	1260	814	764
11	2430	4880	2470	1890	1700	1970	5310	2050	1680	1460	797	798
12	2320	4400	2420	3140	1720	1830	4330	2000	1590	1290	778	732
13	2210	3730	2390	2760	1680	1900	5450	1960	1550	1190	823	655
14	2120	3280	2390	3490	1670	2090	12300	1890	1560	1130	822	627
15	2030	2970	2290	3500	1690	1960	12400	2000	1580	1110	836	601
16	1990	2790	2230	2830	1830	1840	11100	1890	1520	1090	1120	576
17	1940	2650	2180	2600	1900	2730	8420	2200	1750	1070	976	588
18	1900	2540	2090	3330	1710	6220	6280	5930	1920	1060	893	585
19	1860	2440	2060	4130	1620	5210	4860	5610	1930	1090	1040	595
20	1830	2350	2030	3270	1610	4210	4250	4390	1880	1020	1120	636
21	1810	2280	1980	2830	1610	11100	3900	4740	1600	961	999	664
22	1770	2230	1960	2630	1670	9370	3640	3560	1490	938	1240	600
23	1910	2200	1950	2810	1680	7840	3430	3890	1460	958	1150	657
24	2020	3250	2020	2630	1660	6690	3250	4890	2910	1330	946	663
25	1820	6110	2600	2420	1640	5620	3120	4600	3830	1340	873	849
26	1740	15600	2350	2300	1600	4610	3150	3680	3180	1340	854	940
27	1680	12000	2080	2220	1550	3780	3210	3100	2330	1190	791	776
28	1690	10900	2000	2150	1510	4800	2990	2800	1970	1600	725	801
29	1700	8050	1940	2060	1490	6830	2830	2670	1780	1530	690	2140
30	1920	5430	1970	2020	---	6200	2750	3170	1700	1200	661	2500
31	2050	---	2040	2050	---	5210	---	2730	---	1050	737	---
TOTAL	83390	153640	76500	75910	49600	120040	146150	93380	59600	39817	27828	25557
MEAN	2690	5121	2468	2449	1710	3872	4872	3012	1987	1284	898	852
MAX	8340	15600	4090	4130	2010	11100	12400	5930	3830	1760	1240	2500
MIN	1680	1960	1940	1790	1490	1420	2690	1890	1460	938	661	576
CFSM	2.85	5.42	2.61	2.59	1.81	4.10	5.16	3.19	2.10	1.36	.95	.90
IN.	3.28	6.05	3.01	2.99	1.95	4.73	5.75	3.68	2.35	1.57	1.10	1.01

CAL YR 1979 TOTAL 1263920 MEAN 3463 MAX 21300 MIN 1000 CFSM 3.67 IN 49.75
WTR YR 1980 TOTAL 951412 MEAN 2599 MAX 15600 MIN 576 CFSM 2.75 IN 37.45

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.

LOCATION.--Lat 35°47'10", long 82°39'39", Madison County, Hydrologic Unit 06010105, on right bank 0.7 mi (1.1 km) upstream from Hayes Creek, 1.0 mi (1.6 km) downstream from Ivy River, 1.5 mi (2.4 km) southeast of Marshall, and at mile 126.7 (203.9 km).

DRAINAGE AREA.--1,332 mi² (3,450 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1942 to current year.

REVISED RECORDS.--WSP 1436: 1954(M).

GAGE.--Water-stage recorder. Datum of gage is 1,646.79 ft (501.942 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority).

REMARKS.--Records good. Small diversions from tributaries for water supply. Slight diurnal fluctuation and occasional slight regulation at low flow caused by small reservoirs above station. Prior to July 1963, some regulation by Weaverville plant of Carolina Power and Light Company 15 mi (24 km) upstream.

AVERAGE DISCHARGE.--38 years, 2,507 ft³/s (71.00 m³/s), 25.56 in/yr (649 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,000 ft³/s (1,530 m³/s) Nov. 6, 1977, gage height, 13.64 ft (4.157 m), minimum, 193 ft³/s (5.47 m³/s) Sept. 13, 14, 1954, gage height, 0.36 ft (0.110 m); minimum daily, 292 ft³/s (8.27 m³/s) Sept. 27, 28, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed since at least 1791, 22.0 ft (6.71 m) July 16, 1916, discharge, 115,000 ft³/s (3,257 m³/s), and flood of Aug. 30, 1940, reached a stage of 16.6 ft (5.06 m), discharge, 70,000 ft³/s (1,982 m³/s), from high-water marks, flood profiles, and studies by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft³/s (280 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	1415	16600	470	7.03	2.143	Mar 21	0630	18100	513	7.36	2.243
Nov 26	0245	*27600	782	*9.35	2.850	Apr 14	1030	14300	405	6.45	1.966

Minimum discharge, 719 ft³/s (20.4 m³/s) Sept. 20, 21, gage height, 1.03 ft (0.314 m); minimum daily, 720 ft³/s (20.4 m³/s) Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8020	2180	4680	2460	2400	1800	4910	3080	2850	1810	1140	960
2	6880	10400	4210	2420	2220	1820	4310	2960	2660	1700	1110	1020
3	5380	9910	3850	2310	2190	1730	3960	2880	2500	2000	1150	1140
4	4160	7500	3630	2270	2210	1860	3780	2820	2370	2150	1080	1270
5	4450	6950	3500	2290	2080	1970	3520	2730	2260	2020	1060	1150
6	3920	4850	3380	2210	2140	2250	3280	2680	2200	1860	1020	1020
7	3430	3590	3280	2150	2130	2160	3150	2640	2140	1630	1040	966
8	3100	3250	3120	2200	2040	2300	3720	2620	2090	1540	1010	913
9	2910	3070	2950	2240	2000	2900	6730	2530	1980	1530	1000	857
10	2820	5190	2850	2190	2060	2680	6400	2430	1910	1470	1020	934
11	2700	5960	2790	2230	2030	2370	5750	2370	1890	1920	1040	991
12	2570	5380	2740	3620	2030	2200	4810	2310	1800	1560	1000	954
13	2450	4500	2700	3440	1990	2270	5860	2270	1740	1400	982	910
14	2350	3910	2720	3920	1980	2470	12800	2200	1750	1340	973	857
15	2260	3500	2620	4230	2010	2340	12500	2270	1760	1300	957	806
16	2210	3260	2930	3490	2390	2190	11300	2170	1800	1270	1160	776
17	2160	3060	2480	3180	2530	2700	8830	2290	2430	1240	1150	755
18	2110	2910	2400	3930	2260	6800	6720	5740	2250	1220	1010	747
19	2060	2780	2360	5130	2090	5810	5410	5660	2250	1240	1200	729
20	2030	2680	2330	4190	2040	5100	4780	4870	2160	1180	1250	720
21	2000	2600	2270	3600	2020	14300	4430	5100	1880	1120	1170	745
22	1970	2530	2240	3280	2080	10500	4170	4040	1720	1110	1270	746
23	2080	2480	2240	3460	2110	8410	3940	4220	1670	1120	1420	746
24	2250	3420	2280	3270	2050	7670	3750	5190	2930	1350	1120	954
25	2040	6650	3010	2980	2030	6540	3590	5190	4270	1540	1050	1030
26	1930	19600	2830	2810	1990	5550	3580	4260	3720	1450	1000	1150
27	1870	12100	2490	2670	1930	4640	3780	3600	2710	1370	979	1030
28	1850	10900	2370	2590	1880	5480	3500	3210	2270	1700	924	971
29	1880	8130	2290	2490	1850	7640	3320	3040	2040	1710	875	2100
30	2060	5960	2320	2410	---	6790	3230	3490	1940	1450	845	2750
31	2270	---	2440	2440	---	5900	---	3080	---	1210	873	---
TOTAL	90170	169200	87900	92100	60760	139140	159810	103940	67940	46510	32878	30697
MEAN	2909	5640	2835	2971	2095	4488	5327	3353	2265	1500	1061	1023
MAX	8020	19600	4680	5130	2530	14300	12800	5740	4270	2150	1420	2750
MIN	1850	2180	2240	2150	1850	1730	3150	2170	1670	1110	845	720
CFSM	2.18	4.23	2.13	2.23	1.57	3.37	4.00	2.52	1.70	1.13	.80	.77
IN.	2.52	4.73	2.45	2.57	1.70	3.89	4.46	2.90	1.90	1.30	.92	.86

CAL YR 1979 TOTAL 1401520 MEAN 3840 MAX 20400 MIN 1150 CFSM 2.88 IN 39.14
WTR YR 1980 TOTAL 1081045 MEAN 2954 MAX 19600 MIN 720 CFSM 2.22 IN 30.19

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957-67, 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1964 to September 1967, August 1973 to September 1978, March 1979 to current year.
WATER TEMPERATURES: October 1957 to September 1967, August 1973 to September 1978, March 1979 to current year.

REMARKS.--Station operated as part of NASQAN network from March 1979 to present. Daily records of specific conductance for water years 1958-64 are available in files of district office in Raleigh, N. C.

COOPERATION.--Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 237 micromhos Feb. 28, 1978; minimum daily, 33 micromhos May 31, 1976.
WATER TEMPERATURES: Maximum daily, 28.5°C Aug. 8, 1964; minimum daily, 0.0°C on several days during winter months of most years.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 181 micromhos Sept. 19, 20; minimum daily, 36 micromhos Apr. 16.
WATER TEMPERATURES: Maximum daily, 26.5°C Aug. 8, 9; minimum daily, 0.0°C Feb. 4, 5.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
OCT											
01...	0945	8600	48	7.2	17.5	70	8.2	62000	5800	230000	12
NOV											
02...	1535	16400	55	7.2	13.5	100	--	--	--	--	15
DEC											
10...	1100	2860	59	7.4	5.0	4.0	5.6	5900	100	200	13
MAR											
11...	1340	2370	75	6.9	8.0	2.0	10.8	--	--	--	14
18...	1000	7140	76	6.7	8.0	41	11.2	98000	13000	350000	21
APR											
14...	1015	14300	55	7.0	14.0	25	9.7	130000	40000	730000	14
21...	1500	4400	53	7.3	14.0	2.4	10.1	1200	90	6400	12
MAY											
27...	1400	3600	65	7.3	18.0	2.1	7.7	4300	230	130000	13
JUN											
24...	0945	2050	95	7.4	20.0	3.0	7.1	6100	470	38000	18
JUL											
21...	1500	1120	115	7.9	28.0	4.6	7.2	600	90	14000	21
AUG											
20...	1100	1240	145	7.2	24.0	20	6.8	9400	600	52000	24
SEP											
23...	1130	747	153	7.9	24.0	1.0	--	2100	160	12000	31

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)
OCT											
01...	1	3.2	1.0	3.5	35	.4	1.4	14	0	11	1.4
NOV											
02...	4	3.8	1.3	3.2	34	.4	3.2	14	0	11	1.4
DEC											
10...	0	3.9	.9	6.1	55	.7	.8	20	0	16	1.3
MAR											
11...	1	4.0	1.0	7.4	51	.9	.9	16	0	13	3.2
18...	1	5.9	1.4	5.6	35	.5	2.0	24	0	20	7.7
APR											
14...	1	3.8	1.2	2.8	27	.3	1.9	17	0	14	2.7
21...	0	3.2	.9	4.0	40	.5	.9	15	0	12	1.2
MAY											
27...	1	3.6	1.0	5.6	46	.7	.9	13	0	11	1.2
JUN											
24...	2	5.4	1.1	11	55	1.1	1.4	22	0	18	1.2
JUL											
21...	2	6.6	1.2	12	53	1.1	1.6	24	0	20	.5
AUG											
20...	2	7.3	1.4	16	57	1.4	2.1	22	0	*22	2.7
SEP											
23...	8	9.9	1.5	18	54	1.4	2.2	25	0	*23	.6

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)
OCT											
01...	9.1	2.2	.0	7.4	31	37	.04	720	.33	.41	.06
NOV											
02...	7.4	3.7	.1	7.2	56	40	.08	2480	.84	.65	.12
DEC											
10...	9.7	3.4	.0	10	49	46	.07	378	.41	.41	.15
MAR											
11...	12	3.8	.1	8.5	51	47	.07	326	.39	.38	.11
18...	11	5.9	.1	7.4	76	54	.10	1470	.56	.62	.23
APR											
14...	7.3	2.5	.1	6.7	58	37	.08	2240	.44	.42	.16
21...	7.7	3.3	.0	8.9	40	38	.05	475	.36	.35	.10
MAY											
27...	10	4.0	.1	9.5	48	44	.07	467	.53	.55	.07
JUN											
24...	18	5.1	.1	10	74	65	.10	410	.65	.59	.01
JUL											
21...	25	5.0	.1	9.9	92	76	.13	278	.59	.62	.02
AUG											
20...	28	7.3	.2	12	90	92	.12	301	.78	--	.08
SEP											
23...	30	6.5	.0	9.6	95	96	.13	192	1.0	.95	.11

* Lab alkalinity.

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)
OCT										
01...	--	.07	--	4.0	--	4.1	1.9	2.2	4.4	20
NOV										
02...	.06	.15	.08	2.6	.47	2.7	2.2	.53	3.5	16
DEC										
10...	.06	.18	.08	.13	.00	.28	.24	.04	.69	3.1
MAR										
11...	.09	.13	.12	.47	.08	.58	.41	.17	.97	4.3
18...	.22	.28	.28	2.0	.32	2.2	1.7	.54	2.8	12
APR										
14...	.08	.19	.10	1.8	.36	2.0	1.6	.44	2.4	11
21...	.10	.12	.13	.13	.13	.23	.00	.23	.59	2.6
MAY										
27...	.07	.08	.09	.20	.06	.27	.14	.13	.80	3.5
JUN										
24...	--	.01	--	.28	--	.29	--	--	.94	4.2
JUL										
21...	--	.02	--	.36	--	.38	--	--	.97	4.3
AUG										
20...	--	.10	--	.58	--	.66	--	--	1.4	6.4
SEP										
23...	--	.13	--	.35	--	.46	--	--	1.5	6.5

DATE	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)
OCT										
01...	.250	.77	.060	--	--	--	--	--	--	--
NOV										
02...	.760	2.3	.020	3	0	3	300	300	40	0
DEC										
10...	.070	.21	.050	--	--	--	--	--	--	--
MAR										
11...	.100	.31	.070	--	--	--	--	--	--	--
18...	.570	1.7	.060	--	--	--	--	--	--	--
APR										
14...	.470	1.4	.060	1	0	1	500	500	30	0
21...	.080	.25	.040	--	--	--	--	--	--	--
MAY										
27...	.110	.34	.050	--	--	--	--	--	--	--
JUN										
24...	.150	.46	.110	4	2	2	100	80	20	0
JUL										
21...	.130	.40	--	1	0	1	<50	<20	30	0
AUG										
20...	.280	.86	--	--	--	--	--	--	--	--
SEP										
23...	.200	.61	--	--	--	--	--	--	--	--

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)
OCT 01...	--	--	--	--	--	--	--	--	--	--
NOV 02...	0	3	70	30	40	14	13	1	22	19
DEC 10...	--	--	--	--	--	--	--	--	--	--
MAR 11...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
APR 14...	0	0	40	0	50	10	10	0	18	16
21...	--	--	--	--	--	--	--	--	--	--
MAY 27...	--	--	--	--	--	--	--	--	--	--
JUN 24...	0	0	20	0	20	0	0	0	4	1
JUL 21...	0	4	<10	0	30	1	0	1	6	3
AUG 20...	--	--	--	--	--	--	--	--	--	--
SEP 23...	--	--	--	--	--	--	--	--	--	--

DATE	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 01...	--	--	--	--	--	--	--	--	--	--
NOV 02...	3	29000	29000	350	18	17	1	730	700	30
DEC 10...	--	--	--	--	--	--	--	--	--	--
MAR 11...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
APR 14...	2	19000	19000	290	21	19	2	490	480	10
21...	--	--	--	--	--	--	--	--	--	--
MAY 27...	--	--	--	--	--	--	--	--	--	--
JUN 24...	3	1800	1700	140	2	2	0	60	50	9
JUL 21...	3	490	350	140	2	2	0	20	10	10
AUG 20...	--	--	--	--	--	--	--	--	--	--
SEP 23...	--	--	--	--	--	--	--	--	--	--

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)
OCT												
01...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
02...	.1	.0	.1	17	17	0	0	0	0	--	--	0
DEC												
10...	--	--	--	--	--	--	--	--	--	0	--	--
MAR												
11...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	1	--	--
APR												
14...	.1	.0	.1	14	7	7	0	0	0	0	0	0
21...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
27...	--	--	--	--	--	--	--	--	--	0	--	--
JUN												
24...	.1	.0	.1	5	5	0	0	0	0	0	0	0
JUL												
21...	<.1	.0	<.1	6	5	1	0	0	0	0	0	0
AUG												
20...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
23...	--	--	--	--	--	--	--	--	--	0	--	--

DATE	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	BIOMASS CHLORO-PHYLL RATIO PERI-PHYTON (UNITS)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPO-SURE (DAYS)
OCT												
01...	--	--	--	9.7	--	--	--	--	--	--	--	--
NOV												
02...	120	120	0	--	4.5	5.1	--	--	--	--	--	--
DEC												
10...	--	--	--	1.3	--	--	.080	.080	--	.000	.000	24
MAR												
11...	--	--	--	2.8	--	--	--	--	--	--	--	--
18...	--	--	--	12	--	--	--	--	--	--	--	--
APR												
14...	90	80	10	--	3.4	12	--	--	--	--	--	--
21...	--	--	--	2.0	--	--	--	--	--	--	--	--
MAY												
27...	--	--	--	2.8	--	--	25.0	22.9	73.9	28.4	.000	35
JUN												
24...	20	20	3	--	2.0	1.1	--	--	--	--	--	--
JUL												
21...	150	150	1	--	2.7	--	27.3	24.3	88.0	34.1	1.07	26
AUG												
20...	--	--	--	6.5	--	--	--	--	--	--	--	--
SEP												
23...	--	--	--	3.9	--	--	10.8	7.95	143	20.0	.000	33

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

PHYTOPLANKTON ANALYSES, AUGUST TO SEPTEMBER 1979

DATE	AUG 20,79
TIME	1100
TOTAL CELLS/ML	1900
DIVERSITY: DIVISION	1.5
.CLASS	1.5
..ORDER	2.1
...FAMILY	2.9
....GENUS	3.0

ORGANISM	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)		
.CHLOROPHYCEAE		
..CHLOROCOCCALES		
...CHLOROCOCCACEAE		
....CHLOROCOCCUM	230	12
...OOCYSTACEAE		
....CHODATELLA	52	3
....TETRAEDRON	26	1
...SCENEDESMACEAE		
....CRUCIGENIA	52	3
....SCENEDESMUS	390#	20
..TETRASPORALES		
...PALMELLACEAE		
....SPHAEROCYSTIS	100	5
..VOLVOCALES		
...CHLAMYDOMONADACEAE		
....CHLAMYDOMONAS	13	1
CHRYSOPHYTA		
.BACILLARIOPHYCEAE		
..CENTRALES		
...COSCINODISCACEAE		
....CYCLOTELLA	13	1
..PENNALES		
...CYMBELLACEAE		
....CYMBELLA	26	1
...FRAGILARIACEAE		
....SYNEDRA	26	1
...GOMPHONEMATACEAE		
....GOMPHONEMA	13	1
...NAVICULACEAE		
....NAVICULA	180	9
...NITZSCHIACEAE		
....NITZSCHIA	78	4
CYANOPHYTA (BLUE-GREEN ALGAE)		
.CYANOPHYCEAE		
..CHROOCOCCALES		
...CHROOCOCCACEAE		
....ANACYSTIS	130	7
..HORMOGONALES		
...OSCILLATORIACEAE		
....OSCILLATORIA	580#	30

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE	OCT 1,79	NOV 2,79	APR 14,80	MAY 27,80
TIME	0945	1535	1015	1400
TOTAL CELLS/ML	3100	2800	1900	260
DIVERSITY: DIVISION	1.1	0.6	0.8	1.3
.CLASS	1.1	0.6	0.8	1.3
..ORDER	1.7	0.7	0.8	2.1
...FAMILY	2.6	0.8	1.7	2.7
....GENUS	3.2	0.8	2.3	3.0

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	--	-
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	*	0	--	-	--	-	--	-
....CHODATELLA	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	26	10
....SELENASTRUM	*	0	--	-	--	-	13	5
....TREUBARIA	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....SCENEDESMUS	170	5	28	1	--	-	--	-
..TETRASPORALES								
...PALMELLACEAE								
....SPHAEROCYSTIS	--	-	--	-	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	*	0	--	-	39	15
..ZYGNEMATALES								
...DESMIDIACEAE								
....COSMARIUM	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	*	0	*	0	--	-	39	15
....MELOSIRA	69	2	55	2	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	150	5	--	-	14	1	--	-
....COCCONEIS	*	0	--	-	--	-	--	-
...CYMBELLACEAE								
....CYMBELLA	96	3	--	-	69	4	--	-
...DIATOMACEAE								
....DIATOMA	*	0	--	-	--	-	--	-
...FRAGILARIACEAE								
....ASTERIONELLA	--	-	--	-	--	-	52#	20
....SYNEDRA	41	1	28	1	82	4	13	5
...GOMPHONEMATACEAE								
....GOMPHONEMA	41	1	--	-	41	2	--	-
...MERIDIONACEAE								
....MERIDION	*	0	--	-	--	-	--	-
...NAVICULACEAE								
....GYROSIGMA	--	-	--	-	--	-	--	-
....NAVICULA	96	3	170	6	160	9	39	15
....PINNULARIA	*	0	--	-	--	-	--	-
...NITZSCHIACEAE								
....HANTZSCHIA	--	-	--	-	14	1	--	-
....NITZSCHIA	55	2	*	0	96	5	13	5
...SURIRELLACEAE								
....SURIRELLA	*	0	*	0	14	1	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
.CRYPTOPHYCEAE								
..CRYPTOMONADALES								
...CRYPTOMONADACEAE								
....CRYPTOMONAS	*	0	--	-	--	-	--	-

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	OCT 1,79 0945		NOV 2,79 1535		APR 14,80 1015		MAY 27,80 1400	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	220	7	--	-	--	-	--	-
....ANACYSTIS	140	4	--	-	--	-	26	10
..HORMOGONALES								
...NOSTOCACEAE								
....APHANIZOMENON	320	10	--	-	--	-	--	-
...OSCILLATORIACEAE								
....LYNGBYA	1000#	33	--	-	990#	52	--	-
....OSCILLATORIA	540#	17	2500#	88	330#	17	--	-
....PHORMIDIUM	--	-	--	-	--	-	--	-
...RIVULARIACEAE								
....RAPHIDIOPSIS	--	-	--	-	96	5	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	--	-	--	-	--	-	--	-

DATE TIME	JUN 24,80 0945		JUL 21,80 1500		AUG 20,80 1100		SEP 23,80 1130	
TOTAL CELLS/ML	2500		3100		2500		1300	
DIVERSITY: DIVISION	1.2		1.2		1.0		1.4	
.CLASS	1.2		1.2		1.0		1.4	
..ORDER	1.5		1.7		1.4		2.1	
...FAMILY	1.6		2.7		1.6		2.4	
....GENUS	1.6		3.1		1.7		2.9	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...COELASTRACEAE								
....COELASTRUM	--	-	220	7	--	-	--	-
...MICRACTINIACEAE								
....GOLENKINIA	--	-	16	1	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	13	1	62	2	26	1	13	1
....CHODATELLA	--	-	16	1	--	-	--	-
....DICTYOSPHAERIUM	--	-	780#	25	270	11	100	8
....KIRCHNERIELLA	--	-	120	4	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	--	-
....SELENASTRUM	--	-	--	-	--	-	--	-
....TREUBARIA	--	-	16	1	--	-	--	-
...SCENEDESMACEAE								
....SCENEDESMUS	540#	21	810#	26	52	2	210#	16
..TETRASPORALES								
...PALMELLACEAE								
....SPHAEROCYSTIS	--	-	--	-	39	2	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	120	4	26	1	65	5
..ZYGNEMATALES								
...DESMIDIACEAE								
....COSMARIUM	--	-	16	1	--	-	--	-

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	JUN 24,80 0945		JUL 21,80 1500		AUG 20,80 1100		SEP 23,80 1130	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	13	1	31	1	26	1	13	1
....MELOSIRA	--	-	94	3	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	26	1	--	-	--	-	--	-
....COCCONEIS	--	-	--	-	--	-	--	-
...CYMBELLACEAE								
....CYMBELLA	--	-	--	-	--	-	--	-
...DIATOMACEAE								
....DIATOMA	--	-	--	-	--	-	--	-
...FRAGILARIACEAE								
....ASTERIONELLA	26	1	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	--	-	--	-
...GOMPHONEMATACEAE								
....GOMPHONEMA	13	1	--	-	--	-	--	-
...MERIDIONACEAE								
....MERIDION	--	-	--	-	--	-	--	-
...NAVICULACEAE								
....GYROSIGMA	--	-	--	-	13	1	26	2
....NAVICULA	65	3	94	3	130	5	170	13
....PINNULARIA	--	-	--	-	13	1	--	-
...NITZSCHIACEAE								
....HANTZSCHIA	--	-	--	-	--	-	--	-
....NITZSCHIA	13	1	170	6	26	1	--	-
...SURIRELLACEAE								
....SURIRELLA	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
.CRYPTOPHYCEAE								
..CRYPTOMONADALES								
...CRYPTOMONADACEAE								
....CRYPTOMONAS	13	1	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	--	-	--	-	--	-	--	-
....ANACYSTIS	120	5	62	2	120	5	180	14
..HORMOGONALES								
...NOSTOCACEAE								
....APHANIZOMENON	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	--	-	--	-
....OSCILLATORIA	1700#	66	450	15	1800#	71	230#	19
....PHORMIDIUM	--	-	--	-	--	-	250#	20
...RIVULARIACEAE								
....RAPHIDIOPSIS	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	26	1	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	--	-	16	1	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	82	53	66	86	102	55	68	69	96	124	155
2	48	70	54	67	86	100	58	69	67	93	128	164
3	49	43	53	69	84	101	61	69	75	92	127	148
4	56	43	58	71	80	107	62	69	78	88	121	140
5	58	41	54	75	84	98	63	65	81	90	120	129
6	57	51	54	71	92	96	63	69	90	90	137	130
7	65	62	55	67	107	99	59	73	89	82	152	123
8	74	66	56	82	98	86	62	73	86	94	150	128
9	67	69	55	83	96	86	55	78	81	102	152	142
10	80	71	55	82	107	68	45	76	89	104	141	145
11	68	67	58	80	111	71	53	78	98	102	129	150
12	70	60	61	81	102	84	53	72	97	108	144	161
13	68	63	62	67	100	82	54	80	102	118	156	169
14	68	67	65	63	100	83	55	84	100	104	154	152
15	68	69	67	66	100	85	41	88	100	114	92	155
16	75	71	63	63	103	58	36	87	89	127	119	159
17	78	71	60	67	90	81	42	87	97	129	124	171
18	80	69	64	71	100	84	46	74	101	133	119	174
19	81	67	67	68	94	54	48	49	99	143	133	181
20	81	69	68	62	102	57	49	58	103	125	134	181
21	80	76	67	61	112	60	49	67	98	114	138	169
22	80	74	68	68	122	50	56	61	96	122	134	155
23	84	74	64	71	107	44	58	76	95	141	125	172
24	85	73	62	71	100	51	58	82	92	147	122	169
25	89	60	64	70	88	58	61	68	78	143	119	158
26	81	51	63	72	90	55	63	71	67	110	129	163
27	86	41	67	73	114	58	59	67	74	116	147	159
28	86	39	65	70	102	63	63	66	84	98	152	149
29	42	45	65	75	98	59	60	70	78	119	158	126
30	71	52	67	76	---	50	64	74	82	114	161	93
31	84	---	65	86	---	51	---	68	---	110	157	---
MEAN	71	62	61	71	98	74	55	72	88	112	135	152

WTR YR 1980 MEAN 88 MAX 181 MIN 36

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	13.0	5.0	7.0	1.0	5.0	12.0	12.0	15.0	16.0	25.0	23.5
2	17.5	13.0	4.0	5.0	2.0	3.0	13.0	13.0	15.0	19.5	24.5	23.5
3	16.0	11.0	3.0	5.0	1.0	4.0	14.0	14.0	16.0	18.0	25.5	24.0
4	15.0	11.0	3.0	6.0	.0	2.0	15.0	14.0	16.0	19.0	25.0	23.5
5	13.5	12.0	3.0	4.5	.0	4.0	11.0	14.0	16.0	22.0	25.5	24.0
6	12.0	9.5	5.0	3.0	2.5	7.0	11.0	15.0	16.0	21.5	26.0	24.5
7	12.0	9.0	6.0	3.0	2.0	8.0	12.0	16.0	17.0	20.0	26.0	24.0
8	12.0	9.0	6.0	4.0	2.0	10.0	13.5	15.0	18.0	19.0	26.5	23.0
9	15.0	10.0	5.0	5.0	2.5	11.0	13.5	13.0	14.0	22.0	26.5	23.5
10	13.0	11.5	5.0	5.0	3.5	10.0	14.0	13.0	14.0	22.0	26.0	23.0
11	12.0	11.5	5.0	6.5	1.0	9.0	13.5	15.0	14.0	20.0	25.0	22.5
12	11.0	11.5	6.0	5.0	2.0	7.0	13.0	17.0	14.0	21.0	25.5	23.0
13	13.0	11.5	9.0	5.0	2.0	7.0	13.0	19.0	14.0	22.0	25.5	23.5
14	10.0	9.0	9.0	6.0	3.0	6.0	13.5	18.0	15.0	23.0	25.5	23.5
15	10.0	8.0	7.0	6.5	4.0	5.0	11.5	16.0	15.0	22.0	26.0	23.5
16	11.0	8.0	7.0	6.0	6.0	9.0	10.0	17.0	17.0	23.0	25.5	22.5
17	11.0	9.0	5.0	8.0	3.0	10.5	12.5	16.0	16.0	23.0	25.0	22.0
18	12.0	7.0	3.0	9.5	3.0	10.0	12.0	15.0	16.5	23.0	24.0	23.0
19	13.0	8.0	3.0	7.0	4.0	9.5	12.0	16.5	17.0	23.0	24.5	23.0
20	14.0	8.0	4.0	7.0	5.0	10.0	13.0	16.0	17.5	22.0	25.0	23.0
21	15.0	9.0	4.0	6.0	6.0	10.0	13.0	16.0	15.0	23.0	25.5	23.5
22	15.0	9.0	5.0	7.0	9.0	10.0	14.0	16.0	16.0	22.0	25.5	24.0
23	16.0	12.0	6.0	5.5	9.0	9.5	16.0	17.5	17.0	22.0	24.5	24.0
24	13.0	13.5	9.0	4.0	11.0	11.5	15.0	17.0	16.5	21.0	24.0	24.0
25	11.0	13.5	8.0	5.0	9.0	10.5	16.0	17.5	15.0	20.0	24.0	22.5
26	10.0	12.5	6.0	6.0	5.0	11.5	16.0	18.0	14.0	20.0	23.5	21.5
27	9.0	12.0	5.0	7.0	4.0	12.0	15.0	17.0	15.0	20.0	24.0	19.0
28	9.0	10.5	5.0	7.0	4.0	11.5	13.0	17.0	17.0	21.0	23.5	17.0
29	11.0	8.0	4.0	6.0	7.0	12.0	14.0	20.0	20.0	19.0	24.0	16.0
30	12.0	6.0	6.0	4.0	---	12.0	12.0	19.0	18.0	20.0	23.5	15.5
31	12.0	---	6.0	3.0	---	13.0	---	19.5	---	20.0	23.5	---
MEAN	12.5	10.0	5.5	5.5	4.0	8.5	13.0	16.0	16.0	21.0	25.0	22.5

WTR YR 1980 MEAN 13.5 MAX 26.5 MIN .0

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
01...	0945	8600	280	6500	64
NOV					
02...	1535	16400	783	34700	73
DEC					
10...	1100	2860	12	93	82
MAR					
11...	1340	2370	16	102	82
18...	1000	7140	600	11600	77
APR					
14...	1015	14300	879	33900	68
21...	1500	4400	43	511	67
MAY					
27...	1400	3600	39	379	77
JUN					
24...	0945	2050	41	227	86
JUL					
21...	1500	1120	9	27	96
AUG					
20...	1100	1240	58	194	96
SEP					
23...	1130	747	11	22	90

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	PH LAB (UNITS)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	FIELD ALKA-LINITY (MG/L AS CACO3)	LAB ALKA-LINITY (MG/L AS CACO3)
OCT												
15...	1300	2250	50	7.2	--	12.0	9.7	<10	1.1	<10	--	14
NOV												
14...	1305	3910	48	7.3	--	10.0	10.3	<10	1.4	620	--	15
DEC												
14...	1310	2720	48	--	7.3	10.0	10.2	11	2.0	1400	--	16
JAN												
16...	1110	3500	40	--	7.2	6.5	12.0	<10	1.6	520	--	14
FEB												
13...	1035	1950	58	--	7.3	2.0	13.4	<10	1.5	180	--	18
MAR												
24...	1200	8140	52	--	7.1	9.0	10.5	14	1.5	2000	--	10
APR												
23...	1000	3970	--	--	7.0	14.0	9.9	<10	1.3	530	--	12
MAY												
12...	1200	2300	--	--	7.2	18.0	9.2	<10	1.1	130	--	15
JUN												
10...	1110	1920	96	7.3	7.4	19.0	8.8	13	1.4	120	21	18
JUL												
23...	1345	1110	152	7.7	7.6	25.0	8.0	11	1.6	40	25	27
AUG												
14...	1400	984	160	7.7	7.6	27.0	7.8	18	2.0	60	30	30
SEP												
29...	1045	2700	116	--	7.4	16.0	8.8	31	6.9	6400	--	25

03455500 WEST FORK PIGEON RIVER ABOVE LAKE LOGAN, NEAR HAZELWOOD, N. C.

LOCATION.--Lat 35°23'46", long 82°56'17", Haywood County, Hydrologic Unit 06010106, on right bank at upstream side of bridge on Secondary Road 1216, 600 ft (183 m) upstream from Big Creek, 1.1 mi (1.8 km) upstream from Lake Logan, 6.7 mi (10.8 km) southeast of Hazelwood, and at mile 9.3 (15.0 km).

DRAINAGE AREA.--27.6 mi² (71.5 km²).

PERIOD OF RECORD.--February 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,976.00 ft (907.085 m) National Geodetic Vertical Datum of 1929 (Tennessee Valley Authority bench mark).

REMARKS.--Records good.

AVERAGE DISCHARGE.--26 years, 106 ft³/s (3.002 m³/s), 52.16 in/yr (1,325 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,740 ft³/s (276 m³/s) Feb. 13, 1966, gage height, 9.5 ft (2.90 m), from floodmarks; minimum, 9.4 ft³/s (0.27 m³/s) Sept. 29, 30, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	0430	*6160	174	*7.64	2.329	Apr 14	0430	2470	70.0	5.13	1.564
Nov 25	1815	3940	112	6.22	1.896	May 17	2330	2110	59.8	4.81	1.466
Mar 21	0430	2910	82.4	5.48	1.670	May 29	1900	2100	59.5	4.80	1.463

Minimum discharge, 11 ft³/s (0.31 m³/s) Sept. 16, 17, 23, 24, gage height, 0.94 ft (0.287 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	262	162	195	76	99	69	190	102	121	49	21	21
2	212	1630	173	69	95	63	176	97	108	46	20	26
3	182	258	162	67	90	60	164	93	97	85	19	33
4	187	186	155	68	85	60	156	89	90	52	20	24
5	180	159	145	64	80	108	142	88	85	47	20	20
6	152	140	139	63	76	94	134	85	81	43	19	18
7	137	127	129	76	73	161	127	87	77	40	18	15
8	125	116	119	108	70	361	356	87	72	38	19	13
9	117	110	112	98	74	230	189	78	67	39	18	13
10	118	344	107	82	73	148	151	74	65	60	27	30
11	104	220	102	249	70	126	138	72	62	50	29	18
12	96	178	99	173	67	122	229	69	60	38	26	14
13	91	155	113	121	65	201	373	67	59	35	24	13
14	85	138	100	193	65	144	1080	65	57	33	19	12
15	82	128	91	134	68	120	327	64	54	33	18	12
16	79	119	89	116	124	112	260	63	53	31	27	12
17	75	111	82	125	77	604	221	309	62	37	27	12
18	72	104	79	263	75	382	198	264	101	37	20	18
19	71	97	78	156	70	229	181	93	58	31	37	12
20	69	93	76	134	69	531	167	151	52	29	34	16
21	67	89	73	122	109	1020	155	112	49	27	19	16
22	65	85	73	196	149	390	143	111	48	27	34	13
23	88	98	70	174	113	303	134	420	47	33	20	12
24	65	800	123	132	94	415	127	205	290	39	18	12
25	61	1350	106	126	86	329	121	209	129	34	25	40
26	59	888	81	118	75	264	132	149	81	28	18	23
27	57	388	78	113	75	228	137	124	66	28	16	14
28	56	303	75	105	75	364	114	124	59	32	15	38
29	59	250	72	98	73	283	122	319	58	25	15	148
30	70	216	83	104	---	247	109	205	54	22	18	117
31	96	---	79	136	---	213	---	138	---	21	19	---
TOTAL	3239	9042	3258	3859	2414	7981	6253	4213	2362	1169	679	785
MEAN	104	301	105	124	83.2	257	208	136	78.7	37.7	21.9	26.2
MAX	262	1630	195	263	149	1020	1080	420	290	85	37	148
MIN	56	85	70	63	65	60	109	63	47	21	15	12
CFSM	3.77	10.9	3.80	4.49	3.01	9.31	7.54	4.93	2.85	1.37	.79	.95
IN.	4.37	12.19	4.39	5.20	3.25	10.76	8.43	5.68	3.18	1.58	.92	1.06

CAL YR 1979 TOTAL 63130 MEAN 173 MAX 2380 MIN 38 CFSM 6.27 IN 85.09
WTR YR 1980 TOTAL 45254 MEAN 124 MAX 1630 MIN 12 CFSM 4.49 IN 60.99

03456000 WEST FORK PIGEON RIVER BELOW LAKE LOGAN, NEAR WAYNESVILLE, N. C.

LOCATION.--Lat 35°26'38", long 82°54'46", Haywood County, Hydrologic Unit 06010106, on right bank at downstream side of bridge on Secondary Road 1111 at Riverside Church, 2.6 mi (4.2 km) downstream from Little East Fork Pigeon River, 3.4 mi (5.5 km) downstream from Lake Logan, 3.8 mi (6.1 km) upstream from confluence with East Fork Pigeon River, and 5.3 mi (8.5 km) southeast of Waynesville.

DRAINAGE AREA.--55.3 mi^2 (143.2 km^2).

PERIOD OF RECORD.--March 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,725.08 ft (830.604 m) National Geodetic Vertical Datum of 1929 (Tennessee Valley Authority bench mark).

REMARKS.--Records fair. Considerable regulation at times caused by Lake Logan (see p. 401).

AVERAGE DISCHARGE.--26 years, 167 ft^3/s (4.729 m^3/s), 41.01 in/yr (1,042 mm/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,100 ft^3/s (314 m^3/s) May 15, 1976, gage height, 10.52 ft (3.206 m), from rating curve extended above 3,300 ft^3/s (93.5 m^3/s); minimum, 7.6 ft^3/s (0.22 m^3/s) Sept. 7, 1954, minimum gage height, 0.10 ft (0.030 m) Oct. 22, 23, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,630 (188 m^3/s) Nov. 2, gage height, 8.51 ft (2.594 m); minimum, 40 ft^3/s (1.13 m^3/s) Sept. 11, gage height, 0.51 ft (0.155 m); minimum daily, 43 ft^3/s (1.22 m^3/s) Aug. 6, 7, 8, Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	460	150	402	127	160	114	312	174	203	89	48	52
2	372	1570	384	124	158	111	300	167	187	85	48	55
3	316	414	366	121	156	109	288	162	171	156	47	51
4	325	369	283	116	155	100	207	156	160	99	46	50
5	315	380	243	112	130	145	143	153	150	91	44	47
6	264	360	273	104	105	149	144	149	144	83	43	45
7	238	261	217	107	101	152	203	148	147	78	43	45
8	220	199	187	126	84	295	271	150	128	74	43	49
9	202	193	182	132	85	338	273	136	120	79	46	48
10	206	368	175	130	84	320	320	132	118	93	45	57
11	185	406	162	160	83	278	320	127	115	103	47	43
12	170	388	156	165	82	184	340	124	112	75	46	44
13	163	289	159	158	82	217	406	120	110	70	46	50
14	153	225	155	213	82	274	1090	117	107	67	45	50
15	147	226	153	343	159	180	552	116	102	67	46	50
16	142	220	151	325	319	168	439	114	108	64	55	51
17	136	219	146	257	244	370	377	275	116	63	58	52
18	132	206	136	235	106	479	339	460	167	73	51	53
19	200	187	124	315	100	421	306	177	111	62	55	52
20	369	172	122	233	105	496	280	237	98	59	53	53
21	221	165	120	183	120	1490	259	207	92	56	49	53
22	113	162	120	191	195	672	241	185	92	54	52	50
23	124	162	119	198	264	517	227	525	90	60	49	51
24	120	383	133	192	159	650	215	324	319	74	49	57
25	121	1350	145	188	134	604	206	345	212	72	52	59
26	118	1440	150	186	123	647	221	272	140	58	48	51
27	118	648	149	184	122	567	226	232	118	59	50	53
28	117	492	136	180	116	523	196	213	106	60	51	61
29	112	445	125	169	113	545	199	365	101	54	51	71
30	101	421	127	160	---	484	186	314	99	51	51	66
31	103	---	126	176	---	385	---	226	---	48	51	---
TOTAL	6083	12470	5626	5610	3926	11984	9086	6602	4043	2276	1508	1569
MEAN	196	416	181	181	135	387	303	213	135	73.4	48.6	52.3
MAX	460	1570	402	343	319	1490	1090	525	319	156	58	71
MIN	101	150	119	104	82	100	143	114	90	48	43	43
(†)	-417	+327	-527	+33	-144	+84	+629	+2	-6	-8	-135	-153
MEAN‡	183	427	164	182	130	389	324	213	135	73.2	44.3	47.2
CFSM‡	3.31	7.72	2.97	3.29	2.35	7.03	5.86	3.85	2.44	1.32	0.80	0.85
IN.‡	3.81	8.61	3.43	3.79	2.54	8.12	6.53	4.44	2.71	1.53	0.92	0.95

CAL YR 1979 TOTAL 95477 MEAN 262 MAX 2980 MIN 59 MEAN‡ 260 CFSM‡ 4.70 IN.‡ 63.82
WTR YR 1980 TOTAL 70783 MEAN 193 MAX 1570 MIN 43 MEAN‡ 193 CFSM‡ 3.49 IN.‡ 47.38

† Change in contents, in cfs-days, in Lake Logan.
‡ Adjusted for change in lake contents.

03456500 EAST FORK PIGEON RIVER NEAR CANTON, N. C.

LOCATION.--Lat 35°27'42", long 82°52'12", Haywood County, Hydrologic Unit 06010106, on right bank 800 ft (244 m) upstream from bridge on U.S. Highway 276, 0.3 mi (0.5 km) downstream from Dix Creek, 1.6 mi (2.6 km) upstream from confluence with West Fork Pigeon River, and 5.2 mi (8.4 km) southwest of Canton.

DRAINAGE AREA.--51.5 mi² (133.4 km²).

PERIOD OF RECORD.--March 1954 to current year.

REVISED RECORDS.--WRD N. C. 1973: 1966(M), 1972(M).

GAGE.--Water-stage recorder. Datum of gage is 2,674.34 ft (815.139 m) National Geodetic Vertical Datum of 1929 (Tennessee Valley Authority bench mark).

REMARKS.--Records good.

AVERAGE DISCHARGE.--26 years, 148 ft³/s (4.191 m³/s), 39.03 in/yr (991 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft³/s (340 m³/s) May 28, 1973, gage height, 11.19 ft (3.411 m), from rating curve extended above 5,470 ft³/s (155 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 12 ft³/s (0.34 m³/s) Jan. 9, 1956, result of freezeup; minimum gage height, 0.81 ft (0.247 m) Dec. 15, 1958, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	0715	*6990	198	*8.39	2.557	Apr 8	1545	1660	47.0	4.17	1.271
Nov 25	2330	5760	163	7.62	2.323	Apr 14	0715	3110	88.1	5.67	1.728
Mar 21	0500	2480	70.2	5.08	1.548	May 18	0130	1660	47.0	4.17	1.271

Minimum daily discharge, 25 ft³/s (0.71 m³/s) Aug. 16; minimum gage height, 1.16 ft (0.354 m) Sept. 16, 17, 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	511	169	350	99	96	71	315	148	145	71	33	30
2	416	2030	300	92	95	68	277	142	132	68	32	51
3	334	625	264	90	95	69	251	136	124	91	31	49
4	320	410	247	92	90	73	230	129	115	92	30	38
5	305	320	226	88	90	103	206	124	108	82	30	45
6	260	269	210	81	90	94	191	121	105	67	28	44
7	238	238	195	90	88	90	180	118	101	63	28	33
8	218	214	176	113	85	184	541	115	94	59	27	29
9	206	198	165	105	85	136	371	108	90	62	27	28
10	206	421	158	99	85	113	286	103	88	63	28	47
11	187	350	148	180	81	103	251	101	83	72	33	38
12	173	320	142	202	79	101	340	96	81	57	32	31
13	162	282	139	152	77	155	498	94	81	54	33	29
14	152	251	132	206	75	139	1870	92	79	51	28	28
15	142	226	124	169	77	118	875	90	75	51	26	27
16	136	210	121	152	99	110	631	90	77	49	25	26
17	129	195	113	142	79	498	504	238	90	48	37	27
18	126	180	110	198	73	498	421	541	105	65	46	30
19	121	165	108	162	73	315	360	210	79	48	43	28
20	118	158	103	148	73	410	315	222	71	45	37	31
21	115	148	101	139	79	1190	282	202	68	44	30	31
22	110	142	99	148	96	600	256	180	66	43	41	28
23	136	148	96	165	83	433	234	524	66	48	33	26
24	110	675	132	132	79	511	214	382	264	58	31	26
25	105	1650	145	126	77	421	198	340	216	51	40	36
26	103	2110	105	121	73	345	202	277	132	46	31	40
27	101	869	101	118	73	291	198	234	101	45	28	29
28	99	625	96	113	71	541	176	206	88	46	27	38
29	99	498	94	108	71	492	169	187	82	42	27	204
30	110	410	96	105	---	438	158	176	77	38	27	166
31	132	---	96	126	---	371	---	155	---	35	32	---
TOTAL	5680	14506	4692	4061	2387	9081	11000	5881	3083	1754	981	1313
MEAN	183	484	151	131	82.3	293	367	190	103	56.6	31.6	43.8
MAX	511	2110	350	206	99	1190	1870	541	264	92	46	204
MIN	99	142	94	81	71	68	158	90	66	35	25	26
CFSM	3.55	9.40	2.93	2.54	1.60	5.69	7.13	3.69	2.00	1.10	.61	.85
IN.	4.10	10.48	3.39	2.93	1.72	6.56	7.95	4.25	2.23	1.27	.71	.95

CAL YR 1979 TOTAL 94985 MEAN 260 MAX 4150 MIN 39 CFSM 5.05 IN 68.61
WTR YR 1980 TOTAL 64419 MEAN 176 MAX 2110 MIN 25 CFSM 3.42 IN 46.53

03457000 PIGEON RIVER AT CANTON, N. C.

LOCATION.--Lat 35°31'30", long 82°50'28", Haywood County, Hydrologic Unit 06010106, on left bank 100 ft (30 m) upstream from small tributary, 200 ft (61 m) downstream from Pigeon Street Bridge, 0.5 mi (0.8 km) from U.S. Highways 19 and 23 at Canton, and at mile 64.1 (103.1 km). Records include flow of small tributary.

DRAINAGE AREA.--133 mi² (344 km²) includes that of small tributary below gage.

PERIOD OF RECORD.--May 1907 to June 1909, October 1928 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 853: 1929-37(M). WSP 1306: 1908(M).

GAGE.--Water-stage recorder. Datum of gage is 2,572.22 ft (784.013 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to June 1909, nonrecording gage at bridge 0.4 mi (0.6 km) downstream at different datum. Dec. 6, 1928, to Jan. 3, 1929, nonrecording gage at present site and datum.

REMARKS.--Records good. Occasional diurnal fluctuation and considerable regulation at low flow caused by Lake Logan on West Fork Pigeon River 12 mi (19 km) upstream (see p. 401). Town of Canton diverted above station an average of 2.04 ft³/s (0.058 m³/s) for municipal water supply.

AVERAGE DISCHARGE.--53 years (1907-8, 1928-80), 326 ft³/s (9.232 m³/s), 33.29 in/yr (846 mm/yr) unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,600 ft³/s (895 m³/s) Aug. 30, 1940, gage height, 20.75 ft (6.325 m), from floodmarks in gage well; minimum, 15 ft³/s (0.42 m³/s) Jan. 8, 1956, gage height, 0.04 ft (0.012 m), result of freezeup; minimum daily, 27 ft³/s (0.76 m³/s) Sept. 7, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of about 1810 is believed to have been approximately equal to that of Aug. 30, 1940, and flood of June 15, 1876, reached a stage of 18.3 ft (5.58 m), discharge, 25,700 ft³/s (728 m³/s), from studies by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (110 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	0900	*11100	314	*11.64	3.548	Mar 21	0615	6010	170	8.41	2.563
Nov 26	0130	10200	289	11.16	3.402	Apr 14	1000	5310	150	7.83	2.387

Minimum daily discharge, 70 ft³/s (1.98 m³/s) Aug. 7, 8; minimum gage height, 0.79 ft (0.241 m) Aug. 8, 9, 14, 15, 16, Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1080	307	824	256	289	206	713	364	394	173	80	83
2	868	3630	754	242	270	204	660	348	361	160	79	105
3	720	1180	697	236	250	192	619	337	334	278	77	110
4	680	845	600	233	240	197	521	324	312	219	75	94
5	691	766	512	226	230	269	405	313	294	206	74	97
6	569	690	543	212	222	277	372	307	282	180	72	96
7	506	566	457	219	219	264	433	300	279	154	70	82
8	460	451	412	266	195	502	797	307	254	166	70	79
9	425	427	384	266	198	530	715	281	236	157	71	78
10	424	917	373	255	199	480	661	270	230	155	74	109
11	384	873	349	354	189	438	647	260	226	196	82	95
12	357	804	339	431	186	324	737	252	222	148	81	81
13	335	659	342	349	181	377	888	244	222	137	83	85
14	316	529	332	446	181	477	3050	237	221	129	76	84
15	302	500	316	575	215	334	1530	235	212	127	76	83
16	292	474	310	537	464	313	1150	231	224	119	77	83
17	280	454	297	468	401	922	943	415	245	115	101	85
18	270	428	283	481	206	1150	816	1140	318	141	93	90
19	284	394	263	546	201	850	725	434	235	116	114	87
20	492	366	254	450	202	996	654	493	222	108	98	94
21	374	347	248	364	214	3080	598	474	221	101	84	93
22	236	335	245	375	293	1460	547	394	205	98	101	86
23	267	337	241	422	408	1090	506	1070	181	100	88	82
24	243	1010	278	367	275	1300	473	781	525	144	83	86
25	235	2440	344	358	237	1160	447	758	540	122	96	100
26	234	4380	291	346	219	1140	470	617	309	105	84	104
27	234	1660	282	342	218	1010	479	520	246	102	80	87
28	233	1220	267	331	212	1210	417	461	216	103	81	113
29	231	1020	246	315	207	1190	412	532	199	97	81	290
30	232	908	253	299	---	1050	390	626	191	88	81	242
31	240	---	252	343	---	867	---	433	---	83	86	---
TOTAL	12494	28917	11588	10910	7021	23859	21775	13758	8156	4327	2568	3083
MEAN	403	964	374	352	242	770	726	444	272	140	82.8	103
MAX	1080	4380	824	575	464	3080	3050	1140	540	278	114	290
MIN	231	307	241	212	181	192	372	231	181	83	70	78
(†)	-353.7	+385.9	-467.8	+91.7	-87.5	+142.5	+688.5	+63.6	+56.2	+62.8	-61.8	-88.0
MEAN‡	392	977	359	355	239	774	749	446	274	142	80.8	99.8
CFSM‡	2.95	7.35	2.70	2.67	1.80	5.82	5.63	3.35	2.06	1.07	0.61	0.75
IN.‡	3.39	8.19	3.11	3.08	1.94	6.71	6.28	3.86	2.30	1.23	0.70	0.84

CAL YR 1979 TOTAL 201310 MEAN 552 MAX 6710 MIN 110 MEAN‡ 552 CFSM‡ 4.15 IN.‡ 56.32
WTR YR 1980 TOTAL 148456 MEAN 406 MAX 4380 MIN 70 MEAN‡ 407 CFSM‡ 3.06 IN.‡ 41.63

† Diversion by city of Canton, and change in contents in Lake Logan, equivalent in cfs-days. Records of diversion furnished by city of Canton.
‡ Adjusted for diversion and change in lake contents.

03459500 PIGEON RIVER NEAR HEPCO, N. C.

LOCATION.--Lat 35°38'07", long 82°59'22", Haywood County, Hydrologic Unit 06010106, on left bank 95 ft (29 m) east of Interstate Highway 40, 0.8 mi (1.3 km) downstream from Jonathan Creek, 2.0 mi (3.2 km) south of Hepco, 2.4 mi (3.9 km) upstream from Fines Creek, and at mile 45.1 (72.6 km).

DRAINAGE AREA.--350 mi² (906 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1927 to current year.

REVISED RECORDS.--WSP 823: Drainage area. WSP 893: 1928-31, 1932(M), 1933-36, 1937-39(M).

GAGE.--Water-stage recorder. Datum of gage is 2,335.95 ft (711.998 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority).

REMARKS.--Records good. Considerable regulation by Lake Junaluska on Richland Creek and Lake Logan on West Fork Pigeon River for periods at low flow, combined capacity of reservoirs, about 2,000 ft³/s-day (4.894 hm³). (See p. 401).

AVERAGE DISCHARGE.--53 years, 684 ft³/s (19.37 m³/s), 26.54 in/yr (674 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,700 ft³/s (926 m³/s) Aug. 30, 1940, gage height, 15.82 ft (4.822 m), from floodmark in gage house, from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of slope-area measurements at gage heights 14.94 ft (4.554 m) and 15.82 ft (4.822 m); minimum, 81 ft³/s (2.29 m³/s) Sept. 30, 1941; minimum gage height, 0.81 ft (0.247 m) Sept. 8, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of June 1876 and February 1902 reached a stage of about 18 ft (5.5 m), from flood profiles by Tennessee Valley Authority, discharge, about 42,000 ft³/s (1,190 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	1215	13200	374	10.19	3.106	Mar 21	0915	11000	312	9.36	2.853
Nov 26	0430	*13800	391	*10.40	3.170	Apr 14	1515	6260	177	7.17	2.185

Minimum discharge, 167 ft³/s (4.73 m³/s) Sept. 16, 17, gage height, 1.25 ft (0.381 m); minimum daily, 172 ft³/s (4.87 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1620	482	1450	588	705	524	1700	739	791	381	222	203
2	1330	5220	1320	553	646	523	1520	626	733	365	220	267
3	1170	1960	1200	529	664	475	1410	611	685	697	203	269
4	1000	1260	1120	538	646	529	1300	598	642	470	195	283
5	1060	1110	966	532	595	789	1060	577	607	469	210	227
6	864	994	989	501	592	712	958	622	583	388	189	223
7	771	873	900	570	564	664	980	678	572	350	183	196
8	704	720	823	727	533	1190	1410	703	546	327	179	177
9	659	685	755	686	539	1110	1630	647	506	336	176	176
10	724	2400	752	642	554	969	1280	619	494	402	236	312
11	630	1840	700	808	516	885	1250	601	481	463	246	253
12	584	1590	666	1150	511	776	1610	582	466	339	216	194
13	549	1300	680	846	488	810	1800	558	462	306	208	185
14	525	1030	697	1020	490	926	4740	546	453	294	193	182
15	509	935	651	1060	499	751	2900	542	440	290	197	180
16	497	879	636	998	876	695	2260	536	438	278	224	172
17	479	830	612	951	793	1910	1840	606	563	270	308	179
18	469	789	591	1200	566	3030	1610	1650	713	289	373	204
19	454	739	576	1170	533	1970	1450	837	554	276	318	189
20	621	695	556	1010	526	2390	1320	957	443	252	274	225
21	609	662	525	855	545	7260	1240	987	410	243	227	250
22	424	641	504	926	775	3660	1160	779	415	242	338	201
23	512	629	501	1070	811	2720	1060	1500	434	260	256	202
24	460	1510	636	868	690	3260	992	1440	836	323	222	199
25	422	2130	848	835	615	2780	942	1510	1100	282	223	278
26	411	8000	651	794	576	2510	978	1290	632	303	212	295
27	405	3140	608	772	558	2210	1180	1030	516	263	192	216
28	402	2300	580	748	548	3250	1190	904	457	268	186	239
29	404	1860	542	713	531	2950	1140	953	429	248	189	790
30	433	1600	579	695	---	2450	1040	1170	413	233	193	530
31	416	---	581	916	---	2040	---	865	---	214	190	---
TOTAL	20117	48803	23195	25271	17485	56718	44950	26263	16814	10121	6998	7496
MEAN	649	1627	748	815	603	1830	1498	847	560	326	226	250
MAX	1620	8000	1450	1200	876	7260	4740	1650	1100	697	373	790
MIN	402	482	501	501	488	475	942	536	410	214	176	172

CAL YR 1979 TOTAL 372958 MEAN 1022 MAX 8110 MIN 239
WTR YR 1980 TOTAL 304231 MEAN 831 MAX 8000 MIN 172

03459500 PIGEON RIVER NEAR HEPCO, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956-73, 1979 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1978 to current year.
WATER TEMPERATURES: October 1978 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1978.

REMARKS.--Station is part of district's Primary Accounting Network used to define stream-quality characteristics of the State's major streams. During period 1968-73, data were collected at bridge on Interstate Highway 40 and published as Pigeon River at Hepco (station 03459620).

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1930 micromhos Oct. 29, 30, 1978; minimum, 50 micromohos Mar. 4, 5, Sept. 21, 22, Nov. 2, 26, 1979.
WATER TEMPERATURES: Maximum, 31.5°C July 15, 17, 1980; minimum, 1.0°C Feb. 2, 10, 1979.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1710 micromhos Aug. 10; minimum, 50 micromhos Nov. 2, 26.
WATER TEMPERATURES: Maximum, 31.5°C July 15, 17; minimum, 2.0°C Feb. 18.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
DEC 11...	1100	699	340	7.1	5.5	50	9.6	59	33	21	1.6
JUN 23...	1230	424	600	7.4	22.0	70	6.8	120	99	45	2.8
JUL 21...	1015	246	900	7.3	25.0	90	6.8	190	150	69	4.3

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
DEC 11...	41	62	2.3	1.9	32	0	26	4.1	14	74	.1
JUN 23...	62	51	2.4	5.2	39	0	32	1.9	28	150	.1
JUL 21...	110	55	3.5	5.1	55	0	45	4.1	53	230	.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
DEC 11...	10	216	182	.29	408	.52	.02	.54	.54	--	.31
JUN 23...	10	449	320	.61	514	.51	.00	.51	.44	3.3	.00
JUL 21...	12	719	513	.98	478	.82	.07	.89	.91	--	.08

03459500 PIGEON RIVER NEAR HEPCO, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)
DEC 11...	.22	.38	.28	.39	.20	.70	.28	.42	--	1.2	5.5
JUN 23...	.01	.00	.01	.62	.33	.62	.28	.34	500	1.1	5.0
JUL 21...	--	.10	--	.76	--	.84	--	--	--	1.7	7.7

DATE	NITROGEN, TOT IN BOTTOM MATERIAL (MG/KG AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOSPHORUS, TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	PHOSPHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	PHOSPHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS PO4)	PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUSPENDED TOTAL (UG/L AS AS)
DEC 11...	--	.160	.25	.49	.150	.08	.00	.00	--	4	2
JUN 23...	503	.290	.52	.89	.190	.17	.24	.74	100	4	2
JUL 21...	--	.280	.61	.86	--	.20	--	--	--	--	--

DATE	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)
DEC 11...	2	--	0	0	2	--	30	4	26	--
JUN 23...	2	0	0	0	6	<10	30	6	24	20
JUL 21...	--	--	--	--	--	--	40	1	39	--

DATE	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)
DEC 11...	0	0	0	--	1	0	2	--	290	190
JUN 23...	0	0	0	<10	3	1	2	<10	1600	1400
JUL 21...	--	--	--	--	4	0	4	--	950	770

03459500 PIGEON RIVER NEAR HEPCO, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)
DEC 11...	100	--	0	0	1	--	80	0	80	--
JUN 23...	170	97000	5	3	2	<10	210	70	140	200
JUL 21...	180	--	5	4	1	--	--	--	--	--

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC 11...	.1	.0	.1	--	0	0	0	--	10	6	4
JUN 23...	.1	.0	.1	.00	0	0	0	0	20	20	0
JUL 21...	--	--	--	--	--	--	--	--	1100	1100	9

DATE	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	LENGTH OF EXPO-SURE (DAYS)
DEC 11...	--	7.0	.5	--	--	--	.00	--	--	--
JUN 23...	29	12	2.6	2.9	.0	2.9	.20	--	--	--
JUL 21...	--	19	--	--	--	--	.20	40.9	24.9	33

03459500 PIGEON RIVER NEAR HEPCO, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	DEC 11,79 1100		JUN 23,80 1230		JUL 21,80 1015	
TOTAL CELLS/ML	450		850		870	
DIVERSITY: DIVISION	1.2		1.5		1.1	
.CLASS	1.2		1.5		1.1	
..ORDER	1.4		2.1		1.5	
...FAMILY	1.8		3.0		1.7	
....GENUS	1.9		3.3		1.8	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...COELASTRACEAE						
....COELASTRUM	--	-	100	12	--	-
...MICRACTINIACEAE						
....MICRACTINIUM	--	-	39	5	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	--	-	--	-	13	1
....CHLORELLA	20	4	--	-	--	-
....CHODATELLA	--	-	13	2	--	-
....OOCYSTIS	--	-	13	2	--	-
....SELENASTRUM	--	-	--	-	13	1
...SCENEDESMACEAE						
....SCENEDESMUS	20	4	--	-	--	-
....TETRASTRUM	--	-	--	-	52	6
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	13	2	--	-
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	20	4	78	9	13	1
....MELOSIRA	--	-	90	11	39	4
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	5	1	26	3	--	-
...DIATOMACEAE						
....DIATOMA	--	-	13	2	--	-
...FRAGILARIACEAE						
....ASTERIONELLA	10	2	13	2	--	-
....SYNEDRA	15	3	39	5	--	-
...GOMPHONEMATACEAE						
....GOMPHONEMA	--	-	13	2	--	-
...NAVICULACEAE						
....NAVICULA	66	15	90	11	39	4
...NITZSCHIACEAE						
....NITZSCHIA	5	1	78	9	78	9
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....ANACYSTIS	--	-	--	-	39	4
..HORMOGONALES						
...NOSTOCACEAE						
....APHANIZOMENON	--	-	--	-	580#	67
...OSCILLATORIACEAE						
....OSCILLATORIA	--	-	230#	27	--	-
....SCHIZOTHRIX	290#	64	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

03459500 PIGEON RIVER NEAR HEPCO, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	212	167	189	452	398	426	219	185	201	390	358	380
2	219	196	213	394	50	145	222	197	211	377	334	352
3	208	187	197	181	86	144	265	221	243	372	337	356
4	247	207	228	224	175	196	259	239	249	389	371	381
5	248	222	235	236	201	219	290	250	271	390	380	385
6	274	248	266	293	234	265	279	248	261	399	379	388
7	291	274	283	286	260	271	328	267	301	398	357	386
8	309	287	292	327	262	308	326	307	317	363	347	351
9	319	303	310	338	308	317	375	326	361	342	322	331
10	308	231	250	337	131	175	386	354	367	541	321	351
11	265	230	244	164	144	157	385	338	355	361	334	353
12	318	269	297	208	161	188	373	340	355	345	248	287
13	398	320	354	231	169	210	390	345	367	285	267	276
14	400	392	396	192	176	183	377	342	358	296	284	290
15	391	381	384	199	174	189	579	359	383	298	293	295
16	389	383	387	193	176	184	366	352	357	291	261	275
17	397	383	390	248	191	221	373	357	365	261	251	255
18	390	368	375	281	254	269	498	360	380	252	221	237
19	417	371	392	310	282	293	382	369	376	239	220	228
20	453	356	407	343	311	328	388	331	359	247	238	242
21	358	313	342	370	344	358	413	365	395	262	247	255
22	349	317	326	379	360	370	387	354	368	271	262	267
23	391	351	378	379	359	371	412	375	389	262	233	244
24	391	358	373	381	143	299	411	309	382	239	233	236
25	411	361	381	185	141	162	349	266	303	244	239	242
26	437	410	424	112	50	70	365	303	349	261	245	252
27	459	439	450	145	114	135	382	355	369	272	262	267
28	455	447	450	165	143	151	387	365	377	277	271	273
29	466	450	461	175	162	169	431	376	405	290	278	283
30	473	448	459	183	174	178	416	348	385	295	291	293
31	472	456	465	---	---	---	360	340	346	306	294	301
MONTH	473	167	342	452	50	232	579	185	339	541	220	300
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	307	305	306	417	409	412	220	208	213	---	---	510
2	315	305	310	426	420	422	221	198	209	---	---	570
3	330	310	320	429	412	423	233	217	225	---	---	580
4	340	320	330	452	415	431	244	230	236	---	---	600
5	350	330	340	426	391	412	266	239	256	---	---	610
6	360	340	350	394	375	385	285	267	277	---	---	580
7	370	350	360	380	373	368	289	276	282	---	---	540
8	380	360	370	371	292	332	288	267	283	---	---	510
9	383	370	375	294	279	284	254	228	237	---	---	550
10	401	385	394	302	282	292	268	250	258	---	---	580
11	401	392	396	307	303	305	281	272	276	---	---	575
12	394	391	392	307	297	302	288	271	282	515	505	510
13	394	391	392	327	305	313	275	265	268	465	455	460
14	395	390	393	328	309	318	272	202	229	---	---	630
15	400	395	397	326	309	316	233	220	227	---	---	640
16	413	387	401	337	325	331	253	239	246	---	---	640
17	383	308	332	337	201	297	272	260	265	---	---	580
18	308	300	304	191	172	178	293	278	287	---	---	260
19	326	307	318	208	182	195	308	298	301	---	---	460
20	343	326	334	217	178	206	326	314	320	---	---	410
21	358	344	350	175	120	131	334	329	332	---	---	400
22	365	360	363	154	138	147	367	340	353	328	321	324
23	368	358	363	174	156	166	387	374	380	338	267	313
24	368	359	364	177	159	166	---	---	400	286	262	274
25	370	359	382	183	160	172	---	---	420	288	275	282
26	378	368	372	185	174	178	---	---	410	291	274	283
27	383	378	382	196	182	187	---	---	355	306	292	299
28	397	381	387	198	161	179	---	---	355	316	306	311
29	410	400	405	175	162	169	---	---	360	329	312	323
30	---	---	---	194	174	184	---	---	380	315	270	289
31	---	---	---	213	193	204	---	---	---	304	278	291
MONTH	413	300	361	452	120	271	387	198	297	515	262	458

03459500 PIGEON RIVER NEAR HEPCO, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	326	307	316	657	598	636	1510	1270	1340	1370	1310	1340
2	348	328	337	651	402	530	1340	1160	1250	1290	1000	1180
3	372	350	360	491	377	415	1350	1180	1280	1150	949	1080
4	398	374	386	655	452	544	1390	1230	1310	1080	741	951
5	412	400	406	603	508	560	1630	1270	1410	1100	774	932
6	422	413	417	710	618	670	1610	1330	1420	1180	997	1070
7	438	423	428	733	711	723	1420	1240	1310	1210	1100	1170
8	454	439	445	774	717	741	1410	1260	1330	1210	1050	1120
9	468	456	462	766	724	750	1450	1310	1390	1420	1210	1260
10	490	462	479	648	601	618	1710	1130	1380	1510	1040	1270
11	501	487	493	754	621	689	1200	913	1070	1200	1000	1090
12	511	501	505	773	556	634	1570	1120	1450	1010	895	930
13	524	512	518	848	793	820	1500	1280	1380	1410	1020	1200
14	535	523	530	992	849	894	1670	1350	1550	1560	1370	1490
15	556	536	544	1070	970	1010	1340	1130	1240	1490	1330	1370
16	568	557	564	1010	860	904	1210	1000	1120	1570	1370	1460
17	611	471	557	894	820	863	1120	847	970	1360	1220	1290
18	488	469	475	1040	797	873	999	613	848	1330	1270	1290
19	484	475	479	1070	673	870	1010	634	780	1350	1270	1310
20	506	492	500	946	733	835	1040	765	886	1280	1010	1160
21	547	526	535	940	894	912	1260	820	1060	1240	1060	1140
22	586	557	571	952	848	903	1280	696	1080	1150	912	1020
23	615	588	598	929	802	862	1230	1100	1170	1140	1020	1150
24	571	179	356	1120	854	953	1150	1010	1060	1140	940	1030
25	358	301	327	1040	694	777	1340	1020	1170	1160	954	1080
26	458	365	422	848	691	778	1370	1260	1310	964	924	944
27	503	452	479	906	744	809	1270	1090	1160	945	842	873
28	518	478	506	906	802	862	1500	1210	1350	1040	867	969
29	563	525	547	1170	854	964	1520	1400	1480	947	674	814
30	582	532	550	1170	1070	1100	1410	1360	1380	647	585	602
31	---	---	---	1540	1020	1280	1400	1330	1370	---	---	---
MONTH	615	179	470	1540	377	799	1710	613	1240	1570	585	1120
YEAR	1710	50	519									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.5	17.5	18.5	17.5	15.5	16.5	7.0	5.0	6.0	9.0	8.0	8.5
2	18.0	17.0	17.5	17.0	14.0	15.0	6.0	4.5	5.5	8.0	6.0	7.5
3	18.5	16.5	17.5	14.5	12.0	13.5	5.0	4.0	4.5	8.5	6.0	7.0
4	17.0	15.5	16.5	12.5	10.5	11.5	6.0	4.0	5.0	8.0	6.5	7.5
5	16.0	14.5	15.5	12.0	10.0	11.0	7.5	4.5	6.0	7.0	5.0	6.0
6	15.5	13.5	14.5	12.0	10.0	11.0	9.0	6.0	7.5	6.0	3.5	5.0
7	16.5	13.5	15.0	12.5	10.5	11.5	9.5	8.0	8.5	7.0	5.0	6.0
8	17.0	13.5	15.5	12.0	10.0	11.0	8.5	6.5	7.5	8.0	7.0	7.5
9	18.5	15.5	17.0	13.0	11.0	12.0	8.0	5.5	6.5	9.0	8.0	8.5
10	17.5	14.5	15.5	13.5	12.5	13.0	8.0	5.5	7.0	9.0	8.0	8.5
11	15.0	14.0	14.5	13.0	12.5	13.0	9.0	6.0	7.5	10.5	8.5	9.5
12	16.5	13.0	14.5	13.5	12.5	13.0	11.0	8.5	9.5	8.5	7.0	8.0
13	16.5	14.5	15.5	13.0	11.0	12.5	12.0	11.0	11.5	7.5	6.5	7.0
14	15.0	12.5	13.5	11.0	9.5	10.5	11.5	9.5	10.5	9.0	7.5	8.0
15	15.0	11.5	13.5	10.0	8.0	9.0	9.0	7.5	8.5	9.0	8.0	8.5
16	16.0	12.5	14.5	11.0	8.5	9.5	9.0	7.5	8.5	9.5	8.0	8.5
17	16.5	13.5	15.0	11.0	8.5	10.0	8.5	5.5	6.5	10.0	9.0	9.5
18	17.5	14.5	16.0	11.5	9.0	10.0	7.0	4.5	5.5	10.5	9.5	10.0
19	18.0	15.0	16.5	11.5	9.0	10.0	7.5	4.5	6.0	10.0	8.5	9.0
20	19.0	16.5	17.5	12.5	9.0	10.5	7.5	5.5	6.5	9.5	7.5	8.5
21	18.5	16.0	17.5	13.5	10.5	12.0	7.5	5.5	6.5	9.5	7.5	8.5
22	19.5	16.0	18.0	13.5	11.0	12.5	8.5	6.5	7.5	10.0	9.0	9.5
23	19.0	17.0	18.5	15.0	13.5	14.0	10.0	8.0	9.0	9.0	6.0	8.0
24	17.0	14.5	15.5	15.0	13.5	14.5	11.5	10.5	10.5	8.0	5.0	6.5
25	15.0	12.5	14.0	15.0	13.5	14.0	10.0	6.0	8.5	8.5	6.0	7.5
26	14.5	11.5	13.0	14.5	11.5	13.0	8.5	7.0	7.5	9.0	7.5	8.5
27	14.5	10.5	12.5	11.5	10.5	11.0	8.5	6.5	7.5	10.0	8.5	9.0
28	16.0	12.0	14.0	11.0	10.5	11.0	8.5	7.0	7.5	9.0	8.0	8.5
29	15.5	14.0	15.0	10.0	7.0	8.5	8.5	6.0	7.5	8.0	6.5	7.5
30	16.5	15.0	15.5	7.0	5.5	6.5	8.5	8.0	8.0	6.5	5.5	6.0
31	16.5	15.5	16.0	---	---	---	9.0	8.0	8.5	6.0	4.0	5.5
MONTH	19.5	10.5	15.5	17.5	5.5	11.5	12.0	4.0	7.5	10.5	3.5	8.0

03459500 PIGEON RIVER NEAR HEPCO, N. C.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	6.0	4.0	5.0	11.0	8.0	9.5	15.0	11.0	13.0	---	---	---
2	5.5	3.5	4.5	9.5	5.5	7.5	15.0	11.5	13.0	---	---	---
3	6.0	4.0	5.0	5.5	3.5	4.5	16.5	12.5	14.5	---	---	---
4	6.0	4.0	5.0	7.5	4.5	6.0	17.5	13.5	15.5	---	---	---
5	6.0	5.0	5.5	9.0	6.5	8.0	15.0	11.0	13.0	---	---	---
6	6.5	4.5	5.5	11.5	7.5	9.5	15.0	10.0	12.5	---	---	---
7	6.0	4.0	5.0	11.0	8.5	10.0	14.5	12.0	13.5	---	---	---
8	6.0	4.0	5.0	14.0	10.0	12.0	16.0	13.0	14.5	---	---	---
9	6.0	5.0	5.5	13.5	11.0	12.0	16.0	12.5	14.0	---	---	---
10	6.5	4.5	5.0	13.5	9.5	11.5	16.5	12.5	14.5	---	---	---
11	6.0	3.0	4.5	11.5	9.0	10.5	16.5	12.0	14.5	---	---	---
12	5.5	3.5	4.5	9.0	7.5	8.0	15.0	13.5	14.0	19.0	16.0	17.5
13	6.0	2.5	4.5	11.5	7.5	9.0	14.0	13.0	13.5	19.0	16.0	17.5
14	7.5	3.5	6.0	10.5	7.5	9.0	14.5	12.5	14.0	---	---	---
15	8.5	5.5	7.0	12.0	6.5	9.5	12.5	10.0	10.5	---	---	---
16	8.5	5.5	7.5	11.5	8.5	10.5	13.0	9.5	11.0	---	---	---
17	5.5	3.5	4.5	11.0	10.5	11.0	14.0	10.0	12.0	---	---	---
18	5.5	2.0	4.0	11.0	8.5	10.0	15.0	11.0	13.0	---	---	---
19	8.0	4.5	6.0	10.5	8.0	9.5	15.5	12.0	13.5	---	---	---
20	8.5	6.5	7.5	10.5	10.0	10.0	16.5	12.0	14.0	---	---	---
21	11.5	7.5	9.5	10.5	8.5	10.0	16.5	13.0	14.5	---	---	---
22	13.0	10.5	11.5	10.5	7.0	8.5	18.0	13.0	15.5	19.0	16.5	17.5
23	13.5	10.0	11.5	10.5	7.5	9.0	19.5	14.0	15.5	18.0	17.0	17.5
24	12.5	9.5	11.0	11.0	9.5	10.0	---	---	---	19.0	16.5	17.5
25	11.0	8.5	10.0	12.0	9.5	10.5	---	---	---	18.0	17.0	17.5
26	8.0	5.0	6.5	11.0	10.0	10.5	---	---	---	21.0	16.5	18.5
27	8.5	4.5	6.5	13.0	9.5	11.0	---	---	---	21.5	17.0	19.0
28	9.5	6.0	7.0	11.5	10.0	10.5	---	---	---	22.0	17.5	20.0
29	11.0	7.5	9.0	13.5	10.0	11.5	---	---	---	22.0	19.0	20.5
30	---	---	---	13.0	11.5	12.5	---	---	---	22.0	19.0	20.5
31	---	---	---	14.0	11.5	12.5	---	---	---	21.5	19.0	20.5
MONTH	13.5	2.0	6.5	14.0	3.5	10.0	19.5	9.5	13.5	22.0	16.0	18.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	23.0	19.0	21.0	28.0	22.0	25.5	27.0	25.5	26.0	26.5	23.5	25.0
2	24.5	20.0	22.0	26.0	22.0	25.0	28.5	23.5	26.0	26.0	24.0	24.5
3	25.5	21.0	23.0	26.0	23.0	25.0	29.0	24.5	26.5	26.5	23.5	25.0
4	25.5	22.0	23.5	29.0	24.5	26.5	28.5	24.0	26.5	26.0	23.5	24.5
5	25.5	21.0	23.5	29.5	25.0	27.0	29.0	24.5	26.5	26.5	23.0	24.5
6	25.0	21.5	23.0	29.0	24.0	26.5	28.0	24.0	26.0	27.5	23.0	25.0
7	26.5	22.0	24.0	28.5	22.5	26.0	29.5	24.0	27.0	27.5	23.5	25.5
8	26.5	23.0	24.5	30.0	25.0	27.5	30.0	24.5	27.0	25.5	22.5	24.0
9	23.5	20.0	22.0	27.5	25.5	26.5	30.0	24.5	27.5	26.5	21.5	24.0
10	22.5	18.5	20.5	26.0	25.0	25.5	28.0	25.0	26.5	25.5	22.0	23.5
11	23.0	18.5	21.0	30.0	24.5	27.0	26.5	23.5	25.0	26.5	22.0	24.0
12	23.0	18.5	21.0	30.0	25.0	27.5	28.0	24.0	26.0	26.5	22.0	24.0
13	24.5	20.0	22.0	31.0	25.5	28.0	28.5	24.0	26.0	26.5	22.0	24.0
14	24.5	20.5	22.5	30.5	26.5	28.0	29.5	24.5	26.5	26.0	22.0	24.0
15	25.5	20.5	23.0	31.5	26.0	28.5	28.0	25.0	26.5	26.5	22.0	24.0
16	25.5	22.5	24.0	31.0	26.5	29.0	28.0	23.5	26.0	26.0	21.5	23.5
17	24.5	22.0	23.0	31.5	25.5	28.5	27.0	25.0	26.0	24.0	22.0	23.0
18	24.0	20.5	22.0	31.0	26.0	28.5	26.0	24.0	25.0	25.5	22.0	23.5
19	24.0	20.5	22.5	31.0	26.0	28.5	27.5	24.0	26.0	25.0	22.0	23.5
20	25.5	21.0	23.0	30.0	25.0	28.0	29.5	24.5	27.0	24.0	22.5	23.5
21	25.5	21.0	23.0	30.5	25.0	28.0	30.0	24.0	27.5	26.0	23.0	24.0
22	25.5	21.0	23.0	28.5	25.0	27.0	28.0	23.5	26.5	26.0	23.5	24.5
23	24.0	22.0	23.0	27.0	24.5	25.5	28.0	24.5	26.5	27.0	23.5	25.0
24	22.5	19.5	20.5	28.5	24.0	26.0	25.5	24.0	25.0	26.5	23.5	25.0
25	24.5	19.5	21.5	28.5	25.0	26.5	27.5	23.0	25.0	25.0	22.5	23.5
26	26.5	21.0	23.5	26.5	24.0	25.5	27.0	23.0	25.0	24.5	21.5	22.5
27	27.0	23.0	25.0	27.5	23.5	25.0	27.5	22.5	25.0	21.5	19.0	20.0
28	25.0	23.5	24.5	28.0	24.0	26.0	27.0	22.5	25.0	19.0	17.5	18.5
29	26.5	22.0	24.0	28.5	24.0	26.0	26.5	23.0	24.5	19.0	17.5	18.5
30	26.5	21.0	24.0	29.0	24.0	26.5	26.0	23.0	24.5	18.5	17.5	18.0
31	---	---	---	30.0	24.0	27.0	27.5	23.0	25.0	---	---	---
MONTH	27.0	18.5	23.0	31.5	22.0	27.0	30.0	22.5	26.0	27.5	17.5	23.5
YEAR	31.5	2.0	16.0									

03459500 PIGEON RIVER NEAR HEPCO, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC					
11...	1100	699	6	11	76
JAN					
14...	1320	1060	46	132	49
APR					
08...	1215	1110	22	66	--
MAY					
13...	1035	571	11	17	85
JUN					
23...	1230	424	29	33	95
JUL					
21...	1015	246	19	13	98
31...	1015	211	39	22	94
SEP					
04...	1315	230	43	27	97

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.
(HYDROLOGIC BENCH-MARK STATION)

LOCATION.--Lat 35°40'02", long 83°04'23", Haywood County, Hydrologic Unit 06010106, in Great Smoky Mountains National Park, on left bank 20 ft (6 m) downstream from bridge on State Highway 284, 500 ft (152 m) upstream from Little Cataloochee Creek, 2 mi (3 km) north of Cataloochee and 3.7 mi (6.0 km) upstream from mouth.

DRAINAGE AREA.--49.2 mi² (127.4 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1933 to September 1952, October 1962 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,456.88 ft (748.857 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority).

REMARKS.--Water-discharge record good. Records for Class A evaporation station 2.4 mi (3.9 km) upstream published in reports of National Climatic Center, NOAA, U.S. Department of Commerce.

AVERAGE DISCHARGE.--37 years, 111 ft³/s (3.144 m³/s), 30.64 in/yr (778 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,080 ft³/s (144 m³/s) Mar. 6, 1963, gage height, 8.08 ft (2.463 m); minimum, 9 ft³/s (0.25 m³/s) Jan. 2, 1940, Dec. 17, 24, 1943, gage height, 1.87 ft (0.57 m), result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,960 ft³/s (55.5 m³/s) Mar. 21, gage height, 5.71 ft (1.740 m); minimum, 23 ft³/s (0.65 m³/s) Sept. 16, 17, gage height, 2.04 ft (0.622 ft).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	54	137	91	110	95	251	113	107	50	33	30
2	100	170	123	85	110	90	221	109	98	49	33	41
3	91	95	119	82	110	90	200	107	92	115	31	33
4	100	83	107	86	105	95	192	103	86	69	31	32
5	95	76	103	81	105	175	168	100	81	60	32	29
6	85	73	99	77	100	147	155	97	78	58	30	29
7	80	69	94	101	95	145	146	98	75	51	30	27
8	76	67	87	119	90	233	158	95	71	48	29	26
9	72	67	83	124	90	219	155	90	69	55	28	25
10	108	455	80	125	90	189	135	87	67	77	46	49
11	79	319	77	179	85	165	127	84	64	64	40	29
12	75	272	75	234	80	152	208	81	62	50	32	26
13	72	209	86	191	85	155	239	79	61	47	29	26
14	70	169	76	180	80	139	404	77	60	45	29	25
15	69	145	71	155	80	126	323	76	57	44	36	24
16	67	129	69	142	129	120	271	74	65	43	38	24
17	65	116	66	140	96	486	230	94	79	41	33	28
18	64	107	64	204	95	594	208	132	88	40	44	29
19	62	100	64	183	94	387	192	86	62	39	46	25
20	61	94	63	170	89	426	176	126	57	38	33	38
21	59	89	62	158	98	1290	164	109	54	38	29	32
22	58	85	62	194	143	644	151	99	57	37	81	27
23	78	82	61	211	131	436	142	103	63	48	34	31
24	60	135	117	190	122	483	135	104	98	41	31	33
25	58	196	120	176	116	438	130	171	80	37	30	42
26	56	507	95	158	108	365	142	145	64	39	28	39
27	55	270	90	146	105	302	140	127	57	38	27	28
28	55	213	87	135	102	434	122	115	67	44	27	35
29	55	177	84	125	97	420	129	130	63	36	28	90
30	55	153	94	125	---	352	118	143	54	35	30	49
31	55	---	89	151	---	294	---	116	---	33	28	---
TOTAL	2237	4776	2704	4518	2940	9686	5532	3270	2136	1509	1056	1001
MEAN	72.2	159	87.2	146	101	312	184	105	71.2	48.7	34.1	33.4
MAX	108	507	137	234	143	1290	404	171	107	115	81	90
MIN	55	54	61	77	80	90	118	74	54	33	27	24
CFSM	1.47	3.23	1.77	2.97	2.05	6.34	3.74	2.13	1.45	.99	.69	.68
IN.	1.69	3.61	2.04	3.42	2.22	7.32	4.18	2.47	1.61	1.14	.80	.76

CAL YR 1979 TOTAL 49170 MEAN 135 MAX 968 MIN 37 CFSM 2.74 IN 37.18
WTR YR 1980 TOTAL 41365 MEAN 113 MAX 1290 MIN 24 CFSM 2.30 IN 31.28

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued
(Hydrologic bench-mark and pesticide station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: August 1973 to current year.
WATER TEMPERATURES: October 1962 to current year.

INSTRUMENTATION.--Temperature recorder since October 1962. Water-quality monitor since May 1974.

REMARKS.--Miscellaneous chemical data published for 1945 water year.

COOPERATION.--Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 43 micromhos June 13, 1974; minimum, 10 micromhos Jan. 12, 13, Feb. 2, 8, 10, 1975, Jan. 10, 19, 1976, Feb. 8, Dec. 28, 1978, Jan. 3-8, 10, 11, 12, 1979.
WATER TEMPERATURES: Maximum, 23.5°C Aug. 5, 1977; minimum, 0.0°C on several days during winter months of most years.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 22 micromhos Nov. 2, Aug. 11; minimum, 11 micromhos Feb. 3, 27, Mar. 2, 3, 4, May 4-7, 9, 10.
WATER TEMPERATURES: Maximum, 20.5°C July 6, 20, Aug. 7, 9; minimum, 0.0°C Feb. 1, 2, 3, 5, 26, 27, Mar. 2, 3, 4, 15.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT											
22...	1130	59	16	7.3	12.0	7.8	30	3	200	4	0
DEC											
04...	1130	108	13	7.3	1.0	9.4	46	<1	270	3	0
JAN											
16...	1205	146	13	7.2	6.0	16.0	3	<1	290	--	--
FEB											
20...	1215	89	15	6.9	2.5	8.4	82	1	--	3	0
MAR											
07...	1315	129	14	6.8	5.0	11.0	63	1	230	--	--
21...	1000	1480	12	6.8	7.0	11.6	--	--	--	3	0
JUN											
25...	1100	75	16	6.5	15.0	7.7	95	15	1600	4	2
SEP											
09...	1250	26	17	6.8	15.5	7.2	190	2	1700	4	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT											
22...	1.0	.3	1.2	35	.3	.8	8	0	7	.6	2.0
DEC											
04...	.8	.3	.9	44	.2	.4	6	0	5	.5	1.3
JAN											
16...	--	--	--	--	--	--	7	0	6	.7	--
FEB											
20...	.8	.3	1.2	41	.3	.4	5	0	4	1.0	1.5
MAR											
07...	--	--	--	--	--	--	5	0	4	1.3	--
21...	.8	.2	.8	31	.2	.7	4	0	3	1.0	2.3
JUN											
25...	1.0	.3	1.1	35	.2	.6	7	0	6	1.2	1.8
SEP											
09...	1.1	.4	1.2	34	.3	.6	8	0	*11	3.4	1.2

* Lab alkalinity.

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C, DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)
OCT 22...	.5	.0	8.2	16	18	.02	2.55	.00	.00	.020
DEC 04...	.8	.0	7.2	14	15	.02	4.08	.16	.16	.000
JAN 16...	--	--	--	--	--	--	--	--	--	--
FEB 20...	.4	.0	7.6	20	15	.03	4.81	.12	.11	.000
MAR 07...	--	--	--	--	--	--	--	--	--	--
21...	.7	.0	4.9	17	14	.02	67.9	.27	.27	.030
JUN 25...	.4	.1	7.5	38	15	.05	7.69	.17	.19	.050
SEP 09...	.9	.0	10	33	23	.04	2.32	.12	.15	.000

DATE	PHOSPHORUS, TOTAL (MG/L AS PO4)	PHOSPHORUS, ORTHOPHOSPHATE DISSOL. (MG/L AS P)	PHOSPHORUS, ORTHOPHOSPHATE DISSOL. (MG/L AS PO4)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)
OCT 22...	.06	.03	.09	0	0	0	<50	<10	40	0
DEC 04...	.00	.00	.00	--	--	--	--	--	--	--
JAN 16...	--	--	--	--	--	--	--	--	--	--
FEB 20...	.00	.03	.09	--	--	--	--	--	--	--
MAR 07...	--	--	--	--	--	--	--	--	--	--
21...	.09	.04	.12	1	1	0	<50	<40	10	0
JUN 25...	.15	.07	.21	--	--	--	--	--	--	--
SEP 09...	.00	.06	.18	--	--	--	--	--	--	--

DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)
OCT 22...	0	0	2	10	8	2	<3	1	0	0
DEC 04...	--	--	--	--	--	--	--	--	--	--
JAN 16...	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--
MAR 07...	--	--	--	--	--	--	--	--	--	--
21...	0	0	<1	10	9	1	<3	1	0	<10
JUN 25...	--	--	--	--	--	--	--	--	--	--
SEP 09...	--	--	--	--	--	--	--	--	--	--

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 22...	90	73	17	0	0	0	<4	0	0	2
DEC 04...	--	--	--	--	--	--	--	--	--	--
JAN 16...	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--
MAR 07...	--	--	--	--	--	--	--	--	--	--
21...	470	450	20	0	0	<10	<4	30	30	3
JUN 25...	--	--	--	--	--	--	--	--	--	--
SEP 09...	--	--	--	--	--	--	--	--	--	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)
OCT 22...	.4	.3	<.1	<10	0	0	0	0	0	0
MAR 21...	<.1	.0	.1	<10	0	0	0	0	0	0

DATE	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)
OCT 22...	9	<6.0	0	0	<4	<.4	<.4	.7	<.4	.7
MAR 21...	8	<6.0	10	6	<4	--	--	--	--	--

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM DIS-SOLVED, EXTRAC-TION (UG/L)	CYANIDE TOTAL (MG/L AS CN)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL (UG/L)
OCT 22...	<.4	.05	<.01	.00	.0	6	.00	.00	.0	.0
MAR 21...	--	--	--	.00	--	--	--	--	--	--

DATE	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-ELDRIN TOTAL (UG/L)	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDO-SULFAN, TOTAL (UG/L)
OCT 22...	0	.00	.0	.00	.0	.00	.0	.00	.0	.00
MAR 21...	--	--	--	--	--	--	--	--	--	--

DATE	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METH-OXY-CHLOR, TOTAL (UG/L)	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)
OCT 22...	.00	.0	.00	.0	.00	.0	.00	.1	.00	.0
MAR 21...	--	--	--	--	--	--	--	--	--	--

DATE	MIREX, TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
OCT 22...	.00	.00	0	0	.00	.00	.00

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14	14	20	18	13	12	15	13	13	12	14	13
2	14	14	22	20	12	12	15	13	12	12	13	11
3	14	13	21	19	13	13	15	13	13	11	13	11
4	15	13	19	17	14	13	15	13	13	12	13	11
5	14	13	18	17	14	12	14	13	13	12	15	13
6	15	13	18	17	15	13	13	12	13	12	14	13
7	15	13	19	17	15	14	15	13	14	13	15	13
8	15	13	18	17	15	14	15	15	14	13	16	14
9	15	14	19	17	15	13	15	15	15	14	16	14
10	15	15	21	18	15	14	15	14	14	13	15	14
11	15	15	18	17	16	14	15	14	14	13	16	14
12	16	14	18	17	16	15	15	14	14	13	14	14
13	16	15	17	16	17	16	14	13	14	12	15	13
14	15	13	16	15	17	16	15	14	15	13	15	14
15	15	14	15	14	16	15	15	13	15	14	15	14
16	16	15	16	15	16	15	15	13	17	15	15	13
17	16	15	16	14	17	15	15	14	16	14	16	15
18	16	15	16	15	15	14	15	14	15	14	15	13
19	17	16	16	15	16	14	14	13	15	14	14	13
20	17	16	16	15	16	15	14	13	16	14	15	13
21	18	16	16	15	16	13	14	12	15	14	15	12
22	19	16	16	15	16	13	15	14	15	14	13	12
23	21	19	17	15	15	14	14	13	15	14	13	12
24	19	17	18	16	16	14	13	12	15	14	13	12
25	17	17	18	16	16	16	14	13	15	14	13	12
26	17	16	18	15	16	14	14	13	14	12	13	13
27	17	16	16	15	15	14	15	14	14	11	13	12
28	18	17	16	15	15	13	15	13	15	13	15	13
29	19	17	15	14	14	13	15	13	14	13	14	13
30	20	18	13	12	15	13	14	12	---	---	13	13
31	19	18	---	---	15	14	14	13	---	---	13	13
MONTH	21	13	22	12	17	12	15	12	17	11	16	11
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14	12	12	12	16	15	17	16	16	14	19	16
2	14	12	12	12	16	15	18	17	16	14	19	17
3	14	13	12	12	16	15	19	16	16	14	19	17
4	14	13	12	11	16	15	19	18	16	14	19	17
5	14	12	13	11	16	15	19	18	17	15	19	17
6	13	12	13	11	17	15	19	18	17	15	19	17
7	13	12	13	11	16	15	18	17	17	15	19	16
8	13	12	13	12	17	15	18	17	17	15	18	16
9	14	12	13	11	16	15	18	17	17	16	18	13
10	14	12	13	11	16	15	19	18	20	15	17	15
11	14	12	14	12	16	15	18	17	22	18	17	15
12	14	12	14	12	17	15	18	17	20	19	17	15
13	14	13	15	14	17	15	18	16	19	17	17	15
14	15	13	15	14	17	15	18	16	20	17	17	15
15	13	12	15	14	17	16	19	17	21	19	17	15
16	13	12	15	14	18	16	19	17	20	19	16	14
17	13	12	15	15	18	16	18	16	20	18	17	16
18	13	12	15	14	18	17	19	15	20	19	17	14
19	13	12	15	14	18	17	19	15	20	19	17	15
20	13	12	15	15	18	16	18	16	20	19	17	15
21	13	12	15	14	18	16	18	16	20	15	17	15
22	13	12	16	14	18	16	18	16	17	16	17	15
23	13	13	16	16	19	18	19	17	17	16	17	15
24	13	12	17	16	18	17	19	16	17	16	18	16
25	13	12	17	16	18	17	18	16	17	16	17	15
26	14	13	17	15	19	17	20	18	17	15	17	15
27	14	13	16	15	18	15	21	18	17	15	17	15
28	14	13	16	15	18	15	20	18	17	15	17	16
29	13	13	17	15	18	17	19	16	17	16	16	15
30	13	12	16	16	18	16	18	16	19	17	16	15
31	---	---	16	15	---	---	16	15	18	16	---	---
MONTH	15	12	17	11	19	15	21	15	22	14	19	13
YEAR	22	11										

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.0	13.5	13.0	11.0	3.0	1.5	5.5	3.5	.5	.0	4.0	.5
2	15.0	12.5	13.0	11.5	3.0	2.0	3.5	1.5	.5	.0	.5	.0
3	13.0	11.5	11.5	8.5	2.0	.5	3.5	1.0	.5	.0	.5	.0
4	12.5	10.0	8.5	6.0	2.0	.5	3.5	2.0	.5	.5	2.0	.0
5	11.0	9.0	8.5	5.5	4.0	2.0	3.0	1.0	1.0	.0	6.0	2.0
6	11.0	8.5	8.5	6.0	6.5	3.5	2.0	.5	1.0	1.0	8.0	5.0
7	11.5	8.5	8.5	7.0	6.5	5.0	2.5	1.0	1.5	.5	6.5	4.5
8	11.5	7.5	8.5	6.0	5.5	4.0	4.5	2.5	3.0	.5	9.5	5.0
9	13.5	10.5	10.0	8.0	4.0	2.0	5.0	3.5	3.5	3.0	7.0	4.5
10	11.5	9.0	11.5	10.5	4.5	2.5	5.0	2.5	3.5	2.0	6.5	2.5
11	9.5	8.5	11.0	10.0	6.0	3.5	7.5	4.5	2.0	.5	6.0	2.5
12	11.0	7.5	11.0	10.0	9.0	5.5	6.5	3.5	2.0	1.0	2.0	.5
13	11.0	8.5	10.0	9.0	9.5	8.5	4.5	3.5	1.5	.5	5.5	1.0
14	8.5	6.5	9.5	6.0	9.0	6.0	6.5	4.5	4.0	1.0	5.0	1.0
15	9.0	6.0	6.5	5.0	5.5	4.0	6.0	4.0	5.0	3.0	4.5	.0
16	10.0	6.5	8.0	6.0	6.5	4.5	8.0	5.5	5.0	3.0	5.5	2.0
17	10.0	9.0	8.0	5.5	6.5	1.5	7.0	6.0	3.0	.5	6.5	5.5
18	11.0	8.5	8.5	6.0	2.0	1.0	8.5	6.0	1.0	.5	6.5	4.0
19	11.5	9.0	8.0	6.0	3.0	1.5	6.0	4.0	4.5	1.0	6.0	1.5
20	12.5	10.0	9.0	6.5	4.0	2.0	5.5	3.5	4.5	2.0	6.5	5.0
21	13.0	10.5	9.5	6.5	4.0	2.0	5.0	3.0	7.0	3.5	6.5	4.0
22	13.5	10.5	10.0	7.0	6.5	3.5	6.0	5.0	9.0	6.5	5.0	2.0
23	13.0	10.5	11.5	9.0	6.5	5.0	5.5	1.5	9.0	5.0	6.5	2.0
24	10.5	8.5	12.0	10.5	8.5	6.0	3.0	1.0	9.5	6.0	7.0	5.5
25	10.0	8.0	12.5	10.5	6.5	4.0	5.0	2.5	8.0	3.5	8.0	5.5
26	9.0	7.0	12.0	7.5	5.0	3.5	5.5	3.0	3.5	.0	6.5	5.0
27	8.5	5.5	9.5	6.0	4.0	2.0	6.0	4.5	3.0	.0	8.5	4.0
28	10.5	7.0	8.5	6.0	4.5	2.5	5.0	3.5	7.0	2.0	9.0	7.5
29	11.0	9.5	6.5	3.5	5.5	2.0	4.0	2.0	7.0	4.0	9.5	6.0
30	12.5	10.5	3.0	1.5	6.5	4.0	4.0	1.5	---	---	9.0	8.0
31	12.0	10.5	---	---	6.0	5.0	3.5	.5	---	---	9.0	6.5
MONTH	16.0	5.5	13.0	1.5	9.5	.5	8.5	.5	9.5	.0	9.5	.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.5	5.0	11.5	7.0	16.0	13.0	16.5	13.0	19.0	15.5	18.0	14.5
2	10.0	5.5	11.0	8.0	16.5	12.5	19.0	13.0	18.5	16.0	17.0	14.5
3	10.5	6.5	12.0	9.0	16.0	13.5	16.5	15.5	19.0	15.5	16.5	15.0
4	11.0	8.0	14.0	9.5	16.0	13.0	18.0	15.0	19.5	16.0	17.5	15.0
5	8.0	4.0	12.5	10.0	16.0	13.0	20.0	16.5	19.5	16.0	17.0	14.5
6	7.0	2.0	14.0	10.0	17.0	14.0	20.5	18.0	18.5	16.5	19.5	14.0
7	8.0	5.5	13.0	11.5	18.0	14.5	19.5	16.0	20.5	15.5	17.5	14.5
8	12.0	8.0	13.0	11.0	18.5	15.5	18.0	13.0	19.5	15.5	16.5	14.5
9	11.5	8.5	12.5	8.5	16.0	13.5	18.5	17.0	20.5	16.5	18.5	14.0
10	11.5	8.0	13.5	8.0	15.0	11.5	18.5	16.0	19.5	18.0	18.0	15.0
11	12.0	6.5	15.5	10.5	15.5	12.0	18.5	17.0	19.0	17.0	17.5	14.5
12	10.5	10.0	15.5	12.0	15.0	12.0	20.0	16.5	19.5	17.5	17.0	13.5
13	10.5	9.5	16.0	13.5	16.0	13.0	20.0	17.0	19.5	16.5	17.5	13.5
14	12.0	8.0	15.0	13.0	16.0	13.5	19.5	18.5	20.0	17.5	17.0	13.5
15	8.0	6.5	15.5	13.0	17.0	14.0	20.0	18.0	19.5	18.0	16.5	13.5
16	9.5	6.0	14.0	13.0	17.5	15.5	18.5	17.5	19.5	17.5	18.0	14.0
17	10.5	5.0	13.5	12.5	16.5	15.5	19.5	17.5	19.5	16.5	16.5	15.5
18	11.0	6.5	15.5	12.5	16.5	15.0	19.5	16.5	19.0	16.5	17.0	15.5
19	11.0	7.0	14.5	12.5	16.5	14.0	19.5	16.0	18.5	16.0	16.0	14.5
20	11.5	8.0	14.0	13.0	17.0	14.0	20.5	16.0	20.0	16.0	17.5	14.0
21	12.0	8.5	13.5	11.5	16.5	14.0	19.5	17.0	19.5	16.0	18.0	15.0
22	13.0	8.0	13.0	11.5	16.5	14.0	19.5	16.0	18.5	15.5	19.5	14.5
23	15.0	9.5	14.0	12.5	16.5	15.0	19.0	16.5	19.0	14.5	19.5	15.0
24	15.5	11.0	14.0	12.5	16.0	15.5	19.0	16.0	18.5	15.0	18.0	14.5
25	14.0	12.0	13.5	12.5	15.5	15.0	20.0	16.5	18.5	14.0	18.0	15.0
26	13.0	11.5	15.0	12.5	17.5	15.0	18.0	16.0	17.5	15.0	17.0	13.0
27	11.0	9.0	14.5	11.5	18.5	15.0	19.0	16.5	17.0	15.0	14.5	11.0
28	9.0	6.5	15.0	12.0	18.0	15.0	19.5	16.0	17.5	15.5	13.0	11.5
29	8.0	6.0	14.5	13.0	17.0	15.0	19.5	16.5	17.0	15.0	13.0	11.0
30	9.0	5.5	15.0	13.0	17.0	14.5	19.5	15.0	17.0	14.5	14.5	11.5
31	---	---	15.0	13.5	---	---	17.5	16.5	17.0	14.5	---	---
MONTH	15.5	2.0	16.0	7.0	18.5	11.5	20.5	13.0	20.5	14.0	19.5	11.0
YEAR	20.5	.0										

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
02...	1500	118	8	2.5	71
22...	1130	59	2	.32	63
DEC					
04...	1130	108	2	.58	50
JAN					
16...	1205	146	2	.79	60
FEB					
20...	1215	89	9	2.2	33
MAR					
07...	1315	129	1	.35	50
21...	1000	1480	51	204	48
21...	1350	1200	33	107	54
APR					
08...	1415	205	6	3.3	--
MAY					
13...	1425	80	1	.22	75
JUN					
25...	1100	75	2	.40	71
JUL					
31...	1425	36	6	.58	88
SEP					
09...	1250	26	2	.14	83

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	PH LAB (UNITS)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	FIELD ALKA-LINITY (MG/L AS CACO3)	LAB ALKA-LINITY (MG/L AS CACO3)
OCT												
18...	1545	62	15	6.7	--	12.0	9.7	<10	.3	<10	--	5
24...	1200	59	--	6.9	--	--	--	<10	--	4	--	--
NOV												
28...	1245	214	5	--	6.6	9.0	10.5	<10	.2	<10	--	4
DEC												
28...	1000	89	3	--	6.4	4.0	11.2	<10	.6	<10	--	5
JAN												
28...	1115	136	5	--	6.7	6.0	11.3	<10	.1	<10	--	5
FEB												
29...	1230	96	--	--	6.8	--	--	<10	.5	3	--	4
MAR												
31...	1420	288	--	--	6.7	10.0	9.6	<10	.1	<1	--	4
APR												
30...	1255	118	19	--	6.8	9.0	10.8	<10	.3	2	--	5
MAY												
14...	1120	79	--	--	7.0	15.0	9.4	<10	.5	2	--	5
JUN												
27...	1400	58	20	6.9	6.8	17.0	8.6	<10	.6	2	4	6
JUL												
22...	1500	39	16	7.0	6.9	18.0	8.3	<10	.2	8	5	6
AUG												
20...	1205	33	20	6.8	6.9	18.0	8.6	<10	.4	10	8	7
SEP												
30...	1045	47	19	--	6.8	14.0	8.6	<10	.3	24	--	6

03463300 SOUTH TOE RIVER NEAR CELO, N. C.

LOCATION.--Lat 35°49'52", long 82°11'04", Yancey County, Hydrologic Unit 06010108, on right bank on Secondary Road 1168, 800 ft (244 m) upstream from bridge on Secondary Road 1167, 0.3 mi (0.5 km) downstream from Whiteoak Creek, 1.9 mi (3.1 km) southeast of Celo, and at mile 20.1 (32.3 km).

DRAINAGE AREA.--43.4 mi² (112.4 km²).

PERIOD OF RECORD.--July 1957 to current year.

REVISED RECORDS.--WSP 1910: 1958-59.

GAGE.--Water-stage recorder. Datum of gage is 2,658 ft (810.16 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--23 years, 153 ft³/s (4.333 m³/s), 47.87 in/yr (1,216 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,900 ft³/s (932 m³/s) Nov. 6, 1977, gage height, 17.41 ft (5.307 m), from outside floodmarks, from rating curve extended above 4,500 ft³/s (127 m³/s) on basis of slope-area measurement of peak flow; minimum, 14 ft³/s (0.40 m³/s) Dec. 26, 1958, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,800 ft³/s (79 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	0815	5740	163	6.40	1.951	Nov 26	0030	*7310	207	*7.20	2.195

Minimum daily discharge, 29 ft³/s (0.82 m³/s) Aug. 29; minimum gage height, 0.62 ft (0.189 m) Sept. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	559	261	282	108	110	79	273	144	130	140	53	40
2	430	2410	252	102	105	85	245	137	120	127	51	78
3	356	558	231	97	95	92	224	132	111	147	47	75
4	330	360	219	98	90	100	218	127	104	167	55	49
5	315	288	204	94	90	120	191	122	98	125	49	40
6	269	250	194	96	84	103	176	118	94	111	45	35
7	240	223	183	98	81	96	166	114	92	102	43	32
8	216	202	167	112	80	137	665	111	86	94	40	51
9	197	189	158	105	78	137	555	106	82	89	38	32
10	193	529	152	100	78	107	327	102	79	108	42	45
11	174	398	145	206	80	96	273	100	76	109	43	40
12	163	336	141	245	79	91	378	95	74	88	43	38
13	153	283	145	161	80	150	451	92	74	81	38	35
14	140	255	137	271	79	144	1400	90	72	76	35	34
15	134	232	126	202	74	116	608	87	69	74	35	32
16	128	212	123	171	127	110	451	85	74	71	36	30
17	122	196	116	159	107	548	372	163	111	66	55	30
18	117	183	111	275	107	417	322	407	98	64	38	35
19	113	172	111	216	93	247	287	156	93	62	42	31
20	110	162	107	177	81	315	261	223	74	60	45	35
21	106	154	104	157	85	1070	240	215	66	74	38	40
22	102	148	101	159	116	410	219	164	63	73	70	35
23	137	152	99	164	111	307	202	566	63	66	43	36
24	107	551	143	134	104	457	189	361	713	62	38	35
25	99	1400	178	129	92	362	178	287	1230	59	35	58
26	95	1890	127	123	85	293	185	231	436	73	33	50
27	91	601	119	119	81	255	196	190	268	67	32	45
28	88	451	115	114	82	595	169	166	221	116	30	40
29	87	367	109	108	83	506	161	176	193	69	29	80
30	122	315	110	104	---	379	152	156	159	59	32	75
31	241	---	110	106	---	319	---	138	---	55	43	---
TOTAL	5734	13728	4619	4510	2637	8243	9734	5361	5223	2734	1296	1311
MEAN	185	458	149	145	90.9	266	324	173	174	88.2	41.8	43.7
MAX	559	2410	282	275	127	1070	1400	566	1230	167	70	80
MIN	87	148	99	94	74	79	152	85	63	55	29	30
CFSM	4.26	10.6	3.43	3.34	2.09	6.13	7.47	3.99	4.01	2.03	.96	1.01
IN.	4.91	11.77	3.96	3.87	2.26	7.07	8.34	4.60	4.48	2.34	1.11	1.12

CAL YR 1979 TOTAL 99348 MEAN 272 MAX 3500 MIN 38 CFSM 6.27 IN 85.15
WTR YR 1980 TOTAL 65130 MEAN 178 MAX 2410 MIN 29 CFSM 4.10 IN 55.82

03479000 WATAUGA RIVER NEAR SUGAR GROVE, N. C.

LOCATION.--Lat 36°14'18", long 81°49'22", Watauga County, Hydrologic Unit 06010103, on right bank 250 ft (76 m) upstream from bridge on Secondary Road 1121, 300 ft (91 m) downstream from Cove Creek, 2.3 mi (3.7 km) southwest of Sugar Grove, and at mile 64.4 (103.6 km).

DRAINAGE AREA.--90.8 mi² (235.2 km²).

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is 2,607.84 ft (794.870 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period Jan. 9 to Feb. 19, which are fair to poor. Slight diurnal fluctuation at low flow caused by small mills above station. Suspended-sediment records for the current year are published on page 420 of this report.

AVERAGE DISCHARGE.--41 years, 178 ft³/s (5.041 m³/s), 26.62 in/yr (676 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,800 ft³/s (1,440 m³/s) Aug. 13, 1940, gage height, 29.6 ft (9.02 m), from profile based on floodmarks, from rating curve extended above 4,900 ft³/s (139 m³/s) on basis of slope-area measurement of peak flow; minimum, 6.5 ft³/s (0.18 m³/s) Jan. 1, 1954, gage height, 1.13 ft (0.344 m), result of freezeup; minimum daily, 13 ft³/s (0.37 m³/s) Sept. 19, 30, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 22.1 ft (6.736 m), from floodmarks on barn 0.25 mi (0.4 km) above station as witnessed by local resident, discharge, 28,000 ft³/s (793 m³/s), from rating curve extended above 4,900 ft³/s (139 m³/s) on basis of slope-area measurement at gage height 29.6 ft (9.022 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	1245	4040	114	8.65	2.637	Apr 9	0230	3050	86.4	7.56	2.304
Nov 26	0300	7490	212	11.69	3.563	Apr 14	1230	*7500	212	*11.70	3.566

Minimum discharge, 30 ft³/s (0.85 m³/s) Sept. 16, 17, 19, 20, gage height, 1.44 ft (0.439 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	656	151	313	151	150	160	328	181	157	83	71	59
2	494	1960	273	144	150	165	284	169	146	79	68	53
3	394	895	244	139	145	170	258	163	134	104	60	54
4	341	487	230	139	145	180	281	156	125	128	103	50
5	342	359	218	138	145	193	235	151	117	97	105	60
6	282	302	213	137	145	196	214	152	112	134	71	66
7	259	263	202	133	150	176	205	147	110	88	62	48
8	229	238	181	143	150	333	1070	139	104	77	57	44
9	214	223	170	145	150	457	1530	133	93	83	54	42
10	316	692	165	139	145	321	694	128	90	288	52	49
11	252	740	161	184	145	253	474	125	87	201	90	42
12	227	679	157	293	129	210	540	122	83	125	71	38
13	217	492	166	236	131	217	540	119	83	148	54	35
14	194	384	158	466	137	219	3240	118	80	105	50	33
15	180	325	145	395	128	184	1350	113	75	94	48	32
16	172	287	144	306	231	173	784	109	75	84	48	31
17	163	257	136	266	197	442	548	111	90	77	56	31
18	156	236	133	336	177	605	454	278	80	72	46	33
19	150	219	132	335	151	411	395	152	76	68	47	31
20	147	203	125	283	156	405	338	323	72	65	48	33
21	143	192	121	252	210	1420	296	378	67	64	57	40
22	138	181	121	251	242	742	262	232	65	68	118	36
23	171	193	121	257	222	485	241	599	65	65	74	37
24	149	639	180	223	195	683	227	615	104	62	108	36
25	136	823	292	211	177	669	216	393	534	57	64	112
26	129	3580	195	192	169	501	214	302	276	66	55	70
27	125	969	173	179	160	394	243	244	157	68	50	46
28	124	600	165	171	154	520	207	206	119	254	47	43
29	124	451	158	160	144	611	206	192	103	137	45	77
30	147	365	159	154	---	479	195	206	93	83	80	79
31	144	---	156	155	---	400	---	167	---	70	70	---
TOTAL	6915	17385	5507	6713	4730	12374	16069	6623	3572	3194	2029	1440
MEAN	223	580	178	217	163	399	536	214	119	103	65.5	48.0
MAX	656	3580	313	466	242	1420	3240	615	534	288	118	112
MIN	124	151	121	133	128	160	195	109	65	57	45	31
CFSM	2.46	6.39	1.96	2.39	1.80	4.39	5.90	2.36	1.31	1.13	.72	.53
IN.	2.83	7.12	2.26	2.75	1.94	5.07	6.58	2.71	1.46	1.31	.83	.59

CAL YR 1979 TOTAL 132262 MEAN 362 MAX 4790 MIN 73 CFSM 3.99 IN 54.19
WTR YR 1980 TOTAL 86551 MEAN 236 MAX 3580 MIN 31 CFSM 2.60 IN 35.46

03500000 LITTLE TENNESSEE RIVER NEAR PRENTISS, N. C.

LOCATION.--Lat 35°08'57", long 83°22'46", Macon County, Hydrologic Unit 06010202, on left bank 600 ft (183 m) upstream from Owenby Branch, 0.5 mi (0.8 km) upstream from Cartoogechaye Creek, 2 mi (3 km) north of Prentiss, and at mile 119.5 (192.3 km).

DRAINAGE AREA.--140 mi² (363 km²).

PERIOD OF RECORD.--October 1943 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 1236: 1949(M).

GAGE.--Water-stage recorder. Datum of gage is 2,008.39 ft (612.157 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Since Oct. 1, 1954, auxiliary water-stage recorder 0.5 mi (0.8 km) downstream from base gage at same datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--37 years, 401 ft³/s (11.36 m³/s), 38.90 in/yr (988 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft³/s (346 m³/s) Oct. 4, 1964, gage height, 17.30 ft (5.273 m); minimum, 65 ft³/s (1.84 m³/s) Oct. 16, 17, 1954, gage height, 1.21 ft (0.369 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1898 reached a stage of about 15 ft (4.6 m), from profiles by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	2200	2050	58.1	5.50	1.676	Mar 28	2030	1690	47.9	4.79	1.460
Nov 26	1200	*3840	109	*9.32	2.841	Apr 8	2315	1690	47.9	4.79	1.460
Mar 8	0930	1570	44.5	4.55	1.387	Apr 14	1800	2560	72.5	6.67	2.033
Mar 18	0800	2280	64.6	6.23	1.899	May 18	0445	1530	43.3	4.46	1.359
Mar 21	1800	3050	86.4	8.43	2.569						

Minimum discharge, 101 ft³/s (2.86 m³/s) Sept. 16, gage height, 1.46 ft (0.445 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	929	428	781	417	511	345	925	584	490	298	145	133
2	748	1560	724	397	465	347	856	568	460	288	154	140
3	657	1220	675	379	448	323	812	544	439	274	143	136
4	652	728	646	397	432	338	809	531	419	274	138	151
5	735	606	618	400	412	594	744	517	402	267	141	143
6	601	544	600	370	419	527	708	505	392	257	131	126
7	548	506	576	368	403	472	685	492	391	248	126	119
8	506	477	547	420	392	1430	1110	491	373	234	123	114
9	481	461	527	422	409	1020	1240	467	354	231	121	110
10	462	854	512	406	454	726	910	453	345	225	137	136
11	441	739	498	489	418	612	811	441	338	231	166	135
12	426	667	488	747	404	579	1060	431	328	220	158	116
13	409	590	509	545	391	810	1180	417	323	213	142	112
14	392	541	515	647	384	698	2310	409	319	204	126	109
15	379	507	473	568	391	610	1630	413	309	202	120	106
16	371	485	459	514	523	563	1240	396	298	199	116	101
17	361	464	439	517	488	1240	1080	634	312	194	121	105
18	353	446	426	654	428	1870	975	1180	498	196	124	127
19	343	430	420	645	407	1090	905	654	384	179	576	114
20	337	416	411	557	400	1200	846	701	323	171	269	120
21	331	405	401	514	402	2740	804	672	303	166	172	159
22	323	396	396	576	419	1780	765	577	294	161	157	119
23	384	400	389	855	399	1240	732	1070	291	193	142	116
24	338	1080	438	630	381	1330	701	1150	724	216	157	117
25	318	1610	539	571	367	1200	679	861	607	179	151	238
26	308	3240	437	529	354	1020	694	708	468	170	134	245
27	301	1660	409	504	341	921	724	618	392	218	124	146
28	298	1160	395	481	344	1290	649	571	353	198	120	166
29	305	970	383	458	346	1360	624	541	330	172	118	493
30	552	850	404	450	---	1170	599	573	323	160	127	453
31	489	---	410	636	---	1040	---	508	---	152	150	---
TOTAL	14078	24440	15445	16063	11932	30485	27807	18677	11582	6590	4829	4705
MEAN	454	815	498	518	411	983	927	602	386	213	156	157
MAX	929	3240	781	855	523	2740	2310	1180	724	298	576	493
MIN	298	396	383	368	341	323	599	396	291	152	116	101
CFSM	3.24	5.82	3.56	3.70	2.94	7.02	6.62	4.30	2.76	1.52	1.11	1.12
IN.	3.74	6.49	4.10	4.27	3.17	8.10	7.39	4.96	3.08	1.75	1.28	1.25

CAL YR 1979 TOTAL 221141 MEAN 606 MAX 5250 MIN 179 CFSM 4.33 IN 58.76
WTR YR 1980 TOTAL 186633 MEAN 510 MAX 3240 MIN 101 CFSM 3.64 IN 49.59

03500240 CARTOOGECHAYE CREEK NEAR FRANKLIN, N. C.

LOCATION.--Lat 35°09'31", long 83°23'39", Macon County, Hydrologic Unit 06010202, on downstream side of center pier of bridge on Secondary Road 1152, 0.1 mi (0.2 km) downstream from unnamed creek, 1.8 mi (2.9 km) south of Franklin, and 1.9 mi (3.1 km) upstream from mouth.

DRAINAGE AREA.--57.1 mi² (147.9 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1944, 1947, 1953-55, 1960. June 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,017.18 ft (614.836 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--19 years, 150 ft³/s (4.248 m³/s), 35.67 in/yr (906 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,720 ft³/s (134 m³/s) Oct. 4, 1964, gage height, 12.96 ft (3.950 m); minimum, 30 ft³/s (0.85 m³/s) Oct. 7, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1949 reached a stage of 15.6 ft (4.755 m), from studies by Tennessee Valley Authority, discharge, about 7,000 ft³/s (198 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 26	0215	1350	38.2	7.45	2.271	Mar 21	0945	*2170	61.5	*9.88	3.011
Mar 17	2045	1440	40.8	7.83	2.387	Apr 13	2215	1060	30.0	6.25	1.905

Minimum daily discharge, 45 ft³/s (1.27 m³/s) Aug. 28, 29; minimum gage height, 1.28 ft (0.390 m) Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	180	149	195	125	178	123	340	195	175	110	60	54
2	179	482	178	113	163	122	309	189	166	107	66	66
3	154	241	164	109	155	124	288	183	159	104	57	63
4	188	176	158	123	147	120	285	178	152	103	55	135
5	192	148	153	119	140	254	258	175	146	100	56	91
6	159	136	151	108	143	209	244	171	143	105	51	65
7	143	126	143	129	135	216	235	174	140	97	51	56
8	126	119	134	177	132	628	266	176	135	94	48	50
9	113	117	129	177	140	421	251	162	130	92	46	48
10	117	512	126	163	145	293	226	157	128	94	82	70
11	110	354	124	219	134	235	214	153	124	97	65	56
12	106	272	122	257	132	221	366	150	121	87	58	51
13	103	223	143	210	128	286	485	146	119	84	52	49
14	98	191	132	220	127	240	858	143	118	79	49	48
15	97	170	120	183	131	212	534	142	115	78	47	47
16	95	157	117	167	207	196	404	139	113	77	46	46
17	92	144	112	164	170	757	337	258	131	72	46	52
18	90	137	109	201	151	876	303	361	300	70	66	58
19	91	131	107	182	143	486	279	219	154	69	121	51
20	91	124	106	169	140	692	260	256	130	66	69	55
21	91	118	103	159	146	1570	246	224	121	65	54	56
22	91	116	103	234	162	793	232	205	117	64	56	53
23	127	119	101	271	148	554	223	365	114	76	51	53
24	96	274	131	219	140	633	216	356	195	70	55	60
25	91	455	145	196	136	500	212	282	193	64	56	85
26	90	880	121	178	129	412	230	236	150	66	49	71
27	89	410	116	167	126	357	258	208	131	69	46	59
28	87	302	112	157	124	650	218	200	120	71	45	101
29	102	246	108	149	121	598	217	210	123	60	45	242
30	161	214	117	156	---	470	204	210	119	58	54	178
31	128	---	112	245	---	389	---	184	---	57	56	---
TOTAL	3677	7243	3992	5446	4173	13637	8998	6407	4282	2505	1758	2169
MEAN	119	241	129	176	144	440	300	207	143	80.8	56.7	72.3
MAX	192	880	195	271	207	1570	858	365	300	110	121	242
MIN	87	116	101	108	121	120	204	139	113	57	45	46
CFSM	2.08	4.22	2.26	3.08	2.52	7.71	5.25	3.63	2.50	1.42	.99	1.27
IN.	2.40	4.72	2.60	3.55	2.72	8.88	5.86	4.17	2.79	1.63	1.15	1.41

CAL YR 1979 TOTAL 72927 MEAN 200 MAX 1980 MIN 64 CFSM 3.50 IN 47.51
WTR YR 1980 TOTAL 64287 MEAN 176 MAX 1570 MIN 45 CFSM 3.08 IN 41.88

03503000 LITTLE TENNESSEE RIVER AT NEEDMORE, N. C.

LOCATION.--Lat 35°20'11", long 83°31'39", Swain County, Hydrologic Unit 06010202, on left bank on Secondary Road 1113, 0.8 mi (1.3 km) downstream from DeHart Creek, 0.8 mi (1.3 km) north of Needmore, 2.4 mi (3.9 km) downstream from Brush Creek, 6.3 mi (10.1 km) downstream from Tellico Creek and at mile 92.9 (149.5 km).

DRAINAGE AREA.--436 mi² (1,129 km²).

PERIOD OF RECORD.--October 1943 to current year. Monthly discharge only for some periods, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is 1,761.19 ft (36.811 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority).

REMARKS.--Records good. Considerable diurnal fluctuation caused by Porters Bend powerplant at Lake Emory 20 mi (32 km) upstream. Suspended-sediment records for the current year are published on page 420 of this report.

AVERAGE DISCHARGE.--37 years, 1,087 ft³/s (30.78 m³/s), 33.86 in/yr (860 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,100 ft³/s (626 m³/s) Oct. 5, 1964, gage height, 12.87 ft (3.923 m) in gage well, 13.06 ft (3.981 m) from outside gage; minimum, 52 ft³/s (1.47 m³/s) Nov. 7, 8, 1954, gage height, 1.16 ft (0.354 m); minimum daily, 71 ft³/s (2.01 m³/s) Nov. 7, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of October 1898 and Aug. 30, 1940, reached stages of about 13 ft (4.0 m) and 11.5 ft (3.5 m), respectively, from flood profiles by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s (140 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	1545	6160	174	6.19	1.887	Mar 21	0745	*11200	317	*8.34	2.542
Nov 26	1130	10700	303	8.14	2.481	Mar 28	2300	5710	162	5.98	1.823
Mar 18	0215	8260	234	7.11	2.167	Apr 14	1515	7960	225	6.98	2.128

Minimum discharge, 192 ft³/s (5.44 m³/s) Sept. 4, gage height, 1.66 ft (0.506 m); minimum daily, 233 ft³/s (6.60 m³/s) Aug. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2260	999	1930	968	1290	830	2680	1430	1190	715	411	368
2	1820	3990	1750	952	1140	868	2410	1370	1130	702	428	363
3	1560	3490	1590	884	1100	768	2260	1340	1070	676	415	359
4	1420	1860	1500	924	1020	845	2140	1290	1020	667	604	375
5	1720	1470	1430	964	992	1340	1980	1270	974	654	407	541
6	1360	1300	1390	876	1000	1520	1840	1250	946	695	358	417
7	1240	1170	1340	873	962	1230	1760	1220	930	631	341	348
8	1120	1110	1240	1080	952	3670	2230	1280	893	593	329	347
9	1050	1040	1180	1110	968	3170	3300	1160	865	555	319	307
10	1010	2690	1140	1100	1050	2130	2270	1090	820	616	393	400
11	958	2530	1120	1120	995	1720	2010	1090	824	690	484	421
12	914	2110	1070	2000	947	1520	2550	1060	773	592	442	334
13	877	1730	1100	1470	906	2000	3180	1020	785	557	382	324
14	834	1490	1190	1620	897	1850	6650	1000	777	541	233	315
15	829	1330	1050	1470	914	1570	5110	998	751	539	234	284
16	815	1230	1010	1310	1200	1430	3560	974	727	515	327	297
17	748	1170	984	1250	1230	3430	2950	1230	826	504	329	294
18	775	1100	943	1630	1060	6750	2610	3490	1270	467	334	362
19	734	1040	926	1760	1010	3610	2390	1800	1090	481	867	334
20	731	1010	901	1460	977	3910	2210	1820	841	458	565	362
21	722	963	879	1320	968	10100	2070	1880	758	458	421	370
22	704	928	863	1360	1030	6400	1940	1540	716	444	385	381
23	845	941	859	2160	1040	3980	1830	2370	693	470	380	340
24	822	2060	901	1620	972	4110	1740	2850	1600	544	370	346
25	698	3950	1300	1450	930	3780	1690	2290	1910	499	402	426
26	745	9320	1020	1320	917	3100	1770	1770	1170	481	362	673
27	705	5170	934	1240	882	2710	1880	1560	960	513	333	414
28	681	3160	912	1160	857	3930	1660	1430	862	513	320	423
29	588	2550	864	1110	853	4610	1590	1360	797	505	300	1170
30	1010	2160	894	1100	---	3540	1510	1390	790	462	328	1110
31	1170	---	984	1550	---	3090	---	1250	---	411	387	---
TOTAL	31465	65061	35194	40211	29059	93511	73770	46872	28758	17148	12190	12805
MEAN	1015	2169	1135	1297	1002	3016	2459	1512	959	553	393	427
MAX	2260	9320	1930	2160	1290	10100	6650	3490	1910	715	867	1170
MIN	588	928	859	873	853	768	1510	974	693	411	233	284
CFSM	2.33	4.98	2.60	2.98	2.30	6.92	5.64	3.47	2.20	1.27	.90	.98
IN.	2.68	5.55	3.00	3.43	2.48	7.98	6.29	4.00	2.45	1.46	1.04	1.09

CAL YR 1979 TOTAL 565487 MEAN 1549 MAX 14200 MIN 477 CFSM 3.55 IN 48.25
WTR YR 1980 TOTAL 486044 MEAN 1328 MAX 10100 MIN 233 CFSM 3.05 IN 41.47

03504000 NANTAHALA RIVER NEAR RAINBOW SPRINGS, N. C.

LOCATION.--Lat 35°07'35", long 83°37'11", Macon County, Hydrologic Unit 06010202, on right bank on Nantahala Forest Service Road 437, 300 ft (91 m) upstream from Roaring Fork, 0.2 mi (0.3 km) downstream from Buck Creek, 5 mi (8 km) downstream from town of Rainbow Springs, and at mile 34.3 (55.2 km).

DRAINAGE AREA.--51.9 mi² (134.4 km²).

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 973: 1941(M).

GAGE.--Water-stage recorder. Datum of gage is 3,072.97 ft (936.641 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Occasional slight diurnal fluctuation at low flow caused by small ponds on tributaries above station. Suspended-sediment records for the current year are published on page 420 of this report.

AVERAGE DISCHARGE.--40 years, 207 ft³/s (5.862 m³/s), 54.16 in/yr (1,376 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,300 ft³/s (178 m³/s) June 16, 1949, gage height, 9.70 ft (2.957 m), from rating curve extended above 3,000 ft³/s (85.0 m³/s) on basis of slope-area measurement of peak flow; minimum, 33 ft³/s (0.93 m³/s) Nov. 18, 19, 1953, gage height, 0.60 ft (0.183 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 25	2300	2120	60.0	4.83	1.472	Mar 21	0345	*2580	73.1	*5.46	1.664
Mar 17	1700	1690	47.9	4.19	1.277						

Minimum discharge, 41 ft³/s (1.16 m³/s) Sept. 16, 17, gage height, 0.65 ft (0.198 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	311	173	327	171	263	171	438	237	234	121	68	54
2	289	579	303	159	268	162	407	228	219	116	84	57
3	252	308	280	152	231	162	382	219	205	113	67	74
4	292	247	265	158	217	156	390	211	193	109	64	91
5	260	217	254	148	215	392	342	213	184	104	65	75
6	238	199	251	145	209	266	326	205	177	111	60	62
7	222	186	233	181	198	320	311	210	170	98	60	53
8	204	176	218	226	190	741	420	204	164	95	56	49
9	191	173	211	244	211	512	369	186	157	93	55	47
10	188	568	203	210	194	405	315	179	152	99	57	81
11	174	372	195	327	178	345	297	174	147	99	82	56
12	166	317	190	349	172	348	451	169	143	88	64	49
13	159	281	267	279	169	411	553	164	139	85	59	47
14	153	254	219	299	166	349	970	167	135	82	54	46
15	148	237	196	246	172	316	647	160	129	82	52	45
16	143	221	189	227	323	296	534	155	133	79	60	43
17	139	210	183	242	220	974	463	307	146	76	62	57
18	135	200	177	337	201	873	420	398	342	77	54	61
19	131	190	172	281	189	625	384	261	157	74	230	47
20	128	183	168	255	194	957	357	314	136	73	82	58
21	125	176	163	236	230	1660	336	269	126	71	65	55
22	122	171	158	448	256	999	313	257	122	71	62	52
23	190	179	154	428	229	793	295	464	125	97	57	48
24	130	496	226	342	209	828	279	440	247	80	64	52
25	123	796	217	306	200	652	274	366	195	79	61	151
26	118	1050	181	278	191	575	295	321	167	114	54	70
27	114	594	176	260	182	509	346	286	142	91	51	52
28	112	478	169	243	176	685	275	262	130	102	50	113
29	131	404	162	228	171	580	269	315	153	74	50	225
30	201	359	178	256	---	549	248	295	138	70	55	173
31	155	---	167	383	---	479	---	250	---	66	56	---
TOTAL	5444	9994	6452	8044	6024	17090	11706	7886	5007	2789	2060	2143
MEAN	176	333	208	259	208	551	390	254	167	90.0	66.5	71.4
MAX	311	1050	327	448	323	1660	970	464	342	121	230	225
MIN	112	171	154	145	166	156	248	155	122	66	50	43
CFSM	3.39	6.42	4.01	4.99	4.01	10.6	7.51	4.89	3.22	1.73	1.28	1.38
IN.	3.90	7.16	4.62	5.77	4.32	12.25	8.39	5.65	3.59	2.00	1.48	1.54

CAL YR 1979 TOTAL 110377 MEAN 302 MAX 2560 MIN 91 CFSM 5.82 IN 79.11
WTR YR 1980 TOTAL 84639 MEAN 231 MAX 1660 MIN 43 CFSM 4.45 IN 60.66

03505500 NANTAHALA RIVER AT NANTAHALA, N. C.

LOCATION.--Lat 35°17'55", long 83°39'22", Swain County, Hydrologic Unit 06010202, on left bank on U.S. Highway 19, 1.0 mi (1.6 km) northeast of Nantahala, 2.3 mi (3.7 km) downstream from Rowlin Creek, 2.8 mi (4.5 km) downstream from Nantahala Dam powerhouse, and at mile 10.8 (17.4 km).

DRAINAGE AREA.--144 mi² (373 km²).

PERIOD OF RECORD.--May 1942 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,894.68 ft (577.498 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority).

REMARKS.--Records good except those for Jan. 6-18, Feb. 25 to Mar. 27, Sept. 27-30, which are fair. Flow regulated by Nantahala Lake 12 mi (19 km) upstream (see p. 400) and Queens Creek Lake, capacity, about 300 ft³/s-day (734,000 m³). Suspended-sediment records for the current year are published on page 420 of this report.

AVERAGE DISCHARGE.--38 years, 503 ft³/s (14.24 m³/s), 47.44 in/yr (1,205 mm/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,740 ft³/s (219 m³/s) Mar. 30, 1975, gage height, 8.32 ft (2.536 m); minimum, 13 ft³/s (0.45 m³/s) Sept. 6, 1975; minimum gage height, 1.19 ft (0.363 m) Nov. 9, 1953; minimum daily discharge, 17 ft³/s (0.48 m³/s) Nov. 8, 16, 1952, Oct. 25, 1953, Aug. 3, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,400 (153 m³/s) Mar. 21, gage height, 7.06 ft (2.152 m); minimum, 28 ft³/s (0.79 m³/s) Aug. 29, Sept. 8, 9, 16, 17, gage height, 1.47 ft (0.448 m); minimum daily, 32 ft³/s (0.91 m³/s) Aug. 17, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	700	101	802	740	744	548	1010	789	425	493	425	293
2	700	198	788	737	565	673	986	778	423	552	351	285
3	700	133	775	740	481	674	973	765	420	489	293	327
4	720	117	733	748	495	479	955	762	425	450	279	343
5	708	110	789	741	508	481	935	704	450	446	310	325
6	703	106	816	710	483	542	893	754	460	539	353	335
7	698	103	758	731	535	224	839	744	450	446	380	186
8	700	100	735	750	503	414	837	747	310	636	381	381
9	571	101	714	756	642	327	835	740	400	633	340	422
10	709	498	712	752	613	425	816	658	470	665	332	488
11	699	348	712	776	583	416	809	507	460	504	406	289
12	699	305	596	791	403	443	905	478	405	526	480	315
13	696	275	738	771	639	525	1270	521	405	454	320	301
14	694	292	725	771	311	375	2410	532	490	467	280	259
15	362	237	719	752	339	372	1540	542	395	517	288	328
16	139	164	718	747	484	346	1130	525	460	636	174	342
17	103	154	718	746	518	1000	1000	530	405	636	32	173
18	94	147	715	789	375	1400	859	453	400	635	301	302
19	93	140	720	774	369	1150	846	472	400	415	330	345
20	93	131	717	764	264	1470	834	506	441	386	346	325
21	93	121	676	753	110	3970	821	506	447	380	403	189
22	91	115	717	791	119	2840	809	326	356	312	293	378
23	187	116	712	809	238	1910	803	519	435	407	185	333
24	159	199	766	785	159	2000	798	441	500	378	32	319
25	90	383	777	772	327	1760	756	716	430	365	280	288
26	88	2400	755	759	576	1410	816	671	482	422	281	308
27	88	1350	747	755	170	1270	812	668	636	406	235	186
28	86	907	734	741	116	2020	798	657	487	336	272	48
29	91	754	730	737	285	1480	806	658	390	354	279	133
30	103	810	744	747	---	1360	794	673	439	431	196	144
31	95	---	736	780	---	1220	---	461	---	482	185	---
TOTAL	11752	10915	22794	23515	11954	33524	28695	18803	13096	14798	9042	8690
MEAN	379	364	735	759	412	1081	957	607	437	477	292	290
MAX	720	2400	816	809	744	3970	2410	789	636	665	480	488
MIN	86	100	596	710	110	224	756	326	310	312	32	48
(†)	+229.7	+9833.8	-8782.2	-3965.1	+2592.8	+10436	-838.6	-744.4	-1040	-6808.8	-3502.2	-2992.3
MEAN‡	387	692	452	631	502	1418	929	583	402	258	179	190
CFSM‡	2.69	4.81	3.14	4.38	3.49	9.85	6.45	4.05	2.79	1.79	1.24	1.32
IN.‡	3.09	5.36	3.62	5.05	3.76	11.35	7.19	4.66	3.11	2.06	1.43	1.47

CAL YR 1979 TOTAL 235851 MEAN 646 MAX 3260 MIN 86 MEAN‡ 682 CFSM‡ 4.74 IN.‡ 64.33
WTR YR 1980 TOTAL 207578 MEAN 567 MAX 3970 MIN 32 MEAN‡ 552 CFSM‡ 3.83 IN.‡ 52.15

† Change in contents, in cfs-days, in Nantahala and Queens Creek Lakes; furnished by Tennessee Valley Authority and Nantahala Power and Light Co.
‡ Adjusted for change in contents in Nantahala and Queens Creek Lakes.

03510500 TUCKASEGEE RIVER AT DILLSBORO, N. C.

LOCATION.--Lat 35°21'59", long 83°15'38", Jackson County, Hydrologic Unit 06010203, on left bank on Secondary Road 1377, 0.4 mi (0.6 km) downstream from Scott Creek, 0.5 mi (0.8 km) downstream from bridge on U.S. Highway 23 at Dillsboro, and at mile 31.1 (50.0 km).

DRAINAGE AREA.--347 mi² (899 km²).

PERIOD OF RECORD.--June 1928 to current year (prior to October 1933 monthly discharge only, published in WSP 1306; figures of daily discharge published in WSP 663, 683, 698, 713, 728, 743, are unreliable).

REVISED RECORDS.--WSP 823: Drainage area. WSP 923: 1940(M). WSP 1306: 1929-33. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 1,950.15 ft (594.406 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to May 24, 1934, nonrecording gage at site below Scott Creek 0.4 mi (0.6 km) upstream at datum 7.27 ft (2.216 m) higher.

REMARKS.--Records good. Considerable diurnal fluctuation caused by Dillsboro powerplant 0.7 mi (1.1 km) above station. Flow partly regulated by Thorpe Reservoir 28 mi (45 km) upstream (see p. 400), and by Cedar Cliff Lake, Bear Creek Lake, and Tennessee Creek project lakes (see p. 402). Suspended-sediment records for the current year are published on page 420 of this report.

AVERAGE DISCHARGE.--52 years, 802 ft³/s (22.71 m³/s), 31.39 in/yr (797 mm/yr) unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,600 ft³/s (1,490 m³/s) Aug. 30, 1940, gage height, 21.96 ft (6.693 m), from floodmarks, from rating curve extended above 8,400 ft³/s (238 m³/s) on basis of slope-area measurements and computation of peak flow over dam; minimum, 35 ft³/s (0.99 m³/s) Sept. 17, 1953, gage height, 1.60 ft (0.488 m); minimum daily, 107 ft³/s (3.03 m³/s) Sept. 19, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1840 was approximately equal to that of Aug. 30, 1940, from studies by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (130 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	1015	10200	289	10.25	3.124	Mar 21	0445	6550	185	8.42	2.566
Nov 26	0245	*13800	391	*11.77	3.587						

Minimum discharge, 152 ft³/s (4.30 m³/s) Sept. 5, gage height, 2.14 ft (0.652 m); minimum daily, 241 ft³/s (6.83 m³/s) Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1110	989	1600	767	926	669	1780	1450	716	733	469	241
2	1080	4650	1540	859	1010	667	1660	1410	707	810	388	380
3	1000	2050	1490	933	720	847	1540	1380	744	705	343	376
4	1010	1570	1410	939	755	773	1500	1340	678	510	304	412
5	1020	1410	1340	817	844	994	1490	1330	655	475	355	366
6	1200	1370	1100	676	783	1070	1450	1400	655	567	345	388
7	1180	1270	1300	896	623	801	1390	1460	657	391	402	354
8	1080	1200	1120	1120	683	1640	1640	1410	592	646	411	317
9	860	933	1250	833	801	1360	1630	1130	510	544	396	434
10	774	2150	1250	903	704	1100	1480	1220	574	711	389	439
11	754	1790	1100	1170	855	1020	1400	885	556	683	475	296
12	822	1570	1100	1410	1060	988	1750	1220	559	511	809	288
13	779	1180	1270	996	889	1110	1810	1160	546	524	889	389
14	614	1250	1060	1420	702	936	2730	1200	537	471	363	317
15	724	1220	1190	1080	630	881	2460	1250	514	483	512	316
16	816	1140	879	1030	667	607	2220	1230	506	523	500	299
17	975	1140	1010	1120	585	1990	1950	1240	601	709	516	424
18	729	1130	1170	1450	698	2550	1840	1550	1040	629	518	299
19	787	1100	978	1180	728	1910	1790	1260	923	426	480	346
20	731	1080	1030	1120	750	2290	1750	1520	558	410	520	374
21	591	1070	956	1200	812	5060	1700	1460	495	547	431	340
22	774	1020	1050	1180	930	3150	1640	1320	422	491	969	342
23	909	907	667	1280	839	2400	1540	1610	437	486	644	375
24	776	1650	802	1340	516	2760	1520	1670	1270	644	685	316
25	716	2390	1270	1110	633	2270	1480	1550	1240	523	640	407
26	766	6770	1050	903	719	2040	1560	1400	1100	564	350	293
27	669	2740	910	589	607	1920	1700	1420	794	458	334	327
28	574	2130	1020	893	637	2530	1570	992	649	552	351	332
29	795	1870	866	1030	668	2250	1580	863	543	513	371	759
30	987	1700	1030	1050	---	2010	1480	838	659	523	401	940
31	816	---	967	1280	---	1900	---	842	---	515	362	---
TOTAL	26418	52439	34775	32574	21774	52493	51030	40010	20437	17277	14922	11486
MEAN	852	1748	1122	1051	751	1693	1701	1291	681	557	481	383
MAX	1200	6770	1600	1450	1060	5060	2730	1670	1270	810	969	940
MIN	574	907	667	589	516	607	1390	838	422	391	304	241

CAL YR 1979 TOTAL 427520 MEAN 1171 MAX 6770 MIN 344
WTR YR 1980 TOTAL 375635 MEAN 1026 MAX 6770 MIN 241

03512000 OCONALUFTEE RIVER AT BIRDTOWN, N. C.

LOCATION.--Lat 35°27'42", long 83°21'13", Swain County, Hydrologic Unit 06010203, in Cherokee Indian Reservation, on left bank 200 ft (61 m) upstream from bridge on Secondary Road 1359, 0.5 mi (0.8 km) south of Birdtown, 0.6 mi (1.0 km) downstream from Adams Creek, 0.6 mi (1.0 km) upstream from Goose Creek, 2.2 mi (3.5 km) southwest of Cherokee and at mile 3.1 (5.0 km).

DRAINAGE AREA.--184 mi² (477 km²).

PERIOD OF RECORD.--July 1945 to September 1946, July 1948 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,843.30 ft (561.838 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1946, nonrecording gage at same site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--33 years, 524 ft³/s (14.84 m³/s), 38.67 in/yr (982 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,900 ft³/s (450 m³/s) Dec. 30, 1969, gage height, 12.46 ft (3.798 m), from floodmarks; minimum, 80 ft³/s (2.27 m³/s) Oct. 19, 1954, gage height, 0.66 ft (0.201 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of Nov. 19, 1906 and Mar. 27, 1913 reached stages of 18 ft (5.5 m) and 14.5 ft (4.42 m), respectively, discharge not determined, from studies by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (110 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 10	0715	4190	119	5.27	1.606	Mar 21	0515	*8920	253	*8.34	2.542
Nov 26	0415	5150	146	5.96	1.817	Apr 13	2230	4070	115	5.18	1.579
Mar 17	1600	5140	146	5.95	1.814						

Minimum discharge, 111 ft³/s (3.14 m³/s) Sept. 16, 17, gage height, 0.89 ft (0.271 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	607	245	606	499	491	436	1080	536	479	238	156	146
2	554	765	560	493	490	416	964	519	450	233	153	144
3	493	438	497	455	487	391	879	503	424	331	147	148
4	504	360	484	439	446	407	869	483	403	271	145	194
5	508	331	473	434	425	542	769	469	384	247	167	187
6	434	314	461	370	432	511	711	455	374	253	145	154
7	404	303	443	429	411	541	670	472	362	222	139	133
8	377	295	410	535	394	1310	756	469	347	208	133	125
9	360	295	393	547	407	1090	1000	435	333	233	130	122
10	464	2130	379	603	400	827	719	422	324	353	132	206
11	378	1240	375	938	379	714	655	412	313	419	147	162
12	354	1000	370	2170	370	651	990	400	303	265	138	133
13	345	791	434	1200	357	757	1360	390	300	236	129	126
14	325	657	455	828	357	704	2670	384	295	220	125	122
15	317	572	409	709	366	626	1580	378	283	212	122	119
16	307	519	404	642	598	586	1240	370	285	203	158	113
17	298	475	404	666	460	2700	1030	435	370	193	173	137
18	296	443	404	1460	407	2730	917	823	448	189	173	155
19	288	418	347	1130	407	1720	837	495	319	189	188	127
20	283	396	320	893	397	2110	768	760	282	181	201	179
21	277	379	311	785	418	5340	714	691	267	175	145	173
22	269	364	306	943	753	2740	669	549	262	178	487	135
23	366	357	306	1050	684	1890	637	584	270	209	211	131
24	290	789	473	848	604	2130	605	634	404	185	165	148
25	268	939	702	781	545	1820	583	1230	417	186	162	292
26	263	2910	482	710	493	1490	633	877	320	179	143	273
27	256	1280	434	661	469	1270	666	699	284	180	135	172
28	256	947	429	611	459	1980	576	609	266	241	132	201
29	255	784	419	565	451	1780	600	577	263	177	135	447
30	261	684	434	557	---	1480	564	635	253	162	146	325
31	250	---	499	631	---	1270	---	514	---	155	158	---
TOTAL	10907	21420	13423	23582	13357	42959	26711	17209	10084	6923	5020	5229
MEAN	352	714	433	761	461	1386	890	555	336	223	162	174
MAX	607	2910	702	2170	753	5340	2670	1230	479	419	487	447
MIN	250	245	306	370	357	391	564	370	253	155	122	113
CFSM	1.91	3.88	2.35	4.14	2.51	7.53	4.84	3.02	1.83	1.21	.88	.95
IN.	2.21	4.33	2.71	4.77	2.70	8.69	5.40	3.48	2.04	1.40	1.01	1.06

CAL YR 1979 TOTAL 247788 MEAN 679 MAX 5330 MIN 239 CFSM 3.69 IN 50.10
WTR YR 1980 TOTAL 196824 MEAN 538 MAX 5340 MIN 113 CFSM 2.92 IN 39.79

03513000 TUCKASEGEE RIVER AT BRYSON CITY, N. C.

LOCATION.--Lat 35°25'40", long 83°26'50", Swain County, Hydrologic Unit 06010203, on left bank 400 ft (122 m) downstream from bridge on Secondary Road 1364, Everett Street, in Bryson City, 0.6 mi (1.0 km) downstream from Deep Creek, and at mile 12.6 (20.3 km).

DRAINAGE AREA.--655 mi² (1,696 km²).

PERIOD OF RECORD.--October 1897 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 523: 1916, 1918-20. WSP 823: Drainage area. WSP 1306: 1898-1913. WSP 1336: 1907, 1915(M), 1916-20, 1921-29(M), 1933-34(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,714.54 ft (522.592 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Nov. 7, 1897, to Feb. 2, 1914, and May 18, 1920, to June 27, 1927, nonrecording gage at bridge 400 ft (122 m) upstream at datum 2.00 ft (0.610 m) higher. Feb. 3, 1914, to May 17, 1920, water-stage recorder at site 200 ft (61 m) upstream at datum 2.00 ft (0.610 m) higher. June 28, 1927, to Sept. 30, 1960, water-stage recorder at present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good. Considerable diurnal fluctuation caused by powerplants above station. Flow regulated by Thorpe Reservoir, Cedar Cliff Lake, Bear Creek Lake, Tennessee Creek project lakes (see pp. 400,402), and two small reservoirs with combined capacity of 250 ft³/s-day (612,000 m³). Suspended-sediment records for the current year are published on page 420 of this report.

AVERAGE DISCHARGE.--83 years, 1,600 ft³/s (45.31 m³/s), 33.17 in/yr (843 mm/yr) unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,600 ft³/s (1,740 m³/s) Aug. 30, 1940, gage height, 15.96 ft (4.865 m), datum then in use, from rating curve extended above 28,000 ft³/s (793 m³/s) on basis of slope-area measurement of peak flow; minimum, 27 ft³/s (0.76 m³/s) Sept. 10, 1925, minimum gage height, 0.47 ft (0.143 m) Oct. 26, 1952, datum then in use; minimum daily discharge, 31 ft³/s (0.88 m³/s) Sept. 9, 10, 1925, caused by filling reservoir on Oconaluftee River; minimum daily during normal regulation, 186 ft³/s (5.27 m³/s) Oct. 13, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1840, Mar. 6, 1867, and June 1876 reached stages of 22 ft (6.7 m), 19 ft (5.8 m), and 19 ft (5.8 m), respectively, present site and datum, discharge not determined, from studies by Tennessee Valley Authority. The flood in May 1840 exceeded all other observed floods at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,000 ft³/s (250 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov 2	1330	10700	303	7.39	2.252	Mar 17	1945	10300	292	7.23	2.204
Nov 26	0530	18200	515	10.02	3.054	Mar 21	0715	*21400	606	*10.99	3.350

Minimum discharge, 387 ft³/s (11.0 m³/s) Sept. 17, gage height, 1.54 ft (0.469 m); minimum daily, 478 ft³/s (13.5 m³/s) Aug. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2130	1290	2550	1510	1650	1310	3640	2390	1530	1060	767	581
2	1950	5340	2400	1350	1850	1340	3340	2340	1430	1340	706	556
3	1770	3050	2270	1510	1460	1350	3070	2270	1440	1210	603	642
4	1750	2180	2190	1520	1340	1400	2990	2220	1330	1060	478	688
5	1840	1940	2070	1530	1510	1790	2790	2150	1290	919	691	743
6	1830	1880	1790	1180	1520	1990	2680	2220	1250	1010	582	634
7	1830	1770	1970	1400	1280	1580	2580	2270	1250	775	574	600
8	1710	1670	1730	2110	1200	3760	2840	2280	1190	926	668	528
9	1470	1370	1860	1670	1510	3310	3210	1910	1020	1010	585	605
10	1400	5030	1840	1670	1340	2360	2710	1960	1120	1160	636	720
11	1340	3720	1660	2290	1350	2260	2530	1550	1080	1440	640	631
12	1250	3180	1660	3600	1620	1980	3350	1940	1040	1010	906	510
13	1390	2410	1950	2250	1550	2430	3770	1870	1040	943	1150	498
14	1070	2240	1750	2690	1270	2060	6630	1870	1020	849	777	606
15	1140	2090	1770	2190	1160	1980	5010	1910	999	834	541	511
16	1170	1940	1520	2020	1630	1520	4340	1880	877	874	737	491
17	1530	1860	1430	2140	1340	5250	3730	1990	1240	930	827	543
18	1060	1790	1690	3550	1260	6880	3400	3020	1660	1090	774	604
19	1190	1740	1430	3110	1340	4650	3220	2090	1580	807	847	574
20	1240	1680	1510	2450	1380	5400	3070	2670	1140	725	796	623
21	970	1650	1410	2540	1450	13800	2940	2650	985	716	753	664
22	1040	1580	1600	2430	2020	7550	2810	2290	846	857	1690	528
23	1440	1410	1130	3050	1940	5600	2630	2520	842	754	1040	579
24	1290	2620	1290	2640	1410	6040	2560	2870	1750	1020	844	577
25	1070	3490	2310	2330	1370	5340	2510	3390	2140	851	1030	796
26	1070	10300	1860	2150	1450	4530	2640	2800	1700	850	630	773
27	1150	4800	1440	1570	1310	4020	2870	2580	1360	841	546	591
28	914	3650	1730	1660	1280	5560	2580	2120	1220	862	533	521
29	1010	3060	1330	1900	1300	5270	2610	1740	989	815	538	1390
30	1400	2760	1650	1920	---	4520	2480	1860	1060	794	663	1600
31	1280	---	1630	2470	---	4050	---	1670	---	784	592	---
TOTAL	42694	83490	54420	66400	42090	120880	95530	69290	37418	29116	23144	19907
MEAN	1377	2783	1755	2142	1451	3899	3184	2235	1247	939	747	664
MAX	2130	10300	2550	3600	2020	13800	6630	3390	2140	1440	1690	1600
MIN	914	1290	1130	1180	1160	1310	2480	1550	842	716	478	491

CAL YR 1979 TOTAL 819866 MEAN 2246 MAX 13000 MIN 743
WTR YR 1980 TOTAL 684379 MEAN 1870 MAX 13800 MIN 478

03548500 HIWASSEE RIVER ABOVE MURPHY, N. C.

LOCATION.--Lat 35°04'50", long 84°00'10", Cherokee County, Hydrologic Unit 06020002, on right bank on U.S. Highway 64, 600 ft (183 m) upstream from Will Scott Creek, 2.0 mi (3.2 km) southeast of Murphy, and at mile 99.1 (159.5 km).

DRAINAGE AREA.--406 mi² (1,052 km²).

PERIOD OF RECORD.--June 1896 to August 1897, gage heights only, October 1897 to current year. Published as "at Murphy" 1897-1940. Records published for both sites August 1939 to April 1940. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORD.--WSP 583: 1899(M). WSP 973: Drainage area. WSP 1003: 1943. WSP 1306: 1901-2, 1904-17, 1919(M), 1922(M), 1924-26(M). WSP 1706: 1899, 1907.

GAGE.--Water-stage recorder. Datum of gage is 1,538.23 ft (468.853 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to Jan. 30, 1921, nonrecording gage at bridge 2.8 mi (4.5 km) downstream at datum 30.40 ft (9.266 m) lower. Jan. 30, 1921, to Nov. 8, 1926, nonrecording gage 2.8 mi (4.5 km) downstream at datum 28.40 ft (8.656 m) lower. Nov. 9, 1926, to Apr. 30, 1940, water-stage recorder 2.8 mi (4.5 km) downstream at datum 28.20 ft (8.595 m) lower.

REMARKS.--Records good. Considerable diurnal fluctuation since 1924 caused by Mission powerplant at Andrews Dam 7 mi (11 km) upstream, normal regulated storage, about 75 ft³/s-day (184,000 m³). Flow regulated since 1942 by Chatuge Lake 22 mi (35 km) upstream (see p. 401). Suspended-sediment records for the current year are published on page 420 of this report.

AVERAGE DISCHARGE.--83 years (1897-1980), 927 ft³/s (26.25 m³/s), 31.01 in/yr (788 mm/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,100 ft³/s (654 m³/s) Mar. 19, 1899, gage height, 18.4 ft (5.61 m), from graph based on gage readings, site and datum then in use, from rating curve extended above 5,000 ft³/s (142 m³/s); minimum daily, 10 ft³/s (0.28 m³/s) Dec. 3, 1924, result of freezeup and filling of Andrews Lake; minimum daily during normal regulation, 62 ft³/s (1.76 m³/s) Oct. 19, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed is that of Mar. 19, 1899.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,800 ft³/s (362 m³/s) Mar. 21, gage height, 11.50 ft (3.505 m); minimum, 106 ft³/s (3.00 m³/s) Sept. 16, 17, gage height, 2.10 ft (0.640 m); minimum daily, 108 ft³/s (3.06 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	789	1260	1110	1220	1700	1240	1680	1230	733	1320	1100	170
2	1380	1810	1460	1200	1450	1810	1590	1280	1090	1300	1050	830
3	1280	1290	1680	1150	620	1700	1540	795	1350	1190	596	932
4	1290	788	1690	1290	836	1070	1550	528	1350	1260	556	1040
5	1300	805	1710	818	799	1900	1440	1000	1320	949	1250	983
6	1180	1060	1760	526	926	1850	1380	1400	1300	818	1060	928
7	749	1150	1740	889	1240	855	1330	1440	908	748	1090	795
8	863	1490	1710	1360	1210	3840	1490	1450	366	1240	1070	890
9	1100	1050	1470	1440	1070	2000	1480	1380	487	1260	983	1090
10	1150	2270	1580	1120	969	1270	1420	880	726	1250	706	635
11	1200	1500	1470	1200	1220	964	1370	457	725	1300	890	178
12	1140	1590	1170	1620	1330	899	1880	767	617	1170	991	133
13	1220	1520	1330	779	1260	1190	2370	842	690	1110	987	124
14	809	1470	1320	986	1070	1170	3280	942	551	1160	951	118
15	765	1400	1270	995	1080	817	2330	1090	307	1180	937	115
16	601	1220	1200	929	1580	735	2260	1140	502	1080	894	108
17	827	1290	1190	941	1450	3560	2040	890	918	1150	571	147
18	764	709	1180	1220	1240	4090	1920	692	1150	1200	463	182
19	721	844	1190	1350	1160	2430	1700	967	929	866	989	147
20	473	1170	1170	705	1150	3440	1520	1650	877	846	984	173
21	244	1190	1140	944	1150	8050	1470	1400	651	930	956	171
22	756	1100	1020	1550	692	3380	1420	1550	299	1130	945	143
23	1270	1120	1100	2090	551	1970	1450	1780	725	1230	615	134
24	1250	1320	1150	1930	516	2220	1500	1960	1410	1140	199	131
25	1190	1000	1250	1740	772	2040	1450	1860	1580	1090	350	264
26	1180	2050	1170	1210	1040	1760	1220	2080	1470	1060	924	233
27	1190	1690	1280	969	898	1550	1030	2120	1390	330	944	156
28	613	1650	1210	975	945	2270	1080	2020	1350	579	943	208
29	784	1750	1270	515	700	2190	1470	2090	1400	1010	739	878
30	1400	1760	1180	552	---	1860	1310	2160	1130	1060	677	982
31	1280	---	1150	2110	---	1870	---	1480	---	1100	221	---
TOTAL	30758	40316	41320	36323	30624	65990	48970	41320	28301	33056	25631	13018
MEAN	992	1344	1333	1172	1056	2129	1632	1333	943	1066	827	434
MAX	1400	2270	1760	2110	1700	8050	3280	2160	1580	1320	1250	1090
MIN	244	709	1020	515	516	735	1030	457	299	330	199	108

CAL YR 1979 TOTAL 475659 MEAN 1303 MAX 7020 MIN 244 MEAN# 1305 CFSM# 3.21 IN.# 43.63
WTR YR 1980 TOTAL 435627 MEAN 1190 MAX 8050 MIN 108 MEAN# 1150 CFSM# 2.83 IN.# 38.56

Adjusted for change in contents in Chatuge Lake.

03550000 VALLEY RIVER AT TOMOTLA, N. C.

LOCATION.--Lat 35°08'20", long 83°58'50", Cherokee County, Hydrologic Unit 06020002, on right bank at site of former bridge on Secondary Road 1373 at Tomotla, 0.2 mi (0.3 km) upstream from Rogers Creek, 4.7 mi (7.6 km) northeast of Murphy, and at mile 6.6 (10.6 km).

DRAINAGE AREA.--104 mi² (269 km²).

PERIOD OF RECORD.--June 1904 to December 1909, January 1914 to April 1917, October 1918 to current year.

REVISED RECORDS.--WSP 503: 1905-9, 1915-17. WSP 823: Drainage area. WSP 1306: 1917(M), 1920(M), 1922(M), 1925(M), 1930(M), 1933(M). WSP 1626: 1907(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,556.46 ft (474.409 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to May 11, 1934, nonrecording gage at same site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--68 years (1904-9, 1914-16, 1919-80), 258 ft³/s (7.307 m³/s), 33.69 in/yr (856 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft³/s (510 m³/s) Nov. 19, 1906, gage height, 20.5 ft (6.25 m), from flood profile by Tennessee Valley Authority, from rating curve extended above 5,800 ft³/s (164 m³/s) on basis of slope-conveyance study; minimum, 12 ft³/s (0.34 m³/s) several times in August and September 1925, gage height, 0.52 ft (0.158 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of September 1898 reached a stage of 21.2 ft (6.464 m), from floodmark by Tennessee Valley Authority, discharge, about 20,000 ft³/s (566 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft³/s (48 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar 8	1200	2180	61.7	7.66	2.335	Apr 13	2130	2420	68.5	8.31	2.533
Mar 17	2145	4200	119	12.00	3.658	June 18	1145	2150	60.9	7.59	2.313
Mar 21	0730	*6940	197	*15.40	4.694						

Minimum discharge, 44 ft³/s (1.25 m³/s) Sept. 17, gage height, 1.74 ft (0.530 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	264	135	297	224	467	257	648	351	231	144	72	57
2	234	373	272	210	404	247	576	331	218	135	86	54
3	205	245	250	202	370	229	526	315	207	133	69	57
4	258	202	240	260	342	235	490	300	196	128	67	91
5	265	179	232	247	317	691	445	291	186	121	68	83
6	226	166	226	223	317	574	416	284	179	222	62	62
7	207	157	215	300	293	599	394	277	173	132	58	55
8	183	150	201	458	280	1830	447	281	166	119	55	51
9	171	153	191	435	310	1270	457	257	157	113	55	49
10	187	1150	186	388	316	830	385	245	154	127	58	104
11	165	906	180	469	290	622	360	238	149	149	61	72
12	156	708	177	621	281	557	674	229	144	114	61	57
13	148	491	298	500	270	579	1070	221	141	115	57	53
14	140	383	275	453	269	505	1760	217	138	104	54	51
15	136	323	231	385	283	451	1060	213	133	100	51	49
16	133	289	217	347	600	417	765	204	155	97	50	47
17	129	261	204	369	489	1970	617	303	270	105	57	57
18	126	242	193	633	398	2190	539	447	724	114	58	62
19	123	225	189	588	358	1220	486	303	281	94	82	52
20	121	212	182	477	348	2010	446	429	205	89	93	57
21	119	202	176	414	345	4790	414	379	176	87	60	57
22	116	193	173	736	360	1800	384	322	163	87	64	53
23	194	190	171	975	342	1240	363	415	163	91	57	51
24	137	437	237	670	319	1300	344	473	207	92	59	52
25	126	573	289	539	309	1090	341	455	275	77	71	82
26	122	947	251	457	286	886	433	380	211	84	56	75
27	119	581	234	410	273	737	526	325	177	79	52	56
28	117	447	222	369	265	1190	411	300	159	78	49	72
29	123	372	212	338	254	1160	413	278	177	72	64	171
30	171	326	229	368	---	944	378	269	167	69	85	133
31	134	---	218	661	---	766	---	244	---	67	68	---
TOTAL	5055	11218	6868	13726	9755	33186	16568	9576	6082	3338	1959	2022
MEAN	163	374	222	443	336	1071	552	309	203	108	63.2	67.4
MAX	265	1150	298	975	600	4790	1760	473	724	222	93	171
MIN	116	135	171	202	254	229	341	204	133	67	49	47
CFSM	1.57	3.60	2.14	4.26	3.23	10.3	5.31	2.97	1.95	1.04	.61	.65
IN.	1.81	4.01	2.46	4.91	3.49	11.87	5.93	3.43	2.18	1.19	.70	.72

CAL YR 1979 TOTAL 131486 MEAN 360 MAX 4000 MIN 98 CFSM 3.46 IN 47.03
WTR YR 1980 TOTAL 119353 MEAN 326 MAX 4790 MIN 47 CFSM 3.14 IN 42.69

Lakes and Reservoirs in Ohio River basin

03460242 WATERVILLE LAKE.--Lat 35°41'41", long 83°03'02", Haywood County, Hydrologic Unit 06010206, at Waterville Dam on Pigeon River, 0.1 mi (0.2 km) downstream from Cataloochee Creek, 5.5 mi (8.8 km) southeast of Mount Sterling, and at mile 38.0 (61.1 km). DRAINAGE AREA, 455 mi² (1,178 km²). PERIOD OF RECORD, October 1961 to current year. Prior to October 1979, published as Lake Walters. GAGE, nonrecording gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by single arch, variable radius, concrete dam with fourteen taintor gates 10 ft (3 m) high by 24 ft (7.3 m) wide. Dam was completed in 1929 and filling began October 1929; water in reservoir first reached minimum pool elevation November 1929. Total capacity (new capacity table put into use Jan. 1, 1971), at elevation 2,258.6 ft (688.421 m), top of gates, is 12,800 ft³/s-day (31.32 hm³), of which 10,400 ft³/s-day (25.45 hm³) is controlled storage above elevation 2,175 ft (662.9 m), minimum pool. Reservoir is used for power. Prior to Jan. 1, 1971 records furnished by Carolina Power and Light Co. Gage-height record furnished by Carolina Power and Light Co.; level storage records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents observed, 12,800 ft³/s-day (31.32 hm³) several days each year, elevation, 2,258.6 ft (688.421 m); minimum observed, 1,030 ft³/s-day (2.520 hm³) Sept. 16, 1980, elevation, 2,141.5 ft (652.729 m).

EXTREMES FOR CURRENT YEAR: Maximum contents observed, 12,800 ft³/s-day (31.32 hm³) Nov. 2, 3, 10-13, 26-29, Mar 21-31, elevation, 2,258.6 ft (688.421 m); minimum observed, 1,030 ft³/s-day (2.520 hm³) Sept. 16, elevation, 2,141.5 ft (652.729 m).

03504500 NANTAHALA LAKE.--Lat 35°11'56", long 83°39'17", Macon County, Hydrologic Unit 06010202, at Nantahala Dam on Nantahala River, 4.2 mi (6.8 km) southeast of Topton, 5.5 mi (8.8 km) upstream from Whiteoak Creek, and at mile 22.8 (36.7 km). DRAINAGE AREA, 91.0 mi² (235.7 km²). PERIOD OF RECORD, January 1942 to current year. Prior to October 1944 monthend contents only, published in WSP 1306. GAGE, water-stage recorder. Datum of gage is 122.16 ft (37.234 m) National Geodetic Vertical Datum of 1929 (levels by Aluminum Co. of America); gage readings have been reduced to elevations NGVD. Prior to June 3, 1942, nonrecording gage at same site and datum.

Reservoir is formed by rockfill dam with side channel gate-controlled spillway supplemented by fuse-plug dam. Dam completed and storage began Jan. 30, 1942; water in reservoir first reached minimum pool elevation Feb. 16, 1942. Total capacity (based on 1969 resurvey; new capacity table put into use Jan. 1, 1971), at elevation 2,890.0 ft (880.872 m), top of gates, is 69,200 ft³/s-day (169.3 hm³), of which 63,500 ft³/s-day (155.4 hm³) is controlled storage above 2,758.84 ft (840.894 m), minimum pool. Reservoir is used for flood control and power. Gage-height record furnished by Aluminum Co. of America; level storage records furnished by Tennessee Valley Authority. (See sta 03505500)

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 70,400 ft³/s-day (172.3 hm³) Apr. 12, 1957, elevation, 2,890.55 ft (881.040 m); minimum, after first filling, 6,700 ft³/s-day (16.39 hm³) Jan. 28, 1955, elevation, 2,760.11 ft (841.282 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 69,100 ft³/s-day (169.1 hm³) Nov. 26, elevation, 2,889.95 ft (880.857 m); minimum, 52,100 ft³/s-day (127.5 hm³) Sept. 27, elevation, 2,866.69 ft (873.767 m).

03507500 THORPE RESERVOIR.--Lat 35°11'46", long 83°09'09", Jackson County, Hydrologic Unit 06010203, at Thorpe Dam on West Fork Tuckasegee River, 2.3 mi (3.7 km) northwest of Glenville, 3.0 mi (4.8 km) upstream from Shoal Creek, and at mile 9.7 (15.6 km). DRAINAGE AREA, 36.7 mi² (95.1 km²). PERIOD OF RECORD, February 1941 to current year. Prior to October 1944 monthend contents only, published in WSP 1306. Prior to October 1948, published as Glenville Reservoir. GAGE, water-stage recorder. Datum of gage is 391.75 ft (119.405 m) National Geodetic Vertical Datum of 1929 (levels by Aluminum Co. of America); gage readings have been reduced to elevations NGVD. Prior to Apr. 9, 1941, nonrecording gage at same site and datum.

Reservoir is formed by earth and rock dam and six 40 ft (12.2 m) fuse-plug dams. Side channel spillway equipped with two taintor gates 12 ft (3.7 m) high by 25 ft (7.6 m) wide. Dam completed and storage began Feb. 12, 1941. Water in reservoir first reached minimum pool elevation Mar. 15, 1941. Total capacity (based on 1969 resurvey; new capacity table put into use Jan. 1, 1971), at elevation 3,100.0 ft (944.880 m), top of gates, is 35,500 ft³/s-day (86.87 hm³), of which 33,700 ft³/s-day (82.46 hm³) is controlled storage above elevation 3,023.25 ft (921.487 m), minimum pool. Reservoir is used for flood control and power. Gage-height record furnished by Aluminum Co. of America; level storage records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 35,700 ft³/s-day (87.36 hm³) Mar. 13, 1950, elevation, 3,100.01 ft (944.883 m); minimum, after first filling, 2,200 ft³/s-day (5.383 hm³) Feb. 5, 1955, Jan. 13, 1956; minimum elevation, 3,025.10 ft (922.050 m) Feb. 5, 1955.

EXTREMES FOR CURRENT YEAR: Maximum contents, 34,400 ft³/s-day (84.18 hm³) Apr. 19, elevation, 3,098.45 ft (944.408 m); minimum, 23,400 ft³/s-day (57.26 hm³) Feb. 13, elevation, 3,081.94 ft (939.375 m).

03514500 FONTANA LAKE.--Lat 35°27'07", long 83°48'18", Graham County, Hydrologic Unit 06010202, at Fontana Dam on Little Tennessee River, 5.7 mi (9.2 km) upstream from Twenty Mile Creek, 9.0 mi (14.5 km) north of Robbinsville, 9.6 mi (15.4 km) upstream from Cheoah Dam, and at mile 61.0 (98.1 km). DRAINAGE AREA, 1,571 mi² (4,069 km²). PERIOD OF RECORD, October 1944 to current year. Prior to November 1944, monthend contents only, published in WSP 1306. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by gravity nonoverflow type concrete dam. Spillway equipped with four radial gates 35 ft (10.7 m) high by 35 ft (10.7 m) wide. Storage began Nov. 7, 1944; dam completed March 1945; water in reservoir first reached minimum pool elevation Jan. 16, 1945. Total capacity (based on 1967 resurvey; new capacity table put into use Jan. 1, 1971), at elevation, 1,710.0 ft (521.208 m), top of gates, is 727,500 ft³/s-day (1,780 hm³), of which 578,000 ft³/s-day (1,414 hm³) is controlled storage above elevation 1,525.0 ft (464.820 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 728,600 ft³/s-day (1,783 hm³) May 28, 1973, elevation, 1,710.20 ft (521.269 m); minimum, after first filling, 78,300 ft³/s-day (191.6 hm³) Jan. 29, 1955, elevation, 1,472.0 ft (448.666 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 688,700 ft³/s-day (1,685 hm³) June 1, elevation, 1,702.76 ft (519.001 m); minimum, 357,600 ft³/s-day (875.0 hm³) Feb. 17, elevation, 1,620.54 ft (493.941 m).

03516500 SANTEETLAH LAKE.--Lat 35°22'38", long 83°52'33", Graham County, Hydrologic Unit 06010204, at Santeetlah Dam on Cheoah River, 1.0 mi (1.6 km) downstream from Santeetlah Creek, 5.5 mi (8.8 km) northwest of Robbinsville, and at mile 9.3 (15.0 m). DRAINAGE AREA, 176 mi² (456 km²). PERIOD OF RECORD, December 1927 to current year. Prior to October 1946 monthend contents only, published in WSP 1306. GAGE, water-stage recorder. Datum of gage is 122.92 ft (37.466 m) National Geodetic Vertical Datum of 1929 (levels by Aluminum Co. of America); gage readings have been reduced to elevations NGVD. Prior to February 1937, nonrecording gage at same site and datum.

Reservoir is formed by concrete gravity and arch dam with concrete spillway controlled by six taintor gates 12 ft (3.7 m) high by 25 ft (7.6 m) wide. Dam completed and storage began Dec. 7, 1927. Water in reservoir first reached minimum pool elevation December 1927. Total capacity (new capacity table put into use Jan. 1, 1971), at elevation 1,817.0 ft (553.822 m), top of gates, is 78,800 ft³/s-day (192.8 hm³), of which 66,600 ft³/s-day (163.0 hm³) is controlled storage above 1,740.08 ft (530.377 m), minimum pool. Reservoir is used for power. Gage-height record furnished by Aluminum Co. of America; level storage records furnished by Tennessee Valley Authority.

Lakes and Reservoirs in Ohio River basin--Continued

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 81,100 ft³/s-day (198.5 hm³) Sept. 3, 1928, elevation, 1,817.90 ft (554.096 m); minimum, after first filling, 13, 100 ft³/s-day (32.06 hm³) Feb. 6, 1940, elevation, 1,741.39 ft (530.776 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 78,800 ft³/s-day (192.8 hm³) Apr. 17, elevation, 1,817.04 ft (553.834 m); minimum, 46,200 ft³/s-day (113.1 hm³) Jan. 10, elevation, 1,790.04 ft (545.604 m).

03546500 CHATUGE LAKE.--Lat 35°01'01", long 83°47'28", Clay County, Hydrologic Unit 06020002, at Chatuge Dam on Hiwassee River, 2.0 mi (3.2 km) upstream from Hyatt Mill Creek, 2.5 mi (4.0 km) downstream from Georgia-North Carolina State line, 2.4 mi (3.9 km) southeast of Hayesville, and at mile 121.0 (194.7 km). DRAINAGE AREA, 189 mi² (490 km²). PERIOD OF RECORD, February 1942 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Aug. 4, 1942, nonrecording gage at same site and datum.

Reservoir is formed by a rolled earthfill dam with side channel spillway equipped with flashboards. Dam completed and storage began Feb. 12, 1942; water in reservoir first reached minimum pool elevation Feb. 26, 1942. Total capacity (based on 1965 resurvey; new capacity table put into use Jan. 1, 1971), at elevation 1,928.0 ft (587.654 m), top of flashboards, is 121,200 ft³/s-day (296.6 hm³), of which 111,900 ft³/s-day (273.8 hm³) is controlled storage above elevation 1,860.0 ft (566.928 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority. (See sta 03548500)

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 124,200 ft³/s-day (303.9 hm³) Apr. 20, 1943, elevation, 1,927.80 ft (587.593 m); minimum, after first filling, 9,400 ft³/s-day (23.0 hm³) Sept. 5, 1947, Jan. 27, 1956; minimum elevation, 1,860.11 ft (566.962 m) Sept. 5, 1947.

EXTREMES FOR CURRENT YEAR: Maximum contents, 118,400 ft³/s-day (289.7 hm³) May 25, elevation, 1,927.20 ft (587.411 m); minimum, 72,700 ft³/s-day (177.9 hm³) Jan. 10, elevation, 1,911.30 ft (582.564 m).

03554500 HIWASSEE LAKE.--Lat 35°09'01", long 84°10'40", Cherokee County, Hydrologic Unit 06020002, at Hiwassee Dam on Hiwassee River, 0.3 mi (0.5 km) northwest of village of Hiwassee Dam, 3.9 mi (6.3 km) upstream from Shoal Creek, and at mile 75.8 (122.0 km). DRAINAGE AREA, 968 mi² (2,507 km²). PERIOD OF RECORD, September 1939 to current year. GAGE, water-stage recorder. Datum of gage is 0.63 ft (0.192 m) below National Geodetic Vertical Datum of 1929.

Reservoir is formed by gravity overflow concrete dam with seven taintor gates 23 ft (7.0 m) high by 32 ft (9.8 m) wide. Slight storage began Apr. 13, 1939, during construction; systematic storage operation began Jan. 14, 1940; dam completed February 1940; water in reservoir first reached minimum pool elevation Feb. 23, 1940. Total capacity (based on 1965 resurvey; new capacity table put into use Jan. 1, 1971), at elevation 1,526.5 ft (465.277 m), top of gates, is 218,800 ft³/s-day (535.4 hm³) of which 182,700 ft³/s-day (447.1 hm³) is controlled storage above elevation 1,415.0 ft (431.292 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 223,400 ft³/s-day (546.7 hm³) May 28, 1973, elevation, 1,528.02 ft (465.740 m); minimum, after first filling, 35,800 ft³/s-day (87.60 hm³) Jan. 28, 1948, elevation, 1,413.41 ft (430.807 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 214,600 ft³/s-day (525.1 hm³) May 31, elevation, 1,525.09 ft (464.847 m); minimum, 82,300 ft³/s-day (201.4 hm³) Jan. 8, elevation, 1,464.77 ft (446.462 m).

03555500 APPALACHIA LAKE.--Lat 35°10'04", long 84°17'49", Cherokee County, Hydrologic Unit 06020002, at Appalachia Dam on Hiwassee River, 0.1 mi (0.2 km) upstream from North Carolina-Tennessee State line, 1.5 mi (2.4 km) northeast of Farner, Tenn., 9.8 mi (15.8 km) downstream from Hiwassee Dam, and at mile 66.0 (106.2 km). DRAINAGE AREA, 1,018 mi² (2,637 km²). PERIOD OF RECORD, February 1943 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by concrete gravity dam. Spillway equipped with 10 radial gates. Dam completed and storage began Feb. 14, 1943; water in reservoir first reached minimum pool elevation Feb. 21, 1943. Total capacity (based on 1965 resurvey; new capacity table put into use Jan. 1, 1971), at elevation 1,280.00 ft (390.144 m), top of gates, is 29,100 ft³/s-day (71.21 hm³), of which 24,500 ft³/s-day (59.95 hm³) is controlled storage above elevation 1,212.00 ft (369.418 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 30,300 ft³/s-day (74.14 hm³) June 13, 1952, elevation, 1,281.40 ft (390.571 m); minimum, after first filling, 15,300 ft³/s-day (37.44 hm³) Apr. 25, 1971, elevation, 1,251.00 ft (381.305 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 29,100 ft³/s-day (71.21 hm³) Nov. 8, elevation, 1,280.00 ft (390.144 m); minimum, 24,800 ft³/s-day (60.69 hm³) June 25, elevation, 1,272.30 ft (387.797 m).

OTHER RESERVOIRS.--The following smaller reservoirs in the Tennessee River basin are described below, but records of contents are not published herein:

03447832 LAKE JULIAN.--Lat 35°28'37", long 82°32'51", Buncombe County, Hydrologic Unit 06010105, cooling water reservoir for Carolina Power and Light Co. plant, on Powells Creek near Skyland. Prior to November 1967, published as Asheville Steam-electric Generating Plant Lake. DRAINAGE AREA, 4.78 mi² (12.38 km²). Total capacity is 4,540 ft³/s-day (11.11 hm³), of which 2,120 ft³/s-day (5.188 hm³) is controlled storage. Storage began Mar. 27, 1963, and lake reached spillway elevation of 2,160 ft (658.4 m) on June 3, 1963. Most of initial storage and occasional supplemental storage provided by pumped diversion from French Broad River.

03448959 BURNETT LAKE.--Lat 35°39'44", long 82°20'43", Buncombe County, Hydrologic Unit 06010105, part of Asheville's municipal water supply, on North Fork Swannanoa River near Black Mountain. DRAINAGE AREA, 21.9 mi². (56.7 km²). Total capacity is 11,600 ft³/s-day (28.39 hm³), crest of spillway, of which 8,900 ft³/s-day (21.78 hm³) is controlled storage. Storage began Jan. 28, 1954. (See sta 03451000)

03450134 BEETREE RESERVOIR.--Lat 35°38'27", long 82°24'04", Buncombe County, Hydrologic Unit 06010105, part of Asheville's municipal water supply, on Beetree Creek near Swannanoa. DRAINAGE AREA, 7.62 mi² (19.74 km²). Total capacity is 844 ft³/s-day (2.065 hm³), of which 823 ft³/s-day (2.014 hm³) is controlled storage. Dam completed December 1926, and storage began Jan. 11, 1927; water in reservoir first reached maximum pool elevation Mar. 8, 1927. No diversion since June 1963.

03455773 LAKE LOGAN.--Lat 35°25'15", long 82°55'30", Haywood County, Hydrologic Unit 06010106, on West Fork Pigeon River near Canton, and at mile 7.0 (11.3 km). DRAINAGE AREA, 33.3 mi² (86.2 km²). Total capacity is 1,040 ft³/s-day (2.545 hm³), top of flashboards, all of which is usable. Storage began November 1931. (See sta 03456000)

03458319 LAKE JUNALUSKA.--Lat 35°31'38", long 82°57'48", Haywood County, Hydrologic Unit 06010106, on Richland Creek at Lake Junaluska and at mile 2.4 (3.9 km). DRAINAGE AREA, 63.6 mi² (164.7 km²). Total surface area, about 195 acres (789,000 m²). Lake reached spillway elevation in the spring of 1913.

Lakes and Reservoirs in Ohio River basin--Continued

03500466 SEQUOYAH LAKE.--Lat 35°04'02", long 83°13'31", Macon County, Hydrologic Unit 06010202, on Cullasaja River near Highlands, and at mile 18.4 (29.6 km). DRAINAGE AREA, 14.4 mi² (37.3 km²). Total capacity is 233 ft³/s-day (570,000 m³), spillway crest, of which approximately 116 ft³/s-day (284,000 m³) is usable. Storage began in 1926.

03507111; 03507131 EAST FORK LAKE AND WOLF CREEK LAKE.--These two reservoirs are operated as a unit for storage of water for the Tennnessee Creek Project. East Fork Dam DRAINAGE AREA, 24.9 mi² (64.5 km²) on Tuckasegee River near Tuckasegee, Jackson County, Hydrologic Unit 06010203, is at lat 35°12'48", long 83°00'08", Wolf Creek Dam DRAINAGE AREA, 15.2 mi² (39.4 km²) on Wolf Creek near Tuckasegee, is at lat 35°13'18", long 83°00'00". Total capacity of East Fork Lake is 671 ft³/s-day (1.642 hm³), of which 625 ft³/s-day (1.529 hm³) is controlled storage. Storage began Apr. 18, 1955. Total capacity of Wolf Creek Lake is 5,070 ft³/s-day (12.41 hm³), of which 3,850 ft³/s-day (9.421 hm³) is controlled storage. Storage began Mar. 22, 1955. (See sta 03510500)

03507216 BEAR CREEK LAKE.--Lat 35°14'29", long 83°04'22", Jackson County, Hydrologic Unit 06010203, on Tuckasegee River near Tuckasegee. DRAINAGE AREA, 75.3 mi² (195.0 km²). Total capacity is 17,500 ft³/s-day (42.82 hm³), of which 2,290 ft³/s-day (5.604 hm³) is controlled storage. Storage began Oct. 9, 1953. (See sta 03510500)

03507289 CEDAR CLIFF LAKE.--Lat 35°15'12", long 83°05'58", Jackson County, Hydrologic Unit 06010203, on Tuckasegee River near Tuckasegee, and at mile 51.9 (83.5 km). DRAINAGE AREA, 80.3 mi² (208.0 km²). Total capacity is 3,200 ft³/s-day (7.830 hm³) of which 400 ft³/s-day (979,000 m³) is controlled storage. Storage began Apr. 26, 1952. (See sta 03510500)

03515152 CHEOAH LAKE.--Lat 35°26'54", long 83°56'11", Graham County, Hydrologic Unit 06010202, on Little Tennessee River at Cheoah, and at mile 51.4 (82.7 km). DRAINAGE AREA, 1,608 mi² (4,165 km²). Total capacity is 17,700 ft³/s-day (43.31 hm³), of which 3,700 ft³/s-day (9.054 hm³) is controlled storage. Storage began Dec. 8, 1918.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

Date	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Gage height (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Gage height (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
	03460242 Waterville Lake			03504500 Nantahala Lake			03507500 Thorpe Reservoir			03514500 Fontana Lake		
Sept. 30	2246.8	10960	-	2876.04	58600	-	3095.42	32300	-	1677.90	570400	-
Oct. 31	2235.6	9240	-1720	2876.37	58800	+200	3090.83	29100	-3200	1671.00	540700	-29700
Nov. 30	2255.9	12400	+3160	2889.25	68600	+9800	3093.46	30900	+1800	1669.05	532600	-8100
Dec. 31	2224.5	7650	-4750	2877.80	59900	-8700	3087.63	27000	-3900	1635.40	406100	-126500
CAL YR 1979	-	-	+640	-	-	+13200	-	-	+6400	-	-	+31600
Jan. 31	2224.0	7590	-60	2872.09	55800	-4100	3083.41	24300	-2700	1626.35	376100	-30000
Feb. 29	2222.4	7370	-220	2875.72	58400	+2600	3083.76	24500	+200	1627.43	379600	+3500
Mar. 31	2258.6	12840	+5470	2889.61	68900	+10500	3092.87	30500	+6000	1683.93	597600	+218000
Apr. 30	2233.1	8870	-3970	2888.70	68200	-700	3097.45	33700	+3200	1691.98	635600	+38000
May 31	2244.3	10570	+1700	2887.68	67400	-800	3096.86	33300	-400	1702.48	687300	+51700
June 30	2247.3	11040	+470	2886.32	66300	-1100	3094.95	31900	-1400	1695.50	652800	-34500
July 31	2224.0	7590	-3450	2877.31	59500	-6800	3089.19	28000	-3900	1677.20	567400	-85400
Aug. 31	2214.2	6350	-1240	2872.36	56000	-3500	3085.93	25900	-2100	1661.98	503600	-63800
Sept. 30	2182.8	3030	-3320	2868.02	53000	-3000	3082.61	23800	-2100	1648.07	447900	-55700
WTR YR 1980	-	-	-7930	-	-	-5600	-	-	-8500	-	-	-122500

Date	Gage height (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
	03516500 Santeetlah Lake			03546500 Chatuge Lake			03554500 Hiwassee Lake			03555500 Apalachia Lake		
Sept. 30	1801.98	59200	-	1920.66	97300	-	1511.18	174000	-	1274.90	26200	-
Oct. 31	1793.59	49900	-9300	1917.48	88500	-8800	1502.67	152500	-21500	1275.75	26700	+500
Nov. 30	1800.27	57200	+7300	1917.83	89400	+900	1500.96	148400	-4100	1278.45	28200	+1500
Dec. 31	1791.44	47600	-9600	1912.14	74700	-14700	1468.97	88200	-60200	1275.86	26800	-1400
CAL YR 1979	-	-	+300	-	-	+600	-	-	+4800	-	-	-600
Jan. 31	1794.05	50400	+2800	1913.51	78100	+3400	1469.21	88600	+400	1276.73	27300	+500
Feb. 29	1798.55	55300	+4900	1913.93	79200	+1100	1473.19	94800	+6200	1272.55	25000	-2300
Mar. 31	1815.97	77400	+22100	1923.46	105900	+26700	1513.17	179100	+84300	1275.98	26800	+1800
Apr. 30	1815.69	77100	-300	1926.04	114400	+8500	1520.12	198500	+19400	1276.10	26900	+100
May 31	1814.33	75200	-1900	1926.21	115000	+600	1524.62	213100	+14600	1277.75	27800	+900
June 30	1810.49	69800	-5400	1925.27	111800	-3200	1520.60	200000	-13100	1277.94	28000	+200
July 31	1800.88	57900	-11900	1920.09	95600	-16200	1515.09	184200	-15800	1277.30	27600	-400
Aug. 31	1795.06	51400	-6500	1915.38	83000	-12600	1501.63	150000	-34200	1276.86	27300	-300
Sept. 30	1791.69	47900	-3500	1915.25	82600	-400	1487.15	119000	-31000	1277.00	27400	+100
WTR YR 1980	-	-	-11300	-	-	-14700	-	-	-55000	-	-	+1200

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to these events. Those measurements and others collected for some special reasons are called measurements at miscellaneous sites.

Crest-stage partial-record station

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The data of the maximum discharge is not always certain, but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (ft^3/s)
		Pamlico River basin					
02084148	Chicod Creek at Secondary Road 1565 near Grimesland, N.C.	Lat 35°31'57", long 77°11'13", Pitt County, at bridge on Secondary Road 1565, 2.0 miles upstream from Cow Swamp, and 2.2 miles south of Grimesland.	a19	1976-80	3-29-80	24.97	268
02084158	Cow Swamp near Grimesland, N.C.	Lat 35°32'00", long 77°13'30", Pitt County, at bridge on Secondary Road 1756, 1 mile upstream from mouth.	a17	1976-80	5-21-80	22.58	865
		Pee Dee River basin					
02112247	Elkin River at Elkin, N.C.	Lat 36°15'12", long 80°51'46", Surry County, at bridge on State Highway 268, 1 mile upstream from mouth, and 1 mile west of Elkin.	b35.0	1971-80	4-9-80		*1,700
		Santee River basin					
02152500	First Broad River near Lawndale, N.C.	Lat 35°22'53", long 81°32'50", Cleveland County, on right bank at village of Double Shoals, 0.4 mile downstream from Shoal Rock Creek, 500 ft downstream from bridge on Secondary Road 1809, and 2.5 miles southeast of Lawndale.	198	‡1940-71, 1972-80	4-14-80	8.24	4,040

* Based on stage 1100 ft upstream at dam.
‡ Operated as a continuous-record gaging station.
a Approximately.
b Revised.

MEASUREMENTS AT MISCELLANEOUS SITES

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1980

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Chowan River basin				
02053056 Meherrin River	Chowan River	Lat 36°32'40", long 77°18'00", Northampton County, at bridge on State Highway 195 at NC-VA state line, downstream of Seaboard Coast Line Railroad, and 2.7 miles northeast of Margaretsville.	a1070	1975	8-19-80	80.2
		Roanoke River basin				
02068015 Dan River	Roanoke River	Lat 36°31'33", long 80°22'16", Stokes County at bridge on Secondary Road 1432, 2.4 miles downstream from Little Dan River, and 2.8 miles east of Asbury.	a110	1970, 1973-74, 1976-79	3-11-80 8-19-80	138 92.4
02069000 Dan River	Roanoke River	Lat 36°19'08", long 80°03'00", Stokes County, at bridge on SR 2023, at Pine Hall, 1.5 miles upstream from Belews Creek.	481	†1923-26, 1975-79	3-12-80 6-11-80 7-8-80	688 392 305
02069222 Dan River	Roanoke River	Lat 36°22'20", long 80°59'38", Rockingham County, at bridge on Secondary Road 1138, and 1.8 miles southwest of Madison.	a600	1970, 1974, 1976-79	3-12-80 6-11-80 7-8-80	786 390 338
02074282 Wolf Island Creek	Dan River	Lat 36°23'30", long 79°40'08", Rockingham County, at bridge on Secondary Road 1998, 1.5 miles northwest of Reidsville, and 9 miles upstream from Quagna Creek.	a3.8	1970, 1974, 1976-79	6-11-80 7-9-80	1.67 1.71
0207520780 Country Line Creek	Dan River	Lat 36°18'46", long 79°30'48", Caswell County, at bridge on Secondary Road 1146, and 1.2 miles south-southwest of Ashland.	a6.7	1974-79	9-5-80	1.66
0207527050 Country Line Creek	Dan River	Lat 36°32'16", long 79°12'04", Caswell County, at bridge on State Highway 57, 0.4 mile east-southeast of Milton, and 0.8 mile upstream from mouth.	a137	1974-79	9-5-80	6.45
0207718130 Hyco Creek	Hyco River	Lat 36°17'24", long 79°15'43", Caswell County, at Secondary Road 1767, 2.8 miles northeast of Baynes, and 3.2 miles upstream from confluence of Lynch Creek.	a5.1	1974-79	9-5-80	.03
02077227 South Hyco Creek	Hyco River	Lat 35°16'00", long 79°08'50", Person County, at bridge on State Highway 49, 1.5 miles southwest of Gordonton, and 2.5 miles upstream from confluence of Sugar Tree Creek.	a11	1968, 1976, 1978-79	4-21-80	6.56
02077348 Marlowe Creek	Dan River	Lat 36°29'05", long 78°58'47", Person County at bridge on Secondary Road 1322, downstream from Fishing Branch, and 1.2 miles west of Woodsdale.	21	1970, 1974, 1976, 1978	4-22-80	18.9
02077368 Hyco River	Dan River	Lat 36°32'36", long 78°57'52", Person County, at bridge on Secondary Road 1326 at NC-VA state line, 1.5 miles downstream from Storys Creek, and 4 miles north of Woodsdale.	a260	1970, 1974, 1976, 1978	4-22-80	168
0207901030 Grassy Creek	Roanoke River	Lat 36°25'35", long 78°46'10", Granville County, at bridge on Secondary Road 1325, 2.9 miles west-southwest of Oak Hill, and 3.7 miles upstream from Bearskin Creek.	a2.0	1974, 1976, 1978	4-22-80	1.22
0207920940 Island Creek	Roanoke River	Lat 36°26'10", long 78°32'37", Granville County, at bridge on Secondary Road 1430, 0.3 mile downstream from Howlett Creek, and 1.7 miles southeast of Stovall.	a13	1974-76, 1978-79	4-23-80	7.85
02079259 Nutbush Creek	Roanoke River	Lat 36°20'26", long 78°25'12", Vance County, at bridge on Secondary Road 1310, 1.4 miles northwest of Henderson, and 4.4 miles upstream from Crooked Run Creek.	a2.0	1970, 1974-76, 1978	2-25-80	2.31

† Operated as a continuous-record gaging station.
a Approximately.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1980

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Roanoke River basin (Continued)				
02079264 Nutbush Creek	Roanoke River	Lat 36°22'10", long 78°24'31", Vance County, at bridge on Secondary Road 1317, 0.1 mile upstream from Buggs Island Reservoir, and 3 miles north of Henderson.	a3.9	1970, 1974, 1976, 1978-79	4-23-79	6.39
0207966152 Smith Creek	Roanoke River	Lat 36°27'12", long 78°15'51", Warren County, at culvert on Secondary Road 1224, 2 miles northwest of Ridgeway, and 4.2 miles upstream from Ellington Branch.	a5.7	1976, 1979	2-25-80 4-23-80	1.99 1.63
02079717 Smith Creek	Roanoke River	Lat 36°32'27", long 78°11'43", Warren County, at bridge on U.S. Highway 1, 0.3 mile downstream from Blue Mud Creek, and 2.1 miles west of Paschall.	a53	1954, 1961-63, 1966, 1976, 1979	4-23-80	41.4
02081022 Roanoke River	Atlantic Ocean	Lat 36°00'50", long 77°12'55", Martin County, at bridge on State Highway 11, and 5.2 miles northeast of Oak City.	8830		‡9-23-68 ‡11-15-68 ‡2-25-69 ‡5-22-69 ‡11-4-71 ‡6-30-72 ‡3-26-75 ‡4-8-75 ‡5-12-78 8-11-80	1990 8240 9156 6870 19,500 17,900 22,500 34,800 35,200 3760
02081054 Roanoke River	Atlantic Ocean	Lat 35°51'40", long 77°02'20", Martin County, at bridge on U.S. Highway 17, .75 mile above Sweetwater Creek, and 1 mile northeast of Williamston.	9070		‡4-9-75 ‡5-12-78	33,900 37,400
		Pamlico River basin				
02081933 Tar River	Pamlico River	Lat 35°55'48", long 78°08'54", Nash County, at bridge on U.S. Highway 64, 0.5 mile downstream from Turkey Creek, and 2.3 miles southwest of Spring Hope.	a660	1969, 1974, 1976, 1978	8-22-80	123
02082823 Tar River	Pamlico River	Lat 35°55'40", long 77°33'00", Edgecomb County, at bridge on State Highway 44, 2 miles northwest of Tarboro, and 3.2 miles upstream from Fishing Creek.	a1280	1970, 1973-74, 1976	5-15-80	401
02082824 Fishing Creek	Tar River	Lat 36°23'06", long 78°19'05", Vance County, at Secondary Road 1501, 1.1 miles south-southwest of Middleburg, and 5.7 miles upstream from mouth.	a3.3	1974-76, 1978	4-23-80	2.5
02083390 Fishing Creek	Tar River	Lat 35°58'25", long 77°32'29", Edgecombe County, at bridge on Secondary Road 1500, 2.5 miles southeast of Leggett, and 3.5 miles upstream from Deep Creek.	a760	1961-69, 1974, 1978	5-15-80	278
02083432 Deep Creek	Fishing Creek	Lat 35°57'20", long 77°30'10", Edgecombe County, at bridge on U.S. Highway 258, 1 mile upstream from mouth, and 4 miles northeast of Tarboro.	a94	1954, 1974, 1978, 1979	5-15-80	3.72
02083633 Town Creek	Tar River	Lat 35°48'20", long 77°36'50", Edgecombe County, at bridge on Secondary Road 1200, 1 mile upstream from Bynums Mill Creek, and 1.8 miles northeast of Pinetops.	a170	1970, 1973	5-16-80	13.8
02084148 Chicod Creek	Tar River	Lat 35°31'57", long 77°11'13", Pitt County, at bridge on Secondary Road 1565, 2 miles upstream from Cow Swamp, and 2.2 miles south of Grimesland.	a19	1975-79	2-13-80	57.5
		Neuse River basin				
02085034 Eno River	Neuse River	Lat 36°02'47", long 79°00'40", Orange County, at bridge on Secondary Road 1567, 0.5 miles downstream from Stony Creek, and 2 miles northeast of University.	a110	1973, 1976, 1978	4-28-80	66.3
02085079 Eno River	Neuse River	Lat 36°04'19", long 78°51'47", Durham County, at bridge on Secondary Road 1004, 1.3 miles upstream from Little River, and 1.5 miles northeast of Weaver.	a150	1954-55, 1958, 1968, 1972-74, 1976, 1978-79	4-30-80	86.8

‡ Not previously published.
a Approximately.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1980

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Neuse River basin (Continued)				
02085302 South Flat River	Flat River	Lat 36°17'40", long 79°03'54", Person County, at bridge on Secondary Road 1112, 1.3 miles upstream from confluence of Bushy Fork Creek, and 1.8 miles northwest of Hurdle Mills.	6.2	1974-76, 1978-79	4-21-80	2.36
0208535580 North Flat River	Flat River	Lat 36°20'30", long 79°01'29", Person County, at bridge on Secondary Road 1142, 1.3 miles southeast of Roseville, and 5.7 miles upstream from Chappells Creek.	a4.5	1974, 1976	4-21-80	3.68
02086624 Knap of Reeds Creek	Neuse River	Lat 36°07'40", long 78°48'55", Granville County, at SEO, 2.3 miles west of Butner, and 2.5 miles upstream from mouth.	42.1	1972, 1974, 1976, 1978	4-30-80	6.48
02086849 Ellerbe Creek	Neuse River	Lat 36°03'33", long 78°49'58", Durham County, at bridge on Secondary Road 1636, 1.6 miles northwest of Gorman, and 3 miles upstream from mouth.	21.7	1972-73, 1976, 1978	4-30-80	23.0
02087370 Big Branch	Walnut Creek	Lat 35°44'28", long 78°34'06", Wake County, at bridge on Secondary Road 2542, 1 mile upstream from mouth, and 3 miles northeast of Garner.	a12	1953-58, 1960, 1970, 1972-73, 1976, 1979	5-19-80	26.5
02087885 Middle Creek	Swift Creek	Lat 35°42'54", long 78°50'27", Wake County, at Durham and Southern Railroad, 1.4 mile southeast of Apex, 5.1 miles upstream from Basal Creek, and 10.8 miles upstream from mouth.	.6	1973-76, 1979	5-19-80	0.11
02088030 Middle Creek	Swift Creek	Lat 35°30'27", long 78°24'07", Johnston County, at bridge on State Highway 210, 2.3 miles upstream from mouth, and 3 miles west of Smithfield.	a120	1949-55, 1958, 1974, 1976, 1978	5-29-80	43.3
0208807310 Black Creek	Neuse River	Lat 35°34'12", long 78°43'53", Wake County, at culvert on Secondary Road 2754, 1.7 miles south of Willow Springs, and 6.3 miles upstream from Little Black Creek.	a3.2	1973-74, 1978	10-5-79 5-23-80	1.44 1.61
02088119 Neuse River	Atlantic Ocean	Lat 35°22'34", long 78°11'52", Johnston County, at bridge on Secondary Road 1201, 0.1 mile downstream from Bawdy Creek, and 3 miles northeast of Cox Mill.	a1660	1955, 1968, 1976, 1978	5-30-80	1130
02088332 Neuse River	Atlantic Ocean	Lat 35°21'28", long 78°08'09", Wayne County, downstream from bridge on Secondary Road 1224, downstream from Thoroughfare Swamp, and 1.3 miles north of Stevens Mill.	a2010	1963, 1978	5-15-80	563
02088632 Little River	Neuse River	Lat 35°23'35", long 78°01'35", Wayne County, at bridge on State Highway 581, 0.2 mile northeast of Asylum, and 1.1 miles upstream from mouth.	312	1974, 1976, 1978	5-15-80	62.0
*02090572 Black Creek tributary	Black Creek	Lat 35°38'40", long 77°59'10", Wilson County, at bridge on Secondary Road 1645, 1.0 mile upstream from mouth, and 1.3 miles east of Lucama.	4.5	1972-74, 1976, 1978	5-9-80	1.16
02090634 Contentnea Creek	Neuse River	Lat 35°35'10", long 77°48'40", Wilson County, at bridge on State Highway 58, 0.6 mile upstream from Toisnot Swamp, and 1.5 miles southeast of Stantonsburg.	a390	1969-70, 1972-74, 1978	5-9-80	170
02091241 Contentnea Creek	Neuse River	Lat 35°27'27", long 77°40'11", Greene County, at bridge on U.S. Highway 258, at Snow Hill, and 0.8 mile upstream from Panther Swamp Creek.	694	1969-70, 1973-74, 1978	5-13-80	216

* Erroneously published as Lee Swamp tributary (0209055995) water years 1972-74, 1976, 1978.
a Approximately.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1980

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Neuse River basin (Continued)				
02091740 Little Contentnea Creek	Contentnea Creek	Lat 35°27'24", long 77°29'09", Pitt County, at bridge on State Highway 102, at Scuffleton, and 2.6 miles upstream from mouth.	172	1969-70	5-5-80	128
02091814 Neuse River	Atlantic Ocean	Lat 35°18'40", long 77°18'20", Craven County, at bridge on Secondary Road 1470, 1.5 miles upstream from Core Creek, and 2 miles east of Fort Barnwell.	a3900	1970, 1972-73, 1976, 1978	5-13-80	1820
0209184590 Swift Creek	Neuse River	Lat 35°32'16", long 77°25'07", Pitt County, at bridge on Secondary Road 1126, 0.3 mile downstream from Gun Swamp, and 1.1 miles northwest of Winterville.	a7.6	1974, 1978	5-5-80	2.58
0209218190 Trent River	Neuse River	Lat 35°06'23", long 77°43'15", Lenoir County, at bridge on State Highway 11, 2.5 miles south-southwest of Deep Run, and 5.9 miles upstream from mouth.	a3.2	1974-76	5-14-80	0.99
		Cape Fear River basin				
02093248 Haw River	Cape Fear River	Lat 36°11'52", long 79°59'08", Guilford County, at bridge on State Highway 68, 1.6 miles north of Oak Ridge, and 1.8 miles upstream from Rocky Branch.	7.9	1962, 1966, 1971, 1973-79	3-12-80 6-11-80 7-8-80 8-22-80	8.32 1.45 1.27 25.4
02095091 South Buffalo Creek	Buffalo Creek	Lat 36°06'45", long 79°40'19", Guilford County, at bridge on Secondary Road 2821, 0.8 mile northwest of McLeansville, and 1.4 miles upstream from mouth.	43.1	1969-70, 1973, 1976-79	3-20-80 7-22-80	57.9 24.0
02095554 Buffalo Creek	Reedy Fork	Lat 36°08'34", long 79°38'54", Guilford County, at bridge on Secondary Road 2795, 1.2 miles upstream from Blackwood Creek, and 2.6 miles north of McLeansville.	91.6	1969-71, 1973, 1976-79	3-20-80 7-22-80	149 52.6
02095681 Reedy Fork	Haw River	Lat 36°10'06", long 79°30'29", Alamance County, at bridge on State Highway 87, at Ossipee, and 0.5 mile upstream from mouth.	254	1969-70, 1973, 1976-79	3-20-80 7-22-80	285 94.2
0209659814 Little Alamance Creek	Big Alamance Creek	Lat 35°55'52", long 79°40'34", Guilford County, at culvert on Secondary Road 3549 (Old U.S. Highway 421), 0.1 mile downstream from unnamed tributary, and 2 miles north-northwest of Julian.	a2.0	1974, 1976-77, 1979	3-20-80 7-21-80	3.28 0.23
02096788 Big Alamance Creek	Haw River	Lat 36°01'01", long 79°24'50", Alamance County, at bridge on Secondary Road 2309, 0.5 mile downstream from Stinking Quarter Creek, and 1.8 miles east of Bellemont.	247	1974-77, 1979	3-20-80 7-21-80	447 51.3
02096879 Haw River	Cape Fear River	Lat 35°53'39", long 79°15'15", Alamance County, at bridge on Secondary Road 1005, 0.7 mile upstream from Cane Creek, and 5.8 miles north of Terrells.	1090	1974-75, 1979	7-22-80	302
02097189 Robeson Creek	Haw River	Lat 35°42'10", long 79°05'41", Chatham County, at bridge on Secondary Road 1939, 0.5 mile upstream from mouth, and 4.5 miles southwest of Seaforth.	a27	1954 1966, 1970-71, 1973-74, 1976, 1978	5-23-80	7.1
02097203 New Hope Creek	New Hope River	Lat 35°59'31", long 79°02'45", Orange County at bridge on Secondary Road 1730, 0.5 mile downstream from Old Field Creek, and 1.5 miles east of Blackwood.	a22	1962, 1966, 1968, 1971, 1973, 1976, 1978, 1979	9-28-80	8.24
02097299 Third Fork Creek	New Hope River	Lat 35°54'38", long 78°57'39", Durham County, at bridge on State Highway 751, 0.9 mile upstream from mouth, and 1.6 miles north of Bland.	16.5	1970-71, 1974, 1976, 1978	4-28-80	54.9

a Approximately.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1980

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Cape Fear River basin (Continued)				
02097360 Bolin Creek	Little Creek	Lat 35°55'40", long 79°02'08", Orange County, at bridge on U.S. Highway 15A, 1.0 mile above Booker Creek, and 1.5 miles northeast of Chapel Hill.	11.6	1973, 1974-76, 1978	4-28-80	4.64
02097440 Northeast Creek	New Hope River	Lat 35°51'19", long 78°56'26", Chatham County, at bridge on Secondary Road 1731, 0.5 mile downstream from Kit Long Branch, and 0.8 mile south of O'Kellys Church.	35.0	1963-67, 1970, 1976, 1978	4-4-80 5-23-80	17.9 9.17
0209746350 Morgan Creek	New Hope River	Lat 35°57'44", long 79°08'06", Orange County, at culvert on Secondary Road 1112, and 1.7 miles east-southeast of Dobson.	a2.2	1974-76, 1978-79	4-28-80	0.97
02097521 Morgan Creek	New Hope River	Lat 35°51'48", long 79°00'35", Chatham County, at bridge on Secondary Road 1726, 2 miles upstream from Cub Creek, and 4 miles north of Farrington.	45.6	1970, 1973, 1976, 1978	4-4-80 5-23-80	55.8 41.5
02099484 Richland Creek	Deep River	Lat 35°56'26", long 79°54'08", Guilford County, at bridge on Secondary Road 1147, 0.2 mile upstream from mouth, and 4 miles southwest of Groomtown.	16.3	1971, 1973-76, 1978-79	3-19-80 7-21-80	43.0 12.6
02101463 Deep River	Cape Fear River	Lat 35°33'18", long 79°17'17", Chatham County, at Gulf bridge on Secondary Road 1007, 2.4 miles upstream from Picket Creek, and 3.5 miles southeast of Goldston.	a1050	1970, 1973, 1976, 1979	6-10-80	162
02101686 North Prong Rocky River	Rocky River	Lat 35°51'51", long 79°32'34", Randolph County, at bridge on State Highway 49, 1.5 miles northeast of Liberty, and 6.3 miles upstream from mouth.	a2.6	1974, 1976-79	3-20-80 7-21-80	3.85 0.77
02102550 Upper Little River	Cape Fear River	Lat 35°24'08", long 79°07'47", Lee County, upstream from confluence of Gastors Creek, 1 mile downstream from Secondary Road 1146, and 3.8 miles northeast of Lemon Springs.	a19	1974, 1976, 1978	5-22-80	6.99
02103000 Little River	Cape Fear River	Lat 35°11'38", long 78°59'14", Cumberland County, at bridge on State Highway 87, at Manchester, and 0.3 mile upstream from Tank Creek.	348	†1939-50, 1978	5-21-80	406
02103997 Cross Creek	Cape Fear River	Lat 35°03'18", long 78°51'48", Cumberland County, at bridge on U.S. 301 at Fayetteville.	38		‡8-18-80	32.1
02104279 Rockfish Creek	Cape Fear River	Lat 34°58'10", long 79°06'40", Hoke County, at bridge on Secondary Road 1432, 0.2 mile downstream from Puppy Creek, and 1.2 miles northeast of Arabia.	a150	1973-74, 1978	5-21-80	296
02104362 Beaver Creek	Little Rockfish Creek	Lat 35°02'39", long 78°58'40", Cumberland County, at bridge on U.S. Highway 401, 1.1 miles south of Skibo, and 1.3 miles upstream from Cumberland Creek.	24.7	1974-75, 1979	5-20-80	20.6
02104380 Beaver Creek	Little Rockfish Creek	Lat 35°00'00", long 78°58'44", Cumberland County, at bridge on Secondary Road 1141 at Cumberland, and 1 mile upstream from mouth.	32.2	1961-65, 1968, 1973-75, 1979	5-20-80	29.8
0210450005 Rockfish Creek	Cape Fear River	Lat 34°57'57", long 78°55'00", Cumberland County, at bridge on U.S. Highway 301, 0.1 mile downstream from Little Rockfish Creek, and 1.7 miles east of Hope Mills.	286	1974-76, 1979	6-18-80	168
0210591620 Great Coharie Creek	Black River	Lat 35°14'38", long 78°27'00", Sampson County, at bridge on Secondary Road 1636, 1.4 miles north-northeast of Timothy, and 5.2 miles upstream from confluence of Beaverdam Creek.	a1.7	1974-76, 1979	3-31-80	10.1
0210604420 Great Coharie Creek tributary	Great Coharie Creek	Lat 34°47'46", long 78°21'47", Sampson County, on Secondary Road 1135, 0.8 mile upstream from mouth, and 1.8 miles northeast of Garland.	a2.5	1973-74, 1979	5-12-80	0.27

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a Approximately.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1980

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Cape Fear River basin (Continued)				
02106621 Black River	South River	Lat 35°29'26", long 78°42'37", Harnett County, at bridge on Secondary Road 1544, 1.5 miles northwest of Barclaysville, and 15 miles upstream from Popes Pond.	a4.3	1973-74, 1976, 1978-79	5-30-80	0.58
02106648 Black River	South River	Lat 35°20'52", long 78°37'28", Harnett County, at bridge on Secondary Road 1722, and 3 miles north-northwest of Dunn.	a38	1977-79	11-29-79	201
02106681 Black River	South River	Lat 35°17'03", long 78°38'21", Harnett County, at bridge on Secondary Road 1780, 1.5 miles downstream from Pope's Pond, and 2.2 miles southwest of Dunn.	a49	1973, 1977-79	12-12-79 4-15-80	59.6 152
02106760 Mingo Swamp	South River	Lat 35°16'18", long 78°35'11", Harnett County, at bridge on U.S. Highway 421, 1 mile downstream from Stony Run, and 2.7 miles southeast of Dunn.	a50	1955, 1957-64, 1973, 1976, 1979	5-21-80	28.6
02107586 Northeast Cape Fear River	Cape Fear River	Lat 35°11'35", long 78°01'05", Wayne County, at bridge on Secondary Road 1937, 1.5 miles downstream from Barlow Branch, and 3 miles east of Mount Olive.	a10	1973, 1975-76, 1978	6-19-79	9.88
02107672 Northeast Cape Fear River	Cape Fear River	Lat 35°03'10", long 77°50'17", Duplin County, at bridge on State Highway 11, 0.2 mile upstream from Burn Coal Branch, and 0.8 mile southwest of Kornegay.	a120	1956, 1974, 1976, 1978	3-27-80	268
02108534 Rockfish Creek	Northeast Cape Fear River	Lat 34°43'03", long 77°58'48", Duplin County, at bridge on U.S. Highway 117, 1 mile downstream from Sawyer Creek, and 1.5 miles south of Wallace.	a150	1976, 1978-79	3-27-80	391
		Waccamaw River basin				
02108963 Big Creek	Lake Waccamaw	Lat 34°19'18", long 78°27'18", Columbus County, at bridge on U.S. Highways 74 and 76, 2.9 miles upstream from mouth, and 3.1 miles west of Bolton.	b69.6	1975-76, 1979	5-7-80	0.51
0210932380 Soules Swamp	White Marsh	Lat 34°19'00", long 78°42'22", Columbus County, at bridge on U.S. Highway 701 (business), 0.5 mile downstream from Mollie Branch, and 1.5 miles south of Whiteville.	a42	1974-76	1-30-80 3-25-80	88.4 102
02109484 Juniper Creek	Waccamaw River	Lat 34°09'15", long 78°31'53", Columbus County, at bridge on Secondary Road 1928, 2 miles upstream from mouth, and 3.9 miles east of Old Dock.	b174	1974-75	5-7-80 7-29-80	66.3 5.07
02109821 Grissett Swamp	Seven Creeks	Lat 34°08'55", long 78°46'57", Columbus County, at bridge on Secondary Road 1005, 1 mile north of Ironhill, and 2.8 miles upstream from Toms Fork.	b21.8	1959, 1971-72, 1975-76	1-30-80 3-25-80	45.1 42.2
02110056 Waccamaw River	Atlantic Ocean	Lat 34°00'59", long 78°37'49", Columbus County, at bridge on State Highway 904, 1 mile south of Pireway, and 1 mile downstream from Seven Creeks.	b943	1975-76	1-30-80	1910
		Pee Dee River basin				
02113576 Ararat River	Yadkin River	Lat 36°33'13", long 80°34'09", Surry County, at bridge on State Highway 104, 2.1 miles northeast of Salem, and 2.2 miles upstream from Johnsons Creek.	36.2	1970-77, 1979	3-11-80 8-19-80	48.9 22.5
02114101 Ararat River	Yadkin River	Lat 36°18'08", long 80°31'55", Surry County, at bridge on Secondary Road 2080, 2.2 miles northeast of Siloam, and 2.2 miles upstream from mouth.	b311	1974-79	3-10-80	421
02119000 South Yadkin River	Yadkin River	Lat 35°48'18", long 80°33'30", Davie County, at Cooleemee, upstream from State Highway 801, 2.5 miles upstream from Third Creek, and 7.2 miles upstream from mouth.	b557	†1928-65, 1970-79	3-17-80 7-24-80	608 484

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a Approximately.
b Published as a low-flow partial-record station.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1980

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Pee Dee River basin (Continued)				
02120640 Third Creek	South Yadkin River	Lat 35°47'26", long 80°34'17", Rowan County, at bridge on State Highway 801, 1 mile south of Cooleemee, and 3 miles upstream from mouth.	a180	1952-53, 1963-69, 1978-79	7-24-80	.41
02121360 Swearing Creek	Yadkin River	Lat 35°45'19", long 80°18'22", Davidson County, at bridge on Secondary Road 1130, 0.5 mile east of Linwood, and 2 miles upstream from mouth.	b35.0	1948-57, 1961-63, 1970-71, 1973, 1975-79	3-17-80 7-23-80	28.8 134
02121500 Abbotts Creek	Yadkin River	Lat 35°48'23", long 80°14'05", Davidson County, above bridge on Secondary Road 1243, 1.5 miles southeast of Lexington, and 4.9 miles downstream from Rich Fork.	b176	†1940-57, 1970-79	3-17-80 7-21-80	142 23.6
02123113 Uwharrie River	Pee Dee River	Lat 35°48'25", long 79°59'50", Randolph County, at bridge on Secondary Road 1549, 4.5 miles upstream from Little Uwharrie River, and 7.5 miles southwest of Glenola.	b32.1	1961-62, 1974-79	3-17-80 7-21-80	26.1 3.02
02123881 Rocky River	Pee Dee River	Lat 35°28'28", long 80°46'48", Mecklenburg County, at bridge on Secondary Road 1608, 1.3 miles upstream from West Branch, and 4.2 miles southeast of Davidson.	13.4	1970-79	7-24-80	11.6
02124160 Mallard Creek	Rocky River	Lat 35°20'01", long 80°40'06", Cabarrus County, at bridge on Secondary Road 1300, 0.2 mile upstream from mouth, and 1.3 miles northwest of Harrisburg.	b41.1	1955-65, 1971, 1973, 1975-79	4-17-80 7-31-80	47.4 4.82
02124374 Irish Buffalo Creek	Rocky River	Lat 35°20'50", long 80°32'52", Cabarrus County, at bridge on Secondary Road 1132, 1 mile south of Faggarts Crossroads, and 1 mile upstream from mouth.	b45.4	1974-79	4-25-80 7-25-80	22.9 15.7
02124401 Rocky River	Pee Dee River	Lat 35°19'26", long 80°30'59", Cabarrus County, at bridge on U.S. Highway 601, 1 mile upstream from Hamby Branch, and 3 miles southeast of Faggarts Crossroads.	b392	1970-71, 1973-79	4-25-80 7-25-80	228 105
02124823 Long Creek	Rocky River	Lat 35°28'21", long 80°17'37", Stanly County, at bridge on Secondary Road 1454, 1.9 miles west of Richfield, and 15.2 miles upstream from mouth.	a5.0	1974-79	10-29-79 1-22-80 7-28-80	0.24 7.67 8.04
02125126 Long Creek	Rocky River	Lat 35°13'05", long 80°15'28", Stanly County, at bridge on Secondary Road 1917, 1 mile upstream from mouth, and 4 miles east of Oakboro.	198	1970-71, 1973-79	10-29-79 4-25-80 7-28-80	20.8 92.5 7.39
02127560 Little River	Pee Dee River	Lat 35°37'22", long 79°51'18", Randolph County, at bridge on Secondary Road 1142, 1.8 miles southwest of Ulah, and 1.9 miles upstream from confluence of Big Branch.	a5.3	1974-76, 1978-79	3-17-80 7-7-80	5.98 1.45
02128038 White Oak Creek	Cedar Creek	Lat 35°20'46", long 79°47'58", Montgomery County, at culvert on Secondary Road 1556, 1.5 miles southwest of Biscoe, and 1.9 miles upstream from mouth.	b1.21	1970, 1979	1-23-80 7-28-80	15.8 0.08
02129341 Hitchcock Creek	Pee Dee River	Lat 34°55'05", long 79°47'50", Richmond County, downstream from dam at Cordova, and 1.2 miles upstream from mouth.	b134	1970-71, 1974, 1979	10-30-79 1-23-80 7-29-80	97.9 54.3 34.0
02129514 Bailey Creek	North Fork Jones Creek	Lat 34°55'21", long 80°01'27", Anson County, at bridge on Secondary Road 1811, 0.5 mile upstream from mouth, and 4.5 miles southeast of Wadesboro.	b13.0		7-29-80	4.07
0212955844 Marks Creek	Pee Dee River	Lat 34°51'45", long 79°43'09", Richmond County, at bridge on Secondary Road 1812, 1.3 miles downstream from City Lake spillway, and 2.4 miles southwest of Hamlet.	b12.9	1970-71, 1979	10-30-79 1-23-80 7-29-80	8.32 45.3 7.85

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a Approximately.
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DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1980

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Pee Dee River basin (Continued)				
02132172 Gum Swamp	Little Pee Dee River	Lat 34°47'58", long 79°31'56". Scotland County, at bridge on U.S. Highway 74, 2.8 miles upstream from Lower Beaverdam Creek, and 3.9 miles southeast of Old Hundred.	b55.4	1973-75, 1979	10-30-79 1-23-80 7-29-80	57.3 132 40.0
02132269 Leith Creek	Little Pee Dee River	Lat 34°44'37", long 79°25'13", Scotland County, at bridge on Secondary Road 1609, 4 miles west of Maxton, and 5.4 miles upstream from mouth.	b21.8	1973-75, 1979	10-30-79 1-23-80 7-29-80	9.56 48.0 6.26
02132910 Drowning Creek	Lumber River	Lat 35°11'16", long 79°38'55", Moore County, at bridge on State Highway 73, 2 miles southwest of Jackson Springs, and 3 miles upstream from Jackson Creek.	b31.9	1949-54, 1957-59 1962, 1968-69, 1973-75, 1979	10-29-79 3-12-80 7-28-80	26.4 52.7 10.0
02133581 Drowning Creek	Lumber River	Lat 35°01'24", long 79°26'36", Richmond County, at bridge on U.S. Highway 15, 1.3 miles upstream from Quewhiffle Creek, and 5.8 miles east of Hoffman.	247	1959, 1962, 1974, 1976-77, 1979	10-30-79 1-24-80 7-29-80	228 726 122
02133624 Lumber River	Little Pee Dee River	Lat 34°46'22", long 79°19'55", Robeson County, at bridge on State Highway 71, 2.6 miles north of Maxton, and 7.5 miles upstream from Gum Swamp.	b365	1974	5-5-80	513
02133691 Lumber River	Little Pee Dee River	Lat 34°38'30", long 79°10'49", Robeson County, at bridge on Secondary Road 1003, 2.2 miles southwest of Moss Neck, and 6.2 miles downstream from Gum Swamp.	b432	1974-75	5-6-80	597
02134297 Big Marsh Swamp	Big Swamp	Lat 34°46'55", long 78°55'22", Robeson County, at bridge on Secondary Road 1924, 2.8 miles upstream from mouth, and 5.5 miles southeast of Oakland.	b60.2	1973-75 1978	1-29-80	102
02134338 Little Marsh Swamp	Calberry Swamp	Lat 34°51'48", long 78°58'33", Robeson County, at bridge on U.S. Highway 301, 3.2 miles southeast of Parkton, and 7.5 miles upstream from mouth.	b36.3	1959-60, 1962, 1968, 1974-75	4-2-80	159
02134495 Bryant Swamp	Big Swamp	Lat 34°32'20", long 78°49'22", Bladen County, at bridge on Secondary Road 1178, 0.4 mile upstream from Reedy Branch, and 2.3 miles southeast of Butters.	b15.6	1966-67, 1973, 1975, 1978	3-25-80	34.8
02134582 Old Field Swamp	Hog Swamp	Lat 34°29'40", long 79°06'10", Robeson County, at bridge on State Highway 130, and 0.5 mile east of Fairmont.	a17	1973-74, 1979	5-6-80	4.44
02134623 Lumber River	Little Pee Dee River	Lat 34°18'50", long 79°02'19", Columbus County, at bridge on State Highway 904, at Fair Bluff, and 1.4 miles downstream from Porter Swamp.	b1364	1959, 1962, 1968, 1974-75	5-6-80	1140
		Santee River basin				
02136500 Catawba River	Santee River	Lat 35°37'14", long 82°10'43", McDowell County, at bridge on Secondary Road 1103, 0.5 mile upstream from Mill Creek, and 0.5 mile south of Old Fort.	14.1	1907, 1949-54, 1956, 1963-64, 1970-75, 1978-79	12-14-79	28.8
02138288 Linville River	Catawba River	Lat 36°04'22", long 81°52'14", Avery County, at culvert on State Highway 105, at Linville, and 1.8 miles upstream from Grandmother Creek.	b5.73	1970-77, 1979	12-12-79	12.0
02139282 Catawba River	Santee River	Lat 35°44'58", long 81°42'20", Burke County, 0.8 mile downstream from Silver Creek, and 1 mile northwest of Morganton.	b586	1968, 1970-77, 1979	4-29-80 7-23-80	1830 297

a Approximately.
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DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1980

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Santee River basin (Continued)				
02140304 Wilson Creek	Johns River	Lat 37°05'49", long 81°48'28", Avery County, at bridge on U.S. Highway 221, 0.8 mile upstream from Linn Core Branch, and 2.7 miles northwest of Gragg.	b.72	1964, 1969-70, 1978-79	12-12-79	0.49
02140991 Johns River	Catawba River	Lat 35°50'01", long 81°42'43", Burke County, at bridge on Secondary Road 1438, 0.2 mile downstream from Sims Branch, and 0.8 mile northeast of Arneys Store.	b201	1974-79	4-29-80 7-23-80	258 215
02141148 Lower Creek	Catawba River	Lat 35°54'26", long 81°31'46", Caldwell County, at bridge on U.S. Highway 321A, 0.1 mile upstream from Zacks Fork Creek, and 0.8 mile southeast of Courthouse at Lenoir.	b14	1971-73, 1975-77	7-23-80	12.8
02141245 Lower Creek	Catawba River	Lat 35°49'31", long 81°38'10", Burke County, at bridge on Secondary Road 1501, 0.8 mile downstream from Husband Creek, and 7 miles northeast of Morganton.	b89.5	1949-50, 1964-69, 1972-73, 1975-79	4-30-80 7-23-80	139 77.7
02142660 McDowell Creek	Catawba River	Lat 35°23'22", long 80°55'16", Mecklenburg County, at bridge on Beatty Ford Road, 2.1 miles downstream from Terrence Creek, and 11.2 miles north of Charlotte.	26.3	1955, 1957, 1959-67, 1969-71	5-14-80 7-24-80	13.1 10.2
02142872 Fites Creek	Catawba River	Lat 35°17'15", long 81°01'25", Gaston County, at bridge on State Highway 273, 0.7 mile upstream from mouth, and 0.9 mile south-southwest of of Mount Holly.	a3.9	1976-79	4-29-80 7-31-80	3.54 1.52
02143027 Henry Fork	South Fork Catawba River	Lat 35°39'27", long 81°18'33", Catawba County, at bridge on Secondary Road 1143, 1.7 miles upstream from mouth, and 2.5 miles northwest of Startown.	b110	1970-71, 1973-74, 1978-79	7-24-80	143
02143069 South Fork Catawba River	Catawba River	Lat 35°37'58", long 81°18'20", Catawba County, at bridge on State Highway 10, 1 mile downstream from Henry Fork, and 2.2 miles west of Startown.	210	1974-77, 1979	5-9-80 7-25-80	342 218
02143260 Clark Creek	South Fork Catawba River	Lat 35°28'30", long 81°16'00", Lincoln County, at bridge on Secondary Road 1008, at Lincolnton, and 0.2 mile upstream from mouth.	b91.2	1947, 1949-57, 1962-64, 1970-72, 1975, 1978-79	4-29-80 7-25-80	103 60.3
02145640 Crowders Creek	Catawba River	Lat 35°08'15", long 81°08'15", York County, S.C., at bridge on Ridge Road, 3.4 miles upstream from Beaver Dam Creek, and 3.2 miles east-southeast of Bowling Green, S. C.	b89	1970-77, 1979	4-29-80 7-23-80	91.6 45.3
02146211 Irwin Creek	Sugar Creek	Lat 35°15'43", long 80°50'15", Mecklenburg County, at culvert on U.S. Highway 21, in Charlotte, and 3.4 miles upstream from mouth.	5.97	1970-73, 1976-77, 1979	4-17-80 7-31-80	6.86 0.85
02146398 Sugar Creek	Catawba River	Lat 35°04'30", long 80°54'20", Mecklenburg County, at railroad bridge on NC-SC state line, 1 mile upstream from Little Sugar Creek, and 1 mile southwest of Pineville.	a69	1964-79	4-8-80 8-1-80	77.4 35.1
02146421 Little Sugar Creek	Sugar Creek	Lat 35°10'21", long 80°50'49", Mecklenburg County, at bridge on Secondary Road 3814, at Charlotte, and 1.3 miles upstream from Briar Creek.	a16	1969-75, 1978-79	4-17-80 7-31-80	11.7 3.10
02146538 Little Sugar Creek	Sugar Creek	Lat 35°04'40", long 80°53'10", Mecklenburg County, at bridge on U.S. Highway 521, 0.5 mile southeast of Pineville, and 3.5 miles upstream from mouth.	b49.5	1969-79	4-8-80 8-1-80	51.7 20.4
02146556 McAlpine Creek	Sugar Creek	Lat 35°09'46", long 80°43'57", Mecklenburg County, at bridge on Secondary Road 3156, 0.2 mile upstream from Campbell Creek, and 5 miles west of Mint Hill.	8.66	1969-79	4-17-80 8-1-80	8.20 0.53

a Approximately.
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DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1980

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Santee River Basin (Continued)				
02146760 McAlpine Creek	Sugar Creek	Lat 35°03'43", long 80°52'39", Mecklenburg County, at bridge on U.S. Highway 521, 1 mile downstream from McMullen Creek, and 2 miles south of Pineville.	b93.6	1949-57, 1962-67, 1969-79	4-8-80 8-1-80	100 25.6
02146858 Six Mile Creek	Catawba River	Lat 35°00'40", long 80°49'40", Mecklenburg County, at bridge on Secondary Road 3635, 2 miles downstream from Flat Branch, and 6.2 miles southeast of Pineville.	b20.3	1974-79	4-8-80 8-1-80	18.7 0.25
02148751 Broad River	Santee River	Lat 35°25'27", long 82°09'56", Rutherford County, at bridge on U.S. Highway 74, 0.2 mile west of Uree, and 2.8 miles downstream from Cane Creek.	b99.7	1970-71, 1973-75, 1979	1-2-80 7-24-80	361 337
0215027770 Broad River	Santee River	Lat 35°13'00", long 81°46'45", Rutherford County, at bridge on U.S. Highway 221A, 1.2 miles upstream from confluence of Second Broad River, and 1.5 miles southwest of Cliffside.	a624	1974-76, 1979	1-2-80 7-24-80	1170 806
02150495 Second Broad River	Broad River	Lat 35°24'15", long 81°52'20", Rutherford County, at bridge on Secondary Road 1538, 2.2 miles southeast of Logan, and 2.7 miles upstream from Catheys Creek.	b86.2	1971, 1973, 1975-77, 1979	1-2-80 7-25-80	187 199
02152546 Brushy Creek	First Broad River	Lat 35°14'15", long 81°35'40", Cleveland County, at bridge on Secondary Road 1342, 0.8 mile downstream from Little Creek, and 2 miles east of Washburn.	b20.0	1970-77, 1979	1-3-80 7-28-80	20.4 24.6
02152580 Brushy Creek	First Broad River	Lat 35°17'41", long 81"34'51", Cleveland County, at bridge on U.S. Highway 74, 0.7 mile west of Shelby, and 1 mile upstream from mouth.	b27.5	1952, 1955, 1964-67, 1970-77, 1979	1-3-80 7-28-80	34.6 38.4
02152596 First Broad River	Broad River	Lat 35°13'03", long 81°36'28", Cleveland County, at bridge on Secondary Road 1140, 3 miles upstream from mouth, and 4.8 miles northwest of Earl.	b296	1968-77	1-3-80 7-25-80	411 232
02152622 Broad River	Santee River	Lat 35°10'50", long 81°37'10", Cleveland County, at Ellis Ferry, 2 miles downstream from First Broad River, 5 miles west of Earl.	b1279	1970, 1973, 1977	1-2-80 7-24-80	1510 1080
02153280 Buffalo Creek	Broad River	Lat 35°20'50", long 81°28'50", Cleveland County, at bridge on Secondary Road 1908, 1.8 miles upstream from Long Creek, and 3 miles southwest of Waco.	b43.3	1950-56, 1959, 1962-64, 1976-77, 1979	1-3-80 7-25-80	55.5 52.9
02153456 Buffalo Creek	Broad River	Lat 35°10'20", long 81°31'02", Cleveland County, at bridge on State Highway 198, 0.1 mile upstream from NC-SC state line, and 4 miles west of Grover.	b161	1968-77, 1979	1-3-80 7-25-80	106 138
02153872 North Pacolet River	Pacolet River	Lat 35°13'19", long 82°19'24", Polk County, at bridge on U.S. Highway 176, 0.5 mile downstream from Bear Creek, and 2.6 miles southeast of Saluda.	a7.8	1970-71, 1973-77, 1979	1-4-80 7-28-80	36.5 46.1
02154020 North Pacolet River	Pacolet River	Lat 35°12'58", long 82°10'52", Polk County, at bridge on Secondary Road 1517, 1.2 miles downstream from Horse Creek, and 5.6 miles southwest of Sandy Plains.	45.7	1968-77, 1979	1-4-80 7-28-80	112 224

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1980, IN OHIO RIVER BASIN

		Kanawha River basin				
0316019175 South Fork New River	New River	Lat 36°12'12", long 81°38'59", Watauga County, 250 feet below confluence with Middle Fork, and 2.2 miles southeast of Boone.	a16.9		9-16-80	10.3

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DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1980

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Kanawha River basin (Continued)				
0316021050 Winkler Creek	South Fork New River	Lat 36°11'54", long 81°40'25", Watauga County, at bridge on Secondary Road, and 1.2 miles south of Boone.	a5.78		‡9-16-80	2.41
0316023195 South Fork New River	New River	Lat 36°12'16", long 81°39'01", Watauga County, 100 feet below confluence with Winkler Creek, and 2.1 miles southeast of Boone.	a27.5		‡9-16-80	13.4
03160271 South Fork New River	New River	Lat 36°13'14", long 81°38'25", Watauga County, at bridge on U.S. Highway 421, and 2 miles east of Boone.	34.6	1925, 1955-56, 1960, 1962, 1974-79	12-12-79	92.0
03161361 South Fork New River	New River	Lat 36°28'26", long 81°20'13", Ashe County, downstream from Cranberry Creek, 1.2 miles downstream from Nathans Creek, and 2 miles southwest of Scottville.	b298	1974-75, 1977	12-13-79	803
03161880 North Fork New River	New River	Lat 36°25'48", long 81°37'15", Ashe County, at bridge on Secondary Road 1100, at Creston, and downstream from Three Top Creek.	68.4	1949-56, 1960, 1962, 1974-75, 1977	12-13-79	127
03162500 North Fork New River	New River	Lat 36°30'14", long 81°23'25", Ashe County, 0.2 mile downstream from bridge on State Highway 16 at Crumpler, and 6 miles upstream from South Fork.	277	1974-75, 1977	12-13-79	336
03162850 New River	Kanawha River	Lat 36°33'08", long 81°11'00", Alleghany County, at bridge on Secondary Road 1345, 0.8 mile downstream from Rock Creek, and 1.3 miles north-northeast of Amelia.	820	1968-69, 1971-75, 1979	5-12-80 7-21-80	1730 778
03162852 Little River	New River	Lat 36°27'35", long 81°10'04", Alleghany County, at bridge on Secondary Road 1140, 0.6 mile downstream from confluence of Cheek Branch, and 1 mile southwest of Whitehead.	4.8	1974-75 1978-79	5-12-80 7-21-80	17.2 5.78
03162951 Little River	New River	Lat 36°32'33", long 81°01'15", Alleghany County, at bridge on State Highway 18, 1 mile downstream from Brush Creek, and 0.5 mile west of Blevins Crossroads.	a110	1974-75, 1978-79	5-12-80 7-21-80	295 126
		Tennessee River basin				
03438879 West Fork French Broad River	French Broad River	Lat 35°08'20", long 82°51'04", Transylvania County, at bridge on U.S. Highway 64, 1.2 miles upstream from North Fork, and 1.7 miles west of Rosman.	27.2	1968-74, 1977, 1979	5-5-80	101
03438981 West Fork French Broad River	French Broad River	Lat 35°08'28", long 82°50'20", Transylvania County, at bridge on Secondary Road 1135, 0.1 mile upstream from North Fork, and 1 mile west of Rosman.	29.4	1944, 1953-55, 1963, 1966, 1968-73, 1977, 1979	5-5-80	143
03439471 Galloway Creek	French Broad River	Lat 35°09'06", long 82°48'40", Transylvania County, at culvert on entrance road to American Thread Company from U.S. Highway 64, 0.5 mile upstream from mouth, and 0.5 mile south of Calvert.	.56	1968-75, 1979	5-5-80	1.06
03440272 King Creek	French Broad River	Lat 35°14'22", long 82°43'49", Transylvania County, at culvert on U.S. Highway 64, at Brevard, and 1.3 miles upstream from mouth.	.37	1968-69, 1971-75, 1977, 1979	5-5-80	7.31
03440276 King Creek	French Broad River	Lat 35°14'04", long 82°43'13", Transylvania County, at bridge on Secondary Road 1546, 0.6 mile upstream from mouth, and 0.8 mile east of Brevard.	4.17	1968-69, 1971-75, 1978	5-5-80	14.2

‡ Not previously published.
a Approximately.
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DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1980

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Tennessee River basin (Continued)				
03440293 French Broad River	Tennessee River	Lat 35°15'03", long 82°41'58", Transylvania County, at bridge on Secondary Road 1540, at Dunns Rock, and 0.3 mile upstream from Davidson River, and at mile 192.1.	170	1968-70, 1973-74, 1976-79	12-31-79 7-25-80	606 519
0344033010 Davidson River	French Broad River	Lat 35°17'07", long 82°49'47", Transylvania County, 0.3 mile upstream from confluence of Laurel Fork, and 4.5 miles northeast of Balsam Grove.	4.68	1968-77	5-6-80	12.7
03441141 Davidson River	French Broad River	Lat 35°15'18", long 82°41'52", Transylvania County, at bridge on Secondary Road 1533, 0.2 mile northeast of Pisgah Forest.	47.2	1968-77	5-6-80	103
03445425 North Fork Mills River	Mills River	Lat 35°24'20", long 82°38'32", Henderson County, downstream from sewage effluent outfall, 0.2 mile upstream from boundary of Pisgah National Forest, and 0.5 mile downstream from Rocky Fork.	18.9	1969-74, 1979	5-6-80	64.6
0344600989 Mills River	French Broad River	Lat 35°23'29", long 82°34'06", Henderson County, at bridge on State Highway 191 and 280, 2.4 miles upstream from mouth, and 0.2 mile north of Mills River.	70.5	1974-78	12-31-79 5-2-80 7-25-80	208 290 91.7
0344745449 Pinner Creek tributary	Pinner Creek	Lat 35°26'58", long 83°30'00", Buncombe County, 250 feet upstream from mouth, and 0.6 mile southeast of Oak Park.	a0.4	1974-79	5-2-80	.70
0344745950 Pinner Creek	Cane Creek	Lat 35°26'22", long 82°29'31", Henderson County, 0.2 mile upstream from mouth, and 1 mile northeast of Fletcher.	a20	1974-79	5-2-80	2.08
03447671 French Broad River tributary	French Broad River	Lat 35°25'51", long 82°32'41", Henderson County, at culvert on Secondary Road 3526, 0.2 mile upstream from mouth, and 2.4 miles west of Fletcher.	.05	1968-74, 1977	5-6-80	0.49
03447917 Bent Creek	French Broad River	Lat 35°30'08", long 82°35'39", Buncombe County, at bridge on State Highway 191, at Bent Creek, and 0.1 mile upstream from mouth.	10.8	1925, 1947, 1972-75, 1977	5-9-80	17.4
03448910 Swannanoa River	French Broad River	Lat 35°36'11", long 82°21'55", Buncombe County, at bridge on U.S. Highway 70, at Grovestone, 0.2 mile upstream from North Fork, and 1.8 miles northeast of Swannanoa.	21.2	1944, 1953-55, 1958-60, 1973-75, 1977	5-9-80	30.3
03449000 North Fork Swannanoa River	Swannanoa River	Lat 35°39'11", long 82°21'04", Buncombe County, 0.1 mile downstream from Walker Branch, and 3 miles northwest of Black Mountain.	23.8	1973-75, 1977	5-9-80	10.5
03449500 Swannanoa River	French Broad River	Lat 35°36'11", long 82°23'42", Buncombe County, 1,000 feet upstream from bridge at Swannanoa, and 1.5 miles downstream from North Fork.	58.8	1926-31, 1973-75, 1977	5-9-80	45.5
03451826 Reems Creek	French Broad River	Lat 35°41'20", long 82°35'40", Buncombe County, 800 feet upstream from Wagner Branch, and 2 miles west of Weaverville.	33.4	1968-79	5-2-80	32.3
03457124 Pigeon River	French Broad River	Lat 35°32'06", long 82°54'40", Haywood County, at bridge on Secondary Road 1818, at Clyde, and 0.2 mile downstream from Chambers Branch.	162	1969-78	11-21-79 8-21-80	358 73.5
03457138 Pigeon River	French Broad River	Lat 35°32'55", long 82°56'21", Haywood County, at bridge on road connecting Secondary Roads 1513 and 1519, 0.5 mile upstream from Richlands Creek, 2 miles east of Junaluska Dam, and at mile 55.5.	167	1969-79	11-21-79 8-21-80	380 76.5
03458421 Richland Creek	Pigeon River	Lat 35°32'51", long 82°56'44", Haywood County, at bridge on Secondary Road 1519, 0.2 mile upstream from mouth, and 2.2 miles northwest of Clyde.	68.4	1969-73, 1975-76, 1978-79	11-21-79 8-21-80	99.1 43.7

a Approximately.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1980

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Tennessee River basin (Continued)				
03458441 Pigeon River	French Broad River	Lat 35°33'41", long 82°57'14", Haywood County, at bridge on Secondary Road 1625, 0.5 mile downstream from Yates Cover, and 3 miles northwest of Clyde.	238	1968-79	11-21-79 8-21-80	503 134
03458638 Pigeon River	French Broad River	Lat 35°36'52", long 82°58'01", Haywood County, at bridge on Secondary Road 1363, 0.1 mile downstream from Dotson Branch, and 1.8 mile northwest of Crabtree.	278	1969-79	11-21-79 8-21-80	588 167
03460766 Pigeon River	French Broad River	Lat 35°46'32", long 83°06'01", Haywood County, at Carolina Power and Light power plant, downstream from Big Creek, and at Waterville.	536	1968-71, 1973-78	12-31-79 7-25-80	1980 495
03461976 North Toe River	Nolichucky River	Lat 35°58'42", long 82°00'59", Avery County, at bridge on U.S. Highway 19E, 0.1 mile downstream from Jones Creek, 0.7 mile north of Ingalls, and at mile 50.9.	74.1	1969-71, 1973-74, 1976-79	12-27-79 8-5-80	164 73.5
03463786 North Toe River	Nolichucky River	Lat 36°01'35", long 82°19'16", Mitchell County, at bridge on State Highway 26, at Huntdale, and 0.5 mile upstream from Cane River.	442	1968-78	12-27-79 7-24-80	788 355
03463801 Cane River	Nolichucky River	Lat 35°54'16", long 82°19'59", Yancey County, upstream from Pine Swamp Branch, and 2.1 miles southwest of Burnsville.	54.4	1969-73, 1975-79	12-27-79 7-24-80	132 39.7
03464000 Cane River	Nolichucky River	Lat 36°00'52", long 82°19'40", Yancey County, 1.3 miles upstream from North Toe River, and 1.5 miles east of Sioux.	157	†1933-71, 1974-78	12-27-79 7-24-80	218 100
03464500 Nolichucky River	French Broad River	Lat 36°04'29", long 82°20'41", Mitchell County, at Poplar, and 0.7 mile upstream from Hollow Poplar Creek.	608	†1922-45, 1962-63, 1968-72, 1974-78	7-24-80	479
03478720 Watauga River	South Fork Holston River	Lat 36°09'23", long 81°46'14", Watauga County, at bridge on Secondary Road 1559, at Foscoe, and 0.1 mile downstream from Moody Mill Creek.	10.6	1955, 1960-67, 1969, 1974-79	12-12-79	24.4
03478934 Cove Creek	Watauga River	Lat 36°15'13", long 81°47'27", Watauga County, at bridge on U.S. Highway 321, at Sugar Grove, and 100 feet upstream from Brush Fork.	30.6	1960, 1971-73, 1975, 1979	8-19-80	6.05
03515633 Cheoah River	Little Tennessee River	Lat 35°20'05", long 83°48'20", Graham County, 0.1 mile upstream from Mountain Creek, and 0.9 mile north of Robbinsville.	55.3	1968-71, 1973-79	1-22-80 8-19-80	276 30.1
03549124 Valley River	Hiwassee River	Lat 35°12'00", long 83°47'58", Cherokee County, at bridge on Secondary Road 1389, 0.1 mile downstream from Worm Creek, and 0.4 mile southwest of Buffalo.	20.7	1944, 1953, 1958, 1963, 1966, 1974, 1976-79	12-20-79 5-7-80 8-19-80	36.0 44.8 14.9

† Operated as a continuous-record gaging station.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
ROANOKE RIVER BASIN				
02074000 - SMITH RIVER AT EDEN, N. C. (LAT 36 31 30 LONG 079 45 54)				
OCT , 1979				
03...	1040	4090	484	5350
02077670 - MAYO CR NR BETHEL HILL N.C. (LAT 36 32 26 LONG 078 52 21)				
OCT , 1979				
09...	0855	28	233	18
JAN , 1980				
29...	1145	43	14	1.6
PAMLICO RIVER BASIN				
02084540 - DURHAM CREEK AT EDWARD N C (LAT 35 19 25 LONG 076 52 26)				
NOV , 1979				
07...	1458	4.8	6	.08
DEC				
18...	1030	32	2	.17
02084556 - NORTH LAKE CANAL ABOVE PUNGO LAKE NR WENONA N C (LAT 35 43 35 LONG 076 31 01)				
OCT , 1979				
03...	1530	.05	8	.00
NOV				
20...	0930	.004	9	.00
NEUSE RIVER BASIN				
02088315 - BEAVERDAM CREEK NEAR GRANTHAM NC (LAT 35 17 08 LONG 078 15 17)				
NOV , 1979				
15...	1017	9.5	4	.10
02089216 - DAILEYS CREEK NEAR LIDDELL NC (LAT 35 12 30 LONG 077 48 32)				
NOV , 1979				
08...	1625	2.8	39	.29
DEC				
19...	1530	3.4	4	.04
02089222 - BEAR CREEK NEAR PARKSTOWN NC (LAT 35 22 22 LONG 077 48 10)				
NOV , 1979				
13...	1026	12	15	.49
DEC				
19...	1700	3.2	24	.21
02090512 - HOMINY SWAMP AT PHILLIPS ST. AT WILSON NC (LAT 35 42 39 LONG 077 55 01)				
OCT , 1979				
04...	1115	.45	13	.02
JAN , 1980				
07...	1025	4.0	17	.18
MAR				
13...	1345	58	101	16
21...	0900	40	95	10

ANALYSES OF SAMPLES COLLECTED AT GAGING STATIONS AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDIMENT, SUS-PENDED (MG/L)	SEDIMENT DISCHARGE, SUS-PENDED (T/DAY)
CAPE FEAR RIVER BASIN				
02094500 - REEDY FORK NEAR GIBSONVILLE, N. C. (LAT 36 10 31 LONG 079 37 01)				
OCT , 1979				
05...	1040	970	317	830
02096960 - HAW RIVER NEAR BYNUM N C (LAT 35 45 48 LONG 079 08 02)				
OCT , 1979				
02...	1330	1450	50	196
NOV				
09...	1240	478	9	12
02106500 - BLACK RIVER NEAR TOMAHAWK N C (LAT 35 45 17 LONG 078 17 21)				
OCT , 1979				
04...	1400	3060	16	132
WACCAMAW RIVER BASIN				
02109500 - WACCAMAW RIVER AT FREELAND, N. C. (LAT 34 05 43 LONG 078 32 55)				
OCT , 1979				
02...	1030	1770	47	225
MAR , 1980				
25...	1330	3560	4	38
PEE DEE RIVER BASIN				
02111000 - YADKIN RIVER AT PATTERSON, N. C. (LAT 35 59 29 LONG 081 33 30)				
NOV , 1979				
02...	1355	758	817	1670
02...	1537	598	399	644
02111500 - REDDIES RIVER AT NORTH WILKESBORO, N. C. (LAT 36 10 29 LONG 081 10 09)				
NOV , 1979				
02...	1250	2260	1860	11400
02112000 - YADKIN RIVER AT WILKESBORO N C (LAT 36 09 09 LONG 081 08 45)				
OCT , 1979				
01...	1115	3700	60	599
NOV				
02...	1320	3980	1130	12100
02112120 - ROARING RIVER NEAR ROARING RIVER, N. C. (LAT 36 14 59 LONG 081 02 39)				
NOV , 1979				
02...	1150	1690	1480	6750
26...	1300	834	245	552

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
PEE DEE RIVER BASIN--Continued				
02112250 - YADKIN RIVER AT ELKIN, N. C. (LAT 36 14 30 LONG 080 50 49)				
NOV , 1979				
02...	1520	4470	552	6660
02112360 - MITCHELL RIVER NEAR STATE ROAD, N. C. (LAT 36 18 42 LONG 080 48 26)				
NOV , 1979				
02...	1445	1440	913	3550
SANTEE RIVER BASIN				
02138000 - CATAWBA RIVER NEAR MARION, N.C. (LAT 35 42 26 LONG 082 02 00)				
NOV , 1979				
02...	1500	7680	972	20200
02141150 - LOWER CREEK AT MULBERRY ST AT LENOIR, N. C. (LAT 35 54 20 LONG 081 31 59)				
NOV , 1979				
02...	1320	443	2320	2780
02...	1600	345	771	718
02143000 - HENRY FORK NEAR HENRY RIVER, N.C. (LAT 35 41 03 LONG 081 24 10)				
NOV , 1979				
02...	1230	963	193	502
02...	1720	1820	273	1340
02152610 - SUGAR BRANCH NEAR BOILING SPRINGS N C (LAT 35 15 00 LONG 081 37 20)				
NOV , 1979				
02...	1215	113	1070	326
02...	1335	51	368	51
02...	1415	34	234	21
TENNESSEE RIVER BASIN				
03448000 - FRENCH BROAD RIVER AT BENT CREEK N C (LAT 35 30 07 LONG 082 35 35)				
NOV , 1979				
26...	1000	10400	319	8960
03451000 - SWANNANOA RIVER AT BILTMORE, N. C. (LAT 35 34 06 LONG 082 32 42)				
NOV , 1979				
02...	0755	3880	2560	26800
02...	0930	4480	1110	13400
02...	1215	4220	710	8090
02...	1450	4550	914	11200
26...	1140	3140	847	7180

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
TENNESSEE RIVER BASIN--Continued				
03479000 - WATAUGA RIVER NEAR SUGAR GROVE, N. C. (LAT 36 14 18 LONG 081 49 22)				
APR , 1980				
09...	1045	1360	96	353
03503000 - LITTLE TENNESSEE RIVER AT NEEDMORE, N. C. (LAT 35 20 11 LONG 083 31 39)				
NOV , 1979				
26...	1100	10600	530	15200
26...	1350	10400	267	7500
03504000 - NANTAHALA RIVER NEAR RAINBOW SPRINGS, N. C. (LAT 35 07 35 LONG 083 37 11)				
NOV , 1979				
26...	1215	932	31	78
MAR , 1980				
28...	1500	897	18	44
03505500 - NANTAHALA RIVER AT NANTAHALA, N. C. (LAT 35 17 55 LONG 083 39 22)				
NOV , 1979				
16...	1420	155	3	1.3
26...	1210	2060	76	423
JUN , 1980				
19...	1035	95	16	4.1
03510500 - TUCKASEGEE RIVER AT DILLSBORO, N.C. (LAT 35 21 59 LONG 083 15 38)				
NOV , 1979				
26...	1000	5920	562	8980
MAR , 1980				
21...	1010	5470	490	7240
21...	1350	5010	344	4650
03513000 - TUCKASEGEE RIVER AT BRYSON CITY, N. C. (LAT 35 25 40 LONG 083 26 50)				
NOV , 1979				
26...	1020	11100	587	17600
MAR , 1980				
21...	1120	16300	1650	72600
21...	1300	14300	714	27600
21...	1600	12600	324	11000
03548500 - HIWASSEE RIVER ABOVE MURPHY, N.C. (LAT 35 04 50 LONG 084 00 10)				
MAR , 1980				
28...	1130	2000	63	340
28...	1300	2970	96	770

BEAUFORT COUNTY

351932076480001. Local number, NC-13.
LOCATION.--Lat 35°19'32", long 76°48'00", Hydrologic Unit 03020104, near Aurora. Owner: North Carolina Phosphate Company.
AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 167 ft (50.9 m), drilled to 186 ft (56.7 m), cased to 186 ft (56.7 m).
DATUM.--Altitude of land-surface datum is 10 ft (3 m). Measuring point: Top of casing, 0.13 ft (0.04 m) above land-surface datum.
REMARKS.--Since 1965 water levels affected by nearby pumping associated with mining operations.
PERIOD OF RECORD.--June 1964 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.38 ft (0.42 m) below land-surface datum, Apr. 9, 1965; lowest measured, 77.66 ft (23.67 m) below land-surface datum, Sept. 5, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	72.58	---	73.07	73.35	74.67	---			---	73.05	75.45	77.64
10	73.99	71.25	73.37	74.54	74.45	---			---	73.01	74.60	77.39
15	74.21	72.00	73.85	74.03	74.72	---			---	73.19	73.68	76.67
20	74.50	72.22	74.46	73.57	73.95	---			72.08	73.58	74.31	76.93
25	74.01	72.36	73.10	73.28	73.85	---			72.46	72.26	---	76.35
EOM	73.40	73.04	72.78	74.29	74.48	---			73.12	74.31	---	76.34

WTR YR 1980 MEAN 73.90 HIGH 70.98 NOV 8 LOW 77.64 SEP 5

353314077041001. Local number, NC-14.
LOCATION.--Lat 35°33'14", long 77°04'10", Hydrologic Unit 03020104, at Washington. Owner: National Spinning Company.
AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 111 ft (33.8 m), drilled to 158 ft (48.2 m), gravel walled to 90 ft (27.4 m).
DATUM.--Land-surface datum is 9.42 ft (2.871 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, at land-surface datum.
REMARKS.--Water levels affected by pumping from nearby wells.
PERIOD OF RECORD.--May 1948 to November 1961, February 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.02 ft (0.31 m) above land-surface datum, Apr. 10, 1964; lowest, 25.37 ft (7.73 m) below land-surface datum, July 22, 1972.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.66	19.01	16.80	8.82	19.01	18.51	17.39	17.83	11.06	10.11	18.95	11.87
2	18.61	19.08	12.95	12.48	18.55	17.00	17.67	17.91	13.73	10.00	16.35	14.87
3	18.87	16.91	15.19	17.71	11.69	14.76	17.75	17.37	16.97	10.70	12.16	16.42
4	19.05	12.84	17.96	18.13	17.73	15.29	17.82	12.98	17.61	8.93	16.87	16.84
5	19.07	15.61	18.33	18.46	18.71	18.26	16.59	16.50	17.55	8.75	18.61	19.03
6	19.09	18.19	18.53	11.28	18.77	19.15	12.57	17.60	17.61	8.88	18.99	---
7	16.94	18.53	18.68	16.72	18.98	19.22	13.52	17.87	17.72	14.15	19.24	---
8	18.59	18.87	16.73	18.54	19.14	19.13	16.57	17.91	14.58	15.23	19.22	---
9	19.08	18.90	13.69	18.75	17.45	18.45	17.47	17.68	16.11	15.60	13.63	---
10	19.25	16.56	15.07	18.89	13.11	18.10	17.79	16.56	17.39	15.67	12.17	---
11	19.45	14.69	18.24	18.97	17.47	18.84	17.98	14.44	17.54	15.81	14.56	---
12	19.27	16.40	18.60	17.13	18.39	18.52	12.57	16.27	17.29	12.58	18.37	---
13	15.35	18.32	18.82	12.96	18.77	18.41	9.84	17.69	17.33	10.80	18.97	---
14	12.75	18.50	18.81	15.31	18.79	18.72	13.87	17.90	17.06	14.29	19.14	---
15	17.74	18.57	15.57	18.25	18.70	18.46	17.23	18.05	11.94	15.55	19.15	---
16	18.97	18.50	14.44	18.48	18.67	18.28	17.64	14.37	16.28	15.93	17.51	---
17	19.43	16.38	17.58	18.46	16.17	18.08	17.70	11.99	16.94	16.18	13.20	---
18	19.44	13.08	18.49	18.58	17.93	18.32	17.71	11.54	17.01	15.01	15.34	---
19	19.34	16.12	19.01	18.78	18.63	18.42	16.23	16.80	17.16	12.55	16.39	---
20	19.43	18.35	18.78	14.54	18.81	18.21	11.80	17.84	17.25	11.79	15.93	---
21	14.51	18.64	16.10	17.97	18.93	18.18	15.30	17.88	14.14	13.24	16.08	---
22	18.50	15.56	13.28	18.41	18.75	18.22	17.59	18.18	12.73	15.81	16.02	---
23	19.20	12.58	12.66	18.53	16.89	12.53	17.87	17.93	13.66	15.56	16.25	---
24	19.56	11.87	12.54	18.66	13.25	15.77	17.96	16.10	15.34	15.27	13.48	---
25	19.44	11.77	12.34	18.54	17.09	18.12	18.05	14.48	15.56	16.95	15.71	---
26	19.49	12.07	12.05	18.81	18.43	18.27	17.28	16.89	15.74	15.17	16.61	---
27	16.79	13.81	10.54	16.16	18.48	18.19	12.21	17.13	14.40	11.84	18.96	---
28	12.85	17.64	8.92	17.63	18.61	18.17	15.33	17.48	10.09	14.64	19.15	---
29	16.00	18.36	8.78	18.40	18.75	18.00	17.28	17.80	9.49	18.07	19.43	---
30	18.60	18.50	8.62	18.26	---	13.03	17.61	18.16	9.21	18.39	13.69	---
31	18.94	---	8.65	18.49	---	16.12	---	14.91	---	18.92	12.16	---
MEAN	18.11	16.47	15.06	17.13	17.75	17.64	16.14	16.58	15.22	13.95	16.53	15.81

WTR YR 1980 MEAN 16.40 HIGH 8.62 LOW 19.56

BEAUFORT COUNTY--Continued

353227076374001. Local number, NC-15.
LOCATION.--Lat 35°32'27", long 76°37'40", Hydrologic Unit 03020104, Belhaven. Owner: City of Belhaven.
AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 246 ft (75.0 m), drilled to 260 ft (79.2 m), cased to 260 ft (79.2 m).
DATUM.--Land-surface datum is 3.50 ft (1.066 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 5.00 ft (1.52 m) above land-surface datum.
PERIOD OF RECORD.--February 1965 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.25 ft (0.08 m) below land-surface datum, July 24, 1965; lowest, 14.87 ft (4.53 m) below land-surface datum, Oct. 4, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 3	13.29	Jan. 4	12.39	Mar. 12	12.08	June 18	12.36	July 30	12.72	Sept. 4	13.24
Nov. 7	12.69	Feb. 14	12.01	May 6	11.83						

353343076371801. Local number, NC-75.
LOCATION.--Lat 35°33'43", long 76°37'18", Hydrologic Unit 03020104, near Belhaven. Owner: J. W. Younce.
AQUIFER.--Yorktown Formation of late Miocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2 in (0.05 m), depth 145 ft (44.2 m), cased to 120 ft (36.6 m).
DATUM.--Altitude of land-surface datum is 3.8 ft (1.2 m). Measuring point: Top of casing, 2.00 ft (0.61 m) above land-surface datum.
REMARKS.--Water levels affected by pumping from nearby municipal supply wells.
PERIOD OF RECORD.--September 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.39 ft (0.42 m) below land-surface datum, Jan. 14-15, 1968; lowest, 14.65 ft (4.46 m) below land-surface datum, Mar. 23, 1978.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.72	9.37	8.62	---	---	9.82	8.02	7.88	9.36	10.61	10.45	11.28
10	8.85	9.31	8.34	---	---	9.27	7.93	8.48	9.41	10.91	10.49	10.95
15	9.01	9.31	8.18	---	8.32	8.22	7.92	9.06	9.29	10.80	11.36	11.35
20	9.20	9.37	8.28	---	7.85	7.80	7.94	8.73	9.86	---	10.73	11.16
25	9.33	8.87	7.73	---	7.76	7.62	8.32	7.80	11.22	---	10.53	12.40
EOM	9.69	9.55	7.37	---	8.10	7.36	8.71	8.57	10.41	10.31	10.89	10.95

WTR YR 1980 MEAN 9.24 HIGH 7.36 MAR 31 LOW 12.40 SEP 25

352615077083401. Local number, NC-137.
LOCATION.--Lat 35°26'15", long 77°08'34", Hydrologic Unit 03020202, near Wilmar. Owner: N.C. Department of Transportation.
AQUIFER.--Limestone of Castle Hayne Formation of middle and late Eocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 142 ft (43.3 m), cased to 72 ft (21.9 m).
DATUM.--Measuring point: Top of casing, 57.64 ft (17.568 m) National Geodetic Vertical Datum of 1929.
PERIOD OF RECORD.--January 1972 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.94 ft (11.26 m) NGVD, Feb. 3, 1972; lowest, 30.63 ft (9.34 m) NGVD, Nov. 26, 1978.

IONAL DATA

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	34.47	34.47	34.97	35.58	35.97	36.23	36.22	35.82	35.08	33.56	32.26	31.52
10	34.57	34.49	35.04	35.51	36.10	36.14	36.18	35.62	34.90	33.30	32.16	31.40
15	34.59	34.47	35.16	35.69	36.03	36.05	36.17	35.49	34.58	33.05	32.02	31.33
20	34.66	34.50	35.27	35.75	36.08	36.17	35.99	35.46	34.32	32.76	31.94	31.17
25	34.68	34.67	35.54	35.93	36.12	36.26	35.95	35.44	34.02	32.59	31.70	31.11
EOM	34.55	34.80	35.53	35.99	36.00	36.34	35.96	35.22	33.84	32.36	31.50	31.15

WTR YR 1980 MEAN 34.56 MAX 36.34 MAR 30 AND OTHERS MIN 31.01 SEP 28

BEAUFORT COUNTY--Continued

352615077083402. Local number, NC-138.
LOCATION.--Lat 36°26'15", long 77°08'34", Hydrologic Unit, 03020202, near Wilmar. Owner: N.C. Department of Transportation.
AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in (0.10 m), depth 12 ft (3.7 m), cased to 7 ft (2.1 m).
DATUM.--Measuring point: Top of casing, 58.14 ft (17.721 m) National Geodetic Vertical Datum of 1929.
PERIOD OF RECORD.--August 1971 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 59.00 ft (17.98 m) NGVD, May 24, 1979; lowest, 51.11 ft (15.58 m) NGVD, Nov. 24-27, 1979.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	56.72	55.64	56.74	56.75	---	---	56.83	56.64	55.09	53.48	52.74	52.49
10	56.43	55.34	56.78	56.88	---	---	56.70	56.05	54.56	53.16	52.57	52.56
15	56.18	56.70	56.80	56.95	---	---	56.98	55.47	54.06	53.12	52.41	52.33
20	55.69	56.59	56.70	56.88	---	---	56.75	56.29	54.17	52.85	52.40	52.15
25	56.07	56.49	56.77	56.89	---	---	56.56	56.68	53.68	53.14	52.23	51.99
EOM	55.53	56.80	56.64	56.86	---	57.09	56.90	56.05	53.84	52.84	52.03	52.40

WTR YR 1980 MEAN 55.19 MAX 57.12 MAR 30 MIN 51.96 SEP 2

BERTIE COUNTY

355930076570001. Local number, NC-32.
LOCATION.--Lat 35°59'30", long 76°57'00", Hydrologic Unit 03010107, at Windsor. Owner: Town of Windsor.
AQUIFER.--Sand of Black Creek Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 78 ft (23.8 m), drilled to 360 ft (106.7 m), gravel walled.
DATUM.--Land-surface datum is 28.38 ft (8.650 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 1.25 ft (0.38 m) above land-surface datum. Measuring point changed from 1.4 ft (0.43 m) above land-surface datum May 22, 1979.
PERIOD OF RECORD.--June 1955 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.22 ft (4.99 m) below land-surface datum, Aug. 14, 1958; lowest, 36.78 ft (11.21 m) below land-surface datum, Aug. 24, 1977.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.47	28.07	28.16	26.69	27.07	25.80	---	24.84	---	29.34	30.72	30.22
10	29.28	27.18	27.77	27.23	27.39	25.78	---	25.23	---	29.38	30.19	30.18
15	29.23	27.50	27.22	26.94	27.49	---	---	25.59	---	29.41	29.93	30.10
20	29.22	27.59	27.49	26.88	27.18	---	24.90	25.71	---	29.68	29.73	30.17
25	29.03	29.03	26.99	26.62	25.87	25.86	25.23	25.92	---	29.82	29.86	30.00
EOM	28.35	29.29	26.61	26.68	25.63	25.89	24.66	---	29.28	29.71	30.13	29.79

WTR YR 1980 MEAN 27.93 HIGH 24.66 APR 30 LOW 30.72 AUG 5

BRUNSWICK COUNTY

335535078011001. Local number, NC-22.
LOCATION.--Lat 33°55'35", long 78°01'10", Hydrologic Unit 03030005, at Southport. Owner: Town of Southport.
AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 10 in (0.25 m), depth 163 ft (49.7 m), cased to 60 ft (18.3 m).
DATUM.--Land-surface datum is 20.5 ft (6.25 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 5.27 ft (1.61 m) above land-surface datum.
REMARKS.--Water levels affected by pumping from nearby municipal wells.
PERIOD OF RECORD.--February 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.14 ft (4.61 m) below land-surface datum, Mar. 29, 1965; lowest, 31.90 ft (9.72 m) below land-surface datum, Apr. 16, 1976.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.33	20.55	20.85	20.41	20.74	21.13	20.23	21.91	23.01	22.77	23.05	23.45
10	20.48	20.66	20.75	20.70	20.71	20.97	20.65	22.03	22.94	23.00	23.14	23.39
15	20.50	20.39	20.55	20.39	20.83	20.63	20.56	22.18	23.06	23.16	23.29	22.34
20	20.75	20.78	20.41	20.24	20.45	20.29	21.26	22.36	22.96	23.36	23.27	21.60
25	20.78	20.85	20.34	20.21	20.58	20.24	21.67	22.26	22.98	23.72	23.14	21.20
EOM	20.69	20.58	20.37	20.00	20.60	20.08	21.52	22.75	22.88	22.96	23.07	20.67

WTR YR 1980 MEAN 21.51 HIGH 19.93 JAN 23 LOW 23.72 JUL 25

CARTERET COUNTY

344323076451301. Local number, NC-139.
LOCATION.--Lat 34°43'23", long 76°45'13", Hydrologic Unit 03020106, Morehead City. Owner: North Carolina Department of Natural and Economic Resources.
AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 192 ft (58.5 m), cased to 180 ft (54.9 m).
DATUM.--Land-surface datum is 8.72 ft (2.658 m) National Geodetic Vertical Datum of 1929 (levels by N.C. Department of Natural and Economic Resources). Measuring point: Top of casing, 1.73 ft (0.53 m) above land-surface datum.
PERIOD OF RECORD.--January 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.23 ft (1.29 m) below land-surface datum, Dec. 7, 1976; lowest, 9.55 ft (2.91 m) below land-surface datum, Aug. 11, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.78	6.95	6.80	6.12	6.69	6.31	6.28	6.27	7.43	8.08	8.91	8.99
10	7.07	6.89	6.86	6.57	6.15	6.24	6.28	6.56	7.68	8.10	8.99	8.70
15	7.08	6.59	6.68	6.11	6.28	6.72	6.05	6.91	7.94	8.59	9.06	8.58
20	7.20	6.93	6.64	5.96	6.01	6.38	6.39	6.93	7.64	8.89	8.74	8.50
25	6.87	6.94	6.12	6.15	5.82	6.04	6.04	6.87	7.80	8.74	8.48	8.27
EOM	7.05	6.80	6.10	6.13	6.10	5.94	6.03	7.42	7.81	8.60	8.91	7.85

WTR YR 1980 MEAN 7.14 HIGH 5.82 FEB 25 LOW 9.09 AUG 11 AND OTHERS

CHOWAN COUNTY

361842076364001. Local number, NC-31.
LOCATION.--Lat 36°18'42", long 76°36'40", Hydrologic Unit 03010203, near Gliden. Owner: U.S. Geological Survey.
AQUIFER.--Beaufort Formation of Paleocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2 in (0.05 m), depth 242 ft (73.8 m), cased to 232 ft (70.7 m), screened from 232 ft (70.7 m) to 242 ft (73.8 m).
DATUM.--Land-surface datum is 37.50 (11.430 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.05 ft (0.62 m) above land-surface datum.
PERIOD OF RECORD.--October 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.12 ft (4.61 m) below land-surface datum, Feb. 25, 1965; lowest measured, 18.85 ft (5.75 m) below land-surface datum, Aug. 12, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 3	18.32	Jan. 9	18.31	Apr. 2	18.27	May 14	18.42	June 25	18.67	Aug. 12	18.85
Nov. 7	18.37	Feb. 21	18.24								

361427076393001. Local number, NC-58.
LOCATION.--Lat 36°14'27", long 76°39'30", Hydrologic Unit 03010203, Chowan County High School, near Icaria. Owner: Chowan County Board of Education.
AQUIFER.--Sands of Paleocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 320 ft (97.5 m), reported cased to 320 ft (97.5 m).
DATUM.--Land-surface datum is 26.58 ft (8.102 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.90 ft (0.27 m) above land-surface datum.
PERIOD OF RECORD.--June 1955 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.91 ft (2.41 m) below land-surface datum, Mar. 13, 1957; lowest measured, 13.38 ft (4.08 m) below land-surface datum, Oct. 5, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 3	11.81	Jan. 9	11.91	Apr. 2	11.63	May 14	11.65	June 25	11.87	Aug. 12	12.24
Nov. 7	11.99	Feb. 21	11.73								

CHOWAN COUNTY--Continued

361350076392701. Local number, NC-78.
LOCATION.--Lat 36°13'50", long 76°39'27", Hydrologic Unit 03010203, near Tyner. Owner: R. H. Hollowell.
AQUIFER.--Sand of post-Miocene age.
WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in (0.91 m), depth 14 ft (4.3 m), dug to 16 ft (4.9 m), lined with concrete.
DATUM.--Altitude of land-surface datum is 30 ft (9 m). Measuring point: Top of instrument shelf, 2.35 ft (0.72 m) above land-surface datum.
PERIOD OF RECORD.--June 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.01 ft (0.003 m) above land-surface datum, Mar. 18, 1980; lowest, 7.24 ft (2.21 m) below land-surface datum, Sept. 29, 30, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.90	5.26	1.98	.83	1.18	.47	1.09	2.14	3.87	5.77	6.20	6.64
10	4.38	5.50	1.46	.95	.55	.93	1.76	3.10	4.28	5.59	6.10	6.65
15	4.09	1.17	1.06	.50	.67	1.14	1.25	3.77	4.66	5.65	6.12	6.81
20	4.68	2.36	1.53	.87	1.08	.89	2.21	.93	5.06	5.87	6.32	6.99
25	5.08	3.56	1.13	.92	.92	.84	2.82	1.29	5.42	5.73	6.51	7.16
EOM	5.50	1.28	2.02	1.14	1.10	.65	1.19	2.82	5.67	5.98	6.70	7.18

WTR YR 1980 MEAN 3.30 HIGH .42 MAR 6 LOW 7.22 SEP 29

CRAVEN COUNTY

352309077102901. Local number, NC-16.
LOCATION.--Lat 35°23'09", long 77°10'29", Hydrologic Unit 03020202, near Wilmar. Owner: U.S. Geological Survey (formerly W. L. Elkes).
AQUIFER.--Pee Dee Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2 in (0.05 m), depth 322 ft (98.1 m), cased to 300 ft (91.4 m), screened 300 to 320 ft (91.4 to 97.5 m).
DATUM.--Altitude of land-surface datum is 49 ft (15 m). Measuring point: Top of casing, 0.30 ft (0.09 m) above land-surface datum.
PERIOD OF RECORD.--November 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.01 ft (4.58 m) below land-surface datum, Aug. 23, 1966; lowest measured, 25.39 ft (7.74 m) below land-surface datum, Sept. 3, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 1	23.46	Dec. 17	23.67	Mar. 25	23.52	June 17	23.76	July 29	23.98	Sept. 3	25.39
Nov. 7	23.70	Feb. 4	23.62	May 7	23.55						

351049077175501. Local number, NC-44.
LOCATION.--Lat 35°10'49", long 77°17'55", Hydrologic Unit 03020202, Cove City. Owner: City of New Bern.
AQUIFER.--Black Creek Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2 in (0.05 m), depth 854 ft (260.3 m), multi-screened. Screened intervals: 705-715 ft (214.9-217.9 m), 781-786 ft (238.0-239.6 m), 828-833 ft (252.4-253.9 m).
DATUM.--Land-surface datum is 36.73 ft (11.195 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 2.06 ft (0.63 m) above land-surface datum.
REMARKS.--Water levels affected by nearby pumping.
PERIOD OF RECORD.--March 1965 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.01 ft (1.83 m) below land-surface datum, Aug. 25, 26, 1965; lowest measured, 90.68 ft (27.64 m) below land-surface datum, Aug. 7, 8, 1979.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5		---	83.22	81.81	84.49	88.48	83.50	84.17	---	86.35	84.79	---
10		82.94	80.90	83.16	83.66	85.74	83.72	83.14	---	86.65	---	---
15		82.83	82.68	82.80	84.32	84.89	84.75	85.03	---	85.87	---	83.65
20		82.66	82.90	82.80	83.50	83.83	84.89	---	---	85.15	---	84.71
25		83.04	82.41	83.53	83.69	84.42	84.91	---	85.14	85.01	---	83.99
EOM		83.92	82.61	82.88	84.78	83.82	83.58	---	86.65	85.38	---	84.34

WTR YR 1980 MEAN 84.11 HIGH 80.90 DEC 10 LOW 88.48 MAR 5

CRAVEN COUNTY--Continued

350455077105001. Local number, NC-45.
LOCATION.--Lat 35°04'55", long 77°10'50", Hydrologic Unit 03020204, near Rhems. Owner: O. D. Simmons.
AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in (0.20 m), depth 45 ft (13.7 m), cased to 42 ft (12.8 m).
DATUM.--Altitude of land-surface datum is 35 ft (11 m). Measuring point: Top of casing, 1.32 ft (0.40 m) above land-surface datum.
REMARKS.--Well was originally drilled to 1,000 ft (304.8 m) as test well but was back filled to depth of approximately 47 ft (14.3 m).
PERIOD OF RECORD.--July 1964 to January 1980 (discontinued).
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.90 ft (0.27 m) below land-surface datum, Sept. 6, 1979; lowest, 13.04 ft (3.97 m) below land-surface datum, Oct. 16, 1968.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.58	6.36	5.30	5.45								
10	4.09	6.51	4.46	5.15								
15	4.73	5.86	4.72	4.41								
20	5.22	5.96	4.99	4.31								
25	5.63	6.21	5.09	4.11								
EOM	6.16	5.13	5.30	4.29								

WTR YR 1980 MEAN 5.11 HIGH 3.48 OCT 2 LOW 6.59 NOV 11

350904077130601. Local number, NC-48.
LOCATION.--Lat 35°09'04", long 77°13'06", Hydrologic Unit 03020202, Tuscarora. Owner: International Paper Company.
AQUIFER.--Sand of Black Creek Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2 in (0.05 m), depth 310 ft (94.5 m), drilled to 887 ft (270.4 m), cased to 440 ft (134.1 m).
DATUM.--Altitude of land-surface datum is 38 ft (12 m). Measuring point: Top of casing, 2.60 ft (0.79 m) above land-surface datum.
PERIOD OF RECORD.--November 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.55 ft (0.17 m) above land-surface datum, June 24, 1963; lowest, 9.08 ft (2.77 m) below land-surface datum, Sept. 27, 28, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.84	8.16	8.08	8.05	8.20	8.03	8.16	8.26	8.44	8.56	8.83	8.94
10	7.91	8.07	8.11	8.21	8.03	8.07	8.19	8.33	8.45	8.60	8.79	8.98
15	8.05	8.09	8.12	8.09	8.15	8.24	8.09	8.40	8.52	8.68	8.77	8.99
20	8.07	8.09	8.16	8.14	8.12	8.19	8.26	8.33	8.43	8.75	8.76	9.04
25	8.03	8.10	8.00	8.04	8.08	8.11	8.22	8.23	8.51	8.75	8.87	9.02
EOM	8.14	8.08	8.08	8.10	8.20	8.02	8.17	8.39	8.50	8.78	8.94	8.84

WTR YR 1980 MEAN 8.34 HIGH 7.84 OCT 5 LOW 9.08 SEP 27

CUMBERLAND COUNTY

345803078564901. Local number, NC-84.
LOCATION.--Lat 34°58'03", long 78°56'44", Hydrologic Unit 03030004, Hope Mills. Owner: Robert Deaver.
AQUIFER.--Slate of Paleozoic age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 410 ft (125.0 m), drilled to 509 ft (155.1 m), cased to 238 ft (72.5 m).
DATUM.--Altitude of land-surface datum is 110 ft (34 m). Measuring point: Top of instrument shelf, 1.80 ft (0.55 m) above land-surface datum.
PERIOD OF RECORD.--April 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 31.38 ft (9.56 m) below land-surface datum, Apr. 3, 1975; lowest, 92.03 ft (28.05 m) below land-surface datum, June 3, 1967.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	34.63	34.86	34.67	34.62	34.68	34.50	34.30	34.30	34.59	34.81	35.26	35.60
10	34.69	34.71	34.73	34.75	34.48	34.44	34.29	34.41	34.61	34.88	35.25	35.57
15	34.82	34.70	34.71	34.71	34.54	34.55	34.17	34.45	34.70	35.02	35.31	35.58
20	34.81	34.74	34.71	34.66	34.53	34.43	34.33	34.35	34.72	35.15	35.33	35.61
25	34.78	34.71	34.54	34.50	34.50	34.34	34.24	34.28	34.76	35.10	35.46	35.46
EOM	34.89	34.71	34.60	34.59	34.59	34.24	34.22	34.52	34.72	35.22	35.55	35.37

WTR YR 1980 MEAN 34.76 HIGH 34.17 APR 15 LOW 35.64 SEP 13

DAVIE COUNTY

355339080332601. Local number, NC-110.
LOCATION.--Lat 35°53'39", long 80°33'26", Hydrologic Unit 03040102, near Mocksville. Owner: H. S. Larew.
AQUIFER.--Weathered granite of Paleozoic age.
WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in (0.91 m), depth 28 ft (8.5 m), dug to 32 ft (9.8 m), lined with rock.
DATUM.--Altitude of land-surface datum is 830 ft (253 m). Measuring point: Top of wooden platform, 3.60 ft (1.10 m) above land-surface datum.
PERIOD OF RECORD.--January 1932 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured 12.47 ft (3.80 m) below land-surface datum, Apr. 1, 1973; lowest measured, 28.66 ft (8.74 m) below land-surface datum, Feb. 15, 1942.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 6	17.09	Dec. 5	18.30	Feb. 2	17.62	Apr. 27	16.19	June 21	18.02	Aug. 16	19.42
Oct. 13	17.70	Dec. 15	18.54	Feb. 11	17.70	May 3	16.49	June 28	18.04	Aug. 24	19.71
Oct. 20	17.93	Dec. 23	18.82	Feb. 16	17.73	May 11	16.80	July 5	18.31	Aug. 31	20.00
Oct. 27	18.17	Dec. 29	19.02	Feb. 23	17.95	May 17	16.80	July 12	18.54	Sept. 8	20.22
Nov. 3	18.02	Jan. 5	19.15	Mar. 1	18.20	May 24	16.72	July 20	19.33	Sept. 13	20.38
Nov. 10	18.26	Jan. 12	18.84	Mar. 8	17.99	May 31	17.20	July 26	18.64	Sept. 20	20.57
Nov. 18	18.12	Jan. 19	16.60	Mar. 15	17.99	June 8	17.45	Aug. 3	18.93	Sept. 27	20.54
Nov. 24	18.21	Jan. 26	17.42	Mar. 22	15.73	June 14	17.72	Aug. 11	19.13		

DUPLIN COUNTY

350030078060001. Local number, NC-69.
LOCATION.--Lat 35°00'30", long 78°06'00", Hydrologic Unit 03030006, at Warsaw. Owner: City of Warsaw.
AQUIFER.--Black Creek Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 10 in (0.25 m), depth 102 ft (31.1 m), believed cased to 102 ft (31.1 m).
DATUM.--Altitude of land-surface datum is 145 ft (44 m). Measuring point: Top of casing, 1.00 ft (0.30 m) above land-surface datum.
REMARKS.--Water levels affected by intermittent pumping from nearby municipal wells.
PERIOD OF RECORD.--January 1963 to October 1964, January 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 43.69 ft (13.32 m) below land-surface datum, Feb. 23, 1967; lowest, 49.89 ft (15.21 m) below land-surface datum, Aug. 23, 1968.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47.12	47.32	47.20	47.16	46.98	46.74	46.36	46.35	46.69	47.30	47.24	47.86
2	47.11	47.30	47.23	47.17	46.99	46.64	46.38	46.40	46.72	47.35	47.07	47.87
3	47.14	47.24	47.27	47.19	47.00	46.61	46.38	46.38	46.73	47.36	46.94	47.88
4	47.11	47.29	47.23	47.18	47.02	46.65	46.34	46.41	46.76	47.35	46.92	47.68
5	47.06	47.30	47.22	47.15	47.05	46.70	46.35	46.40	46.82	47.25	46.90	47.69
6	47.11	47.27	47.18	47.20	47.02	46.80	46.40	46.41	46.85	47.20	46.94	47.67
7	47.12	47.22	47.11	47.18	47.02	46.85	46.42	46.43	46.79	47.19	46.92	47.68
8	47.15	47.25	47.15	47.14	47.05	46.84	46.39	46.45	46.78	47.19	46.90	47.71
9	47.13	47.25	47.19	47.08	47.01	46.83	46.28	46.50	46.81	47.17	46.91	47.74
10	47.13	47.25	47.17	47.12	46.92	46.81	46.33	46.54	46.82	47.14	46.94	47.77
11	47.16	47.25	47.17	47.09	47.00	46.78	46.37	46.58	46.86	47.04	46.95	47.79
12	47.15	47.12	47.18	47.07	46.90	46.79	46.39	46.59	46.91	47.05	46.98	47.81
13	47.16	46.95	47.21	47.10	46.86	46.66	46.37	46.61	46.91	47.07	47.19	47.86
14	47.22	47.10	47.28	47.05	46.90	46.65	46.30	46.62	---	47.11	47.33	47.89
15	47.24	47.14	47.25	47.05	46.87	46.70	46.27	46.65	---	47.13	47.42	47.90
16	47.23	47.13	47.20	47.07	46.82	46.70	46.29	46.69	---	47.12	47.46	47.95
17	47.23	47.16	47.23	47.08	46.85	46.66	46.34	46.71	---	47.12	47.54	47.98
18	47.25	47.19	47.20	47.11	46.88	46.55	46.33	46.69	---	47.16	47.59	48.00
19	47.27	47.21	47.18	47.18	46.85	46.60	46.32	46.67	---	47.20	47.60	47.96
20	47.29	47.23	47.21	47.21	46.82	46.58	46.34	46.63	---	47.22	47.56	47.96
21	47.32	47.23	47.25	47.19	46.82	46.48	46.27	46.58	---	47.21	47.58	47.89
22	47.32	47.23	47.26	47.12	46.82	46.51	46.09	46.60	---	47.21	47.60	47.73
23	47.28	47.16	47.18	47.00	46.80	46.54	46.24	46.59	---	47.22	47.62	47.90
24	47.22	47.03	47.10	47.00	46.81	46.51	46.30	46.55	47.21	47.18	47.66	47.92
25	47.23	47.16	47.11	47.01	46.78	46.43	46.34	46.53	47.16	47.21	47.68	47.93
26	47.26	47.08	47.16	47.05	46.78	46.45	46.38	46.57	47.13	47.22	47.70	47.95
27	47.28	47.12	47.17	47.05	46.72	46.48	46.37	46.61	47.17	47.22	47.73	48.00
28	47.29	47.11	47.21	47.05	46.54	46.51	46.28	46.64	47.20	47.21	47.76	48.03
29	47.31	47.13	47.20	47.03	46.70	46.36	46.29	46.62	47.23	47.22	47.78	48.00
30	47.32	47.18	47.18	47.03	---	46.34	46.28	46.61	47.23	47.23	47.79	47.93
31	47.34	---	47.16	46.97	---	46.32	---	46.64	---	47.24	47.84	---
MEAN	47.21	47.19	47.19	47.10	46.88	46.62	46.33	46.56	46.94	47.20	47.36	47.86

WTR YR 1980 MEAN 47.04 HIGH 46.09 LOW 48.03

EDGECOMBE COUNTY

355845077264501. Local number, NC-72.
LOCATION.--Lat 35°58'45", long 77°26'45", Hydrologic Unit 03020102, Speed. Owner: Melvin Howell.
AQUIFER.--Sands of Tuscaloosa Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diamter 4 in (0.10 m), depth 94 ft (28.7 m), drilled to 100 ft (30.5 m), cased to 95 ft (29.0 m).
DATUM.--Land-surface datum is 54.51 (16.615 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.90 ft (0.58 m) above land-surface datum.
PERIOD OF RECORD.--March 1946 to May 1965, April 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.17 ft (0.05 m) below land-surface datum, Sept. 27, 1955; lowest measured, 12.16 ft (3.71 m) below land-surface datum, June 11, 1953.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.93	---	6.78	---	---	5.94	5.81	6.69	7.09	8.21	9.07	9.90
10	7.25	7.70	6.97	---	---	5.84	5.94	7.02	7.16	8.21	9.28	9.98
15	7.30	7.34	6.64	---	---	5.74	5.94	7.24	7.46	8.31	9.41	10.00
20	---	7.17	6.75	---	---	5.76	6.10	6.88	7.61	8.59	9.43	9.99
25	---	7.12	6.75	---	6.14	5.80	6.68	6.69	7.80	8.51	9.84	10.14
EOM	---	6.87	6.65	---	5.99	---	6.52	6.74	7.89	8.81	10.00	10.16

WTR YR 1980 MEAN 7.55 HIGH 5.66 MAR 17 LOW 10.24 SEP 29

GATES COUNTY

362044076362301. Local number, NC-30.
LOCATION.--Lat 36°20'44", long 76°36'23", Hydrologic Unit 03010203, Hobbsville. Owner: Mrs. T. W. Blanchard.
AQUIFER.--Black Creek Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 494 ft (150.6 m), believed cased to 494 ft (150.6 m).
DATUM--Land-surface datum is 38.16 ft (11.631 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.50 ft (0.15 m) above land-surface datum.
PERIOD OF RECORD.--November 1961 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.40 ft (5.61 m) below land-surface datum, Mar. 8, 1962; lowest measured, 26.22 ft (7.99 m) below land-surface datum, Aug. 22, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 3	23.17	Jan. 9	23.21	Apr. 2	23.20	May 14	23.33	June 25	23.61	Aug. 8	23.78
Nov. 7	23.30	Feb. 21	23.15								

362751076484701. Local number, NC-54.
LOCATION.--Lat 36°27'51", long 76°48'47", Hydrologic Unit 03010203, Roduco. Owner: James Wright.
AQUIFER.--Beaufort Formation of Paleocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 231 ft (70.4 m), cased to 217 ft (66.1 m).
DATUM.--Land-surface datum is 37.35 ft (11.384 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 1.28 ft (0.39 m) above land-surface datum. Measuring point changed from 1.80 ft (0.55 m) above land-surface datum Mar. 26, 1979.
PERIOD OF RECORD.--November 1965 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.84 ft (3.91 m) below land-surface datum, Mar. 5, 1966; lowest, 19.22 ft (5.86 m) below land-surface datum, Feb. 1, 2, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.75	16.97	16.70	16.99	16.66	17.64	17.70	16.93	16.97	16.84	18.07	17.86
10	17.41	16.91	16.75	17.07	17.36	17.63	17.11	17.99	17.00	16.86	18.10	18.24
15	17.09	16.77	16.67	16.75	17.71	18.25	17.06	17.19	17.05	17.01	18.18	18.46
20	17.37	16.83	16.83	16.73	17.58	18.44	17.13	17.04	16.87	17.24	18.13	18.69
25	17.35	16.85	17.01	16.67	17.62	---	17.05	16.82	16.81	17.64	17.93	18.68
EOM	17.31	16.75	17.00	16.61	17.62	---	16.99	16.87	16.67	17.85	18.03	18.04

WTR YR 1980 MEAN 17.31 HIGH 16.57 FEB 1 LOW 18.84 AUG 17

HARNETT COUNTY

352052078372801. Local number, HR-52.
LOCATION.--Lat 35°20'52", long 78°37'28", Hydrologic Unit 03030006, at SR 1722 near Dunn. Owner: U.S. Geological Survey.
AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 8.4 ft (2.56 m), cased to 8.4 ft (2.56 m).
DATUM.--Measuring point: File cut on top of casing, 178.83 ft (54.507 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).
PERIOD OF RECORD.--July 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 176.85 ft (53.90 m) NGVD, Feb. 27, 1979; lowest measured, 170.45 ft (51.95 m) NGVD, Sept. 8, 1977.

WATER LEVEL, IN FEET NGVD, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 10	174.67	Nov. 29	176.42	Feb. 13	175.82	Apr. 15	175.94	June 5	172.89	Aug. 8	172.01
Oct. 24	174.29	Dec. 12	175.52	Mar. 11	175.67	Apr. 30	175.54	June 26	173.68	Sept. 24	170.84
Oct. 31	174.10	Jan. 21	175.75	Mar. 27	175.72						

352052078372802. Local number, HR-53.
LOCATION.--Lat 35°20'52", long 78°37'28", Hydrologic Unit 03030006, at SR 1722 near Dunn. Owner: U.S. Geological Survey.
AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 8.4 ft (2.56 m), cased to 8.4 ft (2.56 m).
DATUM.--Measuring point: File cut on top of casing, 179.04 ft (54.571 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).
PERIOD OF RECORD.--July 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 176.65 ft (53.84 m) NGVD, Feb. 27, 1979; lowest measured, 170.44 ft (51.95 m) NGVD, Aug. 1, 1977.

WATER LEVEL, IN FEET NGVD, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 10	174.69	Nov. 29	176.24	Feb. 13	175.76	Apr. 15	175.83	June 5	172.66	Aug. 8	171.50
Oct. 24	174.48	Dec. 12	175.43	Mar. 11	175.64	Apr. 30	175.49	June 26	174.03	Sept. 24	170.45
Oct. 31	174.14	Jan. 21	175.67	Mar. 27	175.65						

352052078372201. Local number, HR-54.
LOCATION.--Lat 35°20'52", long 78°37'22", Hydrologic Unit 03030006, at SR 1722 near Dunn. Owner: U.S. Geological Survey.
AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 7.5 ft (2.29 m), cased to 7.5 ft (2.29 m).
DATUM.--Measuring point: File cut on top of casing, 178.08 ft (54.279 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).
PERIOD OF RECORD.--July 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 176.96 ft (53.94 m) NGVD, Feb. 27, 1979; lowest measured, 172.80 ft (52.67 m) NGVD, Sept. 24, 1980.

WATER LEVEL, IN FEET NGVD, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 10	175.56	Nov. 29	176.51	Feb. 13	176.05	Apr. 15	176.09	June 5	174.14	Aug. 8	173.21
Oct. 24	175.66	Dec. 12	175.92	Mar. 11	176.04	Apr. 30	175.89	June 26	176.05	Sept. 24	172.80
Oct. 31	175.41	Jan. 21	176.02	Mar. 27	175.98						

351659078381501. Local number, HR-55.
LOCATION.--Lat 35°16'59", long 78°38'15", Hydrologic Unit 03030006, at SR 1780 near Dunn. Owner: U.S. Geological Survey.
AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 8.0 ft (2.44 m), cased to 8.0 ft (2.44 m).
DATUM.--Measuring point: File cut on top of casing, 155.76 ft (47.475 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).
PERIOD OF RECORD.--July 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 152.85 ft (46.59 m) NGVD, Apr. 29, 1978; lowest, 146.95 ft (44.79 m) NGVD, Sept. 3, 1980.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	148.45	148.41	148.47	147.98	148.01	148.65	148.07	147.91	147.67	149.00	147.81	147.06
10	148.34	148.35	148.47	148.73	149.00	148.25	147.97	147.82	147.73	148.14	147.73	147.43
15	148.32	148.87	148.45	148.14	148.23	148.44	149.00	147.76	147.63	147.91	147.57	147.28
20	148.32	148.48	148.43	---	148.06	148.71	148.03	147.78	147.84	147.74	147.40	---
25	148.30	148.43	148.45	148.50	148.00	148.17	147.87	147.83	147.98	147.82	147.30	147.25
EOM	148.26	148.67	148.02	148.09	147.98	149.02	148.09	147.72	147.88	147.75	147.13	147.58

WTR YR 1980 MEAN 148.09 MAX 149.46 NOV 12 AND OTHERS MIN 146.97 SEP 3

HARNETT COUNTY--Continued

351659078381502. Local number, HR-56.
LOCATION.--Lat 35°16'59", long 78°38'15", Hydrologic Unit 03030006, at SR 1780 near Dunn. Owner: U.S. Geological Survey.
AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 10.8 ft (3.29 m), cased to 10.8 ft (3.29 m).
DATUM.--Measuring point: File cut on top of casing, 156.61 ft (47.735 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).
PERIOD OF RECORD.--July 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 152.24 ft (46.40 m) NGVD, Apr. 27, 1978; lowest measured, 146.76 ft (44.73 m) NGVD, Sept. 24, 1980.

WATER LEVEL, IN FEET NGVD, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 10	148.62	Nov. 29	149.63	Feb. 13	149.60	Apr. 15	149.85	June 26	149.21	Aug. 8	147.52
Oct. 24	148.50	Dec. 12	149.67	Mar. 11	149.66	Apr. 30	149.53	July 18	147.64	Sept. 24	146.76
Oct. 31	148.41	Jan. 21	149.49	Mar. 27	149.63	June 5	147.47				

351657078381001. Local number, HR-57.
LOCATION.--Lat 35°16'57", long 78°38'10", Hydrologic Unit 03030006, at SR 1780 near Dunn. Owner: U.S. Geological Survey.
AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 6.8 ft (2.07 m), cased to 6.8 ft (2.07 m).
DATUM.--Measuring point: File cut on top of casing, 159.32 ft (48.561 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).
PERIOD OF RECORD.--July 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 158.09 ft (48.19 m) NGVD, Nov. 29, 1979 and Apr. 15, 1980; lowest measured, 156.59 ft (47.73 m) NGVD, Aug. 21, 1979.

WATER LEVEL, IN FEET NGVD, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 10	157.99	Nov. 29	158.09	Feb. 13	158.01	Apr. 15	158.09	June 26	157.46	Aug. 8	157.43
Oct. 24	157.97	Dec. 12	158.01	Mar. 11	158.00	Apr. 30	158.04	July 18	157.41	Sept. 24	156.95
Oct. 31	157.79	Jan. 21	158.00	Mar. 27	157.96	June 5	157.12				

HAYWOOD COUNTY

352315082484401. Local number, NC-40.
LOCATION.--Lat 35°23'15", long 82°48'44", Hydrologic Unit 06010106, near Cruso. Owner: Champion Paper and Fiber Company.
AQUIFER.--Phyllitic rock of the Snowbird Group of Precambrian age.
WELL CHARACTERISTICS.--Dug observation water-table well, diameter 12 in (0.30 m), depth 19 ft (5.8 m), cased to 19 ft (5.8 m).
DATUM.--Land-surface datum is 3,148.26 ft (959.590 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.00 ft (0.30 m) above land-surface datum.
PERIOD OF RECORD.--December 1955 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.24 ft (0.38 m) below land-surface datum, Mar. 12, 1977; lowest, 6.27 ft (1.91 m) below land-surface datum, Nov. 1, 1963.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.37	3.15	---	3.75	4.21	4.25	3.57	3.32	4.04	4.32	5.08	5.29
10	3.26	3.10	---	3.85	4.25	4.29	3.29	3.51	4.09	4.50	5.16	5.29
15	3.26	3.25	---	3.82	4.29	4.33	2.77	3.69	4.17	4.67	5.18	5.40
20	3.50	3.29	3.31	3.95	4.32	3.92	2.71	3.60	4.20	4.80	5.13	5.47
25	3.39	2.44	3.34	4.03	4.32	3.70	2.88	3.57	3.78	4.88	5.11	5.54
EOM	3.37	---	3.61	4.09	4.37	3.56	3.06	3.88	4.27	4.99	5.29	4.81

WTR YR 1980 MEAN 4.01 HIGH 2.24 NOV 26 AND OTHERS LOW 5.56 SEP 27

HERTFORD COUNTY

362845077005501. Local number, NC-55.
LOCATION.--Lat 36°28'45", long 77°00'55", Hydrologic Unit 03010203, Como. Owner: Charles DeLoatch.
AQUIFER.--Sands of Tuscaloosa Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2 in (0.05 m), depth 340 ft (103.6 m), cased to 340 ft (103.6 m).
DATUM.--Land-surface datum is 28.40 ft (8.656 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.79 ft (0.85 m) above land-surface datum.
PERIOD OF RECORD.--December 1965 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 48.36 ft (14.74 m) below land-surface datum, May 30, 31, 1966; lowest measured, 92.63 ft (28.23 m) below land-surface datum, Aug. 12, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 5	89.20	Jan. 10	91.11	Apr. 2	91.11	May 13	91.59	June 23	92.24	Aug. 12	92.63
Nov. 6	90.92	Feb. 20	90.95								

362642077051501. Local number, NC-81.
LOCATION.--Lat 36°26'42", long 77°05'15", Hydrologic Unit 03010204 (revised), Murfreesboro. Owner: Town of Murfreesboro.
AQUIFER.--Black Creek Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled public-supply (standby) artesian well, diameter 3 in (0.08 m), depth 215 ft (65.5 m), cased to 215 ft (65.5 m).
DATUM.--Land-surface datum is 13.09 ft (3.989 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 4.89 ft (1.49 m) above land-surface datum.
PERIOD OF RECORD.--February 1964 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.26 ft (1.91 m) above land-surface datum, Apr. 8, 1964; lowest, 2.22 ft (0.68 m) below land-surface datum, Aug. 13, 1980.

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 5	-0.48	Jan. 10	-0.91	Apr. 2	-0.99	May 13	-1.30	June 23	-1.70	Aug. 13	-2.22
Nov. 6	-0.78	Feb. 20	-0.91								

362351076555401. Local number, NC-82.
LOCATION.--Lat 36°23'51", long 76°55'54", Hydrologic Unit 03010203, Winton. Owner: Town of Winton.
AQUIFER.--Sand of Black Creek Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 283 ft (86.3 m), drilled to 309 ft (94.2 m), cased to 237 ft (72.2 m).
DATUM.--Land-surface datum is 41.70 ft (12.710 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 0.70 ft (0.21 m) above land-surface datum.
PERIOD OF RECORD.--October 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 27.58 ft (8.41 m) below land-surface datum, Sept. 17, 1967; lowest, 30.35 ft (9.25 m) below land-surface datum, Mar. 18, 1973.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 3	29.10	Jan. 10	29.34	Apr. 2	29.12	May 14	29.08	June 24	29.16	Aug. 12	29.34
Nov. 7	29.25	Feb. 21	29.27								

HOKE COUNTY

350340079212501. Local number, NC-35.
LOCATION.--Lat 35°03'40", long 79°21'25", Hydrologic Unit 03040203, McCain. Owner: North Carolina Tuberculosis Sanitarium.
AQUIFER.--Tuscaloosa Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 24 m (0.61 m), depth 76 ft (23.2 m), drilled to 309 ft (94.2 m), cased to 309 ft (94.2 m), gravel walled.
DATUM.--Altitude of land-surface datum is 355 ft (108 m). Measuring point: Top of casing, 1.40 ft (0.43 m) above land-surface datum.
PERIOD OF RECORD.--April 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.60 ft (0.49 m) below land-surface datum, May 7, 1973; lowest, 8.27 ft (2.52 m) below land-surface datum, Oct. 14, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 3	5.70	Dec. 18	5.12	Mar. 12	4.68	May 28	4.14	July 10	4.89	Aug. 19	5.60
Nov. 8	5.72	Jan. 24	4.88	Apr. 16	3.51						

JONES COUNTY

350103077150601. Local number, NC-73.
LOCATION.--Lat 35°01'03", long 77°15'06", Hydrologic Unit 03020204, near Pollocksville. Owners: Oak Grove Marine Air Station.
AQUIFER.--Castle Hayne Limestone Formation of middle and late Eocene age.
WELL CHARACTERISTICS.--Driven observation water-table well, diameter 8 in (0.20 m), depth 18 ft (5.5 m), cased to 18 ft (5.5 m).
DATUM.--Land-surface datum is 11.31 ft (3.447 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf 3.28 ft (1.00 m) above land-surface datum. Measuring point changed from 3.40 ft (1.04 m) above land-surface datum May 7, 1979.
PERIOD OF RECORD.--May 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.40 ft (1.34 m) below land-surface datum, Nov. 5, 1971; lowest, 10.12 ft (3.08 m) below land-surface datum, Jan. 19-20, 1969.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.62	---	---	8.96	8.63	8.40	6.35	7.22	---	8.67	---	9.40
10	7.66	8.47	---	8.98	8.73	8.18	6.28	7.43	---	---	---	9.43
15	---	8.51	---	8.88	8.53	7.62	6.53	7.64	---	---	9.34	9.45
20	---	---	8.89	8.66	8.41	7.15	6.60	7.79	---	---	9.37	9.45
25	---	---	8.91	8.62	8.45	6.96	6.78	7.88	8.55	---	9.29	9.47
EOM	---	---	8.98	8.54	8.48	6.80	7.04	---	8.65	---	9.33	9.34

WTR YR 1980 MEAN 8.25 HIGH 6.24 APR 8 AND OTHERS LOW 9.48 SEP 24

LENOIR COUNTY

350306077444201. Local number, NC-51.
LOCATION.--Lat 35°03'06", long 77°44'42", Hydrologic Unit 03020204 (revised), Pink Hill School, Pink Hill. Owner: Lenoir County Board of Education.
AQUIFER.--Pee Dee Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 151 ft (46.0 m), drilled to 195 ft (59.4 m), cased to 125 ft (38.1 m).
DATUM.--Altitude of land-surface datum is 134 ft (41 m). Measuring point: Top of instrument shelf, 1.45 ft (0.44 m) above land-surface datum.
PERIOD OF RECORD.--April 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 52.03 ft (15.86 m) below land-surface datum, Apr. 8, 1973; lowest, 59.64 ft (18.18 m) below land-surface datum, July 20, 21, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 4	54.39	Dec. 19	55.13	Mar. 26	54.86	May 14	54.85	June 24	54.55	Aug. 13	57.10
Nov. 8	55.16	Feb. 7	55.15								

351600077381001. Local number, NC-128.
LOCATION.--Lat 35°16'00", long 77°38'10", Hydrologic Unit 03020202, Kinston. Owner: City of Kinston.
AQUIFER.--Sands of Black Creek Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 10 in (0.25 in), depth 300 ft (91.4 m), cased to 160 ft (48.8 m).
DATUM.--Land-surface datum is 33.5 ft (10.21 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.10 ft (0.64 m) above land-surface datum.
PERIOD OF RECORD.--September 1968 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 34.83 ft (10.62 m) below land-surface datum, Dec. 30, 1968; lowest, 73.85 ft (22.51 m) below land-surface datum, Sept. 19, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	66.97	66.98	67.26	---	68.43	---	67.98	68.79	70.10	71.22	---	---
10	67.23	67.50	67.23	66.83	---	---	68.58	---	70.20	71.56	---	---
15	66.70	67.38	67.52	66.76	---	---	68.54	69.93	70.39	71.43	---	72.67
20	67.35	---	67.99	65.86	---	---	68.36	69.42	71.27	71.66	---	73.44
25	67.37	---	---	67.19	---	---	---	67.69	71.50	72.57	---	73.37
EOM	67.42	67.72	---	67.75	---	67.44	69.11	69.05	70.92	72.62	---	73.14

WTR YR 1980 MEAN 69.07 HIGH 65.86 JAN 20 LOW 73.71 SEP 19

MARTIN COUNTY

355734077180001. Local number, NC-43.
LOCATION.--Lat 35°57'34", long 77°18'00", Hydrologic Unit 03010107, at West Martin School, Oak City. Owner: Martin County Board of Education.
AQUIFER.--Black Creek Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 88 ft (26.8 m), cased to 88 ft (26.8 m).
DATUM.--Land-surface datum is 81.75 ft (24.917 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.13 ft (0.34 m) above land-surface datum. Measuring point changed from 1.73 ft (0.53 m) above land-surface datum Sept. 19, 1978.
PERIOD OF RECORD.--February 1959 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.67 ft (3.56 m) below land-surface datum, June 8, 1961; lowest, 19.32 ft (5.89 m) below land-surface datum, Nov. 8, 9, 1968.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.57	14.12	13.99	---	12.94	12.56	12.52	13.28	13.86	15.62	---	18.52
10	13.46	14.18	---	14.04	12.92	12.42	12.61	13.52	14.09	15.79	---	18.65
15	13.50	14.11	---	13.76	12.86	12.35	12.75	13.75	14.35	16.05	17.70	18.76
20	13.62	13.90	---	13.40	12.74	12.28	12.89	13.84	14.74	---	17.90	18.95
25	13.73	13.85	---	13.04	12.74	12.33	13.05	13.70	15.11	---	18.16	19.05
EOM	13.98	13.89	---	12.91	12.65	12.48	13.17	13.67	15.34	---	18.39	19.15

WTR YR 1980 MEAN 14.38 HIGH 12.22 MAR 21 LOW 19.19 SEP 29

MOORE COUNTY

350636079283601. Local number, NC-122.
LOCATION.--Lat 35°06'36", long 79°28'36", Hydrologic Unit 03040203, Pinebluff. Owner: H. A. Keith.
AQUIFER.--Sands of Tuscaloosa Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 47 ft (14.3 m), cribbed with brick.
DATUM.--Altitude of land-surface datum is 412 ft (126 m). Measuring point: Top of wooden platform, 3.55 ft (1.08 m) above land-surface datum.
PERIOD OF RECORD.--April 1944 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.71 ft (8.75 m) below land-surface datum, Oct. 8, 1971; lowest measured, dry several times 1951-52, 1977-79.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 3	41.00	Dec. 18	32.87	Mar. 12	32.62	May 28	32.52	July 10	33.12	Aug. 19	35.50
Nov. 8	36.57	Jan. 24	31.99	Apr. 16	32.15						

NEW HANOVER COUNTY

341000077524201. Local number, NC-20.
LOCATION.--Lat 34°10'00", long 77°52'42", Hydrologic Unit 03030001 (revised), near Wilmington. Owner: Walter J. Hodder.
AQUIFER.--Pee Dee Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 3 in (0.08 m), depth 169 ft (51.5 m), drilled to 173 ft (52.7 m), cased to 173 ft (52.7 m).
DATUM.--Land-surface datum is 21.30 ft (6.492 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 0.06 ft (0.02 m) above land-surface datum.
PERIOD OF RECORD.--November 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.42 ft (2.87 m) below land-surface datum, June 10, 1966; lowest, 20.93 ft (6.38 m) below land-surface datum, Sept. 6, 7, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.53	13.71	14.11	14.03	14.23	14.19	13.06	16.46	17.67	18.56	19.04	20.20
10	12.83	13.81	13.98	14.22	14.02	13.90	13.36	15.46	17.31	19.66	19.44	---
15	13.26	13.93	13.90	13.95	13.97	13.65	13.74	17.08	18.47	---	19.10	---
20	13.60	14.10	13.90	13.92	13.84	13.37	14.27	16.01	17.07	---	18.04	---
25	13.79	14.36	13.99	13.99	13.89	13.16	15.53	15.49	17.79	---	18.06	---
EOM	13.90	14.19	14.00	14.01	14.06	12.92	15.16	16.70	17.97	18.40	19.25	---

WTR YR 1980 MEAN 15.29 HIGH 12.53 OCT 5 LOW 20.63 SEP 7

NEW HANOVER COUNTY--Continued

342205077515401. Local number, NC-61.
LOCATION.--Lat 34°22'05", long 66°51'54", Hydrologic Unit 03030007, near Wilmington. Owner: Martin Marietta.
AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.
WELL CHARACTERISTICS.--Bored observation artesian well, diameter 2 in (0.05 m), depth 31 ft (9.4 m), bored to 85 ft (25.9 m), cased to 43 ft (13.1 m).
DATUM.--Land-surface datum is 15.93 ft (4.855 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.00 ft (0.61 m) above land-surface datum.
PERIOD OF RECORD.--September 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.86 ft (0.57 m) below land-surface datum, Sept. 4, 1968; lowest, 25.21 ft (7.68 m) below land-surface datum, Dec. 23, 24, 1978.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.43	20.92	21.59	21.82	22.06	21.97	20.94	21.07	21.57	22.01	21.96	22.15
10	20.42	21.00	21.71	21.91	22.04	21.93	20.85	21.21	21.63	22.09	21.96	22.21
15	20.53	21.16	21.73	21.93	22.04	21.78	20.82	21.13	21.72	22.18	22.02	22.37
20	20.57	21.29	21.66	21.99	21.96	21.52	20.88	21.22	21.77	22.22	21.96	22.48
25	20.64	21.39	21.68	22.01	21.94	21.30	20.90	21.33	21.85	22.27	22.07	22.51
EOM	20.79	21.50	21.76	22.04	21.96	21.07	20.98	21.50	21.90	22.02	22.25	22.53

WTR YR 1980 MEAN 21.61 HIGH 20.17 OCT 3 LOW 22.54 SEP 28 AND OTHERS

NORTHAMPTON COUNTY

361608077162601. Local number, NC-27.
LOCATION.--Lat 36°16'08", long 77°16'26", Hydrologic Unit 03010204, at Rich Square. Owner: Boomer Ice Company.
AQUIFER.--Sand of Tuscaloosa Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 57 ft (17.4 m), drilled to 88 ft (26.8 m), cased to 78 ft (23.8 m).
DATUM.--Land-surface datum is 74.44 ft (22.689 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 1.70 ft (0.52 m) above land-surface datum.
PERIOD OF RECORD.--January 1958 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.86 ft (1.48 m) below land-surface datum, Feb. 25, 1960; lowest, 14.99 ft (4.57 m) below land-surface datum, Sept. 29, 30, 1977.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.65	12.11	10.98	11.22	8.94	8.18	6.81	8.53	9.93	11.45	12.31	12.92
10	11.82	12.06	11.12	11.14	8.80	6.54	7.29	9.26	10.29	11.51	12.37	13.00
15	11.96	11.13	11.16	10.22	8.34	6.57	7.69	9.81	10.60	11.56	12.32	13.08
20	12.06	11.16	11.17	8.97	8.03	6.16	8.05	8.97	10.93	11.66	12.60	13.01
25	12.09	11.21	11.02	8.17	8.36	6.44	8.52	8.11	11.31	11.84	12.71	13.07
EOM	12.22	10.99	11.19	8.53	8.19	6.50	8.55	9.24	11.44	12.11	12.82	13.14

WTR YR 1980 MEAN 10.36 HIGH 5.88 MAR 21 LOW 13.14 SEP 29 AND OTHERS

ONSLOW COUNTY

344425077272501. Local number, NC-52.
LOCATION.--Lat 34°44'25", long 77°27'25", Hydrologic Unit 03030001, at Camp Geiger, near Jacksonville. Owner: U.S. Marine Corps.
AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 18 in (0.46 m), depth 68 ft (20.7 m), drilled to 70 ft (21.3 m), cased to 23 ft (7.0 m).
DATUM.--Land-surface datum is 24.45 ft (7.452 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 1.90 ft (0.58 m) above land-surface datum.
PERIOD OF RECORD.--January 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.97 ft (0.60 m) below land-surface datum, Jan. 26, 1978; lowest, 10.44 ft (3.18 m) below land-surface surface datum, Jan. 3, 1966.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.70	5.91	6.08	6.27	5.08	---	3.89	5.63	5.56	6.02	6.97	7.81
10	4.47	6.02	5.50	6.35	---	---	4.36	5.92	5.77	6.21	7.13	7.95
15	4.93	5.92	5.80	5.62	---	---	4.56	6.14	6.05	6.14	7.08	7.77
20	5.23	6.19	6.03	5.42	---	---	4.87	5.97	6.08	6.50	7.14	8.10
25	5.49	6.27	6.01	5.24	---	---	5.19	4.95	6.15	6.70	7.42	8.28
EOM	5.85	5.91	6.20	4.93	---	2.66	5.40	5.18	5.90	6.74	7.63	8.12

WTR YR 1980 MEAN 5.94 HIGH 2.66 MAR 31 LOW 8.36 SEP 27

ONSLOW COUNTY--Continued

344525077254501. Local number, NC-85.
LOCATION.--Lat 34°45'25", long 77°25'45", Hydrologic Unit 03030001, at Jacksonville. Owner: Carolina Power and Light Company.
AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in (0.20 m), depth 106 ft (32.3 m), cased to 106 ft (32.3 m).
DATUM.--Altitude of land-surface datum is 20 ft (6 m). Measuring point: Top of instrument shelf, 3.20 ft (0.98 m) above land-surface datum.
PERIOD OF RECORD.--January 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.86 ft (2.09 m) below land-surface datum, June 10, 1964; lowest, 21.76 ft (6.63 m) below land-surface datum, June 21, 1970.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.82	12.54	12.69	12.61	13.27	12.97	12.44	12.04	13.48	14.82	15.67	16.31
10	12.80	12.68	12.76	12.99	13.11	12.77	12.43	12.14	13.49	15.03	15.97	15.91
15	12.84	12.76	12.90	12.97	12.79	13.20	11.96	12.60	14.07	14.89	16.11	15.78
20	12.23	12.67	12.94	13.33	12.70	12.59	12.01	12.46	14.29	15.43	15.92	15.80
25	12.44	12.29	12.38	12.84	12.27	12.01	12.06	12.44	14.11	15.43	15.93	16.16
EOM	12.73	12.26	12.35	12.84	12.56	12.06	12.07	13.40	14.31	15.45	15.97	15.72

WTR YR 1980 MEAN 13.49 HIGH 11.93 MAR 27 LOW 16.36 SEP 26

ORANGE COUNTY

355522079043001. Local number, NC-126.
LOCATION.--Lat 35°55'22", long 79°04'30", Hydrologic Unit 03030002, Chapel Hill. Owner: Chi Psi Fraternity.
AQUIFER.--Weathered granite of Paleozoic age.
WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in (0.91 m), depth 48 ft (14.6 m), lined with rock.
DATUM.--Land-surface datum is 511.50 ft (155.905 m) National Geodetic Vertical Datum of 1929. Measuring point: gage pointer, 3.15 ft (0.96 m) above land-surface datum.
PERIOD OF RECORD.--August 1938 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 36.43 ft (11.10 m) below land-surface datum, May 9, 1960; lowest measured, dry, Oct. 11 to Dec. 31, 1940.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 15	41.16	Dec. 18	40.56	Feb. 20	41.62	Apr. 1	40.36	June 1	39.48	July 24	39.00
Oct. 22	41.17	Jan. 2	41.06	Feb. 26	41.46	Apr. 9	39.95	June 11	39.45	Aug. 7	39.10
Oct. 29	41.30	Jan. 8	41.79	Mar. 6	41.26	Apr. 15	39.80	June 23	39.50	Aug. 15	39.30
Nov. 7	42.27	Jan. 29	41.60	Mar. 17	41.08	Apr. 29	39.62	July 9	39.06	Sept. 3	40.06
Nov. 20	42.61	Feb. 6	41.60	Mar. 25	40.60	May 27	40.56	July 17	39.00	Sept. 10	39.92
Dec. 11	43.06										

PASQUOTANK COUNTY

361833076173001. Local number, NC-86.
LOCATION.--Lat 36°18'33", long 76°17'30", Hydrologic Unit 03010205, Elizabeth City. Owner: C. T. Winslow.
AQUIFER.--Sands of post-Miocene age.
WELL CHARACTERISTICS.--Dug observation water-table well, diameter 18 in (0.46 m), depth 8 ft (2.4 m), lined with tile.
DATUM.--Land-surface datum is 12.53 ft (3.819 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 3.14 ft (0.96 m) above land-surface datum. Measuring point changed from 2.13 ft (0.65 m) above land-surface datum July 12, 1978.
PERIOD OF RECORD.--June 1935 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.70 ft (0.52 m) above land-surface datum, Feb. 28, 1968; lowest, 8.00 ft (2.44 m) below land-surface datum, Dec. 21, 1943.

WATER LEVEL, IN FEET ABOVE OR BELOW (-) LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	.70	-0.15	-0.15	.80	-0.05	.88	.25	-0.89	-2.38	-3.41	-4.25	-4.94
10	-0.18	-0.44	.05	.75	.89	.78	-0.35	-1.31	-2.67	-3.64	-4.34	-5.03
15	.07	.65	.46	.91	.89	.42	-0.21	-1.65	-2.96	-3.81	-4.43	-5.13
20	-0.39	-0.05	-0.12	.79	.88	---	-0.71	-1.56	-3.27	-3.87	-4.53	-5.24
25	-0.55	-0.32	.46	.75	.71	---	-0.98	-1.17	-3.51	-4.01	-4.68	-5.31
EOM	-0.94	.29	-0.27	.36	.38	---	-0.67	-1.95	-3.52	-4.13	-4.82	-5.35

WTR YR 1980 MEAN -1.43 MAX 1.06 MAR 6 MIN -5.35 SEP 28 AND OTHERS

PASQUOTANK COUNTY--Continued

361556076102402. Local number, NC-141.
LOCATION.--Lat 36°15'56", long 76°10'24", Hydrologic Unit 03010205, U.S. Coast Guard Air Base, near Elizabeth City. Owner: U.S. Coast Guard.
AQUIFER.--Yorktown Formation of Miocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 3 in (0.08 m), depth 64 ft (19.4 m).
DATUM.--Land-surface datum is 8.59 ft (2.618 m) National Geodetic Vertical Datum of 1929. Measuring Point: Top of instrument shelf, 0.93 ft (0.28 m) above land-surface datum. Measuring point changed from 1.50 ft (0.46 m) below land-surface datum Mar. 13, 1979.
PERIOD OF RECORD.--June 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 5.24 ft (1.57 m) below land-surface datum, Mar. 7-8, 1979; lowest recorded, 8.41 ft (2.56 m), below land-surface datum, Aug. 23, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.49	6.84	6.65	---	6.61	6.33	5.81	6.19	7.08	7.40	7.84	8.26
10	6.03	6.65	---	6.02	6.32	5.83	6.02	6.29	7.09	7.62	8.02	8.31
15	6.43	6.46	---	5.90	6.02	6.22	5.92	6.64	7.31	7.74	7.85	8.27
20	6.58	6.40	---	5.65	5.78	5.89	6.27	6.65	7.44	7.72	8.05	8.37
25	6.64	6.60	---	5.52	5.95	6.01	6.53	6.72	7.44	7.90	8.22	8.32
EOM	6.93	6.37	---	6.21	6.01	5.66	5.97	6.80	7.34	7.92	8.05	8.25

WTR YR 1980 MEAN 6.82 HIGH 5.38 OCT 4 LOW 8.41 AUG 23

PENDER COUNTY

342500077553001. Local number, NC-26.
LOCATION.--Lat 34°25'00", long 77°55'30", Hydrologic Unit 03030007, Rocky Point. Owner: Arvida Farms.
AQUIFER.--Pee Dee Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in (0.15 m), depth 141 ft (43.0 m), cased to 141 ft (43.0 m).
DATUM.--Altitude of land-surface datum is 20 ft (6 m). Measuring point: Top of casing, 1.00 ft (0.30 m) above land-surface datum.
PERIOD OF RECORD.--December 1964 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.97 ft (0.30 m) below land-surface datum, May 14, 15, 1966, Jan. 16, 1975; lowest, 6.25 ft (1.91 m) below land-surface datum, May 5, 1966.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.40	2.44	2.06	2.10	1.57	1.79	1.47	2.32	2.37	2.70	1.96	2.53
10	1.62	2.48	1.79	2.05	1.58	1.30	1.72	2.43	2.54	2.39	1.96	2.70
15	1.91	2.22	1.82	1.66	1.52	1.24	1.89	2.56	2.74	2.30	2.02	2.57
20	2.10	2.19	1.91	1.61	1.68	1.33	1.96	2.68	2.91	2.44	2.10	2.08
25	2.24	2.24	2.00	1.59	1.77	1.41	2.08	2.57	3.07	2.56	2.19	1.88
EOM	2.38	1.98	2.06	1.54	1.85	1.38	2.22	2.27	2.84	1.93	2.37	2.00

WTR YR 1980 MEAN 2.07 HIGH 1.24 MAR 14 AND OTHERS LOW 3.07 JUN 25

PITT COUNTY

353352077150101. Local number, PI-527.
LOCATION.--Lat 35°33'52", long 77°15'01", Hydrologic Unit 03020103, at Galloway Crossroads. Owner: U.S. Geological Survey.
AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 6 in (0.15 m), depth 14.6 ft (14.45 m), cased to 9.6 ft (2.93 m).
DATUM.--Measuring point: Top of casing, 28.43 ft (8.665 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).
REMARKS.--During most summers, water levels affected for short periods by nearby pumping used for irrigation of row crops.
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 25.54 ft (7.78 m) NGVD, May 5, 1978; lowest, 18.73 ft (5.71 m) NGVD, July 22, 1980.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.48	22.30	22.62	22.60	22.80	22.94	23.11	22.74	22.14	21.85	22.03	21.68
10	22.29	22.26	22.60	22.75	23.18	23.51	22.94	22.55	21.99	21.48	21.83	21.56
15	22.30	22.62	22.63	23.03	23.14	23.29	22.97	22.42	21.95	21.46	21.97	21.45
20	22.21	22.54	22.57	22.95	22.98	23.38	22.74	22.53	22.06	20.82	22.18	21.40
25	22.19	22.51	22.63	23.00	22.87	23.07	22.65	22.71	21.85	21.95	21.85	21.43
EOM	22.17	22.71	22.52	22.93	22.75	23.71	23.06	22.40	22.03	21.87	21.60	21.88

WTR YR 1980 MEAN 22.43 MAX 23.79 MAR 8 MIN 19.48 JUL 22

PITT COUNTY--Continued

353350077150101. Local number, PI-528.
LOCATION.--Lat 35°33'50", long 77°15'01", Hydrologic Unit 03020103, at Galloway Crossroads. Owner: U.S. Geological Survey.
AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 6 in (0.15 m), depth 14.2 ft (4.33 m), cased to 9.2 ft (2.80 m).
DATUM.--Measuring point: Top of casing, 35.96 ft (10.961 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).
REMARKS.--During most summers, water levels affected for short periods by nearby pumping used for irrigation of row crops.
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 31.82 ft (9.70 m) NGVD, Nov. 6-7, 1977; lowest, 25.9[illegible] ft (7.90 m) NGVD, Aug.15-17, 1977.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	28.14	27.40	28.08	27.78	28.32	28.49	28.80	28.17	27.77	27.19	26.98	26.75
10	27.92	27.38	28.03	28.25	29.38	29.98	28.48	28.00	27.70	26.90	27.04	26.69
15	27.79	28.27	28.03	28.81	29.15	29.35	28.39	27.80	27.65	26.63	27.07	26.61
20	27.70	28.02	27.88	28.70	28.65	29.40	28.19	27.78	27.41	26.38	27.05	26.56
25	27.59	27.97	27.95	28.85	28.46	28.74	28.08	28.13	27.25	26.39	26.90	26.58
EOM	27.46	28.30	27.79	28.60	28.21	29.65	28.42	27.90	27.28	26.58	26.77	26.71

WTR YR 1980 MEAN 27.86 MAX 30.38 MAR 8 MIN 26.18 JUL 22

353304077151401. Local number, PI-529.
LOCATION.--Lat 35°33'04", long 77°15'14", Hydrologic Unit 03020103, at Galloway Crossroads. Owner: U.S. Geological Survey.
AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 6 in (0.15 m), depth 14.4 ft (4.39 m), cased to 9.4 ft (2.87 m).
DATUM.--Measuring point: Top of casing, 49.93 ft (15.219 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 47.57 ft (14.50 m) NGVD, Jan. 26, 1978 and Mar. 8, 1980; lowest, 41.34 ft (12.60 m) NGVD, Nov. 6-7, 1978.

IONAL DATA

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	46.18	44.92	---	45.57	46.13	46.46	46.54	46.22	45.57	44.16	44.05	---
10	45.82	44.85	---	46.06	46.91	47.19	46.21	45.86	45.32	43.85	43.63	---
15	45.55	45.89	---	46.62	46.80	46.79	46.66	45.66	44.79	43.62	43.75	---
20	45.42	45.63	---	46.42	46.43	46.93	45.99	45.81	44.51	43.28	44.08	---
25	45.26	45.49	---	46.54	46.27	46.56	45.76	46.51	44.27	44.24	43.37	---
EOM	45.00	46.07	---	46.35	46.09	47.41	46.86	45.88	44.59	43.59	43.03	---

WTR YR 1980 MEAN 45.51 MAX 47.51 MAR 8 MIN 42.90 SEP 3

353255077150601. Local number, PI-530.
Location.--Lat 35°32'55", long 77°15'06", Hydrologic Unit 03020103, at Galloway Crossroads. Owner: U.S. Geological Survey.
AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 21.1 ft (6.43 m), cased to 16.1 ft (4.91 m).
DATUM.--Measuring point: Top of casing, 51.92 ft (15.825 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service). Top of casing raised from 51.12 ft (15.581 m) NGVD July 11, 1979.
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 50.75 ft (15.47 m) NGVD, Mar. 24, 1977; lowest measured, 43.00 ft (13.11 m) NGVD, Nov. 15, 1978.

WATER LEVEL, IN FEET NGVD, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 2	48.36	Feb. 13	50.32	May 8	49.47	June 17	46.61	July 29	46.57	Sept. 5	44.75
Jan. 2	48.39	Apr. 17	50.05								

353232077154301. Local number, PI-531.
LOCATION.--Lat 35°32'32", long 77°15'43", Hydrologic Unit 03020103, at Galloway Crossroads. Owner: U.S. Geological Survey.
AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 20.4 ft (6.22 m) cased to 15.4 ft (4.69 m).
DATUM.--Measuring point: Top of casing, 57.69 ft (17.583 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 55.87 ft (17.03 m) NGVD, May 2, 1978; lowest measured, 48.96 ft (14.92 m) NGVD, Nov. 15, 1978.

WATER LEVEL, IN FEET NGVD, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 2	54.52	Jan. 3	54.83	Mar. 24	55.74	May 8	55.58	July 29	54.63	Sept. 5	51.36
Nov. 6	54.24	Feb. 13	55.41	Apr. 17	55.84	June 17	54.66				

353219077153801. Local number, PI-532.
LOCATION.--Lat 35°32'19", long 77°15'38", Hydrologic Unit 03020103, at Galloway Crossroads. Owner: U.S. Geological Survey.
AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 6 in (0.15 m), depth 10.9 ft (3.32 m), cased to 5.9 ft (1.80 m).
DATUM.--Measuring point: Top of casing, 57.31 ft (17.468 m) National Geodetic Vertical Datum of 1929, (levels by Soil Conservation Service).
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 55.11 ft (16.80 m) NGVD, May 4, 1978; lowest, 47.43 ft (14.46 m) NGVD, Nov. 6-8, 1978.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	53.07			52.51	53.27	53.80	53.46	52.86	51.76	50.33	50.60	49.02
10	52.57			53.43	54.13	53.95	53.07	52.30	51.31	49.96	49.89	48.66
15	52.24			53.81	53.75	53.78	53.23	51.85	50.94	49.59	50.17	48.43
20	51.95			53.64	53.46	53.86	52.72	51.99	50.73	49.23	50.68	48.22
25	---			53.65	53.31	53.53	52.30	53.20	50.47	51.00	49.67	48.32
EOM	---			53.47	53.15	54.27	53.48	52.38	50.60	50.26	48.95	48.50

WTR YR 1980 MEAN 51.82 MAX 54.54 MAR 6 MIN 48.08 SEP 24

353208077153801. Local number, PI-533.
LOCATION.--Lat 35°32'08", long 77°15'38", Hydrologic Unit 03020103, at Galloway Crossroads. Owner: U.S. Geological Survey.
AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 6 in (0.15 m), depth 9.3 ft (2.83 m), cased to 4.3 ft (1.31 m).
DATUM.--Measuring point: Top of casing, 53.61 ft (16.340 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 52.03 ft (15.86 m) NGVD, Feb. 25, 1979; lowest, 45.93 ft (14.00 m) NGVD, Nov. 6, 1978.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	50.01	48.65	49.81	49.48	50.06	50.44	50.39	49.72	49.12	47.99	47.98	47.11
10	49.55	48.60	49.86	50.20	51.07	51.10	49.89	49.34	48.84	47.61	47.40	46.84
15	49.26	50.25	49.97	50.83	50.77	50.86	50.14	49.11	48.55	47.85	47.81	46.60
20	49.07	49.69	49.66	50.58	50.29	50.80	49.59	49.37	48.31	47.45	48.21	46.44
25	48.91	49.42	49.66	50.64	50.07	50.40	49.36	49.92	47.97	48.29	47.45	46.83
EOM	48.67	50.34	49.42	50.30	49.93	51.43	50.17	49.46	48.69	47.64	46.91	46.87

WTR YR 1980 MEAN 49.21 MAX 51.62 MAR 7 MIN 46.32 SEP 24

PITT COUNTY--Continued

353043077150001. Local number, PI-534.
LOCATION.--Lat 35°30'43", long 77°15'00", Hydrologic Unit 03020103, at Blackjack. Owner: U.S. Geological Survey.
AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 6 in (0.15 m), depth 9.6 ft (2.93 m), cased to 4.6 ft (1.40 m).
DATUM.--Measuring point: Top of casing, 35.84 ft (10.924 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service). Top of casing raised from 34.01 ft (10.366 m) NGVD Mar. 19, 1979.
PERIOD OF RECORD.--January 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 34.02 ft (10.37 m) NGVD, June 11, 1979; lowest, 27.79 ft (8.47 m) NGVD, Sept. 3, 1980.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	31.63	---			---	32.37	30.97	30.45	---	28.95	28.58	28.88
10	---	30.70			---	32.27	30.51	29.96	---	28.58	28.39	29.59
15	---	31.68			---	31.96	32.04	29.65	---	28.50	28.30	29.22
20	---	---			---	32.05	30.37	29.64	28.80	28.24	28.31	28.92
25	---	---			---	32.03	30.35	30.98	28.65	28.70	28.25	28.69
EOM	---	---			31.35	32.36	31.89	30.05	29.05	28.57	27.91	28.83

WTR YR 1980 MEAN 29.92 MAX 32.47 MAR 8 MIN 27.84 SEP 2

SAMPSON COUNTY

350030078194001. Local number, NC-24.
LOCATION.--Lat 35°00'30", long 78°19'40", Hydrologic Unit 03030006, at Clinton. Owner: City of Clinton.
AQUIFER.--Tuscaloosa Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 314 ft (95.7 m), multi-screened, top of screens 257 and 307 ft (78.3 and 93.6 m). Originally drilled to 385 ft (117.3 m).
DATUM.--Land-surface datum is 157.5 ft (48.01 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.40 ft (0.12 m) above land-surface datum.
PERIOD OF RECORD.--May 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.83 ft (5.43 m) below land-surface datum, Oct. 13, 1964; lowest, 28.69 ft (8.74 m) below land-surface datum, Oct. 15, 1976.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	23.67	24.34	---	24.83	24.69	24.12	22.36	22.62	23.33	24.02	25.08	25.81
10	23.77	24.41	---	24.83	24.47	23.96	22.35	22.77	23.37	24.17	25.03	25.81
15	23.89	24.30	---	24.76	24.35	23.77	22.30	23.18	23.58	24.39	25.28	25.95
20	24.00	24.44	24.72	24.76	24.30	23.42	22.32	23.00	23.67	24.52	25.49	25.96
25	24.09	24.50	24.70	24.72	24.27	23.24	22.47	22.77	23.77	24.41	25.71	26.07
EOM	24.35	---	24.79	24.67	24.31	22.66	22.45	23.02	23.88	24.84	25.81	26.01

WTR YR 1980 MEAN 24.16 HIGH 22.24 APR 9 LOW 26.15 SEP 28

TRANSYLVANIA COUNTY

351808082374301. Local number, NC-127.
LOCATION.--Lat 35°18'08", long 82°37'43", Hydrologic Unit 06010105, Blantyre. Owner: Neal Hawkins.
AQUIFER.--Granite of Paleozoic age.
WELL CHARACTERISTICS.--Dug observation water-table well, diameter 5 ft (1.5 m), depth 48 ft (14.6 m), lined with rock.
DATUM.--Land-surface datum is 2,146.39 ft (654.220 m) National Geodetic Vertical Datum of 1929. Measuring point: Nail in 4" x 4" stringer, 1.00 ft (0.30 m) above land-surface datum.
PERIOD OF RECORD.--July 1932 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.90 ft (7.59 m) below land-surface datum, May 19, 1980; lowest, 41.32 ft (12.59 m) below land-surface datum, Jan. 2, 1945, Dec. 25-27, 1954, Jan. 2, 3, 7, 1955.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 1	28.35	Dec. 3	26.78	Feb. 11	27.57	Apr. 8	26.62	June 7	25.10	Aug. 4	27.00
Oct. 3	27.89	Dec. 10	28.69	Feb. 18	27.19	Apr. 14	27.34	June 15	25.20	Aug. 10	27.00
Oct. 8	27.92	Dec. 17	26.45	Feb. 25	27.03	Apr. 21	26.30	June 18	25.30	Aug. 17	27.70
Oct. 15	27.60	Dec. 20	26.45	Mar. 4	27.25	Apr. 28	27.07	June 22	25.40	Aug. 24	28.30
Oct. 22	27.14	Dec. 24	26.39	Mar. 5	27.65	May 5	25.35	June 29	25.20	Aug. 31	29.00
Oct. 29	26.94	Jan. 7	26.63	Mar. 10	27.57	May 12	26.30	July 6	26.00	Sept. 7	29.20
Nov. 5	26.76	Jan. 14	27.04	Mar. 17	28.04	May 15	25.18	July 12	26.10	Sept. 14	29.50
Nov. 12	26.70	Jan. 16	27.10	Mar. 24	26.92	May 19	24.90	July 20	26.70	Sept. 17	29.83
Nov. 16	26.93	Jan. 21	27.21	Mar. 31	27.29	May 23	25.20	July 25	27.10	Sept. 22	30.10
Nov. 19	26.95	Jan. 28	27.25	Apr. 7	27.43	June 2	25.20	July 31	27.49	Sept. 28	30.20
Nov. 26	26.61	Feb. 4	27.23								

WASHINGTON COUNTY

354834076255001. Local number, NC-65.
LOCATION.--Lat 35°48'34", long 76°25'50", Hydrologic Unit 03010205, near Creswell. Owner: M. V. Cahoon.
AQUIFER.--Castle Hayne Limestone Formation of middle and late Eocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2 in (0.05 m), depth 228 ft (69.5 m), drilled to 249 ft (75.9 m), cased to 249 ft (75.9 m).
DATUM.--Altitude of land-surface datum is 6 ft (2 m). Measuring point: Top of instrument shelf, 2.80 ft (0.85 m) above land-surface datum.
PERIOD OF RECORD.--March 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.29 ft (0.09 m) above land-surface datum, May 3, 1972; lowest measured, 3.76 ft (1.15 m) below land-surface datum, Sept. 2, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 17	2.85	Dec. 18	2.91	Feb. 5	2.69	Mar. 31	2.36	June 2	2.68	Aug. 4	3.13
Nov. 16	2.79	Jan. 15	2.72	Mar. 13	2.46	May 1	2.46	June 30	2.68	Sept. 2	3.76

354347076313301. Local number, WS-87.
LOCATION.--Lat 35°43'47", long 76°31'33", Hydrologic Unit 03020104, near Wenona. Owner: U.S. Geological Survey.
AQUIFER.--Marine sands and clays of post-miocene age.
WELL CHARACTERISTICS.--Driven observation water-table well, diameter 3 in (0.08 m), depth 20 ft (6.10 m), cased to 16 ft (4.88 m), screen from 16 ft (4.88 m) to 20 ft (6.10 m).
DATUM.--Altitude of gage is 8 ft (2.4 m), from topographic map. Measuring point: Mark at top of casing, 16.49 ft (5.03 m). Top of casing is 1.9 ft (0.58 m) above land surface.
REMARKS.--Also known as Pungo National Wildlife Refuge, Deep Well No. 3.
PERIOD OF RECORD.--April 1976 to December 1979 (discontinued).
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.28 ft (3.74 m) approximate NGVD, May 26, 1977; lowest, 8.19 ft (2.50 m) approximate NGVD, Nov. 7-8, 1978.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.13	9.49	9.98									
10	9.99	9.45	10.26									
15	9.86	9.56	10.31									
20	9.75	9.57	10.33									
25	9.69	9.49	10.35									
EOM	9.54	9.97	10.33									

WTR YR 1980 MEAN 9.89 MAX 10.35 DEC 25 MIN 9.42 NOV 11

WASHINGTON COUNTY--Continued

354347076313302. Local number, WS-88.
LOCATION.--Lat 35°43'47", long 76°31'33", Hydrologic Unit 03020104, near Wenona. Owner: U.S. Geological Survey.
AQUIFER.--Stratified deposits undifferentiated of Holocene Age.
WELL CHARACTERISTICS.--Driven observation water-table well, diameter 3 in (0.08 m), depth 8 ft (2.44 m), cased to 4 ft (1.22 m), screen from 4 ft (1.22 m) to 8 ft (2.44 m).
DATUM.--Altitude of gage is 8 ft (2.4 m), from topographic map. Measuring point: three filed notches at top of casing, 15.66 ft (4.77 m). Top of casing is 1.1 ft (0.34 m) above land surface.
REMARKS.--Also known as Pungo National Wildlife Refuge, Shallow Well No. 3.
PERIOD OF RECORD.--October 1978 to December 1979 (discontinued).
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.92 ft (3.94 m) approximate NGVD, Feb. 26, 1979; lowest, 8.85 ft (2.70 m) approximate NGVD, Nov. 8, 1978.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.40	10.06	10.14									
10	10.40	10.00	10.96									
15	10.36	9.98	11.03									
20	10.32	9.99	11.10									
25	10.25	9.93	11.11									
EOM	10.14	10.00	11.10									

WTR YR 1980 MEAN 10.40 MAX 11.11 DEC 22 AND OTHERS MIN 9.92 NOV 26

354324076420202. Local number, WS-89.
LOCATION.--Lat 35°43'24", long 76°42'02", Hydrologic Unit 03020104, near Wenona. Owner: U.S. Geological Survey.
AQUIFER.--Marine sands and clays of post-Miocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 3 in (0.08 m), depth 14.0 ft (4.27 m), cased to 10 ft (3.05 m), screen from 10 ft (3.05 m) to 14 ft (4.27 m).
DATUM.--Altitude of gage is 18 ft (5.5 m), from topographic map. Measuring point: Mark at top of casing, 20.40 ft (6.22 m). Top of casing is 2.4 ft (0.73 m) above land surface.
REMARKS.--Also known as McMullen Farm Well on No. 8 Canal near Wenona.
PERIOD OF RECORD.--October 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.15 ft (4.62 m) approximate NGVD, Mar. 9, 10, 1980; lowest, 10.40 ft (3.17 m) approximate NGVD, Nov. 1, 1978 (revised).

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.28	12.43	14.51	14.41	14.60	14.72	14.89	14.71	13.68	12.23	12.00	11.20
10	12.98	12.86	14.55	14.73	14.71	15.13	14.74	14.40	13.28	11.86	12.21	11.07
15	12.51	13.79	14.57	14.95	14.90	14.88	14.76	14.10	12.96	11.62	11.78	10.97
20	12.19	14.20	14.60	14.88	14.83	14.80	14.70	13.89	12.63	11.39	11.83	10.83
25	12.19	14.09	14.54	14.90	14.72	14.84	14.56	14.31	12.21	11.82	11.96	10.77
EOM	12.09	14.65	14.47	14.73	14.83	14.98	14.86	14.05	12.62	12.38	11.46	10.76

WTR YR 1980 MEAN 13.48 MAX 15.14 MAR 9 MIN 10.69 SEP 28

354410076464901. Local number, WS-90.
LOCATION.--Lat 35°44'10", long 76°46'49", Hydrologic Unit 03020104, near Hoke. Owner: U.S. Geological Survey.
AQUIFER.--Marine sands and clays of post-Miocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 3 in (0.08 m), depth 15.0 ft (4.57 m), cased to 11 ft (3.35 m), screen from 11 ft (3.35 m) to 15 ft (4.57 m).
DATUM.--Altitude of gage is 35 ft (10.7 m), from topographic map. Measuring point: Mark at top of casing, 37.30 ft (11.37 m). Top of casing is 2.30 ft (0.70 m) above land surface.
REMARKS.--Also known as Vernon Howell Well near Hoke.
PERIOD OF RECORD.--November 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 33.50 ft (10.21 m) approximate NGVD, May 26-27, 1979; lowest, 27.38 ft (8.34 m) approximate NGVD, Nov. 12-23, 1978.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	32.73	---		33.23	---	---		---	31.86	29.43	28.84	28.24
10	32.79	---		33.38	---	---		32.94	31.42	29.10	28.83	28.08
15	32.69	---		---	33.33	33.37		32.60	30.95	28.78	28.70	27.88
20	32.48	32.89		---	33.33	33.37		32.26	30.57	28.48	28.64	27.71
25	32.36	---		---	33.30	---		32.30	30.13	28.46	28.60	27.55
EOM	---	---		---	---	---		32.23	29.83	28.69	28.41	27.44

WTR YR 1980 MEAN 30.65 MAX 33.49 JAN 14 MIN 27.43 SEP 29

WAYNE COUNTY

352006077581001. Local number, NC-25.
LOCATION.--Lat 35°20'06", long 77°58'10", Hydrologic Unit 03020202 (revised), Seymour Johnson AFB, Goldsboro. Owner: U.S. Air Force.
AQUIFER.--Tuscaloosa Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 87 ft (26.5 m), cased to 31 ft (9.4 m).
DATUM.--Altitude of land-surface datum is 70 ft (21 m). Measuring point: Top of casing, 0.50 ft (0.15 m) above land-surface datum.
REMARKS.--Water levels affected by nearby pumping.
PERIOD OF RECORD.--August 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.24 ft (0.07 m) above land-surface datum, Jan. 29, 1978; lowest measured, 22.57 ft (6.88 m) below land-surface datum, Nov. 21, 1973.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.56	9.00	7.73	9.59	7.86	8.82	4.93	8.40	10.76	11.47	11.81	12.51
10	7.21	8.71	8.32	9.21	8.03	7.44	6.10	9.56	11.07	11.29	12.60	12.47
15	6.44	8.54	8.70	8.67	7.75	6.74	7.10	9.91	11.34	11.55	12.88	12.43
20	7.41	7.60	8.80	8.27	7.76	6.54	7.23	9.73	11.53	11.88	12.52	12.38
25	8.53	7.44	8.56	7.83	8.28	5.84	7.75	9.30	11.45	11.82	12.57	11.63
EOM	8.74	7.83	8.83	7.12	8.42	4.84	8.00	9.87	10.90	11.78	12.78	11.50

WTR YR 1980 MEAN 9.25 HIGH 4.84 MAR 31 LOW 13.18 AUG 18

351849078163901. Local number, WA-154.
LOCATION.--Lat 35°18'49", long 78°16'39", Hydrologic Unit 03020201, near Grantham. Owner: U.S. Geological Survey.
AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 3 in (0.08 m), depth 10.4 ft (3.17 m), cased to 10.4 ft (3.17 m).
DATUM.--Altitude of land-surface datum is 190 ft (58 m). Measuring point: File cut on top of casing, 1.80 ft (0.55 m) above land-surface datum.
PERIOD OF RECORD.--February 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.43 ft (0.13 m) below land-surface datum, March 7, 8, 1980; lowest, 7.59 ft (2.31 m) below land-surface datum, Sept. 24, 25, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5				---	1.39	1.11		---	4.21	3.31	5.74	7.56
10				---	1.13	.65		---	4.58	3.73	6.12	7.46
15				---	.69	---		---	5.00	3.93	6.42	7.41
20				---	1.04	---		3.38	5.23	4.52	6.72	7.52
25				---	.97	---		3.26	5.46	4.85	7.00	7.59
EOM				1.41	1.07	---		3.74	3.07	5.27	7.33	6.67

WTR YR 1980 MEAN 4.33 HIGH .43 MAR 7 LOW 7.59 SEP 25

APPENDIX

PARAMETER CODE	FIRST LINE - NEW TERMINOLOGY SECOND LINE - OLD TERMINOLOGY
39332	ALDRIN, SUSPENDED TOTAL (UG/L)
39332	ALDRIN, SUSPENDED (UG/L)
01505	ALPHA, SUSPENDED TOTAL (PCI/L)
01505	ALPHA, SUSPENDED (PCI/L)
01506	ALPHA, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
01506	ALPHA, SUSPENDED, COUNTING ERROR (PCI/L)
01105	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)
01105	ALUMINUM, TOTAL (UG/L AS AL)
01107	ALUMINUM, SUSPENDED RECOVERABLE (UG/L AS AL)
01107	ALUMINUM, SUSPENDED (UG/L AS AL)
01108	ALUMINUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS AL)
01108	ALUMINUM, TOTAL IN BOTTOM MATERIAL (UG/G AS AL)
01096	ANTIMONY, SUSPENDED TOTAL (UG/L AS SB)
01096	ANTIMONY, SUSPENDED (UG/L AS SB)
39502	AROCLOR, SUSPENDED TOTAL, 1248 PCB SERIES (UG/L)
39502	AROCLOR, SUSPENDED, 1248 PCB SERIES (UG/L)
39506	AROCLOR, SUSPENDED TOTAL, 1254 PCB SERIES (UG/L)
39506	AROCLOR, SUSPENDED, 1254 PCB SERIES (UG/L)
39510	AROCLOR, SUSPENDED TOTAL, 1260 PCB SERIES (UG/L)
39510	AROCLOR, SUSPENDED, 1260 PCB SERIES (UG/L)
01001	ARSENIC, SUSPENDED TOTAL (UG/L AS AS)
01001	ARSENIC, SUSPENDED (UG/L AS AS)
01006	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)
01006	BARIUM, SUSPENDED (UG/L AS BA)
01007	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)
01007	BARIUM, TOTAL (UG/L AS BA)
01008	BARIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS BA)
01008	BARIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS BA)
01011	BERYLLIUM, SUSPENDED RECOVERABLE (UG/L AS BE)
01011	BERYLLIUM, SUSPENDED (UG/L AS BE)
01012	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)
01012	BERYLLIUM, TOTAL (UG/L AS BE)
01013	BERYLLIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS BE)
01013	BERYLLIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS BE)
03505	BETA, SUSPENDED TOTAL (PCI/L)
03505	BETA, SUSPENDED (PCI/L)
03506	BETA, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
03506	BETA, SUSPENDED, COUNTING ERROR (PCI/L)
01016	BISMUTH, SUSPENDED TOTAL (UG/L AS BI)
01016	BISMUTH, SUSPENDED (UG/L AS BI)
01021	BORON, SUSPENDED RECOVERABLE (UG/L AS B)
01021	BORON, SUSPENDED (UG/L AS B)
01022	BORON, TOTAL RECOVERABLE (UG/L AS B)
01022	BORON, TOTAL (UG/L AS B)
01023	BORON, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS B)
01023	BORON, TOTAL IN BOTTOM MATERIAL (UG/G AS B)
01026	CADMIUM, SUSPENDED RECOVERABLE (UG/L AS CD)
01026	CADMIUM, SUSPENDED (UG/L AS CD)
01027	CADMIUM, TOTAL RECOVERABLE (UG/L AS CD)
01027	CADMIUM, TOTAL (UG/L AS CD)
01028	CADMIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CD)
01028	CADMIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS CD)
00916	CALCIUM, TOTAL RECOVERABLE (MG/L AS CA)
00916	CALCIUM, TOTAL (MG/L AS CA)
07052	CALCIUM 45, SUSPENDED TOTAL (PCI/L)
07052	CALCIUM 45, SUSPENDED (PCI/L)

PARAMETER CODE	FIRST LINE - NEW TERMINOLOGY SECOND LINE - OLD TERMINOLOGY
07053	CALCIUM 45, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07053	CALCIUM 45, SUSPENDED, COUNTING ERROR (PCI/L)
00683	CARBON, ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00683	CARBON, ORGANIC, SUSPENDED (MG/L AS C)
00688	CARBON, INORGANIC, SUSPENDED TOTAL (MG/L AS C)
00688	CARBON, INORGANIC, SUSPENDED (MG/L AS C)
00689	CARBON, ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00689	CARBON, ORGANIC, SUSPENDED (MG/L AS C)
00694	CARBON, INORGANIC PLUS ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00694	CARBON, INORGANIC PLUS ORGANIC, SUSPENDED (MG/L AS C)
01116	CESIUM, SUSPENDED TOTAL (UG/L AS CS)
01116	CESIUM, SUSPENDED (UG/L AS CS)
28404	CESIUM 137, SUSPENDED TOTAL (PCI/L)
28404	CESIUM 137, SUSPENDED (PCI/L)
28405	CESIUM 137,SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
28405	CESIUM 137,SUSPENDED, COUNTING ERROR (PCI/L)
28412	CESIUM 134, SUSPENDED TOTAL (PCI/L)
28412	CESIUM 134, SUSPENDED (PCI/L)
28413	CESIUM 134, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
28413	CESIUM 134, SUSPENDED, COUNTING ERROR (PCI/L)
39353	CHLORDANE, SUSPENDED TOTAL (UG/L)
39353	CHLORDANE, SUSPENDED (UG/L)
01029	CHROMIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CR)
01029	CHROMIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS CR)
01031	CHROMIUM, SUSPENDED RECOVERABLE (UG/L AS CR)
01031	CHROMIUM, SUSPENDED (UG/L AS CR)
01034	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)
01034	CHROMIUM, TOTAL (UG/L AS CR)
01036	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)
01036	COBALT, SUSPENDED (UG/L AS CO)
01037	COBALT, TOTAL RECOVERABLE (UG/L AS CO)
01037	COBALT, TOTAL (UG/L AS CO)
01038	COBALT, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CO)
01038	COBALT, TOTAL IN BOTTOM MATERIAL (UG/G AS CO)
01041	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)
01041	COPPER, SUSPENDED (UG/L AS CU)
01042	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
01042	COPPER, TOTAL (UG/L AS CU)
01043	COPPER, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CU)
01043	COPPER, TOTAL IN BOTTOM MATERIAL (UG/G AS CU)
39362	DDD, SUSPENDED TOTAL (UG/L)
39362	DDD, SUSPENDED (UG/L)
39367	DDE, SUSPENDED TOTAL (UG/L)
39367	DDE, SUSPENDED (UG/L)
39372	DDT, SUSPENDED TOTAL (UG/L)
39372	DDT, SUSPENDED (UG/L)
39573	DIAZINON, SUSPENDED TOTAL (UG/L)
39573	DIAZINON, SUSPENDED (UG/L)
39382	DIELDRIN, SUSPENDED TOTAL (UG/L)
39382	DIELDRIN, SUSPENDED (UG/L)
39392	ENDRIN, SUSPENDED TOTAL (UG/L)
39392	ENDRIN, SUSPENDED (UG/L)
01121	GALLIUM, SUSPENDED TOTAL (UG/L AS GA)
01121	GALLIUM, SUSPENDED (UG/L AS GA)
01126	GERMANIUM, SUSPENDED TOTAL (UG/L AS GE)
01126	GERMANIUM, SUSPENDED (UG/L AS GE)

APPENDIX

PARAMETER CODE	FIRST LINE - NEW TERMINOLOGY SECOND LINE - OLD TERMINOLOGY
01516	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS U NATURAL)
01516	GROSS ALPHA RADIOACTIVITY, SUSPENDED (PCI/L AS U NATURAL)
01517	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS U NATURAL)
01517	GROSS ALPHA RADIOACTIVITY, SUSPENDED (PCI/G AS U NATURAL)
01518	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (UG/G AS U NATURAL)
01518	GROSS ALPHA RADIOACTIVITY, SUSPENDED (UG/G AS U NATURAL)
80040	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (UG/L AS U NATURAL)
80040	GROSS ALPHA RADIOACTIVITY, SUSPENDED (UG/L AS U NATURAL)
80060	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS SR/YT-90)
80060	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/L AS SR/YT-90)
03516	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS CS-137)
03516	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/L AS CS-137)
03517	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS SR/YT-90)
03517	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/G AS SR/YT-90)
03518	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS CS-137)
03518	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/G AS CS-137)
39412	HEPTACHLOR, SUSPENDED TOTAL (UG/L)
39412	HEPTACHLOR, SUSPENDED (UG/L)
39422	HEPTACHLOR EPOXIDE, SUSPENDED TOTAL (UG/L)
39422	HEPTACHLOR EPOXIDE, SUSPENDED (UG/L)
01044	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)
01044	IRON, SUSPENDED (UG/L AS FE)
01045	IRON, TOTAL RECOVERABLE (UG/L AS FE)
01045	IRON, TOTAL (UG/L AS FE)
01170	IRON, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS FE)
01170	IRON, TOTAL IN BOTTOM MATERIAL (UG/G AS FE)
07062	IRON 59, SUSPENDED TOTAL (PCI/L)
07062	IRON 59, SUSPENDED (PCI/L)
07063	IRON 59, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07063	IRON 59, SUSPENDED, COUNTING ERROR (PCI/L)
39432	ISODRIN, SUSPENDED TOTAL (UG/L)
39432	ISODRIN, SUSPENDED (UG/L)
01050	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)
01050	LEAD, SUSPENDED (UG/L AS PB)
01051	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
01051	LEAD, TOTAL (UG/L AS PB)
01052	LEAD, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS PB)
01052	LEAD, TOTAL IN BOTTOM MATERIAL (UG/G AS PB)
39342	LINDANE, SUSPENDED TOTAL (UG/L)
39342	LINDANE, SUSPENDED (UG/L)
01131	LITHIUM, SUSPENDED RECOVERABLE (UG/L AS LI)
01131	LITHIUM, SUSPENDED (UG/L AS LI)
01132	LITHIUM, TOTAL RECOVERABLE (UG/L AS LI)
01132	LITHIUM, TOTAL (UG/L AS LI)
00926	MAGNESIUM, SUSPENDED RECOVERABLE (MG/L AS MG)
00926	MAGNESIUM, SUSPENDED (MG/L AS MG)

APPENDIX

PARAMETER CODE	FIRST LINE - NEW TERMINOLOGY SECOND LINE - OLD TERMINOLOGY
00927	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)
00927	MAGNESIUM, TOTAL (MG/L AS MG)
39533	MALATHION, SUSPENDED TOTAL (UG/L)
39533	MALATHION, SUSPENDED (UG/L)
01053	MANGANESE, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS MN)
01053	MANGANESE, TOTAL IN BOTTOM MATERIAL (UG/G AS MN)
01054	MANGANESE, SUSPENDED RECOVERABLE (UG/L AS MN)
01054	MANGANESE, SUSPENDED (UG/L AS MN)
01055	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)
01055	MANGANESE, TOTAL (UG/L AS MN)
71895	MERCURY, SUSPENDED RECOVERABLE (UG/L AS HG)
71895	MERCURY, SUSPENDED (UG/L AS HG)
71900	MERCURY, TOTAL RECOVERABLE (UG/L AS HG)
71900	MERCURY, TOTAL (UG/L AS HG)
71921	MERCURY, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS HG)
71921	MERCURY, TOTAL IN BOTTOM MATERIAL (UG/G AS HG)
39603	METHYL PARATHION, SUSPENDED TOTAL (UG/L)
39603	METHYL PARATHION, SUSPENDED (UG/L)
39757	MIREX, SUSPENDED TOTAL (UG/L)
39757	MIREX, SUSPENDED (UG/L)
01061	MOLYBDENUM, SUSPENDED RECOVERABLE (UG/L AS MO)
01061	MOLYBDENUM, SUSPENDED (UG/L AS MO)
01062	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)
01062	MOLYBDENUM, TOTAL (UG/L AS MO)
01063	MOLYBDENUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS MO)
01063	MOLYBDENUM, TOTAL IN BOTTOM MATERIAL (UG/G AS MO)
01066	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)
01066	NICKEL, SUSPENDED (UG/L AS NI)
01067	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)
01067	NICKEL, TOTAL (UG/L AS NI)
01068	NICKEL, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS NI)
01068	NICKEL, TOTAL IN BOTTOM MATERIAL (UG/G AS NI)
00623	NITROGEN, AMMONIA PLUS ORGANIC, DISSOLVED (MG/L AS N)
00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)
00624	NITROGEN, AMMONIA PLUS ORGANIC, SUSPENDED TOTAL (MG/L AS N)
00624	NITROGEN, KJELDAHL, SUSPENDED (MG/L AS N)
00625	NITROGEN, AMMONIA PLUS ORGANIC, TOTAL (MG/L AS N)
00625	NITROGEN, KJELDAHL, TOTAL (MG/L AS N)
00626	NITROGEN, AMMONIA PLUS ORGANIC, TOTAL IN BOTTOM MATERIAL, DRY WT (MG/KG AS N)
00626	NITROGEN, KJELDAHL, TOTAL IN BOTTOM MATERIAL, DRY WT (MG/KG AS N)
39543	PARATHION, SUSPENDED TOTAL (UG/L)
39543	PARATHION, SUSPENDED (UG/L)
39518	PCB, SUSPENDED TOTAL (UG/L)
39518	PCB, SUSPENDED (UG/L)
09505	RADIUM 226, SUSPENDED TOTAL (PCI/L)
09505	RADIUM 226, SUSPENDED (PCI/L)
07082	RHODAMINE WT, SUSPENDED TOTAL (UG/L)
07082	RHODAMINE WT, SUSPENDED (UG/L)
01136	RUBIDIUM, SUSPENDED TOTAL (UG/L AS RB)
01136	RUBIDIUM, SUSPENDED (UG/L AS RB)
29633	SCANDIUM 46, SUSPENDED TOTAL (PCI/L)
29633	SCANDIUM 46, SUSPENDED (PCI/L)
29634	SCANDIUM 46, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
29634	SCANDIUM 46, SUSPENDED, COUNTING ERROR (PCI/L)
01146	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)
01146	SELENIUM, SUSPENDED (UG/L AS SE)
07102	SELENIUM 75, SUSPENDED TOTAL (PCI/L)
07102	SELENIUM 75, SUSPENDED (PCI/L)

PARAMETER CODE	FIRST LINE - NEW TERMINOLOGY SECOND LINE - OLD TERMINOLOGY
07103	SELENIUM 75, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07103	SELENIUM 75, SUSPENDED, COUNTING ERROR (PCI/L)
01076	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)
01076	SILVER, SUSPENDED (UG/L AS AG)
01077	SILVER, TOTAL RECOVERABLE (UG/L AS AG)
01077	SILVER, TOTAL (UG/L AS AG)
01078	SILVER, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS AG)
01078	SILVER, TOTAL IN BOTTOM MATERIAL (UG/G AS AG)
07122	SILVER 110, SUSPENDED TOTAL (PCI/L)
07122	SILVER 110, SUSPENDED (PCI/L)
07123	SILVER 110, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07123	SILVER 110, SUSPENDED, COUNTING ERROR (PCI/L)
39763	SILVEX, SUSPENDED TOTAL (UG/L)
39763	SILVEX, SUSPENDED (UG/L)
70299	SOLIDS, RESIDUE AT 110 DEG. C, SUSPENDED TOTAL (MG/L)
70299	SOLIDS, RESIDUE AT 110 DEG. C, SUSPENDED (MG/L)
01081	STRONTIUM, SUSPENDED RECOVERABLE (UG/L AS SR)
01081	STRONTIUM, SUSPENDED (UG/L AS SR)
01082	STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR)
01082	STRONTIUM, TOTAL (UG/L AS SR)
01083	STRONTIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS SR)
01083	STRONTIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS SR)
13505	STRONTIUM 90, SUSPENDED TOTAL (PCI/L)
13505	STRONTIUM 90, SUSPENDED (PCI/L)
13506	STRONTIUM 90, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
13506	STRONTIUM 90, SUSPENDED, COUNTING ERROR (PCI/L)
07142	SULFUR 35, SUSPENDED TOTAL (PCI/L)
07142	SULFUR 35, SUSPENDED (PCI/L)
07143	SULFUR 35, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07143	SULFUR 35, SUSPENDED, COUNTING ERROR (PCI/L)

PARA-METER CODE	FIRST LINE - NEW TERMINOLOGY SECOND LINE - OLD TERMINOLOGY
01101	TIN, SUSPENDED RECOVERABLE (UG/L AS SN)
01101	TIN, SUSPENDED (UG/L AS SN)
01102	TIN, TOTAL RECOVERABLE (UG/L AS SN)
01102	TIN, TOTAL (UG/L AS SN)
01151	TITANIUM, SUSPENDED TOTAL (UG/L AS TI)
01151	TITANIUM, SUSPENDED (UG/L AS TI)
39402	TOXAPHENE, SUSPENDED TOTAL (UG/L)
39402	TOXAPHENE, SUSPENDED (UG/L)
07010	TRITIUM, SUSPENDED TOTAL (PCI/L)
07010	TRITIUM, SUSPENDED (PCI/L)
07011	TRITIUM, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07011	TRITIUM, SUSPENDED, COUNTING ERROR (PCI/L)
07014	TRITIUM, SUSPENDED TOTAL, COUNTING ERROR (TRITIUM UNITS)
07014	TRITIUM, SUSPENDED, COUNTING ERROR (TRITIUM UNITS)
07016	TRITIUM, SUSPENDED TOTAL (TRITIUM UNITS)
07016	TRITIUM, SUSPENDED (TRITIUM UNITS)
22705	URANIUM, NATURAL, SUSPENDED TOTAL (UG/L AS U NATURAL)
22705	URANIUM, NATURAL, SUSPENDED (UG/L AS U NATURAL)
01086	VANADIUM, SUSPENDED TOTAL (UG/L AS V)
01086	VANADIUM, SUSPENDED (UG/L AS V)
01091	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)
01091	ZINC, SUSPENDED (UG/L AS ZN)
01092	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
01092	ZINC, TOTAL (UG/L AS ZN)
01093	ZINC, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS ZN)
01093	ZINC, TOTAL IN BOTTOM MATERIAL (UG/G AS ZN)
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01161	ZIRCONIUM, SUSPENDED (UG/L AS ZR)
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16. Abstract (Limit: 200 words)

Water resources data for the 1980 water year for North Carolina consist of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and ground-water levels. This report contains discharge records for 156 gaging stations; stage and contents for 24 lakes and reservoirs; water quality for 57 gaging stations and 7 miscellaneous sites; and water levels for 64 observation wells. Additional water data were collected at various sites, not involved in the systematic data-collection program, and are published as miscellaneous measurements in this report. The collection of water-resources data in North Carolina is a part of the National Water-Data System operated by the U.S. Geological Survey in cooperation with State, municipal, and Federal agencies.

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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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